

Lenovo ThinkPad Laptops PSREF Product Specifications Reference Version 563, July 2020

Contents

Cover	1	ThinkPad E595 Platform Specifications	35
Contents	2	L Series	36
Summary Of Change	5	ThinkPad L13	36
11e Series	6	ThinkPad L13 Platform Specifications	37
ThinkPad 11e (5th Gen)	6	ThinkPad L13 Yoga	38
ThinkPad 11e (5th Gen) Platform Specifications	7	ThinkPad L13 Yoga Platform Specifications	39
ThinkPad 11e Yoga Gen 6	8	ThinkPad L14 Gen 1 (AMD)	40
ThinkPad 11e Yoga Gen 6 Platform Specifications	9	ThinkPad L14 Gen 1 (AMD) Platform Specifications	41
ThinkPad Yoga 11e (5th Gen)	10	ThinkPad L14 Gen 1 (Intel)	42
ThinkPad Yoga 11e (5th Gen) Platform Specifications	11	ThinkPad L14 Gen 1 (Intel) Platform Specifications	43
A Series	12	ThinkPad L15 Gen 1 (AMD)	44
ThinkPad A285	12	ThinkPad L15 Gen 1 (AMD) Platform Specifications	45
ThinkPad A285 Platform Specifications	13	ThinkPad L15 Gen 1 (Intel)	46
ThinkPad A485	14	ThinkPad L15 Gen 1 (Intel) Platform Specifications	47
ThinkPad A485 Platform Specifications	15	ThinkPad L380	48
E Series	16	ThinkPad L380 Platform Specifications	49
ThinkPad E14	16	ThinkPad L380 Yoga	50
ThinkPad E14 Platform Specifications	17	ThinkPad L380 Yoga Platform Specifications	51
ThinkPad E14 Gen 2 (AMD)	18	ThinkPad L390	52
ThinkPad E14 Gen 2 (AMD) Platform Specifications	19	ThinkPad L390 Platform Specifications	53
ThinkPad E15	20	ThinkPad L390 Yoga	54
ThinkPad E15 Platform Specifications	21	ThinkPad L390 Yoga Platform Specifications	55
ThinkPad E15 Gen 2 (AMD)	22	ThinkPad L480	56
ThinkPad E15 Gen 2 (AMD) Platform Specifications	23	ThinkPad L480 Platform Specifications	57
ThinkPad E480	24	ThinkPad L490	58
ThinkPad E480 Platform Specifications	25	ThinkPad L490 Platform Specifications	59
ThinkPad E490	26	ThinkPad L580	60
ThinkPad E490 Platform Specifications	27	ThinkPad L580 Platform Specifications	61
ThinkPad E495	28	ThinkPad L590	62
ThinkPad E495 Platform Specifications	29	ThinkPad L590 Platform Specifications	63
ThinkPad E580	30	P Series	64
ThinkPad E580 Platform Specifications	31	ThinkPad P1	64
ThinkPad E590	32	ThinkPad P1 Platform Specifications	65
ThinkPad E590 Platform Specifications	33	ThinkPad P1 (2nd Gen)	66
ThinkPad E595	34	ThinkPad P1 (2nd Gen) Platform Specifications	67

Contents

ThinkPad P14s Gen 1	68	ThinkPad T15 Gen 1	102
ThinkPad P14s Gen 1 Platform Specifications	69	ThinkPad T15 Gen 1 Platform Specifications	103
ThinkPad P15 Gen 1	70	ThinkPad T480	104
ThinkPad P15 Gen 1 Platform Specifications	71	ThinkPad T480 Platform Specifications	105
ThinkPad P15s Gen 1	72	ThinkPad T480s	106
ThinkPad P15s Gen 1 Platform Specifications	73	ThinkPad T480s Platform Specifications	107
ThinkPad P17 Gen 1	74	ThinkPad T490	108
ThinkPad P17 Gen 1 Platform Specifications	75	ThinkPad T490 Platform Specifications	109
ThinkPad P43s	76	ThinkPad T490 Secure Access / Healthcare Edition	110
ThinkPad P43s Platform Specifications	77	ThinkPad T490 Secure Access / Healthcare Edition Platform Specifications	111
ThinkPad P51	78	ThinkPad T490s	112
ThinkPad P51 Platform Specifications	79	ThinkPad T490s Platform Specifications	113
ThinkPad P52	80	ThinkPad T495	114
ThinkPad P52 Platform Specifications	81	ThinkPad T495 Platform Specifications	115
ThinkPad P52s	82	ThinkPad T495s	116
ThinkPad P52s Platform Specifications	83	ThinkPad T495s Platform Specifications	117
ThinkPad P53	84	ThinkPad T580	118
ThinkPad P53 Platform Specifications	85	ThinkPad T580 Platform Specifications	119
ThinkPad P53s	86	ThinkPad T590	120
ThinkPad P53s Platform Specifications	87	ThinkPad T590 Platform Specifications	121
ThinkPad P72	88	X Series	122
ThinkPad P72 Platform Specifications	89	ThinkPad X13 Gen 1 (AMD)	122
ThinkPad P73	90	ThinkPad X13 Gen 1 (AMD) Platform Specifications	123
ThinkPad P73 Platform Specifications	91	ThinkPad X13 Gen 1 (Intel)	124
T Series	92	ThinkPad X13 Gen 1 (Intel) Platform Specifications	125
ThinkPad T14 Gen 1 (AMD)	92	ThinkPad X13 Yoga Gen 1	126
ThinkPad T14 Gen 1 (AMD) Platform Specifications	93	ThinkPad X13 Yoga Gen 1 Platform Specifications	127
ThinkPad T14 Gen 1 (Intel)	94	ThinkPad X280	128
ThinkPad T14 Gen 1 (Intel) Platform Specifications	95	ThinkPad X280 Platform Specifications	129
ThinkPad T14 Secure Access / Healthcare Edition Gen 1	96	ThinkPad X380 Yoga	130
ThinkPad T14 Secure Access / Healthcare Edition Gen 1 Platform Specifications	97	ThinkPad X380 Yoga Platform Specifications	131
ThinkPad T14s Gen 1 (AMD)	98	ThinkPad X390	132
ThinkPad T14s Gen 1 (AMD) Platform Specifications	99	ThinkPad X390 Platform Specifications	133
ThinkPad T14s Gen 1 (Intel)	100	ThinkPad X390 Yoga	134
ThinkPad T14s Gen 1 (Intel) Platform Specifications	101	ThinkPad X390 Yoga Platform Specifications	135

Contents

ThinkPad X395	136
ThinkPad X395 Platform Specifications	137
X1 Series	138
ThinkPad X1 Carbon (6th Gen)	138
ThinkPad X1 Carbon (6th Gen) Platform Specifications	139
ThinkPad X1 Carbon (7th Gen)	140
,	
ThinkPad X1 Carbon (7th Gen) Platform Specifications	141
ThinkPad X1 Carbon Gen 8	142
ThinkPad X1 Carbon Gen 8 Platform Specifications	143
ThinkPad X1 Extreme	144
ThinkPad X1 Extreme Platform Specifications	145
ThinkPad X1 Extreme (2nd Gen)	146
ThinkPad X1 Extreme (2nd Gen) Platform Specifications	147
ThinkPad X1 Yoga (3rd Gen)	148
ThinkPad X1 Yoga (3rd Gen) Platform Specifications	149
ThinkPad X1 Yoga (4th Gen)	150
ThinkPad X1 Yoga (4th Gen) Platform Specifications	151
ThinkPad X1 Yoga Gen 5	152
ThinkPad X1 Yoga Gen 5 Platform Specifications	153
Legal Information	154

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 29, 2020 - Version 563

Additions in this update

► New product(s)

ThinkPad L14 Gen 1 (AMD)

ThinkPad L15 Gen 1 (AMD)

ThinkPad P15 Gen 1

ThinkPad P17 Gen 1

► Spec updated

ThinkPad 11e (5th Gen)

ThinkPad Yoga 11e (5th Gen)

ThinkPad 11e Yoga Gen 6

ThinkPad E14

ThinkPad E15

ThinkPad E14 Gen 2 (AMD)

ThinkPad E15 Gen 2 (AMD)

ThinkPad E480

ThinkPad E490

ThinkPad E495

ThinkPad E580

ThinkPad E590

ThinkPad E595

ThinkPad L14 Gen 1 (Intel)

ThinkPad L15 Gen 1 (Intel)

ThinkPad L490

ThinkPad L590

ThinkPad P1

ThinkPad P1 (2nd Gen)

ThinkPad P14s Gen 1

ThinkPad P15s Gen 1

ThinkPad P43s

ThinkPad P51

ThinkPad P52

ThinkPad P52s

ThinkPad P53

ThinkPad P53s

ThinkPad P72

ThinkPad P73

► Spec updated

ThinkPad T480

ThinkPad T490

ThinkPad T490s

ThinkPad T495

ThinkPad T580

ThinkPad T590

ThinkPad X1 Extreme

ThinkPad X280

ThinkPad X390

ThinkPad X13 Yoga

Withdrawals in this update

► Withdrawn product(s)

None









ThinkPad 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				ocessor,	Intel Ce	eron® process	or, or		Dimensions Weight	WxDxH: 11.81" x 8.27" x 0.86"; 300mm x 210mm x 21.9mm Starting at 2.99 lb / 1.36 kg
		# of Cores	# of Threads		Burst y Frequen	су	Memory Types	Grap	essor ohics	Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30 i5-7Y54	2		1.0 GHz 1.2 GHz		_	LPDDR3-1866		I HD ics 615	Smart card reade Media reader	· · · · · · · · · · · · · · · · · · ·
	Celeron N4100			1.1 GHz					UHD	Ports	Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1 (with the function of Power
	Celeron N4120		4	1.1 GHz	2.6 GH	z 4MB	_	Graph	ics 600		Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45),
	Pentium Silver N5000	4		1.1 GHz	2.7 GH	z 4MB	DDR4-2400		UHD		headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Pentium Silver N5030			1.1 GHz			<u></u>	Graph	ics 605	Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec, stereo speakers, 2W x 2, Dolby® Audio™, mono digital microphone, combo audio/microphone jack
Graphics	Intel HD Graph supports exter supports dual	nal dig	gital moi endent c	nitor via H displav:	iDMI or U	JSB Typ	e-C;			Keyboard Touchpad	6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Chipset Memory	Max resolution Intel SoC (Sys 4GB or 8GB / soldered to sys	tem oi 1866N	n Chip) IHz LP[platform DDR3 or 2				Hz (HDI	MI)	Security Security chip System Mgt Fingerprint reade	Power-on password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified (may be disabled in some region) None rNone None
Display	Size Resolution	1	Type	Surface E	Brightness	Aspect	Contrast Ratio	Color Gamut	Viewing Angle	Battery	Integrated Li-ion 42Wh battery
	11.6" HD (1366)	ĸ768)	TN A		250 nits		400:1 or 500:1	45%	90°	Max battery life	MobileMark® 2014: 13.9 hr
	11.6" HD (1366)	x768)	WVA A	nti-glare	250 nits	16:9	800:1	45%	170°	AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter
Multi-touch (opt)	Capacitive-type NOT available	e mult in EM	i-touch, EA)	supports	10-finger	gesture	e (HD WVA onl	у,		, i	 45W slim tip AC adapter 65W USB-C AC adapter
Storage	eMMC flash m										65W slim tip AC adapter
Optical	M.2 2242 SSD None) / PCI	e NVMe	e, PCIe 3.	0 x 2					Operating system (optional)	Windows® 10 Home 64
Ethernet	Realtek RTL8111GUS Gigabit Network Connection										Windows 10 Pro 64Windows 10 Pro in S mode
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 (Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.1, M.2 card (Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.1, M.2 card						oth 5.0, M.2 ca	rd rd (US	only)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN	None		.,				,			Mil-Spec test	MIL-STD-810G military testing
SIM card	None									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant

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













ThinkPad 11e Yoga Gen 6 Platform Specifications

Processor	8th Ge	eneration	Intel®	Core™	m / i5 P	rocessor					Smart card reade	
	Proces Number m3-81 i5-820	er (# of Cores 1	# of hreads 4	Base Frequen 1.1 GH 1.3 GH		4MB	Memory Typ	es G	ocessor raphics tel UHD phics 615	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 Delivery and DisplayPort), HDMI1.4, headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Graphics	Intel UHD Graphics 615 in processor, supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 3840x2160@60Hz (USB Type-C); 3840x2160@30Hz (HDMI) Intel SoC (System on Chip) platform										Camera Audio support	HD720p resolution, low light sensitive, fixed focus Optional World facing camera, 5MP resolution, auto focus HD Audio, Realtek® ALC3287 codec Dolby® Advanced Audio / stereo speakers, 2W x 2 / monaural microphone.
Chipset Memory	4GB c	or 8GB / 1	866MI	∃z or′:	2133MHz	z LPDDR3 /						headphone / microphone combo jack
		red to sys em clocks o				s lower memo	ry contro	oller			Keyboard Touchpad	6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface multi-touch touchpad below keyboard
Display		Resolution		·		Brightness	Aspect Ratio	Contrast Ratio	Color Gamut		Security Security chip System Mgt	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified None
MultiTouch		HD (1366x		WVA	Glossy	250 nits s 10 fingers	16:9	800:1	45%	170°	Fingerprint reade	rNone
Hinge Convertible mode Pen (Optional)	Yoga I Laptor	hinge, 360 p, tent, sta upgradat	0 degreand and ole (with ole)	ee d tabl h a pe	et en garage						Battery Max battery life	None Integrated Li-Polymer 46Wh battery MobileMark® 2014: 15.69 hrs MobileMark 2018: 11.05 hrs * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Storage Optical	M.2 22 None	242 SSD	/ PCle	NVM	e, PCIe 3	3.0 x 2					AC adapter	45W or 65W USB-C AC adapter
Ethernet		(support	MAC p	ass th	rough)						Light sensor G-sensor	None Yes
WLAN +	• Intel	Dual Bar	nd Wire	eless-	AC 8265,	Wi-Fi 2x2 8	02.11a	c + Bluetoo	th 4.2,	M.2 card	Gyroscope	None
Bluetooth™						302.11ac + .11ax + Blue			card		· · · · · · · · · · · · · · · · · · ·	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN	None										Limited warranty	 1-year depot repair service 1-year depot with 2-year system board repair service
SIM card	None		411 0 . 4	5 11 6	70"	000		10.0			Mil-Spec test	MIL-STD-810G military testing
Dimensions Weight Case color Case material	From S Black	xH: 11.54 3.1 lb / 1. ay cover: m:	41 kg PC/A		astic;	293mm x 20	J∕mm x	19.9mm			Environment	EPEAT™ Silver; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant



ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				cessor, Inte	el Cele	eron® processo	or, 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 Types	Processor Graphics	Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30 i5-7Y54	2		1.0 GHz 1.2 GHz	2.6 GHz 3.2 GHz	4MB 4MB	LPDDR3-1866	Intel HD Graphics 615	Smart card reade Media reader Ports	erNone MicroSD card reader Two USB 3.1 Gen 1,
	Celeron N4100 Celeron N4120		4	1.1 GHz 1.1 GHz	2.4 GHz 2.6 GHz	4MB 4MB		Intel UHD Graphics 600	Ports	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI1.4, Ethernet (RJ-45), headphone / microphone combo jack,
	Pentium Silver N5000	4	·	1.1 GHz	2.7 GHz	4MB	DDR4-2400	Intel UHD	Control buttons	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed Power button, volume control button
	Pentium Silver N5030			1.1 GHz	3.1 GHz	4MB		Graphics 605	Camera	One of the following, configurable by model:
Graphics	Intel HD Graph supports exter supports dual Max resolution	nal dig	gital mor endent d	nitor via Hˈ[lisplav:	OMI or USE	3 Туре	-C;	ız (HDMI)	Audio support	720p: HD720p resolution, low light sensitive, fixed focus World facing: Rear camera, 5MP resolution, auto focus HD Audio, Realtek® ALC3287 codec Dolby Audio™ / stereo speakers, 2W x 2 / monaural microphone, headphone / microphone combo jack
Chipset Memory	Intel SoC (Sys 4GB or 8GB / soldered to sys	tem or 1866N	n Chip) լ IHz LPD	platform DR3 or 24					Keyboard Touchpad	6-row, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Display MultiTouch Hinge	11.6" (295mm) 16:9 aspect ra Capacitive-typ Yoga hinge, 36) HD (¹ tio, 80 e mult	1366x76 0:1 cont i-touch,	88), glossy, rast ratio,	170° viewir	light, \	WVA, 250 nits, gle, Corning® 0	Gorilla® Glass	Security Security chip System Mgt Fingerprint reade NFC	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified (may be disabled in some region) None In None None
Convertible mode Pen (Optional)		tand a ıble (w	nd table ith a per	n garage re		garag	e		Battery Max battery life	Integrated Li-Ion 42Wh battery MobileMark® 2014: 12 hrs * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Storage	eMMC flash m M.2 2242 SSD				x 2				AC adapter	 45W slim tip AC adapter 65W slim tip AC adapter
Optical	None	44401	10.00.0	Ni ara la la Ni a da					_	45W USB-C AC adapter65W USB-C AC adapter
Ethernet WLAN	One of the follow Intel Wireless Intel Wireless	ving, co s-AC 9 s-AC 9	onfigurable 260, Wi-	<i>e by model:</i> -Fi 2x2 802 -Fi 2x2 802	2.11ac + Bl 2.11ac + Bl	luetoo luetoo	th 5.0, M.2 ca th 5.0, M.2 ca		Preload	One of the following, configurable by model: • Windows® 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro in S mode
Bluetooth™	 Intel Wi-Fi 6 Bluetooth wire 								Limited warranty	One of the following, configurable by model:
WWAN SIM card	None None									1-year depot repair service3-year/1-yr battery depot repair service
Chivi Cara	140110								Mil-Spec test	MIL-STD-810G military testing
Note: The specific									Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant

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







ThinkPad A285 Platform Specifications

Processor	AMD Ryzer	n™ PRO) Mobile I	Processors	with Rade	eon™ Vega	Graphics			er Optional: Smart card reader		
	Processor Number	# of Cores	# of Threads	Base Clock	Max Boost Clock	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,		
	Ryzen 3 PRO 2300U		4	2.0 GHz	3.4 GHz			Radeon Vega 6 Graphics		two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, 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	DDR4-2400	Radeon Vega 8 Graphics		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 Rades supports ex supports fo	cternal ur inde	digital me ependent	onitor via F displays;	IDMI or US	SB Type-C	;		(optional) USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Bundled Accy Optional: ThinkPad Ethernet Extension Adapter Gen 2 Camera (optional) One of the following, configurable by model:			
	Max resolut				- ,	C); 4096x	2160@60H	z (HDMI)	Camera (optional)	• HD720p camera with ThinkShutter camera privacy, fixed focus		
Chipset Memory	AMD SoC (8GB or 160	BB / 24	00MHz Ċ	ĎR4, sold	ered to sys		*	3	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec /		
Display	Some: 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio									stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack		
Multi-touch (opt)	Some: 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, 170° viewing angle								Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
Storage	On-cell touch, supports 10-finger gesture (FHD only) One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s								Security Security chip System Mgt Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified DASH Management r Optional: Touch style match on chip fingerprint reader on the palm rest		
Optical	None								NFC	None		
Ethernet	Gigabit Eth				sion Adapt	er Gen 2			Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
WLAN + Bluetooth™	Realtek® Intel Wire	less-A	C 9260, V	Vi-Fi 2x2 8					Max battery life AC adapter	MobileMark® 2014: 10.55 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
WWAN (optional)	Wireless \ Integrated				Έ Λ					Windows® 10 Home 64 or Windows 10 Pro 64		
SIM card (opt)	Intel XMM * For non-WI Nano-SIM o optional Ve	I™ 736 WAN m card sl rizon L	60 (Fiboco odel, it mea ot, in the TE (US) S	om L850-G ans the mod combo slo SIM card	L), M.2 car lel is NOT W	WAN upgra				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	WxDxH (HI	D & FF	ID multi-t	ouch):	mm v 200 (2mm v 17	1mm		Mil-Spec test	MIL-STD-810G military testing		
Weight	12.11" x 8.26" x 0.69"; 307.7mm x 209.8mm x 17.4mm WxDxH (FHD non-touch): 12.11" x 8.26" x 0.70"; 307.7mm x 209.8mm x 17.8mm FHD non-touch model: 2.49 lb / 1.13 kg;								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; TCO Certified; RoHS-compliant		
	HD non-touch model: 2.78 lb / 1.26 kg; FHD multi-touch model: 2.79 lb / 1.27 kg											
Case color	Black											
Case material	Display cover: Carbon Fiber (FHD non-touch model) or PPS (HD & FHD multi-touch model); Bottom: Magnesium/Aluminum											
Note: The specific	- 41							_		Lenovo		

Note: The specifications above may not be available in all regions and might change by regions.







ThinkPad A485 Platform Specifications

Processor	AMD Ryzen™	PRO	Mobile F	Processors	with Rade	on™ Vega	Graphics		Smart card reader	r Optional: Smart card reader			
		# of Cores	# of Threads	Base Clock	Max Boost Clock	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	20162	4	2.0 GHz	3.4 GHz		Types	Radeon Vega 6 Graphics		two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,			
	Ryzen 5 PRO 2500U	4	8	2.0 GHz	3.6 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics		4-in-1 media reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole			
	Ryzen 7 PRO 2700U		8	2.2 GHz	3.8 GHz			Radeon Vega 10 Graphics	Monitor cable(opt)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed hDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
Graphics	AMD Radeon supports exte supports four	ernal (digital mo	onitor via F					Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None Optional) One of the following, configurable by model:			
	Max resolution				JSB Type-0	C); 4096x2	2160@60H	z (HDMI)	Camera (optional)	HD720p camera with ThinkShutter camera privacy, fixed focus			
Chipset Memory	AMD SoC (Sy 32GB max / 2 * Installed DIMI	2400N	ИHz DDˈF	₹4, dual-ch					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"									optional dual array microphone, headphone / microphone combo jack			
	220 n Some: 14.0"				0:1 contras		hacklight \	۸/\/۸	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	250 n	nits, 1	6:9 aspe	ct ratio, 70	0:1 contras	st ratio, 17	oackiigitt, v		Security	Power-on password, hard disk password, supervisor password, security keyhole			
Multi-touch (opt)	On-cell touch		<u> </u>		•				Security chip System Mgt	Discrete TPM 2.0, TCG Certified DASH Management			
Storage	System has one Some: HDD Some: SSD	/ SAT	TA 6.0Gb	/s, 2.5" wid	de, 7mm hi	gh, Active		System™	Fingerprint reader NFC	**Optional: Touch style match on chip fingerprint reader on the keyboard bezel None			
	Some: M.2 S Some: 128G	SSD / BB M.	PCIe N\ 2 SSD / I	/Me, PCle PCle 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 WV * <i>Installed M.2</i> S None	NAN SSD i	slot as 21 s PCle 3.0	nd Storage x 4 but run	e, mutually at PCle 3.0	exclusive v x 2 due to l	with WWAN M.2 SSD ada	l pter limitation	Max battery life (MobileMark® 2014)	Models 24Wh 48Wh 72Wh 24Wh + 24Wh 24Wh + 48Wh 24Wh + 72Wh Max battery life 5.37 hr 10.76 hr 16.4 hr 10.76 hr 16.4 hr 22.15 hr			
Ethernet	Realtek® RTL	.8111	GUL Gig	abit Ether	net connec	tion			AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB Type-C AC adapter			
WLAN +	Realtek® RT								Operating system	Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™ WWAN (optional)	 Intel Wireless Wireless WA Integrated Notes Intel XMMTM 	AN up	pgradable e Broadb	e and 4G LT	E-A,		5.0, IVI.2 cai	'd	(optional)	 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
	* For non-WWA	AN mo	odèl, it mea	ans the mod	lél is NOT W	WAN upgra	dable		Mil-Spec test	MIL-STD-810G military testing			
SIM card (opt)	Nano-SIM car				, ,		10.05		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
Dimensions Weight	WxDxH: 13				_		x 19.95mm /h + 48Wh /						
- 1-3	Magnesium PPS	2	3.49 lb /	1.58 kg 1.65 kg	1 40VVII, 72	3.92 lb / 4.08 lb /	1.78 kg	1 Z v V I I					
Case color	Black		3.03 ID /	1.00 Kg		4.00 10 /	1.00 ку						
Case material	Display cover Bottom:	r: Ma Gla	ignesium ass-Fiber	Hybrid or Reinforce	PPS; d Plastic								
Note: The specific	ations above me	ov anot	t ha availe	blo in all re	ogione and r	night abon	ao bu rogion			Lenovo			

Note: The specifications above may not be available in all regions and might change by regions.













ThinkPad E14 Platform Specifications

Processor	10th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions	Case Material	Dimensions (WxDxH)		
	* i7-10710U is NOT available in EMEA	1	Aluminum	12.80" x 9.13" x 0.70"; 325mm x 232mm x 17.9mm		
	Processor # of # of Base Max Turbo Cache Memory Processor		PC/ABS	12.80" x 9.13" x 0.81"; 325mm x 232mm x 20.5mm		
	Number Cores Threads Frequency Frequency Graphics i3-10110U 2 4 2.1 GHz 4.1 GHz 4MB i5-10210U 3 1.6 GHz 4.2 GHz 6MB BBB 288 4 200 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Aluminum Display cover + PC/ABS Bottom	12.80" x 9.13" x 0.74"; 325mm x 232mm x 18.9mm		
	1.6 GHz 4.2 GHz 6MB DDR4-2666 Intel UHD Graphics 1.8 GHz 4.9 GHz 8MB DDR4-2666 Intel UHD Graphics 1.8 GHz 4.9 GHz 8MB DDR4-2666 Intel UHD Graphics 1.8 GHz 4.9 GHz 8MB DDR4-2666 Intel UHD Graphics 1.8 GHz 4.9 GHz 8MB DDR4-2666 Intel UHD Graphics 1.8 GHz 4.9 GHz 4.9 GHz 8MB DDR4-2666 Intel UHD Graphics 1.8 GHz 4.9 GHz	Weight	Case Material	Weight		
	i7-10710U 6 12 1.1 GHz 4.7 GHz 12MB	J	Aluminum	starting at 3.81 lb / 1.73 kg		
Graphics	Integrated Graphics Discrete Graphics (Memory)	1	PC/ABS	starting at 3.90 lb / 1.77 kg		
.	Intel UHD Graphics -		Aluminum Display cover + PC/ABS Bottom	starting at 3.74 lb / 1.69 kg		
	Intel UHD Graphics AMD Radeon 625 (2GB GDDR5) Intel UHD Graphics AMD Radeon RX 640 Graphics (2GB GDDR5)	Case color	Black or silver			
	supports external digital monitor via HDMI or USB Type-C; supports three independent displays;	Case material Smart card reade	Display cover: Aluminum or PC/ABS plastic; Bottom: Aluminum or PC/ABS plastic None			
Ohinaat	Max resolution: 3840x2160@60Hz (USB Type-C); 3840x2160@30Hz (HDMI)	Media reader	None			
Chipset Memory	Intel SoC (System on Chip) platform 16GB max / 2666MHz DDR4, one DDR4 SO-DIMM socket	Ports	one USB 3.1 Type-C Gen	.1 Gen 1 (one Always On), 1 (with the function of Power Delivery and DisplayPort),		
Display	Size Resolution Type Surface Brightness Aspect Ratio Contrast Ratio Angle		security keyhole	.45), headphone / microphone combo jack,		
	14.0" FHD (1920x1080) TN Anti-glare 220 nits 16:9 400:1 90°	Monitor cable	None	, actual data transier speed may be lower than theoretical speed		
	14.0" FHD (1920x1080) WVA Anti-glare 250 nits 16:9 700:1 170°	Bundled Accy	None			
Multi-touch	None	Camera	HD720p camera, fixed f	ocus		
Storage	 Up to two drives (one M.2 SSD and one HDD) HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ M.2 2280 SSD / SATA 6.0Gb/s M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 or PCIe 3.0 x 4 M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 	Audio support	HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
	Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4	Keyboard UltraNav™	TrackPoint® pointing device	e and buttonless Mylar surface multi-touch touchpad		
Optane™ memor (optional) Optical	y• Intel Optane memory, PCle NVMe, PCle 3.0 x 2 • Intel Optane™ Memory integrated with SSD, PCle NVMe 3.0 x 4 None	Security Security chip	Integrated model: discr Discrete model: firmv	I disk password, supervisor password, security keyhole ete TPM 2.0, TCG Certified vare TPM 2.0 integrated in chipset		
Ethernet	Gigabit Ethernet Connection, Realtek R8111GUS	System Mgt	None	vorprint roader on newer butten		
WLAN +	One of the following, configurable by model:	NFC	None	gerprint reader on power button		
Bluetooth™	 Realtek® RTL8822CE, 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 	Battery	Integrated Li-Polymer 45\	Wh battery, charge up to 80% in 1hr) with 65W AC adapter		
	• Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card	Max battery life	MobileMark® 2014: 12.8	hr		
WWAN SIM card	None None	AC adapter	* Battery life varies significated 45W or 65W USB-C AC a	ntly with hardware configurations, settings, usage, & other factors adapter		
		Operating system (optional)	 One of the following, configure Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S m No OS 	•		
		Limited warranty (optional)	 1-year limited onsite se 	rice Ir system board repair service rvice		
		Mil-Spec test	MIL-STD-810G military to	•		
		Environment	EPEAT™ Silver; ENERGY	STAR® 7.1; TCO Certified; RoHS-compliant		



ThinkPad E14 Gen 2 (AMD) Platform Specifications

Processor				essors with		Graphics			Smart card reade Media reader	erNone None
	Processor Number	# of Cores	# of	Base	Max Boost Clock	Cache	Memory Types	Processor Graphics	Ports	One USB 2.0, one USB 3.2 Gen 1 (Always On), one USB 3.2 Type-C Gen 1
	Ryzen 3 4300U	4	4	2.7 GHz	3.7 GHz	2MB L2 / 4MB L3				(with the function of Power Delivery and DisplayPort 1.2), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, security keyhole
	Ryzen 5 4500U	6	6	2.3 GHz	4.0 GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed None
	Ryzen 7 4700U	8	8	2.0 GHz	4.1 GHz	4MB L2 /	DD114-3200	Graphics	Bundled Accy Camera	None One of the following, configurable by model:
	Ryzen 7 4800U	8	16	1.8 GHz	4.2 GHz	8MB L3				 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Graphics	supports ι	ip to 3 in	ndepend	s via HDMÍ	(up to 384	0x2160´@	30Hz) or	rnal monitors	´	HD Audio, Realtek ALC3287 codec / stereo HARMAN-branded speakers, 2W x 2, Dolby Audio® / dual array microphone, headphone / microphone combo jack
Chipset	AMD CoC	(C) rotor	m an Chi		ype-C (up	to 3840x2	2160@60Hz))	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, optional LED backlight
Memory	20GB or 2	(Syster 4GB ma	n on Cni ax / 3200	ip) platform DMHz DDR	4, dual-cha	innel capa	able		UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	4GB or 8G	BB mem	ory sold	ered to sys	temboard,	one DDR	4 SO-DIMM	1	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole • Discrete TPM 2.0, TCG Certified • Firmware TPM 2.0 integrated in chipset
, ,		Resolution		ype Surfa		Riess Ri	atio Rati	o Angle	System Mgt	None
	14.0" FHD			TN Anti-glare 220 nits 16:9 400:1 90° WVA Anti-glare 250 nits 16:9 700:1 170°					Fingerprint reade	er <i>Optional:</i> Touch style fingerprint reader on power button None
Multi-touch	None	(1020111	100)	· · · · · · · · · · · · · · · · · · ·				1 110	Battery	Integrated Li-Polymer 45Wh battery,
Storage		2 SSD /		VMe, PCIe VMe, PCIe					Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 13 hrs * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Optical	None	0 000 /	1 010 14	vivio, i Oio	0.0 X T				AC adapter	65W USB-C AC adapter
Ethernet				on, Realtek		IS			Operating system (optional)	n • Windows® 10 Home 64 • Windows 10 Pro 64
WLAN + Bluetooth™	Realtek®Intel Wi-l	RTL88	22CE, W 200, Wi-F	able by mode Vi-Fi 2x2 80 Fi 2x2 802. ⁻ T available in	2.11ac + B I1ax + Blu		5.0, M.2 card), M.2 card	i	· /	 1-year mail-in repair service 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service
WWAN SIM card	None None								Mil-Spec test	MIL-STD-810G military testing
Dimensions	Case Mat	a win I			D:	sions (W.	··D··/ /)		Environment	EPEAT™ Silver; ENERGY STAR® 8.0; ErP lot3; TCO Certified; RoHS-compliant
Dimensions	Aluminum			12 76" v 8 6		(<i>хDXH)</i> ı x 220mm x	17 9mm		
	PC/ABS	·					x 220mm x			
	Aluminum PC/ABS (x 220mm x			
Weight	Case Mat	erial				Weight				
	Aluminum	1			starting a	at 3.62 lb	/ 1.64 kg			
	PC/ABS				starting a	at 3.73 lb	/ 1.69 kg			
	Aluminum PC/ABS (starting a	at 3.51 lb	/ 1.59 kg			
Case color	Black Display co Bottom:	o <i>ver:</i> Al	uminum uminum	or PC/ABS	plastic; plastic					
Note: The speci	fications above	may no	t be avail	lable in all re	egions.					Lenovo



















ThinkPad E15 Platform Specifications

Processor	10th Generation Intel® Core™ i3 / i5 / i7 Processor * i7-10710U is NOT available in EMEA	Dimensions Weight	WxDxH: 14.49" x 9.65" x 0.74"; 368mm x 245mm x 18.9mm Starting at 4.3 lb / 1.9 kg
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Frequency Memory Types Processor Graphics i3-10110U 2 4 2.1 GHz 4.1 GHz 4MB	Case color Case material	Black or silver Display cover: Bottom: PC/ABS plastic
	1.6 GHz 4.1	Smart card reader Media reader Ports	None One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
Graphics	Integrated Graphics Discrete Graphics (Memory) Intel UHD Graphics - Intel UHD Graphics AMD Radeon 625 (2GB GDDR5) Intel UHD Graphics AMD Radeon RX 640 Graphics (2GB GDDR5)	Monitor cable Bundled Accy	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset	supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 3840x2160@60Hz (USB Type-C); 3840x2160@30Hz (HDMI) Intel SoC (System on Chip) platform	Camera Audio support	 HD720p camera, fixed focus HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /
Memory	16GB max / 2666MHz DDR4, one DDR4 SO-DIMM socket	Keyboard	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight
Display	Size Resolution Type Surface Brightness Aspect Ratio Angle Angle	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	15.6" FHD (1920x1080) TN Anti-glare 220 nits 16:9 400:1 90° 15.6" FHD (1920x1080) WVA Anti-glare 250 nits 16:9 700:1 170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset
Multi-touch	None	System Mgt	None
Storage	Up to two drives (one M.2 SSD and one HDD) • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™	NFC	r Optional: Touch style fingerprint reader on power button None
	 M.2 2280 SSD / SATA 6.0Gb/s M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 or PCIe 3.0 x 4 M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 	Battery Max battery life	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 12.2 hr
	 Intel Optane[™] Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 	AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter
Optane™ memory (optional) Optical	 Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Intel Optane™ Memory integrated with SSD, PCIe NVMe 3.0 x 4 None 	Operating system (optional)	Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S mode
Ethernet	Gigabit Ethernet Connection, Realtek R8111GUS	Limited warranty	1-year mail-in repair service
WLAN + Bluetooth™	One of the following, configurable by model: Realtek® RTL8822CE, 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		 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service
\A(\)	Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card	Mil-Spec test	MIL-STD-810G military testing
WWAN SIM card	None None	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant

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





AMD

ThinkPad E15 Gen 2 (AMD) Platform Specifications

Processor	AMD Ryzer (Ryzen 7 480					Graphics	;			Smart card reade Media reader	None			
	Processor Number	# of Cores	# of Threads	Base Clock	Max Boost Clock	Cache	Memo Types		Processor Graphics	Ports	One USB 2.0, one USB 3.2 Gen 1 (Always On), one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort 1.2),			
	Ryzen 3 4300U	4	4	2.7 GHz	3.7 GHz	2MB L2 4MB L3					HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, security keyhole			
	Ryzen 5 4500U	6	6	2.3 GHz	4.0 GHz	3MB L2 8MB L3		200	AMD Radeon	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed None			
	Ryzen 7 4700U	8	8	2.0 GHz	4.1 GHz	4MB L2	/		Graphics	Bundled Accy Camera	None One of the following, configurable by model:			
	Ryzen 7 4800U	8	16	1.8 GHz	4.2 GHz	8MB L3	3				 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio. Realtek ALC3287 codec / 			
Graphics	AMD Radeo supports up supports ex	to 3 ir	ndepende	ent display	ys via nativ				al monitors;	Audio support	stereo HÁRMAN-branded speakers, 2W x 2, Dolby Audio® / dual array microphone, headphone / microphone combo jack			
				USB	Tỳpe-C (up	to 3840x	2160@60	Hz)		Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad, optional LED backlight			
Chipset Memory	AMD SoC (20GB or 24	Systen	n on Chip	o) platforn) 24. dual ab	annol oor	aabla			UltraNav™	TrackPoint [®] pointing device and buttonless Mylar surface multi-touch touchp			
Memory	4GB or 8GE	3 mem	ory solde	ered to sy	stemboard,	one DDI	R4 SO-DII	MM so	ocket	Security	Power-on password, hard disk password, supervisor password, security keyhole • Discrete TPM 2.0. TCG Certified			
Display	Size Reso	lution	Т	Type Sui	face Brig	ntness		ontrast Ratio	Viewing Angle	Security chip	Firmware TPM 2.0 integrated in chipset			
	15.6" FHD	(1920x1	1080)	TN Anti-	glare 22			400:1	90°	System Mgt Fingerprint reader	None r Optional: Touch style fingerprint reader on power button			
		(1920x1			-) nits	16:9	700:1	170°	NFČ	None			
Multi-touch	None									Battery Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter				
Storage	Up to two driM.2 2242M.2 2280	SSD /								Max battery life	MobileMark® 2014: 12.7 hrs * Battery life varies significantly with hardware configurations, settings, usage, & other factors			
Optical	None	3307	I OIE INV	rivie, i Oie	5 J.U X 4					AC adapter	65W USB-C AC adapter			
Ethernet	Gigabit Eth	ernet C	Connectio	n, Realte	k R8111Gl	JS				Operating system (optional)	Windows® 10 Home 64 Windows 10 Pro 64			
WLAN + Bluetooth™	One of the following, configurable by model: Realtek® RTL8822CE, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card (Realtek RTL8822CE is NOT available in EMEA)									<u> </u>	1-year mail-in repair service 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service			
WWAN SIM card	None									Mil-Spec test	MIL-STD-810G military testing			
Dimensions Weight Case color Case material	None None WxDxH: 14.37" x 9.45" x 0.74"; 365mm x 240mm x 18.9mm Starting at 3.75 lb / 1.7 kg Black Display cover: Aluminum; Bottom: PC/ABS plastic									Environment	EPEAT™ Gold (US, Canada, and Germany only); ENERGY STAR® 8.0; ErP lot3; TCO Certified; RoHS-compliant			

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





ThinkPad E480 Platform Specifications

Processor	7th Generat					r			Dimensions Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm PC/ABS (WxDxH): 12.96" x 9.53" x 0.83"; 329mm x 242mm x 21.9mm			
		# of Cores	# of Threads	Base Max Turbo Cache Hemory Processor 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		Bottom: PC/ABS plastic		
	i5-7200U			2.5 GHz	3.1 GHz	змв		620	Smart card reade Media reader	MicroSD card reader		
	8th Generat								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),		
	Number (Max Turbo Frequency	Cache	Memory Types	Processor Graphics		HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole		
	i3-8130U i5-8250U	2	4	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620		* 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			Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec /		
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and AMD Radeon RX 550 Graphics, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display;									stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
									Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
	Max resolut	ion: 1	1920x10	80 (HDMI)	@60Hz				Security chip	Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) None ingerprint reader Optional: Touch style fingerprint reader on the palm rest None iattery Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
Chipset Memory	Intel SoC (S 32GB max / * System clos	/ 2400	MHz DE	DŔ4, dual-c	hannel car	able, to	wo DDR4 S roller	O-DIMM sockets	System Mgt			
Display	Some: 14.0							,	NFC			
	Some: 14.0	o" (35	5mm) FH	pect ratio, 4 HD (1920x pect ratio, 4	1080), anti-	glare, L	ED backlig	jht, WVA,	Battery May bettery life			
Multi-touch	None		<u>'</u>						Max battery life MobileMark® 2014: 13.51 hr *Battery life varies significantly with hardware configurations, settings, usage, & o			
Storage	Up to 2 drives Some: HDI					able. ur	ogradable.		AC adapter	45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
	Acti Some: M.2			System™ JVMe	,	, ,	,		Limited warranty	One of the following, configurable by model:		
Optane™ memory Optical					e NVMe, P	Cle 3.0	x 2			1-year mail-in repair service 1-year depot repair service		
Ethernet	Gigabit Ethe	ernet	Connect	ion, Realte	k R8111Gl	JS			Mil-Spec test	MIL-STD-810G military testing		
WLAN + Bluetooth™		RTL88 TL882 Band	321CE, V 22BE, W I Wireles	Wi-Fi 1x1 80 'i-Fi 2x2 80 s-AC 3165,	02.11ac + E 2.11ac + B Wi-Fi 1x1	luetootl 802.11	n 4.1, M.2 c ac + Blueto	card card ooth 4.1, M.2 card ooth 4.1, M.2 card	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; TCO Certified; RoHS-compliant		
WWAN SIM card	None None											
Note: The specifica	ations above r	may n	ot be ava	ilable in all	regions.					Lenovo		

























ThinkPad E490 Platform Specifications

Processor	8th Genera	tion Ir	ntel® Core	e™ i3 / i5 / i	7 Processo	or				Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm					
	Processor Number	# of Cores	# of Threads	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 i5-8265U	2	4	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB	DDR4-240	0 Intel l	UHD Graphics	Case color Case material	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic					
	i5-8365U i7-8565U	4	8	1.6 GHz 1.8 GHz	4.1 GHz 4.6 GHz	6MB 8MB			·	Smart card reade Media reader	MicroSD card reader					
	* i5-8365U is	for sp	eicial bid d	only						Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On),					
Graphics	Intel UHD (Intel UHD (AMD Rade supports e) supports di Max resolu	Graphi on RX kterna ual ind	ics in pro (550X G I digital n Jepender	cessor and raphics, 20 nonitor via lateral transfer in the control of the control	BB GDDR5 HDMI or U	SB Typ	e-C;	24Hz	(HDMI)	one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None None						
Chipset Memory	Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI) 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, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack					
Display	Ratio Ratio Angle					Ratio .	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" HD (13 14.0" FHD (13 14.0" FHD (13	1920x1	(080) TN	Anti-glare Anti-glare A Anti-glare	220 nits	16:9 16:9 16:9	400:1 400:1 600:1	90° 90° 170°	Non-touch Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)					
Multi-touch	None		·							System Mgt	None					
Storage	Up to two dri					ctive Pr	otection S	vstem™	м	ingerprint reader <i>Optional:</i> Touch style fingerprint reader on the palm rest						
Optane™ memory	 M.2 2280 M.2 2242 M.2 2280 * Installed M. y Optional: In 	SSD SSD SSD 2 2280	/ SATA 6 / PCIe N / PCIe N / SSD is F	.0Gb/s VMe, PCle VMe, PCle Cle 3x4 but	3.0 x 2 3.0 x 4 run at PCle	3x2 due	to M.2 SSL	,		Battery Max battery life AC adapter	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 13 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter					
Optical	None		-							Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64					
Ethernet	Gigabit Eth	ernet	Connect	on, Realtel	k R8111Gl	JS				Limited warranty	One of the following, configurable by model:					
WLAN + Bluetooth™	One of the following, configurable by model: Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card										 1-year mail-in repair service 1-year depot repair service 1-year limited onsite service 					
WWAN	None									Mil-Spec test	MIL-STD-810G military testing					
SIM card	None									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant					

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













ThinkPad E495 Platform Specifications

Processor	7										Dimensions Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm			
	Processor Number		# of Threads	Base Clock	Max Boost Clock	Cache	Memor		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	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-24	100	Radeon Vega 8 Graphics	Smart card reade				
	Ryzen 7 3700U			2.3 GHz	4.0 GHz	2MB L2 / 4MB L3			adeon RX Vega 10 Graphics	Media reader Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
Graphics	supports supports Max resol	extern dual in lution:	al digital depende 3840x2	monitor via ent display; 160@60Hz	X Vega 10 (a HDMI or ((USB Type	JSB Typ	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 (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation								DIMM sockets	l	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /			
Display	Size / Reso	olution	Ту	pe Surface	Brightnes	Aspect Ratio	Contrast N	Viewin Angle			dual array microphone, headphone / microphone combo jack			
	14.0" HD (N Anti-gla		16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Multi-touch	None	(1920x	(1080) W	VA Anti-gla	e 250 nits	16:9	600:1	170°	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole hip Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified			
Storage	• HDD / S	ata 6	.0Gb/s, 2		mm high, A			ystem	n™	Fingerprint reade	reader None None			
Optical	 HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 or PCIe 3.0 x 4 M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 None 									Battery Max battery life	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr			
Ethernet	Gigabit Et	therne	t Conne	ction, Realt	ek R8111G	US					* Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter			
WLAN + Bluetooth™				nfigurable b Wi-Fi 2x2		Bluetoot	th 4.2. M.3	2 card	h	AC adapter Operating system	m Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
	 Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card 									Limited warranty • 1-year mail-in repair service				
WWAN SIM card	None None										1-year depot repair service 1-year limited onsite service			
										Mil-Spec test	MIL-STD-810G military testing			
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant			

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





ThinkPad E580 Platform Specifications

Processor	7th Generat	ion In	ntel® Core	e™ i3 / i5 P	rocessor o	r			Dimensions				
		$ \pi \cup \pi \cup Dase $							Weight Case color	Starting at 4.7 lb / 2.1kg Black or silver			
		Cores	Threads		Frequency		Types	Graphics	Case color Case material	Display cover: Aluminum;			
	i3-7020U i3-7130U			2.3 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	oudo material	Bottom: PC/ABS plastic			
	i5-7200U	2	4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB	DDR4-2133	620	Smart card reade				
	8th Generat	ion In	itel Core			JIVID	<u> </u>		Media reader Ports	MicroSD card reader One USB 2.0, two USB 3.1 Gen 1 (one Always On),			
		# of	# of		Max Turbo	0 1	Memory	Processor	1 0113	one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort)			
	Number C				Frequency	Cache	Types	Graphics		HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole			
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB	DDD4 0400	Intel UHD Graphics		* Depending on many factors, actual data transfer speed may be lower than theoretical spee			
	i5-8250U i7-8550U	4	8	1.6 GHz 1.8 GHz	3.4 GHz 4.0 GHz	6MB 8MB	DDR4-2400	620	Camera	HD720p camera, fixed focus			
		NOT á	available ii	ble in US and EMEA					Audio support	HD Audio, Synaptic® CX11852 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /			
Graphics	Intel HD Gra	Graphics 620 or Intel UHD Graphics 620 in processor only or								dual array microphone, headphone / microphone combo jack			
	Intel HD Gra	n RX	550 Gra	aphics, 2GE	3 GDDR5 r	nemory	y;	d	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backligt TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 1920x1080 (HDMI)@60Hz								Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)			
Chipset	Intel SoC (S	yster	n on Chi	p) platform			DDD4.0	0.0000	System Mgt	system Mat None			
Memory	* System cloc	2400 ks do	MHZ DL wn for pro	DR4, dual-c cessors with	nannel cap lower memo	oable, to ory cont	wo DDR4 S roller	O-DIMM sockets	Fingerprint reade	r <i>Optional:</i> Touch style fingerprint reader on the palm rest None			
Display	Some: 15.6			D (1366x76					Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr			
	Some: 15.6							ht, WVA,		with 65W AC adapter lax battery life			
	250			pect ratio, 6				, ,	,				
Multi-touch	None				-0.				AC adapter	45W or 65W USB-Č AC adapter			
Storage	Up to 2 drives Some: HDE					able ur	ogradable		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
	Activ	ve Pro	otection S	System™	,	, up	g.aaabio,		Limited warranty	One of the following, configurable by model:			
Optane™ memor	Some: M.2				a NIVMa P	Clo 3 () v 2			1-year mail-in repair service1-year depot repair service			
Optical	None	الحا حا	plane me	oniory, i Oi	CINVIVIC, F	OIG 3.0	7 ^ _			MIL-STD-810G military testing			
Ethernet	Gigabit Ethe	ernet	Connect	ion, Realte	k R8111Gl	JS			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
WLAN +	One of the foll												
Bluetooth™	 Realtek® RTL8821CE, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Intel Dual Band Wireless-AC 3165, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card 												
		Band	Wireles	s-AC 8265,	Wi-Fi 2x2	802.11	ac + Blueto	oth 4.1, M.2 card					
WWAN SIM card	None None												
Note: The specific				20 1 1 2 1 10						Long			

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

















ThinkPad E590 Platform Specifications

Processor	8th Generation Intel®	Core	™ i3 / i5 / i	7 Processo	or				Dimensions	<i>WxDxH:</i> 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm			
	Processor # of # of Number Cores Thre	ads F	requency	Max Turbo Frequency	Cache	Memory Types		Processor Graphics	Weight Case color Case material	Starting at 4.68 lb / 2.12 kg Black or silver Display cover: Aluminum;			
	i3-8145U 2 4 i5-8265U 4 8		2.1 GHz 1.6 GHz 1.8 GHz	3.9 GHz 3.9 GHz 4.6 GHz	4MB 6MB 8MB	DDR4-240	00 Intel I	UHD Graphics	Smart card reade	Bottom: PC/ABS plastic rNone MicroSD card reader			
Graphics	Intel UHD Graphics in Intel UHD Graphics in AMD Radeon RX 550 supports external digi supports dual independax resolution: 4096	proc X Gra ital mondent x2304	essor and aphics, 2G onitor via I display; 4@60Hz (B GDDR5 HDMI or U	SB Typ	e-C;	24Hz	(HDMI)	Ports Monitor cable Bundled Accy	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPo 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 sponitor cable None			
Chipset Memory	Intel SoC (System on 32GB max / 2400MHz * Installed memory is act	z DĎŔ	Ŕ4, dual-cl	nannel cap ut run at 240	able, tv	vo DDR4 lue to Intel	SO-DII	MM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /			
Display	Size / Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Natio	/iewing Angle	Multi-touch		dual array microphone, headphone / microphone combo jack			
	15.6" HD (1366x768)	TN	Anti-glare		16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Multi-touch	15.6" FHD (1920x1080) None	WVA	Anti-glare	250 nits	16:9	600:1	170°	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified			
Storage	Up to two drives (one M. • HDD / SATA 6.0Gb/s • M.2 2280 SSD / SA • M.2 2242 SSD / PC	s, 2.5 TA 6.0 Ie NV	" wide, 7m)Gb/s 'Me, PCIe	nm high, Ac 3.0 x 2	ctive Pr	otection S	ystem™	М	System Mgt Fingerprint reader NFC	(may be disabled in some region) Mgt None			
Optane™ memory	 M.2 2280 SSD / PC * Installed M.2 2280 SSL y Optional: Intel Optano None 	D is PC	Cle 3x4 but	run at PCle			D adapt	er limitation	Battery Max battery life	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr			
Ethernet	Gigabit Ethernet Con	nectio	n, Realtel	R8111GL	JS				AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter			
WLAN +	One of the following, con								Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™	Realtek® RTL8822BIntel Wireless-AC 92							I	Limited warranty	One of the following, configurable by model: 1-year mail-in repair service			
WWAN SIM card	None None									1-year depot repair service1-year limited onsite service			
									Mil-Spec test	MIL-STD-810G military testing			
	ations above may not be								Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant			

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













ThinkPad E595 Platform Specifications

Processor	AMD Ryz	en™ Mo	obile Pro	cessors w	th Radeon	' Vega G	raphics			Dimensions	<i>WxDxH</i> : 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.9mm			
	Processor		# of	Base	Max Boost	Cache	Memoi		Processor	Weight Case color	Starting at 4.7 lb / 2.1 kg Black			
		Cores	Threads	Clock	Clock	1MB L2	Control		Graphics Radeon Vega 3	Case material	Display cover: Aluminum;			
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	4MB L3	'		Graphics		Bottom: PC/ABS plastic			
	Ryzen 5 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2	400 F	Radeon Vega 8 Graphics	Smart card reade Media reader	MicroSD card reader			
	Ryzen 7 3700U	4		2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Ra	adeon RX Vega 10 Graphics	Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,			
Graphics	supports supports	externa dual in	al digital Idepende	ega 8, or R monitor via ent display; 160@60Hz	HDMI or I	JSB Typ	e-C;			Monitor cable Bundled Accy	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None			
Chipset Memory	AMD SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation									Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack			
Display	Size / Res			/pe Surfac		Ratio	Contrast Ratio	Angle	e Multi-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	15.6" HD (N Anti-gla		16:9	400:1	90°	Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole			
		5.6" FHD (1920x1080) WVA Anti-glare 250 nits 16:9 600:1 170° Non-touch						170°	Non-touch	Security chip Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified				
Multi-touch	None									Fingerprint reader None				
Storage	• HDD / S • M.2 224	SATA 6 2 SSD	.0Gb/s, 2) / PCle	SSD and one 2.5" wide, 7 NVMe, PC NVMe, PC	mm high, <i>i</i> e 3.0 x 2 o	Active Pr r PCIe 3	otection S .0 x 4	Systen	n™	Battery	None Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter			
Optical	None	00 33L) / FOIE	INVIVIE, FO	E 3.0 X 4					Max battery life	MobileMark® 2014: 10.3 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors			
Ethernet	Gigabit Et	therne	t Conne	ction, Realt	ek R81110	iUS				AC adapter	45W or 65W USB-C AC adapter			
WLAN +	One of the	e follo	wing, coi	nfigurable b	y model:					Operating system	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™	 Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card 									Limited warranty	1-year mail-in repair service			
WWAN SIM card	None None										1-year depot repair service 1-year limited onsite service			
										Mil-Spec test	MIL-STD-810G military testing			
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant			

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















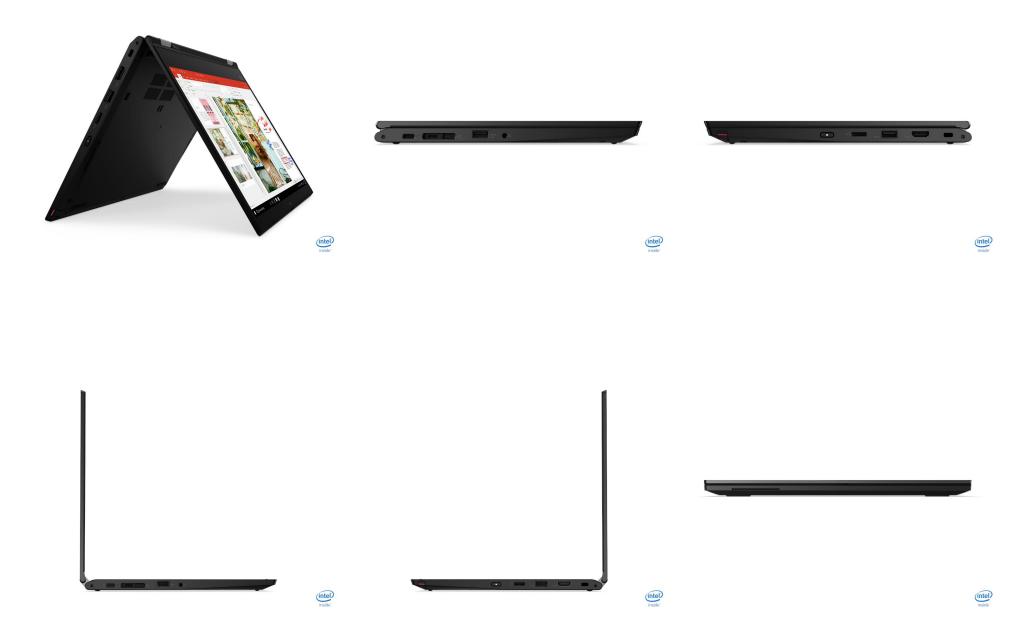




ThinkPad L13 Platform Specifications

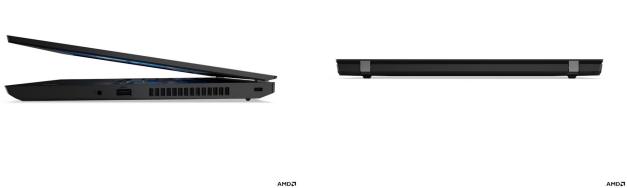
Processor	Intel® C	eleron®	Process	or or 10th G	eneration Inte	l Core™	^м i3 / i5 /	i7 Processor	r		r Optional: Smart card reader
	Process Numbe		# of s Thread	Base s Frequency	Max Turbo Frequency		lemory Types	Processo Graphics		Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	Celeror 5205U		2	1.9 GHz			R4-2400	· ·			two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector,
	i3-1011		4	2.1 GHz		MB]			security keyhole
	i5-1021 i5-1031 i7-1051 i7-1061	DU 4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.8 GHz	4.4 GHz 6 4.9 GHz 8	MB DD MB MB	R4-2666	Intel UHD Gra	aphics	Monitor cable (optional)	 * Depending on many factors, actual data transfer speed may be lower than theoretical speed Lenovo USB-C to VGA Adapter Lenovo USB-C to HDMI Adapter Lenovo USB-C to DisplayPort Adapter
Graphics	Intel Ul suppor suppor	ID Grap s extern s three	nal digita independ	rocessor; monitor via dent display	HDMI or USE	3 Type-0	,	30Hz (HDMI))	Bundled Accessories (optional)	 Lenovo HDMI to VGA Monitor Adapter Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m Lenovo USB-C to Ethernet Adapter ThinkPad Ethernet Extension Adapter Gen 2
Chipset Memory	4GB, 8	GBì ór 1	6GB / 26	hip) platforn 666MHz DD rocessor with	R4 / soldered lower memory o	to syste	emboard r	l, no sockets		Camera Audio support	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec /
Display		esolution		Type Surfac		Aspect Ratio	Conti	ast Hatio A	ewing Angle	radio support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
		D (1366)		TN Anti-gla	250 nits (non-touch)	16:9	800:1 (non-touch)	90° 170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Made to the Cont		•			(multi-touch)		700:1 (r	nulti-touch)	170	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified
Multi-touch (opt) Storage	One of a	he follow	ing, config D / PCIe	urable by mod NVMe, PCI NVMe, PCI	e 3.0 x 2	niy)				System Mgt <i>(opt)</i> Fingerprint reader NFC	(may be disabled in some region) Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest None
Optical	 Intel 	Optane™	^M Memor	y H10 with S = 3.0 x 4	Solid State Sto	orage,				Battery Max battery life	Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14.1 hr
Ethernet	RJ45 c	onnecto	r via opti		19-V (<i>Non-vPi</i> ad Ethernet E					AC adapter	 * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter
WLAN + Bluetooth™	Intel \	Vireless	-AC 9560		<i>/ model:</i> 802.11ac + B 11ax + Bluet						Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S mode
WWAN SIM card	None None	one								(optional)	1-year depot repair service 1-year depot with 2-year system board repair service
Dimensions Weight Case color Case material	Black of Display	g at 3.06 r Silver <i>cover:</i>	lb / 1.38 Aluminu	kg	11.5mm x 219	mm x 1	7.6mm			,	 1-year + 2-year depot repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Bottom	:	GFRP							Mil-Spec test	MIL-STD-810G military testing
Note: The specific										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant

Note: The specifications above may not be available in all regions and might change by regions.



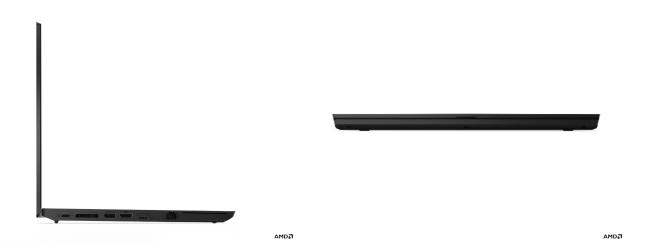
ThinkPad L13 Yoga Platform Specifications

Processor	10th Gene	eration	Intel® Co	ore™ i3 / i5 .	/ i7 Proces	sor				Smart card reade	er Optional: Smart card reader
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Proces Graph		Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i3-10110U i5-10210U i5-10310U	2	4	2.1 GHz 1.6 GHz 1.7 GHz	4.1 GHz 4.2 GHz 4.4 GHz	4MB 6MB 6MB	DDR4-2666	Intel UHD (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, optional smart card reader, microSD card reader, side docking connector, security keyhole
	i7-10510U i7-10610U	4	8	1.8 GHz 1.8 GHz	4.9 GHz 4.9 GHz	8MB 8MB				Monitor cable (optional)	 Depending on many factors, actual data transfer speed may be lower than theoretical speed Lenovo USB-C to VGA Adapter Lenovo USB-C to HDMI Adapter
Graphics	supports t	externa hree ir	al digital r ndepende	nonitor via ent displays	;	,,	e-C; 96x2160@;	30Hz (HDI	MI)	Bundled Accessories	 Lenovo USB-C to DisplayPort Adapter Lenovo HDMI to VGA Monitor Adapter Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m
Chipset Memory				p) platform 66MHz DDF		ed to sy	/stemboard	, no socke	ts	(optional)	 Lenovo USB-C to Ethernet Adapter ThinkPad Ethernet Extension Adapter Gen 2
Display	Size Reso	olution	Ту	pe Surface	Brightne	ss Asp Ra	pect Contras tio Ratio		Viewing Angle	Camera	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus World facing camera, 5MP resolution, auto focus
Multi touch	13.3" FHD	•		reflectio			800:1	72%	170°	Audio support	(selectable for fingerprint model only) HD Audio. Synaptic® CX11880 codec /
Multi-touch	could redu	ice the	brightne	en, support ess by up to		gestur	e, anti-refle	ction (AR)	,		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Hinge Convert-mode Pen <i>(optional)</i>	Yoga hing Laptop, te ThinkPad	nt, stai	nd and ta		lti-touch di	splay, c	on-board re	chargeable	Э	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Storage	ThìnkPad Pen Pro, active pen for multi-touch display, on-board rechargeable. One of the following, configurable by model: • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4									Security Security chip System Mgt (opt) Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest None
Optical Ethernet	None Notive Inte	ol Etho	rnot Con	nostion IO1	O.V. (Non.)	(Pro) o	r I219-LM (ı	(Pro)		Battery	Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet		nector	via optioi	nal ThinkPa			sion Adapte		r	Max battery life	with 65W AC adapter MobileMark® 2014: 12.23 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
WLAN + Bluetooth™	 Intel Wire 	eless-A	AC 9560,	<i>figurable by</i> Wi-Fi 2x2 8 Fi 2x2 802	302.11ac +	Blueto etooth	oth 5.0, M.2 5.0, M.2 ca	2 card ard		AC adapter	 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter
WWAN SIM card	None None									Light sensor G-sensor Gyroscope	None Yes None
Dimensions Weight Case color Case material	Starting at Black or S	t 3.17lk silver	o / 1.43kg	,		:19mm	x 17.6mm			<u> </u>	• Windows® 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro in S mode
	Bottom:	Display cover: Magnesium / Aluminum Bottom: GFRP								Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
							change by re			Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant





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AMD.

ThinkPad L14 Gen 1 (AMD) Platform Specifications

Processor	AMD Ryzer AMD Ryzer						ics or		Dimensions Weight	<i>WxDxH:</i> 13.03" x 9.25" x 0.80"; 331mm x 235mm x 20.4mm Starting at 3.56 lb / 1.61 kg
	Processor Number	# of	# of Threads	Base Clock	Max Boost Clock		Memory Controller	Processor Graphics	Case color Case material	Black Display cover: PC/ABS plastic;
	Ryzen 3 4300U	4	4	2.7 GHz	3.7 GHz	2MB L2 / 4MB L3			Smart card reade	Bottom: PC/ABS plastic rOptional: Smart card reader
	Ryzen 3 PRO 4450U	4	8	2.5 GHz	3.7 GHz	2MB L2 / 4MB L3]		Media reader Ports	MicroSD card reader Two USB 3.2 Gen 1 (one Always On),
	Ryzen 5 4500U	6	6	2.3 GHz	4.0 GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon™ Graphics		one USB 3.2 Type-C Gen 1 (w/ the function of Power Delivery and DP 1.2), one USB 3.2 Type-C Gen 2 (w/ the function of Power Delivery and DP 1.2), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
	Ryzen 5 PRO 4650U	6	12	2.1 GHz	4.0 GHz	3MB L2 / 8MB L3				headphone / microphone combo jack, optional smart card reader.
	Ryzen 7 PRO 4750U	8	16	1.7 GHz	4.1 GHz	4MB L2 / 8MB L3			Monitor cable	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo HDMI to VGA Monitor Adapter
Graphics	AMD Radeo					ve display	and 3 exter	nal monitors;	(optional)	Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter
	supports ex	ternal	monitors				@24Hz) or x2160@60H	7)	Bundled Accy Camera (optional	None None HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	AMD SoC (64GB max	Systen / 3200l	n on Chi MHz DD	p) platform	n \			DIMM sockets	Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio / dual array far-field microphone (optional for special bid model).
Display	Size Resolu	ution	Тур	e Surface			pect Contrast atio Ratio	Color Viewing Gamut Angle		headphone / microphone combò jack
	14.0" HD (1:			Anti-gla	re - 2	20 nits 16	6:9 400:1 6:9 700:1	45% 90° 45% 170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	14.0" FHD (6:9 700:1	45% 170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified
Multi-touch (opt)	On-cell touc	ch, sup	ports 10	-finger ge	esture	•			System Mgt (opt)	DASH Management
Storage	M.2 2242M.2 2280								NFC Reade	r Optional: Touch style match on host fingerprint reader on the palm rest None
Optical	None								Battery	Integrated Li-Polymer 45Wh battery,
Ethernet	Realtek® RGigabit Ethe				or RTL811	1EPV <i>(D.</i>	ASH)		Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14.36 hr MobileMark 2018: 10.7 hr
WLAN + BT (opt)					11ax + Blu	etooth™ 5	.1		AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter
WWAN (optional)	 Integrated 	l Mobil	e Broadl	oand 4G I	_TE-A, Fib	ocom L85	0-GL, M.2 ca	ard	AC adapter	65W USB-C AC adapter
SIM card (opt)	* For non-WI Gemalto eS		odel, it me	eans the m	odel is NOT	WWAN up	gradable		I	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Olivi odra (opi)	demand de	, ivi							Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year onsite repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	Work in progress
Note: The specifica									Environment	EPEAT™ Silver; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant Lenovi









ThinkPad L14 Gen 1 (Intel) Platform Specifications

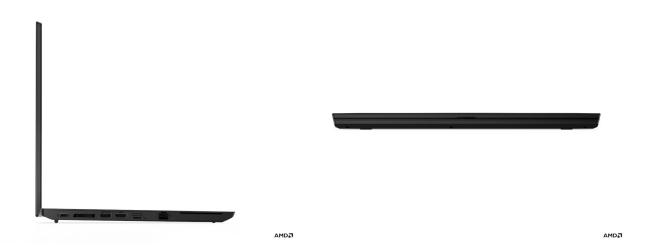
Processor	Intel® Pentiu 10th Genera (i7-10610U is	ation In	itel Core	™ i3 / i5 / i7	7 Processo	r				Dimensions Weight	Aluminum (WxDxH): 13.03" x 9.25" x 0.75"; 331mm x 235mm x 19.1mm PC/ABS (WxDxH): 13.03" x 9.25" x 0.80"; 331mm x 235mm x 20.4mm Aluminum: 34.83 lb / 1.73 kg
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory 7	ypes	Processor Graphics	Case color Case material	PC/ABS: starting at 3.56 lb / 1.61 kg Black Display cover: PC/ABS plastic or Aluminum (Aluminum is NOT available in EMEA)
	Pentium Gold 6405U	2	4	2.4 GHz	-	2MB	DDR4-2	400			Bottom: PC/ABS plastic
	i3-10110U	2	4	2.1 GHz	4.1 GHz	4MB			Intel UHD	Smart card reade	er <i>Optional:</i> Smart card reader MicroSD card reader
	i5-10210U			1.6 GHz	4.2 GHz	6MB	<u> </u>		Graphics	Ports	Two USB 3.2 Gen 1 (one Always On),
	i5-10310U	4	8	1.7 GHz	4.4 GHz	6MB	DDR4-2	666			one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i7-10510U			1.8 GHz 1.8 GHz	4.9 GHz 4.9 GHz	8MB 8MB	-				one USB 3.2 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),
	supports ex	Graphic odels a o to 3 in ternal i	s in proc re NOT a idepende monitors	essor only essor and available in ent displays via HDMI (USB T)	or AMD Rade EMEA); s via native	on 625 display	y and two @24Hz) o	exter r	rnal monitors	Bundled Accy	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 USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None
Chipset	Intel SoC (S	System	on Chip) platform	annal aana	blo tw	~ DDD4 0	O D	IMM apakata	Camera (optional	/)• HD720p camera with ThinkShutter camera privacy, fixed focus
Memory									IMM sockets Intel limitation	Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec /
Display			Ť		Drie		pect Contra		Color Viewing	d	stereo speakers, 2W x 2, Dolby® Audio /
,- ,-	Size Resolu	ution	Туре	Surface	Touch ne	ss R	atio Rati	G	amut Angle		dual array microphone (for special bid model, microphone is optional),
	14.0" HD (10			Anti-glare	- 220		6:9 400:	-	45% 90°	Karda a sud	headphone / microphone combo jack
	14.0" FHD (Anti-glare	- 250	nits 10	6:9 700:	1 4	45% 170°	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, optional LED backlight
	14.0" FHD (1920x10	080) WVA	Anti-glare	Multi- touch 300	nits 16	6:9 700:	1 4	45% 170°	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch (opt)	On-cell touc	h, sup	ports 10-	finger gest	ture	·	·			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified
Storage	 Up to 2 drives HDD / SA (NOT avail M.2 2242 M.2 2280 	TÀ 6.00 ilable ir SSD /	Gb/s, 2.5 n EMEA) PCIe NV	" wide, 7mı Me, PCle (m high, Act 3.0 x 2	ive Pro	tection Sy	stem	тм	System Mgt (opt)	Intel vPro Technology Touch style fingerprint reader on the palm rest, match on host Touch style fingerprint reader on the palm rest, match on chip (special bid only) Near Field Communication
	 Intel Opta M.2 2280. 	ne Mer	nory H10	with Solid		age,				Battery	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optical	None									Max battery life	<i>MobileMark</i> [®] <i>2014</i> : 12.3 hr <i>MobileMark 2018</i> : 7.95 hr
Ethernet	Non-vPro n vPro model	: lı	ntel Ethe	rnet Conne	ection I219	-LM (Ja	acksonville	e)		AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter (NOT available in EMEA)
WLAN + Bluetooth™ (opt)	 Intel Wi-Fi * Intel AX201 	6 AX2 card sυ	00, Wi-F <i>ipports B</i> 7	i 2x2 802.1 「5.1 but is lin	1ax + Blue nited to BT5.	tooth 5 <i>0 by Wir</i>	0.0 ndows OS			Operating system	65W USB-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN (optional)	Wireless \	NAN ur	ogradable	e		-				Limited warranty	1-year depot repair service
SIM card (opt)	• Integrated * For non-WV Gemalto eS	l Mobile <i>VAN mo</i>	e Broadb	and 4G LT	E-A, Fiboc el is NOT W	om L85 WAN up	60-GL, M.2 gradable	card	d	(optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year onsite repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	Work in progress
										Environment	EPEAT™ Silver; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant





AMD

AMD.





ThinkPad L15 Gen 1 (AMD) Platform Specifications

Processor	AMD Ryzen						phics or	•			Dimensions Weight	<i>WxDxH</i> : 14.43" x 9.84" x 0.83"; 366.5mm x 250mm x 21mm Starting at 4.37 lb / 1.98 kg
	Processor Number	# of	# of Threads	Base Clock	Max Boos Clock			emory ntroller		cessor phics	Case color Case material	Black PC/ABS plastic
	Ryzen 3 4300U	4	4	2.7 GHz	3.7 GHz	2MB L 4MB I	2/				Smart card reade Media reader	er <i>Optional:</i> Smart card reader MicroSD card reader
	Ryzen 3 PRO 4450U	4	8	2.5 GHz	3.7 GHz	2MB L 4MB I	2 /				Ports	Two USB 3.2 Gen 1 (one Always On), one USB 3.2 Type-C Gen 1 (w/ the function of Power Delivery and DP 1.2).
	Ryzen 5 4500U	6	6	2.3 GHz	4.0 GHz	3MB L 8MB L	2/	R4-3200		Radeon™ phics		one USB 3.2 Type-C Gen 2 (w/ the function of Power Delivery and DP 1.2), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
	Ryzen 5 PRO 4650U	6	12	2.1 GHz	4.0 GHz	3MB L 8MB I						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
	Ryzen 7 PRO 4750U	8	16	1.7 GHz	4.1 GHz	4MB L 8MB L					Monitor cable (optional)	Lenovo USB-C to VGA Adapter Lenovo USB-C to VGA Adapter
	AMD Radeo					tive disn	lay and	3 exter	nal mor	nitors:	Bundled Accy	Lenovo USB-C to DisplayPort Adapter None
	supports ex			s via HDN		096x216	60´@24F	lz) or		riitoro,	Camera (optional	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	AMD SoC (64GB max /	Systen / 3200ľ	n on Chi MHz DD	p) platforı R4, dual-	n channel c	apable,	two DD	R4 SO-	DIMM s	sockets	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio / dual array far-field microphone (optional for special bid model), headphone / microphone combo jack
Display									Color Gamut	Viewing Angle	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad, optional LED backlight
				Anti-gla				400:1	45%	90°	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	15.6" FHD (1920x1080) WVA Anti-glare - 250 nits 16:9 700:1 45% 15.6" FHD (1920x1080) WVA Anti-glare Multi-touch 300 nits 16:9 700:1 45%									170° 170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified DASH Management
Multi-touch (opt)	On-cell touc	h, sup	ports 10	-finger ge	esture						Fingerprint reade	r Optional: Touch style match on host fingerprint reader on the palm rest
	• M.2 2242										NFČ '	None
Optical	 M.2 2280 None 	SSD /	PCIe N	VMe, PCI	e 3.0 x 4						Battery	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
	Realtek® RT Gigabit Ethe				or RTL81	11EPV	(DASH)				Max battery life	MobileMark® 2014: 13.78 hr MobileMark 2018: 10.43 hr
WLAN + BT (opt)					l 1 av ± Rlı	ıatooth∏	M 5 1				AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter
WWAN (optional)					I I AX + DIC	ie tooti i	J. I				AC adapter	65W USB-C AC adapter
	 Integrated 	Mobile	e Broadt	and 4G	TE-A, Fib	ocom L	.850-GL	, M.2 ca	ard		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
SIM card <i>(opt)</i>	* For non-WV Gemalto eS		odel, it me	eans the m	odel is NOT	- WWAN	upgradai	ble			Limited warranty (optional)	1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year onsite repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
											Mil-Spec test	Work in progress
											Environment	EPEAT™ Silver; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant



ThinkPad L15 Gen 1 (Intel) Platform Specifications

Processor	Intel® Celer (i7-10610U i				neration Ir	ntel Cor	е™ іЗ / і	5 / i7 P	rocessor	r	Dimensions Weight	WxDxH: 14.43" x 9.84" x 0.83"; 366.5mm x 250mm x 21mm Starting at 4.37 lb / 1.98 kg
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turb Frequenc		e Memo	ry Types	Proces Graph		Case color Case material	Black Display cover: PC/ABS plastic Bottom: PC/ABS plastic
	Celeron 5205U	2	2	1.9 GHz	-	2ME	DDR	4-2400				rOptional: Smart card reader
	i3-10110U i5-10210U	2	4	2.1 GHz 1.6 GHz	4.1 GHz 4.2 GHz	_	_		Intel U		Media reader Ports	MicroSD card reader Two USB 3.2 Gen 1 (one Always On),
	i5-10310U i7-10510U i7-10610U	4	8	1.7 GHz 1.8 GHz 1.8 GHz	4.4 GHz 4.9 GHz 4.9 GHz	6ME	DDR	4-2666	Graph	nics		one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.2 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
Graphics	Intel UHD (Intel UHD ((discrete m supports u) supports ex	Graphic odels a o to 3 ir	s in proce ire NOT a ndepende	essor and a available in ent displays via HDMI (or AMD Rad EMEA); s via nativ	eon 62 e displa	ay and tw	wo exte	ernal mon	•	Monitor cable (optional) Bundled Accy	microSD card reader, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None
Chipset Memory	Intel SoC (3 64GB max * Installed m	/32001	MHz DÖÉ	platform R4, dual-ch	annel cap	able, tv	vo DDR r 2666MI	4 SO-E Hz due t	OIMM soc to Intel limi	itation	Camera (optional) 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 / stereo speakers, 2W x 2, Dolby® Audio /
Display	Size Resol	ution	Туре	Surface					Color Vie	ewing ingle		dual array microphone (for special bid model, microphone is optional), headphone / microphone combo jack
	15.6" HD (1366x768) TN Anti-glare - 220 nits 16:9 400:1 4: 15.6" FHD (1920x1080) WVA Anti-glare - 250 nits 16:9 700:1 4:								45%	90° 170°	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad, optional LED backlight
	15.6" FHD ((1920x10	080) WVA	Anti-glare	Multi- touch 30	0 nits	6:9 7	00:1	45% 1	170°	UltraNav™ Security	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
Multi-touch (opt)			<u> </u>			'					Security chip	Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified Intel vPro Technology
Storage	 Up to 2 drive HDD / SA (NOT ava M.2 2242 	ATÀ 6.00 ilable ir	Gb/s, 2.5 n EMEA)	" wide, 7m	m high, A	ctive Pr	otection	Systen	n™		Fingerprint reader (optional)	Touch style fingerprint reader on the palm rest, match on host Touch style fingerprint reader on the palm rest, match on chip (special bid only) Near Field Communication
	 M.2 2280 	SSD /	PCIe NV	Me, PCle	3.0 x 4						Battery	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optical	 Intel Opta M.2 2280 None 	ne Mei , PCle	NVMe 3.	0 x 4	i State St	orage,					Max battery life	<i>MobileMark * 2014:</i> 11.6 hr <i>MobileMark 2018:</i> 8.56 hr
Ethernet	Non-vPro r vPro mode	nodel: I I: I	ntel Ethe ntel Ethe	rnet Conne	ection I21 ection I21	9-V (Ja 9-LM (J	cksonvil ackson	le) ville)			AC adapter	 * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W USB-C AC adapter (NOT available in EMEA) 65W USB-C AC adapter
WLAN + Bluetooth™ (opt)	• Intel Wi-F * Intel AX20							ns			Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	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 Gemalto eSIM										(optional)	1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year onsite repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
											Mil-Spec test	Work in progress
											Environment	EPEAT™ Silver; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant Lenovi





ThinkPad L380 Platform Specifications

Number Cores Threads Frequency Frequ	Processor	Intel® Celer	ron® P	rocessor	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	Dimensions	<i>WxDxH</i> : 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm
Cal 3985U 2 2 2 2 2 2 2 3 3 1 2 3 3 1 3 3 1 3 3 3 3							Cache			Weight Case color	Starting at 3.22 lb / 1.46 kg Black or Silver
Sarriage			Coles			-	2MB	Types	Intel HD Graphics	Case material	
Secondary Seco			•					DDD4 0400	610	Smart card reade	
Strict S		i3-7130U	2	4	2.7 GHz	-	змв	DDR4-2133		Media reader	MicroSD card reader
Processor # of # of # see Max Turbo Cache Memory Processor Types Graphics Gra							3MB		020	l' onto	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
Number Coles Threads Frequency Frequency Frequency Frequency Types T							1	1			
Is-8250U 1.6 GHz 3.4 GHz 6MB 1.6 GHz 3.4 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 4.0 GHz 4				-			Cache			Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed
Sand			2	4							USB-C to VGA: Lenovo USB-C to VGA Adapter
Graphics Intel HD Graphics 610, 620 or Intel UHD Graphics 620 in processor; supports three independent displays; Max resolution: 4096x2304 @ 60Hz (USB Type-C); 4096x2160 @ 30Hz (HDMI) Chipset Intel SoC (System on Chip) platform Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets / System clocks down for processors with lower memory controller Display Some: 13.3° (338mm) HD (1366x768), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 7001 contrast ratio some: 13.3° (338mm) FHD (1920x1080), anti-glare, LED backlight, 1000 on-cell touch, supports 10-finger gesture Multi-touch (opt) on-cell touch, supports 10-finger gesture Multi-touch (spit) on-cell touch, supports 10-finger gesture Mone Multi-touch (spit) on-cell touch, supports 10-finger g			4	8				DDR4-2400		Bundled Accy	
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)			•							l—————	. '
Supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Chipset Intel SoC (System of Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets System clocks down for processors with lower memory controller Display Some: 13.3" (338mm) HD (1366x768), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 13.3" (338mm) FD (1920x1080), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 300: 13.3" (338mm) FD (1920x1080), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 300: 13.3" (338mm) FD (1920x1080), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 300: 13.3" (338mm) FD (1920x1080), anti-glare, LED backlight, 300: 13.	Graphics	Intel HD Gr	raphic	s 610, 62	20 or Intel U	JHD Graph	ics 620) in process	or;		HD Audio, Realtek ALC3287 codec /
Máx resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)		supports ex	xterna ree in	ıl digital n denende	nonitor via ent displays	HDMI or U	SB Typ	e-C;			
Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * System clocks down for processors with lower memory controller Display Some: 13.3" (338mm) HD (1366x768), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 70° viewing angle Multi-touch (opt) on-cell touch, supports 10-finger gesture Multi-touch (opt) On-cell touch, supports 10-finger gesture Multi-touch (opt) N-2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe) None Multi-touch tip intervent in the processors with lower memory controller Max battery life Max battery life AC adapter Max battery life AC adapter MobileMarke 2014: 16.1 hr *Battery li		Max resolu	ition: 4	4096x23	04@60Hź (USB Type-	C); 40	96x2160@3	30Hz (HDMI)		
System clocks down for processors with lower memory controller Display Some: 13.3" (338mm) HD (1366x768), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Multi-touch (opt) on-cell touch, supports 10-finger gesture Storage One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable WLAN + Bluetooth™ Intel Dual Band Wireless-AC 8265, Wi-Fi ≥x2 802.11ac + Bluetooth 4.1, M.2 card Intel BackSac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN SIM card Security chip vPro (optional) Pro (optional) Noc (optional) Near Field Communication Near Field Communication Near Field Communication Near Field Communication Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter Max battery life AC adapter Max battery life **Battery Ilive anti-singlificantly with hardware configurations, settings, usage, & other factor 45W or 65W USB-C AC adapter Operating system Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology NEC (optional) Near Field Communication Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter Max battery life **ABattery life ABattery life **Battery WobileMark* 2014: 16.1 hr **Battery Ilive anti-singlificantly with hardware configurations, settings, usage, & other factor 45W or 65W USB-C AC adapter Operating system Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology NEC (optional) Near Field Communication Nat battery life **ABattery life ABattery life							nahle t	wo DDR4 S	O-DIMM sockets		
Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio on-cell touch, supports 10-finger gesture Multi-touch (opt) on-cell touch, supports 10-finger gesture One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2 PCle NVMe) None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable 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* WWAN None ** ** ** ** ** ** ** ** **										Security chip	Discrete TPM 2.0, TCG Certified (may be disabled in some region)
Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Multi-touch (opt) on-cell touch, supports 10-finger gesture Storage One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe) None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable WLAN + Bluetooth™ 11ac, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, by Windows OS WWAN None SIM card None Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle NET (optional) Near Field Communication Near Field Communication Neat Field Communication Integrated Li-ine 45th battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter ### AC adapter Operating system **Optional: Windows** 2014: 16.1 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factor ### AC adapter Operating system **Optional: Windows** 10 Home 64 or Windows** 10 Pro 64 Limited warranty (optional) • 1-year depot repair service • 1-year depot repair service • 1-year 4-year limited onsite service • 1-year 4-year limited onsite service • 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	Display								,		
Multi-touch (opt) On-cell touch, supports 10-finger gesture Storage One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCle NVMe) None Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable WLAN + Bluetooth™ • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card • Intel B265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN SIM card None Multi-touch (opt) On-cell touch, supports 10-finger gesture Max battery life Max battery life MobileMark® 2014: 16.1 hr * Battery Mih 65W AC adapter MobileMark® 2014: 16.1 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factor 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) • 1-year depot repair service • 1-year 4-year adepot repair service • 1-year + 2-year limited onsite service • 3-year/1-yr battery depot repair service Nil-Spec test Mil-Spec test Mil-STD-810G military testing		Some: 13	3.3" (33	38mm) F	HD (1920x	1080), anti-	-glare,	LED backlig			anti-spoofing technology
Storage One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe) None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable WLAN + Bluetooth™ * 11ac, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card * Intel Ba65ac card supports BT4.2 but is limited to BT4.1 by Windows OS * None None * Max battery life Max battery life Max battery life AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty • 1-year depot repair service • 1-year 4-2-year depot repair service • 1-year 4-2-year limited onsite service • 3-year/1-yr battery limited onsite service None Mil-Spec test Mill-STD-810G military testing	Multi-touch (ont)						ast rati	o, 170° view	ring angle		
• M.2 SSD / SATA 6.0Ğb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe) Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable WLAN + Bluetooth™ Pluetooth™ 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 WWAN SIM card None Max battery life AC adapter AC adapter AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year 4-year depot repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 1-year + 2-year limited onsite service 3-year/1-yr battery life waries significantly with hardware configurations, settings, usage, & other factor 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year + 2-year depot repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing				•						1 1	with 65W AC adapter
Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable WLAN + United Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card linet 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN None None AC adapter 45W or 65W USB-Č AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) 1-year depot repair service 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	- Tarranga	 M.2 SSD 	/ SAT	A 6.0Gb/	s (e.g. xxx)	GB SSD M	.2)	OD 00D	M O DOL - NIV (M -)	Max battery life	
via optional ThinkPad Ethernet Extension Cable WLAN + Bluetooth™	Optical) / PCI	e invivie,	PCIe 3.0 x	4, 32Gb/s	(e.g. x	XXGB SSD	M.2 PCIE NVME)		45W or 65W USB-Č AC adapter
WLAN + Bluetooth™ • 11ac, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card • 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 WWAN SIM card None • 1-year depot with 2-year system board repair service • 1-year + 2-year depot repair service • 1-year + 2-year limited onsite service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	Ethernet							r I219-LM (v	Pro)		· ·
Hitel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Intel 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 WWAN None None None None None None Mil-Spec test Nil-Spec test 1-year + 2-year depot repair service	1A/I A N I .										
WWAN None SIM card None * 3-year/1-yr battery depot repair service * 3-year/1-yr battery limited onsite service * Mil-Spec test MIL-STD-810G military testing		 Intel Dual 	l Band	Wireless	s-AC 8265,	Wi-Fi 2x2	802.11	ac + Blueto Nindows OS	oth 4.1, M.2 card	(1-year + 2-year depot repair service 1-year + 2-year limited onsite service
Mil-Spec test MIL-STD-810G military testing		None									
Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	Slivi card	ivone								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 and might change by regions.

Lenovo July 2020











ThinkPad L380 Yoga Platform Specifications

Processor	7th Gener	ation Ir	ntel® Cor	e™ i3 / i5 P	rocessor				Dimensions	<i>WxDxH:</i> 12.67" x 8.82" x 0.74"; 322mm x 224.2mm x 18.8mm
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color Case material	Starting at 3.44 lb / 1.56 kg Black or Silver Display cover: Aluminum
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB 3MB	DDR4-2133	Intel HD Graphics 620	Smart card reade	Bottom: GFRP IrNone
	i5-7200U 8th Gener	ation Ir	tel Core	2.5 GHz i3 / i5 / i7 I	3.1 GHz	3MB			Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	Processor Number	# of Cores	# of Threads	Base	Max Turbo Frequency	Cache	Memory Types	Processor 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,
	i3-8130U i5-8250U i5-8350U i7-8550U	2	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	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter 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	supports e supports t Max resolu	externa hree in ution: 4	l digital n depende 4096x230		HDMI or U ; (USB Type-	SB Typ	e-C;	30Hz (HDMI)	Camera Audio support	720p: HD720p resolution, low light sensitive, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus World facing: Rear camera, 5MP resolution, auto focus HD Audio, Realtek ALC3287 codec, Dolby® Advance / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack
Chipset Memory	Up to 32G two DDR4	B max SO-D	/ 2400M IMM socl		dual-chanr		able, ory controlle		Keyboard UltraNav™	6-row, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Display Multi-touch (opt) Hinge Convert-mode	13.3" (338 16:9 aspec Capacitive Yoga hinge Laptop, ter	mm) F ct ratio e-type r e, 360 nt, star	HD (192 , 800:1 c nulti-toud degree nd, yoga	0x1080), L ontrast ration on, AR (ant	ED backlig o, 170° viev i-reflection)	ht, WV/ wing ar), suppo	A, 300 nits, ngle, AR (ar orts 10-fing	nti-reflection) er gesture	Security Security chip System Mgt (opt) Fingerprint reade NFC (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel vPro Technology r Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology Near Field Communication
Pen (optional) Storage		following	g, configui	rable by mod	lel:	1 3/	on-board ga	rage	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: 12.85 hrs
Optical							xxGB SSD	M.2 PCIe NVMe)	AC adapter	**Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter
Ethernet	Native Inte	el Ether	rnet Con	nection I21 ernet Exte	9-V (<i>Non-</i> เ กรion Cable	<i>Pro</i>) or	์ I219-LM (เ	(Pro))	Preload	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™	• 11ac, Wi • Intel Dua	i-Fi 1x1 al Band	802.11a Wireless	ac + Blueto s-AC 8265,	oth 4.1, M.: Wi-Fi 2x2	2 card 802.11	ac + Blueto Vindows OS	oth 4.1, M.2 card	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board service 1-year + 2-year depot repair service
WWAN SIM card	None None									 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
Note: The specific	ations above	mav. =	at ba a:	ilabla in all :	ragiona cad	miaht :	shanga bu ==	giono	Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant

Note: The specifications above may not be available in all regions and might change by regions.

















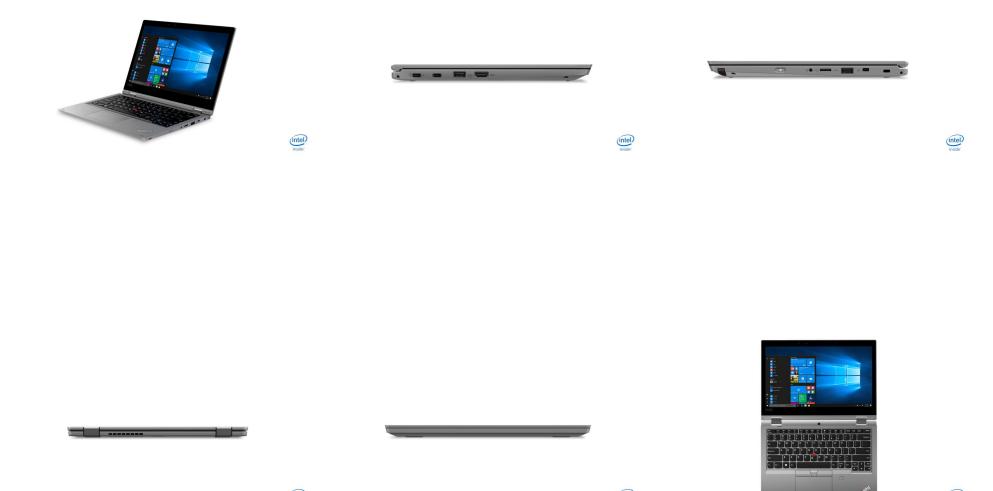




ThinkPad L390 Platform Specifications

Processor	Intel® Ce	eleron® F	rocessor	or 8th Ger	eration Int	el Core	™ i3 / i5 / i	7 Processor	Smart card read	
	Processo Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	Cel 4305	U 2	2	2.2 GHz	-	2MB	DDR4-2133			HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole
	i3-8145U		4	2.1 GHz	3.9 GHz	4MB		Intel UHD Grap	hics Manager	* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i5-8265U i5-8365U		8	1.6 GHz 1.6 GHz	3.9 GHz 4.1 GHz	6MB 6MB	DDR4-2400		Monitor cable (optional)	Lenovo USB-C to VGA Adapter Lenovo USB-C to VGA plus Power Adapter
	i7-8565U	4	8	1.8 GHz	4.6 GHz	8MB				Lenovo USB-C to HDMİ Adapter Lenovo USB-C to HDMI plus Power Adapter
Graphics	supports supports Max res	externa three in olution:	ndepende 4096x230	nonitor via nt displays)4@60Hz (30Hz (HDMI)	Bundled Accessories (optional)	Lenovo USB-C to DisplayPort Adapter Lenovo USB-C to Ethernet Adapter Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m
Chipset Memory	32GB m	ax / 240	OMHz DÖ	o) platform PR4, dual-c 2666MHz b					Audio support	ThinkPad Ethernet Extension Cable HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / Stores packers 20 M x 2 Delba Audio M Bromium /
Display	Size Re	solution	Тур	oe Surface	Brightnes	Asped		st Ratio View		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
	13.3" HE) (1366x7	'(88) Ti	N Anti-glar	e 250 nits	16:9	50	0:1 90		6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
	13.3" FH	ID (1920x	(1080) W\	/A Anti-glar	e 250 nits	16:9	700:1 (no 800:1 (mi		Security	Power-on password, hard disk password, supervisor password, security keyhole
Multi-touch (opt)	On-cell t	ouch, su	ipports 10	O-finger ge	sture (FHD	only)			Security chip	Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)
Storage	M.2 22M.2 22	280 SSD 242 SSD	/ SATA 6 / PCle N	VMe, PCIe	3.0 x 2					t) Intel vPro Technology er <i>Optional:</i> Touch style fingerprint reader on the palm rest Near Field Communication
Ontical	 Intel C M.2 22 	ptane™		VMe, PCIe H10 with S 3.0 x 4		Storage	,		Battery Max battery life	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14.61 hr
Optical Ethernet	via optio	nal Thin	kPad Eth	nection I21 ernet Exter et Adapter			I219-LM (1	vPro)	AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter • 65W USB-C AC adapter • 65W USB-C slim AC adapter
WLAN +				Wi-Fi 1x1						m <i>Optional:</i> Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ WWAN SIM card	None None	/ireless-/	AC 9560,	Wi-Fi 2x2	302.11ac +	Blueto	oth 5.0, M.:	2 card	Limited warranty (optional)	 1-year depot with 2-year system board repair service 1-year limited onsite service
Dimensions Weight Case color Case material										 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Bottom:		SFRP						Mil-Spec test	MIL-STD-810G military testing
Note: The specific									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant

Note: The specifications above may not be available in all regions and might change by regions.



ThinkPad L390 Yoga Platform Specifications

Processor	8th Generation Inte	el® Core™	i3 / i5 / i7	Processor					Smart card reade	
		hreads Free 4 2 8 1 8 1	equency I .1 GHz .6 GHz	3.9 GHz 4 3.9 GHz 6 4.1 GHz 6	MB MB	Memory Types DR4-2400 Ir	Proces Graph	nics	Monitor cable	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo USB-C to VGA Adapter
Graphics	Intel UHD Graphics supports external d supports three inde Max resolution: 409	digital mor ependent	nitor via H displays;			•)Hz (HDN	Л І)	(optional) Bundled	 Lenovo USB-C to VGA plus Power Adapter Lenovo USB-C to HDMI Adapter Lenovo USB-C to HDMI plus Power Adapter Lenovo USB-C to DisplayPort Adapter Lenovo USB-C to Ethernet Adapter
Chipset Memory	Intel SoC (System of 32GB max / 2400M) * Installed memory is	⁄IHz DÖŔŻ	4, dual-ch	annel capab trun at 2400M	ole, two 1Hz due	DDR4 SO to Intel limit	-DIMM s tation	ockets	Accessories (optional)	 Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m ThinkPad Ethernet Extension Cable
Display	Size Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Camera	One of the following, configurable by model: • HD720p camera, fixed focus • IR camera and HD720p camera, fixed focus (black model only)
Multi-touch	13.3" FHD (1920x10) Capacitive-type mu could reduce the br Yoga hinge, 360 de	ulti-touch, rightness egree	by up to	300 nits 10-finger ge 10%	16:9 esture, a	800:1 anti-reflecti	72% ion (AR),	170°	Audio support	World facing camera, 5MP resolution, auto focus (mutually exclusive with fingerprint reader) HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Multi-mode Pen <i>(optional)</i>	Laptop, tent, stand ThinkPad Pen Pro,	and table active pe	et n for mult	ti-touch displ	ay, on-l	ooard gara	ıge		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Storage	One of the following, c • M.2 2280 SSD / S • M.2 2242 SSD / F • M.2 2280 SSD / F • Intel Optane™ Me M.2 2280, PCIe N None	SATĂ 6.00 PCIe NVN PCIe NVN emory H1	Gb/s Me, PCle Me, PCle 0 with So	3.0 x 2 3.0 x 4	orage,				Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest (mutually exclusive with World facing camera) Near Field Communication
Ethernet	Native Intel Etherne via optional ThinkPa Lenovo USB-C to E	ad Ethern	net Extens	I-V (<i>Non-vPr</i> sion Cable o	o) or I2 r	19-LM (<i>vP</i>	Pro)		NFC (optional) Battery	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
WLAN + Bluetooth™	Intel Wireless-ACIntel Wireless-AC	9462, Wi	i-Fi 1x1 8						Max battery life AC adapter	MobileMark® 2014: 12.17 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter • 65W USB-C AC adapter
WWAN SIM card	None None									65W USB-C slim AC adapter
Dimensions Weight Case color Case material	WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm Starting at 3.44 lbs / 1.56 kg Black or Silver									Optional: Windows® 10 Home 64 or Windows 10 Pro 64 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
Note: The specific	ations above may not	ho availah	olo in all ro	aione and mi	aht cha	ngo by rogi	ione		Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant Lenovo



ThinkPad L480 Platform Specifications

Processor	Intel® Cele	eron® F	rocessor	, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)
	Cel 3965U		2	2.2 GHz	-	2MB		Intel HD Graphics 610		Intel XMM™ 7260 (Fibocom L850-GL), M.2 card (EMEA only) Intel XMM™ 7360 (Fibocom L850-GL), M.2 card
	i3-7020U i3-7130U	2		2.3 GHz 2.7 GHz	- -	3MB 3MB	DDR4-2133	Intel HD Graphics	SIM card (opt)	* For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7200U i5-7300U	1	4	2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB		620	Dimensions	<i>WxDxH</i> : 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm
		ation l	ntel Core	i3 / i5 / i7 F		SIVID			Weight Case color	Starting at 3.71 lb / 1.68 kg Black
	Processor Number	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Case material Smart card reade	PC/ABS plastic or Optional: Smart card reader
	i3-8130U	Cores 2	Threads 4	Frequency 2.2 GHz	Frequency 3.4 GHz	4MB	Types	Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8250U i5-8350U	4	8	1.6 GHz 1.7 GHz	3.4 GHz 3.6 GHz	6MB	DDR4-2400	Intel UHD Graphics 620	Forts	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
	i7-8550U * i3-7130U	is NOT	available i	1.8 GHz n US and EN	4.0 GHz <i>1EA</i>	8MB		<u> </u>	l	headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole
Graphics	Intel HD G	araphic	s 620 or	Intel UHD (Graphics 6		0 in process rocessor an		Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	(discrete r supports e supports t	models externa hree ir	are NOT al digital n ndepende	aDDR5 mei available i nonitor via nt displays 04@60Hz (n EMEA); HDMI or U: ;	,,	•	0Hz (HDMI)	Camera (optional) Audio support	One of the following, configurable by model: • HD720p camera, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ /
Chipset Memory	32GB max	x / 240	OMHz DE	p) platform)R4, dual <u>-</u> c	hannel cap	able, t	wo DDR4 S	O-DIMM sockets	Kevboard	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight
Display				cessors with		-	<i>oller</i> D backlight,		UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Some: 14 25	20 nits, 1.0" (35 50 nits,	16:9 asp 55mm) Fl 16:9 asp	ect ratio, 5 HD (1920x1 ect ratio, 8	00:1 contra 080), anti- 00:1 contra	st ratio glare, l st ratio			Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel vPro Technology
Multi-touch (opt) Storage	On-cell to		• •	0-finger ges one M.2 228	•		ctorago		1 .	r Optional: Touch style match on chip fingerprint reader on the keyboard bezel, anti-spoofing technology
Storage	Some: H	DD/S	ATA 6.0G	ib/s, 2.5" w	ide, 7mm h	igh, Ac	tive Protect	on System™	NFC (optional) Battery	Near Field Communication Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Some: M Some: 12	1.2 SSE 28GB N) / PCle N M.2 SSD	NVMe, PCI / PCIe NVI	e 3.0 x 2, 1 //e, PCle 3.	6Gb/s 0 x 2,	g. xxxGB SS 16Gb/s, sive with WV	,	Max battery life	with 65W AC adapter MobileMark® 2014: 12.2 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Optical	None								AC adapter	45W or 65W USB-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Non-vPro vPro mod			ernet Conr ernet Conr			cksonville) Jacksonville)	I	1-year depot repair service
WLAN + Bluetooth™ (optional)	Realtek® Intel Dua	of the following, configurable by model: Paltek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US on Paltek® Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 Pal 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS							(optional)	 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
Note: The specific									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant





ThinkPad L490 Platform Specifications

						el Cole	i3 / i5 / i	Process	sor	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		essor 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				roptional: Smart card reader MicroSD card reader
	i3-8145U	2	4	2.1 GHz	3.9 GHz	4MB				Ports	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	1	O Graphics		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort).
	i7-8565U	4	8	1.8 GHz	4.1 GHZ 4.6 GHz	8MB	DDR4-2400				one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
	i7-8665U	4	8	1.9 GHz	4.8 GHz	8MB					headphone / microphone combo jack, optional smart card reader.
	(discrete n supports e supports tl	Graphi nodels xterna nree in	ics in pro are NOT I digital n depende	cessor and available in availab	l AMD Rade n EMEA); HDMI or US	ВВ Тур	e-C;		,	Monitor cable (optional) Bundled Accy	microSD card reader, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None
	Intel SoC (<i>J)</i> , 400	70X2 100 @ 2	14112 (110	/IVII <i>)</i>	Camera (optional)	One of the following, configurable by model:
Memory	64GR max	/ 2400	MH2 DE	Ř4 dual-c	hannel can	able, t	wo DDR4 S or 2400MHz (O-DIMM due to Inte	sockets I limitation	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 /
	Size Reso		Тур		"	Паш	o Ratio	Gamut	Viewing Angle		stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone (for special bid model, microphone is optional), headphone / microphone combo jack
	14.0" HD (14.0" FHD			N Anti-glar		16:9		45% 45%	90° 170°	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
			- '		sture (FHD		9 000.1	45/6	170	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	 HDD / S. SSD / S. M.2 228 M.2 224 * Installed N 	ATA 6.0 ATA 6.0 0 SSD 2 SSD 1.2 2280	0Gb/s, 2. 0Gb/s, 2. / PCle N / PCle N 0 SSD is F	5" wide, 7r 5" wide, 7r VMe, PCle VMe, PCle	nm high, Ac nm high 3.0 x 4 3.0 x 2 run at PCle 3	tive Pr	to M.2 SSD		mitation	Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) Intel vPro Technology *Optional: Touch style fingerprint reader on the palm rest Near Field Communication
	None	into O	ptario inc	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0 1111110, 1 4	310 0.0	, X L			Battery	Integrated Li-Polymer 45Wh battery,
	Non-vPro vPro mode				nection I219 nection I219			e)		Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 12 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Bluetooth™ • (optional)	(NOT ava	RTL88	322BE, V in EMEA	Vi-Fi Źx2 80 ()	<i>el:</i>)2.11ac + B 302.11ac +			card			 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter
,	 Intel Wi-f 	i 6 AX	200, Wi-	Fi 2x2 802	11ax + Blue	etooth	5.0				Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN (optional)	al) One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • 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 Gemalto eSIM								EA only)		One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant



ThinkPad L580 Platform Specifications

Processor for for for Base Max Turbo Cache Types Graphics Cal 3965U 2 2.2 GHz - 3MB DR4213 Intel HD Graphics Gr	
Cel 3965U 2 2 2 GHz 3 MB 5-7300U 2 2 2 GHz 3 MB 5-7300U 4 2 GHz 3 MB 5-7300U 4 2 GHz 3 MB 5-7300U 4 2 GHz 3 GHz 3 MB 5-7300U 5-7300U 2 4 2 GHz 3 MB 5-7300U 2 4 4 GHz 3 MB 5-7300U 2 4 2 GHz 3 MB 5-7300U 2	
Second S	
Security	
Bith Generation Intel Core is 7 is 7 is 7 processor Froguency Base Max Turbo Cache Memory Processor Signature Froguency Processor Froguency Processor Froguency Processor Froguency Processor	95mm
Processor # of # of Mumber Green	
Sample S	
Intel UHD Graphics Intel U	
Fig. 1730U is NOT available in US and EMEA Intel HD Graphics 610, 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and AMD Radeon 530, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Camera (optional) HD720p camera, fixed focus term of page and the page	and DisplayPort),
Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 in processor and AMD Radeon 530, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports three independent displays; supports three independent displays; Max resolution: 4096x2304 @60Hz (USB Type-C); 4096x2160 @30Hz (HDMI) Chipset Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 42D mits 16:9 aspect ratio, 500:1 contrast ratio 50me: 15.6° (396mm) HD (1306x768), anti-glare, LED backlight, 250 mits, 16:9 aspect ratio, 500:1 contrast ratio, 770° viewing angle Multi-louch None 50me: M2 SSD / SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: N2 SSD / 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, 50me: 128GB M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s 10 mWaN slot as 2nd Storage, mutually exclusive with 50 my model: 1 mitel Ethernet Connection 1219-LM (Jacksonville) 4 Prov model: 1 nitel Ethernet Connection 1219-LM (Jacksonville) 5 nitel Ethernet Connection 1219-LM (Jacksonville) 6 nitel Ethernet Connection 1219-LM (Jacksonville) 7 nor delicition 1	
supports external digital monitor via HDMI of USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Chipset 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 Display Some: 15.6" (396mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio 250 nits, 16:9 aspect ratio, 500:1 contrast ratio 70° viewing angle Multi-touch None Storage System has one HDD slot or one M.2 2280 slot exclusively for storage Some: 12806 M.2 SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: 12808 M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optical None Ethernet Non-VPro model: Intel Ethernet Connection 1219-V (Jacksonville) VPro model: Intel Ethernet Connection 1219-V (Jacksonville) WLAN + One of the following, configurable by model: Near the support supports and support three derotopics and support sterio support and support three derotopics and support sterio support and support and support sterio support and support store speakers, 2W x 2, Dolby® Audios and support dual array microphone, headphone / microphone combo jack Keyboard UltraNav™ 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional UltraNav™ 5-ceurity chip valor spinting device and buttonless Mylar surface multi-touc Security chip valor spinting device and buttonless Mylar surface multi-touc Security chip valor spinting device and buttonless Mylar surface multi-touc Security chip valor spinting device and buttonless Mylar surface multi-touc Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel valor spinting device and buttonless Mylar surface multi-touc Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel valor spinting device and buttonless Mylar surface multi-touc Security chip valor spinting device and buttonless Mylar surface	nan theoretical speed
Chipset Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 sorted and start spointing device and buttonless Mylar surface multi-touc 52curity chip verification and	
220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 250 nits, 16:9 aspect ratio, 800:1 contrast ratio, 170° viewing angle Multi-touch None Multi-touch Storage System has one HDD slot or one M.2 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Ethernet Connection I219-LM (Jacksonville) WLAN + Bluetooth™ Piscrete TPM 2.0, TCG Certified (may be disabled in some region) Intel vPro Technology Fingerprint reader Optical None Security chip vPro (optional) Pro (optional) None Security chip vPro Technology Fingerprint reader on the palm anti-spoofing technology NFC (optional) Near Field Communication Battery Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up with 65W AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot with 2-year system board repair service 1-year 4-2-year depot with 2-year system board repair service 1-year 4-2-year depot with 2-year system board repair service 1-year + 2-year depot with 2-year limited onsite service 1-year + 2-year limited onsite service	
Multi-touch Storage System has one HDD slot or one M.2 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optical None on)	
Storage System has one HDD slot or one M.2 2280 slot exclusively for storage Some: NDD / 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: N.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 Optical Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) WLAN + Bluetooth™ 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, (e.g. xxxGB SSD) some: SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s in WWAN slot as 2nd Storage, mutually exclusive with WWAN Operating system Optional: Windows* 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot with 2-year system board repair service 1-year depot with 2-year depot repair service 1-year 4-year limited onsite service 1-year 4-year limited onsite service	ann rest,
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 Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN + Bluetooth™ Poperating system None Max battery life AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year depot with 2-year system board repair service 1-year 4-year limiting with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year 4-year limiting with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year 4-year limiting with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year 4-year limiting with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year 4-year limiting with hardware configurations, settings, usage 45W or 65W USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot with 2-year depot repair service 1-year 4-year limited onsities are vice.	up to 80% in 1hr)
Optical None Optical None Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) None of the following, configurable by model: None of the following, configurable by model: Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US only)	ısage, & other factors
vPro model: Intel Ethernet Connection I219-LM (Jacksonville) 1-year depot with 2-year system board repair service WLAN + Bluetooth™ One of the following, configurable by model: 1-year + 2-year depot repair service • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US only) 1-year + 2-year limited onsities service	
Bluetooth TM • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US only) • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US only)	
 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 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 specifications above may not be available in all regions and might change by regions.	t Lenovo











ThinkPad L590 Platform Specifications

Processor	Intel® Cele	ron® P	rocessor	or 8th Ger	neration Int	el Core	e™ i3 / i5 / i7	' Processo	r	Dimensions	WxDxH: 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm						
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Proces Graph		Weight Case color Case material	Starting at 4.48 lb / 2.03 kg Black PC/ABS plastic						
	Cel 4305U	2	2	2.2 GHz	-		DDR4-2133				MicroSD card reader						
	i3-8145U	2	4	2.1 GHz	3.9 GHz	4MB				Ports	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 G	Graphics		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),						
	i7-8565U	4	8	1.8 GHz	4.1 GHz 4.6 GHz	8MB	DDN4-2400 				one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),						
	i7-8665U	4	8	1.9 GHz	4.8 GHz	8MB					headphone / microphone combo jack, optional smart card reader,						
Graphics	Intel UHD Intel UHD (discrete m supports e supports th	Graphi nodels xternal nree in	cs in pro are NOT I digital n depende	ocessor only ocessor and available i nonitor via ent displays	y or I AMD Rad n EMEA); HDMI or U: ;	eon 53 SB Typ	5, 2GB GD e-C; 96x2160@2		,	Monitor cable (optional) Bundled Accy	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical spee 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						
						C); 40	90X210U@2	402 (00101	11)		One of the following, configurable by model:						
Memory	64GB max	/ 2400	MHz DE	p) platform DR4, dual-c <i>2666MHz b</i>	hannel cap	able, t	wo DDR4 S or 2400MHz d	O-DIMM so lue to Intel lii	ockets mitation		 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec / 						
	Size Reso		1 7	pe Surface		пан	o Ratio	Gamut	/iewing Angle		stereo speakers, 2W x 2, Dolby® Advanced Audio / optional dual array microphone (for special bid model, microphone is optional), headphone / microphone combo jack						
	15.6" HD (1			N Anti-glare VA Anti-glare		16:9		45% 45%	90° 170°	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight						
		•		0-finger ge:			9 000.1	45/6	170	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
Storage	• HDD / SA	ATA 6.0	0Gb/s, 2. 0Gb/s, 2.	.5" wide, 7r 5" wide, 7n	nm high, Aonm high	• • •	otection Sys	stem™		Security Security chip	Power-on password, hard disk password, supervisor password, security ker Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)						
:	 M.2 2242 * Installed N 	2 SSD 1.2 2280	/ PCIe N SSD is F	IVMe, PCIe IVMe, PCIe PCIe 3x4 but	3.0 x 2 run at PCle	3x2 due	to M.2 SSD	adapter limit	tation	Fingerprint reader	Intel vPro Technology Optional: Touch style fingerprint reader on the palm rest						
Optane™ memory Optical	Optional: I None	ntel O _l	ptane me	emory, PCI	e NVMe, P	Cle 3.0) x 2				Near Field Communication						
		modal:	Intol Eth	nernet Conr	acation 1910) // / lo	okoopyillo)			Battery	Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter						
	vPro mode						Jacksonville Jacksonville)		Max battery life	MobileMark® 2014: 12 hr						
WLAN +	AN + One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card									·	* Battery life varies significantly with hardware configurations, settings, usage, & othe • 45W USB-C AC adapter • 65W USB-C AC adapter • 65W USB-C slim AC adapter						
										Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64						
						CIOOIII	5.0			Limited warranty	1-year depot repair service						
	 II) One of the following, configurable by model: Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable 										 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 						
	Gemalto eSIM										 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 						
										l	MIL-STD-810G military testing						
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant						



ThinkPad P1 Platform Specifications

Processor	8th Generation	Intel® Core	e™ i5 / i7 Pro	ocessor or	Intel X	ceon® E Pro	ocessor	Smart card reade	r Optional: Smart card reader			
	Processor # of # of Base Max Turbo Cache Number Cores Threads Frequency Frequency		Memory Types	Processor Graphics	ExpressCard Media reader Ports	None SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On),						
	i5-8400H 4 i7-8750H i7-8850H	8	2.5 GHz 2.2 GHz 2.6 GHz	4.2 GHz 4.1 GHz 4.3 GHz	9MB	DDR4-2666	Intel UHD Graphics 630	FOILS	two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack,			
	6 E-2176M	12	2.6 GHz 2.7 GHz	4.4 GHz	12MB	DDN4-2000	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	Intel UHD Grap NVIDIA® Quadre supports extern	o® P1000	or P2000. 4	GB GDDF	R5 men	nory;		(optional) Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable			
	Up to 4 displays Max resolution:	s with 3 ex	ternal moni	tors plus s	ystem	LCD scree	n.	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus				
Chipset Memory	Mobile Intel CM 64GB max / 266 Xeon processor	66MHz DE	R4, ECC o				upported only on ckets	Audio support	HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone			
Display	Some: 15.6" (3 300 nits	s, 16:9 asp	ect ratio, 70	00:1 contra	glare, l ast ratio	LED backlio D,	ght, WVA,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad			
	Some: 15.6" (3 400 nits	896mm) UI s, 16:9 asp	viewing and HD (3840x2) ect ratio, 12 ° viewing a	2160), anti- 200:1 cont	rast rat		acklight, WVA,	Security Security chip vPro (optional)	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			
Multi-touch (opt) Pen (optional)	Capacitive-type Lenovo Pen Pro		ch, supports	s 10-finger	gestur	e (4K only)		Color calibration				
Storage RAID (optional) Optical	Up to two M.2 SS M.2 SSD / PCIe RAID 0/1 suppo None	e NVMe, P ort	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 hardware configurations, settings, usage, & other factors 135W slim tip AC adapter			
Ethernet	Native Intel Etho	optional Th	inkPad Eth	ernet Exte	nsión (Cable `		Operating system	One of the following, configurable by model: • Windows® 10 Home 64			
WLAN Bluetooth™	Intel Wireless-A Bluetooth 5.0 w								Windows 10 Pro 64Windows 10 Pro 64 for Workstations			
WWAN SIM card	None None							Limited warranty	One of the following, configurable by model: 1-year depot repair service			
Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.76 lb / 1.7 kg; Multi-touch model: starting at 4.06 lb / 1.8 kg								 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
Weight								Mil-Spec test	MIL-STD-810G military testing			
Case color Case material	Black Display cover: Bottom:	CFRP/GF Aluminum						Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			

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

Lenovo November 2019







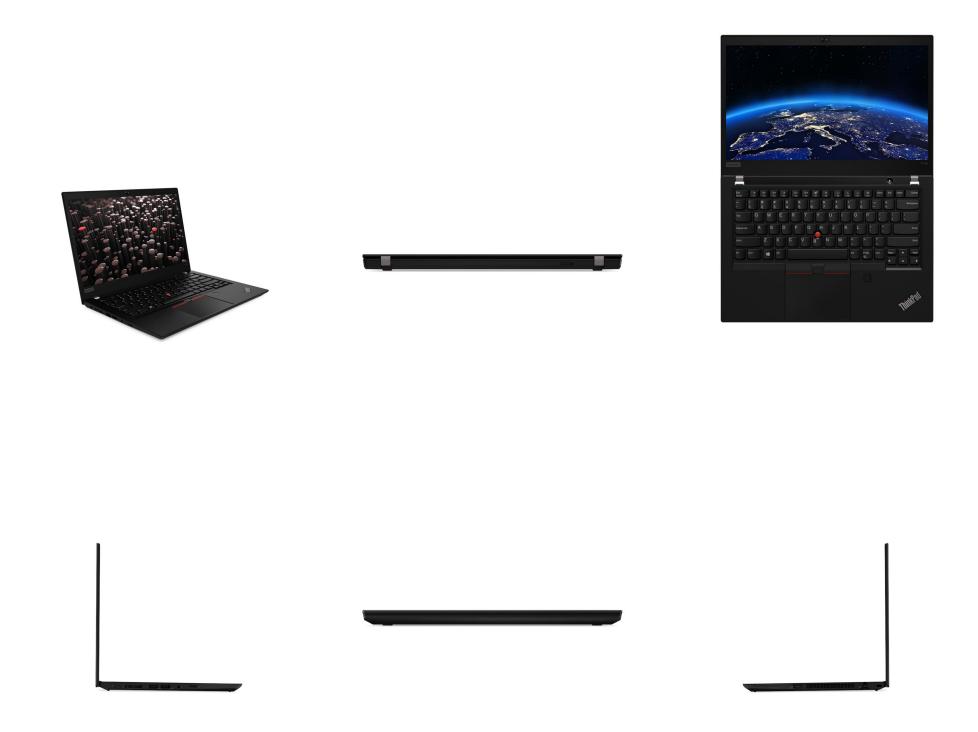






ThinkPad P1 (2nd Gen) Platform Specifications

Processor		ation I		re™ i5 / i7	7 / i9 Pr	ocessor or	Intel Xe	eon® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm				
			# of Threads	Base Freque		Cach		emory ypes	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;				
	i5-9400H 4 8 i7-9750H 6 12 i7-9850H 6 12			2.5 GH 2.6 GH 2.6 GH	Hz 4.5 Hz 4.5 Hz 4.6	8 GHz 8 8ME 5 GHz 12M 6 GHz 12M	B B DDB	In			Case color Case material	Multi-touch model: starting at 4.0 lb / 1.81 kg Black paint (FHD model) or black weave (UHD model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy				
	i9-9880H E-2276M	6	16 12	2.3 GH 2.8 GH		GHz 16M GHz 12M	В	_	ntel UHD P63		Smart card reade Media reader Ports	er <i>Optional:</i> Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3				
Graphics	supports of Up to 4 dis	Graph Quadro externa splays	iics 630 ® T1000 al digital with 3 ex	or P630 or T200 monitor xternal n	in proce 0, 4GB via HDN nonitors	y or essor and GDDR5 me MI or Thund plus systen); 4K@60H	erboĺt [™] m LCD	; screen.			(with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo optional smart card reader, SD card reader, security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretic HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter (optional) (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo					
Chipset Memory	Mobile Into	x / 266	6MHz D	DR4, EC	CC or no	on-ECC (EC two DDR4	CC fund	ction sup	ported o	only on	Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable I) One of the following, configurable by model:				
Display	<u> </u>	Resolution						Type Surface			Contrast Ratio	Gamut Angle		Audio support	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec /	
	15.6" FHD	*	,	WVA Anti-glare 300 nits			16:9	700:1	72% NTSC	170°	Addio Support	stereo speakers, 2W x 2, Dolby® Audio™ Premium /				
	15.6" FHD Dolby	(1920x) Vision	1080) ™ HDR	WVA Ar	nti-glare	500 nits	16:9	1200:1	72% NTSC	170°		optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system				
		(3840x Vision		WVA Ar	nti-glare	500 nits	16:9	1200:1	100% Adobe	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad				
	15.6" Dolby	(3840x y Vision -touch		OLED ,	Anti- eflection / Anti- mudge	SDR 400nit, HDR 500nit (peak)	16:9	100000:1	100% DCI-P3	170°	Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology				
Multi-touch (opt) Pen (optional)	AR (anti-re	eflectio	n) / AS	(anti-sm	udge) c	-finger gest oating	ure (U	HD OLEI	D only),		Fingerprint reader Color calibration NFC	er Touch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None				
Storage RAID (optional) Optical	Lenovo Pen Pro (special bid only) Up to two M.2 SSD, supports single sided M.2 2280 drives only M.2 2280 SSD / PCIe NVMe 3.0 x 4 RAID 0/1 support None										Battery Max battery life AC adapter	Integrated Li- Polymer 80Wh battery, supports Rapid Charge (charge up to 80% i 1hr) **MobileMark** 2014: 13.8 hr **Battery life varies significantly with hardware configurations, settings, usage, & other factor. 135W slim tip AC adapter				
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>)) via bundled or optional ThinkPad Ethernet Extension Cable										Operating system	One of the following, configurable by model: • Windows® 10 Home 64				
WLAN (optional) Bluetooth™ (opt)	al) Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.1 b) Bluetooth 5.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter											Windows 10 Pro 64Windows 10 Pro 64 for Workstations				
WWAN SIM card	None None										Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service				
											Mil-Spec test	MIL-STD-810G military testing				
Note: The specifica	-4:		-41	. !! - !- ! !	-0						Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant Leno				



ThinkPad P14s Gen 1 Platform Specifications

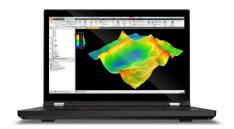
Processor		Supports one 10th Core i7 and i5 -U suffix processor as following:												Weight	Starting at 3.24 lb (1.47kg)							
Number Cores Treads Fraguery Fragu						J 17 C						_			0 \ 0/							
Processor Proces																						
Processor 1/1-1010 4 8 1.581*2 4.981*2 1.981*2 0.9		Number Cores Threads Frequency Frequency Types Graphics												Case material								
Profession 4 8 1.86 Hz 4.96 Hz 8 MB DoRA-2866 Inst UHD Craphics 5-10310U 4 8 1.66 Hz 4.46 Hz 8 MB DoRA-2866 Inst UHD Craphics 5-10310U 4 8 1.66 Hz 4.46 Hz 8 MB DoRA-2866 Inst UHD Craphics 5-10310U 4 8 1.66 Hz 4.46 Hz 8 MB DoRA-2866 Inst UHD Craphics 1.56 Hz	Processor	i7-10	610U	4	8		1.8GHz	4.9GF	lz 8MB	DDR4-2	2666 Inte	el UHD G	araphics	Media reader								
School 1 18 1.76 1.7	1 10000001	i7-10510U 4 8 1.8GHz 4.9GHz 8MB DDR4-2666 Intel UHD								DDR4-2	2666 Inte	el UHD G	araphics	Wicaia Toadoi								
School 4 8 16-GHz 4.20EL 4.00B DRA-2666 intel UHD Graphics Intel SQL (System on Chip) platform DRA-2666 intel UHD Graphics DRA-2666																						
Chippest Intel SQC (System on Chip) platform DDR4-3260, operates at DDR4-2666, operat		15-10	3100	4	8		1./GHZ	4.4GF	1Z GIVIB	DDR4-2	2000 11116	el OHD G	arapnics	Standard Ports								
Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM Memory Spocks SGP 166B DDR4-3290 non-ECC for Soldered DIMM SGP 166B DDR4-3290 non-ECC fo												el UHD G	araphics		1x microSD card reader							
DDR4-3200, operates at DDR4-3200 son-ECC for DIMM socket, 8GB/16GB/26GB DDR4-3200 non-ECC for Soldered DIMM Memory Sockets 1 DIMM socket plus 1 soldered DIMM, dual-for beta non- Memory Protection None Memor	Chipset	Intel	SoC (Svsten	n on C	hip)	platform							1	On right: 1x security keyhole, 1x RJ-45, 1x USB-A 3.2 Gen 1 (Always On)							
Memory Type SGR1/GBG/32GB DDR4-3200 SO-DIMM non-ECC for DIMM socket, SGR1/GBG DDR4-3200 non-ECC for soldered DIMM Memory Protection Non- No	•													Optional Ports								
Memory Protection Name N	Memory Type									r DIMM	socket,			<u>'</u>								
Memory Poscets Max Memory Memory Protection None Max Memory AgeB with ner 32GB SO-DIMM plus one 16GB soldered DIMM Montor Protection None Max Memory AgeB with ner 32GB SO-DIMM plus one 16GB soldered DIMM Montor Cable Bundled Accy Montor State Montor Cable Montor Montor Montor Cable Montor Cable Montor Montor Montor Cable Montor	, ,,	8GB/	16GE	DDR4	-3200	non	-ECC for	solde	red DIMM		•			Monitor cupport								
Memory Protection None Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Max Memory 48GB with one 32GB SO-DIMM Max Memory 48GB wit	Memory Sockets	1 DIN	MM sc	cket pl	us 1 s	olde	red DIMN	/I, dual	-channel d	apable				INIOTHOL Support								
Max Memory 46gB with one 32gB SC-DIMM piles one 18dB soldered DIMS Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains in processor) and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDBR5 memory (argains) intel UHD Graphi	Memory Protection	None)	-										Monitor cable								
Intel UHD Graphics in processor and NVIDIA Quadro PS20, 2GB GDDF5 memory	Max Memory	48GE	3 with	one 32	2GB S	O-D	IMM plus	one 1	6GB solde	red DII	MM											
Size Resolution Type Surface Touch Srightness Aspect Golor (Sewing Gamut Angle) 14.0° FHD (1920x1080) WVA Anti-glare 15.0° FHD (1920x1080) WVA MID (1920x1	Graphics											DDR5 m	nemory									
## Reactive Angle Audio chip Facetive Angle Audio chip Fac	·	<u>.</u>			Í.	_	o ,		5	Aspect	Contrast	Color	Viewing	Camera	HD720p camera with ThinkShutter camera privacy, fixed focus							
14.0 FHD (1920x1080) WVA Anti-glare 250 nits 16.9 700.1 45% 170* 140* FHD (1920x1080) WVA Anti-glare 14.0 FHD (1920x1080)		Size	Resol	ution		Type	Surface	Iouch	Brightness						• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus							
Display 14.0" FHD (1920x1080) WVA Anti-glare multi-touch 14.0" FHD (1920x1080) WVA Anti-glare 400 nits 16.9 700.1 45% 170° 170° 14.0" FHD (1920x1080) WVA Anti-glare 400 nits 16.9 800.1 72% 170° 170° 14.0" FHD (1920x1080) WVA Anti-glare 400 nits 16.9 800.1 72% 170° 170° 14.0" 14.														Audio chip	Realtek ALC3287 codec							
Display 14.0° FHD (1920x1080) WVA Anti-glare Multi-loudh 16.9° 700.1° 45% 170° 170° 14.0° FHD (1920x1080) WVA Anti-glare 400 nits 16.9° 800.1° 72% 170° 170° 14.0		14 0"	FHD (EHD (1020v108)		NVA	Anti-glare	_	250 nits	16:9	700:1	45%	170°	Speaker	Stereo speakers, 2W x 2, Dolby Audio Speaker System							
Display 14.0" FHD (1920x1080) WVA Anti-glare multi touch touch touch padd LED backlight is for special bids LeD backlight is		14.0		1112 (1020/1000)			, and glair		200 10	10.5		1070	''									
Display Table Filth (1920x1080) WVA Anti-glare touch South							multi						Koyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls.								
14.0 CHD (1920x1080) WVA Anti-glare 400 nits 16:9 800:1 72% 170° Power-on password PHD (1920x1080) 14.0 ThinkPad Privacy Guard UHD (3940x180) 14.0 Dobby Vision PDR 400 HDR 400		14.0"	FHD (1920x1	080) V	NVA	Anti-glare		300 nits	16:9	700:1	45%	170°									
Low Fibrows Fibro (1920/1806) Fibrows	Display		FHD (1920x1	080) .																	
14.0° ThinkPap Privacy Guard Guard Guard Government Ethernet One on board GbE port via integrated gigabit ethernet, Intel i219LM for vPro models Government Ethernet One of the following, configurable by model: WUAN + Bluetooth S 16.9 100:1 16.9 1500:1 170° 17		14.0"	Low F	ower	۱ (۵۵۵	NVA	Anti-glare	-	400 nits	16:9	800:1	72%	170°									
Color Calibration Colo			FHD (1920x1	080)			multi														
Guard HDR (400 Policy Vision HDR 400		14.0"			acy WVA Anti-glar		Anti-glare		500 nits	16:9	1000:1	72%	170°		Optional Intel vPro Technology supported on vPro enable models							
14.0° Dolby Vision, HDR 400 MVA Glossy - 500 nits 16:9 1500:1 Adobe 170° A					>									Security locks	Security keyhole for optional Kensington lock							
HDR 400		14 0"	UHD (3840x2		۸۸/۸	Closey		E00 pito	16:0	1500:1		1700									
Touchscreen Optional on-cell touch on selected FHD models, supports 10-finger gesture		14.0	HDR 4	400	١,	/V VA	Glossy	-	300 Hills	10.9	1500.1	Adobe	170	Fingerprint reader	Optional							
Touchscreen Optional on-cell touch on selected FHD models, supports 10-finger gesture Pen None Storage	Color Calibration	Facto			libratio	n or	LIHD na	nels						Battery								
Pen None Up to one M.2 SSD as following, 2TB max: *M.2 2280 PCle NVMe, PCle 3.0 x4, 256GB / 512GB / 1TB / 2TB *M.2 2280 PCle NVMe, PCle 3.0 x2, 128GB, for special bids *M.2 2280 F12GB SSD + 32 GB Optane, PCle NVMe 3.0 x 4, for special bids Optical None Cherring One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models NFC Optional Nano-Pro models WLAN + Bluetooth Dottonal Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: *No WWAN card and non upgradable integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Optional Nano-SIM card slot Width: 329 mm (12.95 in), Depth: 227 mm (8.94 in). Max battery life MobileMark 2018: 10.96 hr. MobileM									dale eunr	orte 10	-finger (naetura		Battory	,							
Up to one M.2 SSD as following, 2TB max: * M.2 2280 PCle NVMe, PCle 3.0 x4, 256GB / 512GB / 1TB / 2TB * M.2 2280 PCle NVMe, PCle 3.0 x4, 256GB / 512GB / 1TB / 2TB * M.2 2280 S12GB SSD + 32 GB Optane, PCle NVMe 3.0 x 4, for special bids Optical None Ethernet One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models NFC Optional WLAN + Bluetooth One of the following, configurable by model: * No WWAN card and non upgradable * No WWAN card and honible Broadband 4 G LTE-A, Fibocom L850-GL, M.2 card * Integrated Mobile Broadband 4 G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card * Up to one M.2 SSD as following, 2TB max: * M.2 2280 PCle NVMe, PCle 3.0 x4, 256GB / 512GB / 1TB / 2TB * M.2 2280 S12GB SSD + 32 GB Optane, PCle NVMe 3.0 x 4, for special bids Supports one optional preloaded operating system as following: * Windows 10 Pro 64 * Windows 10 Fro 64 * Windows 10 Government Edition 64 for special bids * Ubuntu Linux LTS Optional warranty plans as following: * 1-year depot repair service * 1-year depot repair service * 1-year 4-2-year depot repair service * 1-year 4-2-year limited onsite service * 1-year 1-2-year 1-2-y				i con a	Judii C) I I 3C	iccica i i	יווו טוו	ucio, oupp	0113 10	illiger g	jostaro		May battary life								
Storage • M.2 2280 PCle NVMe, PCle 3.0 x4, 256GB / 512GB / 1TB / 2TB • M.2 2242 PCle NVMe, PCle 3.0 x2, 128GB, for special bids • M.2 2280 S12GB SSD + 32 GB Optane, PCle NVMe 3.0 x 4, for special bids Optical None Che none onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: • No WWAN card and non upgradable entegrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card SIM card Optional Nano-SIM card slot Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in).	FEII			M 2 S S	SD ac f	follo	vina 2TE	3 may						liviax battery life	MobileMark 2018: 10.96 hr.							
* M.2 2242 PCIe NVMe, PCIe 3.0 x2, 128GB, for special bids * M.2 2280 512GB SSD + 32 GB Optane, PCIe NVMe 3.0 x 4, for special bids * M.2 2280 512GB SSD + 32 GB Optane, PCIe NVMe 3.0 x 4, for special bids * Mone * Mone * Mone * Mone onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models * Optional * MINC Optional * Windows 10 Pro 64 * Windows 10 Pro 64 * Windows 10 Government Edition 64 for special bids * Ubuntu Linux LTS * Optional warranty plans as following: * 1-year depot repair service * 3-year depot repair service * 1-year + 2-year depot repair service * 1-year + 2-year depot repair service * 3-year limited onsite service * 1-year + 2-year imited	0.	• M 2	2280	PCIe I	NVMe	PC	10, 21L	256G	B / 512GF	8 / 1TR	/ 2TB			Power Adapter								
• M.2 2280 512GB SSD + 32 GB Optane, PCIe NVMe 3.0 x 4, for special bids Optical None Ethernet One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models NFC Optional WLAN + Bluetooth Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: No WWAN card and non upgradable NowWAN card and non upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Vidth: 329 mm (12.95 in), Depth: 227 mm (8.94 in). *Windows 10 Home 64 *Windows 10	Storage	• M.2	2242	PCle	NVMe	. PC	le 3.0 x2	. 128G	B. for spe	cial bids	, 21D			- ovor raaptor								
Optical None Ethernet One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models NFC Optional WLAN + Bluetooth Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: No WWAN card and non upgradable Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Optional Nano-SIM card slot Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Operating system Windows 10 Pro 64 Windows 10 Government Edition 64 for special bids Ubuntu Linux LTS Optional warranty plans as following: 1-year depot repair service 3-year depot repair service 1-year 1 imited onsite service 1-year limited onsite service 1-year depot with 2-year system board repair service 1-year depot with 2-year system board repair service 1-year depot with 2-year system board repair service 1-year depot repair service 1-year 1 plans as following: 1-year depot repair service 1-year 2-year depot repair service 1-year 2-year limited onsite service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year depot with 2-year system board repair service 1-year depot with 2-year system board repair service 1-year depot with 2-year limited onsite service 1-year depot with 2-year system board repair service 1-year depot with 2-year system board repair service 1-year depot with 2-year limited onsite service 1-year limited												ecial bi	ds		• Windows 10 Home 64							
Ethernet One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models NFC Optional WLAN + Bluetooth Done of the following, configurable by model: Nowwan entegrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card lntegrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card SIM card Optional Nano-SIM card slot Windows 10 Government Edition 64 for special bids Ubuntu Linux LTS Optional warranty plans as following: 1-year depot repair service 3-year depot repair service 1-year limited onsite service 1-year limited onsite service 1-year limited onsite service 1-year lemited onsite service 1-year l	Optical	None)												• Windows 10 Pro 64							
or i219V for non-vPro models NFC Optional Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: No WWAN card and non upgradable No WWAN elarged Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Optional Warranty plans as following: 1-year depot repair service 3-year depot repair service 1-year + 2-year depot repair service 3-year limited onsite service 1-year + 2-year limited onsite service 1-year + 2-year limited onsite service 1-year elapot with 2-year system board repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year depot with 2-year system board repair service	•										219LM f	for vPro	models	1								
WLAN + Bluetooth WLAN + Bluetooth Ditional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: No WWAN card and non upgradable Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Optional Nano-SIM card slot Dimonsions Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Integrated Mobile Broadband 4G LTE-A (Bound 10 miles) No WWAN Card and non upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Mil-Spec test Mil-Spec test Environment EPEAT Gold. ENERGY STAR 8.0. RoHS-compliant	Ethernet																					
WLAN + Bluetooth Dilutional fillet Wi-Fl 6 AX201 of filoses, Wi-Fl 2X 2 802. Tax + Bidefooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model: No WWAN card and non upgradable No WWAN card and non upgradable Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Optional Mano-SIM card slot Dimonsions Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). 3-year depot repair service 1-year + 2-year depot repair service 1-year 1	NFC	Optional																				
One of the following, configurable by model: No WWAN card and non upgradable WWAN Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Optional Nano-SIM card slot Dimensions Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Base Warranty Integrated Windows 10 (version 2004 or above) Integrated Mobile Broadband or upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in).	MLAN - Bluetooth	th Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1.								x2 802.	11ax + I	Bluetoo	th 5.1.									
WWAN - No WWAN card and non upgradable - Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only - Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card - Integrated Mobile Broadband 4G LTE-A, Fib	WLAIN + Didelootii	Bluet	tooth !	5.1 req	<u>uires t</u>	he la	atest vers	ion of	Windows 1	10 (vers	sion 200	4 or abo	ove)									
WWAN • Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card SIM card Optional Nano-SIM card slot Dimonsions • 3-year limited onsite service • 1-year 42-year limited onsite service • 1-year depot with 2-year system board repair service Mil-Spec test Mil-STD-810G military testing Environment EPEAT Gold. ENERGY STAR 8.0. RoHS-compliant		One	of the	followi	ng, co	nfigu	urable by	model	:					Base Warranty								
* Integrated Mobile Broadband Upgradable, No wwAn Card, WWAn Antenna Only * Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card * Optional Nano-SIM card slot * Optional Nano-SIM card slot * Dimensions * Mil-Spec test * Mil-Spec test * Environment * EPEAT Gold. ENERGY STAR 8.0. RoHS-compliant	\A/\A/A N I	• No	WWA	N card	and n	on u	pgradabl	e doble	NIO \A/\A/A	N Card	\^/\^/^	I Anton	no Onle									
• Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card SIM card Optional Nano-SIM card slot Dimonsions Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in). Optional Nano-SIM card slot Environment EPEAT Gold. ENERGY STAR 8.0. RoHS-compliant	VVVVAIN	• Inte	grate	J Mobil	le Bro	adba	and 4G IT		ihooom I	IN Card	, VV VVAI	n Anteni	na Only									
SIM card Optional Nano-SIM card slot Mil-Spec test Mil-Spe													2 card									
Width: 329 mm (12.95 in). Depth: 227 mm (8.94 in).	SIM card							<u>- ^, 1</u>	.DOUDIN L	JJU GL	, 14111410	177, IVI	<u> oara</u>	Mil-Spec test	MIL-STD-810G military testing							
	Dimensions													ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/							













ThinkPad P15 Gen 1 Platform Specifications

	Supp	orts one 10th	1 Xeor	ı W, C	Core i9,	i7, or i	5 process	or as fo	ollowing:			S			
	Proce	Processor Number # of Cores Threads Frequency Hongard Frequency Frequency Cache Memory Types Graphics													
	Xeor	n W-10885M	8	10	6 2.4	GHz	5.3GHz	16MB	DDR4-29		el UHD aphics	V			
	Xeor	n W-10855M	6	12	2 2.8	GHz	5.1GHz	12MB	DDR4-29		el UHD aphics	c			
	Core	i9-10980HK	8	10	6 2.4	GHz	5.3GHz	16MB	DDR4-29		el UHD aphics	٨			
Processor	Core	i9-10885H	8	10	6 2.4	GHz	5.3GHz	16MB	DDR4-29	.3.3	el UHD aphics	s			
	Core	i7-10875H	8	10	6 2.3	GHz	5.1GHz	16MB	DDR4-29	3.3	el UHD aphics				
	Core	i7-10850H	6	12	2 2.7	'GHz	5.1GHz	12MB	DDR4-29		el UHD aphics	╟			
	Core	i7-10750H	6	12	2 2.6	GHz	5.0GHz	12MB	DDR4-29		el UHD aphics	N			
	Core	i5-10400H	4	8	2.6	GHz	4.6GHz	8MB	DDR4-29		el UHD aphics	N			
Chipset	Intel	WM490 Chip	set									B			
Memory Type	8GB/	DIMM. DDR4- /16GB/32GB							Operates a	at DDF	R4-2933.	c			
Memory Sockets		MM socket										╟			
Memory Protection		on models w	ith EC	C DI	MMs an	d Xeo	n processo	or				S			
Max Memory	1280											N			
Cropbing	• NV	ort one of the IDIA Quadro IDIA Quadro	T1000	, 4ĞE	3 GDDF	l6 mer	nory					K			
Graphics	NVNV	DIA Quadro DIA Quadro	RTX 3 RTX 4	000, 000 v	6GB GI with Ma	DDR6 k-Q De	memory esign, 8GE					L			
	NVIDIA Quadro RTX 5000 With Max-Q Design, Togs GDDRo memory														
	Size	Resolution	1	уре	Surface	Touch	Brightness	Aspec	t Contrast Ratio	Color Gamut	Viewing Angle	9			
	15.6"	FHD (1920x10	(080)	VVA	Anti-glare	-	300 nits	16:9	700:1	72% NTSC	160°	S			
Dioploy	15.6"	FHD (1920x10 Dolby Vision, HDR 400)80) V	VVA	Anti-glare	-	500 nits	16:9	1200:1	72% NTSC	160°	E			
Display	15.6"	UHD (3840x2 ⁻ Dolby Vision, HDR 400		VVA	Anti-glare	-	600 nits	16:9	1400:1	100% Adobe	178°	N			
	15.6"	UHD (3840x2 ⁻¹ Dolby Vision, HDR 400	(160)	LED	Anti- reflectior / Anti- smudge	touch		16:9	100000:1	100% DCI- P3	170°	F			
Color Calibration	Factory Color Calibration on UHD panels														
Touchscreen	Touch enable on selected UHD OLED models, supports 10-finger gesture														
Pen	Optional Lenovo Pen Pro Up to two M.2 2280 SSD, PCIe NVMe, 256GB / 512GB / 1TB / 2TB each								1						
Storage															
RAID	RAID	0 / 1 suppor	t												
Optical	None								1						
Ethernet	One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models														
NFC	None														
WLAN + Bluetooth	Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above)														
WWAN	NoInte	One of the following, configurable by model: No WWAN card and non upgradable Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card													

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	SIM card	Optional Nano-SIM card slot								
		Width: 375.4 mm (14.78 in). Depth: 252.3 mm (9.93 in).								
	Dimensions	Thickness for non-touch models: 24.5 ~ 31.45 mm (0.96 ~ 1.24 in)								
1		Thickness for touch models: 25.25 ~ 32.2mm (0.99 ~ 1.27 in)								
	Weight	Starting at 2.74 kg (6.05 lb, FHD)								
╢	Case color	Black								
	Case material	Display cover: GFRP 50% (PPS695 + GF 50%).								
╢		Bottom: PPS + GF								
	Media reader	SD card reader								
\parallel		1x USB-C (USB 3.2 Gen 1, PD, DP), 2x Thunderbolt (USB-C form, Thunderbolt								
	Standard Ports	3, USB 3.2 Gen 2, PD, DP), 2x USB-A 3.2 Gen 1 (one Always-on), 1x HDMI								
╢	otaliaai a i oito	2.0, 1x headphone / microphone combo jack, 1x SD card reader,								
		1x security keyhole, 1x RJ-45								
╝	Optional Ports	One optional smart card reader on right, one optional Nano-SIM card slot on left								
	•	Up to 5 displays with 4 external monitors plus system LCD screen. External								
		monitors supported via 1x USB-C, 2x Thunderbolt, and 1x HDMI.								
7	Monitor support	USB-C and HDMI support up to 4K@60Hz.								
	Mornior Support	With Thunderbolt, one supports up to 5K@60Hz and one supports up to								
1		4K@60Hz								
	Monitor cable	Optional HDMI to VGA, USB-C to DP, or USB-C to VGA adapters								
4	Bundled Accy	None								
,	Durialed Accy	Supports one optional camera as following:								
۱٠	Camera	HD720p camera with ThinkShutter camera privacy, fixed focus								
\dashv	Camera	Hybrid IR camera with ThinkShutter camera privacy, fixed focus								
4	Audio chip	Realtek ALC3286 codec								
4	Speaker	Stereo speakers, Dolby Atmos sound system								
_	Microphone	Optional dual array far-field microphone								
		6-row, spill-resistant, LED backlight, numeric keypad, multimedia Fn keys with								
	Keyboard	Unified Communications controls.								
		3-button TrackPoint pointing device and 2-button Mylar surface multi-touch								
	UltraNav	touchpad								
	Password	Power-on password, hard disk password, supervisor password								
╡	Security chip	Discrete TPM 2.0, TCG Certified, may be disabled in some regions								
9	System mgmt	Optional Intel vPro Technology supported on vPro enable models								
٦	Security locks	Security keyhole for optional Kensington lock								
1	Smart card reader	, ,								
╛		Touch style match on chip fingerprint reader on the palm rest								
1	r ingerprint reader									
	Battery	Integrated Li-Polymer 94Wh battery. Supports Rapid Charge (charge up to 80% in 1hr) with 230W AC adapter								
-	May battery life	MobileMark 2014: 16.4 hr.								
	Max battery life	MobileMark 2018: 10.3 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors								
4		One of the following:								
	Power Adapter	• 230W slim AC adapter								
		• 170W slim AC adapter								
		Supports one optional preloaded operating system as following:								
╝		• Windows 10 Home 64								
٦	Operating system	Windows 10 Pro 64								
٦	Operating system	Windows 10 Pro 64 for Workstations								
٦		Ubuntu Linux LTS								
\dashv		• Fedora Linux								
4		Optional warranty plans as following:								
4		1-year depot repair service								
Ц		3-year depot repair service								
3	Base Warranty	1-year + 2-year depot repair service 1-year limited expite service								
╝		 1-year limited onsite service 3-year limited onsite service 								
		1-year + 2-year limited onsite service								
7		1-year + 2-year infinited onsite service 1-year depot with 2-year system board repair service								
╝	Mil-Spec test	MIL-STD-810G military testing								
	Environment	EPEAT Silver. ENERGY STAR 8.0. RoHS-compliant								
	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/								
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- 1										



ThinkPad P15s Gen 1 Platform Specifications

	Supports	upports one 10th Core i7 and i5 -U suffix processor as following:												
	Processor Number	# of Cores	# of Threa		Base	Max Tu Freque		Cache	Mem Type			Proces		1
Processor	i7-10610U	4	8		1.8GHz	4.9G	Hz	8MB	DDR4-	2666	Inte	I UHD G	araphics	
1 10005301	i7-10510U	7-10510U 4 8 1.8GHz 4.9GHz 8MB DDR4-2666 Intel UHD Graphics											:	
	i5-10310U	-10310U 4 8 1.7GHz 4.4GHz 6MB DDR4-2666 Intel UHD Graphics												
	i5-10210U	4	8		1.6GHz	4.2G	Hz	6MB	DDR4-	2666	Inte	I UHD G	araphics	
ChWVAet	Intel SoC	ntel SoC (System on Chip) platform												
Memory Type	8GB/16GI	DR4-3200, operates at DDR4-2666. GB/16GB/32GB DDR4-3200 SO-DIMM non-ECC for DIMM socket, GB/16GB DDR4-3200 non-ECC for soldered DIMM												
Memory Sockets		DIMM socket plus 1 soldered DIMM, dual-channel capable												
Memory Protection		lone												
Max Memory	48GB with	8GB with one 32GB SO-DIMM plus one 16GB soldered DIMM Intel UHD Graphics in processor and NVIDIA Quadro P520, 2GB GDDR5 memory												
Graphics	Intel UHD	A												
	Size Reso	Size Resolution Type Surface Touch Brightness Aspect Contrast Ratio Gamut Angle												
Display	15.6" FHD	15.6" FHD (1920x1080) WVA Anti-glare - 250 nits 16:9 800:1 45% 170°												
	15.6" FHD (1920x1080) WVA Anti-glare multi-touch 300 nits 16:9 800:1 45% 170°													
Color Calibration	Factory C													1
Touchscreen	Optional of	n-cell t	touch (on s	elected F	HD mo	odels	s, supp	orts 10	ე-fing	jer g	esture		
Pen	None													إ
Storage	 M.2 228 M.2 224 	Up to one M.2 SSD as following, 2TB max: • M.2 2280 PCIe NVMe, PCIe 3.0 x 4, 256GB / 512GB / 1TB / 2TB • M.2 2242 PCIe NVMe, PCIe 3.0 x 2, 128GB, for special bids												
Optical	None													1
Ethernet	One onbo or i219V f	One onboard GbE port via integrated gigabit ethernet, Intel i219LM for vPro models or i219V for non-vPro models												
NFC	Optional													
WLAN + Bluetooth	Bluetooth	Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above)												
WWAN	One of theNo WWAIntegrateIntegrate	One of the following, configurable by model: No WWAN card and non upgradable Integrated Mobile Broadband Upgradable, No WWAN Card, WWAN Antenna Only Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 4x4, M.2 card												
SIM card	Optional N	lano-S	IM car	d slo	ot					,		,		1
Dimensions	Width: 369 Thickness					l8 mm	(9.7	'6 in).						E
Weight	Starting a	t 3.86 II	b (1.7	5kg)										1
Case color	Black													1

_		
	Case material	Display cover: PPS / 50% GF; Bottom: PA / 50% GF
Н	Media reader	MicroSD card reader
	Standard Ports	On left: 1x USB-C (USB 3.2 Gen 1, PD, DP), 1x Thunderbolt (USB-C form, Thunderbolt 3, USB 3.2 Gen 2, PD, DP), 1x side docking connector, 1x USB-A 3.2 Gen 1, 1x HDMI 1.4b, 1x headphone / microphone combo jack, 1x microSD card reader On right: 1x security keyhole, 1x RJ-45, 1x USB-A 3.2 Gen 1 (Always On)
11		One optional smart card reader on right, one optional nano-SIM card slot on
Ц	Optional Ports	rear
	Monitor support	Up to 3 displays with 2 external monitors plus system LCD screen. Two external monitors supported via USB-C, Thunderbolt, and HDMI. 4096x2304@60Hz on USB-C and Thunderbolt, 4096x2160 @24Hz on HDMI
4	Monitor cable	Optional HDMI to VGA, USB-C to DP, or USB-C to VGA adapters, up to two
4	Bundled Accy	None
	Camera	Supports one optional camera as following: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	Audio chip	Realtek ALC3287 codec
Ш	Speaker	Stereo speakers, 2W x 2, Dolby Audio Speaker System
Ш	Microphone	Optional dual array near-field microphone
	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad. LED backlight on most models, non LED backlight is for special bids
Ш	UltraNav	TrackPoint pointing device and Mylar surface multi-touch touchpad
Ц	Password	Power-on password, hard disk password, supervisor password
4	Security chip	Discrete TPM 2.0, TCG Certified, may be disabled in some regions
4	System mgmt	Optional Intel vPro Technology supported on vPro enable models
_	Security locks	Security keyhole for optional Kensington lock
	Smart card reader	
	Fingerprint reader	
	Battery	Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
s	Max battery life	MobileMark 2014: 16.5 hr. MobileMark 2018: 10.48 hr. *Battery life varies significantly with hardware configurations, settings, usage, & other factors
Ц	Power Adapter	65W or 65W slim USB-C AC adapter
,		Supports one optional preloaded operating system as following: • Windows 10 Home 64 • Windows 10 Pro 64 • Windows 10 Government Edition 64 for special bids • Ubuntu Linux LTS
		Optional warranty plans as following: 1-year depot repair service 3-year depot repair service 1-year + 2-year depot repair service 1-year limited onsite service 3-year limited onsite service
	Mil-Spec test	1-year + 2-year limited onsite service 1-year depot with 2-year system board repair service MIL-STD-810G military testing
	Environment	EPEAT Gold. ENERGY STAR 8.0. RoHS-compliant
	ISV certifications	Please visit <u>www.thinkworkstations.com/isv-certifications/</u>













ThinkPad P17 Gen 1 Platform Specifications

	Supp	Supports one 10th Xeon W, Core i9, i7, or i5 processor as following:											
		essor Number	# of	# of	Ва	se	Max Turbo	Cache	Memory		ocessor	V	
	1 1000		Cores	Thread	ls Frequ	iency	Frequency	Cache	Types		raphics	C	
	Xeor	n W-10885M	8	16	2.40	GHz	5.3GHz	16MB	DDR4-29		el UHD aphics	C	
	Xeor	n W-10855M	6	12	2.80	ЭНz	5.1GHz	12MB	DDR4-29		el UHD aphics	٨	
	Core	i9-10980HK	8	16	2.40	ЭНz	5.3GHz	16MB	DDR4-29		el UHD aphics	S	
Processor	Core	i9-10885H	8	16	2.40	ЭНz	5.3GHz	16MB	DDR4-29		el UHD aphics	C	
	Core	Core i7-10875H 8 16 2.3GHz 5.1GHz 16MB DDR4-2933 Intel UHD Graphics											
	Core	Core i7-10850H 6 12 2.7GHz 5.1GHz 12MB DDR4-2933 Intel UHD Graphics											
	Core	ore i7-10750H 6 12 2.6GHz 5.0GHz 12MB DDR4-2933 Intel UHD Graphics											
	Core	i5-10400H	4	8	2.60	GHz	4.6GHz	8MB	DDR4-29		el UHD aphics	E	
Chipset	Intel	WM490 Chip	set									Α	
Memory Type		DIMM. DDR4- ate at DDR4-2										S	
Memory Sockets		/IM socket										k	
Memory Protection			ith EC	C DIM	Ms and	Xeo	n processo	or				Ľ	
Max Memory		128GB Support one of the following discrete graphics:											
Graphics	NVIDIA Quadro T2000, 4GB GDDR6 memory NVIDIA Quadro RTX 3000, 6GB GDDR6 memory NVIDIA Quadro RTX 4000 with Max-Q Design, 8GB GDDR6 memory											P 9 9 9 9	
	Cize Resolution Type Surface Touch Brightness Aspect Contrast Color Viewing												
	OIZC	ricsolution	- '	урс	unacc	TOUCI	Drighthose	Ratio	Ratio	Gamut	Angle	В	
Display	17.3" FHD (1920x1080) WVA Anti-glare - 300 nits 16:9 700:1 72% 160°											N	
	17.3" UHD (3840x2160) Dolby Vision, HDR 400 WVA Anti-glare - 500 nits 16:9 1500:1 100% Adobe 178°											P	
Color Calibration	Factory Color Calibration on UHD panels											╟	
Touchscreen	None												
Pen	None											C	
Storage		two M.2 228), PCIe	NVMe	, 256	GB / 512G	B / 1T	B / 2TB ea	ach			
RAID		0 / 1 suppor	t									\vdash	
Optical	None												
Ethernet	or i2	onboard GbE 19V for non-v	port v Pro m	/ia inte	grated	gigab	oit ethernet	t, Intel	i219LM fo	r vPro	models	В	
NFC	None								=				
WLAN + Bluetooth	Optional Intel Wi-Fi 6 AX201 on most models, Wi-Fi 2x2 802.11ax + Bluetooth 5.1. Bluetooth 5.1 requires the latest version of Windows 10 (version 2004 or above) One of the following, configurable by model:												
	(Ina	ot the followir	ng, cor	ntigurat			l:					N	
			and no	n i inar	adahla							IJν	
WWAN	NoInte	WWAN card a grated Mobile	e Broa	dband	Upgrad	dable	, No WWA	N Card	l, WWAN	Anteni	na Only	E	
WWAN SIM card	NoInteInte	WWAN card	e Broa e Broa	dband dband	Upgrad	dable	, No WWA Fibocom La	N Card 860-GL	I, WWAN ., MIMO 4	Anteni x4, M.	na Only 2 card	_	

	Dimensions	Width: 415.44 mm (16.36 in). Depth: 280.81 mm (11.06 in).
1		Thickness: 25.11~ 33.25 mm (0.99 ~ 1.31 in)
II	Weight	Starting at 3.5 kg (7.7 lb, FHD)
1	Case color	Black
$\ $	Case material	Display cover: GFRP 50% (PPS695 + GF 50%). Bottom: PPS + GF
	Media reader	SD card reader
	Standard Ports	1x USB-C (USB 3.2 Gen 1, PD, DP), 2x Thunderbolt (USB-C form, Thunderbolt 3, USB 3.2 Gen 2, PD, DP), 3x USB-A 3.2 Gen 1 (one Always-on), 1x HDMI 2.0, 1x headphone / microphone combo jack, 1x SD card reader, 1x security keyhole, 1x RJ-45
$\ $	Optional Ports	One optional smart card reader on right, one optional Nano-SIM card slot on left
	Monitor support	Up to 5 displays with 4 external monitors plus system LCD screen. External monitors supported via 1x USB-C, 2x Thunderbolt, and 1x HDMI. USB-C and HDMI support up to 4K@60Hz. With Thunderbolt, one supports up to 5K@60Hz and one supports up to 4K@60Hz
$\ $	Monitor cable	Optional HDMI to VGA, USB-C to DP, or USB-C to VGA adapters
	Bundled Accy	None
Ц	Camera	Optional Hybrid IR camera with ThinkShutter camera privacy, fixed focus
	Audio chip	Realtek ALC3286 codec
	Speaker	Stereo speakers, Dolby Atmos sound system
	Microphone	Optional dual array far-field microphone
-	Keyboard	6-row, spill-resistant, LED backlight, numeric keypad, multimedia Fn keys with Unified Communications controls
	UltraNav	3-button TrackPoint pointing device and 2-button Mylar surface multi-touch touchpad
	Password	Power-on password, hard disk password, supervisor password
	Security chip	Discrete TPM 2.0, TCG Certified, may be disabled in some regions
	System mgmt	Optional Intel vPro Technology supported on vPro enable models
	Security locks	Security keyhole for optional Kensington lock
	Smart card reader	
,	Fingerprint reader	Touch style match on chip fingerprint reader on the palm rest
1	Battery	Integrated Li-Polymer 94Wh battery. Supports Rapid Charge (charge up to 80% in 1hr) with 230W AC adapter
	Max battery life	MobileMark 2014: 14.6 hr. MobileMark 2018: 9.75 hr. *Battery life varies significantly with hardware configurations, settings, usage, & other factors
	Power Adapter	One of the following: • 230W slim AC adapter • 170W slim AC adapter
-	, ,	Supports one optional preloaded operating system as following: • Windows 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro 64 for Workstations • Ubuntu Linux LTS
-	Base Warranty	Optional warranty plans as following: 1-year depot repair service 3-year depot repair service 1-year + 2-year depot repair service 1-year limited onsite service 1-year limited onsite service 1-year + 2-year limited onsite service 1-year depot with 2-year system board repair service
	Mil-Spec test	MIL-STD-810G military testing
	Environment	EPEAT Silver. ENERGY STAR 8.0. RoHS-compliant
1	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/
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ThinkPad P43s Platform Specifications

Processor	8th G	eneratio	n Intel® (Core™	i7 Proces	sor					Dimensions	WxDxH:	12.95" x 8.94" x 0.	70"; 329mm x 227	mm x 17.9mm		
	Proce					lax Turbo Ca	ache	Memory	Proce		Weight	Models	FHD	FHD Low Power	WQHD		
	Numb i5-836		res Threa	-		requency	MB	Types	Grap	hics	Case color	Weight Black	3.43 lb / 1.55 kg	3.28 lb / 1.49 kg	3.24 lb / 1.47 kg		
	i7-856	5U 4	8	1	.8 GHz	4.6 GHz 8		DR4-2400 In	ntel UHD	Graphics	Case material	Display co Bottom:	over: PPS / 50% GF PA / 50% GF	- ;			
Graphics	Intel UHD Graphics in processor and NVIDIA Quadro® P520, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; Up to 3 displays with 2 external monitors plus system LCD screen. Max resolution: 3840x2160@60Hz (USB-C); 3840x2160@30Hz (HDMI) Intel SoC (System on Chip) platform										Smart card reade Media reader Ports	MicroSD card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayP 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),					
ChWVAet Memory	Intel SoC (System on Chip) platform 48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation Monitor cable (optional)								al speed								
Display	Size	Resolutio	n	Туре	Surface	Brightness	Aspec Ratio	t Contrast Ratio		Viewing Angle	(ориопат)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to HDMI: Lenovo USB-C to HDMI Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter					
	4.4.0	EUD (400		140.74	A 41 1	250 nits (non-touch)	10:0	700.4	450/	1700	Bundled Accy	None		, ,	αρισι		
	14.0"	FHD (192	(0x1080)	VVVA	Anti-glare	300 nits (multi-touch)	16:9	700:1	45%	170°	Camera (optional)	onal) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus					
	14.0"	FHD (192 Low Powe	0x1080) er	WVA	Anti-glare	,	16:9	800:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, f HD Audio, Realtek® ALC3287 codec / 				ocus	
	14.0"	FHD (192 ThinkPad Guard		WVA	Anti-glare	400 nits	16:9	1000:1	72%	170°		stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo j					
	14.0"	WQHD (2	2560x1440 ion™ HDF	0) R WVA	Glossy	500 nits	16:9	1500:1	100% Adobe	170°	Keyboard UltraNav™	TrackPoin	t®pointing device an		urface multi-touch touchp		
Multi-touch (opt) Pen	On-ce None		support	ts 10-fi	nger gesti	ure (FHD or	ıly)				Security Security chip System Mgt (opt)	Discrete 7	TPM 2.0, TCG Certifi	a password, supervis ed	or password, security key	yhole	
Storage	• M.2	2280 S	SD / SAT	TA 6.00							Fingerprint reade	r Optional:	Touch style match of Communication	on chip fingerprint rea	ader on the palm rest		
	• M.2	2242 S	SD / PC	le NVN	1e, PCle 3 1e, PCle 3 0 with Sol	3.0 x 2	rane				Battery Max battery life	Integrated Li- Polymer 50Wh battery, supports Rapid Charge (charge up					
Optical	 Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCle NVMe 3.0 x 4 None 										MobileMark® 2014: 14.7 hr AC adapter * Battery life varies significantly with hardware configurations, settings, usage, & o					r factors	
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)										65W or 65W slim USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64						
WLAN Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service						
WWAN (optional)	One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA)											• 3-year/	1-yr battery limited o	nsite service			
	 Interest 	grated N	1obile Br	roadba	nd 4G LTE	E, Fibocom I	∟830-E	EB, M.2 card	d (EMEA	(only	Mil-Spec test	MIL-STD-	810G military testing	9			
SIM card (opt)	• Inte	grated Non-WWA	lobile Br N model,	roadba it mear	nd 4G LTE as the mode	E-A, Fibocor el is NOT WW TE (US) SIN	n L850 AN upg	0-GL, M.2 c gradable	ard	3 /	Environment	EPEAT™	Silver; ENERGY STA	AR® 7.1; RoHS-comp	oliant		
Note: The specific:							vi Call									Lenovo	

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













ThinkPad P51 Platform Specifications

Processor	6th or 7th Go					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	Coobo	Memory	Processor	Weight	Models	4-cell	6-cell			
	Number	Cores	Threads	Frequency	Frequency	Cache	71			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	Bottom: Magnesium/Aluminum Smart card reader Optional: Smart card reader						
	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	lways On), USB Type	e-C / Thunderbolt 3,		
Graphics	Intel HD Gra						r and		1	Mini DisplayPort 1.2a, HDMI 1.4b, Ethernet (RJ-45), Dock connect * Depending on many factors, actual data transfer speed may be lower than					
	supports ext Up to 4 disp	NVIDIA Quadro® M1200 or M2200, 4GB memory; supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; Up to 4 displays with 3 external monitors plus system LCD screen. Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable);								HD Audio, Rea	ution, fixed focus altek® ALC3268 codec / rophone, combo audio/r		/x2/		
	Max resoluti	on: 38	40x2160	@60Hz (D	isplayPort	via Mir	າi DisplayPo	ort cable); 4Hz (HDMI)	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight					
Chipset	Mobile Intel			`	nunuerbon,), 4090)XZ 100 @ Z²	+112 (1101/11)	UltraNav™	3-button TrackPoint® pointing device and					
Memory					non-FCC (FCC f	unction sur	ported only on		3-button Mylar	surface multi-touch tou	chpad			
Momory	Xeon proces	ssor), d	lual-chan	nel capable	e, four DDÌ	34 SO	-DIMM soc		Security Security chip		sword, hard disk passwo 2.0, TCG Certified	ord, supervisor passv	vord, security keyhole		
Display	16:9 Some: 15.6	aspec " (396r	t ratio, 70 nm) 4K (00:1 contra 3840x2160	st ratio, 16)), anti-glar	0° viev e, LEC	ving angle) backlight,	nt, WVA, 250 nits, WVA, 300 nits,		orint reader Touch style match on chip fingerprint reader on the palm rest					
Multi-touch (opt)	Capacitive-ty							viewing angle FHD only)	Battery	Lithium Polym	er 4-cell <i>(66Wh)</i> or 6-ce	II (90Wh)			
Pen (optional)	ThinkPad Pe	en Pro,	active pe	en for multi	-touch disp	lay	(Max battery life ¹⁰	Model	4-cell	6-cell			
Storage	Up to 3 drives	(two M.	.2 SSD ar	d one HDD)	, supports si	ingle sid	ded M.2 2280	0 drives only	(MobileMark® 2014)	Discrete Graphi	cs 4.5 hr	6.1 hr			
3	Some: HDE						ve Protection	on System [™]							
RAID (optional) Optical	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s RAID 0/1 support								AC adapter	* Battery life vai 170W slim tip	ries significantly with hardw AC adapter	vare configurations, setti	ings, usage, & other factors		
Ethernet	None								Operating system	One of the follow	ving, configurable by model	l:			
Etnernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)									Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64					
WLAN	One of the foll Intel Dual I	Band W	/ireless-/	AC 8260, W	/i-Fi 2x2 80					 Windows® 10 Windows 10) Home 64 Pro 64				
Bluetooth™	• Intel Dual I Bluetooth 4. * Intel 8260ad	1 wirele	ess. inte	arated in W	i-Fi + Blue	tooth c	ombo adar	oter	Limited warranty	Windows 10 Pro 64 for Workstations One of the following, configurable by model:					
WWAN (optional)		ollowing, configurable by model: WAN upgradable								 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 					
	 Integrated 	Mobile	olle Broadband 4G LTE-A, napdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card						Mil-Spec test						
SIM card (opt)								M.2 card MEA) SIM card	Environment						
Note: The specifica				`		0	(LI				(- >,),	, 3011	Lenovo		













ThinkPad P52 Platform Specifications

Processor	8th Generation Intel® Core™ i7 / i9 Processor or Intel Xeon® E Processor								Dimensions	WxDxH: 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm			
	Number Co	f of ores	# of Threads		Max Turbo Frequency	Cacrie	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	er <i>Optional:</i> Smart card reader None			
	Intel UHD Gr NVIDIA Quad P3200 (6GB supports exte Up to 4 displ Max resolution	dro® I mem ernal ays v on: 3	P1000 (4 nory, VR digital n vith 3 ex 840X21 120X28	4GB memo ready); nonitor via I ternal moni 60@60Hz (80@30Hz (ry), P2000 HDMI, Min tors plus s DisplayPo	i (4GB) ii Displa system ort via M	ayPort, or T LCD scree Iini Display	hunderbolt™; n.	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Three USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals			
Chipset Memory	Mobile Intel (128GB non-li only on Xeor * Installed DIM * 128GB non-li	ECC n prod <i>IMs al</i>	or 64ĠE cessor), <i>re actuall</i> j	B ECC max dual-chann y 2666MHz b	nel capable out run at 24	e, four D	DDR4 SO-I	ction supported DIMM sockets limitation	Camera (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed (f) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /			
Display		nits, ¹ aam	16:9 asp ut. 160°	ect ratio, 70	00:1 contra ale	ast ratio),		- Audio Support	attribution, Healter ALC3266 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone			
Multi-touch (opt)	400 r 100% Capacitive-ty	nits, ⁻ % gar /pe m	16:9 asp nut, 170 nulti-touc	ect ratio, 10 oviewing a h, supports	000:1 cont ngle, multi s 10-finger	rast rat -touch gestur	io, e (4K only)		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad			
Storage Optane™ memory	Up to 3 drives Some: HE Some: M. Optional: Int	Supports pen accessory, please see the accessory compatibility for details ### ### ### ### ### ### ### ### ### #								Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Touch style match on chip fingerprint reader on the palm rest None Near Field Communication			
Optical	None	pport							NFC (optional) Battery	Swappable Li-ion 90Wh battery			
	Non-vPro mo vPro model:		Intel Eth	ernet Conr	ection I21	9-LM (Jacksonvilĺ	e)	Max battery life (<i>MobileMark</i> ® 2014) AC adapter	Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors 170W slim tip AC adapter			
WLAN Bluetooth™			9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card eless, integrated in Wi-Fi + Bluetooth combo adapter						<u> </u>	One of the following, configurable by model: • Windows® 10 Home 64			
(-,,	• Wireless W	the following, configurable by model: ess WAN upgradable rated Mobile Broadband 4G LTE-A.								 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations 			
	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card				ırd		Limited warranty (optional)	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service					
									Mil-Spec test	MIL-STD-810G military testing			
Note: The specifica									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant			

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



ThinkPad P52s Platform Specifications

Processor Work Work Base Max Turbo Base Max Turbo Cache Memory Processor Supports Graphics Intel UHD Graphics Intel Graphic	D	Oth O constitution late 10 Occurry in 7 in 7 in 10 in	Discovering W. D. / J. 44.40% of 0.5% of 0.00% o
Season S	Processor		Case color Black
Graphics Intel UHD Graphics 620 in processor and NVIDIA Quadro* P500, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; Up to 3 displays with 2 external monitors plus system LCD screen. Max resolution: 4096x2304 €60Hz (USB Type-C; 4096x2160 €30Hz (HDMI)		1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB DDR4-2400 Intel UHD Graphic 620 620 620 620 630	Bottom: GFRP Smart card reader Optional: Smart card reader
## System clocks down for processors with lower memory controller Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 45% gamut, 170° viewing angle Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 100:1 contrast ratio, 45% gamut, 170° viewing angle Multi-touch (opt) None Multi-touch (opt) None Storage Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SDI / 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, Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2. 16Gb/s, 1mWAN slot as 2nd Storage, mutually exclusive with WWAN Optical None No		Intel UHD Graphics 620 in processor and NVIDIA Quadro® P500, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; Up to 3 displays with 2 external monitors plus system LCD screen. Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Ports Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort) one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack,
16:9 aspect ratio, 700:1 contrast ratio, 45% gamut, 170° viewing angle Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 72% gamut, 170° viewing angle Multi-touch (opt) None Storage On-cell touch, supports 10-finger gesture (FHD only) None Storage System has one HDD slot or one M.2 2280 slot exclusively for storage, and supports single sided M.2 2280 drives only Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: 18 GBM B.2 SSD / PCIe NVMe, PCle 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optional None Ethernet Non-vPro model: Intel Ethernet Connection 1219-V (Jacksonville) vPro model: Intel Ethernet Connection 1219-W (Jacksonville) vPro model: Intel Ethernet Connection 1219-LM (Jacksonville) vPro model: Intel Section Structure of the following, configurable by model: wHD7020p camera with ThinkShutter camera privacy, fixed focus HD720p camera with ThinkShutter camera privacy, fixed focus HD720p camera with ThinkShutter camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD720p camera with ThinkShutter camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD720p camera with ThinkShutter camera and HD720p camera with ThinkShutter camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, spanial privacy, fixed focus HD Audio, Realtek \$\text{AC3287 codec} stereo speakers, 2W x 2, Dolby* Audio* Premium / optional dual array microphone, headphone / microphone, headphone / microphone combo jack Weyboard UltraNav* TrackPoint* pointing device and buttonless Mylar surface multi-touch touchpe Security chip vPro (optional) Intel PVP 2.0, TCG Certified with PVP 2.0, TCG Certified anti-spoofing	Memory	32GB max / 2400MHz DDÁ4, dual-channel capable, two DDR4 SO-DIMM sockets * System clocks down for processors with lower memory controller	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Monitor cable 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
Multi-touch (opt) Pen None N	Display	16:9 aspect ratio, 700:1 contrast ratio, 45% gamut, 170° viewing angle Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, WVA, 300 nits	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
súpports single sided M.2 2280 drives only Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s 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 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) WLAN + Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth™ * Intel B265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, * Battery life varies significantly with hardware configurations, settings, usage, & other fellowing, captured with hardware configurations, settings, usage, & other fellowing, captured in the policy in with hardware configurations, settings, usage, & other fellowing, captured in the policy in with hardware configurations, settings, usage, & other fellowing, captured in the policy in with hardware configurations, settings, usage, & other fellowing, captured in the plant reader on the palm rest anti-spoofing technology NFC (optional) Near Field Communication Battery Optional integrated Li-ion 32Wh battery and swappable Li-ion 24Wh, 48Wh, or 72Wh 32Wh + 48Wh 32Wh + 72Wh 32Wh +	Pen	On-cell touch, supports 10-finger gesture (FHD only) None	Audio support HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
Some: M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s 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 Optional intel Ethernet Connection I219-V (Jacksonville) WLAN + Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth™ WWAN (optional) WWAN (optional) WWAN (optional) WWAN (optional) One of the following, configurable by model: Wireless WAN upgradable Wireless WAN upgradable Necurity Chip vor (optional) Security Security Chip vor (optional) Security Security Chip vor (optional) Security Security Chip vor (optional) Security Chip vor (optional) Security Chip vor (optional) Security Chip vor (optional) Necurity Chip vor (optional) Intel VPro Technology Near Field Communication Near Field Communication Optional integrated Li-ion 32Wh battery and swappable Li-ion 24Wh, 48Wh, or 72Wh battery Max battery life (MobileMark® 2014) Was battery life varies significantly with hardware configurations, settings, usage, & other of the following of the fol	Storage	súpports single sided M.2 2280 drives only Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™	Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backligh
Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN + Bluetooth™ Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card WWAN (optional) WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, • Mon-vPro model: Intel Ethernet Connection I219-V (Jacksonville) Battery Optional) Optional integrated Li-ion 32Wh battery and swappable Li-ion 24Wh, 48Wh, or 72Wh battery Max battery life (MobileMark® 2014) * Max battery life 12.2 hr 18.5 hr 13.5 hr 20.1 hr 26.3	Optane™ memor	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	Security chip Discrete TPM 2.0, TCG Certified vPro (optional) Intel vPro Technology
WLAN + 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, • Optional integrated Li-ion 32Wh battery and swappable Li-ion 24Wh, 48Wh, or 72Wh battery • Max battery life (Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 7 Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 7 Wh 32Wh + 24Wh 32Wh	Optical	None	
WLAN + Intel Dual Ball d Wireless-AC 8265, Wi-F1 2X2 802.11aC + Bluetooth 4.1, iv.2 card 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, Max battery life (Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh 32Wh + 24Wh 32Wh + 24Wh 32Wh + 72Wh 32Wh + 24Wh 32Wh + 72Wh 32Wh + 24Wh 32Wh + 72Wh 32Wh + 24Wh 32Wh + 24Wh 32Wh + 72Wh 32Wh	Etnernet		Battery Optional integrated Li-ion 32Wh battery and
WWAN (optional) One of the following, configuration by mode: Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, AC adapter * Battery life varies significantly with hardware configurations, settings, usage, & other 65W USB Type-C AC adapter	Bluetooth™	* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	Max battery life Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh
	WWAN (optional)	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, 	*Battery life varies significantly with hardware configurations, settings, usage, & other factor 65W USB Type-C AC adapter
Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Limited warranty One of the following, configurable by model:			
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 * 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year (including battery) limited onsite service	SIM card (opt)	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable	 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Mil-Spec test MIL-STD-810G military testing			, , ,
Environment EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant			Environment

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

Lenovo













ThinkPad P53 Platform Specifications

Processor	9th Gener	ration I	ntel® Cor	e™ i5 / i7	i9 Proce	essor or I	ntel X	eon® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.86" x 9.93" x 0.96-1.16";				
	Processor Number	# of Cores	# of Threads	Base Frequenc	Max Tu y Freque			emory ypes	Proce Grapl			377.4mm x 252.3mm x 24.5-29.4mm <i>WxDxH (multi-touch):</i> 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm				
	i5-9400H i7-9750H	4 6	8 12	2.5 GHz			_	1.	ntel UHD	Oronbios	Weight	Non-touch model: starting at 5.51 lb / 2.5 kg;				
	i7-9750H	6	12	2.6 GHz			B		63		Case color	Multi-touch model: starting at 6.4 lb / 2.9 kg Black				
	i9-9880H	8	16	2.3 GHz	4.8 G	Hz 16M	В	R4-2666			Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum				
	E-2276M	6	12	2.8 GHz	4.7 G	Hz 12M	В	II II	ntel UHD P63			er Optional: Smart card reader				
Graphics	Intel UHD NVIDIA® C RTX 3000 RTX 5000 supports of Up to 5 dia Max resol	Quadro) (6GB) (16GE externa splays	T1000 GDDR6 GDDR6 GDDR6 al digital i with 4 ex	(4GB GD VR read 6, VR reamonitor violetrial model ternal model	DR5), T2 (), RTX 4 dy); a HDMI (onitors pl	2000 (4G 2000 (8G or Thund us syster	B GDI erbolt m LCE	DR6, VR [⊮] ;) screen.	377	or	ExpressCard Media reader Ports None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Displ two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and D HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo lack, optional smart card reader.					
Chipset Memory	Mobile Intel CM246 Chipset 128GB max / 2666MHz DDR4 (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets Monitor cable 4-In-1 Teader (MiMc, SD, SDRC), Security keynole * Power Delivery only supports power-out for charging peripherals * USB-C Dock is not supported in right-side USB-C port * Depending on many factors, actual data transfer speed may be lower than theoretical HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter															
Display										Viewing Angle		USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter				
	15.6" FHD	(1920x	1080) \	VVA Anti	glare 3	00 nits	16:9	700:1	72%	160°	Bundled Accy	None				
		(1920x) y Vision		NVA Anti	glare 5	00 nits	16:9	1200:1	72%	160°	Camera (optional	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus				
	15.6" UHD Dolby	(3840x y Vision	2160) HDR	NVA Anti	glare 5	00 nits	16:9	1200:1	100%	170°	Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 /				
	15.6" Dolby	(3840x y Vision -touch	2160) HDR, C	DLED refle	nti- HD	R 400nit, R 500nit peak)	16:9	100000:1	100% DCI-P3	170°	Keyboard	optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system 6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight				
Multi-touch (opt)	Capacitive anti-reflec	e-type	multi-tou R), anti-s	ch, suppo	rts 10-fir	ger gest	ure (U	IHD only)),		UltraNav™	3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad				
Pen (optional)	Lenovo Pe	en Prò	(special	bid only)							Security	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified				
	Up to 3 drives (3x M.2 SSD or 1x HDD + 2x M.2 SSD), supports single sided M.2 2280 drives only • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 * HDD is only available for T1000 and T2000 graphics model											Intel vPro Technology Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest Optional: X-Rite Pantone factory color calibration (UHD model only) Near Field Communication				
	o Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 RAID 0/1/5 support None										Battery Max battery life (MobileMark® 2014)	Integrated Li- Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 8 hr; Hybrid mode: 13 hr				
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)										AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors 170W or 230W slim tip AC adapter				
Bluetooth™ (opt)	Intel Wi-Fi	5.1 wi	reléss, in	tegrated	n Wi-Fi +			nbo adap	ter		Operating system	 One of the following, configurable by model: Windows® 10 Home 64 Windows 10 Pro 64 				
() /	One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card										Limited warranty	 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 				
											Mil-Spec test	MIL-STD-810G military testing				
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant				



ThinkPad P53s Platform Specifications

Processor # of Number Cores Threads Frequency	
i7-8565U 4 8 1.8 GHz 4.6 GHz 8MB DDR4-2400 Intel UHD Graphics Smart card reader Optional: Smart card reader Media reader MicroSD card reader	
Graphics Intel UHD Graphics in processor and NVIDIA Quadro® P520, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports 3 independent displays with 2 external monitors plus system LCD screen. Max resolution: 3840x2160@60Hz (USB-C); 3840x2160@30Hz (HDMI) Ports Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 1 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composition one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of the composit	ith the function of PD and DP), slot (WWAN models), smart card reader,
Chipset Intel SoC (System on Chip) platform 48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation microSD card reader, side docking connector, s * Depending on many factors, actual data transfer spe HDMI to VGA: Lenovo HDMI to VGA Monitor Cable (optional) USB-C to VGA: Lenovo USB-C to VGA Adapte USB-C to DP: Lenovo USB-C to DisplayPort	need may be lower than theoretical speed Adapter er
Display Size Resolution Type Surface Brightness Aspect Ratio Contrast Ratio Color Ratio Gamut Angle Contrast Ratio Color Viewing Gamut Angle Camera (optional) One of the following, configurable by model:	
15.6" FHD (1920x1080) WVA Anti-glare 250 nits 16:9 700:1 45% 170° • HD720p camera with ThinkShutter camera pr • IR camera and HD720p camera with ThinkSh	rivacy, fixed focus
[15.6" UHD (3840x2160) WVA Anti-glare 500 nits 16:9 1200:1 100% Adobe 170° Adobe HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premi	nium /
Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) optional dual array far-field microphone, headpl	phone / microphone combo jack
Storage Supports single sided M.2 2280 drives only UltraNav TM TrackPoint® pointing device and buttonless Myla	ar surface multi-touch touchpad
 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 Security Power-on password, hard disk password, super Security chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology Fingerprint reader Optional: Touch style match on chip finge	
Optical None NPC (optional) Near Field Communication	David Charge (sharge up to 900/ in
Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) Wero model: Intel Ethernet Connection I219-LM (Jacksonville) Battery Max battery life Intel Ethernet Connection I219-LM (Jacksonville) MobileMark® 2014: 15 hr (FHD model) / 10 hr	, , , , ,
WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter AC adapter * Battery life varies significantly with hardware configuration of the combo adapter * Buttery life varies significantly with hardware configuration of the combo adapter in the combo a	gurations, settings, usage, & other factors
WWAN (optional) One of the following, configurable by model: Operating system Windows® 10 Home 64 or Windows 10 Pro 64	
 Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card Uimited warranty Done of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 	
Mil-Spec test MIL-STD-810G military testing	
Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-co	compliant













ThinkPad P72 Platform Specifications

Processor	8th Generation Intel® Core™ i7 Processor or Intel Xeon® E Processor	Dimensions	<i>WxDxH</i> : 16.38" x 11.06" x 0.96-1.16"; 416mm x 281mm x 24.5-29.4mm
	Processor # of Wumber Cores Threads Frequency Frequency Frequency Cache Memory Processor Graphics I7-8750H 2.2 GHz 4.1 GHz 9MB Intel UHD Graphics G30 G30		Starting at 7.5 lb / 3.4kg Black Display cover: GFRP + PPS; Bottom: Magnesium/Aluminum
	E-2176M	Smart card reade ExpressCard Media reader	r Optional: Smart card reader None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card
Graphics	Intel UHD Graphics 630 or P630 in processor and NVIDIA Quadro® P600 (4GB memory), P2000 (4GB memory), P3200 (6GB memory), P4200 (8GB memory), or P5200 (16GB memory); supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; supports 4 independent displays with 3 external monitors plus system LCD screen. Max resolution: 3840X2160@60Hz (DisplayPort via Mini DisplayPort cable); 5120X2880@30Hz (Thunderbolt); 4096x2160@60Hz (HDMI)	Ports Monitor cable	Four USB 3.1 Gen 1 (one Always On), wo USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor Cable
Chipset Memory	Mobile Intel CM246 Chipset 128GB non-ECC or 64GB ECC max / 2400MHz DDR4 (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets * Installed DIMMs are actually 2666MHz but run at 2400MHz due to Intel limitation	Audio support)IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
Display	Some: 17.3" (439mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 300 nits 16:9 aspect ratio, 800:1 contrast ratio, 72% gamut, 170° viewing angle Some: 17.3" (439mm) UHD (3840x2160), anti-glare, LED backlight, WVA, 400 nits 16:9 aspect ratio, 1000:1 contrast ratio, 100% Adobe gamut,	Keyboard Liltro Nov TM	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 None Up to 3 drives (two M.2 SSD and one HDD), supports single sided M.2 2280 drives only	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 rTouch style match on chip fingerprint reader on the palm rest
Storage	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: M.2 SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s	Color calibration NFC (optional)	None Near Field Communication
Optane™ memor RAID <i>(optional)</i> Optical	y <i>Optional:</i> Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 RAID 0/1 support None	Battery Max battery life	Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 16 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	AC adapter Operating system	
WLAN Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	(optional)	 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

November 2019







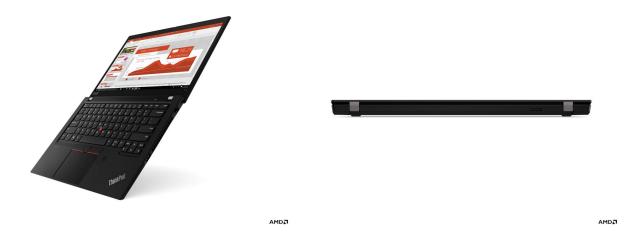






ThinkPad P73 Platform Specifications

Processor				e™ i5 / i7 / i9			el Xeon® E	1		Dimensions	WxDxH: 16.38" x 11.06" x 1.02-1.22"; 416mm x 281mm x 25.9-31mm						
	Processor Number	# of	# of Threads		Max Turbo Frequency	Cache	Memory Types	Process Graphic		Weight Case color	Starting at 7.5 lb (3.4kg) Black						
	i5-9400H	4	8	2.5 GHz	4.3 GHz	8MB	Types	Grapino	<i>J</i> S	Case material	Display cover: GFRP + PPS;						
	i7-9750H	6	12	2.6 GHz	4.5 GHz	12MB		Intel UHD G	raphics		Bottom: Magnesium/Aluminum						
	i7-9850H	6	12	2.6 GHz	4.6 GHz	12MB	DDR4-2666	630	•	Smart card reade ExpressCard	r <i>Optional:</i> Smart card reader None						
	i9-9880H	8	16	2.3 GHz	4.8 GHz	16MB	DDI 14-2000			Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card						
	E-2276M	6	12	2.8 GHz	4.7 GHz	12MB		Intel UHD G P630		Ports	Three USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),						
	NVIDIA QU RTX 3000 or RTX 50 Up to 5 dis tors suppo	uadro® (6GB 00 Ma splays orted vi	P620 (40 GDDR6, x-Q (16G with 4 ex ia USB-C	B GDDR6.	i), T2000 (RTX 4000 VR ready) tors plus s olt, and HI	4GB GI) Max-C); system OMI	Q (8GB GD LCD scree	DR6, VR reans DR6, VR reans DR1, VR reans DR2, VR reans DR3, VR reans DR3, VR reans DR4, VR reans DR5, VR reans DR		Monitor cable (optional)	two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical sp. HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter						
Chipset	Mobile Inte	el CM2	246 Chips	et :				,		1 ′ ′	USB-C to DP: Lenovo USB-C to DisplayPort Adapter						
Memory	128GB ma	ax / 26	66MHz ['] D	DR4 (ECC	function s	upporte	ed only on 2	Xeon proces	ssor),	Bundled Accy	None						
<u> </u>	dual-chan	nel cap	pable, fou	ır DDR4 SC)-DIMM so						IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus						
Display	Size Reso			ype Surfac		Iess R	spect Contra latio Ratio	Gamut	iewing Angle	Audio support	HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 / dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system						
	17.3" FHD	\		VVA Anti-gla		its 1	6:9 700:1	72%	160°	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight						
	17.3" UHD Dolby	(3640X) Vision	≥160) V ™ HDR V	VVA Anti-gla	are 400 n	its 1	6:9 1000:	1 100%	170°	UltraNav™	3-button TrackPoint® pointing device and						
Multi-touch	None		·		,						3-button Mylar surface multi-touch touchpad						
Pen	None									Security	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified						
Storage				<i>and one HDI</i> .5" wide, 7n				80 drives only	/	Security chip vPro (optional)	Intel vPro Technology						
				IVMe, PCIe		Clive i i	olection by	SIGIII		Fingerprint reade	Touch style match on chip fingerprint reader on the palm rest						
Optane™ memory				emory, PCI	e NVMe, F	PCIe 3.	0 x 2			Color calibration NFC (optional)	Optional: X-Rite Pantone factory color calibration (UHD model only) Near Field Communication						
RAID (optional) Optical	RAID 0/1 : None	suppor	t														
Ethernet		model	·Intal Eth	ernet Conr	action I21	0-\/ (la	ckeonvilla)			Battery Max battery life	Integrated Li- Polymer 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr)						
Linemei	vPro mode			ernet Con				e)		1	<i>MobileMark</i> ® <i>2014:</i> 17.2 hr						
WLAN (optional)	Intel Wi-Fi	6 AX2	00, Wi-Fi	2x2 802.1	1ax + Blue	tooth 5	.1	,		AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors 170W or 230W slim tip AC adapter						
Bluetooth™ (opt)		5.1 wir	eless, int	tegrated in	Wi-Fi + Blu	ietooth	combo ada	apter		Operating system	One of the following, configurable by model:						
WWAN	None									operating eyetem	Windows® 10 Home 64						
SIM card	None										Windows 10 Pro 64Windows 10 Pro 64 for Workstations						
										Limited warrants	One of the following, configurable by model:						
										Limited warranty	1-year depot repair service						
											3-year/1-yr battery depot repair service						
											3-year/1-yr battery limited onsite service						
										Mil-Spec test	MIL-STD-810G military testing						
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant						





™DMA



ThinkPad T14 Gen 1 (AMD) Platform Specifications

Processor	AMD	Ryzen™ PRO 400	0 Se	ries Mobile	Proce	essors					Smart card reade	er Optional: Smart card reader						
	Proce	essor # of # o	f	Base M	lax Boo			1emory		essor	Media reader	MicroSD card reader						
	Numb		ads	Clock	Clock	ONARL	C(ontroller	Gra	phics	Ports	Two USB 3.2 Gen 1 (one Always On), two USB 3.2 Type-C Gen 2 (w/ the function of Power Delivery and DisplayPort 1.4),						
	Ryzei	12 de la 12 de la 12	2	2.1 GHz	4.0 GH	3MB L 8MB	12		AMD F	Radeon™		HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models),						
	Ryzei		1	.7 GHz	4.1 GH	, 4MB L	.2/	R4-3200		phics		headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole						
	PRO	4750U 8 10		., αιιε		8MB	L3				Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed						
Graphics		Radeon Graphics orts up to 4 indep			vio no	tiva dian	م م م م م	l O outon		oitoro.	(optional)	 Lenovo HDMI to VGA Monitor Adapter Lenovo USB-C to VGA Adapter 						
	supp	orts up to 4 indep orts external mon	itors v	rii dispiays via HDMI (up to 4	ilive disp IK@60H:	ay and z) or	3 exteri	nai moi	illors,	Dundled Assu	Lenovo USB-C to DisplayPort Adapter						
				USB Ty	pe-C (up to 5K	@60H≥	z)			Bundled Accy	None						
Chipset	AMD	SoC (System on	Chip)	platform							Camera (optional)	 I) HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus 						
Memory	8GB	3 max`/ 3200MHz or 16GB memory	solde	4, duai-cn ered to sys	annei d stembo	capable, ard, one	DDR4	SO-DIM	IM sock	ket	Audio support	HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 2W x 2 /						
Display		1						Contrast			1	optional dual array far-field microphone, headphone / microphone combo jack						
. ,			Туре		Touch	ness	Ratio	Ratio	Gamut	Angle	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, optional LED backlight						
		HD (1366x768)		Anti-glare	-	220 nits	16:9	400:1	45%	90° 170°	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
			ĺ .	Anti-glare	- Multi-	250 nits	16:9	700:1	45%		Security	Power-on password, hard disk password, supervisor password, security keyhol						
	14.0"		WVA	Anti-glare	touch	300 nits	16:9	700:1	45%	170°	Security chip System Mgt	Discrete TPM 2.0 TCG Certified DASH Management						
	14.0"	FHD (1920x1080) Low Power	WVA	Anti-glare	-	400 nits	16:9	800:1	72%	170°	Fingerprint reade	r <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest None						
	14.0"	FHD (1920x1080) ThinkPad Privacy	WVA	Anti-glare	Multi- touch	500 nits	16:9	1000:1	72%	170°	Battery	Integrated Li-Polymer 50Wh battery,						
Multi-touch (opt)	On-ce	Guard ell touch, supports	10-f	inger gest	ure				l		Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14 hr						
Storage		2 2242 SSD / PCI									_	MobileMark 2018: 11.5 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors						
· ·	• M.2	2 2280 SSD / PCI									AC adapter	45W USB-C AC adapter						
Optical	None	·	/ O:	. la :4 T.4 a a								65W USB-C AC adapter 65W USB-C slim AC adapter						
Ethernet WLAN + BT		ek® RTL8111EP\ Wi-Fi 6 AX200, W					1 = 1				Operating system	o Optional: Windows® 10 Home 64 or Windows 10 Pro 64						
WWAN (optional)		· · · · · · · · · · · · · · · · · · ·			1X + DI	ueloolii	" 5.1				· · · · ·							
vvvvAiv (optionai)		egrated Mobile Bro			E-A, Fi	bocom L	850-GL	_, M.2 ca	ard		(optional)	1-year depot with 2-year system board repair service						
SIM card (opt)	* For I	non-WWAN model, i alto eSIM	t mea	ns the mode	el is NO	T WWAN	upgrada	able				 1-year limited onsite service 1-year + 2-year depot repair service 						
Dimensions			24" v	0.70": 2	20mm	v 227mm	v 17 ()mm				1-year + 2-year limited onsite service						
Weight	WxDxH: 12.95" x 8.94" x 0.70"; 329mm x 227mm x 17.9mm Models HD / FHD / FHD Touch FHD Low Power / Privacy Guard											 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 						
•	Weigl					2 lb / 1.46					Mil-Spec test	MIL-STD-810G military testing						
Case color	Black		, = 05.	05		<u> </u>					Environment	EPEAT™ Silver; ENERGY STAR® 8.0; RoHS-compliant						
Case material		cover: PPS oard cover: PC / i			Magne	sium allo	W.				Liviloiiiiciit	El Elli Silver, Eller O'Art 6.0, Horio compilant						
	Botto	<i>m:</i> PA / 5	50% (3F	ŭ		•											
		optional ISO 2219																
Note: The specifica	ations a	above may not be a	availal	ble in all re	gions a	nd might	change	by regic	ns.			Lenovo						

Note: The specifications above may not be available in all regions and might change by regions.

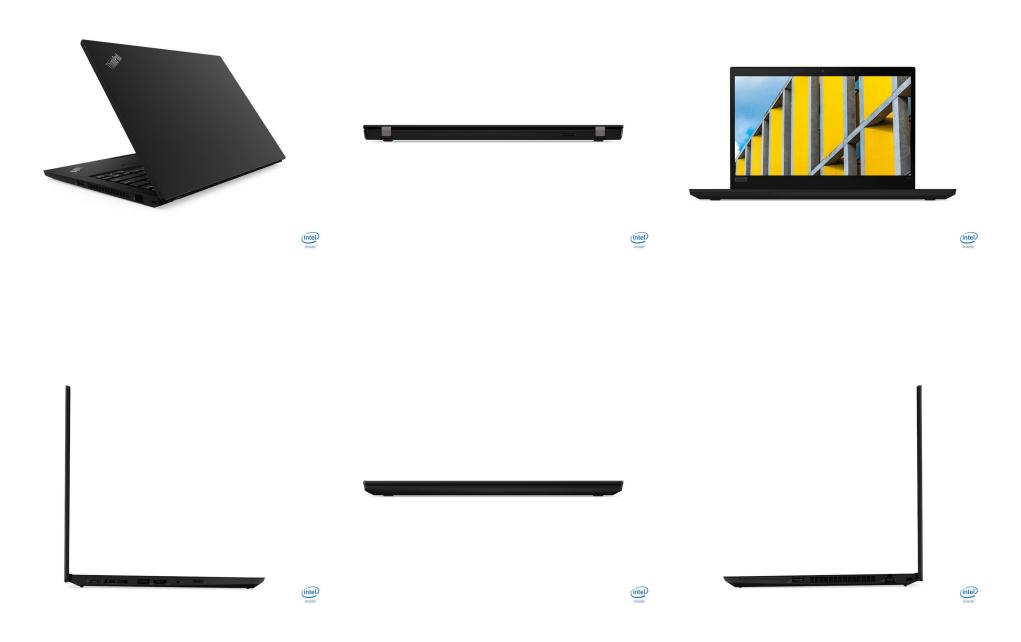






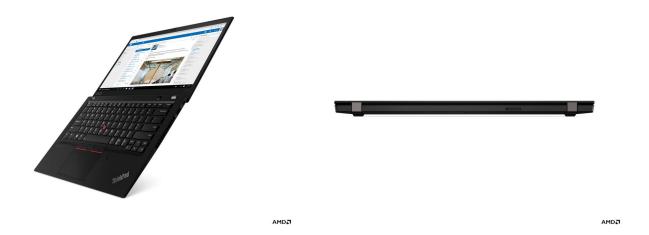
ThinkPad T14 Gen 1 (Intel) Platform Specifications

Processor	10th Generation Ir	ntel® Co	re™ i5 / i7 F	rocess	or					Dimensions	WxDxH:	12.95"	x 8.94" x 0).70"; 329r	nm x 227mm x 1	7.9mm			
	Processor # of	# of		Max Tur		Memor	ry Types	Proce		Weight	Models	HD	FHD		FHD Low Power	UHD	Privacy Guard		
		Threads	• •	Frequen	су	Wellion	iy iypes	Grap	hics		Weight	3.37 lb /	3.41 lb /	3.41 lb /	3.28 lb / 1.49 kg	3.28 lb /	3.56 lb /		
	i5-10210U		1.6 GHz 1.7 GHz	4.2 GH 4.4 GH	_	-				Case color	Plack	1.53 kg	1.55 kg	1.55 kg	9	1.49 kg	1.61 kg		
	i5-10310U i7-10510U 4	8	1.7 GHZ 1.8 GHz	4.4 GH 4.9 GH		DDR4	4-2666	Intel U Grap	-	Case material	Black Top cover: PPS / 50% GF								
	i7-10510U		1.8 GHz	4.9 GH		-		Grap	11100		Keyboar	d cover: P	C / ABS /	Talc15 + Ma	gnesium alloy				
Graphics	Intel UHD Graphics in processor only or								<u>'</u>	Bottom: PA / 50% GF									
Graphics	Intel UHD Graphic							with optional ISO 22196 compliant anti-microbial surface treations (not including keyboard, display, and display bezel)											
	NVIDIA® GeForce									Smart card reade	r Optional	: Smart ca	ard reader		· ·				
	supports up to 3 ir supports external							ernai m	onitors	INICUIA ICAUCI		card read		0-1					
	USB-C (up to 409)							060Hz)		Ports	one USE	3 3.2 Gen 3 3 2 Type.	1 (one Alw	ays On), with the fun	ction of Power De	elivery and	I DisplayPort)		
Chipset	Intel SoC (System	on Chi	p) platform					,			one USE	3.2 Type-	-C Gen 2 /	Thunderbol	t 3 (with the func	tion of PD	and DP),		
Memory	40GB or 48GB ma	ax / 266	6MHz DDR	4, dual-	channel	capable	e,								card slot (WWAN				
	8GB or 16GB mer * Installed memory is								et		microSD	ne / micro card read	pnone con der, side do	nbo jack, op ocking conne	tional smart card ector, security ke	i reader, vhole			
Display	metanea memery te	J doldan,	OZOOWN IZ DO	I	, ,				Viewine	Manitan aabla	* Depend	ing on many	y factors, act	tual data tran:	sfer speed may be l	lower than t	heoretical speed		
Бюріцу	Size Resolution Type Surface Touch Bright- Aspect Contrast Color Viewing Ratio Ratio Gamut Angle									(optional)			VGA Moni o VGA Ada	tor Adapter					
	14.0" HD (1366x768) TN Anti-glare - 220 nits 16:9 400:1 45% 90°							90°					ort Adapter						
	14.0" FHD (1920x10	080) W	/VA Anti-glare		250 nits	16:9	700:1	45%	170°	Bundled Accy	None								
	14.0" FHD (1920x10)80) W	/VA Anti-glare	Multi- touch	300 nits	16:9	700:1	45%	170°	Camera (optional							fixed focus		
	14.0" FHD (1920x10 Low Power)80) _W	/VA Anti-glare	1	400 nits	16:9	800:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera p HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker s optional dual array far-field microphone, headphone / microph 						i, 2W x 2 /		
	FHD (1920x10		0 / A A = +; = =	Multi-	500 11-	10:0	1000.1	700/	1700	Keyboard	'				with Unified Cor				
	14.0" ThinkPad Priva	acy v\	/VA Anti-glare	touch	500 nits	16:9	1000:1	72%	178°	optional LED backlight							ŕ		
	UHD (3840x21	160)								UltraNav™	, , ,								
	14.0" HDR400, Dolby Vision™		/VA Glossy	-	500 nits	16:9	1500:1	100%	178°	Security Security chip	Discrete TPM 2.0 TCG Certified						urity keyhole		
Multi-touch (opt)	On-cell touch, sup		0-finger ges	ture						1 ''									
Storage	• M.2 2242 SSD /	<u> </u>								System Mgt (opt)	Intel vPr	o Technolo	ogy vdo match	on ohin fina	arprint raadar an	the nalm	roct		
	• M.2 2280 SSD /									Fingerprint reader Optional: Touch style match on chip fingerprint reader on the NFC (optional) Near Field Communication							1651		
	 Intel Optane™ M M.2 2280, PCIe 			olid Sta	te Storag	e,				Battery	Integrate	ed Li-Polvn	ner 50Wh I	batterv.					
Optical	None	TAVIVIC	0.0 X T								Integrated Li-Polymer 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapt MobileMark® 2014: 16.5 hr								
Ethernet	Non-vPro model:	Intel Eth	nernet Conn	ection	219-V (J	ackson	ville)			Max battery life			: 16.5 hr 11.45 hr						
	vPro model:	Intel Eth	nernet Conn	ection	1219-LM	(Jackso	nville)				* Battery	life varies s	significantly v		configurations, set	tings, usag	e, & other factors		
WLAN +	Intel Wi-Fi 6 AX20						00			AC adapter		ISB-C AC ISB-C AC							
Bluetooth™	* Intel AX201 card si	• •		nitea to	B15.0 by 1	vinaows	08			_			adaptei 1 AC adapt	er					
WWAN (optional)	 Wireless WAN u Integrated Mobile 			'F-Δ Fi	hocom I	850-GI	M 2 ca	rd		Operating system					dows 10 Pro 64				
	 Integrated Mobile 	e Broad	lband 4G LT	E-A, Fi	bocom L	860-GL	, MIMO		2 card	l		depot repa							
SIM card (opt)	* For non-WWAN mo Gemalto eSIM	odel, it m	eans the mod	lel is NC	T WWAN	upgrada	ble			(optional)	• 1-year	depot with	2-year sys		repair service				
Gilvi Gara (Opt)	Gemailo estivi												site service epot repair						
											 1-year + 2-year onsite repair service 3-year/1-yr battery depot repair service 								
									3-ýear/1-ýr batterý limited onsite service										
										Mil-Spec test	MIL-STE)-810G mi	litary testin	ıg					
										Environment	EPEAT™	¹ Gold; EN	IERGY STA	AR® 8.0; Ro	HS-compliant				



ThinkPad T14 Secure Access / Healthcare Edition Gen 1 Platform Specifications

Processor	10th Generation Intel	® Core	e™ i5 / i7 l	Proces	sor					Smart card reade	
	Processor # of # of Number Cores Three	eads F	requency 1.7 GHz	Max Tu Freque 4.4 G	ency Caci	В	nory Types R4-2666	Gra _l Intel	essor phics UHD	RFID reader Media reader Ports	RFID reader supporting RFID / NFC MicroSD card reader Two USB 3.2 Gen 1 (one Always On), one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i7-10610U	<u> </u>	1.8 GHz	4.9 G	Hz 8M	в В	114-2000	Gra	phics		one USB 3.2 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP).
Graphics	Intel UHD Graphics in Intel UHD Graphics in NVIDIA® GeForce® M Supports up to 3 inder Supports external more USB-C (up to 4096x2	n proce IX330, pende nitors	essor and , 2GB GD ent display via HDMI	i DR5 m s via r (up to	native dis 4096x2	i60@2	4Hz),			Monitor cable (optional)	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo HDMI to VGA Monitor Adapter • Lenovo USB-C to VGA Adapter • Lenovo USB-C to DisplayPort Adapter
Chipset Memory	Intel SoC (System on 40GB or 48GB max /	Chip)) platform	24 dua	l channa	Loopah	alo.			Bundled Accy	None
Memory	8GB or 16GB memor	y sold	lered to sy	ystemb	oard, on	e DDR	4 SO-DIN	MM soci	ĸet	Camera (optional)	() • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Display	* Installed memory is act	1			Dright		Contrast		Viewing		HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 2W x 2 / optional dual array far-field microphone, headphone / microphone combo jack
	Size Resolution 14.0" FHD (1920x1080)	Туре			ness 250 nits	Ratio 16:9	Ratio 700:1	Gamut 45%	Angle 170°	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls,
	14.0" FHD (1920x1080)			B. 4. 11.	300 nits	16:9	700:1	45%	170°	∐ UltraNav™	LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
			Anti-giare	touch	300 Hits	10.9	700.1	45%	170	Security	Power-on password, hard disk password, supervisor password, security keyhole
	FHD (1920x1080) 14.0" ThinkPad Privacy Guard	WVA	Anti-glare	Multi- touch	500 nits	16:9	1000:1	72%	178°	Security chip	Firmware TPM 2.0 integrated in chipset Discrete TPM 2.0 TCG Certified
Multi-touch (opt)	On-cell touch, suppor	rts 10-	finger ges	sture						Fingerprint reade	Intel vPro Technology rFWVA 201 fingerprint reader on palm rest
Storage	• M.2 2280 SSD / PC									NFC	NFC support via RFID reader
	 M.2 2242 SSD / PC Intel Optane™ Mem M.2 2280, PCIe NV 	nory H	l10 with S			ıge,				Battery Max battery life	Integrated Li-Polymer 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 16.5 hr
Optical	None									Max battery ine	MobileMark 2018: 10.5 hr
Ethernet	Non-vPro model: Inte vPro model: Inte		ernet Coni ernet Coni							AC adapter	 * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W USB-C AC adapter 65W USB-C AC adapter
WLAN + Bluetooth™	Intel Wi-Fi 6 AX201, V * Intel AX201 card support						ws OS				65W USB-C slim AC adapter
	Wireless WAN upgra			iiiiieu t	0 013.0 0	vviiidoi	W3 00				Optional: Windows® 10 Pro 64
SIM card (opt)	Integrated Mobile B * For non-WWAN model, Gemalto eSIM	roadb	and 4G L					ard		Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service
Dimensions	<i>WxDxH:</i> 12.95" x 8	3.94" x	(0.70":	329mn	n x 227m	m x 17	.9mm			1	1-year + 2-year depot repair service 1-year + 2-year onsite repair service
Weight	Models FHD / FH Weight 3.41 lb /	HD Tou	ıch	Priva	acy Guard						• 1-year + 2-year onsite repair service • 3-year/1-yr battery limited onsite service
Case color	Black				,					Mil-Spec test	MIL-STD-810G military testing
Case material	Keyboard cover: PC	50%	/Talc15 + GF	Ū		•				Environment	EPEAT™ Gold; ENERGY STAR® 8.0; RoHS-compliant
Note: The specific	ations above may not be						no by rogi	one		1	Lenovo





AMD.

AMD.



ThinkPad T14s Gen 1 (AMD) Platform Specifications

Processor	AMD Ryzen™ PRO 4	1000 Series	Mobile Pro	cessors					Smart card reade	r Optional: Smart card reader
	Processor # of	# of Bas	e Max Bo	oost		1emory		essor	Media reader Ports	MicroSD card reader
	Number Cores Th	hreads Clo		K OMD I	L Co	ontroller	Gra	ohics	Ports	Two USB 3.2 Gen 1 (one Always On), two USB 3.2 Type-C Gen 2 (w/ the function of Power Delivery and DisplayPort 1.4),
	PRO 4650U 6	12 2.1 G	Hz 4.0 G	Hz 8MB	13	R4-3200	AMD F	adeon™		HDMI 2.0, Ethernet extension connector, nano-SIM card slot (WWAN models),
	Ryzen 7	16 1.7 G	Hz 4.1 G	Hz 4MB L	.2 /	H4-3200	Gra	ohics		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
	PRO 4750U 6			8MB	L3				Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo HDMI to VGA Monitor Adapter
Graphics	AMD Radeon Graph supports up to 4 inde			native disn	lav and	l 3 extern	nal mor	nitors:	(optional)	Lenovo USB-C to VGA Adapter
	supports external mo	onitors via F	ĎMÍ (up to	4K@60H:	z) or		101 11101	,	Bundled Accy	Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
Ohinaat	AMD CaC (Creaters of			(up to 5K	@60Hz	<u>z)</u>			Camera	HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	AMD SoC (System of 8GB, 16GB, or 32GB			oldered to	svstem	board. n	o sock	ets		• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Display					Aspect	Contrast			Audio support	HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 1W x 2 / optional dual array far-field microphone, headphone / microphone combo jack
	Size Resolution	Type Surf		brightness	Ratio	Ratio	Gamut	Angle	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls,
	14.0" FHD (1920x1080	<u> </u>	N.A IA.	250 nits	16:9	700:1	45%	170°	UltraNav™	optional LED backlight
	14.0" FHD (1920x1080	' I I '	touch	300 nits	16:9	700:1	45%	170°	Security	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
	14.0" FHD (1920x1080 Low Power	O) WVA Anti-	lare -	400 nits	16:9	800:1	72%	170°	Security chip	Discrete TPM 2.0 TCG Certified
	FHD (1920x1080	D)	NAIti						System Mgt	DASH Management r Optional: Touch style match on chip fingerprint reader on the palm rest
	14.0" ThinkPad Privacy Guard	y WVA Anti-	lare touch	500 nits	16:9	1000:1	72%	170°	NFC	None
Multi-touch (opt)	On-cell touch, suppo	orts 10-finge	r gesture						Battery	Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Storage	• M.2 2242 SSD / PO								Max battery life	MobileMark® 2014: 15.9 hr
Optical	 M.2 2280 SSD / PO None 	Cle NVMe,	² Cle 3.0 x	4						MobileMark 2018: 13.6 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Ethernet	Native Realtek® RTL	.8111EPV G	igabit Ethe	rnet conne	ection				AC adapter	45W USB-C AC adapter
	via optional ThinkPa	d Ethernet I	xtension A	Adapter Ge	n 2					65W USB-C AC adapter 65W USB-C slim AC adapter
WLAN + BT	Intel Wi-Fi 6 AX200,)2.11ax +	Bluetooth™	¹ 5.1				Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN (optional)	Wireless WAN upgIntegrated Mobile B	gradable Broadband 4	GITF-A	Fibocom L	850-GI	M 2 ca	rd		Limited warranty	1-year depot repair service
CIM soud (sout)	* For non-WWAN mode	el, it means th	e model is N	OT WWAN	upgradal	ble			(optional)	 1-year depot with 2-year system board repair service 1-year limited onsite service
SIM card (opt) Dimensions	Gemalto eSIM WxDxH (FHD / FHD	Touch / Pri	oov Guara	۸,					_	1-year + 2-year depot repair service
Difficusions	` 12	2.95" x 8.90"			226.15	5mm x 16	6.7mm			 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service
	WxDxH (FHD Low P	<i>Power):</i> 2.94" x 8.89"	v 0 62"· 3	20 0mm v	225 22	nm v 16	1mm			3-year/1-yr battery limited onsite service
Weight		FHD Touch		Low Power		FHD Priv		ard	Mil-Spec test	MIL-STD-810G military testing
		o / 1.35 kg	2.81	lb / 1.27 kg		2.81 lb			Environment	EPEAT™ Silver; ENERGY STAR® 8.0; RoHS-compliant
Case color Case material	Black Display cover: CFR	D Hybrid								
Jase material		nesium								
Note: The specifica	ations above may not b	e available ir	all regions	and might	change	by regio	ns.		•	Lenovo



ThinkPad T14s Gen 1 (Intel) Platform Specifications

Processor	10th Generation I									Dimensions	WxDxH (black with FHD / FHD Touch / Privacy Guard):				
	Processor # of Number Cores i5-10210U	# of Threads	Frequency	Max Turb Frequence 4.2 GHz	cacne	Memo	ory Types	Proce Grap	essor phics		12.95" x 8.90" x 0.66"; 329.0mm x 226.15mm x 16.7mm WxDxH (black with FHD Low Power / UHD): 12.94" x 8.89" x 0.63"; 328.8mm x 225.8mm x 16.1mm				
	i5-10310U i7-10510U 4	8	1.7 GHz 1.8 GHz	4.4 GHz 4.9 GHz	z 6MB z 8MB	DDF	R4-2666	Intel UHD Graphics		Weight	WxDxH (silver): 12.96" x 8.92" x 0.68"; 329.15mm x 226.45mm x 17.2mm Models Black with FHD / FHD Touch / Privacy Guard Black with FHD Low Power / UHD Silver				
	i7-10610U			4.9 GHz	z 8MB						Weight 2.98 lb / 1.35 kg 2.81 lb / 1.27 kg 3.29 lb / 1.49 kg				
Graphics	Intel UHD Graphi supports up to 3 i supports external USB-C (up to 409	ndepend monitor	dent displays s via HDMI	(up to 4	096x216	80 [°] @24	Hz),				Black or Silver Display cover: CFRP Hybrid (black) or Aluminum (silver); Bottom: Magnesium Note to see the seed as a few seed a				
Chipset Memory	Intel SoC (System 8GB, 16GB or 32 * Installed memory	n on Chi GB / 266	p) platform 66MHz DDR	4 / sold	ered to	system	board, n	o socke		Media reader Ports	er Optional: Smart card reader MicroSD card reader Two USB 3.2 Gen 1 (one Always On), one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),				
Display	Size Resolution	Т	ype Surface	Touch	Bright- ness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		one USB 3.2 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector,				
	14.0" FHD (1920x1	080) V	VVA Anti-glar	9 -	250 nits	16:9	700:1	45%	170°]	combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader,				
	14.0" FHD (1920x1	,	VVA Anti-glar	Multi- touch	300 nits	16:9	700:1	45%	170°		side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed				
	14.0" FHD (1920x1 Low Power		VVA Anti-glar	-	400 nits	16:9	800:1	72%	170°	Monitor cable (optional)	 Lenovo HDMI to VGA Monitor Adapter Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter 				
	FHD (1920x1 14.0" ThinkPad Priv Guard	080) /acy V	VVA Anti-glar	Multi- touch	500 nits	16:9	1000:1	72%	170°	Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2				
	14.0" UHD (3840x2 14.0" HDR400, Dolby Vision ^{TI}	ĺν	VVA Glossy	-	500 nits	16:9	1500:1	100% DCI-P3	170°	Audio support	 I)• HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 1W x 2 / optional dual array far-field microphone, headphone / microphone combo jack 				
Multi-touch (opt)	On-cell touch, sup	pports 1	0-finger ges	ture						Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls,				
Storage	M.2 2242 SSDM.2 2280 SSD	/ PCIe N	IVMe, PCIe	3.0 x 4						UltraNav™	optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Optical	 Intel Optane™ I M.2 2280, PCIe None 			lid Stat	e Storag	e,				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset				
Ethernet	Native Intel Ether						-LM (<i>vPr</i>	0)			Discrete TPM 2.0 TCG Certified Intel vPro Technology Optional: Touch style match on chip fingerprint reader on the palm rest				
WLAN + Bluetooth™	Intel Wi-Fi 6 AX20	1 Wi-Fi	i 2x2 802 11	ax + Bli	ietooth !	5.0	s OS			NFC (optional) Near Field Communication Battery Integrated Li-Polymer 57Wh battery,					
	Wireless WAN Integrated Mobi Integrated Mobi	ıpgradal le Broad le Broad	ole Iband 4G LT Iband 4G LT	E-A, Fil E-A, Fil	ocom L	850-G 860-G	L, M.2 ca L, MIMO		.2 card	Max battery life AC adapter	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark 2014: 21 hr MobileMark 2018: 14.28 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factor				
SIM card (opt)	* For non-WWAN m Gemalto eSIM	odel, it m	eans the mod	el is NO	I WWAN	upgrad	able			, to adapto.	 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter 				
										Operating system	n <i>Optional:</i> Windows® 10 Home 64 or Windows 10 Pro 64				
										Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 1-year + 2-year/1-yr battery depot repair service 1-year + 2-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service 				
										Mil-Spec test	Work in progress				
										Environment	EPEAT™ Gold; ENERGY STAR® 8.0; RoHS-compliant				













ThinkPad T15 Gen 1 Platform Specifications

Processor	10th (Generation	n Intel® (Core™	^м i5 / i7 P	rocess	or					Dimensions	<i>WxDxH</i> : 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm			
	Proce: Numb					Max Turk Frequen		Memo	ry Types	Proce Grap		Weight Case color	FHD model: 3.99 lb / 1.81 kg; UHD model: 3.84 lb / 1.74 kg Black			
	i5-102 i5-103 i7-105 i7-106	10U 4	8	1.	7 GHz 8 GHz	4.2 GH: 4.4 GH: 4.9 GH: 4.9 GH:	z 6MB z 8MB	DDR	4-2666	Intel Grap		Case material	Display cover: PPS / 50% GF Keyboard cover: PC / ABS / Talc15 + Magnesium alloy Bottom: PA / 50% GF with optional ISO 22196 compliant anti-microbial surface treatment (not including keyboard, display, and display bezel)			
	Intel U NVIDI suppo suppo	JHD Gra A® GeFo orts up to orts exter	phics in porce® MX 3 independent	oroces 330, 2 enden tors vi	2GB GDE t displays ia HDMI (OR5 me s via na (up to 4	emory; tive displ 096x216 rbolt (up	0´@24H	Hz),			Smart card reader Optional: Smart card reader Media reader MicroSD card reader Two USB 3.2 Gen 1 (one Always On), one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and I one USB 3.2 Type-C Gen 2 / Thunderbolt 3 (with the function of PD a				
Chipset Memory	40GB 8GB	or 48GE or 16GB	memory	666Ml soldei	Hz DDR4 red to sys	stembo	channel o ard, one 2666MHz o	DDR4	SO-DIM	M sock	æt	Monitor cable	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 • Lenovo HDMI to VGA Monitor Adapter			
Display	Size	Resolutio	า	Туре	Surface	Touch	Bright- ness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	(optional) Bundled Accy	 Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter None 			
	15.6"	FHD (192	0x1080)	WVA	Anti-glare	-	250 nits	16:9	800:1	45%	170°	I	• HD720p camera with ThinkShutter camera privacy, fixed focus			
	\perp	FHD (192 UHD (384		WVA	Anti-glare	Multi- touch	300 nits	16:9	800:1	45%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 2W x 2 / optional dual array far-field microphone, headphone / microphone combo jack 			
	15.6"	HDR400, Dolby Visi	,	WVA	Anti-glare	-	500 nits	16:9	1400:1	100%	170°	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad, optional LED backlight			
					nger gest							UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
J	M.2Inte	2242 SS I Optane	SD / PCIe	NVIV ry H10		3.0 x 2	e Storage	э,				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole • Firmware TPM 2.0 integrated in chipset • Discrete TPM 2.0 TCG Certified Intel vPro Technology			
Optical	None	2200, F	CIE INVIVI	e 3.0								Fingerprint reader	r <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest			
Ethernet		Pro mod model:					219-V (Ja 219-LM (NFC <i>(optional)</i> Battery	Near Field Communication Integrated Li-Polymer 57Wh battery.			
WLAN + Bluetooth™	Intel V	Vi-Fi 6 A	X201, Wi	-Fi 2x	2 802.11	ax + Bl	uetooth 5 BT5.0 by V	.0				Max battery life	Supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 15.26 hr MobileMark 2018: 10.81 hr			
	IntegralIntegral* For note	grated M grated M on-WWA	obile Bro obile Bro V <i>model, it</i>	adbar adbar	nd 4G LT	E-A, Fi	bocom L8 bocom L8 T WWAN 1	360-GL	, MIMO	rd 2x2, M	.2 card	AC adapter	 *Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C Slim AC adapter 			
SIM card (opt)	Gema	ılto eSIM										Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
												,	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
													MIL-STD-810G military testing			
							nd might (Environment	EPEAT™ Gold; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant			







ThinkPad T480 Platform Specifications

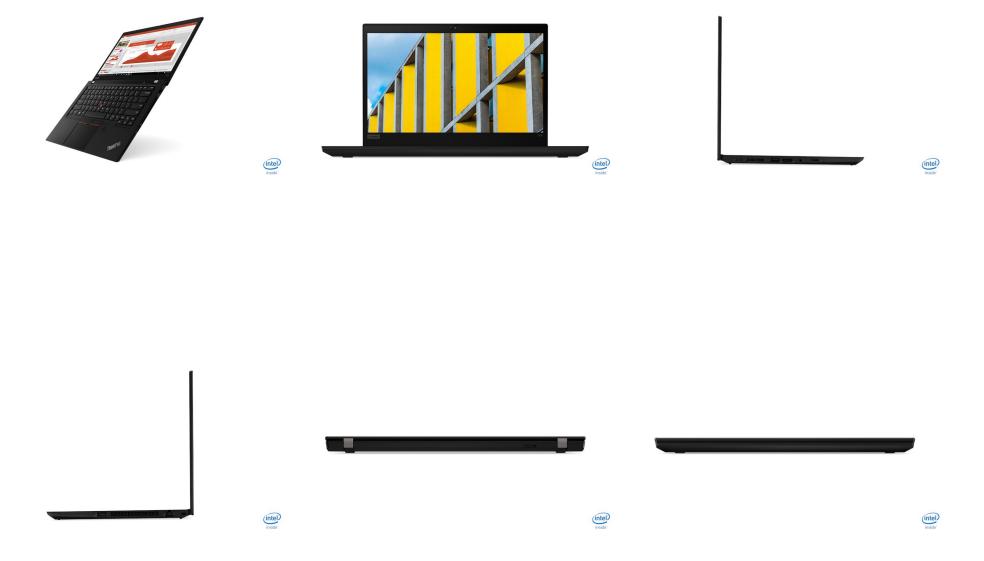
Processor	7th Gener	ration Ir	ntel® Core	e™ i5 Proc	essor				Dimensions	WxDxH:	13.25" x 9	.15" x 0.79"; 336.6mm	n x 232.5mm x 19.9	5mm			
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Weight	Models		24Wh or 24Wh + 24Wh					
	Number	Cores	Threads	Frequency	Frequency		Types	Graphics		Integrated I		3.49 lb / 1.58 kg	3.92 lb /				
	i5-7200U	2	4	2.5 GHz	3.1 GHz	3MB	DDR4-2133	Intel HD Graphics		Integrated F		3.63 lb / 1.65 kg	4.08 lb /				
	i5-7300U	l		2.6 GHz	3.5 GHz	3MB		620	_	Discrete Ma		3.53 lb / 1.60 kg	3.97 lb /				
					i7 Process	or			Casa color	Black	3	3.68 lb / 1.67 kg	4.12 lb /	1.87 kg			
	Processor Number i3-8130U	# of Cores	# of Threads 4	Base Frequency 2.2 GHz	Max Turbo Frequency 3.4 GHz	Cache 4MB	Memory Types	Processor Graphics	Case material								
	i5-8250U i5-8350U i7-8550U i7-8650U	- 4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620	Smart card reader Optional: Smart card reader								
	Intel HD (NVIDIA® ((discrete (supports (supports (Max resol	Graphica GeForce graphica externa three in lution: 4	s 620 or e® MX15 <i>s is avail</i> . I digital n depende 1096x230	Intel UHD 0, 2GB GD able only on nonitor via nt displays 04@60Hz	Graphics 6 DDR5 mem on <i>i7 model</i> HDMI or U s; (USB Type	20 in p ory <i>s in EN</i> ISB Typ	e-Ć;		Monitor cable (optional)	HDMI 1.4b headphone 4-in-1 med side dockir * Depending HDMI to V USB-C to	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 speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter						
Chipset Memory	32GB ma	x / 2400	MHz DE	p) platform)R4, dual-c cessors with		oable, t ory cont	wo DDR4 S roller	O-DIMM sockets		era (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus by Support HD Audio, Realtek® ALC3287 codec /							
Display		220 niit 14.0" (3	s, 16:9 a 555mm) F	spect ratio HD (1920:	, 400:1 cor x1080), an	itrast ra ti-glare	ED backligh atio , LED backl atio, 170° vie	ght, WVA,		stereo spe dual array	akers, 2W : microphone	x 2, Dolby® Audio™ Prei e (for special bid model, one combo jack		onal),			
	;	14.0" (3 300 nits	85 ⁵ 5mm) V	VQHD (25) pect ratio,	60x1440),	anti-gla		cklight, WVA,	Keyboard UltraNav™	TrackPoint	pointing d	multimedia Fn keys, opt evice and buttonless My	/lar surface multi-to	uch touchpad			
Multi-touch (opt)					sture (FHD	only)			Security Security chip	Power-on p	password, r PM 2.0. TC	nard disk password, sup G Certified (may be dis	ervisor password, s abled in some regio	security keynole n)			
Storage	Some: H Some: S Some: N	DD / SA SD / SA 1.2 SSD	ATA 6.0G ATA 6.0G) / PCle N	b/s, 2.5" w b/s, 2.5" w VMe. PCI	ride, 7mm h le 3.0 x 4	nigh, Ad nigh (e.		ion System™ SD)	vPro (optional)	der <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboard be anti-spoofing technology Near Field Communication							
	Some: 1:	28GB N WWAN	N.2 SSD Solution	/ PCIe NVI 2nd Storac	Me, PCIe 3 ge, mutuall	y exclus	sive with W\	VAN adapter limitation	Battery	Battery Optional integrated Li-ion 24Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery							
Optane™ memory Optical	Intel Opta None	ne men	nory, PC	le NVMe, F	PCIe 3.0 x	2		adapter iiriitatiori	Max battery life (<i>MobileMark</i> ® 2014)	Models Integrated r		nr 14.4 hr 21.8 hr	/h + 24Wh 24Wh + 4 14.4 hr 21.8 h 13.6 hr 19.8 h	29.0 hr			
Ethernet	vPro moa	lel:	Intel Eth	ernet Con	nection I21	9-LM (acksonville) Jacksonville	,	AC adapter	* Battery life		ificantly with hardware conf					
WLAN + Bluetooth™ (opt)							c + Bluetoot <i>Windows OS</i>	h 4.1, M.2 card	Operating system	Optional: \	Windows® 1	10 Home 64 or Windows	s 10 Pro 64				
WWAN (optional)	One of the • Wireless • Integrate Intel XM • Integrate Intel XM * For non-N	following s WAN ed Mob lM™ 720 ed Mob lM™ 730 WWAN m	g, configur upgradat ile Broad 62 (Fibod ile Broad 60 (Fibod nodel, it m	able by mod ble band 4G L com L830-E band 4G L com L850-G eans the mod	del (mutually .TE, EB), M.2 ca	exclusiverd (EMard (EMa	ve with Intel Co	ptane memory):	Limited warranty (optional) 1-year/3-yr battery depot repair service 1-year depot repair service 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service 3-year/3-yr battery limited onsite service								
SIM card (opt)	Ivalio-Silv	. oa.a o	, -		(- ,					 3-year/3- 	yı ballery i	irrilled orisite service					
SIM card (opt)	Nano-Silv	· oara o	,		(- ()				Mil-Spec test	MIL-STD-8	, ,						



ThinkPad T480s Platform Specifications

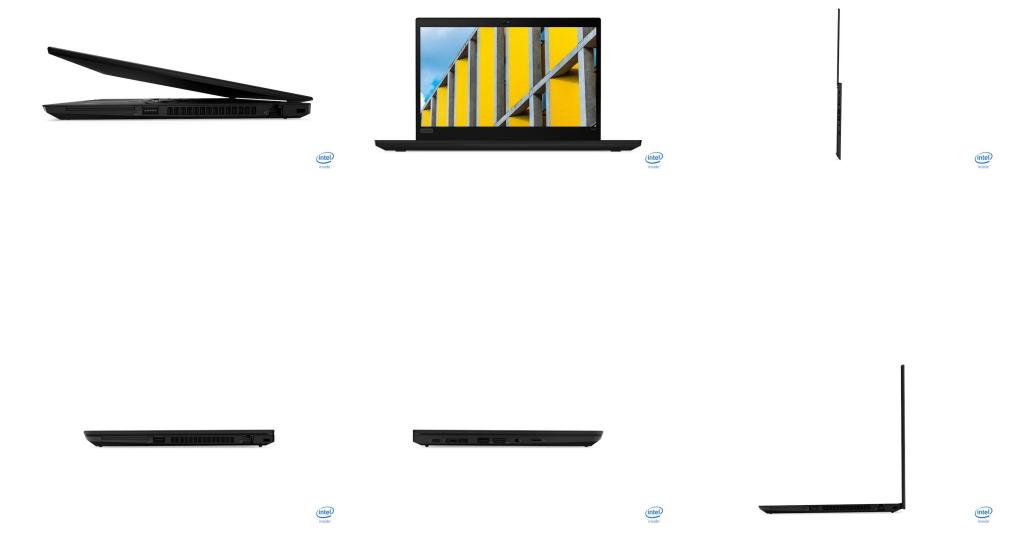
Processor	7th Generation Intel® Core™ i5 Processor	Dimensions
	Processor # of # of Base Max Turbo Cache Processor	Weight Starting at 2.9 lb / 1.32 kg Case color Black or Silver
	Number Cores Threads Frequency Frequency Types Graphics	Case material Display cover: CFRP Hybrid;
	15-7200U 2 4 2.5 GHz 3.1 GHz 3MB DDR4-2133 Intel HD Graphics 620 620	Bottom: Magnesium Smart card reader Optional: Smart card reader
	or 8th Generation Intel Core i5 / i7 Processor	Media reader 4-in-1 reader (MMC, SD, SDHC, SDXC)
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Ports Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 4.	one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory (discrete models are NOT available in EMEA);	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Monitor cable (optional) * Depending on many factors, actual data transfer speed may be lower than theoretical speed USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	supports external digital monitor via HDMI or USB Type-C;	Camera (optional) One of the following, configurable by model:
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus Audio current
Chipset Memory	Intel SoC (System on Chip) platform 20GB or 24GB max / 2400MHz DDR4, dual-channel capable, 4GB or 8GB memory soldered to systemboard, one DDR4 SO-DIMM socket	Audio support HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack
	* System clocks down for processors with lower memory controller	Keyboard 6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle, supports ThinkPad Privacy Guard on some models Some: 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle	Security Power-on password, hard disk password, supervisor password, security keyhole Security chip VPro (optional) Intel vPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Multi-touch (opt)	On-cell touch, supports 10-finger gesture, 250 nits (FHD only)	NFC (optional) Near Field Communication
Storage	One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s	Battery Integrated Li-ion 57Wh battery, supports Rapid Charge (0-80% in 60 mins) with 65W USB Type-C AC adapter
Optical	M.2 SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s None	Max battery life MobileMark® 2014: 15.6 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)	AC adapter 45W or 65W USB-Č AC adapter
	vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™ (opt)	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	 Limited warranty 1-year depot repair service 1-year depot with 2-year system board repair service
WWAN	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)	 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Integrated Mobile Broadband 4G LTE-A.	Mil-Spec test MIL-STD-810G military testing
SIM card (opt)	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card	Environment EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant
Make The second	ations above may not be available in all regions and might change by regions	Longy

Note: The specifications above may not be available in all regions and might change by regions.



ThinkPad T490 Platform Specifications

Processor	8th Generati	on Intel®	Core	™ i5 / i7 F	Processor					Dimensions	WxDxH:			m x 227mm x 17.9mm		
		# of#		Base	Max Turbo Ca		/lemory	Proce		Weight	Models	HD	FHD	FHD Low Power / WQHD		
	Number C i5-8265U	ores Thre	eads I	Frequency 1.6 GHz	Frequency	ИΒ	Types	Grap	nics	Coop color	Weight	3.37 lb / 1.53 kg	3.41 lb / 1.55 kg	3.23 lb / 1.46 kg	3.56 lb / 1.61 kg	
	i5-8365U		-	1.6 GHz		/IR				Case color Case material	Black Display o	cover: PPS / 50%	6 GF:			
	i7-8565U	4 8	3	1.8 GHz	4.6 GHz 81		R4-2400	ntel UHD	Graphics		Bottom:	PA / 50%				
	i7-8665U			1.9 GHz	4.8 GHz 8	ИΒ				Smart card reade			der			
			tel Co		Processor (NC	T avai	lable in E	MEA)		Media reader Ports	Two USF	card reader 3 3.1 Gen 1 (one	Always On).			
		ores Thre	-	Base Frequency	Max Turbo Frequency Ca		/lemory Types		essor ohics		one USE	3 3.1 Type-C`Gen	1 (with the funct	ion of Power Delivery ar 3 (with the function of PI		
	i5-10210U	4 8	3 -	1.6 GHz		/B								ard slot (WWAN models)),	
	i7-10510U i7-10710U	6 1	2	1.8 GHz 1.1 GHz		ИВ DE	R4-2400	Intel UHD	Graphics	5	microSD	card reader, side	e docking connec	onal smart card reader, ctor, security keyhole		
Graphics	Intel UHD G						<u>'</u>			microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theory HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter (optional) USB-C to VGA: Lenovo USB-C to VGA Adapter					theoretical speed	
	NVIDIA® Ge	Force® M	IX250), 2GB GI	DDR5 memory						USB-C to	o HDMI: Lenovo	USB-C to HDMI	Adapter		
	supports external digital monitor via HDMI or Thunderbolt; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt): 4096x2160@24Hz (HD									Bundled Accy	None	o DP: Lenovo	•	yPort Adapter		
Diamlari	Max resoluti	on: 4096	x2304	4@60Hz	(Thunderbolt);		_			Carriera (optional) One of the following, configuration by model.						
Display	Size Resolut	ion	Ту	pe Surfa	ice Brightness	Asped	ct Contras Ratio	t Color Gamut	Viewing Angle	gle • IR camera and HD720p camera with ThinkShutter camera privacy, fixe						
	14.0" HD (136	66x768)	Т	ΓN Anti-g	lare 220 nits	16:9		45%	90°	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /					
					250 nits						stereo sp dual arra	peakers, 2vv x 2, av far-field microp	Dolby [∞] Audio ™ F hone (for specia	remium / I bid model, microphone	is optional).	
	14.0" FHD (19	920x1080)	W	/VA Anti-g	300 1113	10.9	700:1	45%	170°			ne / microphone				
	EHD /10	920x1080)			(multi-touch	1				Keyboard UltraNav™				optional LED backlight	ab tawabaad	
	14.0" Low Pov	ver	W	/VA Anti-g	lare 400 nits	16:9	800:1	72%	170°					Mylar surface multi-tou		
	FHD (19 14.0" ThinkPa Guard	920x1080) Id Privacy	W	/VA Anti-g	lare 400 nits	16:9	1000:1	72%	170°	Security Security chip	Firmware (may be	e TPM 2.0 integra disabled in some	ated in chipset or	supervisor password, se discrete TPM 2.0 TCG (
	14 0" WQHD	(2560x144		/VA Glos	sy 500 nits	16:9	1500:1	100% Adobe	170°	Fingerprint reade	stem Mgt (opt) Intel vPro Technology gerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest C (optional) Near Field Communication					
Multi-touch (opt)				-finger ge	sture (FHD on	lv)				NFC (optional)		ed Li-Polymer 50V				
Chipset	Intel SoC (S				•	<u>, , </u>				Battery	supports	Rapid Charge (d	charge up to 80%	in 1hr) with 65W AC ac	lapter	
Memory	40GB or 480	B max /	2400	MHz DD	R4, dual-chann systemboard, o			111111 000	dra#	Max battery life	MobileM	lark® 2014: 16.1	1 hr	configurations, settings, usa		
					but run at 2400M				Kel	AC adapter	 45W U 	JSB-C AC adapte	r	oringurations, settings, usa	ge, & other lactors	
Storage	• M.2 2280	SSD / SA	TA 6.	0Gb/s (N	OT available in	EMEA	A)			1		JSB-C AC adapte JSB-C slim AC ac				
-	M.2 2280M.2 2242									Operating system			iapiei			
	 Intel Optar 	ne™ Mem	nory H	110 with	Solid State Sto	rage,				(optional)	 Windov 	ws 10 Pro 64				
Ontinal	M.2 2280,	PCIe NV	Mé 3	.0 x 4		0 /						ws 10 Pro in S mo				
Optical	None	l - l - l 1	. L .			/ / -				Limited warranty		depot repair servi depot with 2-year		anoir corrido		
Ethernet	vPro model:				nection I219-V nection I219-L)		(optional)		limited onsite ser		epair service		
WLAN +	Intel Wirele	ss-AC 9	560, V	Vi-Fi 2x2	802.11ac + Blu	<u>·</u> uetooth	1 5.0	,		7		+ 2-year depot re				
Bluetooth™					2.11ax + Blueto	oth 5.0)					+ 2-year onsite re 1-yr battery depo				
(optional)	(AX201 for				,,					- <u></u>	• 3-year/	1-yr battery limite	d onsite service			
WWAN (optional)					<i>aeı:</i> I bid only in EN	ΛΕΑ)				Mil-Spec test	MIL-STD	0-810G military te	sting			
	IntegratedIntegratedIntegrated	Mobile B Mobile B Mobile B	roadb roadb roadb	oand 4G oand 4G oand 4G	_TE, Fibócom L _TE-A, Fibocon _TE-A, Fibocon	.830-E 1 L850 1 L860	-ĠL, M.2 -GL, MIM	card	• •	Environment	EPEAT™	Gold; ENERGY	STAR® 7.1; TCO	Certified; RoHS-complia	ant	
SIM card (opt)	* For non-WW• Verizon LT	'AN model	, it me	ans the m	odel is NOT WW	AN upgi	radable	,								



ThinkPad T490 Secure Access / Healthcare Edition Platform Specifications

Processor	8th Ge	neration	Intel® C	ore™	⁴ i5 / i7 Pr	ocessor					Dimensions	WxDxH:	12.95" x 8.94" x 0.70"		
	Process					Max Turbo	Cache	Memory	Proce		Weight	Models	FHD	Privacy Guard	
	Numbe		es Threa	_		riequency		Types	Graph	nics		Weight	3.41 lb / 1.55 kg	3.56 lb / 1.61 kg	
	i5-8265				1.6 GHz 1.6 GHz		6MB 6MB				Case color Case material	Black Display co	over: PPS / 50% GF;		
	i7-8565	4	8		1.8 GHz		8MB	DDR4-2400 Int	el UHD	Graphics	Gase material		cover: PC/ABS + Magn	esium alloy	
	i7-8665				1.9 GHz		8MB					-	(with ISO 22196	compliant anti-microbial surface treatment);	
Graphics			obico in		essor only						╡	Bottom:	PA / 50% GF		
Graphics					essor and						Smart card reade RFID reader		der supporting RFID / NI	EC.	
	NVIDIA	۹® GeFd	rce® M>	250,	2GB GDI	DR5 memor					Media reader		card reader		
						HDMI or Thu	ınderb	oolt;			Ports	Two USB	3.1 Gen 1 (one Always	On),	
		supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HD										one USB	3.1 Type-C Gen 1 (with t	the function of Power Delivery and DisplayPort)	
Chipset					platform	manacibon), 400	70XL 100 @ L-11	12 (1101	VII.)		ONE USB	3.1 Type-C Gen 2 / Thur b Ethernet (B.I-45) nan	nderbolt 3 (with the function of PD and DP), no-SIM card slot (WWAN model),	
Memory	40GB	or 48GE	max / 2	400N	/Hz DDR	4, dual-char	nnel ca	apable,				headphor	ne / microphone combo j	ack, microSD card reader,	
,	8GB or	0GB or 48GB max / 2400MHz DDR4, dual-channel capable, GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM so Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation										side dock	ing connector, security k	ceyhole	
	* Install	ed memo	ry is actu	ally 2	666MHz bu	ıt run at 2400	MHz d	ue to Intel limita			Monitor cable	HDMI to \	ig on many factors, actual d VGA: Lenovo HDMI to	lata transfer speed may be lower than theoretical spee VGA Monitor Adapter	
Display	Size R	esolution		Туре	Surface	Brightness	Aspe		Color	Viewing	wing (optional) USB-C to VGA: Lenovo USB-C to VGA Adapter				
				71		250 nits	Ratio	Ratio	Gamut	Angle	-	USB-C to DP: Lenovo USB-C to DisplayPort Adapter			
	14 0" F	HD (1920)v1080)	\Λ/\/Δ	Anti-glare	(non-touch)	16:9	700:1	45%	170°	Bundled Accy	y None			
	14.0	110 (102)	,x1000)	****	Trini giaic	300 nits (multi-touch)	10.5	700.1	1570	170	Camera (optional	I) One of the	following, configurable by n	nodel:	
	F	HD (1920)x1080)			(mail: todon)					1	 HD720p 	camera with ThinkShut	tter camera privacy, fixed focus	
	14.0" T	hinkPad	Privacy	WVA	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support			with ThinkShutter camera privacy, fixed focus	
		iuard		40.6	<u> </u>	, (ELID	L.,				Addio Support	stereo spe	, Realtek® ALC3287 cod eakers, 2W x 2, Dolby® A	iec / Audio™ Premium /	
						ture (FHD c	nly)					optional d	lual array far-field microp	phone, headphone / microphone combo jack	
Storage		2280 SS			Gb/s Me, PCle	3 0 v 1					Keyboard			n keys, optional LED backlight	
					Me, PCle						UltraNav™		1 0	uttonless Mylar surface multi-touch touchpad	
	• Intel	Optane	Memo	ry H	10 with So	olid State St	orage	,			Security Power-on password, hard disk password, supervisor password, security chip Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG C				
Optical	M.2 2 None	2280, P	JIE NVN	/le 3.0) x 4						Security chip		isabled in some region)		
Ethernet		Pro moo	al: Intal	Ethou	rnot Conn	ection I219	V (la	okeopyillo)			System Mgt (opt)	lîntel vPro	Technology		
Lineinei	vPro n							lacksonville)				r FWVA 20	1 fingerprint reader on p	alm rest	
WLAN (optional)	Intel W	ireless-	AC 9560	. Wi-I	Fi 2x2 802	2.11ac + Blu	retoot	h 5.0			NFC		oort via RFID reader		
Bluetooth™ (opt)								combo adapte	er		Battery	Integrated	d Li-Polymer 50Wh batte	ry, p to 80% in 1hr) with 65W AC adapter	
WWAN (optional)											Max battery life	MobileMa	<i>rk[®] 2014:</i> 16.11 hr ັ	, ,	
					(special			50 OL MO	1		AC adaptar			ardware configurations, settings, usage, & other facto	
						E-A, FIDOCO del is NOT WI		50-GL, M.2 ca	ard		AC adapter		SB-C AC adapter SB-C AC adapter		
SIM card (opt)		to eSIM					.,	ograda					SB-C slim AC adapter		
											Operating system	Optional:	Windows® 10 Pro 64		
											Limited warranty		epot repair service		
											(optional)	 1-year d 	epot with 2-year system	board repair service	
													mited onsite service -yr battery depot repair s	sarvica	
													2-year/1-yr battery depo		
												• 1-year +	2-year/1-yr battery limit	ed onsite service	
													-yr battery limited onsite	service	
											Mil-Spec test		810G military testing		
											Environment	EPEAT™	Silver; ENERGY STAR®	7.1; RoHS-compliant	
Note: The specifica	tions ab	ove may	not he	ovaila	hle in all re	ndione and n	niaht c	hange by regic	nne		<u> </u>			Lend	



ThinkPad T490s Platform Specifications

Processor	8th Generation In	tal® Car	om is / i7 Dr	occcor					Dimensions	WxDxH (black with FHD / Privacy Guard):				
FIOCESSOI	Processor # of	# of	Base	May Turbo	ne T	emory ypes	Proce Grapl		Dimensions	WxDxH (black with FHD Low Power / WQHD): 12.95" x 8.90" x 0.66"; 329.0mm x 226.15mm x 16.7mm WxDxH (black with FHD Low Power / WQHD): 12.94" x 8.89" x 0.63"; 328.8mm x 225.8mm x 16.1mm WxDxH (silver): 12.96" x 8.92" x 0.68"; 329.15mm x 226.45mm x 17.2mm				
	i5-8365U i7-8565U i7-8665U	8	1.6 GHz 1.8 GHz 1.9 GHz	4.1 GHz 6N 4.6 GHz 8N 4.8 GHz 8N	IB DDI	R4-2400 In	tel UHD	Graphics	Weight	Models Black with FHD / Privacy Guard WQHD				
Graphics	Intel UHD Graphic supports external supports three inc. Max resolution: 4	l digital ı depende	monitor via H ent displays;		,	v160@24	Hz (HDN	MI)	Case color Case material	Black or Silver Display cover: CFRP Hybrid (black) or Aluminum (silver); Bottom: Magnesium				
Chipset Memory	Intel SoC (System 8GB, 16GB or 320 * Installed memory	n on Ch GB / 24	ip) platform 00MHz DDR	4 / soldered t	o systei	mboard, r	o socke		Media reader Ports	or Optional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),				
Display	Size Resolution	-	Type Surface		Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,				
	14.0" FHD (1920x1	080)	NVA Anti-glar	250 nits (non-touch) 300 nits (multi-touch)	16:9	700:1	45%	170°	Monitor cable	headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical shDMI 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				
	14.0" FHD (1920x1 Low Power	080)	WVA Anti-glar	e 400 nits	16:9	800:1	72%	170°	(optional)					
	FHD (1920x1) 14.0" ThinkPad Priv Guard	080) vacy	WVA Anti-glar	e 400 nits	16:9	1000:1	72%	170°	Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2 1) • HD720p camera with ThinkShutter camera privacy, fixed focus				
	14.0" WQHD (2560 HDR, Dolby V		WVA Glossy	500 nits	16:9	1500:1	100% Adobe	170°	Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec /				
	On-cell touch, sur	pports 1		ture (FHD onl	y)		1		-	stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone (for special bid model, microphone is optional), headphone / microphone combo jack				
Storage	 M.2 2280 SSD M.2 2280 SSD M.2 2242 SSD Intel OptaneTM N 	/ PCIe N / PCIe N	NVMe, PCIe NVMe, PCIe	3.0 x 2	ana				Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Optical	M.2 2280, PCIe None	NVMe	3.0 x 4	ma Otate Otor	ago,				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified				
Ethernet	Native Intel Ether via optional Think	Pad Eth	nernet Extens	sion Adapter		9-LM (<i>vP</i>	ro)		Fingerprint reader	(may be disabled in some region) Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest				
WLAN + Bluetooth™ (optional)	One of the followingIntel Wireless-AIntel Wi-Fi 6 AX	C 9560,	Wi-Fi 2x2 8	02.11ac + Blu		5.0			NFČ (optional) Battery	Near Field Communication Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter				
WWAN (optional)	• Wireless WAN u	upgrada	ble		=				Max battery life	MobileMark® 2014: 20 hr *Battery life varies significantly with hardware configurations, settings, usage, & other factor • 45W USB-C AC adapter				
	 Integrated Mobi Integrated Mobi * For non-WWAN m 	ile Broad	dband 4G LT	E-A, Fibocom	L850-0	GL, M.2 c		A only)	AC adapter	65W USB-C AC adapter 65W USB-C Slim AC adapter				
SIM card (opt)	Verizon LTE (USGemalto eSIM								Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
	• Gemailo esim								Limited warranty (optional)	1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 1-year + 2-year/1-yr battery depot repair service 1-year + 2-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service				
									Mil-Spec test	MIL-STD-810G military testing				
	ations above may no								Environment	EPEAT™ Gold; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant				



ThinkPad T495 Platform Specifications

Processor	AMD Ryzer	n™ PRO	Mobile F	Processor	s with Rade	eon™ Veg	a Graphics			Dimensions	WxDxH:	12.95" x 8.94" >	(0.70"; 329mm;	x 227mm x 17.9mm
	Processor	# of	# of	Base	Max Boost	Cache	Memory		essor	Weight	Models	HD	FHD	FHD Low Power
	Number Ryzen 3		Threads	Clock	Clock	2MB L2	Controller		phics n Vega 6	Case color	Weight Black	3.46 lb / 1.57 kg	3.46 lb / 1.57 kg	3.39 lb / 1.54 kg
	PRO 3300U	4	4	2.1 GHz	3.5 GHz	4MB L3		Gra	phics	Case material		ver: PPS / 50%		
	Ryzen 5 PRO 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400		n Vega 8 phics		Bottom:	PA / 50% G		
	Ryzen 7	4		0.0.011-	4.0.01.1-	2MB L2 /			Vega 10	Smart card reade Media reader	r <i>Optional: S</i> MicroSD ca	Smart card reade	er	
	PRO 3700U	4	8	2.3 GHz	4.0 GHz	4MB L3		Gra	phics	Ports	One USB 3	3.1 Gen 1 (Alway	s On), one USB 3	3.1 Gen 2,
Graphics	AMD Raded supports ex supports for Max resolut	ternaľ d	ligital mo	nitor via l	JSB-C or H	IDMI: ˈ	•	DMI)			HDMI 2.0, headphone microSD ca	Ethernet (RJ-45 e / microphone c ard reader, side), nano-SIM card s ombo jack, option docking connector	f Power Delivery and DisplayPort 1.4) slot (WWAN models), al smart card reader, s security keyhole speed may be lower than theoretical speed
Chipset	AMD SoC (System	on Chip) platform						Monitor cable	HDMI to V	<i>GA:</i> Lenovo H	DMI to VGA Monit	or Adapter
Memory	32GB max 7 8GB or 16G	/ 2400M 3B mem	orv sold	(4, dual-c ered to sv	nannei capa Astemboard	able, . one DF	DR4 SO-DIM	M soci	cet	(optional)	USB-C to I USB-C to I	<i>VGA:</i> Lenovo U DP: Lenovo II	SB-C to VGA Ada SB-C to DisplayPo	pter ort Adanter
	* Installed me	emory is	actually 2	666MHz b	ut run at 240	OMHz due	to AMD limit	ation		Bundled Accy	None	Dr. Lonovo o	OB O to Biopiayi (Triangle i
Display	Size Resolu	ition	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Camera (optional)	One of the fo	ollowing, configura camera with Thir	ble by model: nkShutter camera	privacy, fixed focus
	14.0" HD (13	66x768)	TN	Anti-glare	220 nits	16:9	400:1	45%	90°	Audio oupport	• IR camer	a and HD720p o	amera with Thinks	Shutter camera privacy, fixed focus
	14.0" FHD (1		, l	Anti-glare	250 nits (non-touch) 300 nits (multi-touch	16.9	700:1	45%	170°	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone (for special bid model, microphone is optional), headphone / microphone combo jack			
	14.0" FHD (1 Low Po	wei		Anti-glare		16:9	800:1	72%	170°	Keyboard UltraNav™	6-row, spill	resistant, multin	nedia Fn keys, opt and buttonless M	ional LED backlight ylar surface multi-touch touchpad
	On-cell touc				ture (FHD	only)				Security	Power-on p	password, hard o	lisk password, sur	pervisor password, security keyhole
	M.2 2280M.2 2280	SSD / F	Cle NV	Me, PCIe						Security chip	(may be dis	sabled in some r		screte TPM 2.0 TCG Certified
Optical	 M.2 2242 None 	SSD / F	Cle NV	Me, PCIe	3.0 x 2					System Mgt Fingerprint reade	DAŚH Mar	nagement Touch style matc	h on chin fingernr	int reader on the palm rest
Ethernet	Realtek® R1	ΓL8111	Gigabit I	Ethernet of	connection					NFC	None	rodon otylo mato	ir on omp imgorpi	introduction and paintroot
WLAN	One of the fo									Battery		Li-Polymer 50W		4ha) with OFIM AO adeatas
	Realtek® FIntel Wirel	RTL882	2BE, Wi-	-Fi 2x2 80	2.11ac + B	luetooth	4.2, M.2 ca	rd		Max battery life		rapid Charge (ch rk® <i>2014:</i> 13.4 h		1hr) with 65W AC adapter
Bluetooth™	Bluetooth 4							adapte	r	AC adapter		e varies significantl W USB-C AC ad		figurations, settings, usage, & other factors
WWAN (optional)	One of the for Wireless V				el:					<u> </u>			me 64 or Window	s 10 Pro 64
	 Integrated * For non-WV • Verizon LT • Gemalto e 	l Mobile VAN mod ΓΕ (US)	Broadba	and 4G L	ΓΕ-Α, Fiboα del is NOT W	om L85(WAN upg	0-GL, M.2 ca gradable	ard			 1-year de 1-year de 1-year lir 1-year + 1-year + 3-year/1- 	epot repair servic	ce system board repartice lair service site service repair service	
										Mil-Spec test		310G military tes		
										Environment	EPEAT™ G	Gold; ENERGY S	TAR® 7.1; TCO Ce	ertified; RoHS-compliant
Note: The specifica	tions above r	may not	ho availa	blo in all r	ogione and	might ch	ango by rogic	nne						Lenovo



ThinkPad T495s Platform Specifications

Processor	-					on™ Veg	ga Graphics			Dimensions	WxDxH (FHD / Privacy Guard):			
	Processor Number	# of Cores Th	# of preads	Base Clock	Max Boost Clock	Cache	Memory Controller		essor ohics		12.95" x 8.90" x 0.66"; 329.0mm x 226.15mm x 16.7mm WxDxH (Low Power):			
	Ryzen 5	4		2.1 GHz	27047	2MB L2 /	7	Radeor	vega 8	Weight	12.94" x 8.89" x 0.63"; 328.8mm x 225.8mm x 16.1mm			
	PRO 3500U	4	•	2.1 GHZ		4MB L3	DDR4-2400		ohics	∥ ັ	Models FHD FHD Low Power FHD Privacy Guard Weight 2.92 lb / 1.33 kg 2.76 lb / 1.25 kg 2.89 lb / 1.31 kg			
	Ryzen 7 PRO 3700U	4	8	2.3 GHz		2MB L2 / 4MB L3		Hadeon	Vega 10 phics	Case color	Weight 2.92 lb / 1.33 kg 2.76 lb / 1.25 kg 2.89 lb / 1.31 kg Black			
Graphics	AMD Raded supports ex supports the Max resolut	ternal di ree inde	igital mo pendent	nitor via U displays;	JSB-C or H	DMI;		IDMI)		Case material Smart card reade Media reader	Display cover: CFRP Hybrid; Bottom: Magnesium/Aluminum er Optional: Smart card reader MicroSD card reader			
Chipset Memory	AMD SoC (8GB or 16G	System 6 B / 2400	on Chip) platform DR4 / solo	dered to sys	stemboa		ets		Ports	One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2, two USB 3.1 Type-C Gen 2 (w/ the function of Power Delivery and DisplayPort 1.4 HDMI 2.0, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,			
Display	Size Resolu	tion	Тур	e Surface	Brightness	Aspec	t Contrast Ratio		Viewing Angle		microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	14.0" FHD (1	920x1080	0) WV	A Anti-glar	e 250 nits (non-touch 300 nits (multi-touch	10.9	700:1	45%	170°	Monitor cable (optional) Bundled Accy	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2			
	14.0" FHD (1 Low Po	920x1080	0) WV	A Anti-glar	1	16:9	800:1	72%	170°	Camera	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus			
	14.0" Low Power WVA Anti-glare 400 nits 16:9 800:1 72%									 IR camera and HD720p camera with ThinkShutter camera privacy, fixed HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / 				
Multi-touch (opt)	On-cell touc					only)				optional dual array far-field microphone, headphone / microphone combo				
Storage Optical	M.2 2280 S None	SD / PC	le NVM	e, PCIe 3.	.0 x 4					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Ethernet	Native Real via optional	tek® RTL ThinkPa	_8111EF ad Ether	PV Gigabi net Exten	t Ethernet c	onnecti er Gen 2	ion 2			Security Power-on password, hard disk password, supervisor password, security k Security chip Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified				
WLAN (optional) Bluetooth™	Intel Wireles Bluetooth 5	ss-AC 92 .0 wirele	260, Wi- ss, integ	Fi 2x2 802 grated in V	2.11ac + Blu Wi-Fi + Blue	uetooth tooth co	5.0 ombo adapte	er		System Mgt Fingerprint reade	(may be disabled in some region) DASH Management or Optional: Touch style match on chip fingerprint reader on the palm rest			
WWAN (optional)					el:					NFC	None			
	Wireless \Integrated	NAN upç I Mobile	gradable Broadba	e and 4G LT	F-A Fiboco	om I 850	0-GL M 2 c	ard		Battery	Integrated Li-Polymer 57Wh battery,			
	* For non-WV • Verizon L	<i>VAN mod</i> ΓΕ (US)∶	el, it mea	ns the mod	del is NOT W	NAN upg	gradable			Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 16.4 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factor			
	• Gemalto e	eSIM								AC adapter	45W or 65W USB-C AC adapter			
										Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
										(optional)	 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
										Mil-Spec test	MIL-STD-810G military testing			
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant			







ThinkPad T580 Platform Specifications

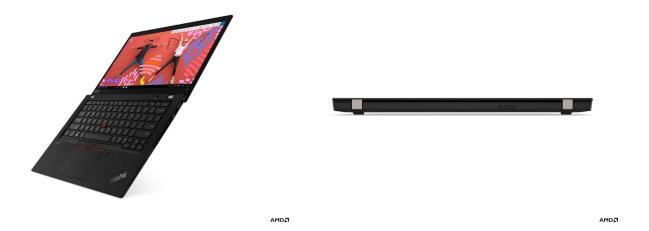
Processor	7th Generation Intel® Core™ i5 Processor		Dimensions	<i>WxDxH:</i> 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm			
	Processor # of # of Base Max Turbo Cache Memory	Processor	Weight	Integrated model: starting at 4.29 lb / 1.95 kg; Discrete model: starting at 4.39 lb / 1.99 kg			
	Number Cores Threads Frequency Frequency Cocine Types i5-7200U 2.5 GHz 3.1 GHz 3MB REPLACED	Graphics	Case color	Black			
	15-7300U 2 4 2.5 GHz 3.5 GHz 3MB DDR4-2133	Intel HD Graphics 620	Case material	Display cover: GFRP + PPS; Bottom: GFRP			
	or 8th Generation Intel Core i5 / i7 Processor		Smart card reade	er Optional: Smart card reader			
	Processor # of # of Base Max Turbo Cache Types Number Cores Threads Frequency Frequency Types	Processor Graphics	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.1 Gen 1 (one Always On),			
	i5-8250U 1.6 GHz 3.4 GHz 6MB	Graphics		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
	1.7 GHz 3.6 GHz 6MB	Intel UHD Graphics		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),			
	i7-8550U 4 8 1.7 GHz 3.0 GHz 6MB DDR4-2400	620		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.			
	i7-8650U 1.9 GHz 4.2 GHz 8MB		_	4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole			
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor onl		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			
	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory;	1	(optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter			
	supports external digital monitor via HDMI or USB Type-C;		Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus				
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@3	OHz (HDMI)		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus			
Chipset	Intel SoC (System on Chip) platform	0112 (1121111)	Audio support	HD Audio, Realtek® ALC3287 codec /			
Memory	32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 S0	D-DIMM sockets		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone (for special bid model, microphone is optional),			
Disales	* System clocks down for processors with lower memory controller	+ 14/1/4	_	headphone / microphone combo jack			
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backligh 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewir		Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight			
	Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight	nt, WVA, 300 nits,	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Multi-touch (opt)	16:9 aspect ratio, 1000:1 contrast ratio, 72% gamut, 170° v On-cell touch, supports 10-finger gesture (FHD only)	riewing angle	Security Power-on password, hard disk password, supervisor password, security chip Discrete TPM 2.0, TCG Certified (may be disabled in some region)				
Storage	System has one HDD slot or one M.2 2280 slot exclusively for storage		vPro (optional) Intel vPro Technology				
J	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection	on System™	Fingerprint reader	r Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology			
	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SS Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s	D)	NFC (optional)	Near Field Communication			
	Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s,	/A.S.I	Battery	Optional integrated Li-ion 32Wh battery and			
Ontane™ memor	in WWAN slot as 2nd Storage, mutually exclusive with WW of Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2	/AN	Max battery life	external Li-ion 24Wh, 48Wh, or 72Wh battery			
Optical	None		(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 (Jacksonville)			* Battery life varies significantly with hardware configurations, settings, usage, & other factors			
	vPro model: Intel Ethernet Connection I219-LM (Jacksonville)		AC adapter	45W or 65W USB-Č AC adapter			
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	1 4.1, M.2 card		Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
WWAN (optional)	One of the following, configurable by model:		Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 			
() /	Wireless WAN upgradable (special bid only)		(optional)	1-year + 2-year depot repair service			
	 Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) 			 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 			
	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		Mil-Spec test	MIL-STD-810G military testing			
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card		Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant			
Note: The enecifie	ations above may not be available in all regions and might change by reg	riono	•	Lenovo			

Note: The specifications above may not be available in all regions and might change by regions.



ThinkPad T590 Platform Specifications

Processor	8th G	enera	ation I	ntel® Co	re™ i	5 / i7 Pr	ocesso	r					Dimensions	WxDxH: 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm			
	Proces Number i5-826	er	# of Cores	# of Thread	s Fred		Max Turk Frequence 3.9 GHz	cy Cac		Memory Types		essor ohics	Weight Case color Case material	FHD model: 3.87 lb / 1.75 kg; UHD model: 3.86 lb / 1.75 kg Black Display cover: PPS / 50% GF; Bottom: PA / 50% GF			
	i5-836 i7-856 i7-866	5U	4	8	1.8	GHz GHz GHz	4.1 GHz 4.6 GHz 4.8 GHz	z 8M	IB L	DR4-2400	Intel UHD	Graphic:	Smart card reade Media reader Ports	er Optional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On),			
Graphics	Intel UHD Graphics in processor only or Intel UHD Graphics in processor and NVIDIA® GeForce® MX250, 2GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HD Intel SoC (System on Chip) platform										4Hz (HD	PMI)	- Monitor cable	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
Chipset Memory												ket	(optional) Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter (NOT available in EMEA) USB-C to DP: Lenovo USB-C to DisplayPort Adapter (NOT available in EMEA) None			
Display		Size Resolution Type Surface Brightness Aspect Ratio Contrast Ratio Gamut											IR camera and HD720p camera with ThinkShutter camera privacy, fixed HD Audio, Realtek® ALC3287 codec /				
	15.6" FHD (1920x1080) WVA Anti-glare 250 nits 16:9 700:1 45%									700:1 1200:1	100%		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone (for special bid model, microphone is opti				
Multi-touch (opt)		חטוו,	DOIDY	V 151011			sture (FF			.200	Adobe	9	Keyboard	headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight			
g -	M.2M.2Intel	2280 2242 Opt	0 SSD 2 SSD ane™	/ SATA / PCIe / PCIe Memor e NVMe	NVMe NVMe y H10	e, PCIe e, PCIe with So		e Stor	age,				UltraNav™ Security Security chip System Mgt (opt)	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest			
Ethernet	Non-v												NFČ (optional)	Near Field Communication			
Bluetooth™ WWAN (optional)	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter) One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EME.										oter .rd (EME	A only)	Max battery life AC adapter	Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics) * Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter • 65W USB-C AC adapter • 65W USB-C slim AC adapter			
	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Verizon LTE (US) SIM card Gemalto eSIM										card			Optional: Windows® 10 Home 64 or Windows 10 Pro 64 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service			
													Mil-Spec test	MIL-STD-810G military testing			
Note: The specifica													Environment	EPEAT™ Gold; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant			





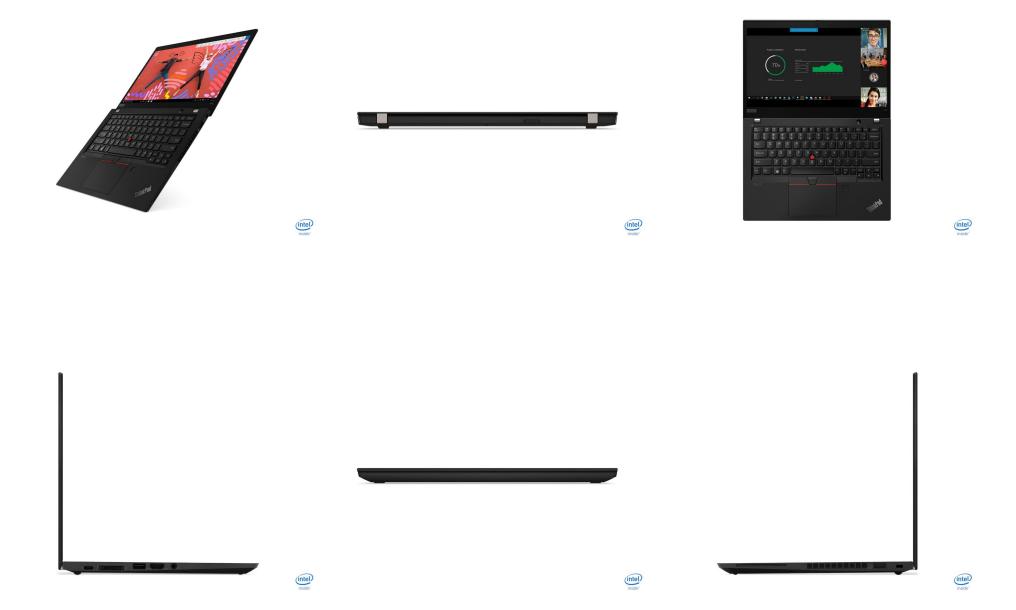
AMD



ThinkPad X13 Gen 1 (AMD) Platform Specifications

Processor A	AMD I	Ryzen	™ PRO	4000 S	eries Mob	ile Proces	sors					Smart card reade	er Optional: Smart card reader					
F	Proces	ssor	# of	# of	Base Clock	Max Boost Clock			emory ntroller	Proce		Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card Two USB 3.2 Gen 1 (Always On),					
	Ryzen PRO 4		4	8	2.5 GHz	3.7 GHz	2MB L2 4MB L3	3		•			two USB 3.2 Type-C Gen 2 (w/ the function of Power Delivery and DisplayPort 1.4), HDMI 2.0, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,					
<u> </u>	Ryzen PRO 4	650U	6	12	2.1 GHz	4.0 GHz	3MB L2 8MB L3	3 DOK	4-3200	AMD R Grap			headphone / microphone combo jack, optional smart card reader.					
	Ryzen PRO 4		8	16	1.7 GHz	4.1 GHz	4MB L2 8MB L3					Monitor cable	side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo HDMI to VGA Monitor Adapter					
. s	oggus	rts up	to 4 in	depend	s via HDM	ýs via nati I (up to 4k	(@60Hz)	or		nal mon	itors;	(optional) Bundled Accy Camera (optional	Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2 // HD720p camera with ThinkShutter camera privacy, fixed focus					
Memory 8	USB Type-C (up to 5K@60Hz) AMD SoC (System on Chip) platform 8GB, 16GB, or 32GB / 3200MHz DDR4 / soldered to systemboard, no s											Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 1W x 2 / optional dual array far-field microphone, headphone / microphone combo jack					
Display											Viewing Angle	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, optional LED backlight					
L	-								300:1	45%	90°	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
<u> </u>	13.3" F	FHD (1	920x10	80) WVA	Anti-glare		00 nits	16:9	800:1	72%	170°	Security	Power-on password, hard disk password, supervisor password, security keyhole					
-		•			Anti-glare	Multi- touch 3	00 nits	16:9	700:1	72%	170°	Security chip System Mgt	Discrete TPM 2.0 TCG Certified DASH Management					
1	13.3"	FHD (1 ThinkPa Guard	920x10 ad Priva	acy WVA	Anti-glare	- 50	00 nits	16:9	1000:1	72%	170°	NFČ .	er <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest None					
Multi-touch (opt)	On-ce	II touc	h, sup	ports 10	-finger ge	sture						Battery	Integrated Li-Polymer 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter					
					/Me, PCI							Max battery life	MobileMark 2018: 10.35 hr					
Optical N	None]	* Battery life varies significantly with hardware configurations, settings, usage, & other factors					
						oit Etherne nsion Ada						AC adapter	 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter 					
WLAN + BT II	Intel V	Vi-Fi 6	AX200	o, Wi-Fi	2x2 802.1	1ax + Blu	etooth™ 5	5.1				Operating system						
*	 Integ 	grated on-WW	Mobile VAN mo	e Broadb	and 4G L	TE-A, Fib odel is NOT				rd								
Weight	WxDx Models	S	Н	D	FHD N	311.9mm on-touch	FHD	Touch	FHC) Privacy			 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 					
_	Weight	t 2	2.85 lb /	1.29 kg	2.85 lb	/ 1.29 kg	2.84 lb /	1.28 kç	g 2.8	85 lb / 1.	29 kg	Mil Connectors	3-year/1-yr battery limited onsite service					
	Black Display cover: PPS/GF;										Mil-Spec test	MIL-STD-810G military testing						
	Display cover: PPS/GF; Bottom: Magnesium/Aluminum											Environment	EPEAT™ Silver; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant					

Note: The specifications above may not be available in all regions and might change by regions.



ThinkPad X13 Gen 1 (Intel) Platform Specifications

Processor	10th C	Gene	ration	Intel® Co	ore™ i3 / i	5 / i7 Pro	cessor						rOptional: Smart card reader
	Proces Number		# of Cores	# of Threads	Base Frequency	Max Tu Freque		he Mer	nory Type		cessor aphics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card Two USB 3.2 Gen 1 (one Always On), one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i3-101 i5-102 i5-103 i7-105 i7-106	10U 10U 10U	4	8	2.1 GHz 1.6 GHz 1.7 GHz 1.8 GHz 1.8 GHz	4.2 GH 4.4 GH 4.9 GH	Hz 6M Hz 6M Hz 8M	B B DI	DR4-2666		el UHD aphics		one USB 3.2 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 * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Graphics	suppo suppo	rts u	p to 3 i xternal	indepen I monito	ocessor; dent displ rs via HDI @60Hz) (ЛÌ (up to	4096x2	160@2	24Hz),			Monitor cable (optional) Bundled Accy	Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
Chipset Memory	8GB, 1	SoC (System on Chip) platform 16GB or 32GB / 2666MHz DDR4 / soldered to systemboard, no socke alled memory is actually 3200MHz but run at 2666MHz due to Intel limitation Right, Aspect Contract Color W										Camera (optional) 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 / Dolby® Audio speaker system, 1W x 2 / optional dual array far-field microphone, headphone / microphone combo jack
Display	Size	ize Resolution Type Surface Touch Bright- Aspect Contrast Color Ratio Gamut									Viewing Angle	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls,
		3.3" HD (1366x768) TN Anti-glare - 250 nits 16:9 300:1 45%										UltraNav™	optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
		,			/A Anti-gla		300 nits		800:1 700:1	72%	170° 170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole • Firmware TPM 2.0 integrated in chipset
	13.3"	FHD (Thinkl Guard		080) vacy W	/A Anti-gla	re -	500 nits	16:9	1000:1	72%	170°	Fingerprint reader	Discrete TPM 2.0 TCG Certified Intel vPro Technology Optional: Touch style match on chip fingerprint reader on the palm rest
Multi-touch (opt)	On-ce	ll tou	ch, su	pports 1	0-finger g	esture					,		Near Field Communication
Storage	M.2Intel M.2	2280 I Opta) SSD ane™ ľ	/ PCIe I	IVMe, PC IVMe, PC H10 with 3.0 x 4	le 3.0 x 4	1	age,				Battery Max battery life	Integrated Li-Polymer 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark* 2014: 15.9 hr MobileMark 2018: 10.45 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Optical Ethernet					nection I2 ernet Ext				9-LM (<i>vl</i>	Pro)		AC adapter	 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter
WLAN +												Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ (opt) WWAN (optional) SIM card (opt)	Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 * Intel AX201 card supports BT5.1 but is limited to BT5.0 by Windows OS • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, if For non-WWAN model, it means the model is NOT WWAN upgradable Gemalto eSIM									card O 2x2, N	M.2 card		 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service
Dimensions	Models	s			HD Non-to			/ FHD N	/lulti-touch	/ Privac	y Guard	NATION AND AND A	3-year/1-yr battery limited onsite service
	Carbo	n Fibe	er (x 217.0mn 8" x 8.54" x		n					Mil-Spec test Environment	Work in progress EPEAT™ Gold; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant
	PPS		(x 217.2mn 8" x 8.55" >		n 3		n x 217.2n 28" x 8.55		.9mm '		2. 2. 1. dola, 2.1.2.1.a. 2.7.1. 3.0, 122 30.1.10a, 1.0.1.0 30.1.p.a.ii.
Weight	Models Carbon PPS		er 2	FHD Non 2.70 lb / 1 2.85 lb / 1	.22 kg	HD - 2.93 lb / 1.	33 kg	FHD M	ulti-touch - 2.84 lb /		y Guard		
Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch only) or PPS; Bottom: Magnesium/Aluminum												
Note: The specifica	tiono o	h aa		-+	ام من ملطمان			- 4 - 1					Lenov













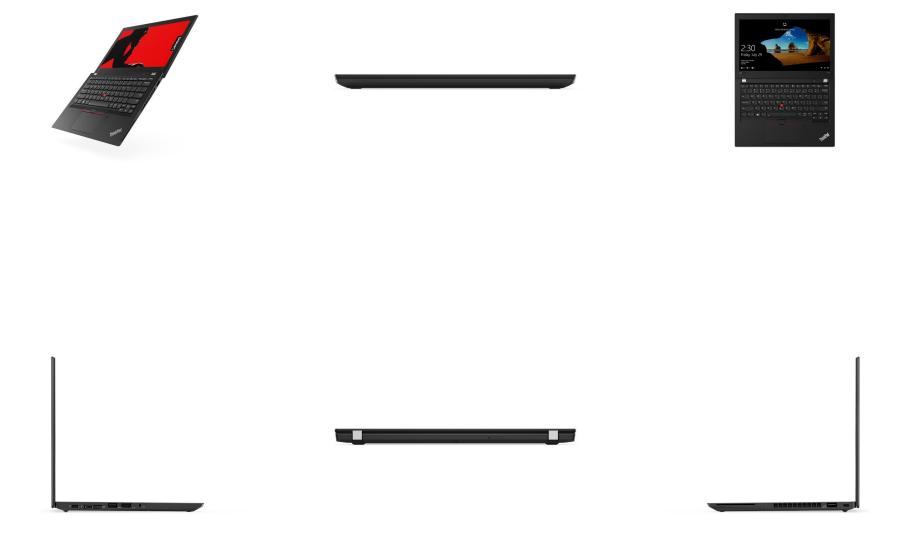






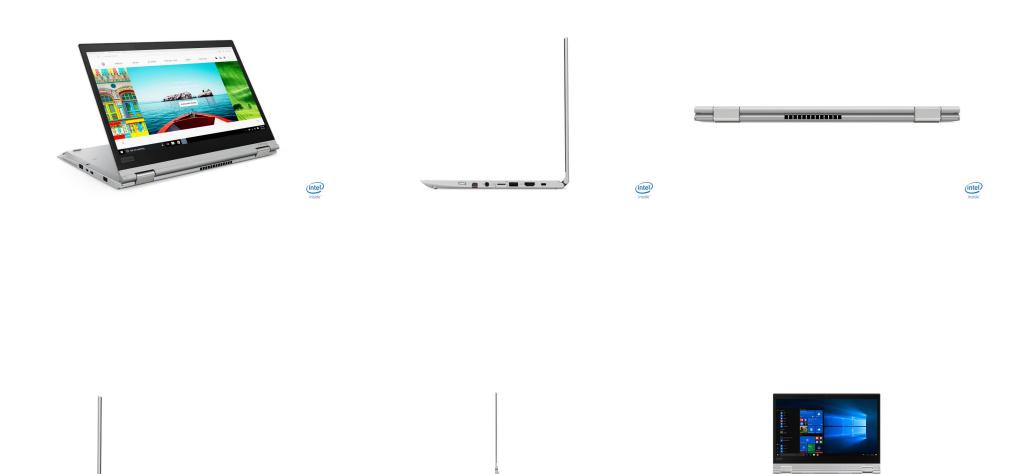
ThinkPad X13 Yoga Gen 1 Platform Specifications

Processor	10th	Generation I	Intel® Co	re™ i5 / i7 Pro	ocesso	r					Dimensions	WxDxH: 12.22" x 8.62" x 0.63"; 310.4mm x 219mm x 15.95mm	
	Proce Numb i5-102	er Cores	# of Threads	Frequency From 1.6 GHz 4	ax Turbo equency .2 GHz	6MB	Memo	ory Types	Proces Graph	nics	Weight Case color Case material	Starting at 2.76 lb /1.25 kg Black Display cover: CF Hybrid PA + 55% GF Bottom: CF Hybrid PA + 55% GF	
	i5-103 i7-105 i7-106	510U 4	8	1.8 GHz 4	.4 GHz .9 GHz .9 GHz	6MB 8MB 8MB	DDR	4-2666	Intel U Graph		Smart card reade Media reader Ports	r <i>Optional:</i> Smart card reader MicroSD card reader, in the combo slot with nano-SIM card Two USB 3.2 Gen 1 (one Always On),	
Graphics	Intel UHD Graphics in processor; supports up to 3 independent displays via native display and two external supports external monitors via HDMI (up to 4096x2160@24Hz), USB-C (up to 4096x2304@60Hz) or Thunderbolt (up to 4096x2304@60H Intel SoC (System on Chip) platform											one USB 3.2 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.2 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,	
Chipset Memory	8GB	or 16GB / 26	666MHz	p) platform DDR4 / solde 3200MHz but i							Monitor cable	side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo HDMI to VGA Monitor Adapter	
Display	Size	Resolution	Тур		Touch	Bright- ness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	(optional) Bundled Accy	 Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2 	
	13.3"	FHD (1920x1	080) WV	Anti-reflection Anti-smudge	touch	300 nits	16:9	800:1	72%	170°	l	• HD720p camera with ThinkShutter camera privacy, fixed focus	
	13.3"	FHD (1920x1 Low Power	⁰⁸⁰⁾ wv	Anti-reflection Anti-smudge	Multi- touch	400 nits	16:9	1500:1	72%	170°	Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec / Dolby® Audio speaker system, 2W x 2 / dual array far-field microphone, headphone / microphone combo jack	
	13.3"	FHD (1920x1) ThinkPad Priv Guard	080) vacy WV	Anti-reflection Anti-smudge	Multi- touch	500 nits	16:9	1000:1	72%	170°	Keyboard -UltraNav™	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, LED backlight	
		UHD (3840x2160)	OLE	Anti-reflection		400 nits	16:9	100000:1	100% DCI-P3	170°	Security	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole	
Multi-touch	Capa	citive-type n	nulti-toud	ch, supports 1 educe the brig	0-finge	r gestur	e, anti	-reflectio	n (AR),		Security chip	 Firmware TPM 2.0 integrated in chipset Discrete TPM 2.0 TCG Certified 	
	Yoga Lapto	hinge, 360 op, tent, stan	degree nd and ta						rgeable		Fingerprint reader	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Near Field Communication	
J	M.2Inte	2280 SSD	/ PCIe N Memory	IVMe, PCIe 3. IVMe, PCIe 3. IVMe, PCIe 3. H10 with Solid	0 x 4	Storage	э,		<u> </u>		Battery Max battery life	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter *MobileMark** 2014: 18.2 hr *MobileMark 2018: 12.05 hr	
Optical Ethernet	None Nativ	e Intel Ether	net Con	nection I219-\				·LM (<i>vPr</i>	0)		AC adapter	 * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W USB-C AC adapter 65W USB-C AC adapter 	
WLAN +				ernet Extension 2x2 802.11ax								65W USB-C slim AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
Bluetooth™ (opt) WWAN (optional)	Inte	AX201 card s grated Mobi grated Mobi	ile Broac ile Broac	3T5.1 but is limit	-A, Fib -A, Fib	ocom L8	Vindows 350-GL 360-GL	_, M.2 ca _, MIMO	rd 2x2, M.:	2 card	Limited warranty (optional)	1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service	
											Mil-Spec test	MIL-STD-810G military testing	
				ilable in all reg							Environment	EPEAT™ Gold; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant	



ThinkPad X280 Platform Specifications

Processor	7th Generation* <i>i3-7130U is N</i>					OU is NC	T available ir	ı 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 #	of	# of	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	0	HD non-touch model: 2.78 lb / 1.26 kg; FHD multi-touch model: 2.79 lb / 1.27 kg	
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics 620	Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch model) or Glass Fiber (HD & FHD multi-touch model);	
	i5-7200U i5-7300U			2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB		620	Smart card roads	Bottom: Magnesium/Aluminum er Optional: Smart card reader	
	or 8th Genera	ation	Intel Co	ore i3 / i5 /	i7 Process	or			Media reader	MicroSD card reader, in the combo slot with nano-SIM card	
	Number Co	$\overline{}$		Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),	
	i5-8250U	4	8	2.2 GHz 1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	4MB 6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620	- Monitor cable	HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter	
Graphics	supports exte	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays:								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 al) One of the following, configurable by model:	
Chipset Memory	Intel SoC (Sy 4GB, 8GB, or * 4GB memory	Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) ntel SoC (System on Chip) platform GB, 8GB, or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets 4GB memory is NOT available in US and EMEA System clocks down for processors with lower memory controller								HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus ID Audio, Realtek® ALC3287 codec / tereo speakers, 2W x 2, Dolby® Audio™ Premium /	
Display	220 r	i" (317.5mm) HD (1366x768), anti-glare, LED backlight, nits, 16:9 aspect ratio, 400:1 contrast ratio								dual array microphone (for special bid model, microphone is optional), headphone / microphone combo jack	
Multi-touch (opt)	Some: 12.5" 300 n On-cell touch	nits, '	16:9 aśp	ect ràtio, 7	00:1 contra	ast ratio	, LED back , 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	On-cell touch * FHD non-touc One of the follo • M.2 SSD / S	owing SATA	, configui A 6.0Gb/	rable by mod s (e.g. xxx)	lel: GB SSD M	.2)	wgr ssn	M.2 PCIe NVMe)	Security Security chip vPro (optional) Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyholo Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel vPro Technology er Optional: Touch style match on chip fingerprint reader on the palm rest,	
Optical	None	· Oie	, in vivic,	1 016 3.0 %	4, 5205/5	(e.g. x	XAD 33D	wi.z i Ole ivvivie)	NFC (optional)	anti-spoofing technology Near Field Communication	
Ethernet	Native Intel E via optional T	ther hink	net Con Pad Eth	nection I21 ernet Exte	9-V (<i>Non-</i> nsion Adap	<i>Pro</i>) or ter Ger	์ I219-LM (เ า 2	/Pro)	Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter	
WLAN <i>(optional)</i> Bluetooth™ <i>(opt)</i>	Intel Dual Bar Bluetooth 4.1	nd W wire	/ireless- eless, int	AC 8265, V tegrated in	Vi-Fi 2x2 80 Wi-Fi + Blu	02.11acuetooth	c + Bluetoot combo ada	h 4.1, M.2 card pter	Max battery life AC adapter	MobileMark® 2014: 16.6 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter	
WWAN (optional)	Wireless W. Integrated N	ΆΝ ι	upgradal	ole (specia	bid only)				<u>'</u>	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
SIM card <i>(opt)</i>	Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, in the combo slot with microSD card reader, optional Verizon LTE (US) SIM card								Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 1-year/3-yr battery depot repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/3-yr battery limited onsite service 3-year/3-yr battery limited onsite service	
									Mil-Spec test	MIL-STD-810G military testing	
Note: The specifica				9 11 1 "					Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Lenov	



ThinkPad X380 Yoga Platform Specifications

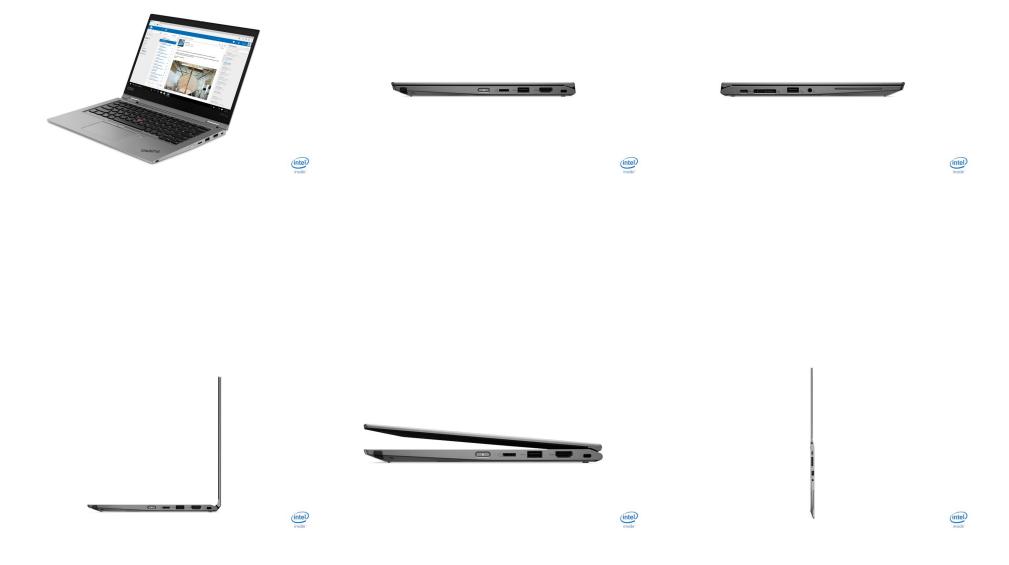
Processor	7th Generation Intel® Core™ i5 Processor	Smart card reader Optional: Smart card reader (mutually exclusive with NFC)
	Processor Number# of Cores# of ThreadsBase FrequencyMax Turbo FrequencyCacheMemory TypesProcessor Graphicsi5-7200U i5-7300U242.5 GHz3.1 GHz3MB 3.5 GHzDDR4-2133Intel HD Graphic 620	Media reader Ports One microSD card slot (microSD, microSDHC, microSDXĆ), UHS-I Two USB 3.1 Gen 1 (one Always On), Ethernet extension connector, one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (Power Delivery, DisplayPort, Data transfer), HDMI 1.4b, microSD card reader, nano-SIM card slot (WWAN models),
	or 8th Generation Intel Core i3 / i5 / i7 Processor	 headphone / microphone combo jack, optional smart card reader * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Processor # of Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	WiGig dock None Monitor cable USB-C to VGA: Lenovo USB-C to VGA Plus Power Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	i3-8130U 2 4 2.2 GHz 3.4 GHz 4MB	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
	1.7 GHz 3.6 GHz 6MB DDR4-2400 17-8550U 17-8650U 17-8650U 18 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 4.	Camera One of the following, configurable by model: 720p: HD720p camera, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus
Graphics	Intel UHD Graphics 620 in processor only; supports external digital monitor via HDMI or USB Type-C;	Audio support HD Audio, Conexant® CX11771 codec / stereo speakers, 2W x 2 / optional dual array microphone, headphone / microphone combo jack
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Keyboard 6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and 3+2 buttons Mylar surface multi-touch click pad
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * System clocks down for processors with lower memory controller	Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified (may be disabled in some region) System Mgt (opt) Intel vPro Technology
Display	13.3" (337.8mm) FHD (1920x1080), LED backlight, WVA, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, 170° viewing angle,	Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest NFC (optional) Near Field Communication (mutually exclusive with smart card reader)
Multi-touch Hinge Convert-mode	AR (anti-reflection) Capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge), supports 10-finger gesture Yoga hinge, 360 degree Laptop, tent, stand, yoga and tablet	Battery Max battery life AC adapter AC adapter Li-lon 51Wh battery MobileMark® 2014: 13.6 hrs * Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter • 45W USB-C AC adapter
Pen Storage	ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)	65W USB-C AC adapter 65W slim tip AC adapter
Optical	Some: M.2 SSD / PCIe NVMe, PČIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe None	Light sensor Ambient Light Sensor G-sensor/ 3D accelerometer and 3D magnetometer eCompass 3D compass
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable	Gyroscope 3D gyrometer
WLAN Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Bluetooth 4.2 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model:
WWAN (optional)	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) 	 1-year depot repair service 1-year depot with 2-year system board service 1-year + 2-year depot repair service
SIM card	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card None	1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service
Dimensions Weight	WxDxH: 12.34" x 8.75" x 0.72"; 313.5mm x 222.2mm x 18.2mm Starting at 3.17 lb / 1.43kg	3-year/1-yr battery limited onsite service Mil Canadase Mil Cana
Case color Case Material	Black or silver Carbon-Fiber Hybrid	Mil-Spec test MIL-STD-810G military testing Environment EPEAT™ Gold; ENERGY STAR®; RoHS-compliant
	ations above may not be available in all regions and might change by regions.	Lenow

Note: The specifications above may not be available in all regions and might change by regions.



ThinkPad X390 Platform Specifications

Processor	8th Gene	ration I	ntel® Cor	e™ i3 / i5 /	i7 Processo	r				Dimensions	Models	FHD Non-touc	ch	HD /	FHD Multi-touch	
	Processo Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Proce Grap			Carbon Fiber	311.9mm x 217.0mm : 12.28" x 8.54" x 0			-	
	i3-8145U i5-8265U	2	4	2.1 GHz 1.6 GHz		4MB 6MB					PPS	312.0mm x 217.2mm x 16.9mm 12.28" x 8.55" x 0.67" 311.9mm x 217.2mm x 16.9mr 12.28" x 8.55" x 0.67"				
	i5-8365U	┥.		1.6 GHz		6MB	DDR4-2400	Intel UHD	Graphics	Weight	Models				FHD Multi-touch	
	i7-8565U	4	8	1.8 GHz		8MB			•		Carbon Fiber	2.70 lb / 1.22 kg	-		-	
	i7-8665U	\		1.9 GHz		8MB	on the fall of the F	1 4 T A \		0	PPS	2.85 lb / 1.29 kg	2.93 lb / 1	1.33 kg	2.84 lb / 1.28 kg	
	Processo	_	on Intel (Base	Processor (I	NOI a	Memory	MEA) Proce	ccor	Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch only) or PPS; Bottom: Magnesium/Aluminum					
	Number	Cores		Frequency	Frequency	Cache	Types	Grap								
	i5-10210l	⊣ 4	8	1.6 GHz		6MB	DDD 4 0 400			Smart card reade Media reader		art card reader reader, in the combo s	lot with nano	-SIM card	I	
	i7-10510l		12	1.8 GHz 1.1 GHz	 	8MB 12MB	DDR4-2400	Intel UHD	Graphics	Ports	Two USB 3.1 (Gen 1 (one Always On)),			
Graphics	Intel UHI				4.7 GHZ	IZIVID					one USB 3.1 T	ype-C Gen 1 (with the vpe-C Gen 2 / Thunde	function of F	Power Deli	very and DisplayPort),	
Graphics	supports	externa	al digital ı	monitor via	HDMI or US	В Тур	e-C;				HDMI 1.4b, Et	hernet extension conn	ector, `		,,	
				ent displays	s; (Thunderbol	+)· 400	a6v2160 <i>@</i> 2	4Hz (HD	MIX		combo slot of	nano-SIM card (WWAI nicrophone combo jack	N models) an	nd microSI nart card r	D card reader, reader	
Chipset				ip) platform	`	1), 40	90X2100@2	4112 (110	ivii <i>)</i>	-	side docking c	onnector, security keyl	nole			
Memory	4GB, 8G	B), 16GE	3 or 32GI	3 / 2400MH	lz DDR4 / so			oard, no	sockets	Monitor cable	HDMI to VGA:	many factors, actual data Lenovo HDMI to VG	<i>transter speed</i> A Monitor A	<i>a may be 10</i> 1 .dapter	wer tnan tneoretical speed	
					dels with 10th out run at 2400			itation		(optional)	USB-C to VGA	A: Lenovo USB-C to V Lenovo USB-C to D	GA Adapter	dantar		
Display						Aanaa			Viewing	Bundled Accy	Optional: Thir	kPad Ethernet Extensi	ion Adapter (Gen 2		
	Size Res			ype Surfac		Ratio	Ratio	Gamut	Angle	Camera (optional	(f) PhD720p camera with ThinkShutter camera privacy, fixed focus In 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 (for special bid model, microphone is optional), headphone / microphone combo jack					
	13.3" HD	(1366x7	68)	TN Anti-gla	re 250 nits	16:9	500:1 800:1	45%	90°	Audio support						
	13.3" FHI) (1920x	1080) V	/VA Anti-gla	re 300 nits	16:9	(non-touch) 72%	170°	, tadio support						
		`	<i>'</i>				700:1 (multi-touch									
	FHI 13.3" Thi) (1920x nkPad Pr		/VA Anti-gla	re 400 nits	16:9	1000:1	72%	178°	Keyboard	6-row, spill-res	sistant, multimedia Fn k	keys, optiona			
Multi touch (ant)	Gua		innorto 1	O finant as	oturo (FUD.	2014				UltraNav™ Security	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole					
Multi-touch (opt) Storage	• M.2 22				Sture (FHD)	orliy)				Security chip	Firmware TPM	1 2.0 integrated in chips				
Storage	 M.2 22 	42 SSD	/ PCIe N	NVMe, PCI						System Mat (ant)		led in some region)				
				NVMe, PCI	e 3.0 x 4 Solid State S	torane				System Mgt (opt) Intel vPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest						
	M.2 22	80, PCI	e NVMe	3.0 x 4	Joha Olalo O	torage	',			NFČ (optional)	al) Near Field Communication					
Optical	None				0.1/11	3 \	1040 1 14 /	D)		Battery		Polymer 48Wh battery, d Charge (charge up to	80% in 1hr) with 65W	/ AC adapter	
Ethernet					9-V (<i>Non-vl</i> nsion Adapt			Pro)		Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 17.6 hr * Battery life varies significantly with hardware configurations, settings, usage, & other fa					
WLAN (optional)	•				802.11ac + I					AC adapter	• 45W USB-C		ware coriligura	auons, seun	igs, usage, & other factors	
Bluetooth™ (opt)					.11ax + Blue			otor			• 65W USB-C	AC adapter slim AC adapter				
WWAN (optional)								nei -		Onerating system		dows® 10 Home 64 or	Windows 10	Pro 64		
vvvv u v (optional)	 Integra 	ted Mob	oile Broad	dband 4G l	TE, Fibócon	n L830	ı́-ЕВ, М.2 са		A only)	Limited warranty			***************************************	11001		
	 Integra * For non- 	ted Mot <i>WWAN r</i>	olle Broad <i>nodel. it n</i>	dband 4G l neans the mi	TE-A, Fiboc odel is NOT W	om L8 <i>WAN 11</i>	50-GL, M.2	card		(optional)	 1-year deport 	t with 2-year system bo	oard repair se	ervice		
SIM card (opt)	 Verizor 	ı LTE (U	JS) SIM (ard			. 3				 1-year limited onsite service 1-year + 2-year depot repair service 					
	• Gemali	Gemalto eSIM							1-year + 2-year limited onsite service							
											 3-year/1-yr b 3-year/1-yr b 	oattery depot repair ser oattery limited onsite se	vice ervice			
										3-ýear/1-ýr batterý limited onsite service Mil-Spec test MIL-STD-810G military testing						
										Environment		; ENERGY STAR® 7.1;	TCO Certifie	ed: RoHS-	-compliant	



ThinkPad X390 Yoga Platform Specifications

Processor	8th G	ener	ation Ir	ntel® Co	re™	i5 / i7 Pro	cessor					Smart card reader Optional: Smart card reader					
	Number Cores Threads Frequency Frequ				one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models),												
	i7-856		·		_			8MB 8MB			<u> </u>	<u></u>	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				
Graphics	supports external digital monitor via HDMI or USB Type-C; supports three independent displays;									lHz (HDI	MI)	Monitor cable (optional) Bundled Accy	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2				
Chipset Memory	Intel 8	SoC or 16	(Syster GB / 2	m on Ch 400MH:	hip) p z DD	olatform OR4 / sold	ered to sys	stembo	oard, no socl ue to Intel limi	kets	,	Audio support	None of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec /				
Display	Size	Reso	lution	-	Туре	Surface	Brightness	Aspec Ratio	t Contrast Ratio	Color Gamut	Viewing Angle		stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack				
	13.3"	FHD	(1920x1	1080)	WVA	Anti- reflection	300 nits	16:9	800:1	72%	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Multi-touch Hinge Convert-mode Pen	AS (a Yoga Lapto	nti-sı hinge p, te	mudge e, 360 nt, star), could degree nd and t	l redu table	uce the br t	ightness b	y up to	e, anti-reflect o 10% n-board rech			Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) of Intel vPro Technology der Touch style match on chip fingerprint reader on the palm rest				
Storage	M.2M.2Inte	2 224 2 228 el Opt 2 228	2 SSD 0 SSD tane™ l	/ PCIe	NVM NVM y H1	Me, PCIe 3 Me, PCIe 3 0 with Sol		torage	,			NFČ (optional) Battery Max battery life AC adapter	Integrated Li-Polymer 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter				
Ethernet	Nativ	e Inte	el Ether	rnet Co	nnec	ction I219- et Extens	V (<i>Non-vF</i>	<i>ro</i>) or er Gen	1219-LM (<i>vF</i>	Pro)			65W USB-C AC adapter 65W USB-C slim AC adapter				
WLAN (optional)	One o	of the t	following eless-A	g, configu	<i>urable</i>), Wi-	e by model -Fi 2x2 80		Bluetoo	oth 5.0			Light sensor G-sensor Gyroscope	None 3D accelerometer 3D gyrometer				
Bluetooth™ (opt)				-				tooth	combo adap	ter			n Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
WWAN (optional) SIM card (opt)	 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 Verizon LTE (US) SIM card (special bid only) 										A only)	Limited warranty (optional) 1-year depot repair service 1-year depot with 2-year system board repair service 1-year/3-yr battery depot repair service 1-year inited onsite service 1-year + 2-year depot repair service					
Dimensions Weight Case color Case material	Gemalto eSIM WxDxH: 12.22" x 8.62" x 0.63"; 310.4mm x 219mm x 15.95mm Starting at 2.85 lb /1.29 kg Black or silver (silver is NOT available in EMEA) Display cover. CF Hybrid PA + 50% GF									l			 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service 				
	Botto	m:	(CF Hyb	rid P	A + 50% (GF					Mil-Spec test	MIL-STD-810G military testing				
Note: The specifica												Environment	EPEAT™ Silver; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant Lenow				



ThinkPad X395 Platform Specifications

Processor	AMD	Rvzen [*]	PRO M	1obile F	Processor	rs with Rac	leon™ Ved	ga Graphics			Dimensions	WxDxH:	12.28" x 8.55" x 0.6	7"; 311.9mm x 2	17.2mm x 16.9mm		
	Proce		# of #	# of		Max Boost	Cache	Memory	Prod	essor	Weight	Models	HD / FHD Touch	FHD Non-touch	FHD Privacy Guard		
	Numb		ores Thr	reads	Clock	Clock		Controller	+	phics	4	Weight	2.91 lb / 1.32 kg	2.82 lb / 1.28 kg	3.01 lb / 1.37 kg		
		3300U	4	4	2.1 GHz	3.5 GHz	2MB L2 / 4MB L3		Gra	n Vega 6 phics	Case color Case material		over: PPS/GF;				
	Ryzer PRO 3	1 5 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400		n Vega 8 phics	Smart card reade	Bottom: Magnesium/Aluminum er Optional: Smart card reader					
	Ryzer PRO 3		4	8	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Radeor Gra	Vega 10 phics	Media reader Ports	MicroSD one USB	card reader, in the cor 3.1 Gen 1 (Always Or	n), one USB 3.1 G	ien 2,		
Graphics	AMD Radeon Vega 6, Vega 8, or Vega 10 Graphics in processor; supports external digital monitor via USB-C or HDMI; supports three independent displays; Max resolution: 4096x2304@60Hz (USB-C); 4096x2160@24Hz (HDMI)											two USB 3.1 Type-C Gen 2 (w/ the function of Power Delivery and DisplayPort 1.4 HDMI 2.0, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microptore combo jack, optional smart card reader, side docking connector, security keybole.					
Chipset Memory	AMD SoC (System on Chip) platform 8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation										Monitor cable (optional)	(optional) USB-C to VGA: Lenovo USB-C to VGA Adapter					
Display	Size	Resoluti	on	Туре	e Surface	Brightnes	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Bundled Accy Camera (optional		ThinkPad Ethernet Extended following, configurable by		Gen 2		
	13.3"	HD (136	6x768)	TN	l Anti-glar	re 250 nits	16:9	300:1	45%	90°	(, , , , , , , , , , , , , , , , , , ,	 HD720p 	camera with ThinkSh	nutter camera priva	acy, fixed focus		
	13.3"	FHD (19	20x1080)) WV	A Anti-glar	re 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 focu HD Audio, Realtek ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack 					
	13.3"		20x1080) d Privacy		A Anti-glar	re 400 nits	16:9	1000:1	72%	178°	Keyboard UltraNav™	6-row, spi TrackPoin	II-resistant, multimediat® pointing device and	a Fn keys, optiona buttonless Mylar	l LED backlight surface multi-touch touchpad		
Multi-touch (opt)	On-ce	ell touch	, suppo	rts 10-	finger ge	sture (FHD	only)				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole					
Storage			SSD / SA								Security Crip	Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)					
Optical		2280			'Me, PCIe 'Me, PCIe						System Mgt Fingerprint reade	DASH Management eader Optional: Touch style match on chip fingerprint reader on the palm rest					
Ethernet			ν'® BTI 8	Q111 F [PV Gigah	it Ethernet	connect	ion			NFČ .	None					
	via op	tional 7	hinkPac	d Ether	rnet Exter	nsion Adap	ter Gen	2			Battery	supports I	l Li-Polymer 48Wh ba [.] Rapid Charge (charge) with 65W AC adapter		
WLAN <i>(optional)</i> Bluetooth™	Intel V Blueto	Vireless ooth 5.0	s-AC 926 wireles	60, Wi- ss, inte	Fi 2x2 80 grated in)2.11ac + E Wi-Fi + Blu	Bluetooth Jetooth c	5.0 ombo adapt	er		Max battery life	* Battery li	rk® 2014: 14.5 hr fe varies significantly with	h hardware configura	ations, settings, usage, & other factors		
WWAN (optional)	One o	f the follo	owing, co	<i>nfigurat</i> radable	ble by mod	lel:					AC adapter Operating system		5W USB-Č AC adapte Windows® 10 Home 6		Pro 64		
SIM card (opt)	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Verizon LTE (US) SIM card Gemalto eSIM 								ard		Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service						
											Mil-Spec test MIL-STD-810G military testing						
Note: The specifica											Environment	EPEAT™ :	Silver; ENERGY STAF	R® 7.1; TCO Certif	ied; RoHS-compliant		







ThinkPad X1 Carbon (6th Gen) Platform Specifications

Processor	7th Gene	ration I	ntel® Co	re™ i5 Pro	cessor				Dimensions	<i>WxDxH</i> : 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm					
	Processor	# of	# of	Base	Max Turbo	Cache	Memory Types	Processor	Weight	Starting at 2.49 lb / 1.13 kg Black or Silver (silver case is NOT available in EMEA) Display cover: CFRP/GFRP hybrid;					
	Number	Cores	Threads	Frequency	Frequency	Cache	iviemory types	Graphics	Case color Case material						
	i5-7300U	2	4	2.6 GHz	3.5 GHz	змв	LPDDR3-1866	Intel HD Graphics 620		Bottom: magnesium alloy / PPS hybrid					
	or 8th Generation Intel Core i5 / i7 Processor								Smart card reade Media reader	rNone MicroSD card reader, supports UHS-II					
	Processor Number		# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b,					
	i5-8250U i5-8350U i7-8550U i7-8650U	- - 4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	6MB 6MB 8MB 8MB	LPDDR3-2133	Intel UHD Graphics 620	Monitor cable	Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter					
Graphics	Intel HD (supports supports	externa	al digital	monitor vi	a HDMI or	620 in USB Ty	processor; /pe-C;		, ,	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2					
	Max reso	lution:	5120x28	880@60H	z (USB Typ	e-C); 4	096x2160@3	30Hz (HDMI)	Camera (optional)	One of the following, configurable by model:					
Chipset Memory	* System c	6GB / 2 locks do	2133MH: own for pr	rocessors w	3 / soldered ith lower me	to syst	emboard, no	sockets	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, 					
Display				<i>urable by m</i> 920x1080		a I FD	hacklight WV	/Α		headphone / microphone combo jack, Dolby® Atmos™ via headphones					
	 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, glossy, WVA, LED backlight, 500 nits,16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle 								Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad					
Mali Landa (and)									Security Security chip vPro (optional) Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest,					
Multi-touch (opt)		On-cell touch, supports 10-finger gesture (FHD only) One of the following, configurable by model:							NFC (optional)	anti-spoofing technology Near Field Communication					
Storage	 M.2 SSI 	D / SAT	A 6.0Gb	o/s (e.g. xx	xGB SSD I		xxxGB SSD I	M.2 PCIe NVMe)	Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 19.3 hr					
Optical	None								Max battery life						
Ethernet					219-V (<i>Nor</i> tension Ada		or I219-LM (เ en 2	rPro)	AC adapter	 * Battery life varies significantly with hardware configurations, settings, usage, & other fac 45W USB-C AC adapter 45W Low Halogen USB-C AC adapter 					
WLAN + Bluetooth™	 Intel Du 	al Band	Wireles		5, Wi-Fi 2x		1ac + Blueto tooth 5.0, M.2	oth 4.1, M.2 card		65W USB-C AC adapter 65W Low Halogen USB-C AC adapter					
	(special	hid on	lv)	•			,	Caru	Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64					
WWAN (optional)	* Intel 826	5ac card	l śupport:			BT4.1 by	Windows OS		Limited warranty	One of the following, configurable by model: 1-year depot repair service					
SIM card (opt)	Intel XMM * For non-V	1™ 736 <i>WWAN r</i>	0 (Fiboc nodel, it i	om L850-0 means the r	GL), M.2 ca	WWAN	<i>upgradable</i> card			 1-year depot with 2-year system board repair service 1-year/3-yr battery depot repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service 3-year/3-yr battery limited onsite service 					
									Mil-Spec test	MIL-STD-810G military testing					
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant					

















ThinkPad X1 Carbon (7th Gen) Platform Specifications

									I	
Processor	8th Generation Inte								Dimensions	WxDxH (Privacy Guard): 12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4mm WxDxH (other model): 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.95mm
	Processor # of Number Cores Th	# of reads F	Base M requency F	Max Turbo requency Ca	che M	emory Types	Proce Grap		Weight	Privacy Guard model: starting at 2.66 lb / 1.21 kg;
	i5-8265U				ИΒ				Case color	Other model: starting at 2.4 lb / 1.09 kg Black paint or black weave
	i5-8365U 4	g —			MB LF	DDR3-2133	Intel		Case material	Display cover: Carbon Fiber;
	i7-8565U	_			MB L		Grap	ohics	I	Bottom: magnesium alloy
	or 10th Generation					ilahla in EM	EΔ\		Smart card reade Media reader	rNone None
		# of		Aox Turbo				essor	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3
	Number Cores Th			requency Ca	iche M	emory Types		ohics		(with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models).
	i5-10210U 4	8			MB LI	PDDR3-2133	Intel	-		headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
_	i7-10510U			4.9 GHz 8	MB -		Grap	ohics	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo HDMI to VGA Monitor Adapter
Graphics	Intel UHD Graphics supports external d	in proc	essor;	DMI or LISB	Type-	C / Thunder	holt:		Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2
	supports three inde	penden	it displays;				DOIL,		Camera (optional)	One of the following, configurable by model:
	Max resolution: 5K		•	olt); 4K@24	Hz (H	DMI)				 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	Intel SoC (System of 8GB or 16GB / 213	on Chip) platform	oldered to s	vetamk	noard no so	ckate		Audio support	HD Audio, Realtek® ALC3286 codec /
Display		JIVII IZ L	1 0011073		Aspect		Color	Viewina	_ 1	Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack
Diopidy	Size Resolution	Тур	oe Surface	Brightness	Ratio	Ratio	Gamut	Angle	 Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight
	14.0" FHD (1920x108	٥,	Anti- reflection						UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	Multi-touch	⁰⁾ w\	Anti-	300 nits	16:9	700:1	72%	170°	Security	Power-on password, hard disk password, supervisor password, security keyhole
	14 0" FHD (1920x108	0)	smudge						Security chip	 Firmware TPM 2.0 integrated in chipset Discrete TPM 2.0 TCG Certified
	Low Power	, , ,	/A Anti-glare	400 nits	16:9	800:1	72%	170°		Discrete TPM 2.0 with L3 Security Support (special bid only)
	FHD (1920x108 14.0" ThinkPad Privad		/A Anti-glare	400 nits	16:9	1000:1	72%	170°	System Mgt (opt)	* May be disabled in some region Intel vPro Technology
	Guard	,							Fingerprint reade	rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
	14.0" WQHD (2560x1		/A Anti-glare	300 nits	16:9	700:1	72%	170°	NFC (optional)	
	UHD (3840x216		/A Glossy	500 nits	16:9	1400:1	90%	170°	Battery	Integrated Li-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
* * * * * * * * * *	Dolby Vision™								Max battery life	MobileMark® 2014: 18.3 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors
Multi-touch (opt)	Capacitive-type mu anti-reflection (AR)				sture (FHD only),			AC adapter	45W USB-C AC adapter
Storage	One of the following, of		<u> </u>	<u> </u>					_	65W USB-C AC adapter 65W USB-C slim AC adapter
	• M.2 2280 SSD / S	SATĂ 6.	0Gb/s						Operating system	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	M.2 2280 SSD / FIntel Optane Mem				ae					1-year depot repair service
	M.2 2280, PCle N			Olalo Olora	go,				Elithica warranty	 1-year depot with 2-year system board repair service
Optical	None				`				_	 1-year limited onsite service 1-year + 2-year depot repair service
Ethernet	Native Intel Etherne via optional ThinkPa						0)			1-year + 2-year limited onsite service
WLAN + BT	Intel Wireless-AC 9									 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Wireless WAN up				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.0			Mil-Spec test	MIL-STD-810G military testing
(2/23/104/)	 Integrated Mobile 	Broadb	and 4G LTI	E-A, Fîbocor	n L850)-GL, M.2 ca	ard	0	Environment	EPEAT™ Gold; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant
	 Integrated Mobile * For non-WWAN mod 	Broadb lel, it me	and 4G LII ans the mode	E-A, FIDOCOI el is NOT WW	n L860 AN upa	ו-GL, MIIMO <i>radable</i>	2x2, M	.2 card	Livionincin	El Elli Gold, Elle I Giziti 7.1, 100 defined, fiorio compilant
SIM card (opt)	 Verizon LTE (US) 	SÍM ca	rd		- 1- 3					
Notes The second of	Gemalto eSIM ations above may not					.				Lenov









ThinkPad X1 Carbon Gen 8 Platform Specifications

Processor	10th Generation	Intel® C	ore™ i5 / i7	Process	or					Dimensions	WxDxH (Privacy Guard model):12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4mm
	Processor # of Number Cores	# of Threads	Base Frequency	Max Turl Frequen		e Memo	ory Types	Proce Grap		Weight	WxDxH (other model): 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.9mm Privacy Guard model: starting at 2.66 lb / 1.21 kg;
	i5-10210U i5-10310U i7-10510U i7-10610U	8	1.6 GHz 1.7 GHz 1.8 GHz 1.8 GHz	4.2 GH 4.4 GH 4.9 GH 4.9 GH	z 6MB z 8MB	LPDD)R3-2133	Intel Grap	-	Case color Case material	Other model: starting at 2.4 lb / 1.09 kg Black paint or black weave Display cover: Carbon Fiber; Bottom: magnesium alloy
				4.9 GH	Z 8IVIB					Smart card reade	rNone None
Graphics	Intel UHD Graph supports up to 3 supports externa	indeper	ndent display	/s via na (up to 4	ative disp 4K@24H	olay and lz) or T	d two ext hunderbo	ernal m olt (5K@	onitors; 960Hz)	Ports	Two USB 3.2 Gen 1 (one Always On), two USB 3.2 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),
Chipset Memory	Intel SoC (System 8GB or 16GB / 2	m on Ch 133MH:	nip) platform z LPDDR3 /	soldere	d to syst	emboa	rd, no so	ckets			headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Display	Size Resolution		Type Surface	Touch	Bright- ness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Monitor cable Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
	14.0" FHD (1920x1	1080)	WVA Anti-gla	re -	400 nits	16:9	800:1	72%	170°		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	14.0" FHD (1920x1	/	WVA Anti-gla	re Multi- touch	400 nits	16:9	700:1	72%	170°	Audio support	HD Audio, USI 4551-513711-00 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack
	14.0" ThinkPad Pri		WVA Anti-gla	re Multi- touch	500 nits	16:9	1500:1	72%	170°	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, LED backlight
	14.0" WQHD (2560		WVA Anti-gla	re -	300 nits	16:9	1000:1	72%	170°	UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	14.0" UHD (3840x2 HDR 400, Dolby Vision	тм	WVA Glossy	-	500 nits	16:9	1500:1	90% DCI-P3	170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole • Firmware TPM 2.0 integrated in chipset
Multi-touch (opt)	* WQHD is NOT at Capacitive-type r anti-reflection (Al	multi-tou	ich, support			ıre,				Fingerprint reader	Discrete TPM 2.0 TCG Certified Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
Storage	 M.2 2280 SSD Intel Optane M M.2 2280, PCIe 	emory H	110 with Sol		Storage	,				Battery	Integrated Li-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optical	None	e in vivie	3.0 X 4							Max battery life	<i>MobileMark[®] 2014:</i> 19.5 hr
Ethernet	Native Intel Ethe	rnet Co kPad Et	nnection I21 hernet Exter	9-V (<i>No</i>	<i>n-vPro</i>) (lapter G	or I219 en 2	-LM (<i>vPr</i>	0)		AC adapter	MobileMark 2018: 13.8 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter
WLAN + Bluetooth™	Intel Wi-Fi 6 AX2 * Intel AX201 card						s OS				65W USB-C AC adapter 65W USB-C slim AC adapter
WWAN (optional)	 Integrated Mob 	ile Broa	dband 4G L	TE-A, Fi	bocom L	.850-GI	L, M.2 ca	ırd		Operating system	Windows® 10 Home 64 Windows 10 Pro 64
SIM card (opt)	 Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Gemalto eSIM Nano-SIM card, Lenovo Connect 4 month, 4G LTE 									(optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Gold; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant
Note: The specifica	ations above may n	ot be av	ailable in all	egions a	ınd miaht	change	e bv reaic	ns.			Leno





















ThinkPad X1 Extreme Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Smart card reader Optional: Smart card reader			
	Processor # of # of Base Max Turbo Cache Types 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 2.3 GHz 4.0 GHz		two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery		
	15-8400H 4 8 2.5 GHz 4.2 GHz 8MB DDR4-2666 Intel UHD Graphics		and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader,		
	12 2.2 GHz 4.1 GHz 9MB 12 2.6 GHz 4.3 GHz 9MB 12 12 12 12 13 14 15 15 15 15 15 15 15		SD card reader, security keyhole * Power Delivery only supports power-out for charging peripherals		
Graphics	Intel UHD Graphics 630 in processor and	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed		
Graphics	NVIDIA® GeForce® GTX 1050 Ti Max-Q, 4GB GDDR5 memory;	(optional)	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 Thunderbolt™; supports four independent displays;		Optional: ThinkPad Ethernet Extension Cable		
	Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (HDMI)		One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus		
Chipset Memory	Mobile Intel CM246 Chipset 64GB max / 2666MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets		IR camera and HD720p camera, fixed focus		
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, WVA,		HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /		
2.0p.ay	300 nits. 16:9 aspect ratio. 700:1 contrast ratio.		dual array microphone (for special bid model, microphone is optional), headphone / microphone combo jack, Dolby Atmos® headphone		
	72% gamut, 170 ^b viewing angle Some: 15.6" (396mm) HDR UHD (3840x2160) with Dolby Vision™, LED backlight,		6-row, spill-resistant, multimedia Fn keys, LED backlight		
	WVA, 400 nits, 16:9 aspect ratio, 1200:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch, anti-reflection (AR)	UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad		
Multi-touch (opt) Pen (optional)	Capacitive-type multi-touch, supports 10-finger gesture (4K only) Lenovo Pen Pro (special bid only)	Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified (may be disabled in some region) Intel vPro Technology er Touch style match on chip fingerprint reader on the keyboard bezel None		
Storage	Up to 2 drives (two M.2 SSD) • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2)	Fingerprint reader			
DAID (" "	• M.2 SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCle NVMe)		None		
RAID <i>(optional)</i> Optical	RAID 0/1 support None	Battery	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)		
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro))	(MobileMark 2014)	Discrete mode: 9.5 hr; Hybrid mode: 14.9 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors		
MI AN (antional)	via optional ThinkPad Ethernet Extension Cable Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card	AC adapter	135W slim tip AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		One of the following, configurable by model:		
WWAN	None	(optional)	1-year depot repair service		
SIM card Dimensions	None WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm		 1-year depot with 2-year system board repair service 3-year/1-vr battery depot repair service 		
	WxDxH (multi-ouch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm		3-ýear/1-ýr batterý limited onsite service		
Weight	Non-touch model: starting at 3.76 lb / 1.7 kg; Multi-touch model: starting at 4.06 lb / 1.8 kg		MIL-STD-810G military testing		
Case color	Black	Environment	EPEAT™ Gold (US only); ENERGY STAR® 7.0; TCO Certified; RoHS-compliant		
Case material	Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy				

Note: The specifications above may not be available in all regions and might change by regions.



















ThinkPad X1 Extreme (2nd Gen) Platform Specifications

Processor	9th Generation Intel® Co	ore™ i5 .	/ i7 / i9 Pr	ocessor					Dimensions WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mn			
	Processor # of # of Number Cores Thread	ls Freq	uency Fre		ie Ty	mory pes	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 3.97 lb / 1.8 kg		
	i5-9300H 4 8 i5-9400H 4 8 i7-9750H 6 12	2.5 2.6	GHz 4.5 GHz 4.5		B DDR	4-2666 In	itel UHD 63		Case color Case material	Black paint (FHD model) or black weave (UHD model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy		
	i7-9850H 6 12 i9-9880H 8 16			6 GHz 12M 8 GHz 16M	_				Media reader	er <i>Optional:</i> Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card		
Graphics	Intel UHD Graphics 630 in processor and NVIDIA® GeForce® GTX 1650 Max-Q, 4GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt"; supports four independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (HDMI)								Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt (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 adapte *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed		
Chipset Memory	Mobile Intel CM246 Chip 64GB max / 2666MHz D		dual-chan	nel capable	, two D	DR4 SO	-DIMM	sockets	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
Display	Size Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable		
	15.6" FHD (1920x1080)	WVA	Anti-glare	300 nits	16:9	700:1	72% NTSC	170°	Camera (optional)) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus		
	15.6" FHD (1920x1080) Dolby Vision™ HDR	WVA	Anti-glare	500 nits	16:9	1200:1	72% NTSC	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / 		
	15.6" UHD (3840x2160) Dolby Vision HDR	WVA	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°		optional dual 360° far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system		
	UHD (3840x2160) Dolby Vision HDR, Multi-touch	OLED	Anti- reflection Anti- smudge	SDR 400nit, HDR 500nit (peak)	16:9	100000:1	100% DCI-P3	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad		
Multi-touch (opt) Pen (optional)	Capacitive-type multi-toranti-reflection (AR), anti Lenovo Pen Pro (specia	-smudg	pports 10 ge (AS) co	-finger gest pating	ure (UI	HD OLEI	D only),		Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region) Intel vPro Technology		
Storage RAID (optional)	Up to two M.2 SSD M.2 2280 SSD / PCIe N RAID 0/1 support		, , , , , , , , , , , , , , , , , , ,						Fingerprint reader Color calibration	The VFTO rechiblogy Touch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None		
Optical Ethernet	None Native Intel Ethernet Co	nnoctic	on 1210 V	(Non yPro)	or 1210	O LM (vE	Prol\		Battery	Integrated Li-Polymer 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)		
	via optional ThinkPad E	thernet	Extensio	n Cable (9-LIVI (VI	10))		Max battery life	MobileMark® 2014: 14 hr *Battery life varies significantly with hardware configurations, settings, usage, & other factor		
WLAN (optional) Bluetooth™ (opt)	Intel Wi-Fi 6 AX200, Wi- Bluetooth 5.0 wireless, i					bo adapt	ter		AC adapter	135W slim tip AC adapter		
WWAN SIM card	None None	<u> </u>								Optional: Windows® 10 Home 64 or Windows 10 Pro 64 1-year depot repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery depot repair service		
									Mil-Spec test	MIL-STD-810G military testing		
Note: The enecified	ations above may not be a	(oiloble	in all region	no and migh	t obon	no by road	ione		Environment	EPEAT™ Gold; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant Leno		







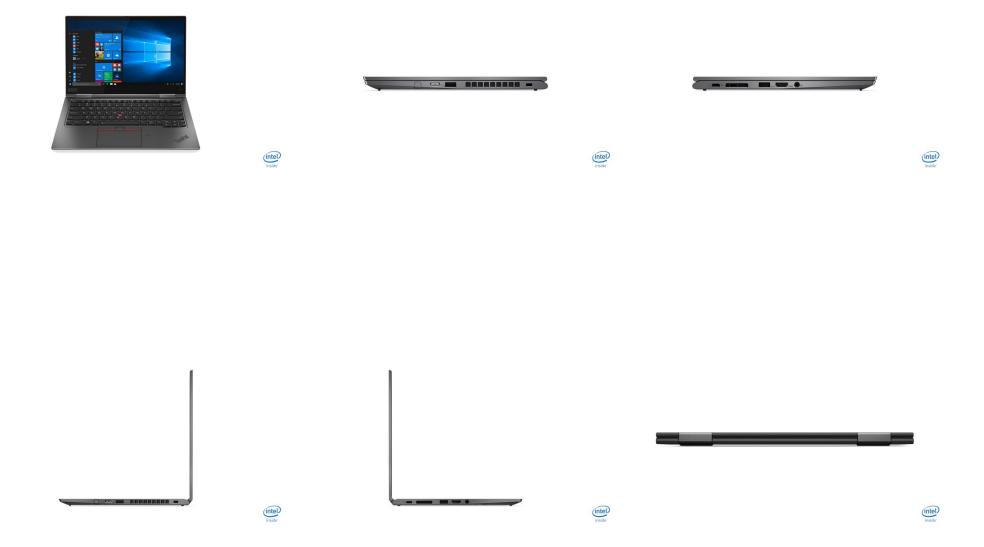






ThinkPad X1 Yoga (3rd Gen) Platform Specifications

Processor	7th Gener	ation In	tel® Cor	e™ i5 Proce	essor				Smart card reade	erNone
	Processor Number i5-7300U	# of Cores	# of Threads 4	Base Frequency 2.6 GHz	Max Turbo Frequency 3.5 GHz	Cacne	lemory Types PDDR3-1866	Processor Graphics 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 (Power Delivery, DisplayPort, Data transfer), HDMI 1.4, Ethernet extension connector, nano-SIM card slot (WWAN models),
	8th Gener Processor Number i5-8250U i5-8350U i7-8550U	# of	tel Core # of Threads	Base Frequency 1.6 GHz 1.7 GHz	Maria Timbra	6MB	lemory Types PDDR3-2133	Processor Graphics Intel UHD Graphics 620	WiGig dock Monitor cable (optional) Bundled Accy	headphone / microphone combo jack, microSD card reader * Depending on many factors, actual data transfer speed may be lower than theoretical speed None 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	i7-8650U Intel HD G supports 6 supports t	1.8 GHZ 4.0 GHZ 8MB GIAPIICS 620						<u>'</u>	Camera (optional	I) 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 HD Audio, Realtek® ALC3286 codec, Dolby® Audio™ Premium / stereo speakers, 1W x 2 /, 360° Noise-cancelling Dual Array Far Field,
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets							sockets	 Keyboard UltraNav™	headphone / microphone combo jack 6-row wave keyboard (rise & fall), spill-resistant, multimedia Fn keys, LED backlit TrackPoint® pointing device and 3+2 buttons multi-touch clickpad
Display Multi-touch	 Some: 14.0" (355mm) FHD (1920x1080), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, WVA, AR (anti-reflection) Some: 14.0" (355mm) WQHD (2560x1440), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, WVA, AR (anti-reflection) Some: 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, LED backlight, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle, WVA, AR (anti-reflection) Capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge), supports 10-finger gesture, reduces overall display brightness by 10% 							ts, ewing angle, ratio,	Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified (may be disabled in some region) Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest Near Field Communication 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 hardware configurations, settings, usage, & other factors 45W or 65W USB-C AC adapter
Hinge Convert-mode Pen (optional) Storage	Some: M	ent, stan Pen Pro .2 SSD	d, and to b, active / SATA	pen for mu 6.0Gb/s (e.	g. xxxG SS	SD)	n-board rech		Light sensor G-sensor Gyroscope GPS	Ambient Light Sensor 3D accelerometer 3D gyrometer GPS function is integrated into WWAN module
Optical	Some: M None	.2 SSD	/ PCIe ľ	NVMe, PCI	e 3.0 x 4, 3	32Gb/s (6	e.g. xxxG S	SD PCIe NVMe)	Preload	Windows® 10 Pro 64
Ethernet				nection Wo					Limited warranty (optional)	1-year depot with 2-year system board repair service
WLAN + Bluetooth™	 Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card 						ac + Bluetoo oth 5.0, M.2	th 4.2, M.2 card card		 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service
WWAN (optional)	tional) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card								Mil Chan toot	3-year/1-yr battery limited onsite service MIL STD 810C military testing
SIM card (opt)		o-SIM card slot, optional Verizon LTE (US) SIM card							Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR®; RoHS-compliant
Dimensions Weight Case color Case material	WxDxH: 13.11" x 9.02" x 0.67"; 333mm x 229mm x 17.05mm Starting at 3.08 lb / 1.4kg Black or silver Display cover: Carbon-Fiber and Glass-Fiber hybrid; Bottom: magnesium-PPS hybrid						x 17.05mm		Livionnent	LI LAI SIIVEI, LIVENGI SIAN , NOI IS-COIIIPIIAIIC
Note: The specifica	ations above	e may no	nt he ava	ilahle in all	regions and	d might ch	hange by reg	ions		Lenovo



ThinkPad X1 Yoga (4th Gen) Platform Specifications

Processor	8th Generation	on Inte	el® Core	™ i5 / i7 Proce	essor					WWAN (optional)	One of the following, configurable by model:
		of ores T	# of Threads F	requency Fred	Turbo quency Cach		ory Types	Proce Grap		SIM card (opt)	 Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Verizon LTE (US) SIM card
	i5-8365U	4	Ω ⊢		GHz 6ME GHz 8ME		DR3-2133	Intel Grap		Dimensions	• Gemalto eSIM WxDxH (Privacy Guard): 12.71" x 8.58" x 0.63"; 323mm x 218mm x 15.95mm
	i7-8665U or 10th Gene	eration			GHz 8ME		ble in EM	IEA)		Weight	WxDxH (other model): 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Privacy Guard model: starting at 3.24 lb / 1.47 kg;
	Processor #	# of	# of	Base Max	v Turbo		nory Types	Proce	essor ohics	Case color Case material	Other model: starting at 2.99 lb / 1.36 kg Iron Grey Display cover: Aluminium;
	i7-10510U	6	8	1.8 GHz 4.9	2 GHz 6ME 9 GHz 8ME 7 GHz 12M	LPD	DR3-2133	Intel Grap	UHD	Smart card reade	Bottom: Magnesium erNone
Graphics	Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C / Thunderbolt; supports three independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@24Hz (HDMI) Intel SoC (System on Chip) platform									Media reader Ports	None Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed
Chipset Memory				PDDR3 / solo	dered to sys					Monitor cable Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
Display	Size Resolution		Туре		Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
	14.0" FHD (19 Low Pow FHD (19	wer	, WVA	Anti-reflection Anti-smudge	400 nits	16:9	800:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 /
	14.0" ThinkPa	d Priva	acy WVA	Anti-reflection Anti-smudge	400 nits	16:9	1000:1	72%	170°	 Keyboard	four 360° far-field microphones, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, LED backlight
	14.0" WQHD (2560x1		WVA	Anti-reflection Anti-smudge	300 nits	16:9	800:1	72%	170°	UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	14.0" UHD (38 14.0" HDR 400 Dolby Vi	0,	(160) WVA	Anti-reflection Anti-smudge	500 nits	16:9	1400:1	90%	170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)
Multi-touch		ection)) / AS (ar	i, supports 10 nti-smudge) c s by up to 10°	oating,	ure,				System Mgt (opt) Fingerprint reade NFC (optional)	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
Hinge Convert-mode Pen	Yoga hinge, 3 Laptop, tent, ThinkPad Pe	360 de	egree d and tab	let		on-bo	ard rech	argeable	a	Battery Max battery life	Integrated Li-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 18.1 hr
Storage	One of the follo • M.2 2280 S • M.2 2280 S • Intel Optan	owing, SSD / SSD /	configuration SATA 6.0 PCIe NV	ble by model: OGb/s /Me 3.0 x 4				a. g - a		AC adapter	* Battery life varies significantly with hardware configurations, settings, usage, & other factors • 45W USB-C AC adapter • 65W USB-C AC adapter • 65W USB-C slim AC adapter
Optical	M.2 2280, I None				tate Storage	,					n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Native Intel E via optional T	Ethern ThinkF	net Conne Pad Ethe	ection I219-V rnet Extensio	(<i>Non-vPro</i>) n Adapter G	or I219 en 2	9-LM (<i>vP</i>	ro)		Limited warranty (optional)	 1-year depot with 2-year system board repair service 1-year limited onsite service
WLAN Bluetooth™	Intel Wireless	s-AC 9	9560, Wi-	-Fi 2x2 802.1 grated in Wi-	1ac + Blueto	oth 5.0		ər			 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
Note: The specific	actions obove ==	2011 12 2	t bo ove	able in all resis	no and miss	t obor	no by roci	one		Environment	EPEAT™ Gold; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant Lenovi









ThinkPad X1 Yoga Gen 5 Platform Specifications

Processor	10th Generation Intel®	[®] Core	™ i5 / i7 Proces	sor					Dimensions WxDxH (Privacy Guard): 12.71" x 8.58" x 0.63"; 323mm x 218mm x 15.95mm			
	Processor # of # c Number Cores Threa		Base Max Tu requency Freque		ne Mem	nory Types		essor phics	Weight	WxDxH (other model): 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Privacy Guard model: starting at 3.24 lb / 1.47 kg; Other model: starting at 2.99 lb / 1.36 kg		
	i5-10210U i5-10310U i7-10510U i7-10610U 4 8	1	1.6 GHz 4.2 G 1.7 GHz 4.4 G 1.8 GHz 4.9 G 1.8 GHz 4.9 G	Hz 6MI Hz 8MI	B B LPD	DR3-2133	: 1	UHD phics	Case color Case material	Iron Grey Display cover: Aluminium; Bottom: Magnesium		
Graphics	Intel UHD Graphics in supports up to 3 indep supports external more	proce	essor; nt displays via r	native dis	play ar	nd two ex Thunderb	ternal n	nonitors @60Hz)	Smart card reade Media reader Ports	None None Two USB 3.2 Gen 1 (one Always On), two USB 3.2 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).		
Chipset Memory	Intel SoC (System on 8GB or 16GB / 2133M	Chip) 1Hz LF	platform PDDR3 / soldere	ed to sys	tembo	ard, no s	ockets			headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
Display	Size Resolution	Туре	e Surface	Bright- ness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Monitor cable Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2		
	14.0" FHD (1920x1080) Low Power	WV	A Anti-reflection Anti-smudge	400 nits	16:9	700:1	72%	170°		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus		
	FHD (1920x1080) ThinkPad Privacy Guard	WV	Anti-reflection Anti-smudge	500 nits	16:9	1500:1	72%	170°	Audio support	HD Audio, USI 4551-513711-00 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack		
	14.0" WQHD (2560x1440	0) WV	A Anti-reflection Anti-smudge	300 nits	16:9	1000:1	72%	170°	Keyboard	6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, LED backlight		
	UHD (3840x2160) HDR 400, Dolby Vision™	WV	Anti-reflection Anti-smudge	500 nits	16:9	1500:1	90% DCI-P3	170°	UltraNav™ Security	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole		
Multi-touch Hinge Convert-mode Pen	*WQHD is NOT availabl Capacitive-type multi- anti-reflection (AR) / a Yoga hinge, 360 degre Laptop, tent, stand an ThinkPad Pen Pro, rec	touch, inti-sm ee id table	supports 10-fir nudge (AS) coat et	ing		ngo.			Fingerprint reader NFC (optional)	Firmware TPM 2.0 integrated in chipset Discrete TPM 2.0 TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest Near Field Communication Integrated Li-Polymer 51Wh battery,		
Storage Optical	M.2 2280 SSD / PC Intel Optane Memor M.2 2280, PCIe NVN None	le NVI y H10	Me 3.0 x 4 with Solid State	-		ige			Battery Max battery life	supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 19.3 hr MobileMark 2018: 13.0 hr * Battery life varies significantly with hardware configurations, settings, usage, & other factors		
Ethernet	Native Intel Ethernet C	Conne Etheri	ction I219-V (<i>N</i>	on-vPro) dapter G	or I219 Sen 2	9-LM (<i>vP</i>	ro)		AC adapter	 45W USB-C AC adapter 65W USB-C AC adapter 65W USB-C slim AC adapter 		
WLAN + Bluetooth™	Intel Wi-Fi 6 AX201, W * Intel AX201 card suppo					ws OS			1	Windows® 10 Home 64 Windows 10 Pro 64		
WWAN (optional) SIM card (opt)	Integrated Mobile Br Integrated Mobile Br * For non-WWAN model, Gemalto eSIM Nano-SIM card, Len	roadba it mea	and 4G LTE-A, F ns the model is N	Fibocom <i>OT WWAI</i>	L860-0 V upgrad	al, MIMC	ard) 2x2, M	1.2 card	(optional)	1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service		
									Mil-Spec test	MIL-STD-810G military testing		
									Environment	EPEAT™ Gold; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant		

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

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

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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.

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

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

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

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Cover	1
Contents	2
Summary Of Change	3
ThinkPad Tablets	4
ThinkPad X1 Tablet (3rd Gen)	4
ThinkPad X1 Tablet (3rd Gen) Platform Specifications	5
Legal Information	6

Summary of Changes

This section describes the technical changes made in this edition.

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

October 30, 2019 - Version 550

Additions in this update

► New product(s)

None

► New model(s)

None

▶ Others

ThinkPad X1 Tablet (3rd Gen) - Spec updated

Withdrawals in this update

► Withdrawn product(s)

None





ThinkPad X1 Tablet (3rd Gen) Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Control buttons	Power button, volume control button, reset switch
	Processor # of # of Base Max Turbo Cache Memory Types Processor	Dock (Optional)	Thin Keyboard (Magnetic Detachable)
	Number Cores Inreads Frequency Frequency Graphics	Monitor cable	USB-C Dock Gen 2 None
	1.6 GHz 3.4 GHz 6MB	Bundled Accy	USB-C to RJ45: Lenovo USB-C to Ethernet Adapter
	1.7 GHz 3.6 GHz 6MB LPDDR3-2133 Intel UHD Graphics 620	(optional)	USB-C to VGA: Lenovo USB C to VGA Plus Power Adapter
	i7-8650U 1.9 GHz 4.2 GHz 8MB		USB-C to HDMI: Lenovo USB-C to HDMI Plus Power Adapter
Cranhina	Intel UHD Graphics 620 in processor,	Camera	Front camera: 2.0-megapixel, fixed focus Rear camera: 8.0-megapixel, auto focus
Graphics	supports external digital monitor via USB Type-C	IR Camera	Optional: IR camera, fixed focus (mutually exclusive with NFC)
Chipset	Intel SoC (System on Chip) platform	Audio support	Realtek® ALC3278 codec / stereo speakers, 1W x 2 /
Memory	8GB or 16GB / 2133MHz LPDDR3, soldered to systemboard, no sockets		dual array microphones, combo audio/microphone jack
Display	13.0" (330mm) QHD+ (3000x2000), glossy, LED backlight, IPS,	Pogo keyboard	Magnetic attached thin keyboard, with TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch, backlit
	anti-figerprint display with Corning® Gorilla® Glass, WideView (160° viewing),	Keyboard color	Black
Multi-touch	400 nits, 3:2 aspect ratio, 1200:1 contrast ratio Capacitive touch panel, supports ten-finger gesture	Security	Kensington lock slot
Pen (optional)	Lenovo Pen Pro or Lenovo Active Pen (ThinkPad Pen Pro)	Security chip	Discrete TPM 2.0 TCG Certified
Kick stand	Opening angle up to 170 degrees	System Mgt (opt)	Intel vPro Technology **Optional: Touch style Fingerprint reader
Storage	One of the following, configurable by model:	NFC (optional)	Near Field Communication (mutually exclusive with IR camera)
	 M.2 2280 SSD / SATA 6.0Gb/s M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s 	Battery	Integrated Li-Ion 42Wh battery
Optical	None	Max battery life	MobileMark® 2014: 9.5 hrs
Storage extension	nOne MicroSD card reader, in the combo slot with nano-SIM card, support USH-I, microSDHC, microSDXC	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Ethernet	None	Light sensor	Ambient Light Sensor
WLAN		G-sensor	3D accelerometer 3D gyrometer
WLAN Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Bluetooth 4.2 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Gyroscope	
	Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A	GPS (optional)	GPS function is integrated into WWAN module
, , ,	(Sierra Wireless EM7455)	Preload	One of the following, configurable by model: • Windows® 10 Pro 64
SIM card (opt)	Nano-SIM card slot, in the combo slot with microSD card reader		• Windows 10 Home 64
Dimensions	Tablet only: 11.97" x 8.9" x 0.35"; 304.1mm x 226mm x 8.9mm Tablet + kevboard: 11.97" x 8.9" x 0.57": 304.1mm x 226mm x 14.4mm	Limited warranty	
Weight	Tablet + keyboard: 11.97" x 8.9" x 0.57"; 304.1mm x 226mm x 14.4mm Tablet only: starting at 1.96 lb / 0.89kg		1-year depot repair service
· ·	Tablet+ keyboard: starting at 2.8 lb / 1.27kg		 1-year depot with 2-year system board service 3-year/1-yr battery depot repair service
Case color	Black		3-year/1-yr battery limited onsite service
Case material	Magnesium/Aluminum	Mil-Spec test	MIL-STD-810G military testing
Ports	Two USB 3.1 Type-C Gen 1 ((with the function of Power Delivery and DisplayPort), one Pogo keyboard connector, one Pen holder slot,	Environment	EPEAT™ Silver, GREENGUARD, Low Halogen, RoHS
	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		

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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.

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Lenovo Services:

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

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

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

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

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

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

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

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

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

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Cover	1	ThinkCentre M80s Platform Specifications	35
Contents	2	ThinkCentre M90s	36
Summary Of Change	4	ThinkCentre M90s Platform Specifications	37
All-In-One	6	ThinkCentre M920 SFF	38
ThinkCentre M70a	6	ThinkCentre M920 SFF Platform Specifications	39
ThinkCentre M70a Platform Specifications	7	Tiny Desktops	40
ThinkCentre M820z AIO	8	ThinkCentre M625 Tiny	40
ThinkCentre M820z AIO Platform Specifications	9	ThinkCentre M625 Tiny Platform Specifications	41
ThinkCentre M90a	10	ThinkCentre M625 Tiny Thin Client	42
ThinkCentre M90a Platform Specifications	11	ThinkCentre M625 Tiny Thin Client Platform Specifications	43
ThinkCentre M920z AIO	12	ThinkCentre M630e Tiny	44
ThinkCentre M920z AIO Platform Specifications	13	ThinkCentre M630e Tiny Platform Specifications	45
Nano Desktops	14	ThinkCentre M70q	46
ThinkCentre M75n	14	ThinkCentre M70q Platform Specifications	47
ThinkCentre M75n Platform Specifications	15	ThinkCentre M715 Tiny (2nd Gen)	48
ThinkCentre M75n IoT	16	ThinkCentre M715 Tiny (2nd Gen) Platform Specifications	49
ThinkCentre M75n IoT Platform Specifications	17	ThinkCentre M715 Tiny Thin Client (2nd Gen)	50
ThinkCentre M90n-1 Nano	18	ThinkCentre M715 Tiny Thin Client (2nd Gen) Platform Specifications	51
ThinkCentre M90n-1 Nano Platform Specifications	19	ThinkCentre M720 Tiny	52
ThinkCentre M90n-1 Nano IoT	20	ThinkCentre M720 Tiny Platform Specifications	53
ThinkCentre M90n-1 Nano IoT Platform Specifications	21	ThinkCentre M75q Tiny	54
SFF Desktops	22	ThinkCentre M75q Tiny Platform Specifications	55
ThinkCentre M70s	22	ThinkCentre M80q	56
ThinkCentre M70s Platform Specifications	23	ThinkCentre M80q Platform Specifications	57
ThinkCentre M710e SFF	24	ThinkCentre M90q	58
ThinkCentre M710e SFF Platform Specifications	25	ThinkCentre M90q Platform Specifications	59
ThinkCentre M720 SFF	26	ThinkCentre M920 Tiny	60
ThinkCentre M720 SFF Platform Specifications	27	ThinkCentre M920 Tiny Platform Specifications	61
ThinkCentre M720e SFF	28	ThinkCentre M920x Tiny	62
ThinkCentre M720e SFF Platform Specifications	29	ThinkCentre M920x Tiny Platform Specifications	63
ThinkCentre M725 SFF	30	ThinkSmart Edition Tiny M920q for Zoom Rooms	64
ThinkCentre M725 SFF Platform Specifications	31	ThinkSmart Edition Tiny M920q for Zoom Rooms Platform Specifications	65
ThinkCentre M75s	32	Tiny-In-One	66
ThinkCentre M75s Platform Specifications	33	ThinkCentre Tiny-In-One 22 Gen 3	66
ThinkCentre M80s	34	ThinkCentre Tiny-In-One 22 Gen 3 Platform Specifications	67

ThinkCentre Tiny-In-One 22 Gen 4	68
ThinkCentre Tiny-In-One 22 Gen 4 Platform Specifications	69
ThinkCentre Tiny-In-One 24 Gen 3	70
ThinkCentre Tiny-In-One 24 Gen 3 Platform Specifications	71
ThinkCentre Tiny-In-One 24 Gen 4	72
ThinkCentre Tiny-In-One 24 Gen 4 Platform Specifications	73
ThinkCentre Tiny-In-One 27	74
ThinkCentre Tiny-In-One 27 Platform Specifications	75
Tower Desktops	76
ThinkCentre M70t	76
ThinkCentre M70t Platform Specifications	77
ThinkCentre M720 Tower	78
ThinkCentre M720 Tower Platform Specifications	79
ThinkCentre M80t	80
ThinkCentre M80t Platform Specifications	81
ThinkCentre M90t	82
ThinkCentre M90t Platform Specifications	83
ThinkCentre M920 Tower	84
ThinkCentre M920 Tower Platform Specifications	85
Legal Information	86

Summary of Changes	1	ThinkCentre M800z (10EW) - TopSeller	70
ThinkCentre Chromebox			71
ThinkCentre Chromebox Platform Specifications			72
ThinkCentre Chromebox (10H8) - TIO	4	ThinkCentre M800z (10EV)	73
ThinkCentre Chromebox (10H9) - TIO (TopSeller)	5	ThinkCentre M900 Tiny	74
ThinkCentre Chromebox (10H6) - TIO	6	ThinkCentre M900 Tiny Platform Specifications	75
ThinkCentre Chromebox (10H2)	7	ThinkCentre M900 Tiny (10FM) - TopSeller	76
ThinkCentre Chromebox (10H3) - TopSeller	8	ThinkCentre M900 Tiny (10FM) - TopSeller - II	77
ThinkCentre Chromebox (10H4)	9	ThinkCentre M900 Tiny (10NE) - TopSeller	78
ThinkCentre Chromebox (10H5) - TopSeller	. 10	ThinkCentre M900 Tiny (10NE) - TopSeller - II	79
ThinkCentre Tiny-in-One 22			
ThinkCentre Tiny-in-One (TIO) 22			
ThinkCentre Tiny-in-One 23			
ThinkCentre Tiny-in-One (TIO) 23			
ThinkCentre Tiny-in-One 24			
ThinkCentre Tiny-in-One (TIO) 24	. 16	ThinkCentre M900 Tower	85
ThinkCentre M600 Tiny			86
ThinkCentre M600 Tiny Platform Specifications			
ThinkCentre M600 Tiny (10G9) - TopSeller			88
ThinkCentre M600 Tiny (10KH) - Thin Client (TopSeller)			
ThinkCentre M600 Tiny (10GK) - Thin Client (TopSeller)	. 21		
ThinkCentre M600 Tiny (10KK) - TIO (Thin Client) - TopSeller			
ThinkCentre M600 Tiny (10GA) - OID			
ThinkCentre M600 Tiny (10G8) - OID			
ThinkCentre M600 Tiny (10GE) - TIO (OID)			
ThinkCentre M600 Tiny (10GC) - TIO (OID)			
ThinkCentre M600 Tiny (10KG) - Thin Client			
ThinkCentre M600 Tiny (10GJ) - Thin Client			
ThinkCentre M600 Tiny (10KJ) - TIO (Thin Client)			
ThinkCentre M700 Tiny		` ' '	
ThinkCentre M700 Tiny Platform Specifications			
ThinkCentre M700 Tiny (10HY) - TopSeller		· · · ·	
ThinkCentre M700 Tiny (10HY) - TopSeller - II			
ThinkCentre M700 Tiny (10J0)			
ThinkCentre M700 SFF			
ThinkCentre M700 SFF Platform Specifications			
ThinkCentre M700 SFF (10GT) - TopSeller		` ' '	
ThinkCentre M700 SFF (10GT) - TopSeller - II			
ThinkCentre M700 SFF (10GS)			
ThinkCentre M700 Tower		, , ,	
ThinkCentre M700 Tower Platform Specifications			
ThinkCentre M700 Tower (10GR) - TopSeller			
ThinkCentre M700 Tower (10GR)			
ThinkCentre M700z All-In-One			
ThinkCentre M700z Platform Specifications		, , , , , , , , , , , , , , , , , , , ,	
ThinkCentre M700z (10EY) - TopSeller		` ' ' ' ' '	
ThinkCentre M700z (10E1) - 10p3eilei			
ThinkCentre M79 SFF and Tower			
ThinkCentre M79 SFF Platform Specifications			
ThinkCentre M79 Tower Platform Specifications			
ThinkCentre M79 10wer Platform Specifications ThinkCentre M79 SFF (10CU) - TopSeller			
ThinkCentre M79 SFF (1000) - TopSeller		, , , , , ,	
ThinkCentre M79 SFF (10CT)			
ThinkCentre M79 SFF (10JA)			
ThinkCentre M79 Tower (10CR) - TopSeller			
ThinkCentre M79 Tower (100A) - TopSeller			
` ' '			
ThinkCentre M79 Tower (10 IC)			
ThinkCentre M79 Tower (10J6)			
ThinkCentre M800 SFF ThinkCentre M800 SFF Platform Specifications			1∠8
·			
ThinkCentre M800 SFF (10FY) - TopSeller			
ThinkCentre M800 SFF (10FX)			
ThinkCentre M800 Tower Platform Capacifications			
ThinkCentre M800 Tower Platform Specifications			
ThinkCentre M800 Tower (10FW) - TopSeller			
ThinkCentre M800 Tower (10FV)			
ThinkCentre M800z All-In-One			
ThinkCentre M800z Platform Specifications			
ThinkCentre M800z (10EU) - TopSeller	. 09		

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.

June 2020 - Version 561

Additions in this update

► New product(s)

ThinkCntre Tiny-In-One 22 Gen 4

ThinkCntre M90a

ThinkCntre M90s

ThinkCntre M90t

ThinkCntre M90q

► New model(s)

None

▶ Others

None

Withdrawals in this update

► Withdrawn product(s)

None

► Withdrawn model(s)

None

















ThinkCentre M70a Platform Specifications

Processor	Intel® Celeron®, Intel I	Pentium®	, or 10th Gen Inte	el Core [⊤]	[™] i3 / i5 / i7 / i9 Pi	rocessor			s, M.2 Card, Intel Wi-Fi 6 AX201 (dual band),
	Processor	Cores / Threads	\ /	Cache	Memory Support (Up to)	Integrated Graphics	Bluetooth™ Ethernet	Some: Bluetooth 5.0	ooth 5.1 combo adapter, 2x2 (Available on 2020/9/29) /5.1 wireless, integrated in Wi-Fi + BT combo adapter lltek RTL8111K, Wake on LAN®
	Celeron G5900 Celeron G5920	2/2	3.4G 3.5G	2 MB 2 MB	DDR4-2666 DDR4-2666	UHD 610 UHD 610	Manageability	None	iller III LOTTIN, Ware OII LAN
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610	Security chip	Discrete TPM 2.0, TC	G Certified
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630	1 '	Security slot (for Ke	
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630		 Optional Chassis in 	trusion switch • Individual USB port disablement
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630			ard disk password Smart USB protection, allows keyboard
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630		Boot sequence con	<i>y</i> .
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Callio	pe Keyboard (USB connector), black ional Keyboard (USB connector), black
	Core i5-10400	6/12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callio	pe Mouse (USB connector), black
	Core i5-10500	6/12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630			rprint Mouse (USB connector), Windows Hello support, black
	Core i5-10600	6/12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630	Mechanical	Business black cold	or
	Core i7-10700	8/16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630	ļ	 Toolless back cover 	
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630	ļ	Support VESA mou	int (100mm)
Memory	64GB max (32GB SO two 260-pin SO-DIMN				bid models), DDF	R4-3200*,		Discoursians (MA-Dall)	Without stand (with camera): w/ ODD: 19.3" x 2.3" x 11.7" / 490.14 x 57.8 x 297.75 (mm)
	* System automatically c	locks dow	for the processors		ver memory controll	ler		Dimensions (WxDxH)	w/o ODD: 19.3" x 1.8" x 11.7" / 490.14 x 46 x 297.75 (mm) w/ ODD: (Non-touch) 11.3 / 5.12 (Touch) 10.8 / 4.88
Storage	Support up to 1x 2.5" Some: Hard Drive / S	HDD and SATA 6.00	d 1x M2.SSD, 3b/s, 2.5" or 3.5".	7200 r	pm			Approx weight (lb / kg)	w/o ODD: (Non-touch) 10.7 / 4.86 (Touch) 10.2 / 4.62
	Some: M.2 SSD (224	12 / 2280) / PCIe NVMe. F	Cle 3.0	x2 or PCle 3.0 x	(4		W	ith Full Function Monitor stand (with camera):
Optical	Some: Intel Optane™ Some: DVD-ROM SA	Memory ATA 1.5G	M10, M.2 2280, b/s Drive, slim (9	PCle 3 .0mm)	.0 x2			Dimensions (WxDxH)	19.3" x 7.9" x 15.2" to 18.3" / 490.14 x 199.82 x 386.05 to 466.04 (mm)
Media reader	Some: DVD Burner (Optional 3-in-1 media	DVD±RV	/), SATA 1.5Gb∕s		slim (9.0mm)			Approx weight (lb / kg)	w/ ODD: (Non-touch) 16.2 / 7.33 (Touch) 15.6 / 7.09 w/o ODD: (Non-touch) 15.6 / 7.07 (Touch) 15.1 / 6.83
Graphics	Intel HD Graphics 61			main m	emory DirectX®	12.		Adjustments	Tilt: 30° back, -5° forward; Lift: 80mm
•	external monitor supp	ort via D	isplayPort™(up to	4096x	2304@60Hz)	,			With UltraFlex IV stand (with camera):
Monitor Cable	Optional DP to VGA d								Lowest in flat mode: 19.3" x 11.3" x 7.8" / 490.17 x 288.17 x 197.04 (mm)
Display	or DP to HDMI 1.4 do 21.5 " (546.1mm) Full	ngle HD 108 (Op (1920x1080),	In-Plan	e Switching tech	nology (may		Diffiensions (WXDXH)	Highest in vertical mode: 19.3" x 9.2" x 17.3" / 490.17 x 232.75 x 439.28 (mm)
	refer to IPS, PLS, ADS light, 250 nits, 16:9 as (88% Screen to Body	spect ratio	o, 1000:1 contras	t ratio, a	anti-glare, border	less design		Approx weight (lb / kg)	w/ ODD: (Non-touch) 17.4 / 7.88 (Touch) 16.9 / 7.65 w/o ODD: (Non-touch) 16.8 / 7.62 (Touch) 16.3 / 7.38
Multi-touch Camera	Optional multi-touch, some: 1080p camera	supports	10-point, AIT (Ad	dvanced	I In-cell Touch) te	chnology		Adjustments	Tilt: 70° back, -5° forward; Lift: up to 115mm (vertical mode) / 164mm (flat mode)
Carriera	Some: RGBIR came							Note	e: Camera adds 14.5mm in height (Vertical mode)
0	(physical swite	ch on/off)	, support Windov	vs Hello)		Power supply	Some: 135 watts ad	apter, autosensing, 89% PSU
Controls	Physical buttons on si	ide for mi	cropnone mute a	nd pow	er on/off		. owor cappiy		apter, autosensing, 89% PSU
Chipset	Intel H470 Chipset		sta Compart Dougas	On) 14	athernat (D I 45)		Limited warranty ³	Some: 1-year, depo	t repair service / service upgrades available
Rear ports*	4x USB 3.2 Gen 1 (or 1x DisplayPort, 1x opt	ie suppoi	ial (9-nin)	On), IX	emerrier (hJ-45)	,			rear, limited onsite service / service upgrades available
Side ports*	1x USB 3.2 Gen 2, 1x 1x optional card reade	(USB 3.2	Gen 1, 1x USB				Preload	Some: Windows® 10 Some: Windows 10	Home 64-bit
M.2 card slot	Two M.2 Card slots (o	ne for W	LÁN, one for SŚ[D/Optan	ie)	,	Environment		IoT Enterprise (only available via special bid model) f, EPEAT™ Silver rating*, ErP Lot 3, TCO 8.0, TCO Edge
A ali a . a	* Depending on many fac						LIMIOIIIIEIIL		Eye comfort certified (for Full Function Monitor Stand only),
Audio support	High Definition (HD) A Dolby® Atmos® certified		aitek ALC233 / tv	wo inter	nai speakers (2vi	/ x 2),		TUV Low Blue Light of RoHS-compliant	ertified, TUV Ultra Low Noise certified (on some models),
WLAN	Some: 11ac wireless				(dual band),			* Only available for M	
	Some: 11ac wireless Wi-Fi + Blueto	, M.2 Car both 5.0 c	combo adapter, 1	-AC 946 x1 (spe	cial bid only)		MIL-SPEC test		ry certification (Low Pressure [Altitude], High Temperature, nperature Shock, Humidity, Sand and Dust, Vibration, Shock, ion)
	Some: 11ac wireless	, M.2 Ca	rd, Intel Wireless combo adapter, 2	-AC 956	60 (dual band),		Accessories		sories, please go to http://smartfind.lenovo.com
Note: The enecific	eations above may not be	ovoiloblo	in all regions						Lenovo June 2020

























ThinkCentre M820z Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9	9 series	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),			
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),			
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,			
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1			
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,			
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2			
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Bluetooth™ Ethernet	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111G, Wake on LAN®			
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610					
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Manageability Security chip	None 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	Security leatures	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 			
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices • Optional Chassis intrusion switch			
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Traditional Keyboard (USB connector), black 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 Wireless Reyboard (2.44Hz via USB receiver), 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, blac			
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Mechanical	Business black color			
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Toolless back cover, stand, memory removal			
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Support VESA mount (100mm)			
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Dimensions (WxDxH) Max weight (lb / kg) Adjustments			
	Core i9-9900	8/16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Without stand (No camera):			
Memory	32GB max (16GB SC two 260-pin SO-DIM				bid models), DDR	4-2666*,		19.3 X 1.9 X 12.6 (inch) (Touch) 11.6 / 5.25 (Non-touch) 11.1 / 5.05			
	* System clocks dowr		·		mory controller			With Full Function Monitor stand (No camera): Tilt: 45° back, -5° forward:			
Storage	Some: Hard Drive / Some: Solid State D	SATA 6.00	Gb/s, 2.5", 5400	rpm or 7				19.3 X 9.9 X 14.8 to 19.1 (inch) 491 X 252 X 377 to 486 (mm) (Non-touch) 15.8 / 7.18 Till. 45 back, -5 lotward, 491 X 252 X 377 to 486 (mm) (Non-touch) 15.8 / 7.18 Swivel: +/-45°			
	Some: M.2 SSD (224	100 (33L 42 / 2280) / PCIe NVMe. F	s, ∠.5 PCle 3.0	x2 or PCle 3.0 x4	4		With UltraFlex III stand (No camera):			
	Some: Intel Optane™	^₄ Memor	/ (not support Ce	leron / F	Pentium Processo	r), M.2		Tilt: 70° back, -5° forward;			
Optical	Some: DVD-ROM S	ATA 1.5G	b/s Drive, slim (9	.0mm)	" (0.0)			19.3 X 9.9 X 13.2 to 16.4 (inch) (Touch) 17.3 / 7.85 Lift: up to 136mm (flat mode)			
Media reader	Some: DVD Burner (Optional 3-in-1 media	DVD±RV	V), SAIA 1.5Gb/s	Drive, s	slim (9.0mm)			491 X 252 X 335 to 417 (mm) (Non-touch) 16.9 / 7.65 up to 82mm (vertical mode); Swivel: +/-45°			
•					Div+V® 1	0		Note: Camera adds 22mm in height (Vertical)			
Graphics	Intel HD Graphics 6 external monitor supp	ort via D	processor, uses isplayPort™·	main m	emory, DirectA i	۷,	Power cumply				
	Max resolution: 4096			(1080 (F	Panel)@60Hz		Power supply	150 watts, autosensing, 90% PSU			
Display	21.5 " (546.1mm) Ful TFT-LCD, In-Plane Sv	vitching t	echnology (In-Pla	ane Swi	tching may refer to	o IPS.	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			
	PLS, ADS, AHVA, an	d AA), wi	de viewing angle	$(+/-89^{\circ}$), LED backlight,	250 nits,	Preload	Preloaded operating system			
Multi-touch	16:9 aspect ratio, 100 Optional multi-touch,	0:1 conti	ast ratio, anti-gla	re, supp	ort Low Blue Ligh	nt Mode		Some: Windows 10 Pro 64-bit			
Camera	Optional 1080p came	ra with c	lual microphone	I FD inc	in-ceil louch) tec licator physical s	witch on/		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)			
G 4111.014	off, supports multi-de							Lenovo Vantage			
Controls	Physical buttons on s	ide for m	icrophone mute a	and pow	er on/off	,		Microsoft Office preloaded; purchase a product key to activate			
Chipset	Intel B360 Chipset							 Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) 			
Rear ports*	Four USB 3.1 Gen1 (one supp	orts Smart Powe	r On), o	ne ethernet (RJ-4	l5),		LinkedIn			
O:- +-*	one DisplayPort, one	optional	serial (9-pin),	-l \	LICD 0 4 T	- 0 0 1	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3			
Side ports*	one USB 3.1 Gen2 (cone optional card rea						,	TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certifie			
	*Depending on many fa							(for Full Function Monitor Stand only), TUV Low Blue Light certified,			
M.2 card slot	Two M.2 Card slots (c	ne for W	LAN, one for SS	D/Optan	e)	5,000		TUV Ultra Low Noise certified (on some models), RoHS-compliant			
Audio support	High Definition (HD) A		altek ALC233 / t	wo inter	nal speakers (2W	x 2),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)			
	Dolby Audio'™ Premi	uIII					Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			

















ThinkCentre M90a Platform Specifications

Processor	Intel® Celeron®, Intel I	1	T .	el Core [⊤]			Bluetooth™	Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter					
	Processor	Cores / Threads	Frequency Base/Max*(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®					
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610	Manageability	Intel Active Management Technology 14.0 (Intel AMT 14.0); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi					
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610	ĺ	adapter to enable vPro function through wireless connection)					
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610	Security chip	Discrete TPM 2.0, TCG Certified					
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630	Security features						
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630	1	 Optional Chassis intrusion switch Self-Healing BIOS Boot without keyboard and mouse Individual USB port disablement 					
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630		Optional PrivacyGuard screen Smart USB protection, allows keyboard/					
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630		Power-on, admin, hard disk password mouse only, blocks all storage de					
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black					
	Core i5-10400	6/12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	l., ´	Some: Lenovo Traditional Keyboard (USB connector), black					
	Core i5-10500	6/12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black					
	Core i5-10600	6/12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black					
	Core i7-10700	8/16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630	Mechanical	Business black color					
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630]	 Toolless back cover, stand removal Support VESA mount (100mm) 					
Memory	64GB max (32GB SO	-DIMM o	nlv available via	special	bid models). DDF	34-3200*.		• • • • • • • • • • • • • • • • • • • •					
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	two 260-pin SO-DIMN				,,	, ,		Privacy Gaurd ODD Dimensions (WxDxH) Approx weight (lb / kg)					
	* System automatically c	locks dow	for the processors	s with lov	er memory control	ler		Gaurd Gaurd Without stand (with camera):					
Storage	Support up to 2x 2.5"	HDD (2n	d HDD occupy C	DD bay) and 1x M2.SSI)		21.3" x 1.8" x 13.4" / 541 x 46 x 340.5 (mm) 11.6 / 5.25					
J	Some: Hard Drive / S	6.00 ATA	3b/s, 2.5", 5400 ı	rpm or 7	'200 rpm			√ 21.3" x 2.3" x 13.4" / 541 x 57.8 x 340.5 (mm) 12.3 / 5.57					
	Some: M.2 SSD (224	2 / 2280	/ PCIe NVMe, F	Cle 3.0	x2 or PCle 3.0 x	(4		21.3" x 1.9" x 13.4" / 541 x 49.5 x 340.5 (mm) 13.5 / 6.13					
Ontical	Some: Intel Optane™ Some: DVD-ROM SA				.0 x2			√ √ 21.3" x 2.4" x 13.4" / 541 x 61.3 x 340.5 (mm) 14.2 / 6.45					
Optical	Some: DVD-ROW S/				slim (9 0mm)			With Full Function Monitor stand (with camera):					
Media reader	Optional 3-in-1 media	card rea	der	, Diivo, .	51111 (0.011111)			16.6 / 7.51					
Graphics	Some: Intel HD Gra			or uses	s main memory I	DirectX® 12		√ 21.3" x 7.9" x 16.3" to 19.5" / 17.3 / 7.84					
атартноо	Some: AMD Radeo					5110007 12,		√ 541 x 200 x 414.2 to 494.2 (mm) 18.5 / 8.39					
	external monitor supp	external monitor support via DisplayPort™(up to 4096x2304@60Hz)						√ √ 19.2 / 8.71					
Monitor Cable	Optional DP to VGA of	longle, Di	o to DVI-D dongl	e, DP to	2 DP dongle (M	ST mode),		With UltraFlex IV stand (with camera):					
Display	or DP to HDMI 1.4 do 23.8" (604.5mm) Full		n (1020v1090)	In Dian	o Switching took	nology (may		Lowest in flat mode: 21.3" x 12.3" x 9.0" / 541 x 312.8 x 227.4 (mm)					
Display								Highest in vertical mode:					
	refer to IPS, PLS, ADS, AHVA, AAS), wide viewing angle (H/V 178°), LED backlight, 250 nits (350 nits for the models with PrivacyGaurd), 16:9 aspect ratio, 1000							7 Ingress in vertical mode. 21.3" x 9.2" x 18.4" / 541 x 232.7 x 467.7 (mm)					
	contrast ratio, anti-gla PrivacyGaurd							Lowest in flat mode: 21.3" x 12.3" x 9.1" / 541 x 312.8 x 230.5 (mm)					
Multi-touch	Optional multi-touch,	supports	10-point, AIT (Ad	dvanced	I In-cell Touch) te	chnology		Highest in vertical mode:					
Camera	Some: 1080p camera	a with dua	al microphone, T	hinkShu	ıtter (physical swi	itch on/off)	Stand	$\sqrt{}$ 21.3" x 9.2" x 18.4" / 541 x 232.7 x 467.7 (mm) $20.9 / 9.46$					
	Some: RGBIR came	ra with di	al microphone, s	support	1080p, ThinkShu	itter		Note: Camera adds 14.5mm in height (Vertical mode)					
Controls	(physical swite Microphone mute and bottom (only for the m	power of podels with	n/off buttons on s h PrivacyGaurd)	side, Pri	vacyGaurd on/of	f botton on		Some: Full Function Monitor stand, Tilt: 30° back, -5° forward; Lift: 80mm Some: UltraFlex IV stand, Tilt: 70° back, -5° forward; Lift: up to 115mm (vertical mode) / 164mm (flat mode)					
Chipset	Intel Q470 Chipset						Power supply	Some: 150 watts adapter, autosensing, 89% PSU					
Rear ports*	4x USB 3.2 Gen 1 (or			On), 1x	ethernet (RJ-45)),		Some: 170 watts adapter, autosensing, 89% PSU					
Side ports*	1x DisplayPort, 1x opi 2x USB 3.2 Gen 2, 1x	USB 3.2	:Type-C Gen 1(5	V/3A cl	narging),	>	l	3 1-year or 3-year, limited onsite service / service upgrades available					
M.2 card slot	1x optional card reade Two M.2 Card slots (c * Depending on many fac	ne for W	∟ÁN, one for SŚI	D/Optan	e)	,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise (only available via special bid model)					
Audio support	High Definition (HD) A	ed				V x 2),	Environment	ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO 8.0, TCO Edge, TUV Eye comfort certified, TUV Low Blue Light certified, TUV Ultra Low Noise certified (on some models), RoHS-compliant					
WLAN	Some: 11ac wireless				(dual band),			* Only available for MT 11CD/11CE					
	Some: 11ac wireless	, M.2 Car ooth 5.0 c	ombo adapter, 2	-AC 956 x2			MIL-SPEC test	est MIL-STD-810H military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock Fungus, Solar Radiation)					
					technology sup	port, 2x2	Accessories	ccessories For compatible accessories, please go to http://smartfind.lenovo.com					
Note: The execition	eations above may not be				0, 1	-		Lenovo May 202					



















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),				
		Cores /	Frequency	Managary Cummant Interne				Dolby® Audio™ Premium				
	Processor	Threads	Base/Max(GHz)	Cache	(Úp to)	Graphics	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1				
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2				
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1				
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265,, 2x2 Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),				
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter				
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Bluetooth™					
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400 DDR4-2400	UHD 610	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®				
	Pentium Gold G5500 Pentium Gold G5600	2/4	3.8G 3.9G	4 MB 4 MB	DDR4-2400 DDR4-2400	UHD 630 UHD 630	Manageability	Intel Active Management Technology 12.0 (Intel AMT 12.0);				
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection)				
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified				
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Security features	• Security slot (in rear for attachment of • Power-on, admin, hard disk password				
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	ĺ	optional Kensington® MicroSaver® cable; • Boot sequence control				
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630		 Kensington lock also locks chassis) Smart USB protection, allows keyboard/ Individual USB port disablement 				
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices • Optional Chassis intrusion switch				
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	rioyboara	Some: Lenovo Traditional Keyboard (USB connector), black				
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630	Mayraa	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black				
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Mechanical	Business black color				
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Micorianicai	Toolless back cover, stand, disk, memory removal				
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Support VESA mount (100mm)				
Memory	32GB max (16GB SC two 260-pin SO-DIM	M sockets	, dual-channel c	apable	,,	4-2666*,		Dimensions (WxDxH) Max weight (lb / kg) Adjustments Without stand (No camera) 21.3 X 1.8 X 13.7 (inch) (Touch) 14.0 / 6.34 N/A				
	* System clocks down for											
Storage	Some: Hard Drive / S							542 X 46 X 349 (mm) (Non-touch) 13.5 / 6.13 With Full Function Monitor stand (No camera):				
				AAIDU/ I	support (RAID pr	eset only		04.0 V 0.0 V 45.0 to 00.0 (in ab)				
	available via special bid model) Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5"							542 X 252 X 405 to 514 (mm) (NOTI-TOUCH) 16.27 8.20 Lift: 110mm; Swivel: +/-45°				
	Some: M.2 SSD (22							With UltraFlex III stand (No camera):				
Optical	Some: Intel Optane ^T Some: DVD-ROM S.				entium Processo	r), IVI.∠		21.3 X 9.9 X 14.3 to 17.5 (inch) (Touch) 19.7 / 8.94 Tilt: 70° back, -5° forward; Lift: up to 136mm (flat mode) / up				
Media reader	Some: DVD Burner Optional 3-in-1 media	(DVD±RW	/), SATA 1.5Gb/s		lim (9.0mm)			542 X 252 X 363 to 444 (mm) (Non-touch) 19.2 / 8.73 81mm (vertical mode); Swivel: +/-45°				
Graphics	Intel HD Graphics 6			main me	emory DirectX® 1	2.		Note: Camera adds 22mm in height (Vertical)				
агартноо	external monitor supp	ort via Di	splayPort™;		•	-,	Power supply	150 watts, autosensing, 90% PSU				
Disales	Max resolution: 4096							<u> </u>				
Display	23.8" (604.5mm) Ful In-Plane Switching te	chnology	J p (1920x1080) (In-Plane Switch	ing may	refer to IPS PLS	SIGN,	Limited warranty ³	Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available				
	AHVA, and AA), wide						Preload	Preloaded operating system				
	ratio, 1000:1 contrast	ratio, ant	i-glare, support l	_ow Blue	Light Mode, worl	k as stand-	i leloau	Some: Windows 10 Pro 64-bit				
Multi touch	alone monitor via Dis				In call Tauch) too	hnology		Some: Windows 10 Home 64-bit				
Multi-touch Camera	Some: 1080p camer	Iti-touch, supports 10-point, AIT (Advanced In-cell Touch) technology Dp camera, with dual microphone, LED indicator, physical switch on/off,			itch on/off		Preloaded applications (only some listed)					
ouo.u	supports mul	ti-degree	rotation (horizon	tal 0° to	180°, vertical -25°	o to 25°)		 Lenovo Vantage Microsoft Office preloaded;purchase a product key to activate 				
	Some: RGBIR came supports mul-	ra, 1080p	, with dual micro	phone, p	hysical switch on	off,		 Cvberlink PowerDVD (only for models with DVD / DVD±RW) 				
	Supports mur Windows Hal	ti-aegree In sunnor	rotation (norizon t, only available [,]	tai U° to via speci	180°, verticai -25° al hid models	10 25°)		 Cýberlink Power2GO (onlý for models with DVD±RW) 				
Controls	Physical buttons on s							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 supp	orts Smart Powe	er On), or	ne ethernet (RJ-4	5),		TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certified, TUV Low Blue Light certified,				
Side norte*	one DisplayPort in/où one USB 3.1 Gen2 (d	it combo p	oort, one optiona	ıı serial (9-pin)	n1 ono	MIL ODEO to at	TUV Ultra Low Noise certified (on some models), RoHS-compliant				
Side ports*	USB 3.1 Type-C Gen combo iack (3.5mm)	1, one op	tional 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 (ical speed	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				







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ThinkCentre M75n Platform Specifications

Processor	AMD Ryzen 3 / 5 PF	RO serie	s processor				Security features	s • Security slot (in rear for optional • Boot sequence control					
	Processor	Cores / Threads	Frequency Base/Max	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		 Kensington® MicroSaver® cable) Chassis intrusion switch Power-on password Boot without keyboard and model individual USB port disableme Smart USB protection, allows 			port disablement		
	Ryzen 3 PRO 3300U	4/4	2.1 / 3.5 GHz		DDR4-2400	Radeon Vega 6		Administrator pass	rator password mouse only, blocks all storage devices				
	Ryzen 5 PRO 3500U	4/8	2.1 / 3.7 GHz	2 MB / 4MB	DDR4-2400	Radeon Vega 8	IZ a cola a a col	Hard disk passwor					
Memory	8GB / DDR4-2400* non-ECC * System automatical		,	*	,	• •	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					
Storage	Support up to two N Some: M.2 2280 St Some: M.2 2242 St	SD / PC	lè NVMe, PC	le 3.0 x 4*	e x2)								
RAID Optical	* M.2 SSD in PCIe 3 None None				Cle 3.0 x2		Mechanical	Nano (0.35L), Iron Gray top cover / Black mid bezel / Red bottom cover Three M.2 slots: two for M.2 SSD (one PCle 3.0 x4 and one PCle 3.0 x2 for WLAN					
Graphics	AMD Radeon™ Vega 6/8 Graphics in processor, uses main memory, DirectX® 12, one DisplayPort™, one USB 3.2 Type-C Gen2 with display function, up to 2 independent displays;						1		Dimension		Weight (Approx.)		
·								M75n (with fan, 0.35L)	7.05" X 3.4 179mm X 88	16" X 0.87" mm X 22mm	1.11 lb (0.505 kg), vary by config		
Monitor cable	Max resolution: 384 Optional DP to VGA HDMI dongle, Type-	dongle,	DP to HDM	3840x2160 dongle, Typ	(Type-C)@(be-C to VGA	60Hz dongle, Type-C to	Mounting	Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75i Some: DIN rail mount bracket kit					
Chipset	AMD SoC (System	on Chi	p) platform				Floor Stand	None					
Front ports (Std.)	* 1x USB 2.0, 1x USE			3.2 Type-C	Gen 2, one l	headphone /	Power supply	65 watts adapter, autosensing, 89% PSU (Not for TIO models)					
Rear ports (Std.)	microphone combo jack (3.5mm) Rear ports (Std.)* 1x USB 2.0, 1x USB 3.2 Gen2, 1x USB 3.2 Type-C Gen 2 (with display function, support power-in [20V and >45W]), 1x ethernet (RJ-45), 1x DisplayPort						Limited warranty	Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available					
	* Depending on many				ay be lower th	an theoretical speed	Preload	Preloaded operating system					
Audio support	Realtek ALC233 / in		`	,			_		Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit				
WLAN	Some: 11ac wireles Wi-Fi + Blue	ss, M.2 (Card, Realtek O combo ada	(RTL88220 Inter 2x2	E (dual ban	d),		Some: Windows 10 Former of Bit Some: Windows 10 IoT Enterprise (only available via special bid model)					
	Some: 11ac wireles Wi-Fi + Blue	ss, M.2 (etooth 4.	Card, Qualco 2 combo ada	mm Atheros apter, 2x2		, ,,	Environment	ENERGY STAR® 8.0, EPEAT™ Silver rating, ErP Lot 3, TCO 8.0 (coming soon), TUV ultra low noise verified (on some models), RoHS, WEEE, REACH					
Bluetooth	Wi-Fi + Blue	Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9260 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: Bluetooth 4.2 / 5.0 wireless, integrated in Wi-Fi + BT combo adapter					MIL-SPEC test	Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, S					
Ethernet	Gigabit ethernet, Re					ιου αυαρισι	<u></u>	Fungus, Solar Radia					
Manageability Security chip	Dash 1.1/1.2 Discrete TPM 2.0, T	CG Cer	tified	·			Accessories	For compatible accessories, please go to http://smartfind.lenovo.com					
											l NA 0000		







AMD

AMD

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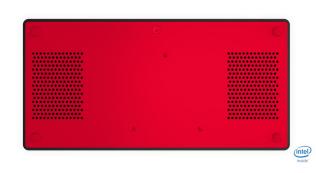
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ThinkCentre M75n IoT Platform Specifications

Processor	AMD Athlon process	sor					Security features	es • Security slot (in rear for optional • Boot sequence control				
	Processor	Cores / Threads	Frequency Base/Max	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		Chassis intrusion switchPower-on passwordIndividu			eyboard and mouse port disablement	
	AMD Athlon Silver 3050e	2/4	1.4 / 2.8 GHz	1 MB / 4MB	DDR4-2400	Radeon Graphics		Administrator passHard disk password				
Memory	4GB / DDR4-2400* * System automatically						Keyboard	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				
Storage	Support one M.2 SS Some: M.2 2280 S Some: M.2 2242 S None	SD / PC					Mouse					
Optical	None						Mechanical	Nano (fanless 0.55L), Iron Gray top cov	ver / Black mid bez	zel / Black bottom cover	
Graphics	AMD Radeon™ Gra DisplayPort™, one U	aphics in	n processor, i	uses main r with displa	nemory, Dire	ectX [®] 12, one		Two M.2 slots: one for M.2 SSD, one for WLAN Dimensions (WxDxH) Weight (Approx.)				
	displays; Max resolution: 384 Optional DP to VGA	0x2160	(DP)@60Hz;	3840x2160	(Type-C)@	60Hz		M75 IoT (fanless, 0.55L)	7.05" X 3.4		Weight (Approx.) 1.58 lb (0.72 kg), vary by config	
Monitor cable	HDMI dongle, Type-	C to DP	dongle	dorigio, Typ		derigie, type o to	_	With I/O box		46" X 2.41" nm X 61.3mm	2.65 lb (1.2 kg), vary by config	
Chipset	AMD SoC (System		<i>,</i> .				Mounting	Comp. VECA moun	, , , ,			
Front ports (Std.)	* 1x USB 2.0, 1x USE microphone combo					neadphone /	Wounting	Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75mr				
. , ,	' 1x USB 3.2 Gen 2, in [20V, > 45W]), 1x	1x USB etherne	3.2 Type-C G t (RJ-45), 1x	en`2 (with ô DisplayPor	display funct t		Floor Stand	Some: DIN rail mount bracket kit None				
I/O box*	Optional I/O box, co 2x serial, 2x etherne ethernet), 1x DI (Dig * Depending on many	et (RJ-45 gital Inpu	5, I/O box is e it) connector,	equipped wi 1x DO (Dig	th Realtek R gital Output)	TL8153B, gigabit connector	Power supply	 Some: 65 watts AC/DC adapter*, autosensing, 89% PSU Some: 65 watts AC/DC adapter (wide temperature)*, autosensing, 88% PSU (only for Machine Type 11GW/11GX) * Not for the models with I/O box 				
Audio support	Realtek ALC233 / ir		`	,			Limited warranty					
WLAN	Some: 11ac wireles Wi-Fi + Blue	etooth 5. ss, M.2 (etooth 4.	0 combo ada Card, Qualco 2 combo ada	pter, 2x2 mm Atheros pter, 2x2	s QCA6174	A (dual band),	Preload	Some: 3-year, limited onsite service / service upgrades available Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 IoT Enterprise (only available via special bid model)				
Bluetooth WWAN	Some: 11ac wireles Wi-Fi + Blue Some: Bluetooth 4. None	etooth 5.	0 combo ada	pter, 2x2	`	,,	Environment	ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO 8.0* (coming soon), TUV ultra low noise verified (on some models), RoHS, WEEE, REACH * Not for the models with I/O box or 65w adapter (wide temperature)				
Ethernet Manageability Security chip	Gigabit ethernet, Re Dash 1.1/1.2 Discrete TPM 2.0, T			G, Wake on	LAN®		MIL-SPEC test	MIL-STD-810H military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock Fungus, Solar Radiation)				
Security Crip	DISCIPLE IF IVI 2.0, I	od oer	uneu				Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				
NI I TI I'C												



















ThinkCentre M90n-1 Nano Platform Specifications

Processor	Intel® 8th Generation	Intel Core	e™ i3 / i5 / i7 Pro	cessor			Manageability	anageability Intel vPro technology on some models (require choosing a vPro-su						
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip	adapter to enable vP Discrete TPM 2.0, TO	ro function through CG Certified					
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620	Security features	• Security slot (in rea	ar for optional	 Boot sequence 				
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		 Kensington® MicroSaver® cable) Chassis intrusion switch Power-on password Boot without keyboard and moderate individual USB port disablem Smart USB protection, allows 						
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620								
	Core i7-8665U	4/8	1.9G / 4.8G	8 MB	DDR4-2400	UHD 620		 Administrator password mouse only, blocks all storage de 						
Memory	8GB or 16GB / DDR4 * System automatical	-2666* / s ly clocks (soldered to syste down for the prod	mboard essors	, no sockets, non with lower memo	n-ECC ory controller	Keyboard	Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black						
Storage	Support up to two M.2 Some: M.2 2280 SSI Some: M.2 2242 SSI Some: Intel Optane TM PCIe NVMe 3	D / PCIe I D / PCIe I Memory 3.0 x 4 (no	NVMe, PCIe 3.0 H10 with Solid S of support Celero	x 2** State St n)			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, b Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black						
RAID Optical	* M.2 SSD / Optane with ** 128G M.2 2242 SSD r RAID 0/1 support (RA None	SSD in`P(not support	Cle 3.0 x 2 M.2 slot ed on Machine Typ	ćan only e 11AM	/11AS/11AK/11A		Mechanical	Nano (0.35L), Iron G Three M.2 slots: two for WLAN	Nano (0.35L), Iron Gray top cover / Black mid bezel / Red bottom cover Three M.2 slots: two for M.2 SSD (one PCIe 3.0 x4 and one PCIe 3.0 x2) and of for WLAN					
Graphics	Intel UHD Graphics	620 in pro	ooccor ucoc mo	in mom	ory DiroctV® 12	ono	-	Dimensions (WxDxH) Weight (Approx.)						
Graphics	DisplayPort™, one US displays;							M90n-1 Nano (with fan, 0.35L)		46" X 0.87" 3mm X 22mm	1.11 lb (0.505 kg), vary by config			
Monitor cable	Max resolution: 4096x Optional DP to VGA of HDMI dongle, Type-C	longle,`Dl	P [*] to HDMİ dongle			, Type-C to	Mounting	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						
Chipset	Intel SoC (System of	n Chip) p	latform				Floor Stand	None						
Front ports (Std.)	*2x USB 3.1 Gen2, 1x	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.)	jack (3.5mm) Rear ports (Std.)* 2x USB 3.1 Gen2, 1x USB 3.1 Type-C Gen 2 (with display function, support power-in [20V and >45W]), 1x ethernet (RJ-45), 1x DisplayPort							Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available						
	* Depending on many fa					etical speed	Preload	Preloaded operating system						
Audio support	Realtek ALC233VB / Some: 11ac wireless		, ,	20005	(al a. l. la a . a. al.)		-	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit						
WLAIN		ooth 5.0 c	ombo adapter, 1	x1	,,		Environment	ENERGY STAR® 7.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO 8.0, TUV ultra low noise verified (on some models), RoHS, WEEE, REACH						
	Wi-Fi + Blueto Some: 11ac wireless	ooth 5.0 c , M.2 Car	ombo adapter, 2	x2 ·AC 946			MIL-SPEC test	est MIL-STD-810H (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)						
	Some: 11ac wireless		d, Intel Wireless ombo adapter, 2		60 (dual band),		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com						
5	Some: 11ac wireless Wi-Fi + Blueto	, M.2 Car both 5.0 c	d, Intel Wireless ombo adapter, Ir	AC 956	tèchnology supp	port, 2x2								
Bluetooth Ethernet	Some: Bluetooth 5.0 Gigabit ethernet, Intel Connection I219-V (Ja	l Ethernet	Connection I219	9-LM (Ja	combo adapter acksonville) or Int	tel Ethernet								
Note: The enecified	ations above may not be										Lenovo March 2020			



















ThinkCentre M90n-1 Nano IoT Platform Specifications

Processor	Intel® Celeron® or 8th	Generati	ion Intel Core™ i	3 / i5 Pro	ocessor		Manageability	Intel vPro technology	on some models	(require choosing	a vPro-support Wi-Fi		
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip	adapter to enable vP Discrete TPM 2.0, TO		h wireless connect	tion)		
	Celeron 4205U	2/2	1.8G	2 MB	DDR4-2133	UHD 610	Security features	• Security slot (in rea	ar for optional	Boot sequence	control		
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD		Kensington [®] MicroSaver [®] cable) • Boot without keyboard and					
	Core i3-8145UE	2/4	2.2G / 3.9G	4 MB	DDR4-2400	UHD 620		Chassis intrusion sPower-on passwore		• Individual USB	port disablement		
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		 Administrator pass 	word				
Memory	4GB or 8GB / DDR4-	2666* / so	oldered to systen	nboard,	no sockets, non-	ECC		Hard disk password					
	(Celeron 4205U / Core ič Core i5-8365U models e * System automatically c	equipped w	ith 8GB memory)				Keyboard	Some: Lenovo Tradi Some: Lenovo Callid	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				
Storage	Support up to two M.2 Some: M.2 2280 SSI Some: M.2 2242 SSI	D / PCle D / PCle	NVMe, PCIe 3.0	x 2**			Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, b Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black					
	Some: Intel Optane ^{TI} PCIe NVMe 3 * M.2 SSD / Optane with ** 128G M.2 2242 SSD	3.0 x 4 (nd h <i>SSD in P</i>	ot support Celero Cle 3.0 x 2 M.2 slot	n) can only	run at PCle 3.0 x2		Mechanical	Nano (fanless 0.55L) Four M.2 slots: two f WLAN, and one for V	for M.2 SSD (one I	ver / Black mid bez PCle 3.0 x4 and or	zel / Black bottom cover ne PCle 3.0 x2), one for		
RAID	RAID 0/1 support (RA					/1L			Dimension	ns (WxDxH)	Weight (Approx.)		
Optical Graphics	None Intel UHD Graphics	610/620 i	in processor, use	s main i	memory, DirectX [®]	12, one	_	M90n-1 Nano IoT (fanless, 0.55L)		46" X 1.36" mm X 34.5mm	1.58 lb (0.72 kg), vary by config		
	DisplayPort™ or HDM display function, up to Max resolution: 40963	o 2 indepe	endent displays; Î	, .	,,	Gen2 with		With I/O box		46" X 2.41" mm X 61.3mm	2.65 lb (1.2 kg), vary by config		
Monitor cable		x2304 (Ty dongle, D	rpe-C)@60Hz P to HDMI dongle	,	,	, Type-C to	Mounting	Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75r Some: DIN rail mount bracket kit			oorts VESA 75mm		
Chipset	Intel SoC (System o	n Chip) p	olatform				Floor Stand	None					
Front ports (Std.)	* 2x USB 3.1 Gen2, 1x jack (3.5mm), 2x seria			ne head	dphone / microph	one combo	Power supply		DC adapter (wide t		J osensing, 88% PSU (only		
Rear ports (Std.)*	<i>With Celeron:</i> 1x USI	B 2.0, 1x	USB 3.1 Type-C		with display funct I-45), 1x DisplayF			for Machine 7 * Not for the models with					
	With i3/i5: 1x USI suppor	B 3.1 Ger rt power-i	n2, 1x ÚSB 3.1 Ty n [20V, > 45W]),	/pe-È G 2x ethei	ien 2 (with display rnet (RJ-45), 1x [y function,	Limited warranty	y Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available 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)					
I/O box*	Optional I/O box, con extends 2x serial, 2x gigabit ethernet), 1x I * Depending on many fa	nect to th ethernet DI (Digital	(RJ-45, I/O box is I Input) connecto	Ć Gen 2 s equipp r, 1x DO	oed with Realtek I (Digital Output)	RTL8153B, connector	Preload						
Audio support	Realtek ALC233VB /		<u>.</u>	eu may	be lower triair trieor	elicai speed	Environment	ENERGY STAR® 7.1			rica)*, ErP Lot 3, , RoHS, WEEE, REACH		
WLAN	Some: 11ac wireless	, M.2 Car	d, Realtek RTL8	322CE ((dual band),			* Not for the models with		(on come medele)	, 110110, 11222, 11271011		
	Some: 11ac wireless Wi-Fi + Blueto	s, M.2 Car ooth 5.0 c	combo adapter, 2	822CE x2	,,		MIL-SPEC test	MIL-STD-810H* (Low Temperature Shock, Radiation) * Not for the	Humidity, Sand an	nd Dust, Vibration,	ure, Low Temperature, Shock, Fungus, Solar		
		ooth 5.0 c	combo adapter, 1	x1	, , , , , , , , , , , , , , , , , , , ,		Accessories	For compatible acces			d.lenovo.com		
	Some: 11ac wireless	ooth 5.0 c s, M.2 Ca	combo adapter, 2 rd, Intel Wireless	x2 -AC 956	, , , , , , , , , , , , , , , , , , , ,	oort. 2x2							
Bluetooth WWAN Ethernet	Some: Bluetooth 5.0 Some: Integrated Mc With Celeron: Gigabi With Core i3: Two gi Wake) wireless, obile Broa it etherne igabit ethe on LAN	, integrated in Wi adband 4G LTE-A t, Realtek RTL81 ernet, Realtek RT	Fi + BT , Fiboco 11K, 1x L8111k	combo adapter om L850-GL, M.2 RJ-45, Wake on and RTL8111H.	card LAN® , 2x RJ-45							
N. T. C.	With Core i5: Two gig and Re		ernet, Intel Etherr L8111H, 2x RJ-4			JacksonVille)							



















ThinkCentre M70s Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 10th Gen Int	el Core™	' i3 / i5 / i7 / i9 Pro	ocessor	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band),
	Processor	Cores /		Cache	Memory Support			Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
		Threads	Frequency Base/Max(GHz)		(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9462 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 1x1 (special bid only)
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610		Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band),
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630	Divista eth	Wi-Fi + Bluetooth 5.1 combo adapter, 2x2
	Pentium Gold G6600	2/4	4.2G 3.6G / 4.3G	4 MB 6 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630	Bluetooth Ethernet	Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection I219-V(Jacksonville), Wake on LAN®
	Core i3-10100 Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630	(Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1
	Core i5-10400F	6/12	2.9G / 4.3G	12 MB	DDR4-2666	None	Manageability	None
	Core i5-10400	6/12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-10500	6/12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Security features	Security slot (for Kensington® lock) Power-on password
	Core i5-10600	6/12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630		Padlock loop Administrator password
	Core i7-10700F	8/16	2.9G / 4.8G	16 MB	DDR4-2933	None		Optional Smart Cable Clip to Hard disk password
	Core i7-10700	8/16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630		 physically lock keyboard and mouse Optional chassis intrusion switch Boot sequence control Boot without keyboard and mouse
	Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None		Optional chassis E-Lock Optional chassis E-Lock Individual USB port disablement
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630		Smart USB protection, allows keyboard/
	* Max freguency may ref			ology 2.0				mouse only, blocks all storage devices
	Technology 3.0 / Intel Th						Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
Memory	128GB max, DDR4-3	3200*, fou	r 288-pin DIMM	sockets,	dual-channel cap	able	1	Some: Lenovo Traditional Keyboard (USB connector), black
•	* System automatical	lly clocks	down for the pro	cessors	with lower memoi	ry controlle	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black
Storage	Support up to 2x HDI	D ([2.5" +	3.5"] or [dual 2.5	5"]) and ι	p to 1x M2.SSD		Iviouse	Some: Lenovo Galilope Mouse (USB connector), Black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
•	Some: Hard Drive / S	SAIA 6.00	3b/s, 2.5" or 3.5"	, 7200 rp	om			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Some: M.2 SSD (22	42 / 2280) / PCIe NVMe, I	Cle 3.0	x2 or PCIe 3.0 x4	4	Mechanical	SFF (8.2L), black color, metal case
Optical	Some: Intel Optane™ Some: DVD-ROM, S	™ Memory SATA 1 50	/ IVI I U, IVI.	, PCIE 3. 9 0mm)	0 XZ		Medianicai	Dimensins with bezel & PCI holder & rubber foot:
Optioai	Some: DVD Burner	(DVD±RV	V). SATA 1.5Gb/s	Drive. s	lim (9.0mm)			(WxDxH) 3.6" X 11.7" X 13.4"; 93mm X 298mm X 340mm
Onboard SATA	Three onboard SATA	6.0Gb/s	connectors	•	,		_	Weight (approx.): 11.7 lb (5.3 kg), weight may vary by configuration
Media reader	Optional 3-in-1 media	a reader (:	support SD, SDF	IC, and S	SDXC)		Bays	Bay 1: Slim ODD bay
Graphics	Intel UHD Graphics	610/630 i	n some process	ors, uses	main memory, D	DirectX® 12,		Bay 2: 3.5" HDD bay Bay 3: 2.5" HDD bay (optional bay, or bay comes with disk)
	two DisplayPort™, on		supports up to 3	indepen	dent displays, mo	re displays	Slots	Slot 1: low-profile (length < 155mm, height < 68mm), PCle 3.0 x16
	support via discrete of Max resolution: 4096		D\@60⊔ 1020v	/1000 (L	DMI) @ 60H-z			Slot 2: low-profile (length < 155mm, height < 68mm), PCle 3.0 x1
	Some: AMD Radeon					vatts.		Slot 3: no slot, only bracket for optional port extension
			4096x2160@60H		. 0.0 0.0 %0, 00 %	· acco,		Slot 4: no slot, only bracket for optional port extension M.2 card slots: two (one for WLAN, one for SSD/Optane)
Monitor cable	Optional DP to VGA					(for Collage	Floor Stand	Optional system floor stand for vertical orientation
	Display with intel inte	grated gra	aphics), or DP to	HDMI 1	.4 dongle		EOU design	Toolless cover, disk, optical, extension card removal
Chipset	Intel H470 Chipset						Power supply	Some: 180 watts, autosensing, 85% PSU
Front ports* (Std.	.) 2x USB 3.2 Gen 2, 2: 1x microphone (3.5m							Some: 260 watts, autosensing, 85% PSU
Front ports* (Opt	.) Optional: 3-iin-1 med			priorie c	offibo jack (3.5ffi	11)		Some: 310 watts, autosensing, 92% PSU Some: 380 watts, autosensing, 92% PSU
Rear ports* (Std.) 4x USB 2.0, 1x serial	l (9-pin). 1	x ethernet (RJ-4	5). 2x D	isplavPort**. 1x H	IDMI**.		* Discrete graphics card / 10-core processors need > 180w power supply
	1x line-out (3.5mm)						Limited warranty	Some: 1-year, depot service / service upgrades available
Rear ports* (Opt.) Optional: 2x USB 3.2	Gen 1 via	a PCle x1, 2x US	SB 3.2 Ty	pe-C Gen 2 via F	Cle x4, 1x	Limitou warranty	Some: 1-year or 3-year, limited onsite service / service upgrades available
	2nd serial (9-pin), 4x 1x parallel (25-pin), 2	serial (9-)	pin) via PCIe x1,	ouco) o	dditional D I 45 a	nd vidoo	Preload	Some: Windows® 10 Pro 64-bit
	ports available on opt				uuliioilai HJ-45 ai	iu video		Some: Windows 10 Home 64-bit
	* Depending on many fa				e lower than theore	tical speed		Some: Windows 10 IoT Enterprise (only available via special bid model)
	** Only available for the					<u> </u>	Environment	ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO (coming soon),
Audio support	High Definition (HD)	Audio, Re	altek ALC623-C	G / interr	nal speaker (2 wa	tt)		TUV low noise verified (on some models), RoHS-compliant
• •	- , ,				•	•		* Only available for MT 11DB/11DC
							Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Note: The enecifie	ations above may not be	ملطمانميرم	in all vanions					Longue May 2020













ThinkCentre M710e SFF Platform Specifications

Processor	Intel® Celeron®, Int			eration I	1		Security features	es • 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 password 				
	Celeron G3900	2/2	2.8G	2 MB	DDR4-2133	HD 510		 Smart USB protection, allows keyboard/ Boot sequence control Boot without keyboard a 				
	Celeron G3930	2/2	2.9G	3 MB	DDR4-2133	HD 610		Optional smart cable clip to physically Individual U	SB port disablement			
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		lock both keyboard and mouse Optional cha	assis intrusion switch			
	Pentium G4500	2/2	3.5G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black	k			
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610	l., '	Some: Lenovo Traditional Keyboard (USB connector), bla	ack			
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black	المساح المالم مسمم المالم			
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		Some: Lenovo Fingerprint Mouse (USB connector), Wind	Jows Hello Support, blac			
	Core i5-6400	4/4	2.7G / 3.3G	6 MB	DDR4-2133	HD 530	Mechanical	SFF (7.4L), black color, metal case (Market 1), black color, metal case (Market 1), black color, metal case (Market 1), black color, metal case	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 riahts			
Graphics	Intel HD Graphics			essor us	ses main memory	DirectX® 12	1	in Windows 10 Pro 64-bit(not available with 7th G	ien Intel processor)			
атартноо	one VGA, one Disp	layPort™	, supports 2 inde	pendent	displays, works a	long with		Preloaded applications (only some listed)	, ,			
	discrete graphics to	o support	more displays;			· ·		Microsoft Office preloaded; numbers a 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 / miorophon	ie dombo jadi		Create Récovery Media				
Rear ports*	Two USB 3.1 Gen1	, two US	B 2.0, optional tw	o USB 2	2.0, serial (9-pin),	optional 2nd		Adobe® Reader®				
	serial (9-pin), optio optional external U	SB to PS	5/2 ports cable (fo	or PS/2 k	(eyboard / mouse	e DisplayPort. ;	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North Americ RoHS-compliant, WEEE	ca), ErP Lot 3,			
Daan avalla saast s	additional DisplayF		tional graphics o	n some	models		Accessories	For compatible accessories, please go to http://www.lene	ovoguicknick.com			
Rear audio ports* IEEE 1394*	Line-out jack (3.5m	ım)					710000001100	To companie accessories, produce go to nitp://www.ici i	ovoquiokpiok.com			
IEEE 1394*	None * Depending on many	factors a	otual data transfor s	spood ma	y bo lower than thee	ratical speed						
Audio support	High Definition (HD				•	<u> </u>	-					
WLAN ¹³		, Audio,	I IGAIIGN ALUZ33	, miema	u speaket (1.5 Wat	,	-					
	None None											
Rhietooth™		Paltak R	ΓL8111HN, Wake	on LAN	J ®							
Bluetooth™ Ethernet	Gigabit ethernet. H	icalick i i					1					
	None	icanck in	0 ,									
Ethernet		leaner i					_					













ThinkCentre M720 SFF Platform Specifications

Dragonar	Intol® Coloron® Intol I	Dantium®	or Oth / Oth Com	Intal Ca	*oTM :0 /:E /:7 /:0	Dragger	JAZI ANI	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1
Processor	Intel® Celeron®, Intel I			intel Co			WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Graphics		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	LILID 040	DI	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Bluetooth™	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 (Ont.)	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®
	Pentium Gold G5500	2/4	3.8G	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)
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630		* Choose either I350-T4 or BN8E88
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Manageability	None
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Security features	Security slot (in rear for optional Power-on password
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630		Kensington® MicroSaver® cable) ◆ Administrator password
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		both keyboard and mouse • Boot sequence control • Boot sequence control
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		mouse only, blocks all storage devices
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i5-9400F	6/6	2.9G / 4.1G	9 MB	DDR4-2666	None		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
	Core i5-9500F	6/6	3.0G / 4.4G	9 MB	DDR4-2666	None	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Mechanical	• SFF (8.4L), black color; metal case
Memory	64GB max, UDIMM, I dual-channel capable * System automatical	*	•					 SFF (6.4L), black color, metal case (WxDxH) 3.64" X 11.44" X 13.52"; 92.5mm X 290.5mm X 343.5mm Approx. 13.24 lb (6.0 kg), weight may vary by configuration Toolless cover, disk, optical, and extension card removal
Optical Onboard SATA Media reader Graphics	Some: Hard Drive / Some: Solid State Dr Some: M.2 Solid State Dr Some: M.2 Solid State * M.2 SSD (2242) PC Some: Intel Optane TM Some: DVD-ROM S/ Some: DVD Burner (Three onboard SATA Optional 7-in-1 media	rive (SSD te Drive (le NVMe Memory ATA 1.5G DVD±RV 6.0Gb/s o reader	o) / SATA 6.0Gb/s SSD) / PCIe NVI only supports Por (not support Ce b/s Drive, slim (9 V), SATA 1.5Gb/s connectors	, 2.5" Me, PCle Cle 3.0 x leron / P .0mm) Drive, s	2 3.0 x 4*, 32Gb/s 2, 16Gb/s entium Processo lim (9.0mm)	or), M.2	Floor Stand	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 bay) Slot 1: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x16 Slot 2: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1 Slot 3: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1 Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane) Optional system floor stand for vertical orientation
·	one VGA (up to 2048) supports 3 independe Some: NVIDIA Gefor	ent display	ys, more displays 30 (End Of Life)	support DirectX	via discrete grap 12, 2GB GDDR	phics 5,	Power supply	Some: 180 watts, autosensing, 85% PSU 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)
	Some: AMD Radeon	™ 520 , D	two DisplayPort irectX 12, 2GB 0 1096x2160@60H	iDDR5, I	340x2160@60Hz PCle 3.0 x8, 30 v	vatts,	Limited warranty ³	³ Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Monitor cable	Optional DP to VGA of Display with intel integ	longie, Di	P to DVI-D dongl	e, DP to	dual DP dongle 4 dongle	(for Collage	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit
Chipset	Intel B360 Chipset						1	Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
Front ports* (Std.	.)2x USB 3.1 Gen2, 2x	USB 3.1	Gen1, 1x USB 3	.1 Type-0	C Gen1 (15W ch	arging),	-	Lenovo Vantage
Rear ports* (Std.	1x microphone (3.5mi) Optional: 1x media re) 4x USB 2.0, 1x serial 1x line-out (3.5mm)) Optional: 2x USB 3.1	ader (9-pin), 1 Gen1 via	x ethernet (RJ-4	5), 1x V0 SB 3 1 T	GA, 2x DisplayPo	ort, PCIe v4**		 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) LinkedIn
	(special bid only), 1x 2 pin), 2x PS/2 ports (ke optional graphics or e	eyboard/r	nouse), addition	ii (9-pin) al RJ-45	and video ports	available on	Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant
	* Depending on many fac ** Choose either 2x USB	ctors, actua	al data transfer spe		e lower than theore	tical speed	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Audio support	High Definition (HD) A	Audio, Re	altek ALC233VB	2 / interr	al speaker (2 wa	att)		













ThinkCentre M720e SFF Platform Specifications

Drococor	Intol® Coloron® Intol	Dontium®	or 9th / 9th Con	Intol Co	roTM i2 / i5 / i7 / i0	Droopoor	Monogoobility	None
Processor	Intel® Celeron®, Intel			inter Co	Υ		Security chip	None Discrete TPM 2.0, TCG Certified
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Graphics		s • Security slot (in rear for optional • Power-on password
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	Occurry leatures	Kensington® MicroSaver® cable) • Administrator password
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Padlock loop
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Smart USB protection, allows keyboard/ Boot sequence control Boot sequence control Boot sequence control
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		lock both keyboard and mouse Optional chassis intrusion switch
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	Some: Lenovo Traditional Keyboard (USB connector), black
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Mechanical	SFF (7.4L), black color, metal case
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630		• (WxDxH) 3.9" X 11.9" X 10.8"; 100mm X 303.5mm X 274.8mm
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		 Approx. 9.37 lb (4.25 kg), weight may vary by configuration Bay 1: Slim ODD bay
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Bay 2: 3.5" disk bay, supports 2.5" HDD (2.5 to 3.5 bracket comes with 2.5" disk)
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Slot 1: low-profile (length < 152mm, height < 64mm), PCle 3.0 x16*
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Slot 2: low-profile (length < 152mm, height < 64mm), PCle 3.0 x1*
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		M.2 card slot: one for SSD *Optional rear 2x USB2.0 / parallel occupies one expansion slot
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Floor Stand	Optional system floor stand for vertical orientation
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Packaging	• (WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500mm
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	ackaging	• Cross weight (approx.) 14.48 lb (6.57 kg)
Memory	32GB max, UDIMM, I	DDR4-26	66*. two 288-pin	DIMM so	ockets, non-ECC.		Power supply	180 watts, autosensing, 85% PSU
,	dual-channel capable		, <u></u>				11.7	<u> </u>
	* Memory may be und processor	derclocke	d to DDR4-2400	for the Id	ower memory con	itroller in	Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Storage	Some: Hard Drive / S	SATA 6 00	3b/s 2.5" or 3.5"	5400 rp	m or 7200 rpm		Preload	Preloaded operating system
Otorago	Some: M.2 Solid Sta	te Drive (SSD) / PCIe NVI	Ие. PCle	3.0 x2 or PCle 3	3.0 x4		Some: Windows® 10 Pro 64-bit
Optane memory	Some: Intel Optane™	Memory	, M.2 2280, PCI	NVMe,	PCle 3.0 x 2			Some: Windows 10 Home 64-bit Some: Linux Ubuntu
Optical	Some: DVD-ROM SA Some: DVD Burner (lim (0.0mm)		En income at	
Onboard SATA	Two onboard SATA 6.			Dilve, S	11111 (9.0111111)		Environment	ENERGY STAR® 7, EPEAT™ Silver rating (North America), ErP Lot 3, RoHS-compliant, WEEE
Media reader	Optional 7-in-1 media						Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
Graphics	Intel HD Graphics 61	10/630 in	processor, uses	main me	mory, DirectX® 1:	2,	Accessories	Tor companiore accessories, prease go to mtp.//www.ierrovoquickpick.com
•	one VGA, one Display	yPort™, s	upports 2 indepe					
	discrete graphics to s	upport m	ore displays;	4506 (V	CA\@E0U=			
	Max resolution: 4096 Some: AMD Radeon	™ 520 D	irectX 12 2GB G	IDDR5 F	GA) @ SUFIZ PCIe 3 0 v8 adan	ter		
	one VGA, one	HDMI, 3	0 watts (Max);		·			
Manitan aalala	Max resolution	n: 3840x2	2160 (HDMI)@30	Hz; 2048	3x1536 (VGA)@8	5Hz		
Monitor cable	Optional DP to VGA,	DP to DV	I-D (single link),	JP to du	al DP, or DP to H	DMI 1.4	_	
Chipset	Intel B365 Chipset							
Front ports* (Std.)Two USB 3.1 Gen1, n	nicrophor	ne (3.5mm), one	headpho	ne / microphone	combo jacł		
Front nortox (Ont	(3.5mm)							
Front ports* (Opt. Rear ports* (Std.)) Two USB 3.1 Gen1, to	wo USB 2	2.0 serial (9-nin)	etherne	t (B.I-45) one VC	A one		
riour porto (ota.)	DisplayPort, Line-out			Ottrorrio	t (110 10), 0110 t c	ar t, 0110		
Rear ports* (Opt.)) optional two USB 2.0), optional		
	external USB to PS/2					ma madala		
	additional video ports * Depending on many face							
Audio support	High Definition (HD)					icai speeu	1	
Audio support	3 (/	audio, ne	allek ALU023 / II	nemai S	Jeaner (2 Wall)		-	
WLAN¹³ Bluetooth™	None None							
Ethernet	Gigabit ethernet, Rea	ltek RTL8	3111HN, Wake o	n LAN®				
Ethernet (Opt.)	Some: Bitland BN8E							
Modem	None							













ThinkCentre M725 SFF Platform Specifications

Processor	AMD A6 / A8 / A10	/ A12 and	d Ryzen 3 / s	5 / 7 series	processor		Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®			
		Cores /	Frequency	L2/L3	Memory	Integrated	Ethernet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)			
	Processor	Threads	(Base/Max)	Cache	Support (Up to)	Graphics	Manageability Security chip	DASH 10/1.1 Discrete TPM 2.0, TCG Certified			
	PRO A6-9500	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	2MB / -	DDR4-2400	Radeon R7	,	Kensington® MicroSaver® cable) • Administrator password			
	PRO A10-9700	4/4	3.5 / 3.8	2MB / -	DDR4-2400	Radeon R7	.	Padlock loop			
	PRO A12-9800	4/4	3.8 / 4.2	2MB / -	DDR4-2400	Radeon R7		 Smart USB protection, allows keyboard/ ■ Boot sequence control 			
	Ryzen 3 2300X	4/4	3.5 / 4.0	2MB / 8MB	DDR4-2933	None	-	mouse only, blocks all storage devices • Boot without keyboard and mouse			
	Ryzen 5 2500X Ryzen 3 PRO 2200G	4/8	3.6 / 4.0	2MB / 8MB 2MB / 4MB	DDR4-2933 DDR4-2933	None Radeon Vega 8	-	 Optional cable lock to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch 			
	Ryzen 5 PRO 2400G	4/4	3.6 / 3.8	2MB / 4MB	DDR4-2933 DDR4-2933	Radeon RX Vega 11	Kaybaard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Ryzen 5 PRO 2600	6/12	3.4 / 3.9		DDR4-2933	None	Keyboard	Some: Lenovo Traditional Keyboard (USB connector), black			
	Ryzen 7 PRO 2700	8/16	3.2 / 4.1		DDR4-2933	None	-	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
	· ·						4	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)			
Memory	64GB max, UDIMM dual-channel capab * Systemboard supp clocks down for the	le ports up t lower cap	o DDR4-266 pability of m	66, memory emory conti	frequency r	may automatically essor	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
Storage	Some: Hard Drive / Some: Solid State Some: M.2 SSD / F * 128GB SSD M.2 (supports PCle 3.0 x	Drive (SS PCIe NVN 2242) PC	SD) / SATA 6 Me, PCIe 3.0 Cle NVMe ar	5.0Gb/s, 2.5) x 4*, 32Gb	n/s		Mechanical	 SFF (8.4L), black color; metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 13.2 lb (6.0 kg), weight may vary by configuration Toolless cover, disk, optical removal Optional dust filter 			
Optical	Some: DVD-ROM Some: DVD Burne	SATA 1.5 r (DVD±F	Gb/s Drive, RW), SATA 1	.5Gb/s Driv	e, slim (9.0n	nm)		Optional dust litter Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD			
Onboard SATA	Three onboard SATA available via special	I bid mod	el)	s, RAID 0/1	support (RA	ID preset only		Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16			
Media reader	Optional 7-in-1 med	lia reader	•					Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1			
Graphics	AMD Radeon™ Gramemory, DirectX® 1, 4096x2160@60Hz, with integrated grap	2, one V(onboard hics), su	GA (up to 19 VGA and D oports 3 inde	20x1200@ P ports are ependent di	60Hż), two [only availab	DisplayPort™ (up to le on the models	Floor Stand	Slot 3: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1 Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0 M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation			
	discrete graphics to Some: NVIDIA Gefor adapter, 35 v Some: AMD Radeo	orce® GT watts, two on™ 520,	730, Direct DisplayPor DirectX 12,	X 12, 2GB (t (up to 384 2GB GDDF	0x2160@60)Hz)		Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU 260 watts, autosensing, 92% PSU (only available via special bid)			
Monitor coble	two DisplayF						Limited warranty	1-year or 3-year, limited onsite service / service upgrades available			
Monitor cable	Optional DP to VGA or DP to HDMI 1.4 o	dongle, dongle	DP to DVI-L	dongle, DF	to dual DP	dongle,	Preload	Preloaded operating system Some: Windows 10 Pro 64-bit			
Chipset	AMD B450 Chipset	t						Some: Windows 10 Home 64-bit			
Front ports* (Std.)	2x USB 3.1 Gen2, 2	2x USB 3	.1 Gen1, 1x	microphone	e (3.5mm), 1	x headphone		Preloaded applications (only some listed)			
	(3.5mm)					· ·		Lenovo VantageMicrosoft Office preloaded;			
Front ports* (Opt.	<i>Optionál:</i> 1x media i	reader, 2	x USB 3.1 T	ype-C Gen2	via PCle ca	ard (special bid only))	purchase a product key to activate			
Hear ports (Std.)	2x USB 3.1 Gen1, 2 2x DisplayPort**, 2x	2X USD 2 PS/2 no	.u, TX Seriai rts (kevhoar	(9-pin), 1x (amemet (HJ 1x line-in (3	-45), IX VGA , 55mm) 1x line-out		 Cyberlink PowerDVD (only for models with DVD / DVD±RW) 			
	(3.5mm), 1x microp	hone (3.5	imm)	a / mouse),	17 1110 111 (0	.onini), ix inic out		Cyberlink Power2GO (only for models with DVD±RW)			
Rear ports* (Opt.)	Optionál: 2x USB 2	.0, 1x 2n	d serial (9-p	in), 1x para	llel (25-pin),	additional RJ-45	Facility is a set	LinkedIn FNEROV CTAR® 7.0* EREATIN Citizen nations* (*nations of consider): **The Control of the Control			
	* Depending on many ** only available on the					an theoretical speed	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant			
Audio support	High Definition (HD)						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
							4				
WLAN	Some: 11ac wireles Wi-Fi + Blue	etooth 4.2	2 combo ada	apter, 1x1							
	Some: 11ac wireles Wi-Fi + Blue	etooth 4.2	2* combo ad	lapter, 1x1							
	Some: 11ac wireles Wi-Fi + Blue	etooth 4.2	2* combo ad	apter, 2x2	`	,,					
	Some: 11ac wireles Wi-Fi + Blue	etooth 4.2	2* cómbo ad	apter, 2x2		, ,,					
Bluetooth™	Some: Bluetooth 4. * Hardware support										
_			_								













ThinkCentre M75s-1 SFF Platform Specifications

Processor	AMD Athlon, Athlon	PRO, R	Ryzen 3 / 5, c	r Ryzen 3 /	5 PRO serie	es processor	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band),
	Processor	Cores / Threads	Frequency (Base/Max)	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Athlon PRO 200GE	2/4	3.2 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9260 (dual band),
	Athlon PRO 300GE	2/4	3.4 / 3.4 GHz	1MB / 4MB	DDR4-2666	Radeon Vega 3	Dlueteeth™	Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
	Ryzen 3 PRO 2200G	4/4	3.5 / 3.7 GHz	2MB / 4MB	DDR4-2933	Radeon Vega 8	Bluetooth™	Some: Bluetooth 4.2 / 5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Ryzen 5 PRO 2400G	4/8	3.6 / 3.9 GHz	2MB / 4MB	DDR4-2933	Radeon Vega 11	Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®
	Ryzen 3 PRO 3200G	4/4	3.6 / 4.0 GHz	2MB / 4MB	DDR4-2933	Radeon Vega 8	Ethernet (Opt.)	None
	Ryzen 5 PRO 3350G	4/8	3.6 / 4.0 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11	Manageability Security chip	DASH 10/1.1
	Ryzen 5 PRO 3400G	4/8	3.7 / 4.2 GHz	2MB / 4MB	DDR4-2933	Radeon Vega 11	Security teatures	Discrete TPM 2.0, TCG Certified • Security slot (in rear for optional • Power-on password
	Ryzen 5 PRO 3600	6 / 12	3.6 / 4.2 GHz	3MB / 32MB	DDR4-3200	None		 Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password
	Ryzen 7 PRO 3700	8 / 16	3.6 / 4.4 GHz	4MB / 32MB	DDR4-3200	None		Padlock loop
	Ryzen 9 PRO 3900	12 / 24	3.1 / 4.3 GHz	6MB / 64MB	DDR4-3200	None		 Smart USB protection, allows keyboard/ ● Boot sequence control
	Athlon 300GE	2/4	3.4 / 3.4 GHz	1MB / 4MB	DDR4-2666	Radeon Vega 3		mouse only, blocks all storage devices • Boot without keyboard and mouse
	Ryzen 3 3200G	4/4	3.6 / 4.0 GHz	2MB / 4MB	DDR4-2933	Radeon Vega 8		 Optional smart cable clip to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch
	Ryzen 5 3350G	4/8	3.6 / 4.0 GHz	2 MB / 4MB	DDR4-2933	Radeon RX Vega 11	16 1	
	Ryzen 5 3400G	4/8	3.7 / 4.2 GHz	2MB / 4MB	DDR4-2933	Radeon RX Vega 11	Keyboard	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Ryzen 5 3600	6 / 12	3.6 / 4.2 GHz	3MB / 32MB	DDR4-3200	None		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
Memory	64GB max, UDIMM	DDR4-	2666*, four 2	88-pin DIMI	M sockets, r	ion-FCC.	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	dual-channel capab			p	000	= 0 0,		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, blac
	* System board suppo							Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	DDR4-1866, DDR4-21			, ,	,			7 7 7
Storage	Some: Hard Drive						Mechanical	• SFF (8.4L), black color; metal case
Ontical	Some: M.2 SSD (2					Te 3.0 x4		 (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
Optical	Some: DVD-ROM: Some: DVD Burne					nm)		Toolless cover, disk, optical, and extension card removal
Onboard SATA	Three onboard SAT							Optional dust filter
	available via special	I bid mod	del)	•		, ,		Bay 1: Slim external ODD bay
Media reader	Optional 7-in-1 med							Bay 2: 3.5", internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk)
Graphics	AMD Radeon™ Gra	aphics i	n processor	(only for so	me process	ors), uses main		Slot 1: low-profile (length < 150mm, height < 68mm), PCIe 3.0 x16
	memory, DirectX® 1	2, one V	GA, two Disp	olayPort™ (C	nboard VG	A and DP ports		Slot 2: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1
	are only available or displays, works alor	n the mo	aeis with inte MD discrete	egrated grap	nics), suppi	orts 3 independent		Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1
	Max resolution: 409	6x2160	(DP)@60Hz:	graphics to	support mo	ie dispiays,		Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0
	Some: AMD Radeo	on™ 520	DirectX 12,	2GB GDDR	5, PCIe 3.0	x8 adapter,	Floor Stand	M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation
	two DisplayF	Port, 30 v	watts (Max);			• · · · · · · · · · · · · · · · · · · ·		
Monitor cable	Max resoluti Optional DP to VGA		6x2160 (DP)		dual DP or	DD to HDMI 1 4	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU
			DVI-D (Sirigle	illik), DF to	dual DF, OI	DE TO FIDIVIT 1.4		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
Chipset Front ports* (Std.	AMD PRO 560 FCF .) 2x USB 3.1 Gen2, 2		2.1 Con1. 1v	miorophono	(2 5mm) 1	y hoodphono	Limited warranty	
TIOTIL POLIS (Stu.	(3.5mm)	OOD (J. i Geili, IX	moropriorie	; (J.JIIIII), I	v Heauhilone	Preload	Preloaded operating system
Front ports* (Opt	.) <i>Òptionál:</i> 1x media i	reader						Some: Windows 10 Pro 64-bit
Rear ports* (Std.) 2x USB 3.1 Gen1 (c	one supr	oort Smart Po	ower-On), 20	USB 2.0, 1	x serial (9-pin), 1x		Some: Windows 10 Home 64-bit
	ethernet (RJ-45), 1)					/board / mouse); 1x		Some: Windows 10 IoT Enterprise
Rear norts* (Ont	line-in (3.5mm), 1x l 2 <i>Optional:</i> 2x USB (.					available on		Some: Linux Ubuntu
ricai porto (Opt.	optional graphics ca		aranor (20-pii	i,, additiona	video ports	avanable on	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);
	* Depending on many factors, actual data transfer speed may be lower than theoretical speed may available on the models with integrated graphics							ErP Lot 3; RoHS-compliant, WEEE
	** only available on the	e models v	with integrated	graphics		·	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Audio support	High Definition (HD)) Audio,	Realtek ALC	662 / option	al internal s	peaker (1 watt)		
Note: The enecific	ations above may not b	o ovoilal	blo in all ragio	no				Lenovo July 202



















ThinkCentre M80s Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®,	or 10th Gen Int	el Core™	' i3 / i5 / i7 / i9 Pro	ocessor	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band),			
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),			
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2			
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610		Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band),			
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610	Bluetooth	Wi-Fi + Bluetooth 5.1 combo adapter, Intel vPro technology support, 2x2 Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter			
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection 1219-I M(Jacksonville), Wake on I AN®			
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4			
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630	, , ,	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1			
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Technology 14 (Intel AMT 14);			
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi			
	Core i5-10400F	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	None	Coourity obio	adapter to enable vPro function through wireless connection)			
	Core i5-10400	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified			
	Core i5-10500	6 / 12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Security features	s • Security slot (for Kensington® lock) • Power-on password			
	Core i5-10600	6 / 12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630		 Padlock loop Optional Smart Cable Clip to Administrator password Hard disk password 			
	Core i7-10700F	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	None		physically lock keyboard and mouse • Boot sequence control			
	Core i7-10700	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630		Optional chassis intrusion switch Boot without keyboard and mouse			
	Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None		Optional chassis E-Lock Individual USB port disablement			
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630		 Smart USB protection, allows keyboard/ 			
	* Max freguency may ref Technology 3.0 / Intel Th					1ax	Keyboard	mouse only, blocks all storage devices Some: Lenovo Calliope Keyboard (USB connector), black			
Memory	128GB max, DDR4-3	200*, fou	288-pin DIMM	sockets,	dual-channel cap		1	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
	* System automatical	ly clocks	down for the pro	cessors	with lower memor	ry controller	Mouse	Some: Lenovo Calliope Mouse (USB connector), black			
Storage	Support up to 2x HDI					RAID 0/1		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
	support for HDD (RAI							Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
	Some: Hard Drive / S Some: M.2 SSD (224					1	Mechanical	SFF (8.2L), black color, metal case			
	Some: Intel Optane					•		Dimensins with bezel & PCI holder & rubber foot:			
Optical	Some: DVD-ROM, S	ATA 1.5G	b/s Drive, slim (9.0mm)				(WxDxH) 3.6" X 11.7" X 13.4"; 93mm X 298mm X 340mm			
·	Some: DVD Burner (Drive, s	lim (9.0mm)		Povo	 Weight (approx.): 11.7 lb (5.3 kg), weight may vary by configuration Bay 1: Slim ODD bay 			
Onboard SATA	Three onboard SATA			IC and C	CDVC)		Bays	Bay 2: 3.5" HDD bay			
Media reader	Optional 3-in-1 media						-	Bay 3: 2.5" HDD bay (optional bay, or bay comes with disk)			
Graphics	Intel UHD Graphics						Slots	Slot 1: low-profile (length < 155mm, height < 68mm), PCIe 3.0 x16			
	two DisplayPort™, on support via discrete of		supports up to 3	muepem	ueni uispiays, mo	ile displays		Slot 2: low-profile (length < 155mm, height < 68mm), PCle 3.0 x1			
	Max resolution: 4096		P)@60Hz: 1920	(1080 (H	DMI)@60Hz			Slot 3: no slot, only bracket for optional port extension Slot 4: no slot, only bracket for optional port extension			
	Some: AMD Radeon	™ 520 , D	rectX 12, 2GB 0	addr5, I	PCIé 3.0 x8, 30 w	atts,		M.2 card slots: two (one for WLAN, one for SSD/Optane)			
Manitan aabla	two DisplayPo	rt (up to 4	1096x2160@60H	lz)			Floor Stand	Optional system floor stand for vertical orientation			
Monitor cable	Optional DP to VGA of Display with intel inter	dongle, Di grated gra	onhics) or DP to	e, DP to	dual DP dongle (for Collage	EOU design	Toolless cover, disk, optical, extension card removal			
Chipset	Intel Q470 Chipset	gratou gre	(prii00), 01 D1 10	TIDIVII I	dorigio		Power supply	Some: 180 watts, autosensing, 85% PSU			
	2x USB 3.2 Gen 2, 2x	/ LISB 2 2	Gen 1 1v IISB	3 2 Tvno	-C Gan 1 (15\M)	harging)	1	Some: 260 watts, autosensing, 85% PSU Some: 310 watts, autosensing, 92% PSU			
TIOHE POLIS (SIG.,	12x 05b 3.2 Gen 2, 2) 1x microphone (3.5m							Some: 380 watts, autosensing, 92% PSU			
Front ports* (Opt.) <i>Optional</i> : 3-iin-1 med	lia reader	•	•	, ,	,		* Discrete graphics card / 10-core processors need > 180w power supply			
Rear ports* (Std.)	4x USB 3.2 Gen 1, 1)	k serial (9	-pin), 1x etherne	t (RJ-45), 2x DP**, 1x HD	MI**,	Limited warranty	Some: 1-year, depot service / service upgrades available			
	1x line-out (3.5mm)						1	Some: 1-year or 3-year, limited onsite service / service upgrades available			
Rear ports" (Opt.,	Optional: 2x USB 2.0	, 2x USB	3.2 Gen 1 via P(Cle x1, 2:	x USB 3.2 Type-C	Gen 2 via	Preload	Some: Windows® 10 Pro 64-bit			
	PCle x4, 1x 2nd seria 1x parallel (25-pin), 2	น (ฮ-หนา), x PS/2 nc	arts (keyhoard/m	via FUIE OUSE) ar	AT, Iditional R.I-45 ar			Some: Windows 10 Home 64-bit			
	ports available on opt				20.11011Q1 1 10 TO Q1	11400		Some: Windows 10 IoT Enterprise (only available via special bid model)			
	* Depending on many fa	ctors, actua	al data transfer spe	ed may b	e lower than theoret	tical speed	Environment	ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO (coming soon),			
	** Only available for the	models with	n integrated graphi	cs			TUV low noise verified (on some models), RoHS-compliant				
Audio support	High Definition (HD)	Audio, Re	altek ALC623-C	G / interr	nal speaker (2 wa	tt)		* Only available for MT 11CU/11CV			
	•						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			

















ThinkCentre M90s Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®,	or 10th Gen Int	el Core™	⁴ i3 / i5 / i7 / i9 Pro	ocessor	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band),
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610		Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band), Wi-Fi + Bluetooth 5.1 combo adapter, Intel vPro technology support, 2x2
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610	Bluetooth	Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630		Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Technology 14 (Intel AMT 14);
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i5-10400F	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	None	Coourity obio	adapter to enable vPro function through wireless connection)
	Core i5-10400	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-10500	6 / 12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Security features	Security slot (for Kensington® lock) Hard disk password
	Core i5-10600	6 / 12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630		 Padlock loop Optional Smart Cable Clip to Boot sequence control Boot without keyboard and mouse
	Core i7-10700F	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	None		physically lock keyboard and mouse Individual USB port disablement
	Core i7-10700	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630		Optional chassis intrusion switch Smart USB protection, allows keyboard
	Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None		Optional chassis E-Lock mouse only, blocks all storage devices
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630		Power-on password Self-Healing BIOS
	* Max freguency may ref Technology 3.0 / Intel Th					lax	Keyboard	Administrator password Some: Lenovo Calliope Keyboard (USB connector), black
Memory	128GB max, DDR4-3 * System automatical						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
Storage	Support up to 3x HDI RAID 0/1 support (RA	AID preset	t only available v	ia specia	al bid)	2x M2.SSD,	1	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Optical Onboard SATA	Some: Hard Drive / Some: M.2 SSD (224 Some: Intel Optane" Some: DVD-ROM, Some: DVD Burner (Four onboard SATA 6	42 / 2280) [∉] Memory 6ATA 1.5G (DVD±RW	/ PCIe NVMe, F M10, M.2 2280 b/s Drive, slim (9 /), SATA 1.5Gb/s	PCIe 3.0 , PCIe 3. 9.0mm)	x2 or PCIe 3.0 x ² 0 x2	1	Mechanical	SFF (8.2L), black color, metal case Dimensins with bezel & PCI holder & rubber foot: (WxDxH) 3.6" X 11.7" X 13.4"; 93mm X 298mm X 340mm Weight (approx.): 11.7 lb (5.3 kg), weight may vary by configuration Bay 1: Slim ODD bay
Media reader	Optional 3-in-1 media	reader (s	support SD, SDF	IC, and S	SDXC)			Bay 2: 3.5" HDD bay Bay 3: 2.5" HDD bay (optional bay, or bay comes with disk)
Graphics Monitor cable	Intel UHD Graphics two DisplayPort™, on supports up to 3 inde Max resolution: 4096: Some: AMD Radeon two DisplayPo Optional DP to VGA o Display with intel inte	e optional pendent c <2304 (DF ™ 520 , Di rt (up to 4 dongle, DF	video port (cho lisplays, more di P / Type-C)@60l rectX 12, 2GB 0 096x2160@60l P to DVI-D dong	ose one splays si Hz; 4096 GDDR5, Hz) e, DP to	from HDMI / DP / upport via discret x2160 (HDMI)@2 PCIe 3.0 x8, 30 w dual DP dongle (Type-C), e graphics 24Hz vatts,	Floor Stand EOU design	Slot 1: low-profile (length < 155mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 155mm, height < 68mm), PCle 3.0 x1 Slot 3: low-profile (length < 155mm, height < 68mm), PCle 3.0 x4 Slot 4: no slot, only bracket for optional port extension M.2 card slots: three (one for WLAN, two for SSD/Optane) Optional system floor stand for vertical orientation Toolless cover, disk, optical, extension card removal
Chipset	Intel Q470 Chipset	g. a.o a g. o	(p. 1.00), 0. 2. 10				Power supply	Some: 180 watts, autosensing, 85% PSU
) 2x USB 3.2 Gen 2, 2x 1x microphone (3.5m						_	Some: 260 watts, autosensing, 85% PSU Some: 310 watts, autosensing, 92% PSU Some: 380 watts, autosensing, 92% PSU
Front ports* (Opt.' Rear ports* (Std.)) Optional: 3-iin-1 med 4x USB 3.2 Gen 1, 1)	lia reader	·		• ,	,	Limited warranty	* Discrete graphics card / 10-core processors need > 180w power supply
	1x line-out (3.5mm)						,	, ,
Rear ports* (Opt.)	Optional: 1x optional Gen 1 with DP function Type-C Gen 2 via PC	on), 2x US	SB 2.0, 2x USB 3	3.2 Gen ⁻	1 via PCle x1, 2x	USB 3.2	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise (only available via special bid model)
	1x parallel (25-pin), 2 ports available on opt	x PS/2 po ional grap	rts (keyboard/m phics or ethernet	ouse), ac card	e lower than theore	nd video	Environment	ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO (coming soon), TUV low noise verified (on some models), RoHS-compliant * Only available for MT 11D1/11D2
Audio support	** Only available for the High Definition (HD)	models with	n integrated graphi	cs			Accessories	For compatible accessories, please go to http://smartfind.lenovo.com



















ThinkCentre M920 SFF Platform Specifications

D	Intal® Calcuma I	D	Oth / Oth O	late! C	TM :0 /:5 /:7 /:7	D		decreased at 100 min 200 DC/0 marks (leads a solder cont.) 4. The sold at 100 /
Processor	Intel® Celeron®, Intel		,	intel Co				1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), 1x Thunderbolt 3 (combo USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018),
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		additional RJ-45 and video ports available on optional graphics or ethernet card
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)
	Celeron G4930	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 G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2 Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630		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 (Ont)	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCle x4 Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Iviariageability	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		adapter to enable vPro function through wireless connection)
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	Security slot (in rear for optional Power-on password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) • Administrator password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9400F	6/6	2.9G / 4.1G	9 MB	DDR4-2666	None		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 i5-9500F	6/6	3.0G / 4.4G	9 MB	DDR4-2666	None	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		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
Memory	64GB max, DDR4-26 * System automatical	ly clocks	down for the pro	cessors	with lower memor			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 Solid State D * 128GB SSD M.2 (2: Some: Intel Optane	rive (SSD te Drive (242) PCI	o) / SATA 6.0Gb/s SSD) / PCIe NV e NVMe only sup	s, 2.5" Me, PCle ports PC	e 3.0 x 4*, 32Gb/s le 3.0 x 2, 16Gb/	'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
Optical	Some: DVD-ROM, S Some: DVD Burner	SATA 1.5G	ab/s Drive, slim (9.0mm)				Optional dust filter Bay 1: Slim external ODD bay DD (000) DD (000)
Onboard SATA	Four onboard SATA 6 available via special b			0/1 supp	oort (RAID preset	only		Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional bay)
Media reader	Optional 7-in-1 media	a reader]	Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1
Graphics	Intel UHD Graphics one VGA (up to 2048 supports 3 independe Some: NVIDIA Gefor	x1536@5 ent displa	i0Hz), two Displa ys, more display:	ıyPort™ (s suppor	(up to 4096x2304 t via discrete grap	@60Hz), phics		Slot 3: low-profile (length < 150mm, height < 68mm), PCIe 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)
	PCle 2.0 x16.	35 watts.	two DisplayPort	(up to 3	840x2160@60Hz	·)	Floor Stand	Optional system floor stand for vertical orientation
	Some: AMD Radeon				PCIe 3.0 x8, 30 w	<i>i</i> atts,	Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor cable	Optional DP to VGA	dongle, D		e, DP to		for Collage		Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)
Chipset	Display with intel inte Intel Q370 Chipset	grated gra	apnics), or DP to	HDMI 1	.4 dongle		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* (Std.) 2x USB 3.1 Gen2, 2x 1x microphone (3.5m	USB 3.1	Gen1, 1x USB 3	3.1 Type-	C Gen1 (15W cha	arging),	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit
Front ports* (Opt. Rear ports* (Std.)	.) <i>Optional:</i> 1x media re) 4x USB 3.1 Gen1, 1x	ader	•	•	, \	,	Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant
Rear ports* (Opt.	1x line-out (3.5mm)) Optional: 2x USB 2.0 PCle x4 (special bid	, 2x USB only), 1x 2	3.1 Gen1 via PC 2nd serial (9-pin)	le x1, 2x , 4x seria	uSB 3.1 Type-C al (9-pin) via PCle	Gen2 via x1,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com

























ThinkCentre M625 Tiny Platform Specifications

Processor	AMD A9 series	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo			
	ADII	0	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	SD) / PC	le NVMe interl	face face	VESA mount Floor Stand	2.9 lb (1.3 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation			
Optical Onboard SATA Media reader	None one SATA 6.0Gb/ None	/s conne	ctor on planar				Power supply	Some: 65 watts adapter, autosensing, 88% PSU (not included for TIO models) Some: 135 watts adapter, autosensing, 89% PSU			
Graphics	AMD Radeon™ (rectX [®] 12, two DisplayPort Alternate	Limited warranty ³	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available			
Monitor cable	Mode), supports Max resolution: 3	up to 2 i 8840x216 8840x216	ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	plays; 2048x12 e-C)@6	280 (VGA)@6 0Hz	0Hz;	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade Preloaded applications (only some listed) - Windows 10 only - Lenovo Vantage			
Chipset	AMD SoC platfo		O DVI D (Sirigic	, iii ik), Oi	DI TOTIDIVII	1.4 dongle		rights in Windows 10 Pro 64-bit LinkedIn			
Front ports*			is Always On ar	nd fast ch	narge), one mi	crophone (3.5mm),		 Microsoft Office preloaded; purchase a product key to activate 			
Rear ports*	one headphone / One USB 3.1 Ge two optional port Alternate Mode), * Depending on ma	en1, three s (Port 1 Port 2 fo	e USB 2.0, ethe for VGA / serial or serial)	rnet (RJ I / USB 2	-45), two Disp 2.0 Type-C (wit	layPort, th DisplayPort han theoretical speed		 Windows 7 only Lenovo Solution Center Lenovo System Update Factory Recovery User Guide Viewer 			
I/O box	None							 Microsoft Office preloaded; purchase a product key to activate 			
Audio support						speaker (1.5 watt)		Adobe® Reader®			
WLAN ¹³	Some: 11ac wire	Bluetooth eless, M.	4.2* combo ad 2 Card, Qualco	apter, 2x mm Athe	(2 eros QCA6174	,,	Environment	ENERGY STAR® 7.0*, EPEAT™ Gold rating (with 135W adapter) or EPEAT™ Silver rating (with 65W), ErP Lot 3, RoHS-compliant, WEEE, TCO			
Bluetooth™	Some: Bluetooth * Win 10 RS3 and	า 4.2* wii d Win10	earlier version	ed in Wi-l only sup	Fi + BT combo port Bluetooth	adapter 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	неапек	KILSIIIHN, V	vake on	LAN		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Manageability Security chip Security features	None Discrete TPM 2.0 Security slot (in Kensington® M Smart USB promouse only, blo Power-on pass	rear for icroSave otection, ocks all s	optional r® cable) allows keyboard	 Har Boo Boo Indi 		ord ontrol ooard and mouse ort disablement					























ThinkCentre M625 Tiny Thin Client Platform Specifications

Processor	AMD E2 series A	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo		
	ABIL		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		
	E2-9120e	2	1.5 / 2.2 GHz	1 MB	DDR4-1866	Radeon R3 Series		M625 Tiny Thin Client only: 7.05" W X 7.20" D X 1.36" H		
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autoi				pability of memory	VESA mount	179mm W X 182.9mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm		
Disk	Some: 32GB M. Some: 128GB M	2 Solid S	State Drive (SSI	D) / SATA	A interface	face	Floor Stand	Optional system floor stand for vertical orientation		
Optical	None	/I.2 30IIU	State Drive (St	3D) / FC	ie ivvivie iriter	iace	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)		
Onboard SATA Media reader	one SATA 6.0Gb/ None	/s conne	ctor on planar				Limited warranty ³	Some: 1-year, limited onsite service / service upgrades available		
Graphics	Mode), supports Max resolution: 3	ne option up to 2 i 3840x216	al port (VGA or ndependent dis 50 (DP)@60Hz:	USB 2.0 plays; 2048x1	Type-C with I 280 (VGA)@6	DisplayPort Alternate	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)		
Monitor cable	Optional DP to V	3840x216 GA, DP	60 (USB 2.0 Typ to DVI-D (single	e link), or	OHz` DP to HDMI	1.4 dongle	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO		
Chipset	AMD SoC platfo	orm					MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,		
Front ports*	Two USB 3.1 Ge one headphone	n1 (one	is Always On ar	nd fast c	harge), one m	crophone (3.5mm),		Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)		
Rear ports*	One USB 3.1 Ge two optional port Alternate Mode),	en1, three s (Port 1 Port 2 fo	e USB 2.0, ethe for VGA / seria or serial)	ernet (RJ I / USB 2	-45), two Disp 2.0 Type-C (wi	th DisplayPort	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
I/O box	None	iny factors	s, actual data trans	ster speed	d may be lower t	han theoretical speed				
Audio support	High Definition (H	HD) Audi	o, Realtek ALC	233-VB2	2-CG / internal	speaker (1.5 watt)				
WLAN¹³	Some: 11ac wire	Bluetooth eless, M. Bluetooth eless, M. Bluetooth eless, M. Bluetooth eless, M. Bluetooth	14.2* combo ad 2 Card, Qualco 14.2* combo ad 2 Card, Realtel 14.2* combo ad 2 Card, Qualco 14.2* combo ad 2 Card, Intel W 15.0 combo ada	lapter, 12 John Athina Athina K RTL88 Lapter, 22 John Athina Lapter, 22 John Athina John	k1 eros QCA9377 k1 22BE (dual ba k2 eros QCA6174 k2 AC 9260 (dual 2	7 (dual band), nd), 4A (dual band), band),				
	* Win 10 RS3 and	d Win10	earlier version	only sup	port Bluetooth	4.1				
Ethernet Modem	Gigabit ethernet, None	пеанек	nicollinin, v	vake on	LAIN					
Manageability Security chip Security features	Kensington® Mi • Smart USB promouse only, blo	n rear for icroSave otection, ocks all s	r optional er® cable) allows keyboard	HaiBooBoo		ord				
	Power-on pass	woru			assis intrusion					

















ThinkCentre M630e Tiny Platform Specifications

Processor	Intel® Pentium®, or 8th	n Generat	tion Intel Core™ i	i3 / i5 Pı	rocessor		Security chip	None						
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Security features		•	•	•			
	Pentium Gold 5405U	Threads 2 / 4	Base/Max(GHz) 2.3G	2 MB	(Up to) DDR4-2133	Graphics UHD 610				ar for optional Saver® cable)	Boot sequence con Boot without keyboo	equence control rithout keyboard and mouse		
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2100	UHD 620			sis intrusion s		Individual USB port disablement			
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620			-on password		 Smart USB protecti 	on, allows keyboard/		
				<u> </u>		0110 020	<u>]</u>	Admir	nistrator pass	word	mouse only, blocks	all storage devices		
Memory	16GB max, DDR4-26 * System automaticall	66*, one 2 ly clocks (260-pin SO-DIMI down for the prod	M socke cessors	ets, non-ECC with lower memo	ory controller	r Kevboard	-	Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black					
Storage	Some: Hard Drive / S						Mouse	Some: Lenovo Calliope Mouse (USB connector), black						
Onboard SATA	Some: Solid State Dr Some: M.2 SSD (228 Some: M.2 SSD (224 One onboard SATA 6.	30) /`PCle 12) / PCle	NVMe, PCIe 3.0 NVMe, PCIe 3.0	Ó x 4, 32			Mechanical	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)						
Graphics	Intel HD Graphics 61			main m	omory DiroctV®	12 000	-			Dime	ensions (WxDxH)	Weight (Approx.)		
Grapines	DisplayPort™, one HD					12, 0116		Tiny on	lv	7.0" X 7.2" X	1.4" (1.5" with rubber feet)	2.91 lb (1.32 kg),		
Monitor cable	Max resolution: 4096x Optional DP to VGA d	(2304 DF	P)@60Hz; 4096x	2304 (H			\/\(\(\(\) \)	1	,	179mm X 1	83mm X 34.5mm (37mm 'vith rubber feet)	vary by config		
Chipset	Intel SoC (System or	n Chip) p	latform				VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation						
Front ports* (Std.)	One USB 3.1 Gen1, o	ne USB	3.1 Type-C Gen	1, one n	nicrophone (3.5m	nm),								
D + (Ot-1)	one headphone / micr				Diambar Dan	a UDMI	Power supply	Some: 65 watts adapter, autosensing, 88% PSU						
Rear ports* (Std.)	Two USB 3.1 Gen1, to None	WO USB 2	.u, one etnernet	(HJ-45)	, one DisplayPor	t, one HDIVII	Limited warranty							
	* Depending on many fac	ctors, actua	al data transfer spe	ed may b	e lower than theore	etical speed		Some: 1-year, limited onsite service / service upgrades available						
Audio support	Realtek ALC233VB / i	internal s	peaker (1.5 watt))			Preload Preloaded operating system Some: Windows® 10 Pro 64-bit							
WLAN	Some: 11ac wireless,				(dual band),					D Pro 64-bit Home 64-bit				
			ombo adapter, 1		/ al a. l. la a . a al.\					ons (only sor	me listed)			
	Some: 11ac wireless Wi-Fi + Blueto		ombo adapter, 2		(duai band),				o Vantage					
	Some: 11ac wireless				ess-AC 3165,				soft Office produce	eloaded; It key to activa	ato.			
	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,								ase a produc din	i key io aciiva	ile			
			d, Intel Dual Bar ombo adapter, 2		ess-AC 8265,		Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, RoHS-compliant, WEEE, REACH				BoHS-compliant		
Bluetooth	Some: Bluetooth 4.2				combo adapter		Liviloriii							
Ethernet	Gigabit ethernet, Rea				•		MIL-SPEC test	MIL-STI	D-810G (Low	Pressure [Alti	itude], High Temperature, L	ow Temperature,		
Ethernet (Opt.)	None			1	Temperature Shòck, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)				ck, Fungus, Solar					
Manageability	None													
							Accessories	For com	patible acces	ssories, please	e go to http://smartfind.ler	novo.com		















ThinkCentre M70q Platform Specifications

Processor			0. 00.0	^м i3 / i5 / i7 / i9 Pr			Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter				
1 10000001	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Ethernet Ethernet (Opt.)	Gigabit ethernet, Intel Ethernet Connection I219-V(Jacksonville), Wake on LAN® None				
Celeron G5900T	2/2	3.2G	2 MB	DDR4-2666	UHD 610	Manageability	None Discrete TPM 2.0, TCG Certified • Security slot (in rear for optional • Boot sequence control				
Pentium Gold G6400T	2/4	3.4G	4 MB	DDR4-2666	UHD 610	Security chip					
Pentium Gold G6500T	2/4	3.5G	4 MB	DDR4-2666		Security features					
Core i3-10100T	4/8	3.0G / 3.8G	6 MB	DDR4-2666	UHD 630						
			+								
Core i5-10400T	6/12	2.0G / 3.6G	12 MB	DDR4-2666			 Administrator pass 	sword	mouse only, blocks all storage devices		
	+		_				 Hard disk passwor 	<u>rd</u>			
			-			Keyboard	Some: Lenovo Calli	ope Keyboard (US	B connector), black		
		-					Some: Lenovo Trad	itional Keyboard (L	JSB connector), black	raasiyar\ blaak	
Core i9-10900T	10 / 20	1.9G / 4.6G	20 MB	DDR4-2933	UHD 630	Mouse	Some: Lenovo Calli	ope Wireless Keyb	connector) black	receiver), black	
Technology 3.0 / Intel Th	ermal Velo	city Boost, and ad	opt the m	ax one of them		Modes	Some: Lenovo Fina	erprint Mouse (US	B connector). Windows	Hello support, black	
* System automatical	ly clocks	down for the pro				Mechanical	Tiny (1L), black colo	r; metal case			
Support up to 1x 2.5"	HDD + 1	x M.2 SSD					,	, ,	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
Some: M 2 SSD (22)	5AIA 6.UC 42 / 2280`	3D/S, 2.5°, 7200 1 / PCIe NVMe 1	rpm PCIe 3 0	x2 or PCIe 3.0 x	4		Tiny only			Weight (Approx.)	
Some: Intel Optane™ Some: DVD-ROM, s	^M Memorý lim (9.0mi	M10, M.2 2280 n), via USB exte	, PCIe 3. ernal OD	0 x2 D box			Tilly Offiy	179mm X 183m	nm X 34.5mm (37mm 🏻	2.76 lb (1.25 kg), vary by config	
One onboard SATA 6	.0Gb/s co	nnector								3.84 lb (1.74 kg), vary by config	
DisplayPort™, one HI independent displays Max resolution: 4096: 4096: Optional DP to VGA of	DMI, more ; x2304 (DF x2160 (HI	video ports ava P)@60Hz; 4096> DMI)@24Hz; 204	iilable vii (2304 (T 18x1536	a optional ports, p ype-C)@60Hz; (VGA)@50Hz	up to 3	VESA mount Floor Stand Dust filter EOU design	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation Optional dust filter Toolless chassis open (need optional toolless chassis screw), toolless HDD and memory assembly / removal				
Intel H470 Chipset						Power supply	Some: 90 watts AC/DC adapter, autosensing, 89% PSU (special bid o		cial bid only)		
)* one USB 3.2 Gen 2 (Always O	n and fast chard	e), one l	JSB 3.2 Type-C (Gen 1.		Some: 135 watts AC/DC adapter, autosensing, 89% PSU				
one headphone / mic * 1x USB 3.2 Gen 2, 3	rophone of	combo jack (3.5r	nm)	•		Limited warranty	Some: 1-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available				
* Two optional ports:						Preload	Preloaded operatin	g system			
Position VGA / 2n	d DP / 2n	d HDMI / USB	Port 2				Some: Windows® 1 Some: Windows 10	0 Pro 64-bit) Home 64-bit			
parts 3.2 Type-C	/ Seri	al ´		(Available at	end of July)	Environment	TCO 8.0 (coming so				
		<u>'</u>			elicai speed	MIL CDEC toot	·	an contification (L	Dragoura [Altituda] I	liah Tamparatura	
Some: 11ac wireless	., M.2 Car	d, Realtek RTL8	822CE	,		MIL-SPEC test	Low Temperature, Te	emperature Shock,			
Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: 11ax wireless	s, M.2 Car ooth 5.0 c s, M.2 Car ooth 5.0 c s. M.2 Car	d, Intel Wireless combo adapter, 1 d, Intel Wireless combo adapter, 2 d, Intel Wi-Fi 6	-AC 946 x1 (spe -AC 956 x2 X201 (d	cial bid only) (60 (dual band),		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				
	Pentium Gold G6500T Core i3-10100T Core i3-10100T Core i3-10300T Core i5-10400T Core i5-10500T Core i5-10500T Core i5-10500T Core i5-10500T Core i9-10900T * Max freguency may ret Technology 3.0 / Intel The G4GB max, DDR4-32 * System automatical Support up to 1x 2.5" Some: Hard Drive / Some: Hard Drive / Some: M.2 SSD (22:Some: Intel Optane* Some: DVD-ROM, Some: DVD-ROM, Some: DVD Burner (One onboard SATA 6 Intel HD Graphics 6 DisplayPort™, one HI independent displays Max resolution: 4096: 4	Pentium Gold G6500T 2 / 4 Core i3-10100T 4 / 8 Core i3-10300T 4 / 8 Core i5-10400T 6 / 12 Core i5-10500T 6 / 12 Core i5-10500T 6 / 12 Core i5-10600T 6 / 12 Core i5-10600T 10 / 20 * Max freguency may refer to Intel Technology 3.0 / Intel Thermal Velo 64GB max, DDR4-3200*, two 2 * System automatically clocks of Support up to 1x 2.5" HDD + 1 Some: Hard Drive / SATA 6.0G Some: M.2 SSD (2242 / 2280) Some: Intel Optane™ Memory Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: DVD-ROM, slim (9.0mr Some: NOM-ROM, slim (9.0mr Some: A096x2304 (DF 4096x2160 (HI Optional DP to VGA dongle, DF HDMI 1.4 dongle Intel H470 Chipset)* one USB 3.2 Gen 2 (Always Or one headphone / microphone of 1x USB 3.2 Gen 2, 3x USB 3.2)* Two optional ports: Position Port 1 Optional parts VGA / 2nd DP / 2n 3.2 Type-C Gen 1 w / Seria * Depending on many factors, actu Realtek ALC233VB / optional in Some: 11ac wireless, M.2 Car Wi-Fi + Bluetooth 5.0 c Some: 11ac wireless, M.2 Car Wi-Fi + Bluetooth 5.0 c Some: 11ac wireless, M.2 Car Wi-Fi + Bluetooth 5.0 c Some: 11ax wireless, M.2 Car Wi-Fi + Bluetooth 5.0 c Some: 11ax wireless, M.2 Car	Pentium Gold G6500T 2 / 4 3.5G Core i3-10100T 4 / 8 3.0G / 3.8G Core i3-10300T 4 / 8 3.0G / 3.9G Core i3-10300T 6 / 12 2.0G / 3.6G Core i5-10400T 6 / 12 2.3G / 3.8G Core i5-10500T 6 / 12 2.3G / 3.8G Core i5-10500T 6 / 12 2.4G / 4.0G Core i5-10600T 6 / 12 2.4G / 4.0G Core i7-10700T 8 / 16 2.0G / 4.5G Core i9-10900T 10 / 20 1.9G / 4.6G * Max freguency may refer to Intel Turbo Boost Technot Technology 3.0 / Intel Thermal Velocity Boost, and add 64GB max, DDR4-3200*, two 260-pin SO-DIMI * System automatically clocks down for the pro Support up to 1x 2.5" HDD + 1x M.2 SSD Some: Hard Drive / SATA 6.0Gb/s, 2.5", 7200 Some: M.2 SSD (2242 / 2280) / PCIe NVMe, F Some: Intel Optane™ Memory M10, M.2 2280 Some: DVD-ROM, slim (9.0mm), via USB excessore: DVD Burner (DVD±RW), slim (9.0mm), One onboard SATA 6.0Gb/s connector Intel HD Graphics 610/630 in processor, uses DisplayPort™, one HDMI, more video ports avaindependent displays; Max resolution: 4096x2304 (DP) @ 60Hz; 4096x 4096x2160 (HDMI) @ 24Hz; 204 Optional DP to VGA dongle, DP to DVI-D dongled HDMI 1.4 dongle Intel H470 Chipset * one USB 3.2 Gen 2 (Always On and fast chargone headphone / microphone combo jack (3.5r) * 1x USB 3.2 Gen 2, 3x USB 3.2 Gen 1, 1x ether one headphone / microphone combo jack (3.5r) * 1x USB 3.2 Gen 2, 3x USB 3.2 Gen 1, 1x ether optional parts * Depending on many factors, actual data transfer sp Realtek ALC233VB / optional internal speaker Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some: 11ac wireless, M.2 Card, Intel Wireless Wi-Fi + Bluetooth 5.0 combo adapter, 2 Some	Pentium Gold G6500T	Pentium Gold G6500T 2 / 4 3.5G 4 MB DDR4-2666 Core i3-10100T 4 / 8 3.0G / 3.8G 6 MB DDR4-2666 Core i3-10300T 4 / 8 3.0G / 3.8G 12 MB DDR4-2666 Core i5-10400T 6 / 12 2.0G / 3.6G 12 MB DDR4-2666 Core i5-10500T 6 / 12 2.3G / 3.8G 12 MB DDR4-2666 Core i5-10600T 6 / 12 2.4G / 4.0G 12 MB DDR4-2666 Core i5-10600T 6 / 12 2.4G / 4.0G 12 MB DDR4-2666 Core i7-10700T 8 / 16 2.0G / 4.5G 16 MB DDR4-2666 Core i7-10700T 8 / 16 2.0G / 4.5G 16 MB DDR4-2933 * Max freguency may refer to Intel Turbo Boost Technology 2.0 / Intel Turbo Boost Technology 3.0 / Intel Thermal Velocity Boost, and adopt the max one of them 64 GB max, DDR4-3200°, two 260-pin SO-DIMM sockets, dual-channel of them and the processors with lower memory Support up to 1 x 2.5° HDD + 1x M.2 SSD Some: Hard Drive / SATA 6.0Gb/s, 2.5°, 7200 rpm Some: M.2 SSD (2242 / 2280) / PCIe NVMe, PCIe 3.0 x2 or PCIe 3.0 x2 some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-BOM, slim (9.0mm), via USB external ODD box Some: DVD-BOM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB extern	Pentium Gold G6500T	Pentitum Gold G6500T	Penilum Gold G6500T	Pentium Gold G6500T 2 / 4 3.5.5 AMB DDR4-2866 UHD 630	Pentium Gold G6900T 2/4 3 3.5G 4MB DDR4-2968 UHD 530	













ThinkCentre M715 Tiny (2nd Gen) Platform Specifications

Processor	AMD Athlon, A6, A1	0, A12,	or Ryzen pro	cessor			Security features	es • Security slot (in rear for optional • Administrator password				
	Processor	Cores / Threads	Frequency Base/Max	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		Kensington® Micro Padlock loop Smart USB protec	ord ontrol board and mouse			
	Athlon 200GE	2/4	3.2 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		mouse only, blocks	Individual USB p			
	Athlon PRO 200GE	2/4	3.2 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		Power-on passwor		Chassis intrusion	SWITCH	
	PRO A6-8570E	2/2	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5	Keyboard		ope Keyboard (USB o itional Keyboard (USE			
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7		Some: Lenovo Irau	ope Wireless Keyboai	rd (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 Calli	ope Mouse (USB con	nector), black		
	PRO A10-9700E	4/4	3.0 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7		Some: Lenovo Fina	erprint Mouse (USB o	connector). Windows	Hello support, black	
	PRO A12-9800E	4/4	3.1 / 3.8 GHz	2 MB / -	DDR4-2400	Radeon R7		Some: Lenovo Calli	ope Wireless Mouse ((2.4GHz via USB red	eiver), black	
	Ryzen 3 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8	Mechanical	Tiny (1L), black colo				
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz		DDR4-2933	Radeon Vega 8			pen (need optional to	olless chassis screw))	
	Ryzen 5 2400GE	4/8	3.2 / 3.8 GHz		DDR4-2933	Radeon RX Vega 11		Optional dust filter				
	Ryzen 5 PRO 2400GE	4/8	3.2 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon RX Vega 11			Dimensions	s (WxDxH)	Weight (Approx.)	
Memory	32GB max, DDR4 2 * System automatics	ally clock	ks down for th	ne lower me	emory contro	oller		Tiny only	179mm X 183mm	7.0" X 7.2" X 1.4" (1.5" with rubber feet) 179mm X 183mm X 34.5mm (37mm with rubber feet)		
Disk	Some: Hard Drive / Some: Solid State Some: M.2 SSD / F	Orive (S	SD) / SATA 6	.0Gb/s, 2.5'	'			With VESA mount & ODD box			3.66 lb (1.66 kg), vary by config	
Optical	* 128GB SSD M.2 (X Some: DVD-ROM.	2242) P 9.0mm h	Cle NVMe on nigh, via USB	lly supports external O	PCIe 3.0 x DD box	2, 16Gb/s	VESA mount Floor Stand	Optional VESA mou	00mm			
Onboard SATA	Some: DVD±RW, 9 One SATA cable (1-	drop to	gn, via USB (device), one S	external OL SATA 6.0Gb	סס טוע s connectol/s	or on planar	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)				
Graphics	AMD Radeon™ Gra						Limited warranty	, , , ,				
Monitor cable	DisplayPort™, one of displays (supports in port or DP to DVI/HI Max resolution: 4090 Optional DP to VGA	naximun DMI don 6x2160 0x1200	n of 2 concurr gles, and Ath (DP)@60Hz; (VGA)@60Hz	rent HDMI/I Ilon / Athlor 4096x2160 z	OVI displays PRO only (HDMI)@3	when using HDMI support 2 displays); 0Hz;	Preload	Preloaded operating system Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64-bit Windows 10 only Lenovo Vantage Microsoft Office preloaded; purchase a product key to activate Cyberlink PowerDVD (only for mod				
Chipset	AMD B300 Chipset		2. 10 2 1 1 2	<u> </u>	2. 10 1.2		-					
	.) Two USB 3.1 Gen1	(one is A	Always On an	nd fast char	ge), one mic	crophone (stereo,		with DVD / DVD±RW) • Cyberlink Power2GO (only for mowith DVD±RW) • LinkedIn • Windows 7 only				
Rear ports* (Std.	3.5mm), one headpl) One USB 3.1 Gen1 one headphoneone											
Rear ports* (Opt.) One optional port (V * Depending on many ** Not support VGA, 3r	actors, a	ctual data trans MI for the mode	sfer speed ma els with Athlo	ay be lower th n / Athlon PR	an theoretical speed			enter tem Update Media			
Audio support	High Definition (HD)	Audio,	Realtek ALC2	233-VB2 / ir	nternal spea	ıker (1.5 watt)			•	Microsoft Office process		
WLAN	Some: 11ac wireles Wi-Fi + Blue	tooth 4.	2* combo ada	apter, 1x1	`	•				 purchase a produc Adobe® Reader® 		
	Some: 11ac wireles Wi-Fi + Blue	ss, M.2 (tooth 4.	Card, Qualco 2* combo ada	mm Atheros apter, 1x1		, ,,	Environment	ENERGY STAR® 7.0 ErP Lot 3; ; RoHS-co)*, EPEAT™ Silver rati ompliant	ing* (*Not for non-OS	S models);	
		tooth 4.	2* combo ada	apter, 2x2	`	,.	MIL-SPEC test	MIL-STD-810G milita Low Temperature, Te	ary certification (Low emperature Shock, Hu	Pressure [Altitude], Fundation in Indicate	ligh Temperature, st, Vibration, Shock)	
Bluetooth Ethernet	Some: 11ac wireles Wi-Fi + Blue Some: Bluetooth 4. * Hardware supports Gigabit ethernet, Re	tooth 4. 2* wirele s BT 4.2	2* combo ada ess, integrate , but Win10 F	apter, 2x2 d in Wi-Fi + RS3 and ea	BT combo	adapter	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, T											
	•											













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

Processor	AMD Athlon, A6, A10), or Ryz	en processor				Keyboard					
	APU Athlon PRO 200GE	Cores / Frequency Threads Base/Max 2 / 4 3.2 GHz		L2 / L3 Cache	Memory Sup- port (Up to) DDR4-2666	Integrated Graphics Radeon Vega 3	Mouse	Some: Lenovo Call Some: Lenovo Call	litional Keyboard (USB connector), black iope Wireless Keyboard (2.4GHz via USB iope Mouse (USB connector), black perprint Mouse (USB connector), Windows	•		
	PRO A6-8570E	2/2	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5		Some: Lenovo Call	ceiver), black			
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7	Mechanical	Tiny (1L), black colo				
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		Toolless chassis oOptional dust filter	pen (need optional toolless chassis screw	′)		
Memory	8GB max, DDR4 266 * System automatica								Dimensions (WxDxH) W			
Disk Optical	Some: 32GB M.2 So Some: 128GB M.2 S None	olid State Solid Stat	e Drive (SSD) te Drive (SSD	/ SATA inte D) / PCIe N\	erface VMe, PCIe 3	.0 x 2		Tiny only	7.0" X 7.2" X 1.4" (1.5" with rubber feet) 179mm X 183mm X 34.5mm (37mm with rubber feet)	2.91 lb (1.32 kg), vary by config		
Onboard SATA Graphics	One SATA cable (1-d		,.			:	VESA mount Floor Stand		nt bracket kit, supports VESA 75mm and restand for vertical orientation	100mm		
апартноо	DisplayPort™, one or	tional po	ort (HDMI, VC	A, or 3rd D	P), supports	3 independent	Power supply		apter, autosensing, 88% PSU (not included	d for TIO models)		
	displays (supports m port or DP to DVI/HD						Limited warranty	1-year or 3-year, lim	ited onsite service / service upgrades ava	ilable		
	Max resolution: 4096	x2160 (Ľ	DP)@60Hz; 4				Preload	Preloaded operating				
Monitor cable	Optional DP to VGA		/GA)@60Hz DP to DVI-D o	dongle, or D	P to HDMI 1	.4 dongle		Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise				
Chipset	AMD B300 Chipset								Lenovo Terminal Operating System, Linux	,		
Front ports* (Std.)	Two USB 3.1 Gen1 (3.5mm), one headph	one is Al	ways On and	I fast charge nbo iack (st	e), one micro	ophone (stereo,	Environment	ENERGY STAR® 7.0 ErP Lot 3; RoHS-co	0*, EPEAT™ Silver rating* (*not for non-OS mpliant	6 models);		
. , ,	One USB 3.1 Gen1 a one headphoneone	and three	e USB 2.0, et	hernet (RJ-	45), two Disp	olayPort,	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* (Opt.)	One optional port (V0 * Depending on many fa ** Not support VGA, 3rd	actors, act	ual data transfe	er speed may	be lower than	theoretical speed	Accessories	· · · · · · · · · · · · · · · · · · ·	essories, please go to http://smartfind.ler			
Audio support	High Definition (HD)	Audio, R	ealtek ALC23	33-VB2 / int	ernal speak	er (1.5 watt)						
WLAN Bluetooth Ethernet	Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: Bluetooth 4.2 * Hardware supports Gigabit ethernet, Rea	tooth 4.2 s, M.2 Ca tooth 4.2 s, M.2 Ca tooth 4.2 s, M.2 Ca tooth 4.2 2* wireles BT 4.2,	* combo ada ard, Qualcom * combo ada ard, Realtek I * combo ada ard, Qualcom * combo ada ss, integrated but Win10 RS	pter, 1x1 Im Atheros pter, 1x1 RTL8822BE pter, 2x2 Im Atheros pter, 2x2 I in Wi-Fi + I S3 and earl	QCA9377 (c E (dual band) QCA6174A BT combo ac ier only supp	dual band),), (dual band), dapter						
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, TO	CG Certif	fied									
Securitý features	Security slot (in rea Kensington® Micros Padlock loop Smart USB protect mouse only, blocks Power-on passwort	Saver® ca tion, allov all stora d	able) ws keyboard/ ge devices	Hard disBoot seeBoot witIndividueChassis		rol rd and mouse disablement						













ThinkCentre M720 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel F	Pentium®	or 8th / 9th Gen	Intel Co	re™ i3 / i5 / i7 /	i9 Processor	Manageability	None					
1 10003301		Cores /	Frequency		Memory Support		Security chip	Discrete TPM 2.0, TO	G Certified				
	Processor	Threads	Base/Max(GHz)	Cache	(Up to)	Graphics	Security features	• Security slot (in rea	r for optional	Boot sequence cont	rol		
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610		Kensington® Micro	rd and mouse				
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		Chassis intrusion s	disablement on, allows keyboard/				
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		Power-on passwordAdministrator password	all storage devices				
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Hard disk password					
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Keyboard	Some: Lenovo Callic	ppe Keyboard (U	SB connector), black			
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Tradit	ional Kevboard (USB connector), black			
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Mauaa	Some: Lenovo Callio	pe Wireless Key	board (2.4GHz via USB	receiver), black		
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callid	pe Mouse (USB	connector), black SB connector), Windows	Hollo support black		
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Callic	ope Wireless Mou	use (2.4GHz via USB red	ceiver). black		
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630			·	200 (2.1.0.1.2 1.0.002 1.0.0	,,		
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630	INECHANICAL	Tiny (1L), black color Toolless chassis on	, metal case en (need option:	al toolless chassis screw)		
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630		Toolless HDD, SSD	, memory remov	al	,		
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		 Optional dust filter 					
	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-profile), i D/SSD and PCIe card ar	two M.2 slots (one		
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		IOI VVLAIN, OHE IOI IVI.	2 33D), 2.5 ND	D/33D and Pole card at	e mulually exclusive		
	Core i9-9900T	8 / 16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630				sions (WxDxH)	Weight (Approx.)		
Memory	32GB max, DDR4-26 dual-channel capable * System automaticall	•	·			ory controller		Tiny only	179mm X 183r	I" (1.5" with rubber feet) mm X 34.5mm (37mm rubber feet)	2.91 lb (1.32 kg), vary by config		
Storage	Some: Hard Drive / S Some: Solid State Dr	rive (SSD) / SATA 6.0Gb/s	, 2.5"	200 rpm	•		With VESA mount & ODD box		(7.30" X 2.48" 185.38mm X 63mm	3.66 lb (1.66 kg), vary by config		
	Some: M.2 SSD / PC * 128GB SSD M.2 (22 Some: Intel Optane™	242) PCIe	NVMe only sup	ports PC			VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation					
Optical	Some: DVD-ROM, sli	im (9.0mr	n). via USB exte	rnal ODI	D box	01), 101.2	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU Some: 90 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU					
Onboard SATA	Some: DVD Burner (One onboard SATA 6.	DVϱRW), slim (9.0mm),			оох] ower supply						
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	OMI, one o	optional video po	ort (2nd F	HDMI, VGA, 2nd	I DP,	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					
	or USB 3.1 Type-C Ge Max resolution: 4096x 4096x	(2304 (DF		2304 (Ty	/pe-C)@60Hz;		Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Preloaded applications (only some listed)					
Monitor cable	Optional DP to VGA d Display with intel integ	longle,`DF	P to DVI-D dongl	e, DP to	dual DP dongle								
Chipset	Intel B360 Chipset]		 Lenovo Vantage Microsoft Office preloaded; 				
Rear ports* (Std.)	one USB 3.1 Gen1 (A one microphone (3.5n 2x USB 3.1 Gen2, 2x Two optional ports (m	nm), one USB 3.1 utually ex	headphone / mid Gen1, 1x ethern clusive with PCI	crophone et (RJ-4 e card):	e combo jack (3. 5), 1x DisplayPo Port 1 for VGA	5mm) ort, 1x HDMI / 2nd DP /		 purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) LinkedIn 					
	2nd HDMI / serial / US Optional ports via PC PCle x1	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	9-pin) via	Environment	ENERGY STAR® 7.0 rating (with 65W/90W some models), RoHS	/ adapter), ErP L	rating (with 135W adapte ot 3, TCO, TUV ultra low	r) or EPEAT™ Silvei noise verified (on		
	* Depending on many fac					etical speed	MIL-SPEC test	MIL-STD-810G milita	ry certification (L	ow Pressure [Altitude], I	High Temperature,		
Audio support	Realtek ALC233VB2		·	`			_			k, Humidity, Sand and Du	st, Vibration, Shock		
WLAN	Some: 11ac wireless Wi-Fi + Blueto Some: 11ac wireless Wi-Fi + Blueto Some: 11ac wireless	ooth 4.2 c , M.2 Car ooth 4.2 c , M.2 Car ooth 4.2 c , M.2 Car	ombo adapter, 1 d, Realtek RTL8 ombo adapter, 2 d, Intel Dual Bar ombo adapter, 1 d, Intel Dual Bar	x1 822BE (x2 nd Wirele x1 nd Wirele	dual band), ess-AC 3165,		Accessories	Fungus, Solar Radiat For compatible acces		o to http://smartfind.len	ovo.com		
Bluetooth Ethernet Ethernet (Opt.)	WI-FI + Blueto Some: Bluetooth 4.2 Gigabit ethernet, Intel Some: Intel Ethernet	wireless, Ethernet Server Ac	Connection I21 dapter I350-T4, g	-Fi + BT 9-V (Jacl	ksonville), Wake	on LAN® 5, PCle x4					Longvo May 202		













ThinkCentre M75q-1 Tiny Platform Specifications

Processor	AMD Athlon, Athlon	PRO, P	yzen 3 / 5, c	r Ryzen 3 /	5 PRO serie	es processor	Manageability	DASH 1.0/1.1				
	Processor	Cores / Threads	Frequency Base/Max	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics	Security chip Security features	Discrete TPM 2.0, TCG Certified Security slot (in rear for optional Mirra County and Shipper Co				
	Athlon PRO 200GE	2/4	3.2 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		 Kensington® MicroSaver® cable) Smart USB protection, allows keyboard/ Boot sequence control Boot without keyboard and 				
	Athlon PRO 300GE	2/4	3.4 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3			s all storage devices • Individual USB			
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		 Power-on password Chassis intrusion switch 				
	Ryzen 5 PRO 2400GE	4/8	3.2 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11		 Administrator pass 				
	Ryzen 3 PRO 3200GE	4/4	3.3 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8	Keyboard	Some: Lenovo Trad	itional Keyboard (USB connector), black			
	Ryzen 5 PRO 3350GE	4/8	3.3 / 3.9 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11	Mouse		iope Wireless Keyboard (2.4GHz via USB iope Mouse (USB connector), black	receiver), black		
	Ryzen 5 PRO 3400GE	4/8	3.3 / 4.0 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11	Iviouse	Some: Lenovo Calil	perprint Mouse (USB connector), black	Hello support black		
	Athlon 300GE	2/4	3.4 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		(only availab	ble via special bid models)	riolo support, blasi		
	Ryzen 3 3200GE	4/4	3.3 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		Some: Lenovo Calli	iope Wireless Mouse (2.4GHz via USB re	ceiver), black		
	Ryzen 5 3350GE	4/8	3.3 / 3.9 GHz	2 MB / 4MB	DDR4-2933	Radeon RX Vega 11	Mechanical	Tiny (1L), black colo	r; metal case			
	Ryzen 5 3400GE	4/8	3.3 / 4.0 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11		 Toolless chassis o 	pen (need optional toolless chassis screw	<i>'</i>)		
Memory	32GB max, DDR4-2 * System board suppor							Toolless HDD, SSIOptional dust filter	Toolless HDD, SSD, memory removal			
	DDR4-1866, DDR4-213								Dimensions (WxDxH)	Weight (Approx.)		
Disk	Some: Hard Drive / Some: M.2 SSD (22	SATA 6 242 / 22	.0Gb/s, 2.5", 80) / PCIe N	5400 rpm c	or 7200 rpm 3.0 x2 or PC		-	Tiny only	7.0" X 7.2" X 1.4" (1.5" with rubber feet) 179mm X 183mm X 34.5mm (37mm vary by			
Optical	Some: DVD-ROM,						I		with rubber feet)			
Onboard SATA	Some: DVD±RW, 9 One SATA 6.0Gb/s o	connect	or on system	board				With VESA mount & ODD box				
Graphics	AMD Radeon™ Gra DisplayPort™, one H 3 independent displa	IDMI, or	ne optional po	ort (VGA, 2r	nd DP, or 2nd	d HDMI), supports	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
	when using HDMI po support 2 displays);	ort or D	P to DVI/HDN	/II dongles,	and Athlon /	Athlon PRO only	Power supply	Some: 65 watts adapter, autosensing, 88% PSU (not included for TIO models) Some: 135 watts adapter, autosensing, 88% PSU (not included for TIO models)				
	Max resolution: 4096				(HDMI)@30	OHz;	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available				
Monitor cable	Optional DP to VGA HDMI 1.4 dongle	dongle,	(VGA)@60H DP to DVI-D	z) dongle, DF	to dual DP	dongle, or DP to	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit				
Chipset	AMD B300 Chipset						-	Some: Windows 10 Home 64-bit				
	one USB 3.1 Gen1 (On and fact	oborgo) on	LICD 2 1 To	ma C Can 1	-	Some: Windows 10	dows 10 IoT Enterprise			
Rear ports* (Std.)	one microphone (3.5 1x USB 3.1 Gen1, 3 Two optional ports: F	5mm), o x USB 2 Port 1 fo	ne headphor 2.0, 1x etherr or VGA / 2nd I	ne / microph net (RJ-45), DP / 2nd HD	one combo 1x DisplayP 0MI / serial;	jack (3.5mm) ort, 1x HDMI Port 2 for serial;	Environment	ENERGY STAR® 7.1 rating* (with 65W ad	ENERGY STAR® 7.1*, EPEAT™ Gold rating* (with 135W adapter) or EPEAT Silve rating* (with 65W adapter); ErP Lot 3; RoHS-compliant; TUV low noise verified *Not applicable for non-OS models			
A	* Depending on many f			· ·		· · · · · · · · · · · · · · · · · · ·	MIL-SPEC test	MIL-STD-810H milita	ary certification (Low Pressure [Altitude],	High Temperature,		
Audio support	High Definition (HD)				· · · · · · · · · · · · · · · · · · ·	, ,	_	Low Temperature, Te	emperature Shock, Humidity, Sand and Di	ust, Vibration, Shock,		
WLAN	Some: 11ac wireles	tooth 5. s, M.2 (tooth 4.	0 combo ada Card, Qualco 2 combo ada	opter, 2x2 mm Atheros opter, 2x2	QCA6174	A (dual band),	Accessories	Fungus, Solar Radiation) For compatible accessories, please go to http://smartfind.lenovo.com				
Bluetooth Ethernet		tooth 5. 2 / 5.0 v altek R	0 combo ada vireless, integ TL8111EPV-0	opter, 2x2 grated in Wi CG, Wake o	· -Fi + BT con	,.				Lenovo July 202		















ThinkCentre M80q Platform Specifications

Processor	Intel® Celeron®, Intel			el Core [⊤]			Manageability Intel Active Management Technology 14 (Intel AMT 14); Intel vPro technology on some models (require choosing a vPro-support					
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Coording to the local	adapter to enable vP	ro function through	(require choosing a vPi h wireless connection)	ro-support Wi-Fi	
	Celeron G5900T	2/2	3.2G	2 MB	DDR4-2666	UHD 610	Security chip	Discrete TPM 2.0, TO		5		
	Pentium Gold G6400T	2/4	3.4G	4 MB	DDR4-2666	UHD 610	Security leatures	 Security slot (in real Kensington® Micro 	ar for optional	Boot sequence cont Boot without keyboo	oot sequence control oot without keyboard and mouse Idividual USB port disablement	
	Pentium Gold G6500T	2/4	3.5G	4 MB	DDR4-2666	UHD 630		Chassis intrusion s				
	Core i3-10100T	4/8	3.0G / 3.8G	6 MB	DDR4-2666	UHD 630		 Power-on passwor 	d	 Smart USB protection 	on, allows keyboard/	
	Core i3-10300T	4/8	3.0G / 3.9G	8 MB	DDR4-2666	UHD 630	1	 Administrator pass 		mouse only, blocks a	all storage devices	
	Core i5-10400T	6 / 12	2.0G / 3.6G	12 MB	DDR4-2666	UHD 630		Hard disk passwor				
	Core i5-10500T	6 / 12	2.3G / 3.8G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calli	ope Keyboard (US	B connector), black		
	Core i5-10600T	6 / 12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Iradi	nna Wireless Kavh	JSB connector), black board (2.4GHz via USB	receiver) black	
	Core i7-10700T	8 / 16	2.0G / 4.5G	16 MB	DDR4-2933	UHD 630	Mouse	Some: Lenovo Calli	ope Mouse (USB o	connector), black	receiver), black	
	Core i9-10900T	10 / 20	1.9G / 4.6G	20 MB	DDR4-2933	UHD 630]	Some: Lenovo Finge	erprint Mouse (US	B connector), Windows	Hello support, black	
	* Max freguency may ref Technology 3.0 / Intel Th					Max	- Mechanical	Some: Lenovo Calli	ope Wireless Mous	se (2.4GHz via USB red		
Memory	64GB max, DDR4-3200*, two 260-pin SO-DIMM sockets, dual-channel capable * System automatically clocks down for the processors with lower memory control							Tiny (1L), black color; metal case one 2.5" bay for HDD, two M.2 slots (one for WLAN, one for M.2 SSD)				
Storage	Some: Hard Drive / S	SATA 6.00	3b/s. 2.5". 7200	rpm		-	1		Dimensi	ons (WxDxH)	Weight (Approx.)	
Optical	Some: M.2 SSD (224 Some: Intel Optane ^{TI}	Some: M.2 SSD (2242 / 2280) / PCIe NVMe, PCIe 3.0 x2 or PCIe 3.0 x4 Some: Intel Optane™ Memory M10, M.2 2280, PCIe 3.0 x2 Some: DVD-ROM, slim (9.0mm), via USB external ODD box		4		Tiny only	179mm X 183m	' (1.5" with rubber feet) nm X 34.5mm (37mm ubber feet)	2.76 lb (1.25 kg), vary by config			
- p	Some: DVD Burner (DVϱRW	'), slim (9.0mm),	via USE	B external ODD b	ox		With VESA mount &	8.04" X	7.35" X 2.52"	3.84 lb (1.74 kg),	
Onboard SATA	One onboard SATA 6	.0Gb/s co	nnector					ODD box		186.6mm X 64mm	vary by config	
Graphics Monitor cable	Intel HD Graphics 610/630 in processor, uses main memory, DirectX° 12, one DisplayPort™, one HDMI, more video ports available via optional ports, up to 3 independent displays; Max resolution: 4096x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@50Hz Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle, or DP to				up to 3	VESA mount Floor Stand Dust filter EOU design	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation Optional dust filter Toolless chassis open (need optional toolless chassis screw), toolless HDI and memory assembly / removal					
	HDMI 1.4 dongle						Power supply	Some: 65 watts AC/DC adapter, autosensing, 89% PSU		-i-l -i-l -\		
Chipset	Intel Q470 Chipset							Some: 90 watts AC/DC adapter, autosensing, 89% PSU (special bid only) Some: 135 watts AC/DC adapter, autosensing, 89% PSU				
. , ,	one USB 3.2 Gen 2 (one headphone / mic 2x USB 3.2 Gen 2, 2x	rophone d	combo jack (3.5n	nm)	• •		Limited warranty	, , , , , , , , , , , , , , , , , , ,				
	* Two optional ports:	(000 0.2	den i, ix emei	1101 (110	40), IX DI , IX II	DIVII	Preload	Preloaded operatin	a system		<u> </u>	
	Position	Port 1		Port 2]	Some: Windows® 1 Some: Windows 10	0 Pro 64-bit			
	Optional parts VGA / 2n	GDP / 2n Gen 1 w / Seria	d HDMI / USB ith DP function) al	Seria	Dual USB al poi (Available at	rts	Environment	TCO 8.0 (coming so		Silver rating (on some ne / ultra low noise verifie		
	* Depending on many fa	actors, actu	al data transfer sp	eed may	be lower than theor	etical speed		RoHS-compliant				
Audio support	Realtek ALC233VB /	optional ii	nternal speaker	(1.5 wat	t)		MIL-SPEC test	MIL-STD-810H milita	ary certification (Lo	ow Pressure [Altitude], H	High Temperature,	
WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band),					Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)						
	Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band), Wi-Fi + Bluetooth 5.1 combo adapter, Intel vPro technology support, 2x2 Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		iovo.com						
Bluetooth												
Ethernet (Opt.)	Gigabit ethernet, Inte None											
Note: The specific	ations above may not be	available	in all regions.								Lenovo, May 202	



















ThinkCentre M90q Platform Specifications

Processor	Intel® Celeron®, Intel F	Pentium®	or 10th Gen Inte	el Core⊺	M i3 / i5 / i7 / i9 Pr	rocessor	WLAN	Some: 11ac wireles	s, M.2 Card, Realtek RTL8822CE (dual b	and)		
1 10000001		Cores /	Frequency		Memory Support	Integrated			tooth 5.0 combo adapter, 2x2	aria),		
	Processor		Base/Max*(GHz)	Cache	(Up to)	Graphics			11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),	ıl band),		
	Celeron G5900T	2/2	3.2G	2 MB	DDR4-2666	UHD 610			Vi-Fi + Bluetooth 5.0 combo adapter, 2x2 1ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band),			
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610			tooth 5.1 combo adapter, Intel vPro techn			
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610	Bluetooth	Some: Bluetooth 5.0	0/5.1 wireless, integrated in Wi-Fi + BT co	mbo adapter		
	Pentium Gold G6400T	2/4	3.4G	4 MB	DDR4-2666	UHD 610	Ethernet		ville), Wake on LAN®			
	Pentium Gold G6500T	2/4	3.5G	4 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	None				
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610	Manageability	Intel Active Management Technology 14 (Intel AMT 14); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi				
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630			y on some models (require choosing a vP Pro function through wireless connection)	ro-support vvi-Fi		
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TO				
	Core i3-10100T	4/8	3.0G / 3.8G	6 MB	DDR4-2666	UHD 630	Security features	• Security slot (in rea	ar for optional Boot sequence contains Boot sequence contains	trol		
	Core i3-10300T	4/8	3.0G / 3.9G	8 MB	DDR4-2666	UHD 630		Kensington® Micro	Saver® cable) • Boot without keyboa	ard and mouse		
	Core i5-10400T	6 / 12	2.0G / 3.6G	12 MB	DDR4-2666	UHD 630		 Chassis intrusion s 				
	Core i5-10500T	6 / 12	2.3G / 3.8G	12 MB	DDR4-2666	UHD 630		Power-on passworAdministrator pass				
	Core i5-10600T	6 / 12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		Hard disk passwor		all storage devices		
	Core i7-10700T	8 / 16	2.0G / 4.5G	16 MB	DDR4-2933	UHD 630	Keyboard	<u> </u>	ope Keyboard (USB connector), black			
	Core i9-10900T	10 / 20	1.9G / 4.6G	20 MB	DDR4-2933	UHD 630	Royboard		itional Keyboard (USB connector), black			
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630		Some: Lenovo Calli	ope Wireless Keyboard (2.4GHz via USB	receiver), black		
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calli	ope Mouse (USB connector), black			
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630		Some: Lenovo Fing	erprint Mouse (USB connector), Windows ope Wireless Mouse (2.4GHz via USB re	s Hello support, black		
	Core i5-10400	6/12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630				ceiver), black		
	Core i5-10500	6/12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color	r; metal case D, three M.2 slots (one for WLAN, two for l	M 2 SSD)		
	Core i5-10600	6/12	3.3G / 4.8G	12 MB	DDR4-2666 DDR4-2933	UHD 630		One 2.3 bay for FIDE		,		
	Core i7-10700 Core i9-10900	8 / 16 10 / 20	2.9G / 4.8G 2.8G / 5.2G	16 MB 20 MB	DDR4-2933 DDR4-2933	UHD 630 UHD 630			Dimensions (WxDxH)	Weight (Approx.)		
								Tiny only	7.0" X 7.2" X 1.4" (1.5" with rubber feet)	2.76 lb (1.25 kg),		
	* Max freguency may refe Technology 3.0 / Intel The					viax			179mm X 183mm X 34.5mm (37mm with rubber feet)	vary by config		
Memory	64GB max, DDR4-320 * System automaticall							With VESA mount & ODD box	8.04" X 7.35" X 2.52" 204.2mm X 186.6mm X 64mm	3.84 lb (1.74 kg), vary by config		
Storage	Support up to 1x 2.5" preset only available v Some: Hard Drive / S Some: M.2 SSD (224 Some: Intel Optane™ Some: DVD-ROM, sli	via specia SATA 6.00 22 / 2280) Memory	al bid model) Gb/s, 2.5", 7200 r) / PCIe NVMe, F v M10, M.2 2280,	pm Cle 3.0 PCle 3	x2 or PCle 3.0 x .0 x2	,	VESA mount Floor Stand Dust filter EOU design	Optional system floo Optional dust filter	ont bracket kit, supports VESA 75mm and or stand for vertical orientation en (need optional toolless chassis screw), bly / removal			
Optical	Some: DVD Burner (I	DVϱRW	/), slim (9.0mm),			ох	Power supply	Some: 65 watts AC/DC adapter, autosensing, 89% PSU				
Onboard SATA Graphics	One onboard SATA 6. Intel HD Graphics 61 DisplayPort™, one HD	0/630 in	processor, uses				_	Some: 135 watts AC	DC adapter, autosensing, 89% PSU (spe C/DC adapter, autosensing, 89% PSU C/DC adapter, autosensing, 89% PSU	ciai bid only)		
	independent displays;		video porto ava	iiabic vi	a optional ports,	ap to o	Limited warranty		nited onsite service / service upgrades a	available		
	Max resolution: 4096x						Preload	Preloaded operatin				
Monitor cable	4096x Optional DP to VGA d HDMI 1.4 dongle	2160 (HI ongle, DI	DMI)@24Hz; 204 P to DVI-D dongl	8x1536 e, DP to	(VGA)@50Hz dual DP dongle,	or DP to	Fieldau	Some: Windows® 1 Some: Windows 10	0 Pro 64-bit			
Chipset	Intel Q470 Chipset						Environment	ENERGY STAR® 8.0), EPEAT™ Gold / Silver rating (on some r	models), ErP Lot 3,		
		Alwavs O	n and fast charge	e), one	JSB 3.2 Type-C (Gen 1.	-	TCO 8.0 (coming so RoHS-compliant	on), TUV low noise / ultra low noise verifie	ed (on some models)		
Rear ports (Std.)	Std.)* one USB 3.2 Gen 2 (Always On and fast charge), one USB 3.2 Type-C Gen 1, one headphone / microphone combo jack (3.5mm) std.)* 2x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, 1x ethernet (RJ-45), 1x DP, 1x HDMI opt.)* Two optional ports:						MIL-SPEC test	•				
	Position	Port 1	1	Port	2 Port	1&2	Accessories		·····/	novo com		
			d HDMI / USB ith DP function) al	Seria	Dual USB por (Available at	rts		For compatible accessories, please go to http://smartfind.lenovo.com		1000.00111		
	* Depending on many fa	ctors, actu	al data transfer spe	eed may	be lower than theor	etical speed						
Audio support	Realtek ALC233VB / c	optional i	nternal speaker ((1.5 wat	t)		1					
	ations above may not be	<u> </u>			,		1			Langua May 2020		





















ThinkCentre M920 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel I	Pentium®	, or 8th / 9th Gen	Intel C	ore™ i3 / i5 / i7 / i	9 Processor	Bluetooth	Some: Bluetooth 4.2/	/5.0 wireless, integrated in Wi-Fi + BT con	nbo adapter		
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Ethernet Ethernet (Opt.)		el Ethernet Connection I219-LM(Jacksonvi Server Adapter I350-T4, gigabit ethernet,			
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Manageability	Intel Active Managem	nent Technology 12 (Intel AMT 12);			
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610		Intel vPro technology	on some models (require choosing a vPr	o-support Wi-Fi		
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610	Security chip	adapter to enable vPro function through wireless connection) Discrete TPM 2.0, TCG Certified				
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	Security trip	• Security slot (in rea	ar for optional Boot sequence conti	·ol		
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630		Kensington® MicroS	Saver® cable) • Boot sequence conti			
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610		 Chassis intrusion s 	witch • Individual USB port	disablement		
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Power-on password Administrators		n, allows keyboard/		
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630		Administrator passvHard disk password		ili storage devices		
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	Kouboord	·				
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calilo	ope Keyboard (USB connector), black tional Keyboard (USB connector), black			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Callio	ope Wireless Kevboard (2.4GHz via USB i	receiver), black		
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callio	ope Mouse (USB connector), black			
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Finge	erprint Mouse (USB connector), Windows ope Wireless Mouse (2.4GHz via USB rec	Hello support, black		
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630			<u> </u>	eiver), 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 HDD, SSD	pen (need optional toolless chassis screw) Demory removal			
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		 Optional dust filter 	•			
	Core i7-9700T Core i9-9900T	8/8	2.0G / 4.3G 2.1G / 4.4G	12 MB 16 MB	DDR4-2666 DDR4-2666	UHD 630	-		D/SSD, one PCIe 3.0 x8 slot (low-profile), t .2 SSD), 2.5" HDD/SSD and PCIe card are			
N4			•				<u> </u>	IOI VVLAIN, OHE IOI IVI.	,.			
Memory	32GB max, DDR4-26 * System automatical						r		Dimensions (WxDxH)	Weight (Approx.)		
Storage	Some: Hard Drive / S Some: Solid State Drive	SATA 6.00	Gb/s, 2.5", 5400 i	pm or 7		ny controlle	<u>'</u>			2.91 lb (1.32 kg), vary by config		
	Some: M.2 SSD / PC * 128GB SSD M.2 (22 Some: Intel Optane TM	ile NVMe 242) PCIe	, PCIe 3.0 x 4*, 3 NVMe only sup	32Gb/s ports Po	Cle 3.0 x 2, 16Gb)/s or) M 2		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: DVD-ROM, sl Some: DVD Burner (im (9.0mí	m), via USB exte	rnal OD	D box	,-	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
Onboard SATA	One onboard SATA 6.	0Gb/s co	nnector					Some: 65 watts AC/DC adapter, autosensing, 88% PSU Some: 90 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU				
Graphics	Intel HD Graphics 61 DisplayPort™, one HE	OMI, one	optional video po	rt (2nd	HDMİ, VGA, 2nd	DP,	Power supply					
	or USB 3.1 Type-C Ge Max resolution: 4096	(2304 (DI	P)@60Hz; 4096x	2304 (T	ype-C)@60Hz;		Limited warranty	Some: 1-year or 3-y	year, depot service / service upgrades av	vailable		
Monitor cable	4096x Optional DP to VGA	(2160 (or Ionale. Di	iboard HDMI)@2 P to DVI-D donal	:4Hz; 20 e. DP to	Í48x1536 (VGÁ) € dual DP donale	҈950Hz (for Collaαe	Preload	Some: 1-year or 3-year, limited onsite service / service upgrades availab				
	Display with intel integ	grated gra	aphics), or DP to	HDMI 1	.4 dongle		- Toload	Preloaded operating system Some: Windows® 10 Pro 64-bit				
Chipset	Intel Q370 Chipset							Some: Windows 10	ons (only some listed)			
Front ports (Std.)	* one USB 3.1 Gen1 (A	lways Or	and fast charge), one L	ISB 3.1 Type-C G	en 1,		Lenovo Vantage	ons (only some isteu)			
Daar marta (Otal)	one microphone (3.5r	ne microphone (3.5mm), one headphone / microphone combo jack (3.5mm) x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI wo optional ports (mutually exclusive with PCIe card): Port 1 for VGA / 2nd DP / and HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial;			one microphone (3.5mm), one headphone / microphone combo jack (3.5mm)					Microsoft Office pre	eloaded;	
Rear ports (Std.)	* 2x USB 3.1 Gen2, 2x * Two ontional ports (m					purchase a produc	t key to activate					
rical ports (Opt.)	2nd HDMI / serial / Us						/D (only for models with DVD / DVD±RW)					
	Optional ports via PC	le card: 2	x USB 3.1 Gen1	via PC	e x1, 4x serial (9	-pin) via		LinkedIn	GO (only for models with DVD±RW)			
	PCle x1, 1x Thunderb								e Type 10V8 models only)			
	* Depending on many fac		· · · · · · · · · · · · · · · · · · ·			eticai speed	Environment	ENERGY STAR® 7.0.	, EPEAT™ Gold rating (with 135W adapte	r) or EPEAT™ Silver		
Audio support	Realtek ALC233VB2			`				rating (with 65W/90W adapter), ErP Lot 3, TCO, TUV ultra low noise v				
WLAN		oth 4.2 c	combo adapter, 1	x1	` ,.		MIL-SPEC test	some models), RoHS	ร-compliant ary certification (Low Pressure [Altitude], F	ligh Temperature		
	Some: 11ac wireless Wi-Fi + Blueto				(dual band),		WIL-SF LO (est	Low Temperature, Ter	mperature Shock, Humidity, Sand and Du	st, Vibration, Shock,		
	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,					Acceptation	Fungus, Solar Radiat	•	ovo com			
	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				Accessories	For compatible acces	ssories, please go to http://smartfind.len	ovo.com				
	Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2											



















ThinkCentre M920x Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pentium®, or 8th / 9th Gen Intel Core™ i3 / i5 / i7 / i9 Processor							4x Mini DisplayPort, up to 4 independent displays, works along with
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		onboard DP and HDMI to support up to 6 independent displays; Max resolution: 5120x2880 @60Hz ((up to 2 Mini DisplayPort);
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	1	4096x2160@60Hz ((up to 4 Mini DisplayPort) Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle (for Collage Display
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Monitor cable	with intel integrated graphics), or DP to HDMI 1.4 dongle, Mini DP to DP
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Chipset	Intel Q370 Chipset
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	Front ports (Std.)*	one USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1,
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	' ' '	one microphone (3.5mm), one headphone / microphone combo jack (3.5mm)
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Rear ports (Std.)*	2x USB 3.1 Gen2, 2x USB 3.1 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 PCle card): Port 1 for VGA / 2nd DP / 2nd HDM serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial;
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	Optional ports via PCIe card: 2x USB 3.1 Gen1 via PCIe x1, 4x serial (9-pin) via PCIe x1, 1:
	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 PCle x4 * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Adia	
	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 RTL8821CE (dual band), 1x1
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630]	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
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630]	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630]	Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band), Intel vPro technology support, 2x2
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Bluetooth	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(Jacksonville), 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 ethernet, 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);
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection)
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security features	Security slot (in rear for optional Boot sequence control
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610	1	Kensington® MicroSaver® cable) • Boot without keyboard and mouse
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610]	 Chassis intrusion switch Power-on password Individual USB port disablement Smart USB protection, allows keyboard/
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630]	Administrator password mouse only, 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), black
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630]	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i3-8300T	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]	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630]	Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color; metal case
	Core i7-8700T	6 / 12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630]	 Toolless chassis open (need optional toolless chassis screw) Toolless HDD, SSD, memory removal
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630]	Optional dust filter
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630		one 2.5" bay for HDD/SSD, one PCIe 3.0 x8 slot (low-profile), three M.2 slots (one for WLAN
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630]	two for M.2 SSD), 2.5" HDD/SSD and PCle card are mutually exclusive
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630]	Dimensions (WxDxH) Weight (Approx.)
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630	_	Tiny only 7.0" X 7.2" X 1.4" (1.5" with rubber feet) 2.91 lb (1.32 kg),
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		179mm X 183mm X 34.5mm (37mm vary by config
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630]	with rubber feet)
Memory	32GB max, DDR4-2666* * System automatically cl					er		With VESA mount & 7.42" X 7.30" X 2.48" 3.66 lb (1.66 kg), vary by config ODD box 188.4mm X 185.38mm X 63mm vary by config
Storage	Some: Hard Drive / SA Some: Solid State Drive	TA 6.0Gb/s	s, 2.5", 5400 rpm o				VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation
	Some: M.2 SSD (suppo	ort up tó tv	/o M.2 SSD) / PCIe	NVMe,	PCle 3.0 x 4*, 32Gb	n/s,	Power supply	135 watts AC/DC adapter, autosensing, 88% PSU
	RAID 0/1 suppo * 128GB SSD M.2 (2242)	rt (RAID p	reset only available	e via spe	cial bid model)		Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available
	Some: Intel Optane™ N	lemory (no	ot supports F	/ Pentiur	n Processor). M.2		Limited Warranty	Some: 1-year or 3-year, limited onsite service / service upgrades available
Optical	Some: DVD-ROM slim	(9 0mm)	via LISB external C	DD hav			Preload	Some: Windows® 10 Pro 64-bit
Onboard SATA	Some: DVD Burner (DV One onboard SATA 6.0G	/D±RW), s	lim (9.0mm), via U	SB exter	nal ODD box			Some: Windows 10 Home 64-bit
Graphics	Intel HD Graphics 610/6	30 in prod	essor, uses main n	nemory,	DirectX® 12, one Dis	splayPort™,	Environment	ENERGY STAR® 7.0, EPEAT™ Gold rating (North America), ErP Lot 3, TCO, TUV ultra low noise verified (coming soon, on some models), RoHS-compliant
	one HDMI, one optional v or USB 3.1 Type-C Gen1 Max resolution:c4096x23	with Displ 04 (DP)@	ayPort function), u	p to 3 ind (Type-C)	@60Hz;		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)
	Some: AMD Radeon™	RX 560 , D	irectX 12, 4GB GD	DR5, PC	Cle 3.0 x8 adapter,		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
		,	,	,			ACCESSOLIES	i or companior accessories, piease yo to intp://sinartimu.ienovo.com

















ThinkSmart Edition Tiny M920q for Zoom Rooms Platform Specifications

Processor	Intel® 9th Gen Core™	[™] i7 Proces	ssor				Keyboard	Lenovo Traditional Keyboard (USB connector), black			
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Mouse	· · · · · · · · · · · · · · · · · · ·	ouse (USB connector), black		
	Core i7-9700T	Threads 8 / 8	Base/Max(GHz)	12 MB	(Up to) DDR4-2666	Graphics UHD 630	Mechanical	Tiny (1L), black color	r; metal case		
							1		Dimensions (WxDxH)	Weight (Approx.)	
Memory	16GB (8GB x 2) DDR4-2666, two 260-pin SO-DIMM sockets, dual-channel capable 128GB SSD M.2 (2242) PCIe NVMe only supports PCIe 3.0 x 2, 16Gb/s				<u> </u>	_	Tiny only 7.0" X 7.2" X 1.4" (1.5" with rubber feet) 2				
Storage Optical	128GB SSD M.2 (22 None	(42) PCIe r	vvivie only supp	orts PC	ie 3.0 x 2, 16Gb/	S			179mm X 183mm X 34.5mm (37mm with rubber feet)		
Onboard SATA	One onboard SATA 6	6.0Gb/s co	nnector				VESA mount	\(\(\)			
Graphics	Intel HD Graphics 630 in processor, uses main memory, DirectX [®] 12, one DisplayPort™, one HDMI (onboard), one 2nd HDMI (internal DP to HDMI dongle),					Floor Stand	VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
	up to 3 independent						Power supply	135 watts AC/DC adapter, autosensing, 88% PSU			
Monitor cable	Max resolution: 4096x2304 (DP) @ 60Hz; 4096x2160 (onboard HDMI) @ 24Hz None					24Hz	Limited warranty	ted warranty 3-year, limited onsite service with premier support / service upgrades available			
Chipset	Intel Q370 Chipset						Preload	Preloaded operating system Windows® 10 IoT Enterprise with Zoom Rooms preload			
Front ports (Std.)	* one USB 3.1 Gen1 (Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, TUV ultra low no		TUV ultra low noise	
Rear ports (Std.)	one microphone (3.5° 2x USB 3.1 Gen2, 2°	x USB 3.1	Gen1. 1x etherr	cropnon et (RJ-4	e combo jack (3. 45). 1x DisplavPo	omm) ort. 2x HDMI		verified (on some mo	odels), RoHS-compliant		
	* Depending on many fa	actors, actua	al data transfer spe	ed may b	oe lower than theor	etical speed	MIL-SPEC test	IIL-SPEC test MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Sh			
Audio support	Realtek ALC233VB2	2 / optional	internal speake	1.5 wa	att or 2 watt)			Fungus, Solar Radiation)		ust, vibration, Snock,	
WLAN	11ac wireless, M.2 C combo adapter, Intel				band), Wi-Fi + B	luetooth 5.0	Accessories		ssories, please go to http://smartfind.ler	novo.com	
Bluetooth Ethernet	Bluetooth 5.0 wireles Gigabit ethernet, Inte	ss, integrat el Ethernet	ed in Wi-Fi + BT Connection I21	combo 9-LM(Ja	adapter acksonville), Wak	e on LAN®					
Manageability Security chip	Intel Active Management Technology 12 (Intel AMT 12); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection) Discrete TPM 2.0, TCG Certified				t Wi-Fi						
Security features	 Security slot (in reactions) Chassis intrusion sons Power-on passwon Administrator pass Hard disk passwor 	Saver® ['] cab switch d sword	ole) • Boot • Indiv • Sma	without dual US t USB p	ce control keyboard and me BB port disableme protection, allows blocks all storage	ent keyboard/					

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













ThinkCentre Tiny-in-One (TIO) 22 Gen3

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

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

	ThinkCentre Tiny-in-One 22 Gen3 Compatible list						
Model	P330 / P320 / M920(x) / M720 / M910(x) / M710 / M900(x) / M700 / M630e / M625 / M600 / M75q / M715 / M83 / M53 Tiny M90n Nano (with TIO kit)	M93/p Tiny, M73 Tiny	Chromebox				
	,						
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						
TIO Power Button							

















ThinkCentre Tiny-In-One 22 Gen 4 Platform Specifications

Form factor			rience when optional Tiny slots into	Мо			
Compatible Tiny:	the back of TIO, clean cabling and effortless setup P340 / P330 / P320 / M90q / M80q / M70q / M75q / M920(x) / M720 / M910(x) / M710 / M715 / M900(x) / M700 / M630e / M625 / M600 Tiny M90n / M75n Nano (with TIO kit)						
Panel		,	**, White LED backlight	1=			
Tarior	Notes: In-Plane Sv	witching may refer to IF	PS, PLS, ADS, AHVA, AAS panels	Po			
Viewable image size	21.5" (546.1mm) d	iagonal 76.1mm x 267.8mm		Lin			
Max view area (W x H) Bezel Width	Top / Side: 2mm, B			En			
Native resolution	1920x1080 @60H			-			
Presets / user settings	25			Wir			
Multi-touch Aspect ratio	Optional 10-point n	nulti-touch, AIT techno	logy	Shi			
Pixel pitch (mm)	0.24795mm						
Dot/Pixel per Inch	102.4 dpi			Acc			
Brightness	250 nits or cd/m² (t	typical)					
Contrast ratio Pixel response time	1000:1 (typical)	er drive to 4ms, 6ms					
Color gamut	72% NTSC (CIE 1	931)					
Anti-reflective	Anti-glare	,					
Viewing angle at 10:1 Cl	R178° (+/- 89°) horiz	zontal, 178° (+/- 89°) ve	ertical	1			
On screen display		with digital user contro					
Control features			button (TIO / monitor mode lay and side USB port),				
			/ Menu button, Power button				
	Bottom: Volume up	p button, Volume down	button				
TIO Power On features			button (on TIO) can turn on both				
Side ports (on TIO)			support, see compatible list) d version depends on the Tiny				
Side ports (on 110)		connected via USB ups					
Side ports (on Tiny)	Side ports offered	by installed Tiny (front	ports)				
Rear ports			am port, one power connector	"			
3-in-1 Cable			cter, USB [supports USB 3.1 Gen1 ing to Tiny installed (optional)				
Camera		dual microphone and 1					
Internal Speaker	2 watt x2						
Security			al cable lock (Kensington® lock]			
			together, more security features				
	offered by Tiny inst	alled (optional)		-			
Mechanical	Dimensions	TIO without stand	TIO with stand				
	W x D x H (inch)	19.26 x 2.57 x 13.35	19.26 x 8.68 x 16.46 - 22.37.93				
	W x D x H (mm)	489.3 x 65.3 x 339	489.3 x 220.4 x 418.2 - 568.2				
	Weight (Approx.)	7.52 lb / 3.41 kg	14.51 lb / 6.58 kg				

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: 5.9" (150mm); swivel: +/-45°; Pivot: clockwise -5° to 90°
Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 25 watts max, 14 watts typical, <0.5 watts standby / suspend
Limited warranty	3-years, Carry-In or Courier service
Environmental Windows certifications	TCO 8.0, TCO edge 2.0, ENERGY STAR® 8.0, EPEAT™ Silver rating, UL GREENGUARD Certified, Erp lot5, WEEE, RoHS, TUV Eye comfort Windows 7 and Windows 10 certified
Ship group	TIO (Monitor), detachable stand, power adapter, power cord, information flyer, user's guide, and driver CD
Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com

	ThinkCentre Tiny-In-One 22 Gen 4 Compatible list						
Model	P340 / P330 / P320	M93/p / M83 /	Chromebox				
	M90q / M80q / M70q / M75q / M920(x) /	M73 / M53					
	M720 / M910(x) / M710 / M715 / M900(x) /	Tiny					
	M700 / M630e / M625 / M600 Tiny						
	M90n / M75n (with TIO kit)						
Turn on TIO and							
Tiny together via	All models	All models	Not support				
Alt + P on USB KB							
Turn on TIO and	rn on TIO and						
Tiny together via	ether via All 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			ence when optional Tiny slots into			
Compatible Tiny:	P330 / P320 / M92 M625 / M600 / M75	5q / M715 / M93/p* / M8	s setup M710 / M900(x) / M700 / M630e / 3 / M73* / M53 /Chromebox Tiny essing power button of TIO			
Panel	TFT-LCD, In-Plane	Switching technology**	, White LED backlight			
Viewable image size Max view area (W x H) Bezel Width Native resolution Multi-touch	Notes: In-Plane Switching may refer to VA, PLS, and IPS panels 23.8" (604.7mm) diagonal 20.75" x 11.67" / 527.0mm x 296.5mm Top / Side: 2mm, Bottom: 22.1mm 1920x1080 Optional 10-point multi-touch, supports Wake on Touch					
Aspect ratio Pixel pitch (mm)	16:9 0.2745mm					
Dot/Pixel per Inch Brightness	92.6 dpi 250 nits or cd/m² (t	ypical)				
Contrast ratio Pixel response time	1000:1 (typical) 14ms (default), ove 72%	er drive to 4ms, 6ms				
Color gamut Anti-reflective Viewing angle at 10:1 Cl	Anti-glare	contal, 178° (+/- 89°) ver	tical			
Preset resolutions	640x350 @ 70Hz 640x480 @ 60Hz,					
	720x400 @ 70Hz 800x600 @ 60Hz, 1024x768 @ 60Hz	72Hz, 75Hz				
	1152x864 @75Hz 1280x800 @ 60Hz					
	1280x1024 @ 60H 1366x768 @ 60Hz	,				
	1440x900 @ 60Hz 1600x1200 @ 60H:					
	1680x1050 @ 60H 1920x1080 @ 60H					
Presets / user settings	Presets: 25; user so		(2.1			
On screen display Control features	Ftont: Exit butto Right / Bi	rightness button, Enter /	button (TIO / monitor mode), Menu button, Power button			
Tiny-in-One Power On	Pressing Alt + P or		button Power button positioned on TIO Finy support, see compatible list)			
Side ports (TIO)	One USB 3.1 Gen1 connected via USB	I / USB 2.0 (when M73 o	or M53 installed or USB 2.0			
		ort is only availáble whe via USB upstream port	n a Tiny is istalled or a PC is			
Side ports (Tiny) Rear ports		by installed Tiny (optiona port, one USB upstrear	al) n port, one power connector			
3-in-1 Cable	Undetachable 3-in-	·1 cable (Power connect	er, USB [supports USB 3.1 Gen1 g to Tiny installed (optional)			
Camera Internal Speaker	1080p camera with 2 watt x2	dual microphone for VC	DIP, LED indicator			
Security		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			

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

















ThinkCentre Tiny-In-One 24 Gen 4 Platform Specifications

Form factor		a full All-In-One experie	ence when optional Tiny slots into	M	lounting features		Vall or desk mounting using the exter		y accessories	
Compatible Tiny:			/ M75q / M920(x) / M720 /	A	djustable stand	7	Filt: 30° back, -5° forward;	i mount)		
			M630e / M625 / M600 Tiny				ift: 5.9" (150mm); swivel: +/-45°;			
	M90n / M75n Nand	- (iwivei: +/-45°; Pivot: clockwise -5° to 90°			
Panel	TFT-LCD, In-Plane	Switching technology**	, White LED backlight S, PLS, ADS, AHVA, AAS panels		Power supply 90 watts AC/DC adapter, 88% PSU, universal					
Viewable image size	23.8" (604.7mm) d		5, FLS, ADS, ARVA, AAS pariels	_	Power consumption 27 watts max, 15 watts typical, <0.5 watts standby / suspend					
Max view area (W x H)		27.0mm x 296.5mm		I —	imited warranty		-years, Carry-In or Courier service			
Bezel Width Native resolution	Top / Side: 2mm, E 1920x1080 @60H			E	nvironmental	Ţ	CO 8.0, TCO edge 2.0, ENERGY ST JL GREENGUARD Certified, Erp lot5	TAR® 8.0, EPEAT™	Silver rating,	
Presets / user settings	25	4		l _w	/indows certification		Vindows 7 and Windows 10 certified), WEEE, ROOS, 10	ov Eye comion	
Multi-touch		multi-touch, AIT technolo	ogy	1	hip group		TO (Monitor), detachable stand, power	er adanter nower o	ord information	
Aspect ratio Pixel pitch (mm)	16:9 0.2745mm			"	inp group		yer, user's guide, and driver CD	or adaptor, power c	ora, imormation	
Dot/Pixel per Inch	92.6 dpi			A	ccessories	F	or compatible accessories, please go	o to http://smartfir	nd.lenovo.com	
Brightness	250 nits or cd/m ² (1	typical)		-			, ,,,			
Contrast ratio Pixel response time	1000:1 (typical)	er drive to 4ms, 6ms		۱,		т	hinkContro Tiny In One 04 Con 4 Co	manatible list		
Color gamut	72% NTSC (ĆÍE 1			1	Model	- 1	hinkCentre Tiny-In-One 24 Gen 4 Co P340 / P330 / P320	M93/p / M83 /	Chromebox	
Anti-reflective	Anti-glare		at a a I		Model	Mac	0g / M80g / M70g / M75g / M920(x) /	M73 / M53 Tiny	Chromebox	
Viewing angle at 10:1 Cl							0 / M910(x) / M710 / M715 / M900(x)	, , ,	Wide Tilly	
On screen display Control features	On screen display	with digital user controls	s (8 languages) outton (TIO / monitor mode,				M700 / M630e / M625 / M600 Tiny			
Control leatures	switchs th	ne sources of both displa	ay and side USB port),				M90n / M75n (with TIO kit)			
	Down / Bi	rightness button, Enter /	Menu button, Power button		Turn on TIO and		,			
TIO Power On features	Bottom: Volume u	p button, Volume down by	outton utton (on TIO) can turn on both		Tiny together via		All models	All models	Not support	
110 1 Ower Off leatures	TIO and Tiny (Som	ne old Tiny cannot fully s	upport, see compatible list)		Alt + P on USB KB	3				
Side ports (on TIO)	One USB Type A p	ort (The availability and	version depends on the Tiny		Turn on TIO and					
Side ports (on Tiny)	istalled or the PC of	connected via USB upstr by installed Tiny (front p	ream port)		Tiny together via		All models Not support All m			
Rear ports	One DisplayPort in	nort, one USB unstream	m port, one power connector	L	TIO Power Button					
3-in-1 Cable	Undetachable 3-in-	 1 cable (Power connect 	er, USB [supports USB 3.1 Gen1							
Camera		/Port), only for connectir nera with dual microphor	ng to Tiny installed (optional)							
Camera	Some: RGBIR car	mera with dual micropho	one, support Think Shutter							
Internal Speaker	2 watt x2									
Security			cable lock (Kensington® lock							
	compatible), locks offered by Tiny inst	optional Tiny with TIO to	ogether, more security features							
Mechanical	, ,	,		1						
oiai iioai	Dimensions	TIO without stand	TIO with stand							
	W x D x H (inch)	21.25 x 2.57 x 14.47	21.25 x 9.07 x 17.59 - 23.5							
	W x D x H (mm)	539.8 x 65.3 x 367.6	539.8 x 230.4 x 446.9 - 596.9							
	Weight (Approx.)	7.96 lb /3.61 kg	12.92 lb /6.66 kg							
				_					Lenovo May 2020	













ThinkCentre Tiny-in-One (TIO) 27

Form factor	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into the back of TIO, clean cabling and effortless setup	Mechanical		TIO without stand	TIO	with stand		
Compatible Tiny:	ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny		Dimensions (W x D x H	614.0 x 73.89 x 413.1	614.0 x 329.0) x 444.25 - 554.25		
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight **Notes: In-Plane Switching may refer to IPS, PLS, ADS, AHVA, and AA		mm / inch)	/ 24.17 x 2.91 x 16.26	/ 24.17 x 12.	95 x 17.49 - 21.82		
Viewable image size Max view area (W x H)	27" (685.8mm) diagonal 23.49" x 13.22" / 596.7mm x 335.7mm		Weight (Approx.)	4.91 kg / 10.82 lb	7.95 k	g / 17.53 lb		
Bezel Width Native resolution Multi-touch Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch	Top / Side: 2mm, Bottom: 23.3mm 2560x1440 None 16:9 0.2331mm 109 dpi	Mounting features Adjustable stand	meeting the VESA Tilt: 35° back, -	ift: 4.3" (110mm); wivel: +/-45°;				
Brightness Contrast ratio	350 nits or cd/m² (typical) 1000:1 (typical)	Power supply	170 watts adapter	, 88% PSU, universal				
Pixel response time Color gamut	14ms (default), over drive to 4ms, 6ms 99% sRGB	Power consumption Limited warranty		7 watts maximum, <0.5 Exchange Service (US				
Anti-glare	Yes (25%)	Limited warranty	Service (EMEA)	exchange Service (US	and EIVIEA) or	Customer Carry-in		
Viewing angle at 10:1 C	R178° (+/- 89°) horizontal, 178° (+/- 89°) vertical 640x350 @ 70Hz 640x480 @ 60Hz, 66Hz, 72Hz, 75Hz 720x400 @ 70Hz 800x600 @ 60Hz, 72Hz, 75Hz 1024x768 @ 60Hz, 70Hz, 75Hz 1152x864 @75Hz 1280x768 @ 60Hz 1280x800 @ 60Hz 1280x800 @ 60Hz 1280x800 @ 60Hz 1440x900 @ 60Hz, 72Hz, 75Hz 1366x768 @ 60Hz 1440x900 @ 60Hz, 75Hz 1680x1050 @ 60Hz 1920x1080 @ 60Hz	VESA-compliant Ergonomics Emission standards Environmental Windows certification Ship group Accessories Model	ISO 9241-307, TU FCC Class B TCO 8.0, TCO Edi EPEAT™ Silver rat Windows 7 and W TIO 27 (Monitor), and driver CD For compatible acc ThinkCentre Tiny P330 / P320 / M920(x)	` '	ENERGY STAFOC er adapter, power http://smartfinde. Matrix M93/p Tiny,	er cord, reference		
Presets / user settings On screen display	2560x1440 @ 60Hz Presets: 27; user settings: 25 On screen display with digital user controls (8 languages)		M710 / M900(x) / M70 M600 / M75q / M715 M90n Nano (w	7 / M83 / M53 Tiny	M73 Tiny			
Control features	Ftont: Exit button, Left / Mode-switching button (TIO / monitor mode), Right / Brightness button, Enter / Menu button, Power button Bottom: Volume up button, Volume down button	Turn on TIO and Tiny together via Alt + P on USB KB	All mod	dels	All models	Not support		
Tiny-in-One Power On Side ports (TIO)	Pressing Alt + P on keyboard or pressing Power button positioned on TIO can turn on both TIO and Tiny (only some support, see Compatible Matrix) Two USB 3.1 Gen1 (downgrade to USB 2.0 when installing M73 or M53 or connecting USB 2.0 via USB upstream port), one headphone / microphone	Turn on TIO and Tiny together via TIO Power Button	All mod	dels	TIO models	All models		
Side ports (Tiny) Rear ports 3-in-1 Cable Camera Internal Speaker Security	combo jack Notes: The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting USB upstream, DisplayPort(in), or HDMI(in) port Side ports offered by the installed Tiny (optional) One DisplayPort(in) port, one HDMI(in) port, one USB (Type-B) upstream port, one power connector Undetachable 3-in-1 cable, connecting to the power connecter, one USB, and one DisplayPort of the installed Tiny (optional) RGBIR camera with dual microphone, supports Window Hello and Facial Recognition, Think Shutter for Privacy Security, LED indicator 2 watt x2 Security keyhole for attachment of optional cable lock (Kensington® lock compatible), locks optional Tiny with TIO together, more security features offered by Tiny installed (optional)							















ThinkCentre M70t Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 10th Gen Int	el Core™	i3 / i5 / i7 / i9 Pro	ocessor	Audio support	High Definition (HD) Audio, Realtek ALC623-CG / internal speaker (2 watt)
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9462 (dual band),
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610		Wi-Fi + Bluetooth 5.0 combo adapter, 1x1 (special bid only)
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band),
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630		Wi-Fi + Bluetooth 5.1 combo adapter, 2x2
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630	Bluetooth™	Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-V(Jacksonville), Wake on LAN®
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCle x4
	Core i5-10400F	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	None		Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1
	Core i5-10400	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	Manageability	None
	Core i5-10500	6 / 12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-10600	6 / 12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630	Security features	 Security slot (for Kensington® lock) Power-on password
	Core i7-10700F	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	None		Padlock loop Administrator password Administrator password Alloyd disk password
	Core i7-10700	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630		 Optional Smart Cable Clip to Hard disk password Boot sequence control
	Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None		Optional chassis intrusion switch Boot without keyboard and mouse
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630		Optional chassis E-Lock Individual USB port disablement
	* Max freguency may ref Technology 3.0 / Intel Th					1ax		 Smart USB protection, allows keyboard/ mouse only, blocks all storage devices
Memory	128GB max, DDR4-3 * System automatical						Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
Storage	Support up to 2x HDI Some: Hard Drive / Some: M.2 SSD (22- Some: Intel Optane	SATA 6.00 42 / 2280	ab/s, 2.5" or 3.5" / PCIe NVMe, I	, 7200 rp PCIe 3.0	im x2 or PCIe 3.0 x4	1	Mouse	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, b Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Optical	Some: DVD-ROM, S Some: DVD Burner	SATA 1.5Ğ	b/s Drive, slim (9.0mm)			Mechanical	Tower (13.6L), black color, metal case Dimensins with bezel & PCI holder & rubber foot:
Onboard SATA Media reader	Four onboard SATA 6 Optional 3-in-1 media	i.0Gb/s co	nnectors					(WxDxH) 5.7" X 13.6; 145mm X 296mm X 346mm • Weight (approx.): 10.6 lb (4.8 kg), weight may vary by configuration
Graphics	Intel UHD Graphics two DisplayPort™, on support via discrete of	610/630 i e HDMI, s	n some process	ors, uses	main memory, D	DirectX® 12, ore displays	Bays	Bay 1: Slim ODD bay Bay 2: 3.5" HDD bay Bay 3: 2.5" HDD bay (optional bay, or bay comes with disk)
	Max resolution: 4096 Some: AMD Radeon two DisplayPo	×2304 (Dl n™ 520 , D ort (up to 4	rectX 12, 2GB (1096x2160@601	BDDRS, F Hz)	PCIé 3.0 x8, 30 w		Slots	Slot 1: full-height (length < 215mm), PCle 3.0 x16 Slot 2: full-height (length < 215mm), PCle 3.0 x1 Slot 3: no slot, only bracket for optional port extension Slot 4: no slot, only bracket for optional port extension
	Some: AMD Radeon		, Directo 12, 40 3840x2160@60			o walls,		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	4096x2160@	60Ĥz), on	e VGA (up to 20	48*1536	@85Hz), occupie	s two slots	EOU design	None
Monitor Cable	Optional DP to VGA on Display with intel inte	dongle, Di	⊃ to DVI-D dong	le, DP to	dual DP dongle (for Collage	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 85% PSU
Chipset	Intel H470 Chipset						1	Some: 310 watts, autosensing, 92% PSU
Front ports* (Std	.) 2x USB 3.2 Gen 2, 2:							Some: 380 watts, autosensing, 92% PSU * Discrete graphics card / 10-core processors need > 180w power supply
1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm) Front ports* (Opt.) Optional: 3-iin-1 media reader Rear ports* (Std.) 4x USB 2.0, 1x serial (9-pin), 1x ethernet (RJ-45), 2x DisplayPort**, 1x HDMI**,							Limited warranty	Some: 1-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
	1x line-out (3.5mm) s* (Opt.) Optional: 2x USB 3.2 Gen 1 via PCle x1, 2x USB 3.2 Type-C Gen 2 via PCle x4, 1x 2nd serial (9-pin), 4x serial (9-pin) via PCle x1,							Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise (only available via special bid model)
	1x parallel (25-pin), 2 ports available on opi * Depending on many fa ** Only available for the	x PS/2 po tional grap ctors, actua	orts (keyboard/m ohics or ethernet al data transfer spe	ouse), ac card eed may be			Environment	ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO (coming soon), TUV low noise verified (on some models), RoHS-compliant * Only available for MT 11D9/11DA
	Only available for the	models wit	i integrateu grapni	C9			Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Nister The server side	ations above may not be		to all or others				•	Lenovo May 2020













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	n Intel Co	re™ i3 / i5 / i7 / i9	Processor	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)
	Processor	Cores /	Frequency	Cache	Memory Support		WLAN ¹³	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1
		1	Base/Max(GHz)		(Up to)	Graphics		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610 UHD 610	Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5400 Pentium Gold G5500	2/4	3.7G 3.8G	4 MB 4 MB	DDR4-2400 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 DDR4-2400	UHD 630	Ethernet (Opt.)	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		* Choose either I350-T4 or BN8E88
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Manageability	None
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security leatures	S • Security slot (in rear for optional Kensington® MicroSaver® cable) • Power-on password • Administrator password
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		Padlock loop Hard disk password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		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 i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		Optional chassis intrusion switch Optional chassis intrusion switch Optional chassis F Lock (chassis hid) Smort USB protection allows keyboard/
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)
	Core i5-9400F	6/6	2.9G / 4.1G	9 MB	DDR4-2666	None	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	Reyboard	Some: Lenovo Traditional Keyboard (USB connector), black
	Core i5-9500F	6/6	3.0G / 4.4G	9 MB	DDR4-2666	None		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
	Core i7-9700	8/8	3.0G / 4.7G 3.1G / 5.0G	12 MB 16 MB	DDR4-2666	UHD 630	iviouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	Core i9-9900	8/16			DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Memory	64GB max, UDIMM,		66*, four 288-pin	DIMM s	ockets, non-ECC	,		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	dual-channel capable * System automatical	; Ilv clocks	down for the pro	caceare i	with lower memor	v controller	Mechanical	Tower (15L), black color, metal case
Storage	Some: Hard Drive / S					y controller	-	• (WxDxH) 5.91" X 10.65" X 14.17"; 150mm X 270.5mm X 360mm
Sidiage	Some: Solid State D				111 01 7200 Ipili			Approx. 15.21 lb (6.9 kg), weight may vary by configuration Optional dust filter.
	Some: M.2 SSD (22-	42 / 2280	/ PCIe NVMe, I	Cle 3.0	x2 or PCle 3.0 x4	1		Optional dust filter Bay 1: Slim external ODD bay
0 11 1	Some: Intel Optane [™]	Memory	(not support Ce	eleron / P	entium Processo	r), M.2		Bay 2: 3.5", 1" high, internal, HDD/SSD
Optical	Some: DVD-ROM S. Some: DVD Burner	AIA 1.5G (DVD±RV	D/S Drive, Slim (S	J.Umm)	lim (0 0mm)			Bay 3: 3.5", 1" high, internal, HDD/SSD (optional bay)
Onboard SATA	Three onboard SATA	6.0Gb/s	connectors	Dilve, S	IIII (9.0IIIII)			Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16
Media reader	Optional 7-in-1 media		301111001010					Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1 Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1
Graphics	Intel UHD Graphics	610/630	n some process	ors. uses	main memory. D	irectX® 12.		Slot 4: no slot, only bracket for optional port extension
	one VGA (up to 2048	x1536@5	60Hz), two Displa	ayPort™ (up to 4096x2304	@60Hz),		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	supports 3 independe						Power supply So	Some: 180 watts, autosensing, 85% PSU
	Some: NVIDIA Gefor	rce° G / / DienlavP/	ort (up to 3840x2	, Directx	12, 2GB, PCIe 2 Hz)	.0 X16,		Some: 210 watts, autosensing, 85% PSU
	Some: AMD Radeon	™ 520 , D	irectX 12, 2GB (DDR5, I	PCIe 3.0 x8, 30 w	atts,		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
	two DisplayPo	ort (up to	4096x2160@60l	Hz)			Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available
	Some: AMD Radeon		(, DirectX 12, 46 3840x2160@60l			00 watts,		Some: 1-year or 3-year, limited onsite service / service upgrades available
			e VGA (up to 20				Preload	Preloaded operating system
Monitor Cable	Optional DP to VGA	dongle, D	P to DVI-D dong	le, DP to	dual DP dongle (for Collage		Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit
	Display with intel inte	grated gra	aphics), or DP to	HDMI 1.	4 dongle	•		Preloaded applications (only some listed)
Chipset	Intel B360 Chipset							Lenovo Vantage
Front ports* (Std.)	Front ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x USB 3.1 Type-C Gen1 (15W charging), 1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm)							Microsoft Office preloaded;
								 purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW)
Front ports* (Opt. Rear ports* (Std.)) <i>Optional:</i> 1x media re 0 4x USB 2.0, 1x serial	eader (9-pin), 1	x ethernet (RJ-4	5), 1x V0	GA, 2x DisplayPo		Cyberlink Power2GO (only for models with DVD±RW) LinkedIn	
	1x line-out (3.5mm)					Environment		
near ports" (Opt.,) <i>Optional:</i> 2x USB 3.1 (special bid only), 1x	Gen1 via	PCIE X1**, 2X U	5B 3.1 T	ype-C Gen2 via F via PCIe v1	Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant	
	1x parallel (25-pin), 2	x PS/2 no	orts (kevboard/m	ouse), ac	ditional R.I-45 ar	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com	
	ports available on op	tional gra	phics or ethernet	card			70000001100	Tor companior accessories, prease go to fittp://sinartimu.ienovo.com
	* Depending on many fa	ctors, actu	al data transfer spe	ed may be		tical speed		
	** Choose either 2x USE	3.1 Gen1	or 2x USB 3.1 Typ	e-C Gen2				

















ThinkCentre M80t Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 10th Gen Int	el Core™	i3 / i5 / i7 / i9 Pro	ocessor	Audio support	High Definition (HD) Audio, Realtek ALC623-CG / internal speaker (2 watt)
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610		Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610		Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band),
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630	Divisto ath	Wi-Fi + Bluetooth 5.1 combo adapter, Intel vPro technology support, 2x2
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630	Bluetooth™ Ethernet	Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630		Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Technology 14 (Intel AMT 14);
	Core i5-10400F	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	None	a.iagoaoy	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i5-10400	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630		adapter to enable vPro function through wireless connection)
	Core i5-10500	6 / 12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-10600	6 / 12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630	Security features	 Security slot (for Kensington® lock) Power-on password
	Core i7-10700F	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	None		Padlock loop Administrator password
	Core i7-10700	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630		Optional Smart Cable Clip to Hard disk password Plact acqueres control
	Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None		 physically lock keyboard and mouse Optional chassis intrusion switch Boot sequence control Boot without keyboard and mouse
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630		Optional chassis E-Lock Individual USB port disablement
	* Max freguency may ref Technology 3.0 / Intel Th					lax		 Smart USB protection, allows keyboard/ mouse only, blocks all storage devices
Memory	128GB max, DDR4-3 * System automatical						Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
Storage	Support up to 2x HDI support for HDD (RA Some: Hard Drive / Some: M.2 SSD (22-	D ([2.5" + ID preset SATA 6.00	3.5"] or [dual 2.5 only available vi Bb/s, 2.5" or 3.5'	5"]) and u a special ', 7200 rp	p to 1x M2.SSD, bid) om	RAID 0/1	Mouse	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
Optical	Some: Intel Optane Some: DVD-ROM, S	Memory SATA 1.5G	M10, M.2 2280 b/s Drive, slim (, PCIe 3.0 9.0mm)	0 x2		Mechanical	Tower (13.6L), black color, metal case Dimensins with bezel & PCI holder & rubber foot:
Onboard SATA Media reader	Some: DVD Burner Four onboard SATA 6 Optional 3-in-1 media	0.0Gb/s co	nnectors	-	, ,		Dove	(WxDxH) 5.7" X 11.7" X 13.6; 145mm X 296mm X 346mm ■ Weight (approx.): 10.6 lb (4.8 kg), weight may vary by configuration
Graphics	Intel UHD Graphics	610/630 i	n some process	ors, uses	main memory, D		Bays	Bay 1: Slim ODD bay Bay 2: 3.5" HDD bay Bay 3: 2.5" HDD bay (optional bay, or bay comes with disk)
	two DisplayPort™, on support via discrete of Max resolution: 4096 Some: AMD Radeon two DisplayPo	graphics ×2304 (DI o™ 520 , D	P)@60Hz; 1920:	x1080 (H GDDR5, I	DMI)@60Hz	. ,	Slots	Slot 1: full-height (length < 215mm), PCIe 3.0 x16 Slot 2: full-height (length < 215mm), PCIe 3.0 x1 Slot 3: full-height (length < 215mm), PCIe 3.0 x4 Slot 4: no slot, only bracket for optional port extension
	Some: AMD Radeon one DisplayPo	RX 550X ort (up to	., DirectX 12, 4G 3840x2160@60	iB GDDR Hz), one	HDMI (up to	· ·	EOU design	M.2 card slots: Two (one for WLAN, one for SSD/Optane) None
Monitor Cable	one DisplayPort (up to 3840x2160@60Hz), one HDMI (up to 4096x2160@60Hz), one VGA (up to 2048*1536@85Hz), occupies two slots Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle (for Collage Display with intel integrated graphics), or DP to HDMI 1.4 dongle						Power supply	Some: 180 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 85% PSU Some: 310 watts, autosensing, 92% PSU
Chipset	Intel Q470 Chipset]	Some: 380 watts, autosensing, 92% PSU
Front ports* (Std.	12x USB 3.2 Gen 2.2	x USB 3.2	Gen 1 1x USB	3 2 Type	-C Gen 1 (15W c	harging)		* Discrete graphics card / 10-core processors need > 180w power supply
Front ports* (Std.) 2x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, 1x USB 3.2 Type-C Gen 1 (15W charging), 1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm) Front ports* (Opt.) Optional: 3-iin-1 media reader							Limited warranty	Some: 1-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Rear ports* (Std.) 4x USB 3.2 Gen 1, 1x serial (9-pin), 1x ethernet (RJ-45), 2x DP**, 1x HDMI** 1x line-out (3.5mm)							Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit
Rear ports* (Opt.) <i>Optional:</i> 2x̀ USB 2́.0, 2x USB 3.2 Gen 1 via PCIe x1, 2x USB 3.2 Type-C Gen 2 via								Some: Windows 10 IoT Enterprise (only available via special bid model)
	PCIe x4, 1x 2nd serial (9-pin), 4x serial (9-pin) via PCIe x1, 1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), additional RJ-45 and video ports available on optional graphics or ethernet card * Depending on many factors, actual data transfer speed may be lower than theoretical speed							ENERGY STAR® 8.0*, EPEAT™ Silver rating*, ErP Lot 3, TCO (coming soon), TUV low noise verified (on some models), RoHS-compliant * Only available for MT 11CS/11CT
	** Only available for the				5 IOWEI MIAN MEOREI	lical speeu	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Note: The constitution	ations above may not be			-			ı	Lenovo May 2020

















ThinkCentre M90t Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 10th Gen Int	el Core™	[⊿] i3 / i5 / i7 / i9 Pro		1x parallel (25-pin), 2x PS/2 ports (keyl	poard/mouse), additional RJ-45 and video		
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			ports available on optional graphics or *Depending on many factors, actual data tra	ethernet card nsfer speed may be lower than theoretical speed	
	Celeron G5900	2/2	3.4G	2 MB	DDR4-2666	UHD 610		** Only available for the models with integrat	ed graphics	
	Celeron G5920	2/2	3.5G	2 MB	DDR4-2666	UHD 610	Audio support	High Definition (HD) Audio, Realtek AL	C623-CG / internal speaker (2 watt)	
	Pentium Gold G6400	2/4	4.0G	4 MB	DDR4-2666	UHD 610	WLAN	Some: 11ac wireless, M.2 Card, Realt	ek RTL8822CE (dual band),	
	Pentium Gold G6500	2/4	4.1G	4 MB	DDR4-2666	UHD 630		Wi-Fi + Bluetooth 5.0 combo ac		
	Pentium Gold G6600	2/4	4.2G	4 MB	DDR4-2666	UHD 630		Some: 11ac wireless, M.2 Card, Intel \		
	Core i3-10100	4/8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630		Wi-Fi + Bluetooth 5.0 combo at Some: 11ax wireless, M.2 Card, Intel \		
	Core i3-10300	4/8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630			dapter, Intel vPro technology support, 2x2	
	Core i3-10320	4/8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630	Bluetooth™	Some: Bluetooth 5.0/5.1 wireless, inte		
	Core i5-10400F	6/12	2.9G / 4.3G	12 MB	DDR4-2666	None	Ethernet		otion I219-LM(Jacksonville), Wake on LAN®	
	Core i5-10400	6/12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630	Ethernet (Opt.)	Some: Bitland BN8E88, gigabit etherne	50-T4, gigabit ethernet, 4x RJ-45, PCle x4	
	Core i5-10500	6/12	3.1G / 4.5G 3.3G / 4.8G	12 MB	DDR4-2666 DDR4-2666	UHD 630	Managoghility	Intel Active Management Technology 1	<u> </u>	
	Core i5-10600 Core i7-10700F	6 / 12 8 / 16	2.9G / 4.8G	12 MB 16 MB	DDR4-2000 DDR4-2933	UHD 630 None	Manageability		(require choosing a vPro-support Wi-Fi	
	Core i7-107001	8/16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630		adapter to enable vPro function through	wireless connection)	
	Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None	Security chip	Discrete TPM 2.0, TCG Certified	,	
	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630	Security features	 Security slot (for Kensington[®] lock) 	Power-on password	
	* Max freguency may ref Technology 3.0 / Intel Th	fer to Intel	Turbo Boost Techn	ology 2.0 /	/ Intel Turbo Boost M			Padlock loop Optional Smart Cable Clip to	Administrator password Hard disk password	
Memory	128GB max, DDR4-3 * System automatical	3200*, fou	r 288-pin DIMM	sockets,	dual-channel cap		r	physically lock keyboard and mouseOptional chassis intrusion switchOptional chassis E-Lock	 Boot sequence control Boot without keyboard and mouse Individual USB port disablement 	
Storage	Support up to 3x HDI		· ·				-	Self-Healing BIOS	 Smart USB protection, allows keyboard/ 	
Clorago	RAID 0/1 support (RA	AID prese	t only available	/ia specia	al bid)	-X III.2.00B,			mouse only, blocks all storage devices	
	Some: Hard Drive / S						Keyboard	Some: Lenovo Calliope Keyboard (US		
	Some: M.2 SSD (22- Some: Intel Optane	42 / 2280 M Momor) / PCIe NVMe, I	PCIe 3.0	x2 or PCIe 3.0 x ²	4		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello sur		
Optical	Some: DVD-ROM, S				0 12		Mouse			
op.iou.	Some: DVD Burner				slim (9.0mm)				B connector), Windows Hello support, black	
Onboard SATA	Four onboard SATA 6				20140)			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black		
Media reader	Optional 3-in-1 media				,		Mechanical	• Tower (17L), black color, metal case		
Graphics	Intel UHD Graphics	610/630	n some process	ors, uses	s main memory, D	DirectX® 12,		Dimensins with bezel & PCI holder &		
	two DisplayPort™, on supports up to 3 inde						Bays	(WxDxH) 6.7" X 11.7" X 14.8"; 170mm X 298mm X 376mm Weight (approx.): 14.33 lb (6.5 kg), weight may vary by configuration Bay 1: Slim ODD bay Bay 2: 3.5" HDD bay Bay 3: 3.5" HDD bay (optional bay, or bay comes with disk) Bay 4: 2.5" HDD (bay comes with 2.5" disk) Slot 1: full-height (length < 245mm), PCle 3.0 x16 		
	Max resolution: 4096	×2304 (D	P / Type-C) @ 60	Hz: 4096	x2160 (HDMI)@2	24Hz	Days			
	Some: AMD Radeon	™ 520 , D	irectX 12, 2GB (GDDR5,						
	two DisplayPo	ort (up to	4096x2160@60I	Hz)	DCI- 0.00 F	.0				
	Some: AMD Radeon	ort (un to	3840x2160@60	ID GDDF Hz) one	15, POIE 3.0 x6, 5 HDMI (un to	oo walls,	Slots			
					@85Hz), occupie	es two slots		Slot 2: full-height (length < 245mm), PC	Cle 3.0 x1	
	Some: NVIDIA Gefor							Slot 3: full-height (length < 245mm), PC		
					1600@60Hz), 1x			Slot 4: no slot, only bracket for optional		
	to 4096x2160 occupies two		, 1x DP (up to 76	80X432C	0@60Hz with DS0	زر),	EOU dooign	M.2 card slots: Two (one for WLAN, two Toolless cover, disk, optical, extension		
	Some: NVIDIA Gefor		2060, DirectX 12	, 6GB GI	DDR6, PCIe 3.0 >	κ16 ,	EOU design	, . , . , . , . ,		
	170 watts, thre	ee Displa	yPort (up to 768	0x4320@	60Hz with DSC)		Power supply	Some: 180 watts, autosensing, 85% 300 watts, autosensing, 85%		
Monitor Cable	one HDMI (up	to 4096	(2160@60Hz), o	ccupies 1	two slots	(fa., Oallana		Some: 300 watts, autosensing, 85% 300 watts, autosensing, 90%		
WOTHOL Cable	Optional DP to VGA on Display with intel inte					(for Collage	*	Some: 500 watts, autosensing, 92%		
Chineet	Intel Q470 Chipset	grated gr	артноз), от Бт	/ I IDIVII I	.+ dorigio			* Discrete graphics card / 10-core processors	s need > 180w power supply	
Chipset		v LISB 3.1	Can 1 1v IISB	3 2 Type	a-C Gan 1 (15W c	Limited warranty	1-year or 3-year, limited onsite service	ce / service upgrades available		
Tront ports (Old	Front ports* (Std.) 2x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, 1x USB 3.2 Type-C Gen 1 (15W charging), 1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm)							Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit		
Front ports* (Opt.) Optional: 3-iin-1 media reader								Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise (or	nly available via special bid model)	
Rear ports* (Std.) 4x USB 3.2 Gen 1, 1x serial (9-pin), 1x ethernet (RJ-45), 2x DisplayPort**,									· · · · · · · · · · · · · · · · · · ·	
	1x line-out (3.5mm)					Environment	ENERGY STAR® 8.0*, EPEAT™ Silver			
near ports" (Opt	 Optional: 1x optional Gen 1 with DP function 	video por	T^^ (Choose one	Trom HD	IVII / DP / USB 3.2 1 via PCIa v1 3v		TUV low noise verified (on some mode * Only available for MT 11D0/11CY	15), NO113-COMPHANE		
	Type-C Gen 2 via PC						Accessories	For compatible accessories, please go	to http://smartfind.lenovo.com	
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, 17	00a. (0 pin	,, 5011	(3 p) OI	,	70000001100	Tor compatible accessories, please go	to mapinamanananchovolcom	





















ThinkCentre M920 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 8th /9th Gen	Intel Co	re™ i3 / i5 / i7 / i9	Processor		1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), 1x Thunderbolt 3 (combo
. 10000001	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018), additional RJ-45 and video ports available on optional graphics or ethernet card
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)
	Celeron G4930	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 G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	VVLAIV	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630		Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	Bluetooth™	Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold 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	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	\ \ \ \	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		adapter to enable vPro function through wireless connection)
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Security features	s ● Security slot (in rear for optional ● Power-on password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) • Administrator password
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		Padlock loop Hard disk password
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional cable lock to physically lock Boot sequence control Boot without keyboard and mouse
	Core i5-9400F	6/6	2.9G / 4.1G	9 MB	DDR4-2666	None		Optional chassis intrusion switch Individual USB port disablement
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666 DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)
	Core i5-9500F Core i5-9600	6/6 6/6	3.0G / 4.4G 3.1G / 4.6G	9 MB	DDR4-2666 DDR4-2666	None UHD 630		mouse only, blocks all storage devices
	Core i7-9700	8/8	3.1G / 4.6G 3.0G / 4.7G	9 MB 12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i9-9900	8/16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	noyboara	Some: Lenovo Traditional Keyboard (USB connector), black
				·	<u>'</u>			Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
Memory	64GB max, DDR4-26 * System automatica	66*, four lly clocks	288-pin DIMM s down for the pro	ockets, d cessors	lual-channel capa with lower memor	ible ry controlle:	r Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid Some: Lenovo Calliope Mouse (USB connector), black
Storage	Some: Hard Drive / Some: Solid State D Some: M.2 SSD (22	rive (SSD) / SATA 6.0Gb/s	s, 2.5"		1		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)
	Some: Intel Optane						Mechanical	Tower (18L), black color, metal case
Optical	Optional DVD-ROM of	or DVD Bi	rner (DVD±RW)	, SATA 1	.5Gb/s Drive, slin	n (9.0mm)		• (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm
Onboard SATA	Four onboard SATA 6			0/1 supp	oort (RAID preset	only		 Approx. 15.45 lb (7 kg), weight may vary by configuration
Madia raadar	available via special l)					Toolless cover, disk, optical, extension card removal
Media reader	Optional 7-in-1 media						_	Optional carry handle, dust filter Bay 1: Slim external ODD bay
Graphics	Intel UHD Graphics one VGA (up to 2048							Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD
	supports 3 independe							Bay 3: 3.5", 1" high, internal, HDD/SSD
	Some: NVIDIA Gefo	rce® GT 7	30 (End Of Life)	. DirectX	12. 2GB GDDR	5.		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)
					840x2160@60Hz			Bay 5: 2.5", internal, HDD/SSD (optional bay)
	Some: AMD Radeor				PCIe 3.0 x8, 30 w	vatts,		Notes: M920 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and
			1096x2160@60l					1 eSATA device (front access HDD) Slot 1: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16
	Some: AMD Radeor					ou watts,		Slot 2: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x1
			3840x2160@60 e VGA (up to 20					Slot 3: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16 (x4 signal)
	Some: NVIDIA Gefo	rce GTX	1060 (special bid	d only), D	0irectX 12, 6GB G	HDMI (un		Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	to 4096x2160	@60Hz).	3x DP (up to 51)	20x3200	@60Hz), occupie	s two slots	Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor Cable	Optional DP to VGA on Display with intel intel	dongle, D	P to DVI-D dong	le, DP to	dual DP dongle ((for Collage	I ower suppry	Some: 250 watts, autosensing, 85% PSU Some: 400 watts, autosensing, 92% PSU (only available via special bid)
Chipset	Intel Q370 Chipset					Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available	
Front ports* (Std	.) 2x USB 3.1 Gen2, 2x 1x microphone (3.5m						Some: 1-year or 3-year, limited onsite service / service upgrades available	
Front ports* (Opt	.) <i>Optional</i> : 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)						Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,
Hear ports* (Opt	 Optional: 2x USB 2.0 PCle x4 (special bid 	, 2x USB	3.1 Gen1 via PC	le x1, 2x	(USB 3.1 Type-C	Gen2 via	Accessories	TUV low noise verified (coming soon, on some models), RoHS-compliant For compatible accessories, please go to http://smartfind.lenovo.com
	i Ole At (Special Did	O(11), 1 X Z	-na senai (s-pin	, 4A SUII	ai (a-piii) via FUR	- AI,	, 10000001100	i di demparatio addecedentes, produce go la nitipiratina timaliento volconi

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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.

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

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

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

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U.S. EMEA

Summary of Changes

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

July 29, 2020 - Version 563

► Add new processors for ThinkStation P340 Tower / SFF

June 17, 2020 - Version 561

- New ThinkStation P340 Tower / SFF annouced on June 9, 2020
- ► Add 625W / 1000W PSU, RTX 2070 Super, RTX 2080 Super, NVlink support

May 27, 2020 - Version 560

▶ New ThinkStation P340 Tiny annouced on May 21, 2020

May 6, 2020 - Version 559

▶ Update vPro information on ThinkStation P330 Tower Gen 2 / SFF Gen 2

April 15, 2020 - Version 558

- ▶ Update weight data on ThinkStation P330 Tower Gen 2
- ► Add new product ThinkStation P920 Rack

March 25, 2020 - Version 557

► Add Core i5-8700K, Geforce GTX 1660 Ti, RTX 2070, RTX 2080 on ThinkStation P330 Tower Gen 2

March 4, 2020 - Version 556

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

December 31, 2019 - Version 553

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

December 11, 2019 - Version 552

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

August 7, 2019 - Version 546

▶ Update processor information on Thinktation P330 Tiny

July 17, 2019 - Version 545

► Update EPEAT rating to Silver on most ThinkStation

June 26, 2019 - Version 544

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

May 15, 2019 - Version 542

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

March 13, 2019 - Version 539

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

February 20, 2019 - Version 538

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

August 22, 2018 - Version 529

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

August 1, 2018 - Version 528

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

June 20, 2018 - Version 526

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

May 30, 2018 - Version 525

► Added ThinkStation P720/P920 EMEA May 2018 models

April 18, 2018 - Version 523

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

March 28, 2018 - Version 522

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

March 7, 2018 - Version 521

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

January 30, 2018 - Version 519

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

December 20, 2017 - Version 517

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

September 29, 2017 - Version 513

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

September 12, 2017 - Version 512

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

August 23, 2017 - Version 511

New ThinkStation P320 Tiny models announced on August 2017

August 2, 2017 - Version 510

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

June 21, 2017 - Version 508

► New ThinkStation P320 Tiny announced on June 2017

May 26, 2017 - Version 507

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

April 19, 2017 - Version 505

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

March 29, 2017 - Version 504

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

January 25, 2017 - Version 501

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

January 4, 2017 - Version 500

▶ Added ThinkStation P310 models announced on December 2016

December 14, 2016 - Version 499

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

November 23, 2016 - Version 498

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

October 12, 2016 - Version 496

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

August 3, 2016 - Version 493

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

July 13, 2016 - Version 492

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

June 22, 2016 - Version 491

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

June 2, 2016 - Version 490

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

May 19, 2016 - Version 489

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

April 27, 2016 - Version 488

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

April 6, 2016 - Version 487

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

March 23, 2016 - Version 486

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

February 24, 2016 - Version 485

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

December 9, 2015 - Version 482

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

November 18, 2015 - Version 481

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









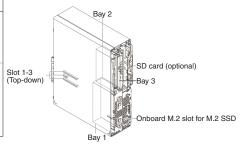


ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

Components	Specification									
Form factor	8.4L mini-tower									
Dimensions	Height: 343.5 mm (13	S.5 in) Width:	92 5 mm (3	6 in) Denth:	305 6 mm	(12 in)				
Weight			,	III). Dopui.	000.0 111111	(12 111)				
vveignit	Maximum configuration Supports one of the form									
	Xeon E-2278G	(260W PSI	J needed)							
	Xeon E-2276G			W/DDR4-2666						
	Xeon E-2274G	4C/8T/4.0GHz								
	Xeon E-2246G			W/DDR4-2666						
	Xeon E-2244G	4C/8T/3.8GHz								
	Xeon E-2236			W/DDR4-2666						
	Xeon E-2234	4C/8T/3.6GHz 6C/6T/3.4GHz								
	Xeon E-2226G Xeon E-2224G	4C/4T/3.5GHz								
	Xeon E-2224	4C/4T/3.4GHz								
	Xeon E-2174G	4C/8T/3.8GHz								
Processor	Core i9-9900			W/DDR4-2666						
	Core i7-9700	8C/8T/3.0GHz								
	Core i7-8700			W/DDR4-2666						
	Core i5-9600	6C/6T/3.1GHz								
	Core i5-9500	6C/6T/3.0GHz								
	Core i5-9400F	6C/6T/2.9GHz								
	Core i5-9400	6C/6T/2.9GHz								
	Core i5-8500	6C/6T/3.0GHz								
	Core i3-9300	4C/4T/3.7GHz								
	Core i3-9100	4C/4T/3.6GHz	/6MB/65W/	DDR4-2400						
	Core i3-8300	4C/4T/3.7GHz	/8MB/62W/	DDR4-2400						
	Core i3-8100	4C/4T/3.6GHz								
	Pentium Gold G5620	2C/4T/4.0GHz	/4MB/54W/	DDR4-2400						
Chipset	Intel C246 Chipset									
Memory Sockets	4 DIMM sockets with 2	channels								
Memory Types	8GB/16GB DDR4-2660 4GB/8GB/16GB/32GB			FCC						
Memory Capacity	64GB with 4 x 16GB fo				UDIMM non	-FCC				
Memory Protection	ECC on models with U				02					
Momory Frotodion	Three PCIe 3.0 slots		omoory							
	Slot 1 PCIe 3.0 x16, I		s to CPU							
Expansion slots	Slot 2 PCle 3.0 x1, low profile, links to PCH									
	Slot 3 PCIe 3.0 x16 (negotiable link width x4), low profile, links to PCH									
	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD									
	Graphice 630 in Core	is or is proce	o in -G Suii	ix veon broce	essors, or in	itel OnD				
Processor graphics	Works along with disc			multi-display	enables th	ree rear				
	display connectors (2	DP standard	1 DP or H	DMI optional)	CHADIOO III	100 1001				
	Up to two PCIe 3.0 x					3) Supports				
	the following graphics	adapters:	oroto grapi	noo adaptor (olot i alia t	o). Gapporto				
Discrete graphics	Adapter Core	s Memory	Power	Connectors	Max qty					
card	Quadro P400 256			3x miniDP	2					
	Quadro P620 512	2GB GDDR	5 40W	4x miniDP	2					
	Quadro P1000 640	4GB GDDR	5 47W	4x miniDP	2					
	Storage Controller	Тур	e Interfac	ce Disl	(Туре	RAID				
Storago Controllo	Onboard Intel RST SA				or SSD	0/1				
Storage Controller	Onboard Intel RST PC	le RAID Sto	d PCIe NV	Me M.2 P	Cle SSD	0/1				
	Notes: M.2 SSD support is li	mited, please see	Storage bay se	ection for more inf	ormation					
	Disk Type Inte	erface RPM	Off	ering	Max	Qty				
		6Gb/s 7.2K		TB/4TB		1				
04		6Gb/s 7.2K		B FIPS		2				
Storage Support		6Gb/s		12GB/1TB		2				
	Optane Memory PCIe			GB		h HDD/SSD				
		NVMe		12GB/1TB		3				

	Components	Specification						
	Components	Up to 3 bays with two disk bays and one slim optical bay:						
		Bay 1 Primary 3.5" SATA bay						
	Ctawa na hay	Bay 2 2.5" SATA bay (Optional)						
	Storage bay	Bay 3 9mm Slim ODD bay						
		M.2 SSD (1 onboard, 2 via PCle to M,2 adapter) Notes: Support 1x M.2 SSD at present, 3x M.2 SSD support is pending availability						
	M.2 slot for Wi-Fi and Bluetooth	One dedicated onboard M.2 slot for optional Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps						
	Media reader	Optional 7-in-1 card reader on most models						
	Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional PCIe ethernet adapters are available						
Power-on and admin password. Trusted Platform Module, TCG 2.0 comp Security features Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, an								
	Intel vPro	Supports Intel vPro on Xeon and selected Core i7 or i5 models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed						
	Intel AMT	Intel Active Management Technology 12 on Xeon and selected Core i7 or i5 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						
	Optional real ports	Supports the following via PCIe adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor						
	Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)						
	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)						
7	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 <u>www.thinkworkstations.com/isv-certifications/</u>						
	Note:	ors actual data transfer speed mentioned on this page may be lower than theoretical speed						

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















ThinkStation P330 Tiny Platform Specifications - I of II

Components	Specification												
Form factor	Optional floor s Optional tool-le	1L. Optional VESA mount bracket kit, supports VESA 75mm and 100mm. Optional floor stand for vertical orientation. Optional tool-less chassis open. Optional dust filter											
Dimensions	Height: 179 mn		n). Width	: 37 mm (1.	5 in). D	epth:	183 mm (7.	2 in)	1				
Weight	Maximum confi	,	,	•		•		,	7				
Recommended monitors	Lenovo recommend and productivity		ThinkVis	ion P series	s monit	ors fo	r best displa	y performance					
	Supports one of	of the fo	ollowing:										
	Processor Number	Cores	Threads	Base Frequency	Cache	TDP	Memory Types	Processor Graphics					
	Core i9-9900T	8	16	2.1GHz	16MB	35W	DDR4-2666	Intel UHD Graphics 630					
	Core i7-9700T	8	8	2.0GHz	12MB	35W	DDR4-2666	Graphics 630					
	Core i7-9700	8	8	3.0GHz	12MB	65W	DDR4-2666	Intel UHD Graphics 630	1				
	Core i5-9600T	6	6	2.3GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630					
	Core i5-9600	6	6	3.1GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	ı				
	Core i5-9500T	6	6	2.2GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	1				
	Core i5-9500	6	6	3.0GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630					
	Core i5-9400T	6	6	1.8GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630					
	Core i5-9400	6	6	2.9GHz	9MB	65W	DDR4-2666	Graphics 630					
	Core i3-9320	4	4	3.7GHz	8MB	62W	DDR4-2400	Intel UHD Graphics 630	a				
	Core i3-9300T	4	4	3.2GHz	8MB	35W	DDR4-2400	Intel UHD Graphics 630	I.				
Procesor	Core i3-9300	4	4	3.7GHz	8MB	62W	DDR4-2400	Graphics 630					
Processor	Core i3-9100T	4	4	3.1GHz	6MB	35W	DDR4-2400	Intel UHD Graphics 630	1				
	Core i3-9100	4	4	3.6GHz	6MB	65W	DDR4-2400	Graphics 630					
	Core i7-8700T	6	12	2.4GHz	12MB	35W	DDR4-2666	Intel UHD Graphics 630					
	Core i7-8700	6	12	3.2GHz	12MB	65W	DDR4-2666	Graphics 630	╟				
	Core i5-8600T	6	6	2.3GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	1				
	Core i5-8600	6	6	3.1GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	5				
	Core i5-8500T	6	6	2.1GHz	9MB	35W	DDR4-2666	Graphics 630	l r				
	Core i5-8500	6	6	3.0GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	E				
	Core i5-8400T	6	6	1.7GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	F				
	Core i5-8400	6	6	2.8GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630					
	Core i3-8300T	4	4	3.2GHz	8MB	35W	DDR4-2400	Intel UHD Graphics 630	∦				
	Core i3-8300	4	4	3.7GHz	8MB	62W	DDR4-2400	Intel UHD Graphics 630					
	Core i3-8100T	4	4	3.1GHz	6MB	35W	DDR4-2400	Intel UHD Graphics 630					
	Core i3-8100	Core i3-8100 4 4 3.6GHz 6MB 6				65W	DDR4-2400	Intel UHD Graphics 630	ַ `				
Chipset	Intel Q370 Chip								\perp				
Memory			34-2666.	SoDIMM. N	lon-EC	0			٦,				
Memory Capacity	64GB (2x 32GE	3)		2 DIMM sockets. DDR4-2666. SoDIMM. Non-ECC									

ansion slots	One PCle slot via PCle 3.0 x16 (ne	snec								
	card;	ne PCle slot via specific riser card: Cle 3.0 x16 (negotiable link width x8) and low profile for discrete graphics ard; Cle 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter								
phics					ocessor graphics only. or graphics plus a discrete graphics					
phics - Processor phics	support multi-dis	regrated Intel UHD Graphics 630. Works along with discrete graphics to pport multi-display								
	One of the follow	ing dis	screte graphics	cards	s on 35W processor models:					
phics - Discrete phics card		Cores	,	Pow- er	Connectors					
	Quadro P620 Quadro P1000		2GB GDDR5 4GB GDDR5		4x miniDP 4x miniDP					
age controllers	Integrated Intel S SATA port for 2.5	ATA A	AHCI controller	in chi	pset, 6Gbps SATA, one onboard					
rnal storage bay	Up to one 2.5" H	DD on	models witho	ut disc	rete graphics card					
(S					, 5.4K; or 1TB SATA 6Gbps, 7.2K					
slot for SSD	or 2242 SSD				r M.2 2280 SSD, one for M.2 2280					
SSD	M.2 2280 SSD st M.2 2242 SSD st	upport	ts up to 512GE	each	·					
ane memory	a 2.5" HDD				m. Optane memory must work with					
slot for Wi-Fi 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. Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps. Note: Wi-Fi card, or specific functions of Wi-Fi- card may not be supported in some countries									
i antenna	Optional Tiny 2.4	GHz/5	GHz SMA and	enna l	kit					
ical	Optional one 9.00 VESA mount is re			optica	I drive kit, DVD-ROM or DVD±RW.					
lia reader	None. Using USE	3 adap	oter							
work interfaces	One onboard Gb Wake-on-LAN. O	E port ptiona	t via integrated Il Intel i350-T4	gigab for 4x	it ethernet Intel i219LM, supports GbE ports, using PCIe slot					
urity features	Chassis intrusion	switc	h. Optional Ke	nsingt						
l vPro nnology		86007	, Core i5-8600), Core	processors: Core i7-8700T, Core i5-8500T, Core i5-8500. Fi is needed					
tems nagement	Intel Active Mana Intel Standard Ma	igeme anage	nt Technology ability on othe	12 on r mode	vPro models, els					
e warranty					e service with 9x5/NBD. IBD in EMEA or other GEOs					
Audio	Intel HD Audio in	terface	e with Realtek	ALC2	33 Codec					
nt standard ports	1x USB 3.1 Gen Combo jack	1 Туре	A (charging).	1x US	SB 3.1 Gen 1 Type-C. 1x Mic-in. 1x					
r standard ports	1x HDMI				1 Type-A. 1x RJ-45. 1x DP.					
Up to two optional rear ports via punch out cable. Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports DP function. 1x COM. 1x VGA. 1x DP. 1x HDMI.										
onal rear por	ts -	Up to two options Port 1 supports of 1x USB 3.1 Gen 1x COM. 1x VGA. 1x DP. 1x HDMI.	Up to two optional rear Port 1 supports one of 1x USB 3.1 Gen 1 Type 1x COM. 1x VGA. 1x DP. 1x HDMI.	Up to two optional rear ports via puncture Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports one 1x COM. 1x VGA. 1x DP.	1x HDMI Up to two optional rear ports via punch out Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports DI ts - 1x COM. 1x VGA. 1x DP. 1x HDMI.					

ThinkStation P330 Tiny Platform Specifications - II of II

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













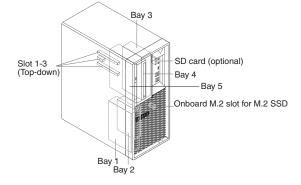
ThinkStation P330 Tower Gen 2 (30CY and 30D0) Platform Specifications - I of II

Components	Specification			Components		ication						
Form factor	18L Tower									aphics card (SI	ot 1 and 3)	
Dimensions	Height: 376 mm (14.	.8 in). Width: 165 mm (6.5 in). Depth: 328	3 mm (12.9 in)		Suppo	rts the fol	lowing	graphics ada	apters:			
Weight		ion: 23.37 lb (10.6kg)	(- /	-		Graphics		Memory	Power	Connector	Max Qt	ty
vvoigni		following processors:		1		P400	2	GB wGDDR	5 30W	3x miniDP	2	
						p P620	_	2GB GDDR5	_	4x miniDP	2	
	Xeon E-2286G	6C/12T/4.0GHz/12MB/95W/DDR4-2666		Discrete Graphics		P1000		4GB GDDR5		4x miniDP	2	_
	Xeon E-2278G	8C/16T/3.4GHz/16MB/80W/DDR4-2666	400W PSU needed	Offering		P2000		5GB GDDR5		4x DP	2	
	Xeon E-2276G	6C/12T/3.8GHz/12MB/80W/DDR4-2666				P2200		GB GDDR5		4x DP	2	_
	Xeon E-2274G Xeon E-2246G	4C/8T/4.0GHz/8MB/83W/DDR4-2666 6C/12T/3.6GHz/12MB/80W/DDR4-2666				P4000		8GB GDDR5			1	-
	Xeon E-2246G Xeon E-2244G	4C/8T/3.8GHz/8MB/71W/DDR4-2666			Quadro	o P5000	1	6GB GDDR5	X 180W	DVI-D DL + 4x	DP 1	_
	Xeon E-2236	6C/12T/3.4GHz/12MB/80W/DDR4-2666			Quadro	o RTX 400	00	8GB GDDR6	160W	3x DP, 1x VirtualLin	1	
	Xeon E-2234	4C/8T/3.6GHz/8MB/71W/DDR4-2666			Mata: Ou	Ounder DOO	00 000	In DAOOO Oward	- BE000 e	or Quadro RTX 4000		DCU.
	Xeon E-2226G	6C/6T/3.4GHz/12MB/80W/DDR4-2666										
	Xeon E-2224G	4C/4T/3.5GHz/8MB/71W/DDR4-2666		Ctavana Cantuallau		e Controlle		Type			Type	RAID
	Xeon E-2224	4C/4T/3.4GHz/8MB/71W/DDR4-2666		Storage Controller				A RAID Std			or SSD	0/1/10/5
	Xeon E-2186G	6C/12T/3.8GHz/12MB/95W/DDR4-2666	400W PSU needed		Unboa	ra miei Ro	ST PUR	RAID Std	Pole	IVIVIE IVI.2 P	Cle SSD	0/1
	Xeon E-2174G	4C/8T/3.8GHz/8MB/71W/DDR4-2666			Disk Ty			ace RPM	0	ffering	Max C	Qty
Processor	Core i9-9900K	8C/16T/3.6GHz/16MB/95W/DDR4-2666	400W PSU needed		3.5" S/	ATA HDD	SATA 6	Gb/s 7.2K		2TB/4TB	3	
1 10003301	Core i9-9900	8C/16T/3.1GHz/16MB/65W/DDR4-2666						6Gb/s 7.2K		GB FIPS	4	
	Core i7-9700K	8C/8T/3.6GHz/12MB/95W/DDR4-2666	400W PSU needed	Storage Support	2.5" S/	ATA SSD	SATA 6	Gb/s	256GB/	/512GB/1TB	4	
	Core i7-9700	8C/8T/3.0GHz/12MB/65W/DDR4-2666			Optane	e Memory	PCIe N	IVMe	3	B2GB .	1,	DD/00D
	Core i7-8700K	6C/12T/3.7GHz/12MB/95W/DDR4-2666				Cle SSD				ι	sed with H	טט/טט
	Core i7-8700	6C/12T/3.2GHz/12MB/65W/DDR4-2666								/512GB/1TB		
	Core i5-9600K		400W PSU needed		Up to f	ive bays v	with fou	ır disk bays p	olus one	slim optical ba	y, supports	up to 3x
	Core i5-9600	6C/6T/3.1GHz/9MB/65W/DDR4-2666			3.5" HI	DD plus 1	x 2.5" \$	SSD, or 4x 2	.5" HDD	D/SSD		
	Core i5-9500	6C/6T/3.0GHz/9MB/65W/DDR4-2666			Bay 1	Primary o	disk ba	y, 3.5" or 2.5	ıı			
	Core i5-9400F	6C/6T/2.9GHz/9MB/65W/DDR4-2666								vhen 2nd Quad	ro P2000 is	s used
	Core i5-9400	6C/6T/2.9GHz/9MB/65W/DDR4-2666			Bay 3 Secondary disk bay, 3.5" or 2.5"							
	Core i5-8500	6C/6T/3.0GHz/9MB/65W/DDR4-2666			Bay 4 5.25" Flex bay, supports one of the following:							
	Core i3-9300 Core i3-9100	4C/4T/3.7GHz/8MB/62W/DDR4-2400 4C/4T/3.6GHz/6MB/65W/DDR4-2400			Flex module for optional front eSATA/Thunderbolt/IEEE1394							
	Core i3-8300	4C/4T/3.7GHz/8MB/62W/DDR4-2400 4C/4T/3.7GHz/8MB/62W/DDR4-2400										
	Core i3-8100	4C/4T/3.6GHz/6MB/65W/DDR4-2400				3rd disk bay, 3.5" or 2.5", removable, via Front Access Storage The leaves writing SATA 4 connector as a SATA mode.						
Chipset	Intel C246 Chipset	HO/+1/0.00112/0101D/03 VV/DD114-2+00	1	Enclosure, using SATA 4 connector as eSATA mode • 3rd disk bay, 3.5" or 2.5", via 5.25" to 3.5" HDD Kit								
Memory Sockets	4 DIMM sockets with	2 shannala		-					ia 5.25	to 3.5" HDD K	τ	
iviernory Sockets				-		9mm Slin						
Memory Types	8GB/16GB DDR4-266	B DDR4-2666 UDIMM non-ECC			M.2	3x M.2 SS	SD (1 or	nboard. 2 via	PCle to	M.2 adapter)		
Memory Capacity		for UDIMM ECC or 128GB with 4 x 32GB L	IDIMM non-ECC	Media reader				ader on mos				
		UDIMM ECC memeory	DENVINI HOH-EGG	Network	One or	nboard Gl	bE port	via integrate	ed gigab	oit ethernet Inte	l i219LM, s	upports
Welliory Frotection		,		interfaces						pters are availa		
	Three PCIe 3.0 slots			WLAN + Bluetooth	One de	edicated o	onboard	d M.2 slot for	optiona	al Intel Wireless	-AC 9560,	2x2,
Expansion slots		full height, half length, links to CPU		VVLAIV + Didetootiii						ac, Bluetooth 5,		
Expansion sides	Slot 2 PCIe 3.0 x1, f	full height, full length, links to PCH			Power-	on and a	dmin pa	assword. Tru	sted Pla	atform Module,	TCG 2.0 cc	mpliant.
	Slot 3 PCIe 3.0 x16	(negotiable link width x4), full height, hall	f length, links to PCH	Security features		al chassis	s intrus	ion switch, E	-lock, c	able lock, Kensi	ngton lock	, and pad
		Graphics P630 in -G suffix Xeon proce		1	lock	ata Intel d	D	V		0 17 15	-1-1-	
	Craphica COO in Car	ia i7 iF i0 ar Dantium processors		Intel vPro	Suppo	rts intel vi	Pro on	Xeon and se	elected (Core i7 or i5 mo Fi is needed	oaeis.	
Processor graphics	Works along with dis	e 17, 15, 15, or Pentium processors. screte graphics to support multi-display,	enables three rear								-11-0	: : -
	display connectors (2 DP standard, 1 DP or HDMI optional)		Intel AMT	intel A	CIIVE Man	ageme	III Technolog	y 12 on	Xeon and sele	ctea Core	17 or 15
	,	,						Manageabil			- F/NIDD	
				Base warranty	US mc	aels com	es with	3-year limite	ea onsit	e service with 9	X5/NBD.	00
						•				NBD in EMEA o	other GE	US
				HD Audio	intel H	D Audio ir	nterface	e with Realte	k ALC2	33 Codec		

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

Rear ports Type-C. 1x Mic-in. 1x Combo jack 2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor 2x Thunderbolt (USB Type-C), one of two ports supports video-out. 1x eSATA. 1x IEEE1394 Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCle adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C) Non operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing 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.	Components	Specification							
Tx Audio line-out	Front ports								
(on flex module) 1x eSATA. 1x IEEE1394 Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCle adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C) Altitude Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft) 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 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.	Rear ports	1x Audio line-out							
Optional rear ports 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCle adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C) Non operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft) Humidity	Optional front ports (on flex module)								
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 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.	Optional rear ports	1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCIe adapter:							
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 Robert Graduation 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.	Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)							
Environmental certification Power supply Storage (with package): 20%~90%, non-condensing RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified 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.	Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft).							
certification qualified Supports one 250W or 400W power supply, 100V - 240V, 92% PSU. Power supply Climate Savers Computing Platinum and 80 PLUS Platinum qualified. 400W PSU supports one 6+2-pin aux power connector.	Humidity								
Power supply Climate Savers Computing Platinum and 80 PLUS Platinum qualified. 400W PSU supports one 6+2-pin aux power connector.	Environmental certification								
SV certifications Please visit <u>www.thinkworkstations.com/isv-certifications/</u>	Power supply	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 P340 SFF Platform Specifications

Components	Specification											
Form factor	8.2L											
Dimensions	Height: 339.5 mm (13.4 in). Width: 92.5 mm (3.6 in). Depth: 309.7 mm (9.3 in)											
Weight	Maximum configuration: 12.6 lb (5.7 kg)											
Processor Sockets			11. 12.0	ID (5.7 KÇ	ال							
			:0 :7	· : 0								
Processor Support	Processor Support Up to one Xeon, Core i9, i7, i5, or i3 processor Processor Cores Threads Base Cache TDD Memory FCC Processor VPro											
	Processor Number	Cores	hreads	Base Frequence	Cache	TDP	Memory Types	ECC	Processor Graphics	vPro		
	Xeon W-1290	10	20	3.2GHz		80W	DDŔ4-2933	Yes	UHD P630	Yes		
	Xeon W-1270	8	16	3.4GHz			DDR4-2933		UHD P630	Yes		
	Xeon W-1250	6	12	3.3GHz			DDR4-2666		UHD P630	Yes		
	Core i9-10900	10	20	2.8GHz			DDR4-2933		UHD 630	Yes		
Processor	Core i7-10700	8	16	2.9GHz			DDR4-2933		UHD 630	Yes		
	Core i5-10600	6	12	3.3GHz			DDR4-2666		UHD 630	Yes		
	Core i5-10500	6	12	3.1GHz			DDR4-2666		UHD 630	Yes		
	Core i5-10400	6 4	12	2.9GHz			DDR4-2666		UHD 630	No		
	Core i3-10320 Core i3-10300	4	<u>8</u> 8	3.8GHz 3.7GHz	8MB 8MB		DDR4-2666 DDR4-2666		UHD 630 UHD 630	No No		
	Core i3-10300	4	8	3.6GHz	6MB		DDR4-2666		UHD 630	No		
Chipset	Intel W480 Chip			0.0011Z	OIVID	0344	DDI 14-2000	INO	0110 000	140		
Memory Sockets	4 DIMM sockets) ohanr	nole								
Wellioly Sockets					1500							
Memory Types	8GB/16GB/32G or 4GB/8GB/16					l non-	ECC					
Memory Capacity	128GB											
Memory Protection	ECC. ECC men	nory ar	nd ECC	C-enable (CPU are	need	led					
	Three PCIe 3.0 slots as following:											
C a sa a lata	Slot 1 PCle 3.0	Slot 1 PCle 3.0 x16, low profile, links to CPU										
Expansion slots	Slot 2 PCIe 3.0	x1. lov	v profile	e. links to	PCH							
	Slot 3 PCle 3.0 x16 (negotiable link width x4), low profile, links to PCH											
Processor graphics	Integrated Intel in Core process Works along wi display connect HDMI, or USB-0	ors. th disci ors (2	rete ara	aphics to	support	multi-	displav. en	ables	three real	,		
	Graphics	;	Me	emory	Power		Conne	ector		Max Qty		
Discrete Graphics	Quadro P400		2GB	GDDR5	30W		3x mir	niDP		2		
Offering	Quadro P620			GDDR5	40W		4x mir			2		
	0 1 01000					4x miniE				2		
	Quadro P1000											
		ller	1400		50W Inter	face			RAID			
Storage	Storage Contro			Туре	Inter		Disk Ty	/ре	RAID 0/1	-		
Storage Controller	Storage Contro Onboard Intel F	RST SA	ATA RA	Type ID Std	e Inter SATA	6Gb/s	Disk Ty HDD or	rpe SSD	0/1	-		
	Storage Contro Onboard Intel F Onboard Intel F	RST SA	ATA RA Cle RA	Type ID Std ID Std	e Inter SATA	6Gb/s VVMe	Disk Ty HDD or M.2 PCle	rpe SSD	0/1			
	Storage Contro Onboard Intel F Onboard Intel F Disk Type	RST SA RST PO	ATA RA Cle RA erface	Type ID Std ID Std	SATA PCIe I	6Gb/s NVMe Offer	Disk Ty HDD or M.2 PCle	rpe SSD	0/1 0 0/1 Max Qty			
Controller	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD	RST SA RST PO Int SAT	ATA RA Cle RA erface A 6Gb/	Type ID Std ID Std RPM /s 7.2K	SATA PCIe I	6Gb/s NVMe Offer 2TB/4	Disk Ty HDD or M.2 PCle ing TB/6TB	rpe SSD	0/1 0 0/1 Max Qty 1			
	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA HDD	RST SARST PO	ATA RA Cle RA cerface A 6Gb/ A 6Gb/	Type ID Std ID Std RPM /s 7.2K	SATA PCIe I	6Gb/s NVMe Offer 2TB/4 1TB F	Disk Ty HDD or M.2 PCle ing ITB/6TB	rpe SSD	0/1 0 0/1 Max Qty 1 2			
Controller	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA SSD	RST SARST PO Int SAT SAT	ATA RA Cle RA cerface A 6Gb/ A 6Gb/	Type ID Std ID Std RPM /s 7.2K /s 7.2K	Inter SATA PCIe I	6Gb/s NVMe Offer 2TB/4 1TB F 12GB	Disk Ty HDD or M.2 PCle ing HTB/6TB HPS /1TB	/pe SSD SSD	0/1 0 0/1 Max Qty 1			
Controller	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA SSD M.2 PCIe SSD	RST SARST PO Int SAT SAT SAT PCI	ATA RA Cle RA cerface A 6Gb/ A 6Gb/ A 6Gb/ e NVM	Type ID Std ID Std RPM /s 7.2K /s 7.2K	Inter SATA PCIe I	6Gb/s NVMe Offer 2TB/4 1TB F 12GB	Disk Ty HDD or M.2 PCle ing ITB/6TB	/pe SSD SSD	0/1 0 0/1 Max Qty 1 2 2			
Controller	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA SD M.2 PCIe SSD Bay 1 First 3.5"	RST SARST PO Into SAT SAT SAT PCI	ATA RA Cle RA cerface A 6Gb/ A 6Gb/ A 6Gb/ e NVM	Type ID Std ID Std RPM /s 7.2K /s 7.2K	Inter SATA PCIe I	6Gb/s NVMe Offer 2TB/4 1TB F 12GB	Disk Ty HDD or M.2 PCle ing HTB/6TB HPS /1TB	/pe SSD SSD	0/1 0 0/1 Max Qty 1 2 2			
Controller Storage Support	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA SD M.2 PCIe SSD Bay 1 First 3.5' Bay 2 First 2.5'	RST SARST PO Into SAT SAT SAT PCI disk b	ATA RA Cle RA Cerface A 6Gb/ A 6Gb/ A 6Gb/ A 6Gb/ e NVM Day bay	Type ID Std ID Std RPM /s 7.2K /s 7.2K	Inter SATA PCIe I	6Gb/s NVMe Offer 2TB/4 1TB F 12GB	Disk Ty HDD or M.2 PCle ing HTB/6TB HPS /1TB	/pe SSD SSD	0/1 0 0/1 Max Qty 1 2 2			
Controller	Storage Contro Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA SDD M.2 PCIe SSD Bay 1 First 3.5' Bay 2 First 2.5' Bay 3 9mm Slii	RST SARST PO	ATA RA Cle RA Cerface A 6Gb/ A 6Gb/ A 6Gb/ A 6Gb/ e NVM Day bay	Type ID Std ID Std RPM /s 7.2K /s 7.2K	Inter SATA PCIe I	6Gb/s NVMe Offer 2TB/4 1TB F 12GB	Disk Ty HDD or M.2 PCle ing HTB/6TB HPS /1TB	/pe SSD SSD	0/1 0 0/1 Max Qty 1 2 2			
Controller Storage Support	Storage Contro Onboard Intel F Onboard Intel F Onboard Intel F Disk Type 3.5" SATA HDD 2.5" SATA HDD 2.5" SATA SSD M.2 PCIe SSD Bay 1 First 3.5' Bay 2 First 2.5' Bay 3 9mm Slii Bay 4 Media re	RST SARST PO Into SAT. SAT. SAT. PCI. ' disk b	ATA RA Cle RA cerface A 6Gb/ A 6Gb/ A 6Gb/ A 6Gb/ a 6Gb/ bay bay bay	Type ID Std ID Std RPM /s 7.2K /s 7.2K	Inter SATA PCIe I	6Gb/s NVMe Offer '2TB/4 1TB F 12GB '512G	Disk Ty HDD or M.2 PCle ing ITB/6TB IPS /1TB B/1TB/2TB	/pe SSD SSD	0/1 0 0/1 Max Qty 1 2 2			

Components	Specification
Media reader	Optional SD 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
WLAN + Bluetooth	Optional Intel Wi-Fi 6 AX201, 2x2, 2.4GHz/5GHz (160MHz channels), WiFi 6, Bluetooth 5
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and pad lock
Intel vPro	Supports Intel vPro on models with vPro-enable processor. vPro also requires AX201 if Wi-Fi function is needed
Intel AMT	Intel Active Management Technology 14 on vPro models, Intel Standard Manageability on other models
Base warranty	Most models comes with 3-year limited onsite service with 9x5/NBD. Other models may have 1 or 2-year limited onsite service
HD Audio	Intel HD Audio interface with Realtek ALC623 Codec
Front ports	2x USB-A 3.2 Gen 1. 2x USB-A 3.2 Gen 2. 1x USB-C 3.2 Gen 1. 1x Mic-in. 1x Combo jack
Rear ports	2x USB-A 3.2 Gen 1. 2x USB-A 2.0. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out
Optional rear ports	Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x video (DP, HDMI, or USB-C). 2x USB 2.0. Supports the following via PCle adapter: 4x COM*. 1x USB-C 3.2 Gen 2. 2x USB-A 3.2 Gen 1*. 1x Thunderbolt Notes: 4x COM and 2x USB-A 3.2 Gen 1 are special bids only.
Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)
Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)
Humidity	Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing
Environmental certification	RoHS-compliant, EPEAT Silver rating, and ENERGY STAR 8 qualified
Power supply	Supports one of the following: 310W, 92% PSU, 100V - 240V, 80 PLUS Platinum qualified 380W, 92% PSU, 100V - 240V, 80 PLUS Platinum qualified
ISV certifications	Please visit <u>www.thinkworkstations.com/isv-certifications/</u>
Note:	factors, actual data transfer aread mentioned on this page may be lower than theoretical aread

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 Lenovo workstation PSREF developer













ThinkStation P340 Tiny Platform Specifications

Components	Specificatio	n									
Form factor	1L. Optional VESA mount bracket kit, supports VESA 75mm and 100mm. Optional floor stand for vertical orientation. Optional tool-less chassis open. Optional dust filter										
Dimensions	Height: 179 r	 Height: 179 mm (7.0 in). Width: 37 mm (1.5 in). Depth: 182.9 mm (7.2 in)									
Weight	Maximum co	Maximum configuration: 3 lb (1.4kg)									
	Processor Number	Cores	Threads	Base	e ncy	Cache		Memo Type	s	vP	ro
	19-10900 I	10	20	1.9GI	1Z			DDR4-2		Ye	
	i9-10900	10	20	2.8GI				DDR4-2		Ye	
	i7-10700T	8	16	2.0GI				DDR4-2		Ye	
	i7-10700	8	16	2.9Gl				DDR4-2		Ye	
	i5-10600T	6	12	2.4GI				DDR4-2		Ye	
D	i5-10600	6	12	3.3GI				DDR4-2		Ye	
Processor	i5-10500T	6	12	2.3Gl				DDR4-2		Ye	
	i5-10500	6	12	3.1Gl				DDR4-2		Ye	-
	i5-10400T	6	12	2.0GI				DDR4-2		N.	
	i5-10400	<u>6</u> 4	12	2.9GI				DDR4-2		N.	
	i3-10320 i3-10300T	4	8	3.8GI 3.0GI		8MB 8MB	25//	DDR4-2 DDR4-2	666	N N	
	i3-103001	4	8	3.7GI			65W	DDR4-2	666	N.	
	i3-10300 i3-10100T	4	8	3.0GI				DDR4-2		N.	
	i3-101001	4	8	3.6GI				DDR4-2		N	
Chipset	Intel Q470 C			0.001	14	OIVID	00 * *	DDITE	.000	14	
Memory Sockets	2 DIMM sock										
Memory Types	4GB/8GB/16		CR DDR	1-2033	Son	NIMI n	on-F(20			
Memory Capacity	64GB (2x 32		ab bbit	T 2000	OOL	/11V11V1 11	OII L	<i></i>			
Memory Protection		GD)									
iviemory Frotection											
Expansion slots	One PCIe slo PCIe 3.0 x16 PCIe 3.0 x4	(nego	tiable lin	k width	x8) a	and low adapte	profi r and	le for dis Thunde	crete rbolt a	graphics dapter	card;
Processor graphics	Integrated In multi-display	tel UH	D Graphi	cs 630.	Wor	ks alor	ng wit	h discret	e grap	hics to	support
Diagrata Cranbias	Graphic	cs	Men	nory	Pow	er		Connec	tor		Max Qt
Discrete Graphics Offering	Quadro P620		2GB G	DDR5	40V	V		4x mini	DP		1
Juenna	Quadro P100	0	4GB G	DDR5	50V	V		4x mini	DP		1
Storage Controller	Supports M.2	2 SSD	RAID 0 /	1, for s	peci	al bids	only				
Storage Support	Disk Type M.2 PCIe SS		nterface De NVMe	RPM 2	56GI	Offeri B/512G		3/2T	Ma	x Qty 2	
Storage Bays	Two M.2 slots	for M.	2 SSD								
Media reader	None										
Network interfaces	One onboard								219LN	l, suppo	rts Wak

	Components	Specification
	WLAN + Bluetooth	One dedicated M.2 slot for optional Wi-Fi card, supports one of the following: Intel Wi-Fi 6 AX201, 2x2, 2.4GHz/5GHz (160MHz channels), WiFi 6, Bluetooth 5 Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5
		• Realtek 8822CE, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 5
_	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Chassis intrusion switch. Kensington slot
	Intel vPro	Supports vPro on models with the vPro enable processors vPro also requires Wi-Fi 6 AX201 if WiFi is needed
4	Systems management	Intel Active Management Technology 14 on vPro models, Intel Standard Manageability on other models
4	Base warranty	Most models comes with 3-year limited onsite service with 9x5/NBD. Other models may have 1 or 2-year limited onsite service
┪	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec
	Optical	Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW.
4		1x USB-A 3.2 Gen 2 (charging). 1x USB-C 3.2 Gen 1. 1x Combo jack
4	Rear standard ports	2x USB-A 3.2 Gen 2. 2x USB-A 3.2 Gen 1 (one supports smart power-on). 1x RJ-45. 1x DP. 1x HDMI. 1x security-lock slot
	Optional rear ports	Reserved area for two optional ports. Ports 1 supports one of the following: 1x USB-C, also supports DP function 1x COM 1x VGA 1x DP 1x HDMI Port 2 supports 2nd COM. Also supports optional Thunderbolt via PCIe adpater and Wi-Fi antenna slot
	Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)
	Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)
	Humidity	Operating: 20%~80%, non-condensing Storage (with package): 20%~90%, non-condensing
/	MIL-SPEC	Certified
_	Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 8 qualified
	Power supply	 170W power adaper, 100V - 240V, 89% PSU 230W power adaper, 100V - 240V, 89% PSU
_	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/













ThinkStation P340 Tower Platform Specifications

Components	Specification								Components	Specification				
Form factor	17L Tower									Disk Type Interface RPM Offering Max Qty				
Dimensions	Height: 376 mm (14.8 in) Width:	170 mm (6.7	in) D	enth: 315 '	35 mn	n (12 4 in)			3.5" SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB/6TB 2				
Weight			`	111). D	cpiii. 010.	00 11111	11 (12.7 111)		Storage Support	2.5" SATA HDD SATA 6Gb/s 7.2K 1TB FIPS 4				
	Maximum configu	iration: 20.7 ib (9.4 kg)							2.5" SATA SSD SATA 6Gb/s - 512GB/1TB 4				
Processor Sockets		0 :0 :7 :5							-	M.2 PCIe SSD PCIe NVMe - 256GB/512GB/1TB/2TB 4				
Processor Support	sor Support Up to one Xeon, Core i9, i7, i5, or i3 processor									Bay 1 First 3.5" disk bay				
	Processor Number		Base guency Cache	TDP	Memory Types	ECC	Processor Graphics	vPro		Bay 2 First 2.5" SATA bay				
				125W		3 Yes	UHD P630	Yes		Bay 3 Secondary 3.5" disk bay				
							UHD P630		Storage Bays	Bay 4 Secondary 2.5" disk bay				
		8 16 3.					UHD P630		Otorage Bays	Bay 5 9mm Slim ODD bay				
							UHD P630			,				
							UHD P630			Bay 6 Media reader				
							UHD P630			M.2 4x M.2 SSD (2 onboard. 2 via PCIe to M.2 adapter)				
Drococor					DDR4-2933 DDR4-2933			Yes Yes	Media reader	Optional SD reader on most models				
Processor					DDR4-2933			Yes	Network	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports				
					DDR4-2933			Yes	interfaces	Wake-on-LAN. Optional PCIe ethernet adapters are available				
	Core i5-10600K	6 12 4.	1GHz 12MB	125W	DDR4-2666	3 No	UHD 630	Yes	WLAN +	Optional Intel Wi-Fi 6 AX201, 2x2, 2.4GHz/5GHz (160MHz channels), WiFi 6,				
					DDR4-2666			Yes	Bluetooth	Bluetooth 5				
					DDR4-2666			Yes	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and pad				
			9GHz 12MB		DDR4-2666			No	Security leatures	lock				
			8GHz 8MB 7GHz 8MB		DDR4-2666 DDR4-2666			No No	-	Supports Intel vPro on Xeon and selected Core i7 or i5 models.				
					DDR4-2666			No	Intel vPro	vPro also requires AX201 if Wi-Fi function is needed				
Chipset	Intel W480 Chipse		00.12 0.11.2		222000	<u> </u>	02 000	1.10	Intel AMT	Intel Active Management Technology 14 on vPro models,				
Memory Sockets	4 DIMM sockets v								Intel Alvi i	Intel Standard Manageability on other models				
Memory Types	8GB/16GB/32GB or 4GB/8GB/16GI			1 non-l	ECC				Base warranty	Most models comes with 3-year limited onsite service with 9x5/NBD. Other models may have 1 or 2-year limited onsite service				
Memory Capacity	128GB								HD Audio	Intel HD Audio interface with Realtek ALC623 Codec				
Memory Protection	ECC. ECC memo	ry and ECC-en	able CPU are	need	ed				Front ports	2x USB-A 3.2 Gen 1. 2x USB-A 3.2 Gen 2. 1x USB-C 3.2 Gen 1. 1x Mic-in. 1x				
,	Three PCIe 3.0 sl	•							<u> </u>	Combo jack 2x USB-A 3.2 Gen 1. 2x USB-A 2.0. 1x RJ-45. 1x COM. 2x DP.				
	Slot 1 PCle 3.0 x	16 full height f	ull lenath linl	cs to C	PU				Rear ports	1x Audio line-out				
Expansion slots	Slot 2 PCle 3.0 x									Supports the following via cable:				
	Slot 3 PCle 3.0 x					anath	links to P	СН	Optional rear	1x COM. 1x Parallel. 2x PS/2. 1x video (DP. HDMI. or USB-C). 2x USB 2.0.				
	<u> </u>								41 - 1 - 1 - 1	Supports the following via PCIe adapter:				
	Integrated Intel Ul		630 in Xeon	oroces	sors, or in	itel UF	1D Grapnic	cs 630	ports	4x COM*. 1x USB-C 3.2 Gen 2. 2x USB-A 3.2 Gen 1*. 1x Thunderbolt				
Processor graphics			cs to support	multi-	display er	nables	s three rea	r		Notes: 4x COM and 2x USB-A 3.2 Gen 1 are special bids only.				
	display connector	s (2 DP standa	rd, 1 video po	ort opti	ional (Vide	o por	t can be D)P,	Tomorotura	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C)				
	HDMI, or USB-C) `	•		`			•	Temperature	Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)				
	Graphics	Memo	ry Power		Conn	ector		Max	A IL'L I -	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft).				
	0 1 0100	200.00	0014					Qty	Altitude	Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)				
	Quadro P400	2GB GDI			3x mi			2	Humidity	Operating: 30%~90%, non-condensing				
Discrete Graphics	Quadro P620	2GB GDI			4x mi			2	Hulfillalty	Storage (with package): 20%~90%, non-condensing				
Offering	Quadro P1000 Quadro P2200	4GB GDI	DR5 50W DR5X 75W		4x mi 4x l			2	Environmental	RoHS-compliant, EPEAT Silver rating, and ENERGY STAR 8 qualified				
	Quadro RTX 400		DR6 160W	-	3x DP, 1x \		llink	1	certification	<u> </u>				
	Quadro RTX 500							1	Dower ownshi	Supports one of the following:				
		Quadro RTX 5000 16GB GDDR6 265W 4x DP, 1x VirtualLink 1 Notes: RTX 4000/RTX 5000/2x P2200 needs 500W PSU.							Power supply	 300W, 90% PSU, 100V - 240V, 80 PLUS Gold qualified 500W, 92% PSU, 100V - 240V, 80 PLUS Platinum qualified 				
									ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/				
Ctorogo	Storage Controller Type Interface Disk Type RAID Onboard Intel RST SATA RAID Std SATA 6Gb/s HDD or SSD 0/1/10/5								Note:	1 ICAGC VIGIL WWW.trillinwornstations.com/15V-CCI tillications/				
Storage Controller		Onboard Intel RST SATA RAID Std SATA 6Gb/s HDD or SSD 0/1/10/5 Onboard Intel RST PCIe RAID Std PCIe NVMe M.2 PCIe SSD 0/1							1. Depending on many	factors, actual data transfer speed mentioned on this page may be lower than theoretical speed. vice on ThinkStation PSREF, please contact Lenovo workstation PSREF developer				
55111101101	Notes: RAID 5 and 10 a				1 010	JOL	- 0/1		2. Any questions or adv	rice on ThinkStation PSHEF, please contact Lenovo workstation PSHEF developer				
	INUIDO. HAID O AIR 10 8	are available UH 2.5	טטטועוו.											



ThinkStation P520 Platform Specifications - I of II

Form factor	33L Tower								
Dimensions	165mm/6.5" W x				n/17.3"	H (with feet)		
Weight	Maximum configu		ì						
	Processor	# of	# of .	_ Bas		Cache	TDP	Memo	
			Threads	Frequ				Туре	
	Xeon W-2295	18	36	3.0G		24.75MB	165W	DDR4-2	
	Xeon W-2275	14	28	3.3G		19.25MB	165W	DDR4-2	
	Xeon W-2265	12	24	3.5G		19.25MB	165W	DDR4-2	
	Xeon W-2255 Xeon W-2245	10	20	3.7G		19.25MB	165W	DDR4-2	
	Xeon W-2235	8 6	16 12	3.9G 3.8G		16.5MB 8.25MB	155W 130W	DDR4-2 DDR4-2	
	Xeon W-2235	4	8	4.1G		8.25MB	105W	DDR4-2	
	Xeon W-2223	4	8	3.6G		8.25MB	120W	DDR4-2	
Processor Support	Xeon W-2195	18	36	2.3G		24.75MB	140W	DDR4-2	
	Xeon W-2175	14	28	2.5G		19MB	140W	DDR4-2	
	Xeon W-2175	10	20	3.3G		13.75MB	140W	DDR4-2	
	Xeon W-2145	8	16	3.7G		11MB	140W	DDR4-2	
	Xeon W-2135	6	12	3.7G		8.25MB	140W	DDR4-2	
	Xeon W-2133	6	12	3.6G		8.25MB	140W	DDR4-2	
	Xeon W-2125	4	8	4.0G		8.25MB	120W	DDR4-2	
	Xeon W-2123	4	8	3.6G		8.25MB	120W	DDR4-2	
	Xeon W-2104	4	4	3.2G		8.25MB	120W	DDR4-2	
	Xeon W-2102	4	4	2.9G		8.25MB	120W	DDR4-2	
Processor Sockets									
Chipset	Intel C422 Chips	et .							
Memory Sockets	8 DIMM sockets		annale						
Memory Types	DDR4-2666 RDII			3 DDIM	N/I				
Memory Capacity	512GB with 8 x 6	94GB DD	H4-2933	RUIIVII	/IS				
Memory Protection									
	Slot 1 (CPU) F	Cle 3.0	x8, full h	eight, fu	II lengtl	h, 25W, ope	n ended		
	Slot 2 (CPU) F	Cle 3.0	x16, full	height, f	ull leng	th, 75W, do	uble-wid	th	
Francisco eleka		Cle 3.0	x4, full h	eight, ha	alf leng	th, 25W, ope	en ended	d	
Expansion slots						th, 75W, do			
		PCI, full h				,, ,			
						th, 25W, ope	n andar	4	
		010 0.0			<u>_</u>				
	Graphics		Mer	nory	Pow-	Connec	tor	SLI /	Max
	NIVC 010		4CD	DDDa	er	Oversioni		NVlink	Qty
	NVS 810			DDR3	68W	8xmini			2
	Quadro P400 Quadro P600			ADDR5 ADDR5	30W 45W	3xmini[4xmini[2
	Quadro P620			DDR5	40W	4xmini[2
	Quadro P1000				14000				2
				DDR5	50W	4xmini[
Discrete Graphics	Quadro P2000		5GB C	DDR5	50W 75W	4xDF)		2
Discrete Graphics Offering	Quadro P2000 Quadro P4000		5GB G	DDR5 DDR5	50W 75W 120W	4xDF 4xDF)	SLI	2
	Quadro P2000 Quadro P4000 Quadro P5000		5GB 0 8GB 0 16GB 0	SDDR5 SDDR5 SDDR5X	50W 75W 120W 180W	4xDF 4xDF DVI-D DL+	4xDP	SLI	2 2 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000	00	5GB C 8GB C 16GB C 24GB C	SDDR5 SDDR5 SDDR5X SDDR5X	50W 75W 120W (180W (250W	4xDF 4xDF DVI-D DL+ DVI-D DL+	4xDP 4xDP	SLI	2 2 2 1
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400	00	5GB C 8GB C 16GB C 24GB C 8GB C	GDDR5 GDDR5 GDDR5X GDDR5X GDDR6	50W 75W 120W (180W (250W 160W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViri	4xDP 4xDP ualLink		2 2 2 1 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500	00	5GB C 8GB C 16GB C 24GB C 8GB C	GDDR5 GDDR5 GDDR5X GDDR5X GDDR6 GDDR6	50W 75W 120W (180W (250W 160W 265W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xVir1 4xDP, 1xVir1	4xDP 4xDP ualLink	NVLink	2 2 2 1 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600)0)0	5GB 0 8GB 0 16GB 0 24GB 0 8GB 0 16GB 0	ADDR5 ADDR5 ADDR5X ADDR5X ADDR6 ADDR6 ADDR6 ADDR6 ADDR6	50W 75W 120W (180W (250W) 160W 265W 295W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt	4xDP 4xDP ualLink ualLink	NVLink	2 2 2 1 2 2 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800)0)0	5GB 0 8GB 0 16GB 0 24GB 0 8GB 0 16GB 0 24GB 0	GDDR5 GDDR5X GDDR5X GDDR5X GDDR6 GDDR6 GDDR6 GDDR6	50W 75W 120W 180W 250W 160W 265W 295W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt	4xDP 4xDP ualLink ualLink ualLink	NVLink NVLink	2 2 2 1 2 2 2 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro GP100)0)0	5GB (3 8GB (3 16GB (3 24GB (3 16GB (4 24GB (4 48GB (4 16GB	ADDR5 ADDR5X ADDR5X ADDR5X ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6	50W 75W 120W (180W (250W 160W 265W 295W 295W 235W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 1xDVI-D DL	4xDP 4xDP ualLink ualLink ualLink ualLink ualLink	NVLink	2 2 1 2 2 2 2 1 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro GP100 Quadro GV100)0)0)0	5GB G 8GB G 16GB G 24GB G 16GB G 24GB G 48GB G 16GB 32GB	ADDR5 ADDR5 ADDR5X ADDR5X ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6	50W 75W 120W 180W 250W 160W 265W 295W 295W 235W 250W	4xDF 4xDF DVI-D DL+ 3xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 1xDVI-D DL 4xDF	4xDP 4xDP ualLink ualLink ualLink ualLink ualLink	NVLink NVLink NVLink	2 2 2 1 2 2 2 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controlli	00 00 00 er Type	5GB 0 8GB 0 16GB 0 24GB 0 8GB 0 16GB 0 24GB 0 48GB 0 16GB 32GB	ADDR5 ADDR5X ADDR5X ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ADDR6 ABM2 ABM2	75W 75W 120W 180W 250W 160W 265W 295W 295W 295W 250W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 1xDVI-D DL 4xDF	4xDP 4xDP ualLink ualLink ualLink ualLink ualLink	NVLink NVLink	2 2 1 2 2 2 2 1 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controllo	on on on er Type STe Std	5GB 0 8GB 0 16GB 0 24GB 0 16GB 0 24GB 0 48GB 0 16GB 3 24GB 0 5/8	ADDR5 ADDR5 ADDR5 ADDR5 ADDR6	50W 75W 120W (180W (250W 160W 265W 295W 295W 235W 250W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViril 4xDP, 1xViril 4xDP, 1xViril 1xDVI-D DL 4xDF RAID 0/1/10/5	4xDP 4xDP ualLink ualLink ualLink ualLink ualLink	NVLink NVLink NVLink	2 2 1 2 2 2 2 1 2
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controlli	00 00 00 er Type	5GB 0 8GB 0 16GB 0 24GB 0 16GB 0 24GB 0 48GB 0 16GB 3 24GB 0 5/8	EDDR5 EDDR5 EDDR5X EDDR6 EDDR6 EDDR6 EDDR6 EDDR6 HBM2 HBM2 Interface ATA 6Gb 12Gb/s,	50W 75W 120W (180W (250W 160W 265W 295W 295W 235W 250W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 4xDP, 1xVirt 1xDVI-D DL 4xDF	4xDP 4xDP ualLink ualLink ualLink ualLink ualLink	NVLink NVLink NVLink	2 2 1 2 2 2 2 1 2
Offering	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 800 Quadro RTX 800 Quadro RTX 800 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controll Onboard Intel RS	er Type STe Std	5GB C 8GB C 16GB C 24GB C 8GB C 16GB C 48GB C 16GB S 32GB	GDDR5 GDDR5X GDDR5X GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 HBM2 HBM2 Interface ATA 6Gb 12Gb/s, 6Gb/s	50W 75W 120W 180W 250W 160W 265W 295W 295W 295W 250W 250W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 1xDI-D DL 4xDF RAID 0/1/10/5	4xDP 4xDP ualLink ualLink ualLink ualLink	NVLink NVLink NVLink Cache	2 2 2 1 2 2 2 1 2 1
Offering	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controllo	on on on er Type STe Std	5GB C 8GB C 16GB C 24GB C 8GB C 16GB C 48GB C 16GB S 32GB	GDDR5 GDDR5 GDDR5X GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 HBM2 HBM2 Interface ATA 6Gb 12Gb/s, 6Gb/s	50W 75W 120W 180W 250W 160W 265W 295W 295W 295W 250W 250W	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViril 4xDP, 1xViril 4xDP, 1xViril 1xDVI-D DL 4xDF RAID 0/1/10/5	4xDP 4xDP ualLink ualLink ualLink ualLink	NVLink NVLink NVLink	2 2 2 1 2 2 2 1 2 1
	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controlli Onboard Intel RS 9440-8i PCIe	er Type STe Std Opt Opt	5GB C 8GB C 16GB C 24GB C 16GB C 24GB C 16GB S 16GB 32GB S/SAS	GDDR5 GDDR5 GDDR5X GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 HBM2 HBM2 Interface ATA 6Gb 12Gb/s, 6Gb/s 6Gb/s	50W 75W 120W (180W (250W 160W 265W 295W 295W 295W 250W 8 V/s SATA	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 1xDVI-D DL 4xDF RAID 0/1/10/5 0/1/10/5/6	4xDP 4xDP ualLink ualLink ualLink ualLink	NVLink NVLink NVLink Cache	2 2 2 1 2 2 2 1 2 1
Offering	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RY100 Storage Controlli Onboard Intel RS 9440-8i PCIe 9460-16i PCIe NVMe Basic	er Type STe Std Opt Opt	5GB C 8GB C 16GB C 24GB C 16GB C 24GB C 16GB C 16GB C 32GB 32GB SAS	GDDR5 GDDR5 GDDR5X GDDR6X GDDR6 GDDR6 GDDR6 HBM2 HBM2 Interface ATA 6Gb/s 12Gb/s, 6Gb/s 12Gb/s, 6Gb/s	50W 75W 120W (180W (250W) 265W 295W 295W 295W 250W 250W 8	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 1xDI-D DL 4xDF 0/1/10/5 0/1/10/5 0/1/10/5/6	4xDP 4xDP ualLink ualLink ualLink ualLink	NVLink NVLink NVLink Cache	2 2 2 1 2 2 2 1 2 1
Offering	Quadro P2000 Quadro P4000 Quadro P5000 Quadro P6000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro RTX 800 Quadro GP100 Quadro GV100 Storage Controlli Onboard Intel RS 9440-8i PCIe	er Type STe Std Opt Opt Opt Opt	5GB C 8GB C 16GB C 24GB C 16GB (24GB C 16GB (32GB 32GB SAS SAS	GDDR5 GDDR5 GDDR5X GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 GDDR6 HBM2 HBM2 Interface ATA 6Gb 12Gb/s, 6Gb/s 6Gb/s	50W 75W 120W (180W (250W) 265W 295W 295W 235W 235W 8 7/s SATA	4xDF 4xDF DVI-D DL+ DVI-D DL+ 3xDP, 1xViri 4xDP, 1xViri 4xDP, 1xViri 1xDVI-D DL 4xDF RAID 0/1/10/5 0/1/10/5/6	4xDP 4xDP ualLink ualLink ualLink ualLink	NVLink NVLink NVLink Cache	2 2 2 1 2 2 2 1 2 1

	Disk Type			RPM	Offering	Max Qty			
	3.5" SATA HDD		SATA 6Gb/s	7.2K	1TB/2TB/4TB/6TB	6			
Storage Sup-	2.5" SATA HDD		SATA 6Gb/s	7.2K	500GB/500GB FIPS	6			
port	2.5" SATA SSD		SATA 6Gb/s		256GB/512GB/1TB/2TB	6			
	M.2 PCIe S	SSD	PCIe NVMe		256GB/512GB/1TB/2TB	9			
	PCIe AIC S	SSD	PCIe NVMe		480GB	2 (1 when quad M.2 adapter used)			
	Bay Type				Maximum Drives Qty				
		x M.2	SSD (2 on	board	I, 7 via PCIe to M.2 adapt	er)			
Storage Bays	2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure Flex Bay 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures								
	Disk bay or			.5" dis	sks with 4 disk bays (2 bay	ys standard, 2 bays			
Supports up to 9x M.2 SSD + 6x 3.5" HDD/6x 2.5" SATA disks/4x 2.5" SAS HDD + 1x PCle AIC SSD. All HDD: 36TB using 6x 3.5" HDD All SSD: 30.48TB using 6x 2.5" SATA SSD, 9x M.2 SSD, and 1x PCle AIC SSD Supports one of the following:									
Power supply	One fixedOne fixed	1 900V 1 1000	W, autosens W, autose	sing, 9 nsing,	92%, 80 PLUS Platinum o 92%, 80 PLUS Platinum o 92%, 80 PLUS Platinum	jualified qualified			
Media reader	USB 2.0 9- reader on fl			on m	ost models. Optional UHS	S-II 15-in-1 USB 3.1 Gen 1			
Network interfaces	ethernet or	wirel	ess adapte	rs are	available '	ake-on-LAN. Optional PCIe			
WLAN + Bluetooth	Optional Int 867Mbps	tel Wi	reless-AC	8265,	2x2, 2.4GHz/5GHz, 802.	11ac, Bluetooth 4.2, up to			
Security features	Power-on a				Trusted Platform Module, access panel lock, Kensir	TCG 2.0 compliant, switch			
Intel vPro	Intel vPro te	echno	ology suppo	orted.	vPro requires Wireless-A	C 8265 if Wi-Fi is needed			
Intel AMT	Intel Active	Mana	agement Te	echno	logy 11				
Diagnostic		o PC	Diag-nostic		tation Diagnostics for Wir Android and iOS. Optiona	ndows. Photo-audio transfer Il front 4-digit diagnostic			
Base warranty	1 or 3-year	limite	ed onsite se	ervice	with 9x5/NBD				
HD Audio	Realtek AL				AANA ah amala A. A	Control - Control			
Front ports	(3.5mm)		`		11W charging), 1x combo	. ,			
Rear ports	mic-in), 2x l		JSB 3.1 Ge	en 1, 1	Ix RJ-45, 3x analog audic	ports (line-in, line-out,			
Optional ports	Front: • 2x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out • 1x eSATA on flex module • 1x USB Type C on flox module								
	Internal: 1x interna	al USI	B 3.1 Gen	1 port					

ThinkStation P520 Platform Specifications - II of II

	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)					
	Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)					
Environmental	Temperature - storage (with package)	-40 °F to 140 °F (-40 °C to 60 °C)					
specification	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)					
- F	Humidity - operating	10%~80%, non-condensing					
	Humidity - storage (with package)	10%~90%, non-condensing					
Environmental Certifications	ntal RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 ns qualified on model 30BE0008US and 30BE0009US						
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. To support the maximum expandability, 900W power supply may be needed.
 3. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer





ThinkStation P520c Platform Specifications

Form factor	25L Tower											
Dimensions	175mm/6.89" W	/ x 426n	nm/16.7	77" D	x 376	3mm	1/14.8"	H (with fe	et)			
Weight	Maximum config	guration	: 31.97	lb (1	4.5kg))						
	Dunnan	# of	# of		Bas	e			TDD		Memor	V
	Processor	Cores	Thread	l st	Freque	ency	, 0	ache	TDP		Types	
	Xeon W-2245	8	16		3.9G	Hz	16	.5MB	155W	DI	DŘ4-29	33
	Xeon W-2235	6	12		3.8G	Hz	8.2	25MB	130W	DI	DR4-29	33
	Xeon W-2225	4	8		4.1G	Hz	8.2	25MB	105W	DI	DR4-29	33
	Xeon W-2223	4	8		3.6G	Hz			120W		DR4-26	
	Xeon W-2195	18	36		2.3G				140W		DR4-26	
Processor Support	Xeon W-2175	14	28		2.5G				140W		DR4-26	
r roocooor capport	Xeon W-2155	10	20		3.3G				<u>140W</u>		DR4-26	
	Xeon W-2145	8	16		3.7G				140W	_	DR4-26	
	Xeon W-2135	6	12		3.7G				140W		DR4-26	
	Xeon W-2133	6	12		3.6G				140W		DR4-26	
	Xeon W-2125	4	8		4.0G				120W		DR4-26	
	Xeon W-2123	4	8		3.6G				120W		DR4-26	
	Xeon W-2104	4	4		3.2G				120W		DR4-24	
	Xeon W-2102	4	4		2.9G	<u>Hz</u>	8.2	25MB	120W	D	DR4-24	00
Processor Sockets	1x FCLGA2066											
Chipset	Intel C422 Chip	set										
Memory Sockets	4 DIMM sockets	s with 4	channe	els								
Memory Types	DDR4-2666 RD	IMM or	DDR4-	2933	RDIN	ИΜ						
Memory Capacity	256GB with 4 x	64GB F	RDIMM	S								
Memory Protection												
	Slot 1 (CPU)	PCIe 3.	0 v16	full h	aiaht	full	lenath	75\M				
									ande	. d		
Expansion slots	Slot 2 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended											
	Slot 3 (CPU) PCIe 3.0 x16, full height, full length, 75W Slot 4 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended											
	Slot 4 (PCH)	PCIe 3.	.U X4, IL									
	Graphics			Me	mory		Power	Conr	nector		SLI/	Max
											NVlink	Qty
	NVS 810				DDR		68W		ni DP		-	1
	Quadro P400				GDDF		30W		niDP		-	2
D:	Quadro P600				GDDF		45W		niDP		-	2
Discrete Graphics	Quadro P620				GDDF		40W		<u>iniDP</u>		-	2
Offering	Quadro P1000				GDDF		50W		<u>niDP</u>		-	2
	Quadro P2000				GDDF		75W		<u>DP</u>		-	2
	Quadro P4000				GDDF		120W		DP	-	-	2
	Quadro P5000						180W	DVI-D D			-	1
	Quadro RTX 40				GDDF			3xDP, 1x\			-	1
	Quadro RTX 50			6GB	GDDI			4xDP, 1x\	_		-	
	Storage Contro		Type				erface			AID	Cad	che
	Onboard Intel F	RSTe	Std				6Gb/s			<u>/10/5</u>		
Storage Controller	9440-8i PCle		Opt	S				6Gb/s		/10/5		
	NVMe Basic		Opt				NVMe			1/10		
	NVMe for Intel	SSD	Opt		P	Cle	NVMe)	0/1	<u>/10/5</u>		
	Disk Type		Interfac	ce	RPM		Of	fering			Max Qt	V
	3.5" SATA HDD	S	ATA 6C		7.2K	1		B/4TB/6T	В		4	,
Storage Support	2.5" SATA HDD	S	ATA 6C					00GB FII				
3	2.5" SATA SSD		ATA 6C					2GB/1TB/			4	
I			Cle NV					2GB/1TB/			5	
	M.2 PCIe SSD		Cle IVV	IVIE		<u> 2</u> 00	<u>ad/</u> 31/	<u> 200/</u> 110/	<u> </u>		o	

	Bay		Maximum Drives Qty
	Type M.2 clot	Ev M 2 CCD (2 onboard 2	via PCIo to M.2 adaptor\
	IVI.∠ SIOT	5x M.2 SSD (2 onboard, 3 2 flex bays. Supports the fo	via roie to ivi.∠ adapter)
		 2x half-height optical dri 	ves
		 2x 5.25" 9.0mm optical of 	
		• 1x 5.25" 9.0mm optical	drive + 2x 3.5"/2.5" SATA SSD/HDD
Storage Bays		 1x 3.5"/2.5" SATA SSD/I 	HDD with Front Access Storage Enclosure
	Flex Bay		
		Tray 1: 9.0mm optical	
			Gen 1 reader, 2x Thunderbolt, or 4-digit diag-
		nostic display	2.1 Can 1 Time C ar aCATA
			3.1 Gen 1 Type-C or eSATA nt Removable Drive Enclosures
	Disk hav	Up to 2x 3.5"/2.5" disks wi	
		•	IT Z diok bayo
Power supply	One of the	e following:	92%, 80 PLUS Platinum qualified
li ower suppry	• One	fixed 625W, autosensing,	92%, 80 PLUS Platinum qualified
			models. Optional UHS-II 15-in-1 USB 3.1 Gen
Media reader		on flex module	models. Optional one ii 10 iii 1 00B 0.1 den
Network			el i219LM), supports Wake-on-LAN. Optional
interfaces	PCIe ethe	ernet or wireless adapters	are available
WLAN +	Optional	Intel Wireless-AC 8265, 2x	2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up
Bluetooth	to 867Mb		•
	Power-on	and admin password. Trus	sted Platform Module, TCG 2.0 compliant,
Security features		1.2 via UEFI setting. Optio	nal access panel lock, Kensington lock, and
	pad lock	tooknology supported vD	re requires Wireless AC 8065 if Wi Fi is
Intel vPro	needed	technology supported. ve	ro requires Wireless-AC 8265 if Wi-Fi is
Intel AMT		ve Management Technolog	v 11
			ws. Optional front 4-digit diagnostic display on
Diagnostic	flex modu		vo. Optional front + digit diagnostic display on
Base warranty	1 or 3-year	ar limited onsite service wi	th 9x5/NBD
HD Audio		LC662 codec	
Front ports		s.1 Gen 1, microphone (3.5	
Rear ports			RJ-45, 3x analog audio ports (line-in, line-out,
	mic-in), 2		
	Front:	the following optional ports	S:
		nderbolt ports (USB Type-C	c) on flex module, one of two ports
		s video-out	, on not module, one of the porte
		TA on flex module	
Optional ports		Type-C on flex module, U	SB 3.1 Gen 1
	Rear:	Amend	
	 1x CON 2x USB 		apter, USB 3.1 gen 2. One 15W, one 5W
	Internal:	Type-C ports via PCIe au	apter, 03B 3.1 gen 2. One 15vv, one 5vv
		nal USB 3.1 Gen 1 port	
	Tempera	ture - operating	50 °F to 95 °F (10 °C to 35 °C)
	Tempera	ture - storage (no pack-	14 °F to 140 °F (-10 °C to 60 °C)
	age)		14 * F 10 140 * F (-10 * C 10 60 * C)
Environmental		ture - storage (with pack-	-40 °F to 140 °F (-40 °C to 60 °C)
Environmental specification	age)		(Unpressurized): -50ft-10000ft (-15.2m-
Specification	Altitude -	operating	(Onpressurized): -5011-1000011 (-15.211-
	Humidity	- operating	10%~80%, non-condensing
	Humidity	- storage (with package)	10%~90%, non-condensing
Environmental	BoHS-00	mnliant GREENGLIADD D	EPEAT Silver rating. ENERGY STAR 6.1
Certifications	qualified	on model 30BX0008US ar	nd 30BX0009US
ISV certifications	Please vi	sit <u>www.thinkworkstations.</u>	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













Expansion slots

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

Slot 3 (CPU1) PCle 3.0 x8, full height, full length, 25W, open ended

Slot 4 (CPU1) PCle 3.0 x16, full height, full length, 75W, double-width

Slot 5 PCl, full height, full length, 25W
Slot 6 (PCH) PCle 3.0 x4, full height, half length, 25W, open ended

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

ThinkStation P720 Platform Specifications

Form factor	36L Tower						
Dimensions	175mm/6.89" W x 48				'.6" H (with fe	eet)	
Weight	Maximum configurat	ion: 52.2	5 lb (23.7	'kg)			
Processor Sockets			01.1.1	٧ 0			
Processor Support	Up to two 165 W Ge ver, Gold, or Platinur		en 2 Intel	Xeon So	alable family	process	ors, Bronze, S
	_	# of	# of	Base		TDD	
	Processor		Threads	Frequen	cv Cache	TDP	Memory Typ
	Xeon Gold 6246	12	24	3.3GH		165W	DDR4-293
	Xeon Gold 6244	8	16	3.6GH		150W	DDR4-293
	Xeon Gold 6242	16	32	2.8GH		150W	DDR4-293
	Xeon Gold 6238T	22	44	1.9GH	z 30MB	125W	DDR4-293
	Xeon Gold 6234	8	16	3.3GH	z 25MB	130W	DDR4-293
	Xeon Gold 6230	20	40	2.1GH		125W	DDR4-293
	Xeon Gold 6226	12	24	2.7GH		125W	DDR4-293
	Xeon Gold 5222	4	8	3.8GH		105W	DDR4-293
	Xeon Gold 5218	16	32	2.3GH		125W	DDR4-266
	Xeon Gold 5217	8	16	3.0GH		115W	DDR4-266
	Xeon Gold 5215	10	20	2.5GH		85W	DDR4-266
	Xeon Silver 4216	16	32	2.1GH		100W	DDR4-240
	Xeon Silver 4215	8	16	2.5GH		85W	DDR4-240
	Xeon Silver 4214	12	24	2.2GH		85W	DDR4-240
	Xeon Silver 4210	10	20	2.2GH:		85W	DDR4-240
Processor Offering	Xeon Silver 4209T	8	16	2.2GH		70W	DDR4-240
Processor Offering		8	16	2.1GH		85W	DDR4-240
	Xeon Bronze 3204 Xeon Platinum 8160	6 T 24	6 48	1.9GHz 2.1GHz		85W 150W	DDR4-213 DDR4-266
	Xeon Gold 6146	12	24	3.2GH		165W	DDR4-266
	Xeon Gold 6142	16	32	2.6GH		150W	DDR4-266
	Xeon Gold 6136	12	24	3.0GH	24.75MB	150W	DDR4-266
	Xeon Gold 6134	8	16	3.2GH		130W	DDR4-266
	Xeon Gold 6128	6	12	3.4GH		115W	DDR4-266
	Xeon Gold 5122	4	8	3.6GH		105W	DDR4-266
	Xeon Gold 5120T	14	28	2.2GH		105W	DDR4-240
	Xeon Gold 5118	12	24	2.3GH:		105W	DDR4-240
	Xeon Gold 5115	10	20	2.4GH		85W	DDR4-240
	Xeon Silver 4116	12	24	2.1GH		85W	DDR4-240
	Xeon Silver 4114T	10	20	2.2GH		85W	DDR4-240
	Xeon Silver 4114	10	20	2.2GH	z 13.75MB	85W	DDR4-240
	Xeon Silver 4112	4	8	2.6GHz	z 8.25MB	85W	DDR4-240
	Xeon Silver 4110	8	16	2.1GH	z 11MB	85W	DDR4-240
	Xeon Silver 4109T	8	16	2.0GH	z 11MB	70W	DDR4-240
	Xeon Silver 4108	8	16	1.8GH	z 11MB	85W	DDR4-240
Chipset	Intel C621 Chipset						
Memory Sockets	12 DIMM sockets wi	th 12 cha	nnels. 6	DIMM so	ckets with 6	channels	per processo
Memory Types	DDR4-2666 RDIMM						
Memory Capacity	768GB (DDR4-2933	RDIMM)	or 384G	B (DDR4	-2666 RDIM	M)	
Memory Protection							
	Slot 1 (CPU2) PCI6	3 0 x16	full heig	ht full le	ngth, 75W		
	Slot 2 (CPU1) PCI6	3 0 v16	full hain	ht full la	ngth, 75W, do	ouble-wic	\th
					gth, 25W, op		
Expansion slots							
•					ngth, 75W, do	ouble-wid	atn
		full heigh					
	Slot 6 (PCH) PCI	3.0 x4, t	full heigh	t, half ler	igth, 25W, op	en ende	d
	Graphics	Memo	ry Po	ow- (Connector	SLI /	
	111/0 0 / 0	10		er		NVlin	
	NVS 810	4GB DI			3xmini DP		2
	Quadro P400	2GB GD		DW WC	3xminiDP		3
			1105 141	5W	4xminiDP		3
Discrete Graphics	Quadro P600	2GB GD					
Discrete Graphics Offering	Quadro P600 Quadro P620	2GB GD	DR5 40	WC	4xminiDP		3
Discrete Graphics Offering	Quadro P600 Quadro P620 Quadro P1000	2GB GD 4GB GD	DR5 40 DR5 50	WC WC	4xminiDP 4xminiDP		3
Discrete Graphics Offering	Quadro P600 Quadro P620 Quadro P1000 Quadro P2000	2GB GD 4GB GD 5GB GD	DR5 40 DR5 50 DR5 75	OW OW 5W	4xminiDP 4xminiDP 4xDP		3 3 3
Discrete Graphics Offering	Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000	2GB GD 4GB GD	DR5 40 DR5 50 DR5 79 DR5 12	0W 0W 5W	4xminiDP 4xminiDP	SLI	3

	Graphics	l N	lemo	ory	Pow-	C	onnecto	r	SLI /	Max	
-	Quadro RTX 4000) 8GF	3 GF	DR6	er 160W3	3xDP	1xVirtu:	alLink	NVlink	Qty 2	
Discrete Graphics	Quadro RTX 5000	16G	B GI	DDR6	265W	4xDP,	1xVirtua	alLink	NVlink	2	
Offering	Quadro RTX 6000	24G	B GI	DDR6	295W	4xDP,	1xVirtua	alLink	NVlink	2	
	Quadro RTX 8000 Quadro GP100	16G	BGL	DDK6	295W	4XDP, 1×DV/I	1xvirtua	<u>alLink</u>	NVIink NVIink	2	
	Quadro GV100			BM2	250W	IXDVI	4xDP	+	NVlink	2	
	Storage Controlle			Inter	face	l R	AID		Cach		
	Onboard Intel RSTe	Std	5		6Gb/s	0/1	/10/5				
	9440-8i PCle	Opt	S	SATA (2Gb/s, 6Gb/s	0/1	/10/5				
Storage Controller	9460-161 PCIE			SATA (2Gb/s, 6Gb/s		10/5/6	4GE	3 DDR4, 9	SuperCap	
	NVMe Basic NVMe Premium	Opt Opt			NVMe NVMe		1/10 /10/5				
	NVMe for Intel	Opt			VVMe		/10/5				
		Interfac	20	RPM		Offeri	ina		May	Qtv	
	Disk Type	шена)e	LL IVI		Ollen	irig		(Blind co	nnection used)	
									6 (Also s	supports	
	3.5" SATA HDD S	ATA 6G	TA 6Gb/s 7.2K			/2TB/4	TB/6TE	3	`additional 4x 2.5" SATA		
Storage Support									SSD/HDD)		
configuration	2.5" SATA HDD S				500G	B/500	GB FIP	S	1	0	
	2.5" SAS HDD SA	AS 120	ab/s	10K			00GB			3	
	2.5" SATA SSD S. 2.5" PCIe SSD P				256GB/	<u>/512G</u> 1.5T		218		0	
	M.2 PCIe SSD P	Cle NV	'Me		256GB/	256GB/512GB/1TB/2TB				9	
	PCIe AIC SSD P					4800			2	2	
	Bay Type				Maximu	ım Dri	ves Qty	'			
	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter)										
	2 flex bays. Supports the following: 2 x 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 										
	Elay Bay • 1x 3.5	"/2.5" \$	Sata	\ SSD	/HDD w	ith Fro	nt Acce	ess St	torage En	closure	
	- IX IICX	modul 9.0mr			ollowing	optio	ns:				
Storage Bays					Gen 1	reade	r or 2x ⁻	Thund	derbolt		
1	Port 1	and 2:	Fro	nt US	B 3.1 G	en 1 T	ype-C o	r eSA	ATA		
					ont Rem					-f 4l f-1	
	lowing co				iard, 2 b	ays of	otionai).	Supp	orts one	of the fol-	
	• 4x 3.5"										
		SATA	HDD) + 4x	2.5" SA	TA SS	D/HDD	(Blin	d connec	tion	
	, needed)	CATA	220	/HDD	or 8v 2	5" Q A	S HDD	(Blin	d connect	tion	
	needed)	OAIA	OOD	71100	OI OX Z	.5 0/-	OTIDD	(DIIII)	a connec	11011	
	• 2x 2.5 [°]	PCIe S	SSD	+ 2x	3.5"/2.5	" disks	(Blind	conn	ection nee	eded)	
	Supports one of the						- · · ·				
Power supply	One fixed 690W,One fixed 900W,	autos	ensir	ng, 92	2%, 80 P	LUS	latinun	n qua	lified		
11	 One fixed 900VV, One fixed 1000V 	autos∈ √. auto:	sens	iy, 92 sina. 9	. /∘, 60 P 92%, 80	PLUS	Platinu	ı qua m alı	alified		
	3	,			, 00			94			

ThinkStation P720 Platform Specifications

Media reader	1 reader on flex module	nodels. Optional UHS-II 15-in-1 USB 3.1 Gen				
Network interfaces	Integrated two-port gigabit ethernet (II LAN on both two ports. Optional PCIe	ntel i219LM and i210AT), supports Wake-on- ethernet are available				
WLAN + Bluetooth	to 867Mbps	2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up				
Security features	switch to 1.2 via UEFİ setting. Chassis lock, Kensington lock, and pad lock	ed Platform Module, TCG 2.0 compliant, sintrusion switch. Optional access panel				
Intel vPro	Intel vPro technology supported. vPro needed	requires Wireless-AC 8265 if Wi-Fi is				
Intel AMT	ntel Active Management Technology 11					
Diagnostic	Front panel warning LED. ThinkSta-tio transfer with Lenovo PC Diag-nostics diagnostic display on flex module	n Diagnostics for Windows. Photo-audio for Android and iOS. Optional front 4-digit				
Base warranty	1 or 3-year limited onsite service with	9x5/NBD				
HD Audio	Realtek ALC662 codec					
Front ports	(3.5mm)	charging), 1x combo audio/microphone jack				
Rear ports	2x USB 2.0, 4x USB 3.1 Gen 1, 2x RJ mic-in), 2x PS/2	-45, 3x analog audio ports (line-in, line-out,				
Optional ports	Internal: 1x internal USB 3.1 Gen 1 port	3 3.1 Gen 1 ter, USB 3.1 gen 2. One 15W, one 5W				
Environmental specification	Temperature - operating Temperature - storage (no package) Temperature - storage (with package) Altitude - operating Humidity - operating Humidity - storage (with package)	50 °F to 95 °F (10 °C to 35 °C) 14 °F to 140 °F (-10 °C to 60 °C) -40 °F to 140 °F (-40 °C to 60 °C) (Unpressurized): 0-10000ft (0-3048m) 10%~80%, non-condensing 10%~90%, non-condensing				
Environmental Certifications	RoHS-compliant. GREENGUARD. EP fied on model 30BA0007US and 30BA	EAT Silver rating. ENERGY STAR 6.1 quali-				
ISV certifications	Please visit www.thinkworkstations.co	m/isv-certifications/				

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













ThinkStation P920 Platform Specifications

55L Tower

Form factor

i omi iacioi	JUNEI						
Dimensions	200mm/7.87" W x 620	mm/24.4	" D x 446	3mm/17.56" I	H (with feet	t)	
Weight					`		
			(==:=::3/				
		1 or Gen	2 Intel X	eon Scalable	e family pro	cessors	Bronze Sil-
Weight Maximum configuration: 71.3 lb (32.3kg) Processor Sockets 2x FCLGA3647 Processor Support Up to two 205 W Gen 1 or Gen 2 Intel Xeon Scalable family processors, Bronze ver, Gold, or Platinum Yerocessor Support # of Cores Threads Frequency Ver, Gold, or Platinum # of TDP Mer Tyles of Threads Frequency Cores Threads Frequency Ver, Gold 6244 Mer TDP Mer Tyles of Tyles							
		# of	# of	Rasa			Memory
	Processor				Cache	TDP	Types
	Xeon Platinum 8280				39MB	205W	DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2933
							DDR4-2666
							DDR4-2666
							DDR4-2666
							DDR4-2400
							DDR4-2400
							DDR4-2400
							DDR4-2400
Processor Offering							DDR4-2400
							DDR4-2400
							DDR4-2133
	Xeon Platinum 8160T						DDR4-2666
	Xeon Gold 6154	18	36	3.0GHz	24.75MB	200W	DDR4-2666
	Xeon Gold 6142	16	32	2.6GHz	22MB	150W	DDR4-2666
	Xeon Gold 6136	12	24	3.0GHz	24.75MB	150W	DDR4-2666
	Xeon Gold 6134	8	16	3.2GHz	24.75MB	130W	DDR4-2666
	Xeon Gold 6128	6	12	3.4GHz	19.25MB	115W	DDR4-2666
	Xeon Gold 5122	4	8	3.6GHz	16.5MB	105W	DDR4-2666
	Xeon Gold 5120T	14	28	2.2GHz	19.25MB	105W	DDR4-2400
	Xeon Gold 5118	12	24	2.3GHz	16.5MB	105W	DDR4-2400
	Xeon Gold 5115	10	20	2.4GHz	13.75MB	85W	DDR4-2400
	Xeon Silver 4116	12	24	2.1GHz	16.5MB	85W	DDR4-2400
	Xeon Silver 4114T	10	20	2.2GHz	13.75MB	85W	DDR4-2400
	Xeon Silver 4114	10	20	2.2GHz	13.75MB	85W	DDR4-2400
	Xeon Silver 4112	4	8	2.6GHz	8.25MB	85W	DDR4-2400
	Xeon Silver 4110	8	16	2.1GHz	11MB	85W	DDR4-2400
	Xeon Silver 4109T	8	16	2.0GHz	11MB	70W	DDR4-2400
	Xeon Silver 4108	8	16	1.8GHz	11MB	85W	DDR4-2400
Chipset	Intel C621 Chipset		10	1.00112	THVID	0011	DDITH ZHOO
		10 -1	I- 0 DI	11.41.4			
Memory Sockets	16 DIMM sockets with						r processor
Memory Types	DDR4-2666 RDIMM, D						
Memory Capacity	1TB (DDR4-2666 LRD	IMM or I	DDR4-29	33 RDIMM) (or 512GB (DDR4-26	666 RDIMM)
Memory Protection	ECC						
Expansion slots	Slot 3 (CPU1) PCIe 3 Slot 4 (CPU1) PCIe 3 Slot 5 (PCH) PCIe 3 Slot 6 (CPU2) PCIe 3 Slot 7 (CPU2) PCIe 3	3.0 x16, f 3.0 x4, fu 3.0 x4, fu 3.0 x16, f 3.0 x16, f	ull height, Il height, Il height, ull height ull height	, full length, full length, 2 , full length, full length, 2 half length, 2 , half length, , full length, , full length,	75W, doub 5W, open 6 25W, open 75W 75W, doub	le-width ended ended	

	Graphics		Me	emory	Power	Conne	ector	SLI / NVlink	Max Qty	
	NVS 810		4GF	DDR3	68W	8xmin	i DP	INVIIIIK	2	
	Quadro P400			GDDR5	30W	3xmir			5	
	Quadro P600			GDDR5	45W	4xmir			4	
	Quadro P620			GDDR5	40W	4xmir			4	
	Quadro P1000			GDDR5	50W	4xmir			4	
	Quadro P2000			GDDR5	75W	4xE			4	
Discrete Graphics	Quadro P4000			GDDR5	120W				4	
Offering	Quadro P5000			GDDR5X				SLI	3	
	Quadro P6000			GDDR5X	250W	DVI-D DI	+4xDP	SLI	3	
	Quadro RTX 40			GDDR6	160W	3xDP, 1xV	irtualLink		3	
	Quadro RTX 50		16GB	GDDR6	265W	4xDP, 1xV	irtualLink	NVLink	3	
	Quadro RTX 60			GDDR6	295W	4xDP, 1xV	irtualLink	NVLink	2	
	Quadro RTX 80	000 4	48GB	GDDR6	295W	4xDP, 1xV	irtualLink	NVLink	2	
	Quadro GP100		16GE	3 HBM2	235W	1xDVI-D	L, 4xDP	NVLink	3	
	Quadro GV100			3 HBM2	250W	4xE)P	NVLink	3	
	Storage Contro	ller	Type		Interfac	e	RAID	Ca	che	
	Onboard Intel F		Std		ATA 6G		0/1/10/5		01.10	
	9440-8i PCle					ATA 6Gb/s	0/1/10/5			
Storage								1CB	DDR4,	
Controller	9460-16i PCle		Opt	SAS 12	3D/S, 5/	ATA 6Gb/s	0/1/10/5/	Supe	erCap	
	NVMe Basic		Opt		Cle NV		0/1/10			
	NVMe Premiun		Opt		Cle NV		0/1/10/5			
	NVMe for Intel	SSD	Opt	F	Cle NV	Me	0/1/10/5	5		
	Disk Type	Interfa	ce RI	PM	Offeri	ina		Max Qty		
	Diok Type	micha	00 111	141	Onon	ıı ıg		9460 used)	
	3.5" SATA	SATA	\ \	014 4.T	4TD/0TD/4TD/6TD			6 (Also supports addition		
	HDD	6Gb/s		2K 1T	1TB/2TB/4TB/6TB			4x 2.5" SATA SSD/HDD		
	2.5" SATA	SATA	٦,	2K 500	CD/E00	CD FIDE		10	,	
	HDD	6Gb/s	s /	ZK 500	K 500GB/500GB FIPS			10		
	2.5" SAS HDD	SAS		ok 3	300GB/600GB			8		
Storage Support		12Gb/	/S	JIX C	. 000GB/000GB					
3	2.5" SATA	SATA		256GB/512GB/1TB/2				10		
	SSD	6Gb/s		20002/01202/112/2						
	2.5" PCIe SSD	PCIe NVM		1.5TB			4			
		PCle						9		
	M.2 PCIe SSD	NVM		256G	B/512G	B/1TB/2TB				
		PCle					_			
	PCIe AIC SSD	NVM			4800	àВ		2		
 	Bay				/laximur	n Drives Q	tv.			
	Type				naniiiui	Diivos Q	• 7			
	M.2 slot 9x M.2	2 SSD	(2 on	board. 7	via PCIe	e to M.2 ad	apter)			
	2x 3.5	" or 2.5	5" dis	ks. Suppo	orts the	following:				
	• 3x h	nalf-hei	ght o	ptical driv	es	3				
	• 2x 5	5.25" 9.	.Ŏmm	optical d	rives					
						x 3.5"/2.5"				
-						Front Acc	ess Stora	ge Enclos	ure	
Storage Bays	'P IXI			for the fol	lowing c	ptions:				
and buyo		/ 1: 9.0					TI	- 14		
						ader or 2x				
						1 Type-C				
						vable Drive			orto	
				4 days (2 ig configu		andard, 2 b	ays opilo	man, Supp	אווטכ	
	Disk bay • 4x 3				nations.					
]	• 4x 3	5" SAT	AHE	D + 4x 2	.5" SATA	SSD/HDE)			
	• 8x 2	5" SAT	A SS	D/HDD o	r 8x 2.5	" SAS HDE)			
	J JA Z			_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. 5% =.0	J, 10 1 1DL				

ThinkStation P920 Platform Specifications

	Supports up to 9x M.2 SSD + 6x 3.5" AIC SSD.	HDD/10x 2.5" SSD/10x 2.5" HDD + 2x PCle					
Max Storage	All HDD: 36TB using 6x 3.5" HDD						
		SSD, 9x M.2 SSD, and 2x PCIe AIC SSD					
	One fixed 1400 watts, autosensing, 92						
Power supply	Countries with input voltage under 115	5V, output power limited to 1125 watts					
Media reader	USB 2.0 9-in-1 card reader on most m 1 reader on flex module	odels. Optional UHS-II 15-in-1 USB 3.1 Gen					
Network interfaces	Integrated two-port gigabit ethernet (Ir LAN on both two ports. Optional PCIe	ntel i219LM and i210AT), supports Wake-on- ethernet are available					
WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, to 867Mbps	2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up					
Security features	Power-on and admin password. Truste switch to 1.2 via UEFI setting. Chassis lock, Kensington lock, and pad lock	d Platform Module, TCG 2.0 compliant, s intrusion switch. Optional access panel					
Intel vPro	Intel vPro technology supported. vPro needed	requires Wireless-AC 8265 if Wi-Fi is					
Intel AMT	Intel Active Management Technology						
Diagnostic	Front 4-digit diagnostic display. ThinkS transfer with Lenovo PC Diagnostics for	station Diagnostics for Windows. Photo-audio or Android and iOS					
Base warranty	1 or 3-year limited onsite service with	9x5/NBD					
HD Audio	Realtek ALC662 codec						
Front ports	(3.5mm)	charging), 1x combo audio/microphone jack					
Rear ports	2x USB 2.0, 4x USB 3.1 Gen 1, 2x RJ mic-in), 2x PS/2	-45, 3x analog audio ports (line-in, line-out,					
	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, USE	3 3.1 Gen 1					
	Rear:						
	1x COM port2x USB Type-C ports via PCIe adap	ter LISB 3.1 gen 2. One 15M, one 5M					
	Internal:	ter, USD 3.1 gen 2. One 15vv, one 5vv					
	1x internal USB 3.1 Gen 1 port						
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)					
	Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)					
Environmental	Temperature - storage (with package)	-40 °F to 140 °F (-40 °C to 60 °Ć)					
specification	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)					
- CP - SIII O G II O II	Humidity - operating	10%~80%, non-condensing					
	Humidity - storage (with package)	10%~90%, non-condensing					
Environmental Certifications	RoHS-compliant. GREENGUARD. EP fied on model 30BC0008US and 30BC	EAT Silver rating. ENERGY STAR 6.1 quali-					
	Please visit www.thinkworkstations.co						

Note:

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

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













Form factor	2U rack									
Dimensions	Height: 87 mm (3.4 ir	a) Midth:	115 mm	(17 5 in) [)onth: 720 m	m /29 2	in\			
					лерит. 720 п	1111 (20.3	111)			
Weight	Maximum configurati	on: 70.54	ID (32 KC)						
Processor Sockets	2x FCLGA3647	1.1/		.,		0:1				
Processor Support	Up to two Gen 2 Inte				ssors, Bronz	e, Silver				
	Processor		# of Threads	Base Frequenc		TDP	Ty	mory pes		
	Xeon Gold 6252	24	48	2.1GHz	35.75MB			4-2933		
	Xeon Gold 6234	8	16	3.3GHz	25MB	130W		4-293 <u>3</u>		
	Xeon Gold 6230	20	40	2.1GHz	28MB	125W		4-2933		
Processor Offering	Xeon Gold 5218	16	32	2.3GHz	22MB	125W		4-2666		
	Xeon Gold 5215	10	20	2.5GHz	13.75MB			4-2666		
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W		4-2400		
	Xeon Silver 4214	12	24	2.2GHz	17MB	85W		4-2400		
	Xeon Silver 4210	10	20	2.2GHz	14MB	85W		4-2400		
	Xeon Silver 4208	8	16	2.1GHz		85W		4-2400		
	Xeon Bronze 3204	6	6	1.9GHz	8.25MB	85W	DDR	4-21 <u>33</u>		
Chipset	Intel C624 Platform (
Memory Sockets	24 DIMM sockets wit	h 12 cha	nnels. 12	DIMM soc	kets with 6 c	hannels	per pro	cessor		
Memory Types	DDR4-2933 RDIMM,	8GB/160	GB/32GB	available						
Memory Capacity	768GB with 24x 32G	B DDR4-	2933 RD	IMM						
Memory protection	ECC, memory mirror									
Momory protoction				ngth, doub	alo veido					
	Slot 1 (riser card 1)					4				
	Slot 2 (ricer cord 1)	NOL pres	<u>enii, ioi u</u>	ouble-wide	card in slot	lonath				
Evacacion elete	Slot 3 (riser card 1) Slot 4 (onboard)	PCIe 3.0	0 X 10 (X8	<u>rafila</u>	l height, half	iengin				
Expansion slots	Slot 4 (onboard) PCIe 3.0 x8, low profile Slot 5 (riser card 2) PCIe 3.0 x16, full height, half length, requires 2nd CPU									
	Slot 6 (riser card 2)				length, requ					
	Slot 7 (onboard)				internal stor					
Integrated Craphica					internal stor	age com	ioner)			
integrated Graphics	Integrated Matrox G2									
	Graphics		mory	Power	Connec		SLI / NVlink	Max Qty		
Discrete Graphics	Quadro P620		GDDR5	40W	4xminiE			3		
Offering	Quadro RTX 4000		GDDR6		3xDP, 1xVirt			3		
	Quadro RTX 5000		GDDR6		4xDP, 1xVirt	ualLink		2		
	T4		GDDR6	70W	-			5		
	V100	16GB/32	<u>2GB HBM</u>	2 250W	-			2		
Storage Controller	Storage Controller	Type	Interfa		RAID		Cad	che		
Otorage Controller	530-8i	<u>Optional</u>	12Gbps	SAS	0/1/10/5/5	0	-			
	Disk Type Int	terface	RPM		Offering		M	ax Qty		
C4 = = = = = = = = = = = = = = = = = = =	3.5" SATA HDD SAT			B/4TB/6TI		12TB/14		8		
Storage Support	3.5" SATA SSD SAT	A 6Gb/s	7.2K 240	GB/480G	3/960GB/1.9	2TB/3.8	4TB	8		
	M.2 SATA SSD SAT				480GB			2		
	Bay Type			Mavimum	Drives Qtv					
Storage Bays		SATA SS	SD non-ho		DIIVOS QLY					
ototago zajo		SATA/SA	AS hot-sw	ap disk ba	vs					
	Up to two redundant	hot-swar	1100\\/	or 1600W	RO PLUS PL	tinum aı	ıalifiad	ΔC:		
Power supply	power supplies. 100\	/ - 240V	, 1100 ** (10000	001 2001 10	unium qu	adillica	70		
Media reader	None	Z-10 V								
IVICUIA I CAUCI	One dedicated mana	aomont r	ort One	LOM alat	or austomiz	241014	with up	to four		
Network interfaces	RJ-45 10GbE ports.							to loui		
	None				, ,					
WLAN + Bluetooth										
WLAN + Bluetooth	Power-on and admin	passwor	d. Trusted	l Platform	Module, TCC	3 1.2 cor	npliant,			
Security features	Power-on and admin upgrade to 2.0 via UI	<u>ĖFI settin</u>	g. Option	al lockable	security be:	zel				
	Power-on and admin	<u>ĖFI settin</u> tandard. l	g. Option Energy M	<u>al lockable</u> anager, X0	security be:	zel		Capac		

			Product Specifications Reference (PSREF)					
	Diagnostic	Light Path Diagnostics						
┪	Base warranty	3-year limited onsite service with 9x5/NBD						
5WS7A72784 Foundation Service - 3Yr Next Business Day Response								
┪	Warranty	5WS7A72764 Ouridation Service - 311 Next Business Day Response						
┪		5WS7A72786 Foundation Service - 5Yr Next Business Day Response						
┪		5PS7A72787 Essential Service - 3Yr 24x7 4Hr Response + YourDrive YourData						
5PS7A72788 Essential Service - 4Yr 24x7 4Hr Response + YourDrive YourD								
1		5PS7A72789 Essential Service - 5Yr 24x7 4Hr Response + YourDrive YourDat						
1								
1	Front ports	One XClarity Controller USB connector, one	USB 3.0, one optional VGA					
]	Rear ports	One VGA, two USB 3.0, one XClarity Contro						
	Operating system	Microsoft Windows Server 2016 and 2019. Red Hat Enterprise Linux (RHEL) 7 and 8. SUSE Linux Enterprise Server (SLES) 12 and 15. VMware vSphere (ESXi) 6.5 and 6.7.						
41		Supports ASHRAE A4 with limitations.						
		Temperature - operating	A4: 5°C to 45°C (41°F to 113°F) A3: 5°C to 40°C (41°F to 104°F) A2: 10°C to 35°C (50°F to 95°F)					
		Temperature - non operating (no package)	-10°C to 60°C (14°F to 140°F)					
╛								
╛		Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)					
4	Environmental specification	Humidity - operating, non-condensing	A4: 8%~90%. A3:8%~85%. A2:8%~80%					
1		Humidity - storage (with package), non- condensing	8%~90%					
┨		Models should meet the following requirements to support A3 and A4:						
٦		NVMe drives not installed						
		PCle flash adapter not installed						
		 Graphic processing unit (GPU) not installed 	d					
		Must have redundant PSU						
(Environmental	Processors with TDP more than or equal to 150-watt not installed						
Ц	Certifications	Energy Star Server 2.1 certified. More environmental information please see: www.lenovo.com/social responsibility/us/en/environment/						
4	ISV certifications							
\dashv	IOV CEI IIIICAIIONS							
\dashv		4XB7A62801 Intel S4510 3.5" 240G	SSD OPT					
┨		4XB7A62802						
┪		4XB7A62804 Intel S4510 3.5 960G						
H		4XB7A62805 Intel S4510 3.5" 3.84T	SSD OPT					
╣		4XB7A62806 4TB7.2K 6GSATA 3.5G						
-		4XB7A62807 6TB7.2K 6GSATA512e	3.5G4HS OPT					
\dashv	Options	4XB7A62808 8TB7.2K 6GSATA512e						
\dashv		4XB7A62809 10T7.2K 6GSATA512e						
Ħ		4XB7A62810 3.5" 12TB 7.2K SATA 5						
1		4XB7A62811 14T 3.5" 7.2 SATA HDE 4ZC7A62797 8GB 1RX8 PC4-2933F						
1		4ZC7A62797 8GB 1RX8 PC4-2933F 4ZC7A62798 16GB 1RX4 PC4-2933						
-		4ZC7A62796 16GB 1RX4 PC4-2933 4ZC7A62799 16GB 2RX8 PC4-2933	R 8Gh 1 2V					
		4ZC7A62800 32GB 2RX4 PC4-2933						
┪		DEGID ETTATT OF 2000	110001.2					

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

Lenovo Services:

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

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

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

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

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

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

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

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

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

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Lenovo ThinkVision PSREF Product Specifications Reference Version 563, Jul 2020

Contents

Cover 1	ThinkVision P24h-10	35
Contents 2	ThinkVision P24h-10 Platform Specifications	36
Summary Of Change 4	ThinkVision P24h-20	37
20 Inch - 23 Inch 5	ThinkVision P24h-20 Platform Specifications	38
ThinkVision E2054 5	ThinkVision P24q-10	39
ThinkVision E2054 Platform Specifications 6	ThinkVision P24q-10 Platform Specifications	40
ThinkVision E22-20 7	ThinkVision P24q-20	41
ThinkVision E22-20 Platform Specifications 8	ThinkVision P24q-20 Platform Specifications	41
ThinkVision S22e-19 9	ThinkVision S24e-10	42
ThinkVision S22e-19 Platform Specifications 10	ThinkVision S24e-10 Platform Specifications	43
ThinkVision T2054p 11	ThinkVision S24q-10	44
ThinkVision T2054p Platform Specifications 12	ThinkVision S24q-10 Platform Specifications	45
ThinkVision T2224d 13	ThinkVision T24d-10	46
ThinkVision T2224d Platform Specifications 14	ThinkVision T24d-10 Platform Specifications	47
ThinkVision T2254 15	ThinkVision T24h-20	48
ThinkVision T2254 Platform Specifications 16	ThinkVision T24h-20 Platform Specifications	49
ThinkVision T22i-10 17	ThinkVision T24i-10	50
ThinkVision T22i-10 Platform Specifications 18	ThinkVision T24i-10 Platform Specifications	51
ThinkVision T22i-20 19	ThinkVision T24i-19	52
ThinkVision T22i-20 Platform Specifications 20	ThinkVision T24i-19 Platform Specifications	53
ThinkVision T22v-10 21	ThinkVision T24i-20	54
ThinkVision T22v-10 Platform Specifications 22	ThinkVision T24i-20 Platform Specifications	55
ThinkVision T22v-20 23	ThinkVision T24m-10	56
ThinkVision T22v-20 Platform Specifications 24	ThinkVision T24m-10 Platform Specifications	57
ThinkVision T23d-10 25	ThinkVision T24v-10	58
ThinkVision T23d-10 Platform Specifications 26	ThinkVision T24v-10 Platform Specifications	59
ThinkVision T23i-10 27	ThinkVision T24v-20	60
ThinkVision T23i-10 Platform Specifications 28	ThinkVision T24v-20 Platform Specifications	61
ThinkVision T23i-20 29	ThinkVision T25d-10	62
ThinkVision T23i-20 Platform Specifications 30	ThinkVision T25d-10 Platform Specifications	63
24 Inch - 26 Inch 31	ThinkVision T25m-10	64
ThinkVision E24-10 31	ThinkVision T25m-10 Platform Specifications	65
ThinkVision E24-10 Platform Specifications 32	27 Inch - 30 Inch	66
ThinkVision E24-20 33	ThinkVision P27h-10	66
ThinkVision E24-20 Platform Specifications 34	ThinkVision P27h-10 Platform Specifications	67

Contents

ThinkVision P27h-20	68	ThinkVision T34w-20	102
ThinkVision P27h-20 Platform Specifications	69	ThinkVision T34w-20 Platform Specifications	103
ThinkVision P27q-10	70	Under 20 Inch	104
ThinkVision P27q-10 Platform Specifications	71	ThinkVision LT1913p Square	104
ThinkVision P27q-20	72	ThinkVision LT1913p Square Platform Specifications	105
ThinkVision P27q-20 Platform Specifications	73	ThinkVision M14	106
ThinkVision P27u-10	74	ThinkVision M14 Platform Specifications	107
ThinkVision P27u-10 Platform Specifications	75	ThinkVision T1714	108
ThinkVision S27i-10	76	ThinkVision T1714 Platform Specifications	109
ThinkVision S27i-10 Platform Specifications	77	ThinkVision T1714p	110
ThinkVision S27q-10	78	ThinkVision T1714p Platform Specifications	111
ThinkVision S27q-10 Platform Specifications	79	Legal Information	112
ThinkVision S28u-10	80		
ThinkVision S28u-10 Platform Specifications	81		
ThinkVision T27h-20	82		
ThinkVision T27h-20 Platform Specifications	83		
ThinkVision T27i-10	84		
ThinkVision T27i-10 Platform Specifications	85		
ThinkVision T27p-10	86		
ThinkVision T27p-10 Platform Specifications	87		
ThinkVision T27q-20	88		
ThinkVision T27q-20 Platform Specifications	89		
ThinkVision X1 (2nd Gen)	90		
ThinkVision X1 (2nd Gen) Platform Specifications	91		
Above 30 Inch	92		
ThinkVision P32p-20	92		
ThinkVision P32p-20 Platform Specifications	93		
ThinkVision P32u-10	94		
ThinkVision P32u-10 Platform Specifications	95		
ThinkVision P44w-10	96		
ThinkVision P44w-10 Platform Specifications	97		
ThinkVision T32h-20	98		
ThinkVision T32h-20 Platform Specifications	99		
ThinkVision T32p-20	100		
ThinkVision T32p-20 Platform Specifications	101		

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.

Jul, 2020 - Version 563

Additions in this update

► New product(s)

None

► New model(s)

None

▶ Others

None

Withdrawals in this update

► Withdrawn product(s)

None



ThinkVision E2054 Monitor

SPECIFICATIONS

DISPLAY		MECHANICAL		
Panel Size Panel Type Backlight Viewable Area (Diagonal) Screen Dimensions (W x H) (mm) Resolution Aspect Ratio Viewing Angle (H/V at CR 10:1) Maximum Brightness (Typical) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Number of Colors Response Time Extreme Mode Normal Mode Off-Mode Anti-Glare	19.5" IPS WLED 19.5" 418.61 (H) x 262.35 (V) 1440 x 900 16:10 178°/178° 250 cd/m² 1000:1 3M:1 0.0969 x 0.2915 87.3 72% 16.7 Million <5 ms 7 ms 14 ms	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift (mm) Pivot VESA Mount (mm) Kensington Lock Slot Cable Management Ambient Light Sensor Control Buttons Bezel Color Bezel Width Sides (mm / inches) Top (mm / inches) Bottom (mm / inches)	-5° - 22° No No No 100 x 100 Yes No No Yes Raven Black 17.9 / 0.7" 18 / 0.71" 26 / 1.02"	
	Yes			
SIGNAL INPUT		SIGNAL INTERFACE / PERFORMANCE		
Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied	VGA VGA 1.8 m No No	Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed / Bandwidth Default Color Temperature Preset Display Modes User-defined Display Modes OSD Buttons OSD Languages	30 kHz - 83 kHz 50 Hz - 75 Hz 1440 x 900 VGA : 205 MHz 7200K 18 10 5	
POWER CONSUMPTION		ENVIRONMENTAL		
Power Consumption Typical Maximum Sleep-Mode Off-Mode Heat Dissipation Typical Maximum Power Supply Power Voltage Voltage Dynamic Frequency	16 W 20 W 0.5 W 0.5 W 54.56 Btu/h 68.2 Btu/h Internal 100 VAC - 240 VAC, 0.75 A - 0.3 A 47 Hz - 63 Hz	Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating	0°C - 45°C (non-condensing -20°C - 60°C (non-condensing) 8% - 80% (non-condensing) 5% - 95% (non-condensing) 5,000 m 40,000 ft	
DIMENSIONS (W x D x H)		COMPLIANCE		
Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Distance from Table to Panel (mm / inches) Lowest Pixel at Bottom of Screen	513 × 388 × 124 20.2" × 15.27" × 4.88" 456 × 188.3 × 372 17.95" × 7.41" × 14.65" 456 × 44.5 × 308 17.95" × 1.75" × 12.13"	Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins EPEAT ENERGY STAR Rating TCO TCO Edge TUV RoHS (EU 2002/95/EC) China Energy Efficiency Standard Windows Certification	Yes Yes Yes 85% Silver 8.0 6.0 No No Yes Tier 1 Windows 7, Windows 8, Windows 8.1, Windows 10	
Highest Pixel at Top of Screen Stand Base Footprint Area	354 / 13.94"	WARRANTY AND AVAILABILITY		
(mm / inches) Weight	162.3 × 200.8 / 6.39" × 7.91"	Warranty Geography Availability	3 Years World Wide	



Packed

Unpacked



Monitor Head

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Starting at 8.7 lbs (3.96 kg)

Starting at 6.2 lbs (2.8 kg)

Starting at 5.4 lbs (2.45 kg)

Geography Availability

ThinkVision Logo

Global Model

World Wide

Yes

No













Think Vision F22-20

DISPLAY

Panel Size

21.5-inch

Screen Dimensions

476.06 mm x 267.79 mm

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch

0.2480 x 0.2480 mm

Dot/Pixel Per Inch (DPI/PPI)

102

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

178° / 178°

Response Time

14ms

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M·1

Color Gamut

72% NTSC (CIE 1931)

Color Support (typical)

16.7 Million

Color Depth

8-bit

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

1 x VGA

MULTI-MEDIA

Integrated Speakers

Yes (2 x 1.5W)

POWFR

Power Consumption (typ./max)

18W / 24W

Power Consumption

Sleep/Off Mode

< 0.5W

Power Consumption Switch Off-Mode

< 0.5W

ENERGY STAR Power

Consumption

(P_{on}/E_{TEC}) 11.24W / 35.64kWh

Power Supply

Internal

Voltage Required

AC 90 to 264 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

Lift (max range)

155 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Bezel Color

Raven Black

Bezel Width (side)

15 mm

Bezel Width (top/bottom)

17.25 / 21.15 mm

DIMENSION

Size Packed

(D x H x W, mm/inch)

131.0 x 405.0 x 610.0 mm 5.16 x 15.94 x 24.02 inches

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

178.6 x 301.6 x 508.0 mm 7.03 x 11.87 x 20.00 inches

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

178.6 x 443.4 x 508.0 mm 7.03 x 17.46 x 20.00 inches

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

43.4 x 307.9 x 508.0 mm 1.71 x 12.12 x 20.00 inches

Weight Packed (kg/lbs.) 5.40 kg / 11.90 lbs.

Weight Unpacked (kg/lbs.)

3.90 kg / 8.60 lbs.

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

2.20 kg / 4.85 lbs.

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Certification

Yes

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT

Silver

RoHS (2011/65/EU)

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

TÜV Rheinland Eve Comfort













Depends on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments.

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Think Vision S22e-19

DISPLAY

Panel Size

21.5-inch

Screen Dimensions (W x H) (mm)

476.06 mm × 267.79 mm

Panel Type

3-side NearEdgelss, VA

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080 mm

Pixel Pitch (H x V) (mm)

0.2480 × 0.2480 mm

Dot/Pixel Per Inch (DPI/PPI)

102

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)

Color Gamut NTSC (CIE 1931)

72% NTSC

Color Support (typical)

16 7M

Refresh rate

60 Hz

Brightness (typical)

250 cd/m²

CONNECTIVITY

Video Input Signals

1x VGA 1x HDMI14

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tinv)

Yes (by VESA mount PN:4XF0N03161)

Sync Technology

FreeSync™

POWFR

Power Consumption (Typ./Max)

18W / 22W

MECHANICAL

Tilt Angle (front / back)

-5°/ 22°

VESA Mount

Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

20 mm

Bezel Width (top / bottom)

2.0 mm / 21.2 mm

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.

WHAT'S IN THE BOX

Monitor with stand 1x HDMI Cable

1x Power Cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

80

CCC

Yes

TCO

TCO 7.0/TCO Edge 2.0

EPEAT

Silver

ULE

Gold

RoHS

Yes

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Low Blue Light

Yes































ThinkVision T2054p Monitor

SPECIFICATIONS

DISPLAY		MECHANICAL	
Panel Size Panel Type Backlit Viewable Area (Diagonal) Screen Dimensions (W x H) (mm) Resolution Aspect Ratio Viewing Angle (H/V at CR 10:1) Maximum Brightness (Typical) Contrast Ratio (Typical) Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP / PPI) Color Gamut (CIE 1931) Number of Colors Response Time Anti-Glare	19.5" IPS WLED 19.5" 262.35 x 418.61 1440 x 900 16:10 178° / 178° 250 cd/m² 1000:1 0.0969 x 0.2915 87.3 72% 16.7 M 7 ms Yes	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift (mm) Pivot VESA Mount (mm) Kensington Lock Slot Cable Management Ambient Light Sensor Control Buttons Bezel Color Bezel Width (Side) (mm / inches) Bezel Width (Top / Bottom) (mm / inches)	-5° ~ 22° -45° - 45° 110 No 100 x 100 Yes Yes No Yes Raven Black 17 / 0.67" 17 / 0.67"
SIGNAL INPUT		SIGNAL INTERFACE / PERFO	ORMANCE
Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied	VGA, HDMI, DisplayPort VGA 1.8 m No No	Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed / Bandwidth Default Color Temperature Preset Display Modes User-defined Display Modes OSD Buttons OSD Languages	30 kHz - 81 kHz 50 Hz - 75 Hz 1440 x 900 VGA : 150 MHz HDMI : 150 MHz DisplayPort: 150 MHz 7200K 22 16 5 8
POWER CONSUMPTION		COMPLIANCE	
Power Consumption Typical Max. without USB Hub Max. with USB Hub Sleep-Mode Off-Mode Heat Dissipation Typical Max. Power Supply Power Voltage Voltage Dynamic Frequency	14.5 W 21 W N/A 0.3 W 0.3 W 49.45 Btu/h 71.61 Btu/h Internal 90 - 264 VAC, 1.5 A 47 - 63 Hz	EPEAT ENERGY STAR Rating ULE TCO TCO Edge TUV GREENGUARD ROHS (EU 2002/95/EC) Windows Certification China Energy Efficiency Standard	Silver 8.0 Gold 6.0 2.0 Yes No Yes Windows 7, Windows 8, Windows 8.1, Windows 10 Tier 1
DIMENSIONS (W X D X H)		ENVIRONMENTAL	
Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Head Only) (mm) (inches) Distance from Table to Panel Lowest Pixel at Bottom of Screen Highest Pixel at Top of Screen Stand Base Footprint Area (mm / inches)	509 x 176 x 368 20.04" x 6.93" x 14.49" 454.2 x 242.6 x 345.9 ~ 455.9 17.88" x 9.55" x 13.62" ~ 17.95" 454.2 x 53 x 297.9 17.88" x 2.09" x 11.73" (mm / inches) 65.8 / 2.59" 328.2 / 12.92" Diameter 240 / 9.45"	Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating Arsenic-free Glass PVC Free Mercury Free PCC % of Plastic Resins Low Halogen WARRANTY AND AVAILABI	0 °C - 45 °C -20 °C - 60 °C (non-condensing) 10% - 80% 5% - 95% (non-condensing) 8,000 ft 40,000 ft Yes Yes Yes Yes No
Weight	Starting at 10.9 lbs (4.0 kg)		
Packed Unpacked Monitor Head	Starting at 10.8 lbs (4.9 kg) Starting at 8.15 lbs (3.7 kg) Starting at 4.85 lbs (2.2 kg)	Warranty Geography Availability ThinkVision Logo	3 Years World Wide Yes





. Monitor Head ThinkVision Logo

Global Model

Yes

Yes

Starting at 4.85 lbs (2.2 kg)













ThinkVision T2224d MONITOR

SPECIFICATIONS

51051 417			
DISPLAY		MECHANICAL	
Panel Size Panel Type Backlight Screen Dimensions (W x H) (mm) Resolution Aspect Ratio Viewing Angle (H/V at CR 10:1) Maximum Brightness (Typical) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) NTSC Number of Colors Response Time Anti-Glare	21.5" IPS WLED 476.064 (H) x 267.786 (V) 1920 x 1080 16:9 (Wide) 178°/178° 250 cd/m² 1000:1 3000000:1 0.248 102 72% 16.7 Million 4 ms (extreme mode) Yes	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift Range Pivot VESA Mount (mm) Kensington Lock Slot Cable Management Ambient Light Sensor Control Buttons Bezel Color Bezel Width Bottom (mm / inches) Top (mm / inches) Sides (mm / inches)	-5° / 22° No No No No 100 x 100 Yes Yes No Yes Raven Black 25.6 / 1.01" 17.6 / 0.69" 17.6 / 0.69"
SIGNAL INPUT		POWER CONSUMPTION	
Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied	VGA + DisplayPort VGA + DisplayPort 1.8 m No No	Typical Maximum Sleep-Mode Switch-Off Mode Power Supply Power Voltage Voltage Dynamic Frequency	20 W 25 W <0.5 W <0.5 W Internal 90 VAC - 264 VAC 47 Hz - 63 Hz
SIGNAL INTERFACE / PERFOR	MANCE	DIMENSIONS (W x D x H)	
Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed Bandwidth VGA DisplayPort Default Color Temperature Plug 'n' Play Preset Display Modes User-defined Display Modes OSD Buttons OSD Languages Lockable Controls	30 kHz ~ 83 kHz 50 Hz ~ 75 Hz 1920 x 1080 205 MHz 165 MHz 7200K Yes 22 22 5 8 No	Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Head Only) (mm) (inches) Distance from Table to Panel (mm / inches) Lowest Pixel at Bottom of Screen Highest Pixel at Top of Screen Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only	512.9 × 204.9 × 381.4 20.19" × 8.07" × 15.01" 512.9 × 51 × 312.6 20.19" × 2.01" × 12.31" 94.4 / 3.72" 363.9 / 14.33" 180 × 180 / 7.09" × 7.09" Starting at 9.19 lbs (4.17 kg) Starting at 6.48 lbs (2.94 kg) Starting at 5.93 lbs (2.69 kg)
ENVIRONMENTAL		COMPLIANCE	
Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating	0°C - 45°C -20°C - 60°C 10% - 80% 5% - 95% 5000 m 0 ft - 40,000 ft	EPEAT ENERGY STAR Rating TCO ROHS (EU 2002/95/EC) Windows Certification Image Quality Capability China Energy Efficiency Standard	Silver 8.0 Display 7.0 / Edge 2.0 Yes Windows 7, Windows 10 ISO 9241-307 Tier 1
Arsenic-free Glass PVC-free	Yes Yes	WARRANTY AND AVAILABILIT	ГҮ
Mercury-free PCC % of Plastic Resins Low Halogen	Yes >85% No	Warranty Geography Availability Global Model	3 Years World Wide Yes





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SPECIFICATIONS

DISPLAY

Panel Size 22" Wide Panel Type TN Backlight WIED 22" (558.8 mm) Viewable Area (Diagonal) Screen Dimensions (W x H) 473.76 mm x 296.1 mm

Resolution 1680 x 1050 Aspect Ratio 16:10 Viewing Angle (H/V at CR 10:1) 170°/160°

Maximum Brightness (Typical) 250 cd/m² Contrast Ratio (Typical) 1000:1 Dynamic Contrast Ratio 3M:1

Dot/Pixel Per Inch (DP/PPI) ٩n Color Gamut (CIE 1931) 72% Number of Colors 16.7 M 5 ms (On/Off) Response Time

0.282 (H) x 0.282 (W)

Anti-Glare

MECHANICAL

Tilt Angle (Front / Back) -5° to 30° Swivel Angle (left/right) NΑ Lift 110 mm Pivnt NΔ VESA® Mount 100 x 100 mm Kensington® Lock Slot Yes

Cable Management Yes Ambient Light sensor Nο Bezel Color Raven Black Bezel Width (Side) 17 mm Bezel Width (Top / Bottom) 17 mm

SIGNAL INPUT

Pixel Pitch (mm)

VGA, DVI Video Input Signals VGA, DVI Video Cables Supplied Video Cable Length 1 8 m USB Hub None USB Cable Supplied None

POWER CONSUMPTION

Power 16 W Typical Max 22 W Sleep Mode 0.5 W 0.5 W Off Mode

Heat Dissipation Typical

54.56 Btu/h 75.02 Btu/h Max. Power Supply Internal Power Voltage

90-264 VAC, 0.75-0.3 A

Voltage Dynamic Frequency 47-63 Hz

SIGNAL INTERFACE / PERFORMANCE

30 kHz to 83 kHz Horizontal Frequency Vertical Frequency 50 kHz to 75 Hz Native Resolution 1680 x 1050 Maximum Pixel Clock Speed / 146.25 MHz

Randwidth

Default Color Temperature 7200 K Preset Display Modes 28 User-defined Display Modes 20 OSD Buttons 5 OSD Languages 8

DIMENSIONS (W x D x H)

Size Packed 22.44" x 7.52" x 16.57" (570 mm x 191 mm x 421 mm) Size Unpacked with stand 20.05" x 9.61" x 14.97"

(509.3 mm x 244.2 mm x 380.2 mm)

Size Unpacked without stand 20.05" x 1.73" x 13.06"

(Head Only) (509.3 mm x 44 mm x 331.7 mm)

Min. Distance from Table to Panel 2.58" (65.5 mm) (lowest pixel at bottom of screen)

Max. Distance from Table to Panel 14.30" (363.2 mm)

(highest pixel at top of screen) Stand Base Footprint Area 8.31" (211 mm) (diameter)

Weight Packed 6.98 kg (15.38 lbs) 4.71 kg (10.38 lbs) Weight Unpacked 3.09 kg (6.81 lbs) Weight (Monitor Head Only)

COMPLIANCE

FPEAT® GOLD **ENERGY STAR Rating** 6.0 ULE Gold TCO® Display 6.0 TCO® Edge 2 U TUV Yes GREENGUARD® Nο RoHS (EU 2002/95/EC) Yes Windows 7. Windows 8.0. Windows Certification

Windows 8.1

China Energy Efficiency Standard Tier 1

ENVIRONMENTAL

Low Halogen

Temperature - Operating 0 °C to 45 °C -20 °C to 60 °C (non-condensing) Temperature - Non-operating Humidity - Operating 10% to 80% Humidity - Non-operating 5% to 95% (non-condensing) 5.000 m Altitude – Operating Altitude - Non-operating 40,000 ft Arsenic-free Glass Yes PVC free Yes Mercury free Yes PCC % of plastic resins 85%

WARRANTY AND AVAILABILITY

Warranty 3 Years

Geography Availability EMEA, ASEAN, Japan



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Think Vision T22i-10 MONITOR



SPECIFICATIONS

ISDI	ΔV

Panel Size 21.5" Wide Panel Type **IPS** Backlight WLED Resolution (H x V) 1920 x 1080 Aspect Ratio 16:9 Anti-Glare Yes Borderless Screen Yes Screen Dimensions (W x H) (mm) 476.064 x 267.786

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

Color Support (Typical)

Color Gamut NTSC (CIE 1931) Response Time

DIMENSIONS (W x D x H)

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

(mm) (inches)

Size Monitor Head Only

(mm) (inches)

Stand Base Footprint Area

(mm) (inches) Weight Packed

Unpacked Monitor Head Only

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

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

240 x 240 9.45" x 9.45"

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

CONNECTIVITY

Video Input Signals VGA + HDMI 1.4 + DisplayPort 1.2 18 m Video Cables Supplied (Length) Audio-Out Audio English, French, German, OSD Languages

Spanish, Italian, Japanese, Simplified Chinese, Russian

18.74" x 10.54"

0.248 x 0.248

16.7 Million

4/6/14 ms

21.4 / 0.84"

2 / 0.08"

250 cd/m²

178°/178°

1000:1

3M:1

72%

POWER CONSUMPTION

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

MECHANICAL

Tilt Angle (Front / Back) -5°/30° Swivel Angle (Left / Right) +/-45° 110 / 4.33" Lift (mm / inches) Pivot -90° / 90° Cable Management Yes Kensington Lock Yes VESA Mounting Yes (100 mm) Bezel Color Raven Black Bezel Width Top (mm / inches) 2 / 0.08"

COMPLIANCE

Windows Certification

Arsenic-Free Glass Yes ULF Gold **PVC-Free** Yes; Without Cable Mercury-Free Yes **EPEAT** Silver **ENERGY STAR Rating** 8.0 TCO 7.0 TCO Edge 20 RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2

Windows 7 / Windows 10





Bottom (mm / inches)

Sides (mm / inches)













Think Vision T22i-20

DISPLAY

Panel Size

21.5-inch

Screen Dimensions

476.06 mm x 267.79 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch

0.2479 x 0.2479 mm

Dot/Pixel Per Inch (DPI/PPI)

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

178°/178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Brightness (peak)

250 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical) Power Consumption

3M:1

Color Gamut

72% NTSC (CIE 1931)

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2 1 x VGA

Audio Signal

1x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

1 x USB 3.2 Gen1

USB Downstream

4 x USB 3.2 Gen1 (1 x BC 1.2)

MULTI-MEDIA

Optional Soundbar Support

Yes (PN: 0A36190)

POWER

Power Consumption

(typ./max.)

12W / 43W

Power Consumption Sleep/Off Mode

<0.3W

Switch Off-Mode

< 0.3 W

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

10.4W / 32.97kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (max range)

150 mm

Pivot

-90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Tiny Bracket Support Yes (sold separately)

Kensington Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

18 mm

Bezel Width (top/bottom)

1.8 / 22 mm

DIMENSION

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

390.0 x 187.0 x 577.0 mm 15.35 x 7.36 x 22.72 inches

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

205.0 x 396.0 x 489.3 mm 8.07 x 15.59 x 19.26 inches

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

205.0 x 546.0 x 489.3 mm 8.07 x 21.50 x 19.26 inches

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

48.5 x 297.4 x 489.3 mm 1.91 x 11.71 x 19.26 inches

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

121.6 mm

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

539.4 mm

Weight Packed (kg/lbs.)

7.20 kg / 15.87 lbs.

Weight Unpacked (kg/lbs.) 5.47 kg / 12.06 lbs.

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

3.01 kg / 6.66 lbs.

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

1188 / 550 units

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Rating 8.0

CCC

Yes

TCO 80

TCO Edge

2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort Yes













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

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ThinkVision T22V-10 MONITOR

SPECIFICATIONS

DISPLAY		E1
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Response Time (Extreme/Typical/Off)	21.5" In-Plane Switching WLED 1920 x 1080 16:9 Yes 476.06 x 267.79 250 cd/m² 178°/178° 1000:1 3M:1 0.25 x 0.25 102 72% sRGB 4/6/14 ms (G-to-G)	Tei C N Hu C N Alt C N Ar PV Me
POWER CONSUMPTION		D
Typical	18 W	Siz

Typical	18 W
Maximum	43 W
Sleep-Mode	<0.5 W
Switch Off-Mode	<0.3 W
Power Supply	Internal
Power Voltage	90 VAC - 264 VAC
Voltage Dynamic Frequency	47 Hz - 63 Hz

SIGNAL INPUT

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

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/ Bandwidth	al Frequency Resolution um Pixel Clock Speed/
Default Color Temperature Preset/User Modes	· ·

Default Color Temperature
Preset/User Modes
OSD Buttons
OSD Languages

30 kHz - 81 kHz
50 Hz - 75 Hz
1920 x 1080

24/20

2 / 0.08"

VGA	: 205 MHz
HDMI	: 165 MHz
DisplayPort	: 165 MHz
6500K	

5+2 Buttons
English, French, German,
Spanish, Italian, Japanese,
Simplified Chinese, Russian

NVIRONMENTAL

Temperature Operating Non-Operating	0°C - 40°C -20°C - 60°C
Humidity Operating Non-Operating	10% - 80% 5% - 95%
Altitude Operating Non-Operating	0 m - 8000 m 0 ft - 40,000 ft
Arsenic-Free Glass PVC-Free	Yes Yes
Mercury-Free PCC % of Plastic Resins	Yes >85%

IMENSIONS (W x D x H)

Size Packed	
(mm)	554 x 365 x 187
(inches)	21.81" x 14.37" x 7.36"
Size Unpacked with Stand	

Size	Unpa	аскеа	with
Lo	west	Positi	on

(mm)	489.7 x 251.9 x 375.8
(inches)	19.28" x 9.92" x 14.79"
Highest Position	
(mm)	489.7 x 251.9 x 485.8

19.28" x 9.92" x 19.13"

(inches)		
Size Unpacked	without	Stand

Monitor Head Only)	
(mm)	489.7 x 43.5 x 315.1
(inches)	19.28" x 1.71" x 12.41"

Distance from Table to Panel

Lowest Pixel at Bottom of Screen	
(mm / inches)	82.1 / 3.23"
Highest Pixel at Top of Screen	
(mm / inches)	192.1 / 7.56"

Stand Base Footprint Area

(mm / inches) 232 x 3	203.6 /	9.13"	x 8.02
-----------------------	---------	-------	--------

Weight

Packed	Starting at 14.46 lbs (6.56 kg)
Unpacked	Starting at 10.16 lbs (4.61 kg)
Monitor Head Only	Starting at 6.48 lbs (2.94 kg)

MECHANICAL

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

COMPLIANCE

EPEAT ENERGY STAR Rating ULE TCO RoHS (EU 2002/95/EC) Windows Certification China Energy Efficiency Standard TÜV Eye Comfort	Silver 8.0 Gold TCO Display 7.0 / TCO Edge 2.0 Yes Windows 7 / Windows 10 Grade 2
TÜV Eye Comfort	Yes

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months WW Geography Availability





Sides (mm / inches)

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













Think Vision T22v-20

DISPLAY

Panel Size

21.5-inch

Screen Dimensions

476.06 mm x 267.79 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch

0.2479 x 0.2479 mm

Dot/Pixel Per Inch (DPI/PPI)

102

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

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Brightness (peak)

250 cd/m²

Contrast Ratio (typical)

1000.1

Dynamic Contrast Ratio (typical)

3M·1

Colour Gamut

72% NTSC (CIE 1931)

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

1 x VGA

Audio Signal

1 x Audio Combo (3.5 mm; in/out)

USB Hub

Yes

USB Upstream

1 x USB 3.2 Gen1

USB Downstream

2 x USB 3.2 Gen1 (1 x BC 1.2)

MULTI-MEDIA

Integrated Webcam

Yes

Integrated Microphone

Integrated Speakers

Yes (2 x 3W)

POWFR

Power Consumption (typ./max.)

13W / 43W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

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

10.75W / 33.81kWh

Power Supply

Internal

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

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) +45° / -45°

Lift (max. range)

150 mm

Pivot

-90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Tiny Bracket Support

Yes (sold separately)

Kensington Lock Slot Yes

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side)

1.8 mm

Bezel Width (top/bottom)

1.8 / 22.0 mm

DIMENSION

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

390.0 x 187.0 x 577.0 mm 15.35 x 7.36 x 22.72 inches

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

205.0 x 413.0 x 489.3 mm 8.07 x 16.26 x 19.26 inches

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

205.0 x 563.0 x 489.3 mm 8.07 x 22.17 x 19.26 inches

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

48.3 x 314.4 x 489.3 mm 1.90 x 12.38 x 19.26 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 121.7 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 539.4 mm

Weight Packed (kg/lbs.)

7.22 kg/15.92 lbs.

Weight Unpacked (kg/lbs.) 5.49 kg/12.10 lbs.

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

3.03 kg/6.68 lbs.

Full Container Load (40' STD/20' STD) 1188/550 units



WHAT'S IN THE BOX

1 x USB Type-A to Type-B cable

Monitor with stand

1 x DP cable (1.8 m)

Quick setup guide

CERTIFICATION

ENERGY STAR Rating

RoHS (EU 2002/95/EC)

Windows Certification

China Energy Efficiency Standard

TÜV Rheinland Eye Comfort

(1.8 m)

8.0

CCC Yes

TCO

TCO Edge

80

20

EPEAT

Silver

Tier 1

Yes

1 x Power cable (1.8 m)







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 T23d-10

DISPLAY

Panel Size 22.5 inch

Screen Dimensions (H x V) (mm)

496.2 x 313.9

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:10

Resolution

1920 x 1200

Pixel Pitch (H x V) (mm)

0.25 x 0.25

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

Video Cable Length

1.8 m

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

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

655 x 422 x 160 mm / 25.78 x 16.61 x 6.30 inch

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

251.9 x 381.9 x 501.2 mm / 9.9 x 15.04 x 19.73 inch

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

251.9 x 491.9 x 501.2 mm / 9.9 x 19.37 x 19.73 inch

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

43.4 x 326.5 x 501.2 mm / 1.71 x 13.54 x 19.73 inch

Weight Packed (kg/lbs.)

6.84 kg / 15.05 lbs.

Weight Unpacked (kg/lbs.)

4.85 kg / 10.67 lbs.

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

2.87 kg / 6.31 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Yes (by Tiny Clamp Bracket Kit+VESA mount PN:4XF0N82412+PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

-45°/+45°

Lift (Max range)

110 mm

Pivot

-90°/+90°

VESA Mount

Yes (100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.3 mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1x DP-DP cable

1 x VGA cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

8.0

CCC

Yes

TCO

TCO 7.0/TCO Edge 2.0

EPEAT

Silver

ULE

Gold

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 50°C

Eye Comfort Certification

Yes















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Think Vision t23i-10 monitor



SPECIFICATIONS

DISPLAY

23 Wide Panel Size Panel Type IPS Backlight WIFD Resolution (H x V) 1920 x 1080 Aspect Ratio 16:9 Anti-Glare Yes Borderless Screen Yes Screen Dimensions (W x H) (mm) 517.2 x 302.8 (inches) 20.36" x 11.92"

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

Color Support (Typical) Response Time

DIMENSIONS (W x D x H)

Size Packed 590 x 187 x 422 (mm) (inches) Size Unpacked with Stand

(mm) (inches)

Size Monitor Head Only

(mm) (inches)

Stand Base Footprint Area (mm)

(inches) Weight Packed

Unpacked Monitor Head Only 23.23" x 7.36" x 16.61"

522.2 x 264.2 x 337.7 20.56" x 10.4" x 13.3"

522 2 x 42 7 x 317 6 20.56" x 1.68" x 12.5"

218.7 x 218.7 8.61" x 8.61"

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

CONNECTIVITY Video Input Signals

Video Cables Supplied (Length) Audio

OSD Languages

VGA + HDMI 1.4 + DisplayPort 1.2 Audio-Out

250 cd/m²

0.265 x 0.265

16.7 Million 4/6/14 ms

178°/178°

1000:1

3M:1

72%

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

POWER CONSUMPTION

Typical Maximum 45 W Sleep-Mode <0.5 W Switch Off-Mode <0.5 W **Power Supply** Internal Power Voltage 100 VAC - 240 VAC

MECHANICAL

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

Top (mm / inches) 2 / 0.08" 237/093" Bottom (mm / inches) Sides (mm / inches) 2 / 0.08"

COMPLIANCE

Arsenic-Free Glass Yes Yes; Without Cable PVC-Free

Mercury-Free Yes **EPEAT** Silver **ENERGY STAR Rating** 8.0 TCO 7.0 TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2

Windows Certification Windows 7 / Windows 10

















ThinkVision T23i-20

DISPLAY

Panel Size

23-inch

Screen Dimensions

509.19 mm × 286.42 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch

0.2652 × 0.2652 mm

Dot/Pixel Per Inch (DPI/PPI)

95.78

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

178°/178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

75% NTSC (CIE 1931)

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

1 x VGA

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

1 x USB 3.2 Gen 1 Type-B

USB Downstream

4 x USB 3.2 Gen 1 (1 x BC1.2)

POWFR

Power Consumption (typ./max.)

14.5W / 52W

Power Consumption Sleep/Off Mode

< 0.5 W

Power Consumption Switch-off Mode

< 0.3 W

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

10.52W / 33.73kWh

Internal

Voltage Required

Power Supply

AC 100 to 240 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (max. range)

150 mm

Pivot

-90°/90°

VESA Mount Capability

Yes (100 x 100 mm)

Tiny Bracket Support Yes (sold separately)

Nano Bracket Support Yes (sold separately)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 22.0 mm

DIMENSION

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

175 x 387 x 599 mm 6.89 x 15.24 x 23.58 inches

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

200 x 404.34 x 521.8 mm 7.87 x 15.92 x 20.54 inches

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

200 x 554.34 x 521.8 mm 7.87 x 21.82 x 20.54 inches

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

44.82 x 316.31 x 521.8 mm 1.76 x 12.45 x 20.54 inches

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

111.62 mm

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

398.04 mm

Weight Packed (kg/lbs.)

7.5 kg / 16.53 lbs.

Weight Unpacked (kg/lbs.) 5.59 kg / 12.32 lbs.

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

3.32 kg / 7.32 lbs.

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

1260 / 600 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x DP cable (1.8 m) Quick setup quide

CERTIFICATION

ENERGY STAR Rating

ccc

Yes

TCO

TCO Edge

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification
Windows 7. Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort



Yes













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

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ThinkVision E24-10 MONITOR

SPECIFICATIONS

DISPLAY

Panel Size 23.8" Panel Type In-Panel Switching Backlight WLED Screen Dimensions (H x V) 527.04 x 296.46 Resolution 1920 x 1080 Anti-Glare Yes Aspect Ratio 16:9

Viewing Angle (H/V at CR 10:1) 178°/178° Maximum Brightness (Typical) 250 cd/m² 1000:1 Contrast Ratio (Typical) Dynamic Contrast Ratio 3M:1 0.2745 x 0.2745

Pixel Pitch (H x V) (mm) Dot/Pixel Per Inch (DP/PPI) 92.5 PPI Color Gamut NTSC (CIE 1931) 72% sRGB

Response Time (Extreme/Default/Off) 4/6/14 ms (G to G)

ENVIRONMENTAL

Temperature Operating 0°C - 40°C Non-Operating -20°C - 60°C

Humidity Operating 10% - 80% Non-Operating 5% - 95%

Altitude Operating 5.000 m Non-Operating 0 ft - 40,000 ft

Arsenic-Free Glass Yes PVC-Free Yes (without cable)

Mercury-Free Yes PCC % of Plastic Resins >85%

POWER CONSUMPTION

18W Typical Maximum 23W Sleep-Mode <0.3W Switch Off-Mode <0.3W Power Supply Internal Power Voltage

90 VAC - 264 VAC 47 Hz - 63 Hz Voltage Dynamic Frequency

SIGNAL INPUT

VGA + DisplayPort 1.2 Video Input Signals Video Cables Supplied

Analog Cable DisplayPort to DisplayPort

Cable (for RoW)

Video Cable Length USB Hub No USB Cable Supplied No Audio-Out No

DIMENSIONS (W x D x H)

Size Packed 617 x 399 x 140 (mm) (inches) 24.3" x 15.7" x 5.51"

Size Unpacked with Stand 554 x 204.9 x 403.8 (mm)

(inches) 21.8" x 8.07" x 15.9"

Size Unpacked without Stand 336.7 x 554 x 49.2 (mm)

(inches) 13.3" x 21.8" x 1.9" Distance from Table to Panel

Lowest Pixel at Bottom of Screen 934/37" (mm / inches) Highest Pixel at Top of Screen

(mm / inches) 390.8 / 15.4"

Stand Base Footprint Area

200 x 200 / 7.9" x 7.9" (mm / inches) Weight

Starting at 11.7 lbs (5.3 kg) Packed Unpacked Starting at 8.2 lbs (3.7 kg) Monitor Head Only Starting at 7.7 lbs (3.5 kg)

-5° / 22°

Yes (100 x 100)

Raven Black

No

Nο

Yes

Yes

SIGNAL INTERFACE / PERFORMANCE

30 kHz - 81 kHz Horizontal Frequency Vertical Frequency 50 Hz - 75 Hz 1920 x 1080 Native Resolution (H x V) Maximum Pixel Clock Speed/ Bandwidth

205 MHz VGA 165 MHz DisplayPort Default Color Temperature 6500 K Preset/User Modes 24/20 OSD Buttons 5 Buttons

OSD Languages Spanish, Italian, Japanese, Simplified Chinese, Russian

English, French, German,

Bezel Width

Bezel Color

Lift

Pivot

MECHANICAL

Tilt Angle (Front / Back)

VESA Mount (mm x mm)

Kensington Lock Slot

Cable Management

Swivel Angle (Left / Right)

13 / 0.51" Sides (mm / inches) 13 / 0.51" Top (mm / inches) 26.3 / 1.03" Bottom (mm / inches)

COMPLIANCE

EPEAT Silver **ENERGY STAR Rating** 8.0 Gold ULE TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes

Windows Certification Windows 7 / Windows 10

China Energy Efficiency Standard

WARRANTY AND AVAILABILITY

3 Years Warranty Geography Availability ww



















Think Vision F24-20

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

527.04 mm x 296.46 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch

0.2745 x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)

92

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

178°/178°

Response Time

14ms

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M·1

Color Gamut

72% NTSC (CIE 1931)

Color Support (typical)

16.7 Million

Color Depth

8-bit

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

1 x VGA

MULTI-MEDIA

Integrated Speakers

Yes (2 x 1.5W)

POWFR

Power Consumption (typ./max)

18W / 24W

Power Consumption

Sleep/Off Mode

< 0.5W

Power Consumption

Switch Off-Mode

< 0.5W

DIMENSION

ENERGY STAR Power

12.98W / 40.98kWh

Consumption

Power Supply

Voltage Required

MECHANICAL

Lift (max range)

AC 90 to 264 V (47-63 Hz)

Tilt Angle (front/back)

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

 (P_{on}/E_{TEC})

Internal

-5° / 22°

155 mm

-90° / 90°

Bezel Color

Raven Black

3.1 / 20.9 mm

3.1 mm

Bezel Width (side)

Bezel Width (top/bottom)

Pivot

Yes

Size Packed

(D x H x W, mm/inch)

145.0 x 397.0 x 638.0 mm 5.71 x 15.63 x 25.12 inches

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

178.6 x 317.1 x 541.8 mm 7.03 x 12.48 x 21.33 inches

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

178.6 x 462.5 x 541.8 mm 7.03 x 18.21 x 21.33 inches

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

41.7 x 326.4 x 541.8 mm 1.64 x 12.85 x 21.33 inches

Weight Packed (kg/lbs.) 5.70 kg / 12.57 lbs.

Weight Unpacked (kg/lbs.) 4.80 kg / 10.58 lbs.

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

3.10 kg / 6.83 lbs.

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Certification

Yes

CCC

Yes

TCO 8.0

TCO Edge 2.0

EPEAT

Silver

RoHS (2011/65/EU)

Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard

TÜV Rheinland Eve Comfort

















Depends on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments.

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ThinkVision P24h-10 MONITOR



SPECIFICATIONS

DISPLAY		DIMENSIONS (W x D x H)	
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare Borderless Screen 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 (mm) Color Gamut (CIE 1931) Display Colors (Typical) Response Time	23.8" Wide IPS WLED 2560 x 1440 16:9 Yes Yes 526.848 (H) x 296.352 (V) 300 cd/m² 178°/178° 1000:1 3M:1 0.2058 99% sRGB 16.7 Million 4/6/14 ms (G-to-G)	Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only	635 x 188 x 422 25" x 7.4" x 16.61" 540.2 x 261.75 x 373.4 21.26" x 10.3" x 14.7" 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 19.73 lbs (8.95 kg) Starting at 12.54 lbs (5.69 kg) Starting at 8.42 lbs (3.82 kg)
SIGNAL INPUT		POWER CONSUMPTION	
Video Input Signals Video Cables Supplied (Length)	2 x HDMI 1.4 + USB-C + DisplayPort 1.2 + DisplayPort-Out USB-C - USB-C Cable (1.8 m)	Typical Maximum Sleep-Mode Off-Mode	24 W 120 W <0.5 W <0.5 W
SIGNAL INTERFACE / PERF	ORMANCE	Power Supply Power Voltage	Internal 90 VAC - 264 VAC
A 1'	Audio Out		

Audio-Out Audio

English, French, Italian, OSD Languages German, Spanish, Japanese, Chinese, Russian

-5°/ 30°

MECHANICAL

Tilt Angle (Front / Back)

Cable Management	163
Kensington Lock	Yes
VESA Mounting	Yes (100 mm)
Bezel Color	Raven Black
Bezel Width	
Top (mm / inches)	2 / 0.08"
Bottom (mm / inches)	22 / 0.87"
Sides (mm / inches)	2 / 0.08"

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.

COMPLIANCE

Arsenic-Free Glass	Yes
PVC-Free	Yes
Mercury-Free	Yes
EPEAT	Silver
ENERGY STAR Rating	8.0
ULE	Gold
TCO	7.0
TCO Edge	2.0
TÜV Eye Comfort Certification.	Yes
RoHS (EU 2002/95/EC)	Yes
China Energy Efficiency Standard	Tier 2
Windows Certification	Windows 7 / Windows 10

















Think Vision P24h-20

DISPLAY

Panel Size 23.8-inch

Screen Dimensions 526.85 mm x 296.35 mm

Panel Type 3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio 16.9

Resolution 2560 x 1440

Pixel Pitch 0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI) 123

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

Response Time 4ms (extreme mode)

6ms (normal mode) Refresh Rate

60 Hz Brightness (typical)

300 cd/m²

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M·1

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

Color Support (typical)

16.7 Million

Processor LUT 8-bit

Anti-glare Yes

CONNECTIVITY

Video Signal 1 x USB Type-C Gen1 (DP1.2 Alt Mode) 1 x HDMI 1.4 1 x DP 1.2 1 x DP 1.2 (Out)

Audio Signal 1x Audio Out (3.5 mm)

USB Hub Yes

Ethernet Yes (10M/100M/1000M)

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

USB Downstream 4 x USB 3.1 Gen1 (1 x BC1.2)

MULTI-MEDIA

Integrated Speakers Yes (2 x 1W)

Optional Soundbar Support Yes (PN 0A36190)

SPECIAL FEATURES

Factory Calibration Yes (Avg. ∆E<2)

POWFR

Power Consumption (tvp./max.) 23W / 132W

Power Consumption Sleep/Off Mode <0.5W

Power Consumption Switch-off Mode ≤0.3W

ENERGY STAR Power Consumption (P_{-}/E_{TEC}) 18.49W / 60.11kWh

Power Supply Internal

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

Smart Power

Voltage Required AC 100 to 240 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) +45° / -45°

Lift (max. range) 150 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot Yes

Cable Management Yes

Bezel Color Raven Black

Bezel Width (side) 2 mm

Bezel Width (top/bottom)

2 / 21.4 mm

DIMENSION Size Packed (D x H x W.

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

Size Unpacked w/ Stand (D x H x W. mm/inch) (lowest position) 205 x 420 x 539.8 mm 8.07 x 16.5 x 21.3 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 205 x 570 x 539.8 mm 8.07 x 22.4 x 21.3 inches

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch) 44.6 x 325.7 x 539.8 mm 1.8 x 12.8 x 21.3 inches

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

1179 mm

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

415 mm

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

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

Weight (monitor head only) (kg/lbs.) 3.85 kg / 7.89 lbs.

Full Container Load (40' STD/20' STD) 1395 / 645 units

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Rating 8.0

CCC Yes

> TCO 80

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification Windows 7. Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort















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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^{*}up to 75 W power delivery to compatible devices by USB Type-C













ThinkVision P24q-10 MONITOR

SPECIFICATIONS			
DISPLAY		MECHANICAL	
Panel Size 23.8" Panel Type In-Plane Switching Backlight WLED Resolution 2560 x 1440, QHD Aspect Ratio 16:9 Screen Dimensions (W x H) (mm) 526.848 (H) x 296.352 (V) Maximum Brightness (Typical) 300 cd/m² Minimum Brightness (Typical) 240 cd/m² Viewable Area (Diagonal) (mm / inches) 604.5 / 23.8" Viewing Angle (H/V at CR 10:1) 178°/178° Viewing Angle (H/V at CR 5:1) 178°/178° Contrast Ratio (Typical) 1000:1 Dynamic Contrast Ratio (Typical) 3M:1 Pixel Pitch (mm) 0.2058 Dot/Pixel Per Inch (DP/PPI) 123.6 Color Gamut (CIE 1931) 99% sRGB Color Support (Typical) 16.7 Million Response Time (Typical) 4/6/14 ms (G to G) Processor LUT 8-bit (6-bit + 2-bit FRC)	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift (mm) Pivot VESA Mount Kensington Lock Slot Pivot Auto Rotation Cable Management Bezel Color Bezel Width Sides (mm / inches) Top (mm / inches) Bottom (mm / inches) SPECIAL FEATURES Anti-Glare	-5° / 30° +/-45° 110 CW/CCW 90° Yes (100 mm) Yes No Yes Raven Black 2 / 0.08" 2 / 0.08" 22 / 0.87"	
	Thin Client Support (Tiny) Others	Yes Daisy Chain	
DIMENSIONS (W x D x H)		ENVIRONMENTAL	
Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Distance from Table to Panel (mm / inches) Lowest Pixel at Bottom of Screen Highest Pixel at Top of Screen Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only Full Container Load (40' STD / 20' STD)	635 × 188 × 422 25" × 7.4" × 16.61" 540.2 × 261.75 × 373.4 21.26" × 10.3" × 14.7" 540.2 × 42 × 325.98 21.26" × 1.65" × 12.83" 70.64 / 2.78" 366.99 / 14.45" 250 × 250 / 9.84" × 9.84" Starting at 19.69 lbs (8.93 kg) Starting at 12.35 lbs (5.6 kg) Starting at 8.22 lbs (3.73 kg) 1050 Units / 500 Units	Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating Ambient Operating Temperature Heat Dissipation Typical Maximum Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins	0 °C - 40 °C -20 °C - 60 °C 10% - 80% 5% - 95% 0 m - 5000 m 0 ft - 40,000 ft 0 °C - 40 °C 75.02 Btu/h 228.47 Btu/h Yes Yes (Without Cable) Yes >85%
SIGNAL INPUT		SIGNAL INTERFACE / PERFO	DRMANCE
Video Input Cianala	2 v HDML1.4	Harizantal Fraguency	EO Uz. 76 Uz.

Video Input Signals	2 x HDMI 1.4 DisplayPort 1.2 Mini DisplayPort DisplayPort-Out
Video Cables Supplied	Mini DisplayPort - DisplayPort Cable
Video Cable Length	1.8 m
Daisy Chain Support	Yes
USB Hub	USB 3.01 (1 x Up,
	4 x Down (1 x BC 1.2)
USB Cable Supplied	Yes
USB Cable Length	1.8 m
Audio-Out	Yes (3.5 mm)

Horizontal Frequency Vertical Frequency	50 Hz - 76 Hz 30 kHz - 99 KHz
Native Resolution	2560 x 1440
Maximum Pixel Clock Speed /	
Bandwidth	
HDMI	300 MHz
DisplayPort	5.4 GHz
Default Color Temperature	6500K
Preset/User Modes	20/24
On Screen Display (OSD) Controls	
Buttons	5 Buttons
Languages	English, French, German,

POWER CONSUMPTION

24 W 67 W Typical Maximum <0.5 W Sleep-Mode <0.5 W Off-Mode Power Supply Internal Power Voltage 90 VAC - 264 VAC 47 Hz - 63 Hz Voltage Dynamic Frequency

CERTIFICATIONS

TCO TCO 7.0 / TCO Edge 2.0 GREENGUARD VOC RoHS (EU 2002/95/EC) Yes Windows 7 / Windows 10 Windows Certification Image Quality Capability ISO 9241-307 Reduction of Hazardous Substances Arsenic-Free / Mercury-Free China Energy Efficiency Standard

Tier 2

Spanish, Italian, Japanese,

Simplified Chinese, Russian

WARRANTY AND AVAILABILITY

Geography Availability ThinkVision Logo Global Model Warranty

Worldwide Yes Yes





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

ThinkVision P24a-20

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WIFD

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

123

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

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

04 % DCI-P3

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

1 x USB3.1 Gen1 Type-B

USB Downstream

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

SPECIAL FEATURES

Factory Calibration

Yes (Avg. Delta E<2)

POWER

Power Consumption (typical/max)

20W / 61W

Power Consumption Sleep/Off Mode

≤ 0.5W

Power Consumption Switch-off Mode

≤ 0.3W

ENERGY STAR Power Consumption

 (P_{op}/E_{TEC})

16.04W / 51.61kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (Max range)

150 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 X 100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 21.4 mm

DIMENSION

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

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

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

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

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

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

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

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

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

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

Weight Packed (kg/lbs.) 8.1 kg / 17.86 lbs. Weight Unpacked (kg/lbs.) 6.18 kg / 13.6 lbs. Weight (monitor head only) (kg/lbs.)

3.85 kg / 7.89 lbs.

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

1395 / 645 units

WHAT'S IN THE BOX

MONITOR WITH STAND

1 X POWER CABLE (1.8 M)

1 X DP CABLE (1.8 M)

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

FACTORY CALIBRATION REPORT

QUICK SETUP GUIDE

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

тсо

8.0

TCO Edge

2.0 **EPEAT**

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 1

TÜV Rheinland Eye Comfort

⁄es











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

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Think Vision S24e-10

DISPLAY

Panel Size

23.8-inch

Screen Dimensions (H x V)

527.04 x 296.46 mm

Panel Type

3-side NearEdgelss, VA

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V)

0.2745 x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)

92

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

178°/178°

Response Time (gray to gray)

4 ms (Extreme Mode) 6 ms (Normal Mode)

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72% NTSC

Color Support

16.7 Million

CONNECTIVITY

Video Signal

1 x VGA 1 x HDMI 1.4

Video Cable Length

1.8 m

Audio Signal

1 x Audio Out (3.5 mm)

MULTI-MEDIA

Optional Speakers Support

Yes

SPECIAL FEATURES

Sync Technology

FreeSvnc™

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

Anti-glare

Yes

POWFR

Power Consumption (Typ./Max)

24W / 31W

Power Consumption Sleep/Off Mode

< 0.3W

Power Consumption Switch-Off Mode

< 0.3W

Power Supply

Internal

Voltage Required

AC 100 to 240 V (47/63 Hz)

MECHANICAL

Tilt Angle (front/back)

-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 / 22 mm

DIMENSION

Size Packed (D x H x W)

(mm/inch)

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

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

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

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

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

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

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

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

99.0 mm

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

399.9 mm

Weight Packed (kg/lbs.)

4.84kg / 10.67 lbs.

Weight Unpacked (kg/lbs.)

3.36kg / 7.41 lbs.

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

3.07kg / 6.77 lbs.

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

1660 / 800 Units

WHAT'S IN THE BOX

Monitor with stand interchange

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

8.0

CCC Yes

EPEAT

Silver

ULE

Gold

RoHS (EU 2002/95/EC)

Yes (2011/65/EU)

Windows Certification

Windows 7 Windows 10

China Energy Efficiency Standard

Tier 2

Low Blue Light

Yes











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ThinkVision S24q-10

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

124

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

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

240 cd/m²

Brightness (peak)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

> 99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1 x Audio Out (3.5 mm)

SPECIAL FEATURES

Tiny Support

Yes

POWER

Power Consumption (typical/max)

20W / 31W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Power Supply

Internal

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

16.76 W / 52.75 kWh

Voltage Required

AC 100 to 240 V (47/63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2 mm

Bezel Width (top/bottom)

2 / 21.4 mm

DIMENSION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR® Rating

8.0

CCC

Yes

TCO

TCO Edge

2.0

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 1

TÜV Eye Comfort

Yes















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

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ThinkVision T24d-10 MONITOR

SPECIFICATIONS

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

SIGNAL	INPUT
0.0.0.	

Horizontal Frequency

Maximum Pixel Clock Speed/

Default Color Temperature

Preset Display Modes

Vertical Frequency

Native Resolution

DisplayPort™

OSD Buttons

OSD Languages

Bandwidth VGA

HDMI™

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

30 kHz - 83 KHz

English, French, German, Spanish, Italian, Japanese,

Simplified Chinese, Russian

50 Hz - 75 Hz

1920 x 1200

205 MHz

165 MHz 165 MHz

6500 K

20

5

SIGNAL INTERFACE / PERFORMANCE

Power Voltage Voltage Dynamic Frequency

ENVIRONMENTAL

Typical Maximum

Sleep-Mode

Power Supply

Switch Off-Mode

Temperature Operating Non-Operating Humidity	0°C - 40°C -20°C - 60°C
Operating Non-Operating	10% - 80% 5% - 95%
Altitude	
Operating Non-Operating	0 m - 5000 m 0 ft - 40.000 ft
Arsenic-Free Glass	Yes
PVC-Free	Yes
Mercury-Free	Yes

22 W

64 W

<0.3 W

<0.3 W

Internal

100 VAC - 240 VAC

50 Hz - 60 Hz

MECHANICAL

-5°/ 30° +/-45° 110 +/-90° 100 x 100 Yes Yes Business Black 2 / 0.08"
2 / 0.08" 22.7 / 0.89" 2 / 0.08"

PCC % of Plastic Resins

COMPLIANCE

EPEAT	Silver
ENERGY STAR Rating	8.0
ULE	Gold
TCO	TCO Display 7.0 / TCO Edge 2.0
RoHS (EU 2002/95/EC)	Yes
China Energy Efficiency Standard	Tier 2
Windows Certification	Windows 7 / Windows 10

>85%

WARRANTY AND AVAILABILITY

3 Years Warranty Geography Availability WW

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.





^{*} NA only.













Think Vision T24h-20

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WIFD

Aspect Ratio

16.9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

123

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

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

USB Downstream

4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (tvp./max.)

23W / 120W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

ENERGY STAR Power Consumption (Pon/ETEC)

16.36W / 53.37kWh

Power Supply

Internal

USB Type-C Power Delivery (W)

up to 75W*

Smart Power

Yes

Voltage Required

AC 100 to 240 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45°/ -45°

Lift (max range)

150 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 24.1 mm

DIMENSIONS

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

620 x 149 x 423 mm 24 4 x 5 9 x 16 7 inches

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

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

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

8.07 x 22.4 x 21.3 inches

Size Unpacked w/o Stand

(head only) (D x H x W, mm/inch) 44.6 x 325.7 x 539.8 mm 1.8 x 12.8 x 21.3 inches

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

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

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

415 mm

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

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

3.85 kg / 7.89 lbs.

Full Container Load (40' STD / 20' STD) 1395 / 645 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m)

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

(NA only) Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

ссс

Yes

TCO 8.0

TCO Edge

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard
Tier 1

TÜV Rheinland Eye Comfort













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

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

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Think Visinn 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 WIFD 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 Video Cables Supplied (Length) 1.8 m

USB Hub

Audio Out

DisplayPort 1.2 1 x USB 3.01 (Upstream)

4 x USB 3.01 (Downstream, Incl. 1 BC)

. Yes (3.5 mm)

Raven Black

POWER CONSUMPTION

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

Power Voltage 90 VAC - 264 VAC

MECHANICAL

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

VESA Mount (mm x mm) Bezel Color

Bezel Width

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

WHAT'S IN THE BOX

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

CERTIFICATIONS

EPEAT Silver **ENERGY STAR Rating** 8.0 TCO 7.0 TCO Edge 2.0 Gold ULE Yes RoHS (EU 2002/95/EC) China Energy Efficiency Standard Tier 2

Windows 7 / Windows 10 Windows Certification

TüV Eye Comfort Certification Yes

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

















Think Vision 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

Buttons

Languages

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**

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 VGA + HDMI + DisplayPort Video Cables Supplied VGA, DisplayPort, USB, Power, HDMI (for NA only) USB Hub USB 3.01 (4 x down, 1 x BC) Audio Out Yes (3.5 mm) Internal Power Soundbar Support* Yes

MECHANICAL

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

POWER CONSUMPTION

Typical 16.5 W Maximum 59 W <0.5 W Sleep-Mode Switch Off-Mode <0.3 W Power Supply Internal Power Voltage 90 VAC - 264 VAC

ENERGY STAR (Pon) 13.67 W

ENERGY STAR (E_{TEC}) 43.51 kWh

WHAT'S IN THE BOX

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

CERTIFICATIONS

EPEAT Silver **ENERGY STAR Rating** 8.0 TCO 7.0 TCO Edge 2.0 ULF Gold RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2 Windows Certification Windows 7 / Windows 10

TüV Eye Comfort Certification Yes TINY Support Yes





Optional.

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













Think Vision T24i-20

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

527.04 mm x 296.46 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch

0.2745 x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)

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

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Brightness (peak)

250 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical) Power Consumption

3M:1

Color Gamut

72% NTSC (CIE 1931)

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

1 x VGA **Audio Signal**

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream 1 x USB 3.2 Gen1

USB Downstream

4 x USB 3.2 Gen1 (1 x BC 1.2)

MULTI-MEDIA

Optional Soundbar Support

Yes (PN 0A36190)

POWFR

Power Consumption (typ./max.)

14W / 55W

Power Consumption Sleep/Off Mode

< 0.5W

Switch-off Mode

< 0.3W

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

12.35W / 38.83kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (max. range)

150 mm

Pivot

-90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Tiny Bracket Support

Yes (sold separately)

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 mm / 22.2 mm

DIMENSION

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

422.0 x 187.0 x 622.0 mm 16.61 x 7.36 x 24.49 inches

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

205.0 x 409.3 x 539.8 mm 8.07 x 16.11 x 21.25 inches

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

205.0 x 559.3 x 539.8 mm 8.07 x 22.02 x 21.25 inches

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

46.8 x 326.5 x 539.8 mm 1.84 x 12.85 x 21.25 inches

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

106.62 mm

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

557.0 mm

Weight Packed (kg/lbs.)

8.17 kg/18.01 lbs

Weight Unpacked (kg/lbs.)

5.90 kg/13.01 lbs. Weight (monitor head only)

(kg/lbs.) 3.30 kg/7.28 lbs.

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

1140/540 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x DP cable (1.8 m) 1 x USB Type-A to B cable (1.8 m)

CERTIFICATION

Quick setup guide

ENERGY STAR Rating

CCC Yes

TCO 8.0

2.0

TCO Edge

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard

TÜV Rheinland Eye Comfort













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

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ThinkVision T24m-10 MONITOR

SPECIFICATIONS

ח	ISDI	ΙΔΥ

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

Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio (Typical)

Pixel Pitch (mm) Dot/Pixel Per Inch (DPI/PPI) Color Gamut (CIE 1931)

Response Time (gray to gray)

23.8"

In-Plane Switching

WLED 1920 x 1080 16:9

Yes 527.04 (H) x 296.46 (V)

250 cd/m² 178°/178° 1000:1 3M:1

0.2745 (H) x 0.2745 (V)

92

72% NTSC

4 ms (Extreme mode) 6 ms (Normal mode)

POWER CONSUMPTION

Typical
Maximum
Sleep-Mode
Switch Off-Mode
Power Supply
Power Voltage

19 W 116 W <0.5 W <0.5 W Internal

Power Voltage 90 VAC - 264 VAC Voltage Dynamic Frequency 47 Hz - 63 Hz

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

(inches) 540.2 x 261.75 x 373.4 (inches) 21.26" x 10.3" x 14.7"

Highest Position

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

Size Unpacked without Stand (Monitor Head Only)

(mm) 540.2 x 46.45 x 325.98 (inches) 21.26" x 1.82" x 12.83"

Distance from Table to Panel Lowest Pixel at Bottom of Screen (mm / inches)

Highest Pixel at Top of Screen

(mm / inches)

Stand Base Footprint Area

(mm / inches)

Weight Packed

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

70.37 / 2.77"

476.8 / 18.77"

CONNECTIVITY

Video Input Signals
Video Cables Supplied
Video Cable Length
USB Hub

HDMI 1.4 + DisplayPort 1.2a + USB Type-C USB Type-C to Type-C Cable 1.8 m

Yes

1 x USB 3.01 (Upstream, by USB Type-C)

4 x USB 3.0¹ (Downstream, incl. 1BC) Yes (3.5 mm)

Audio-Out

SPECIAL FEATURES

Thin Client Support (Tiny)

Yes (by Tipy Clamp

(by Tiny Clamp Bracket Kit + VESA Mount)

WHAT'S IN THE BOX

Monitor with Stand 1 x Power Cable

 $1 \times USB Type-C^{\scriptscriptstyle{TM}}$ to Type- $C^{\scriptscriptstyle{TM}}$ Cable

Quick Setup Guide

MECHANICAL

Tilt Angle (Front / Back)
Swivel Angle (Left / Right)
Lift Range (mm)
Pivot
VESA Mount (mm x mm)
Kensington Lock Slot

VESA Mount (mm x mm) Kensington Lock Slot Cable Management Bezel Color Bezel Width Top (mm / inches)

Sides (mm / inches)

-5° / 30° +/-45° 110 +/-90° Yes (100 x 100)

Yes Yes

Raven Black 2 / 0.08"

2 / 0.08"

CERTIFICATIONS

EPEAT
ENERGY STAR Rating
ULE

TCO TCO 7.0 / TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes

(EU 2002/95/EC)

Windows Certification Windows 7 / Windows 10

Silver

8.0

Gold

China Energy Efficiency Standard Tier 2
TüV Eye Comfort Certification Yes

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

















ThinkVision T24v-10 MONITOR

SPECIFICATIONS

DISPLAY		ENVIRONMENTAL	
Panel Size Panel Type Backlight	23.8" In-Plane Switching WLED	Temperature Operating Non-Operating	0°C - 40°C -20°C - 60°C
Resolution Aspect Ratio Anti-Glare Screen Dimensions (W x H) (mm)	1920 x 1080 16:9 Yes 527.04 x 296.46	Humidity Operating Non-Operating	10% - 80% 5% - 95%
Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical)	250 cd/m ² 178°/178° 1000:1	Altitude Operating Non-Operating	0 m - 8000 m 0 ft - 40,000 ft
Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Response Time (Extreme/Typical/Off)	3M:1 0.25 x 0.25 102 72% sRGB 4/6/14 ms (G-to-G)	Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins	Yes Yes Yes >85%
POWER CONSUMPTION	,, ,, ,, ,,,,,, (2 - 22 - 2)	DIMENSIONS (W x D x H)	
Typical Maximum Sleep-Mode Switch Off-Mode Power Supply Power Voltage Voltage Dynamic Frequency	20 W 45 W <0.5 W <0.3 W Internal 90 VAC - 264 VAC 47 Hz - 63 Hz	Size Packed (mm) (inches) Size Unpacked with Stand Lowest Position (mm)	608 x 395 x 187 23.94" x 15.55" x 7.36" 540.2 x 261.9 x 390.5
SIGNAL INPUT		(inches) Highest Position	21.28" x 10.32" x 15.39"
Video Input Signals	HDMI 1.4 + DisplayPort 1.2 + VGA	(mm) (inches)	540.2 x 261.9 x 500.5 21.28" x 10.32" x 19.72"
Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied Audio-Out	HDMI (ROW) + DisplayPort + VGA + USB 3.0¹ 1.8 m Yes Yes Yes (3.5 mm)	Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Distance from Table to Panel	540.2 × 43.8 × 343.7 21.27" × 1.72" × 13.53"
SIGNAL INTERFACE / PERFO	RMANCE	Lowest Pixel at Bottom of Screen (mm / inches)	69.6 / 2.74"
Horizontal Frequency Vertical Frequency Native Resolution	30 kHz - 81 kHz 50 Hz - 75 Hz 1920 x 1080	Highest Pixel at Top of Screen (mm / inches) Stand Base Footprint Area	69.6 / 2.74"
Maximum Pixel Clock Speed/ Bandwidth Default Color Temperature Preset/User Modes OSD Buttons	VGA : 205 MHz HDMI : 165 MHz DisplayPort : 165 MHz 6500K 27/21 5+2 Buttons	(mm / inches) Weight Packed Unpacked	242.5 x 212.8 / 9.55" x 8.38" Starting at 15.78 lbs (7.16 kg) Starting at 11.18 lbs (5.07 kg)
OSD Languages	English Evensh Covers	Monitor Head Only	Starting at 7.3 lbs (3.31 kg)

MECHANICAL

OSD Languages

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

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

COMPLIANCE

EPEAT Silver ENERGY STAR Rating 8.0
ULE Gold TCO TCO Display 7.0 / TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes Windows Certification Windows 7 / Windows 10 China Energy Efficiency Standard TÜV Eye Comfort Gold TVS Gold TCO Display 7.0 / TCO Edge 2.0 Yes
·

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months WW Geography Availability





Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the 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 T24v-20

DISPLAY

Panel Size 23.8-inch

Screen Dimensions 527.04 x 296.46 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio

Resolution 1920 x 1080

Pixel Pitch 0.2745 x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)

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

Response Time 4ms (extreme mode)

Refresh Rate 60 Hz

Brightness (typical) 250 cd/m²

Brightness (peak) 250 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical) 3M:1

Color Gamut 72% NTSC (CIE 1931)

Color Support (typical) 16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal 1 x HDMI 1.4 1 x DP 1.2 1 x VGA

Audio Signal

1 x Audio combo (3.5 mm; in/out)

USB Hub Yes

USB Upstream 1 X USB 3.2 Gen1

USB Downstream 2 x USB 3.2 Gen1 (1 x BC 1.2)

MULTI-MEDIA

Integrated Webcam

Integrated Microphone

.

Integrated Speakers Yes $(2 \times 3W)$

POWFR

Power Consumption (typical/max) 13W / 44W

Power Consumption Sleep/Off Mode < 0.5W Power Consumption Switch-off Mode < 0.3W

ENERGY STAR Power Consumption (P_{on}/E_{TEC}) 11.36W / 35.68kWh

Power Supply Internal

Voltage Required AC 100 to 240 V (50-60 Hz) **Size Unpacked w/ Stand**

MECHANICAL

Tilt Angle (front/back) -5° / 35°

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

Lift (max range) 150 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Tiny Bracket Support Yes (sold separately)

Kensington Lock Slot Yes

Cable Management

Bezel Color Raven Black

Bezel Width (side) 1.8 mm

Bezel Width (top/bottom)

1.8 / 22.0 mm

DIMENSION

Size Packed (D x H x W, mm/inch) 418.0 x 187.0 x 644.0 mm 16.46 x 7.36 x 25.35 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position) 205.0 x 434.0 x 539.8 mm

8.07 x 17.0 x 21.2 inches

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

205.0 x 584.0 x 539.8 mm 8.07 x 23.0 x 21.2 inches

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch) 48.35 x 344.3 x 539.8 mm 1.9 x 13.55 x 21.25 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 114.1 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 560.56 mm

Weight Packed (kg/lbs.) 7.86 kg/17.33 lbs.

Weight Unpacked (kg/lbs.) 5.94 kg/13.10 lbs.

Weight (monitor head only) (kg/lbs.) 3.48kg/7.67 lbs.

Full Container Load (40' STD / 20' STD) 1012/440 units WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC) Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort













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

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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_{TEC})

52.06kWh

Voltage Required

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

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

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

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

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

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

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

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

Weight Packed

7.8ka/17.20lbs.

Weight Unpacked

5.5ka/12.13lbs.

Weight (Monitor Head Only)

3.58kg/7.89lbs.

SPECIAL FEATURES

Anti-glare

Yes

Optional Soundbar Support

Yes

ThinkCentre Tiny Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot

+/-90°

VESA Mount Capability

Yes (100 x 100mm)

Kensington Lock Slot

Yes

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/22.2mm

WHAT'S IN THE BOX

Monitor with stand

1 × Power Cable

1 × USB 3.1 Gen1 Cable

1 × HDMI Cable*

1 × DP Cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR Rating

0.8

EU RoHS

Yes

CCC Yes

TCO

TCO 8.0/TCO Edge 2.0

EPEAT

Silver

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes















*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 (Pan)

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

8.0

EU RoHS

Yes

CCC Yes

TCO

TCO 8.0/TCO Edge 2.0

EPEAT

Silver

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes













*The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to other devices. 75W power delivery by USB Type-C can be achieved when downstream USB ports are not connected and OSD brightness setting is <31.

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

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ThinkVision P27h-10 MONITOR



SPECIFICATIONS

		_	_	_	
DI	2	D		Δ	V

 Panel Size
 27" Wide

 Panel Type
 IPS

 Backlight
 WLED

 Resolution
 2560 x 1440

 Aspect Ratio
 16:9

 Anti-Glare
 Yes

 Borderless Screen
 Yes

Borderless Screen

Screen Dimensions (W x H) (mm)

Maximum Brightness (Typical)

Viewing Angle (H/V at CR 10:1)

Dynamic Contrast Ratio (Typical)

Dynamic Contrast Ratio

Dixel Pitch (mm)

Color Gamut (CIE 1931)

Display Colors (Typical)

Display Colors (Typical)

16.7 Million

Display Colors (Typical)
Response Time
SIGNAL INPUT

Video Input Signals 2 x HDMI 1.4 + USB-C + DisplayPort 1.2 +

DisplayPort-Out
USB-C - USB-C Cable

4/6/15 ms (G-to-G)

Video Cables Supplied (Length)

USB-C - USB-C Cable
(NA only: HDMI,
DisplayPort - DisplayPort,
USB-C - USB-C) (1.8 m)

SIGNAL INTERFACE / PERFORMANCE

Audio Audio-Out

OSD Languages English, French, Italian, German, Spanish, Japanese, Chinese, Russian

POWER CONSUMPTION

 Typical
 38 W

 Maximum
 140 W

 Sleep-Mode
 <0.5 W</td>

 Off-Mode
 <0.5 W</td>

 Power Supply
 Internal

 Power Voltage
 100 VAC - 240 VAC

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.

DIMENSIONS (W x D x H)

Size Unpacked without Stand (Monitor Head Only)

(mm) 611.6 x 45.5 x 368.4 (inches) 24.08" x 1.79" x 14.5"

Stand Base Footprint Area

(mm / inches)

Weight

Packed Starting at 24.25 lbs (11 kg)
Unpacked Starting at 15.43 lbs (7 kg)
Monitor Head Only Starting at 11.02 lbs (5 kg)

260 x 260 / 10.24" x 10.24"

MECHANICAL

Tilt Angle (Front / Back) -5°/30°
Cable Management Yes
Kensington Lock Yes

VESA Mounting Yes (100 mm)
Bezel Color Raven Black

Bezel Width

 Top (mm / inches)
 2 / 0.08"

 Bottom (mm / inches)
 22.9 / 0.9"

 Sides (mm / inches)
 2 / 0.08"

COMPLIANCE

Arsenic-Free Glass Yes PVC-Free Yes Mercury-Free Yes EPEAT Silver **ENERGY STAR Rating** 8.0 TCO 7.0 TCO Edge 2.0 TÜV Eye Comfort Certification Yes RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard

Windows Certification Windows 7 / Windows 10

















ThinkVision P27h-20 Monitor

Specifications

DISPLAY

Panel Size 27-inch

Screen Dimensions 596.74 mm x 335.66 mm

Panel Type

4-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio

16:9

Resolution 2560 x 1440

Pixel Pitch 0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI)

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

178° / 178°

Response Time

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut 99% sRGB,

99% BT.709, 85% DCI-P3

Color Support (typical)

16.7 Million

Processor LUT 8-bit

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x USB Type-C Gen1 (DP1.2 Alt Mode) 1 x HDMI 1.4

1x DP 12 1 x DP 1.2 (Out)

Audio Signal

1x Audio Out (3.5 mm)

USB Hub Yes

Ethernet

Yes (10M/100M/1000M)

USB Upstream

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

USB Downstream

4 x USB 3.1 Gen1 (1 x BC1.2)

MULTI-MEDIA

Integrated Speakers

Yes (2 x 1W)

Optional Soundbar Support

Yes (PN 0A36190)

SPECIAL FEATURES

Factory Calibration

Yes (Avg. Delta E<2)

POWER

Power Consumption (typ./max.)

27W / 150W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

ENERGY STAR Power Consumption

19W / 61kWh

Power Supply

Internal

USB Type-C Power Delivery (W)

up to 90 W*

Smart Power**

Yes

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45°/ -45°

Lift (max range)

135 mm

Pivot -90° / 90°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

Cable Management

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 2.0 mm

DIMENSION

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

182 x 463 x 722 mm 7.17 x 18.23 x 28.43 inches Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position)

208 x 441.5 x 613.8 mm 8.19 x 17.38 x 27.17 inches

Size Unpacked w/ Stand

(D x H x W, mm/inch) (highest position)

208 x 576.5 x 613.8 mm 8.19 x 22.70 x 27.17 inches

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

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

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

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

Weight Packed (kg/lbs.)

9.55 kg / 21.01 lbs.

Weight Unpacked (kg/lbs.)

7.35 kg / 16.17 lbs.

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

4.87 kg / 10.71 lbs.

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

792 / 352 units

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable (1.8 m)

1 x DP cable (1.8 m) (NA only)

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

Factory calibration report

Quick setup guide

CERTIFICATION

ENERGY STAR Rating

CCC

Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC) Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard

TÜV Rheinland Eye Comfort













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

^{**}The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device. Get up to 90 W* of power delivery through the USB Type-C cable with the Smart Power function.













ThinkVision P27q-10 MONITOR

SPECIFICATIONS			
DISPLAY		MECHANICAL	
Panel Size Panel Type Backlight Resolution Aspect Ratio Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Minimum Brightness (Typical) Viewable Area (Diagonal) (mm/ inches) Viewing Angle (H/V at CR 10:1) Viewing Angle (H/V at CR 5:1) Contrast Ratio (Typical)	27" Wide In-Plane Switching WLED 2560 x 1440, QHD 16:9 596.74 (H) x 335.66 (V) 350 cd/m ² 300 cd/m ² 685.8 / 27" 178°/178° 178°/178° 1000:1 3M:1	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift (mm) Pivot VESA Mount Kensington Lock Slot Cable Management Bezel Color Bezel Width Sides (mm / inches) Top (mm / inches) Bottom (mm / inches)	-5° / 30° +/-45° 110 CW/CCW 90° Yes (100 mm) Yes Yes Raven Black 2 / 0.08" 2 / 0.08" 22.9 / 0.9"
Dynamic Contrast Ratio (Typical) Pixel Pitch (mm)	0.2331	SPECIAL FEATURES	
Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Color Support (Typical) Response Time (Typical) Processor LUT	109 99% sRGB 16.7 Million 4/6/15 ms (G to G) True 8-bit	Anti-Glare Thin Client Support (Tiny) Others	Yes Yes Daisy Chain
DIMENSIONS (W x D x H)		ENVIRONMENTAL	
Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Distance from Table to Panel (mm / inches) Lowest Pixel at Bottom of Screen Highest Pixel at Top of Screen Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only Full Container Load (40' STD / 20' STD)	453 x 732 X 210 17.83" x 28.82" X 8.27" 614 x 269.8 X 513 24.17" x 10.62" X 20.2" 540.2 x 42 x 325.98 21.26" x 1.65" x 12.83" 58.8 / 2.31" 504.4 / 19.86" 260 x 260 / 10.24" x 10.24" Starting at 23.8 lbs (10.8 kg) Starting at 15.43 lbs (7 kg) Starting at 10.58 lbs (4.8 kg) 800 Units / 350 Units	Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating Ambient Operating Temperature Heat Dissipation Typical Maximum Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins	0 °C - 40 °C -20 °C - 60 °C 8% - 80% 5% - 95% 0 m - 5000 m 0 ft - 40,000 ft 0 °C - 40 °C 129.68 Btu/h 255.75 Btu/h Yes Yes Yes >85%

SIGNAL	INPUT
Video Inpu	t Signals

	DisplayPort-Out
Video Cables Supplied	Mini DisplayPort - DisplayPort Cable
Video Cable Length	1.8 m
Daisy Chain Support	Yes
USB Hub	USB 3.01 (1 x Up,
	4 x Down (1 x BC 1.2))
USB Cable Supplied	Yes
USB Cable Length	1.8 m
Audio-Out	Yes (3.5 mm)

2 x HDMI 14

DisplayPort 1.2 Mini DisplayPort

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency	50 Hz - 76 Hz
Vertical Frequency	30 kHz - 99 KHz
Native Resolution	60 Hz (2560 x 1440)
Maximum Pixel Clock Speed /	
Bandwidth	
HDMI	300 MHz
DisplayPort	5.4 GHz
Default Color Temperature	6500K
Preset/User Modes	20/24
On Screen Display (OSD) Controls	
Buttons	5 Buttons
Languages	English, French, Italian, German, Spanish, Japanese,

POWER CONSUMPTION

38 W Typical 75 W Maximum <0.5 W Sleep-Mode Off-Mode <0.5 W **Power Supply** Internal Power Voltage 100 VAC - 240 VAC Voltage Dynamic Frequency 50 Hz - 60 Hz

CERTIFICATIONS

TCO TCO 7.0 / TCO Edge 2.0 ULE Gold VOC GREENGUARD RoHS (EU 2002/95/EC) Yes Windows Certification Windows 7 / Windows 10 Image Quality Capability ISO 9241-307 Reduction of Hazardous Substances Arsenic-Free / Mercury-Free China Energy Efficiency Standard

Chinese, Russian

WARRANTY AND AVAILABILITY

Geography Availability Worldwide ThinkVision Logo Yes Global Model Warranty 3 Years





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.













Lenovo P27q-20

DISPLAY

Panel Size

27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

4-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:

Resolution

2560 x 1440

Pixel Pitch

0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI)

109

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

01 1.1

Color Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

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

USB Downstream

4 x USB3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max)

22W / 57W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3\/

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

18W / 57kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (Max range)

135 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 X 100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 2.0 mm

DIMENSION

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

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

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

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

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

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

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

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

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

97.3 mm

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

567.9 mm

Weight Packed (kg/lbs.)

9.26 kg / 20.37 lbs.

Weight Unpacked (kg/lbs.)

7.12 kg / 15.7 lbs.

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

4.64 kg / 10.23 lbs.

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

792 / 352 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m)

1 x DP cable (1.8 m)

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

Quick setup guide

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

TCO

TCO Edge

2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification

Windows 7, Windows 10

China Energy

Efficiency Standard
Tier 1

TÜV Rheinland Eye Comfort

Yes













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

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Cable)

kg)

Starting at 11.02 lbs (5 kg)

ThinkVision P27u-10 MONITOR

SPECIFICATIONS

SFECII ICATIONS			
DISPLAY		ENVIRONMENTAL	
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Color Support (Typical) Color Depth Response Time	27" In-Panel Switching WLED 3840 x 2160 16:9 Yes 596.74 (H) x 335.66 (V) 350 cd/m² 178°/178° 1000:1 3M:1 0.1554 (H) x 0.1554 (V) 163 99.5% Adobe RGB 1.07 Billion 10-bit (8+ FRC) 4/6/14 ms (G-to-G)	Temperature Operating Non-Operating Humidity Operating Non-Operating Altitude Operating Non-Operating Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins	0°C - 45°C -20°C - 60°C 10% - 80% 5% - 95% 0 ft - 5000 ft 0 ft - 40,000 ft Yes Yes (without Cab Yes 0.85
POWER CONSUMPTION		DIMENSIONS (W x D x H)	
Typical Maximum Sleep-Mode	50 W 160 W <0.5 W	Size Packed (mm) (inches)	453 x 732 x 210 17.83" x 28.82" x

Switch Off-Mode	
Power Supply	
Power Voltage	

SIGNAL INPUT

Voltage Dynamic Frequency

Video Input Signals	2 HDMI + DisplayPort + USB Type-C
Video Cables Supplied	HDMI*, DisplayPort, USB Type-C
Video Cable Length	1.8 m
USB Hub	Yes
USB Cable Supplied	Yes (USB Type-C to Type-A Cable)
Audio-Out	Yes

<0.3 W

Internal

100 VAC - 240 VAC

50 Hz - 60 Hz

SIGNAL INTERFACE / PERFORMANCE

30 kHz - 160 kHz
23 Hz - 80 Hz
3840 (H) x 2160 (V)
HDMI : 600 MHz
DisplayPort: 5.4 Gbps
USB Type-C: 5.4 Gbps/Lane
6500K
27/20
5 Buttons
English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian

Size Packed	
(mm)	453 x 732 x 210
(inches)	17.83" x 28.82" x 8.27"
Size Unpacked with Stand	
Lowest Position	
(mm)	611.6 x 269.8 x 403.3
(inches)	24.08" x 10.62" x 15.88"
Highest Position	
(mm)	611.6 x 269.8 x 513.3
(inches)	24.08" x 10.62" x 20.21"
Size Unpacked without Stand	
(Monitor Head Only)	
(mm)	611.6 x 45.5 x 368.4
(inches)	24.08" x 1.79" x 14.5"
Distance from Table to Panel	
Lowest Pixel at Bottom of Screen	
(mm / inches)	60.2 / 2.37"
Highest Pixel at Top of Screen	
(mm / inches)	505.8 / 19.91"
Stand Base Footprint Area	
(mm / inches)	260 x 260 / 10.24" x 10.24"
Weight	
Packed	Starting at 24.25 lbs (11 kg)
Unpacked	Starting at 15.32 lbs (6.95 kg

MECHANICAL

Tilt Angle (Front / Back) Swivel Angle (Left / Right)	-5° / 30° +/-45°
Lift (mm)	Yes (110)
Pivot	+/-90°
	,
VESA Mount (mm x mm)	Yes (100 x 100)
Kensington Lock Slot	Yes
Cable Management	Yes
Bezel Color	Raven Black
Bezel Width	
Top (mm / inches)	2 / 0.08"
Bottom (mm / inches)	24.5 / 0.96"

COMPLIANCE

Monitor Head Only

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

WARRANTY AND AVAILABILITY

Warranty	3 Years
Geography Availability	WW

^{*} NA only.





Sides (mm / inches)

WWW.LENOVO.COM

2 / 0.08"

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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 S27i-10

DISPLAY

Panel Size

27-inch

Screen Dimensions (W x H mm)

597.89 mm × 336.31 mm

Panel Type

3-side NearEdgelss, In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Dot/Pixel Per Inch(DPI/PPI)

81

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

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

Refresh rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72% NTSC

Color Support

16.7M

CONNECTIVITY

Video Input Signals

1 x VGA 1 x HDMI 1.4

Audio Out

1 x Audio Out (3.5 mm)

Optional Speaker Support

Yes

MULTI-MEDIA

Optional Soundbar Support

Yes

SPECIAL FEATURES

Sync technology

FreeSync

Thin Client Support (Tiny)

Yes

(by Tiny Clamp Bracket Kit+VESA mount PN:4XF0N82412+PN:4XF0N03161)

Anti-glare

Yes

POWER

Power Consumption (Typ. / Max)

24W / 28W

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount

Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width(top/bottom)

2.0 / 21.7 mm

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)

(mm/mcn)

(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)

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)

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

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

98.7 mm

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

440.7 mm

Weight Packed (kg/lbs.)

6.80kg / 14.99 lbs.

Weight Unpacked (kg/lbs.)

4.76kg / 10.49 lbs.

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

4.22kg / 9.30 lbs.

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

1088 / 544 Units

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable (1.8 m)

1 x HDMI cable (1.8 m)

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

8.0

CCC

Yes

TCO

7.0

TCO Edge

2.0

EPEAT

Silver

ULE Gold

RoHS (EU 2002/95/EC)

Yes(2011/65/EU)

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

















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ThinkVision S27q-10

DISPLAY

Panel Size

27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI)

109

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

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

280 cd/m²

Brightness (peak)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

> 99% sRGB

Color Support (typical)

1.07 Billion

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1x Audio Port (3.5 mm)

SPECIAL FEATURES

Tiny Support

Yes

POWER

Power Consumption (typical/max)

35W / 45W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Power Supply

Internal

Energystar Power Consumption (Pon/ETEC)

19 W / 59.6 kWh

Voltage Required

AC 100 to 240 VAC (50/60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2 mm

Bezel Width (top/bottom)

2 / 22 mm

DIMENSION

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

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

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

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

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

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

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

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

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

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

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

Weight Unpacked (kg/lb)

4.65 kg / 10.25 lbs.

Weight (monitor head only) (kg/lb)

4.10 kg / 9.04 lbs.

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

1088 / 544 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m)

1 x HDMI cable (1.8 m) Quick setup guide

CERTIFICATION

ENERGY STAR® Rating

8.0

CCC

Yes

TCO 8.0

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Window 7, Window 10

China Energy Efficiency Standard

Tier 1

TÜV Eve Comfort

Yes











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

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ThinkVision S28u-10

DISPLAY

Panel Size

28-inch

Screen Dimensions

631 928 mm x 359 78 mm

Panel Type

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

3840 x 2160

Refresh Rate

60 Hz

Pixel Pitch (H x V)

0.16 x 0.16

Dot/Pixel Per Inch (DPI/PPI)

157.35

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

178° / 178°

Response Time

4ms (Extreme Mode) 6ms (Normal Mode)

Brightness (typical)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

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

1.07 Billion

CONNECTIVITY

Video Input Signals

HDMI 2.0 + DP 1.2

Audio Signal

1 x Audio Out (3.5mm)

POWER

Power Consumption (Typical/Max)

31W / 48W

Power Consumption Sleep/Off Mode

<0.3W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

Energystar Power Consumption

 (P_{on}/E_{TEC})

24.28W / 75.41kWh

Voltage Required

AC 90 to 264 V (50/60 Hz)

DIMENSIONS

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

127 x 723 x 452 mm /

5 x 28.46 x 17.80 inches

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

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

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

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

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

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

Weight Packed

7.0 kg / 15.43 lbs.

Weight Unpacked

5.24 kg / 11.55 lbs.

Weight (Monitor Head Only)

4.58 kg / 10.10 lbs.

SPECIAL FEATURES

Anti-glare

Yes

ThinkCentre Tiny Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 22.8 mm

WHAT'S IN THE BOX

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

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

8.0

CCC

Yes

TCO

TCO Edge

2.0

EPEAT

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier

TÜV Rheinland Eye Comfort

Yes

















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













ThinkVision T27h-20

DISPLAY

Panel Size 27-inch

Screen Dimensions 596.74 mm x 335.66 mm

Panel Type 3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 2560 x 1440

Pixel Pitch 0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI) 109

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

Response Time

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical) 3M:1

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

Anti-glare Yes

CONNECTIVITY

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

Audio Signal 1 x Audio Out (3.5 mm)

USB Hub Yes

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

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typ./max.) 23W / 122W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode < 0.3W

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

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

Smart Power Yes

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

MECHANICAL

Tilt Angle (front/back) $-5^{\circ}/35^{\circ}$

Swivel Angle (left/right) +45° / -45°

Lift (max range) 135 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot

Cable Management

Bezel Color Raven Black

Bezel Width (side) 2 mm

Bezel Width (top/bottom) 2 / 23.87 mm

DIMENSION

Size Packed (D x H x W, mm/inch) 694.0 x 163.0 x 480.0 mm 27.32 x 6.42 x 18.90 inches Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position) 614.0 x 429.4 x 208.0 mm 2417 x 16.9 x 8.19 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 614.0 x 564.4 x 208.0 mm 24.17 x 22.22 x 8.19 inches

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch) 614.0 x 369.1 x 46.7 mm 24.17 x 14.53 x 1.84 inches

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

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

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

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

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

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

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC) Yes

Windows Certification
Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort Yes















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

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













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

WLFD

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4 + DP 1.2

USB Hub

Yes

1 x USB 3.0 (Upstream)

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

Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

Power Consumption

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

MULTI-MEDIA

Optional Soundbar Support

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)

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

PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

-45°/+45°

Lift (Max range)

110 mm

Pivot

-90°/90°

VESA Mount

Yes (100 mm)

Kensington Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1 x VGA cable

1 x DP-DP cable

1 x HDMI cable (NA only)

1 x USB 3.0 cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

8.0

CCC

Yes

TCO

7.0 **EPEAT**

Silver

ULE Gold

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Eye Comfort Certification

Yes













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ThinkVision T27p-10

DISPLAY

Panel Size

27.0 inches

Screen Dimensions (H x V)

596.74 x 335.66mm

Panel Type

In-Plane Switching

Backlight WLED

Aspect Ratio

16.9

Resolution

3840 x 2160 pixels

Pixel Pitch (H x V)

0.1554 x 0.1554mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Refresh Rate

60Hz

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

350 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

1.07 Billion

POWER

Power Consumption (Typical/Max)

50W/140W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR (Pon)

23.40W

ENERGY STAR (E_{TEC})

101.94kWh

Voltage Required

100-240VAC (50/60Hz)

CONNECTIVITY

Video Input Signals

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

Video Cables Supplied

USB 3.1 Type-C + HDMI

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

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

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC)

Audio Out

Yes (3.5mm)

DIMENSIONS

Size Packed (D x H x W)

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

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

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

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

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

Weight Packed

11.00kg/24.25lbs.

Weight Unpacked

6.95kg/15.32lbs.

Weight (Monitor Head Only)

5.0kg/11.02lbs.

SPECIAL FEATURES

Smart Power*

Yes

Anti-glare

Yes

ThinkCentre Tiny Support

Yes

Optional Soundbar Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot +/-90°

VESA Mount Capability

Yes (100 x 100mm)

Kensington Lock Slot

Yes

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/24.5mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power Cable 1 x HDMI Cable

1 x USB Type-C to Type-C cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR Rating

8.0

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

EPEAT

Silver













*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.

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ThinkVision T27q-20

DISPLAY

Panel Size 27-inch

Screen Dimensions 596.74 mm x 335.66 mm

Panel Type 3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 2560 x 1440

Pixel Pitch 0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI) 109

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

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M:1

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

16.7 Million

Anti-glare Yes

CONNECTIVITY

Video Signal 1 x HDMI 1.4 1 x DP 1.2

Audio Signal 1 x Audio Out (3.5 mm)

USB Hub Yes

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

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

POWER

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

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode < 0.3W

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

Power Supply Internal

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

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) +45° / -45°

Lift (max range) 135 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot Yes

Cable Management

Bezel Color Raven Black

Bezel Width (side) 2 mm

Bezel Width (top/bottom) 2 / 23.87 mm

DIMENSION

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

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

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

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

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

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

2417 x 14 53 x 184 inches

85.2 mm

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

Weight Packed (kg/lbs.)

9.59 kg / 21.14 lbs.

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

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

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

WHAT'S IN THE BOX

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

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort













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



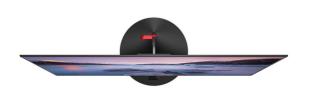






















ThinkVision X1 (2nd GEN) MONITOR



SPECIFICATIONS

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Panel Size 27"
Panel Type IPS
Backlight WLED

Resolution 3840 (H) x 2160 (V)

Aspect Ratio 16:9
Anti-Glare Yes

Screen Dimensions (W x H) (mm) 596.7 (H) x 335.7 (V)
Maximum Brightness (Typical) 350 cd/m²
Viewing Angle (H/V at CR 10:1) 178°/178°
Contrast Ratio (Typical) 1000:1
Dynamic Contrast Ratio 3M:1

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

Dot/Pixel Per Inch (DP/PPI) 163 Color Gamut (CIE 1931) 99% sRGB

Response Time (Extreme/Typical/Off) 4/6/14 ms (G-to-G)

POWER CONSUMPTION

 Typical
 40 W

 Maximum
 150 W

 Sleep-Mode
 0.5 W

 Switch Off-Mode
 0.5 W

 Power Supply
 External

 Power Voltage
 10 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 1.8 m

USB Hub Yes (4 x USB 3.01)

USB Cable Supplied N/A Audio-Jack Yes

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/

Bandwidth

Default Color Temperature

Preset Modes OSD Buttons

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

20 Gbps 6500K 24

2 Buttons + Tracking Point English, French, Italian,

German, Spanish, Japanese, Chinese, Russian

MECHANICAL

-5° / 30° Tilt Angle (Front / Back) N/A Swivel Angle (Left / Right) 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

 Top (mm / inches)
 1.2 / 0.04"

 Bottom (mm / inches)
 1.2 / 0.04"

 Sides (mm / inches)
 1.2 / 0.04"

ENVIRONMENTAL

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

Humidity

 Operating
 8% - 80%

 Non-Operating
 5% - 95%

Altitude

Operating 16,000 ft 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)

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

Size Unpacked with Stand

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

Size Unpacked without Stand Monitor Head Only

(mm) 609.74 x 32.7 x 351.71 (inches) 24" x 1.29" x 13.85"

Distance from Table to Panel Lowest Pixel at Bottom of Screen

(mm / inches) 134 / 5.276"

Highest Pixel at Top of Screen

(mm / inches) 450 / 17.717"

Stand Base Footprint Area

 (mm)
 234.81 x 234.81

 (inches)
 9.24" x 9.24"

Weight

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

COMPLIANCE

ULE Gold
TCO 7.0
ROHS Yes
Windows Certification Windows 10
China Energy Label Grade 2

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability WW





WWW.LENOVO.COM

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 P32p-20

DISPLAY

Panel Size 31.5-inch

Screen Dimensions 697.31 mm x 392.23 mm

Panel Type
3-side NearEdgeless
In-Plane Switching

Backlight WLFD

Aspect Ratio

Resolution 3840 x 2160

Pixel Pitch 0.1816 x 0.1816 mm

Dot/Pixel Per Inch (DPI/PPI) 140

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

Response Time

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

Refresh Rate

Brightness (typical) 350 cd/m²

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M:1

Color Gamut 99% sRGB 99% BT.709 90% DCI-P3

Color Support (typical)

1.07 Billion

Color Depth 10-bit

Processor LUT 14-bit

Anti-glare Yes

CONNECTIVITY

Video Signal

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

1 x HDMI 2.0

1 x DP 1.2

Audio Signal 1 x Audio Out (3.5 mm)

USB Hub Yes

Ethernet
Yes (10M/100M/1000M)

USB Upstream 2 x USB 3.2 Gen1 (1 by USB Type-C, 1 by USB Type-B)

USB Downstream 3 x USB 3.2 Gen1 (1 x BC1.2)

MUITI-MEDIA

Optional Soundbar Support Yes (PN:0A36190)

SPECIAL FEATURES

Factory Calibration Yes (Avg. Delta E<2)

KVM Switch Yes

POWER

Power Consumption (typ./max.) 36W / 186W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode < 0.3W

ENERGY STAR Power Consumption (P_{on}/E_{TEC}) 27W / 84kWh

Power Supply Internal

USB Type-C Power Delivery (W) up to 90 W

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

MECHANICAL

Tilt Angle (front/back) $-5^{\circ}/35^{\circ}$

Swivel Angle (left/right) +45° / -45°

Lift (max. range)

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

ThinkCentre M Series Tiny support

Yes, by Tiny/Nano monitor clamp II (PN: 4XHOZ42451) & Tiny VESA mount II (PN: 4XFONO3161)*

ThinkCentre M Series Nano support

Yes, by Tiny/Nano monitor clamp II (PN: 4XH0Z42451) & Nano VESA mount (PN: 4XF0V81630)* Kensington Lock Slot

es

Cable Management

Bezel Color Raven Black

Bezel Width (side) 2.0 mm

Bezel Width (top/bottom) 2.0 / 24.1 mm

DIMENSION

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

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

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

235.0 x 469.4 x 714.6 mm 9.25 x 18.48 x 28.13 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 235.0 × 604.4 × 714.6 mm

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

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch) 714.6 x 426.0 x 51.0 mm 28.13 x 16.77 x 2.01 inches

Weight Packed (kg/lbs.) 13.30 kg/29.32 lbs.

Weight Unpacked (kg/lbs.) 10.21 kg/22.51 lbs.

Weight (monitor head only) (kg/lbs.) 6.96 kg/l5.34 lbs. WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x DP cable (1.8 m) (for US and Canada only) 1 x USB Type-C to Type-C cable (1.8 m) 1 x USB Type-A to Type-B cable (1.8 m) Factory calibration report Quick setup guide

CERTIFICATION

ENERGY STAR

Yes

CCC Yes

TCO

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification
Windows 7. Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort ∨⇔s















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.

^{*}Accessories sold separately













ThinkVision P32u-10 SPECIFICATIONS

DISPLAY

Panel Size 32 inches

Screen Dimensions (H x V) 708.48 x 398.52mm

Panel Type In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 3840 x 2160 pixels

Pixel Pitch (H x V) 0.1845 x 0.1845mm

Viewing Angle (H x V) 178°/178°

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

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M:1

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

Color Support 1.07 Billion

CONNECTIVITY

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

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

Audio Out Yes (3.5mm)

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

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

DIMENSIONS

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

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

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

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

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

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

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

WEIGHT

Weight Packed 14.30kg/31.32lbs.

Weight Unpacked 10.97kg/24.18lbs.

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

SPECIAL FEATURES

Factory Calibration Yes

Anti-Glare Yes

PIP/PBP Yes

KVM switch Yes

Software

Yes (ThinkColor)

MECHANICAL

Tilt Angle (front/back) -5°/22°

Swivel Angle (left/right) -45°/+45°

Lift (Max range) 110mm

Pivot -90°/90°

VESA Mount Capability Yes (100 x 100mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2mm

Bezel Width (top/bottom) 2.0/23.8mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable 1 x DP-DP cable

1 x HDMI cable 1 x USB 3.0 cable

 $1 \times \text{Thunderbolt}^{TM} 3 \text{ cable (20Gbps)}$

1 x CD (ThinkColor)
Factory calibration report
Quick setup guide

CERTIFICATIONS

CCC Yes

RoHS Yes

TCO 7.0

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard
Tier 2

TÜV Eye Comfort Yes









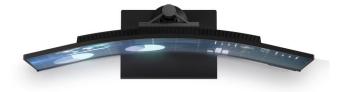












Specifications

DISPLAY

Panel Size 43.4 inches

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

Panel Type VA NearEdgeless, anti-glare

Curvature 1800R

Backlight **WLED**

Aspect Ratio 32:10

Resolution 3840 x 1200

HDR VESA Certified DisplayHDR™ 400

Pixel Pitch (H x V) 0.2740 x 0.2740mm

Viewing Angle (H x V) 178°/178°

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

Refresh Rate Max. 144Hz

Contrast Ratio (typical) 3000:1

Dynamic Contrast Ratio (typical)

Color Support (typical) 16.7M

Color Gamut sRGB: 99.5% BT.709: 99.5% DCI-P3: 90%

Brightness 380 nits (typical) 450 nits (peak)

CONNECTIVITY

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

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

Audio Out Yes (3.5mm)

USB Hub Yes

USB Upstream 2 x USB 3.1 (1 x USB Type-C Gen1, 1 x USB Type-C Gen2)

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

Power Internal

Power Consumption Typical/Max: 70W/250W Switch-off Mode: < 0.5W Sleep/Off Mode: <0.5W Energy Star (P_{op}) - 42.18W Energy Star (E TEC) - 138.17kWh

DIMENSIONS

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

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

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

269.8 x 591.1 x 1058.3mm 10.62 x 23.27 x 41.67 inches

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

Weight Packed 18.59kg/40.98lbs.

Weight Unpacked 13.45kg/29.65lbs.

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

SPECIAL FEATURES

Anti-Glare Yes

PIP/PBP Yes

Software Yes (ThinkColor)

Speaker Supports optional Harman Kardon certified speaker

MECHANICAL

Tilt Angle (front/back)

Swivel Angle (left/right)

Lift (Max. range) Yes (130mm)

VESA Mount Capability Yes (100 x 100mm)

Kensington Lock Slot

Cable Management

Bezel Color Raven Black

Bezel Width (side) 2.4mm

Bezel Width (top/bottom) 2.4/25.6mm

WHAT'S IN THE BOX

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

CERTIFICATIONS

ENERGY STAR Rating

CCC Yes

RoHS Yes **TCO**

8.0

EPEAT Silver

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard

TÜV Eye Comfort Yes











*with FreeSync support graphic cards













ThinkVision T32h-20 Monitor

DISPLAY

Panel Size 31.5-inch

Screen Dimensions 698.11 mm x 392.69 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio

16:9

Resolution 2560 x 1440

Pixel Pitch 0.2727 x 0.2727 mm

Dot/Pixel Per Inch (DPI/PPI) 94

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

Response Time

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

Refresh Rate

60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical)

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

Anti-glare

Yes

CONNECTIVITY

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

Audio Signal

1 x Audio out (3.5 mm)

USB Hub

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

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

POWFR

Power Consumption (typ./max.) 28W / 138W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode < 0.3W

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

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

up to 75 W*

Smart Power

Yes

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

AC 100 to 240 V (50-60 H

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) -45° / 45°

Lift (max range) 135 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot Yes

Cable Management

Bezel Color Raven Black

Bezel Width (side) 2.0 mm

Bezel Width (top/bottom) 2.0 / 24.12 mm

DIMENSION

Size Packed (D x H x W, mm/inch) 528.0 x 190.0 x 845.0 mm / 20.79 x 7.48 x 32.27 inches Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position)

235.0 x 469.4 x 714.6 mm / 9.25 x 18.48 x 28.13 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 235.0 x 604.4 x 714.6 mm

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

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

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

28.13 x 16.77 x 2.01 inches

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

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

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

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

Full Container Load (40' STD / 20' STD) 672 / 320 units

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification
Windows 7. Windows 10

China Energy Efficiency Standard

Tier 1

TÜV Rheinland Eye Comfort















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

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













ThinkVision T32p-20

DISPLAY

Panel Size 31.5-inch

Screen Dimensions 697.31 mm x 392.23 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 3840 x 2160

Pixel Pitch 0.1816 x 0.1816 mm

Dot/Pixel Per Inch (DPI/PPI) 140

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

Response Time

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio

(typical) 3M:1

Color Gamut 99% sRGB

Color Support (typical) 1.07 Billion

Anti-glare

Yes

CONNECTIVITY

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub Yes

USB Upstream

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

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typ./max.) 39W / 135W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode < 0.3W

26.9W / 84.9kWh

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

















Power Supply

USB Type-C power delivery (W) up to 75W*

Smart Power Yes

Internal

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

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) +45°/-45°

Lift (max range) 135 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot

Cable Management Yes

Bezel Color Raven Black

Bezel Width (side) 2.0 mm

Bezel Width (top/bottom) 2.0 / 24.12 mm

DIMENSION

Size Packed (D x H x W, mm/inch) 190 x 528 x 845 mm 7.48 x 20.79 x 32.27 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position) 235.0 x 469.4 x 714.6 mm 9.25 x 18.48 x 28.13 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 235.0 x 604.4 x 714.6 mm 9.25 x 23.79 x 28.13 inches

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

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

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

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

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

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

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

Full Container Load (40' STD / 20' STD) 672 / 320 units

Quick setup guide CERTIFICATION

Monitor with stand

1 x DP cable (1.8 m)

(NA only)

cable (1.8 m)

1 x Power cable (1.8 m)

1 x USB Type-C to Type-C

1 x USB Type-C to Type-A

cable (1.8 m) (NA only)

WHAT'S IN THE BOX

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

> TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC) Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eve Comfort Yes

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

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

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













Specifications

DISPLAY

Panel Size

34-inch

Screen Dimensions

797.20 mm x 333.70 mm

Panel Type

3-side NearEdgeless VA

Curvature

1500R

Backlight

WLED

Aspect Ratio

21:9

Resolution

3440 x 1440

Pixel Pitch

0.2317 x 0.2317 mm

Dot/Pixel Per Inch (DPI/PPI)

109

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

350 cd/m²

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

3M:1

Colour Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Upstream

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

USB Downstream

4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typ./max.)

46W / 140W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.5W

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

34W / 107kWh

USB Type-C Power Delivery (W)

Up to 75W*

Smart Power

Yes

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5°/35°

Swivel Angle (left/right)

+45°/ -45°

Lift (max range)

135 mm

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

res

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side)

2.2 mm

Bezel Width (top/bottom)

2.2 / 27.8 mm

DIMENSION

Size Packed

(D x H x W, mm/inch) 523.0 x 250.0 x 980.0 mm / 20.59 x 9.84 x 38.58 inches

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

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

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

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

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

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

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

119.1 mm

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

587.9 mm

Weight Packed (kg/lbs.)

13.85 kg / 30.53 lbs.

Weight Unpacked (kg/lbs.) 9.91 kg / 21.85 lbs.

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

6.91 kg / 15.23 lbs.

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

432 / 216 units

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR Rating 8.0

ccc

Yes

TCO

TCO Edge

2.0

EPEAT Silver

....

RoHS (EU 2002/95/EC)

Windows Certification Windows 7, Windows 10

China Energy

Efficiency Standard

TÜV Rheinland Eye Comfort















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

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.













Lenovo ThinkVision LT1913p Monitor

SPECIFICATIONS

D	15	D	П.	Δ	V

Panel Size

Panel Type In Plane Switching

Aspect Ratio 5.4

1280 x 1024 Resolution Viewable Area (mm) 479.958

Screen Dimensions (W x H) (mm) 374.7 x 299.8 0.0976 x 0.2928

Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP / PPI) 86 78

Brightness (Typical) 250 nits Contrast Ratio (Typical) 1000:1 Viewing Angle (H/V at CR 10:1) 178°/178°

Response Time (Typical) 7 ms Color Gamut 72%

Number of Colors 16.7 Million

SIGNAL INPUT

Video Input Signals VGA, DVI Cables Supplied VGA, DVI Sync on Green No Plug 'n' Play DDC/CI Preset Display Modes

User-defined Display Modes 20 OSD Buttons Yes OSD Languages 8 Lockable Controls Yes

DIMENSIONS (W x D x H)

Size Unpacked

411 x 264 2 x 371 5 (mm) (inches) 16.18" x 10.4" x 14.63"

Weight Unpacked Starting at 10.69 lbs (4.85 kg)

WARRANTY

Warranty 3 Years

MECHANICAL

Tilt Angle (Front / Back) -5° ~ 30° Swivel Angle (Left / Right) 45° / 45°

Lift (mm) 110

0° ~ 90° (Clockwise) Pivot

VESA® Mount Yes Kensington® Lock Slot Yes

USB Hub No

Multimedia Optional USB Sound Bar

Bezel Color Black

Bezel Width

Sides (mm / inches) 17.4 / 0.68" Top (mm / inches) 17.4 / 0.68" 17.4 / 0.68" Bottom (mm / inches)

POWER CONSUMPTION

Power Consumption

24 W Typical 27 W Maximum <0.5 W Sleep-Mode Off-Mode <0.5 W

Heat Dissipation

Typical 81.84 Btu/h Maximum 92.07 Btu/h Power Supply Internal

COMPLIANCE

TCO TCO Edge **EPEAT**

ENERGY STAR Rating 8.0 TÜV Green Mark Yes

Windows 10 / Windows 8.1 / Windows 8 / Windows 7 Windows Certification Tier 1 (New Standard Tier 2)

Display 7.0

Silver

China Energy Label

85%



PCC



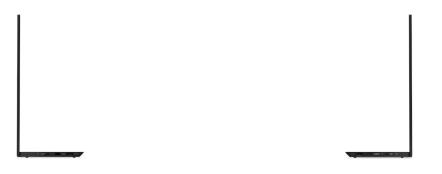


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TECH SPECS

LCD PANEL

Panel Size 14-inch

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

Panel Type In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 1920 x 1080

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

Dot/Pixel Per Inch (DPI/PPI) 157

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

Response Time (typical)
6ms with OD

Refresh Rate 60 Hz

Brightness (typical) 300 cd/m²

Contrast Ratio (typical) 700:1

Dynamic Contrast Ratio (typical) 3M:1

Colour Gamut NTSC (CIE 1931) 72%

Color Support (typical) 16.7 Million

Color Depth 8bit (6bit + FRC)

Anti-Glare Yes

CONNECTIVITY

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

DOWED

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

ENERGY STAR Power Consumption (Pon)
4.88 W

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

Power Consumption Sleep/Off Mode < 0.3 W Power Consumption Switch-Off Mode < 0.3 W

USB Type-C/Power Delivery Up to 65 W

Power Supply External (no adapter bundle)

Voltage Required DC 5 V to 20 V

MECHANICAL

Tilt Angle (front/back) -5° / 90°

Mounting Support Yes (100 mm)

Kensington Lock Slot Yes

Cable Management Yes

Bezel Color Raven Black

Bezel Width (Side) 5.48mm

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

DIMENSIONS

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

Stand base footprint area (mm 2) 260.87 x 69.55 mm / 10.27 x 2.74 inches

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

Weight Unpacked (kg / lbs.) 0.598 kg / 1.31 lbs.*

WHATS IN THE BOX

1 x Monitor with stand 1 x ThinkVision M14 sleeve 1 x USB Type-C cable (1 m) 1 x QSG 1 x Pair of clips

ENVIRONMENTAL

Temperature - Operating 0° to 40°C

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

Humidity - Operating 30 to 80%

Humidity - Non-operating 30 to 90%

Altitude - Operating 0 to 5000 m

Altitude - Non-operating 0 to 40,000 ft

Arsenic-free Glass Yes

PVC free Yes

Mercury free

Yes

PCC % of plastic resins 85%

WARRANTY

Geography Availability WW

Warranty 3 Years

CERTIFICATIONS

ENERGY STAR Rating 8.0

CCC Yes

EPEAT Silver

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

Windows Certification Windows 7 / 10

Image Quality Capability ISO 9241-307

China Energy Efficiency Standard Tier 2

Low Blue Light / Eye Comfort Yes (Low Bluelight)



Windows



*Actual weight may vary due to components, manufacturing process and options.

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ThinkVision T1714 Essential Monitor

SPECIFICATIONS

DISPLAY		MECHANICAL		
Panel Size Panel Type Backlight Viewable Area (Diagonal) Screen Dimensions (W x H) (mm) Resolution Aspect Ratio Viewing Angle (H/V at CR 10:1) Maximum Brightness (Typical) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DPI / PPI) Color Gamut (CIE 1931) Number of Colors Response Time Anti-Glare	17" TN WLED 17" 270.34 x 337.92 1280 x 1024 5:4 170°/160° 250 cd/m² 1000:1 NA 0.26 x 0.26 96.21 72% 16.7 Million 5 ms (On / Off) Yes	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift Pivot VESA Mount (mm) Kensington Lock Slot Cable Management Ambient Light Sensor Control Buttons Bezel Color Bezel Width Sides (mm / inches) Top (mm / inches) Bottom (mm / inches)	-5° - 22° No No No 100 x 100 Yes Yes No Yes Raven Black 17.5 / 0.69" 17.5 / 0.69"	
POWER CONSUMPTION		SIGNAL INPUT		
Power Consumption Typical Maximum Sleep-Mode Off-Mode Heat Dissipation Typical Maximum Power Supply Power Voltage Voltage Dynamic Frequency	14 W 18 W 0.5 W 0.3 W 47.74 Btu/h 61.38 Btu/h Internal 90 VAC - 264 VAC, 1.5 A 50 Hz - 60 Hz	Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied	VGA, DVI VGA, DVI 1.8 m No No	
COMPLIANCE		SIGNAL INTERFACE / PERFORMANCE		
EPEAT ENERGY STAR Rating ULE TCO TCO Edge TUV RoHS (EU 2002/95/EC) Windows Certification China Energy Efficiency Standard	Silver 8.0 Gold 7.0 2.0 Yes Yes Windows 10 / Windows 8.1 / Windows 8 / Windows 7 Tier 1 (New Standard Tier 2)	Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed / Bandwidth Default Color Temperature Preset Display Modes User-defined Display Modes OSD Buttons OSD Languages	30 kHz - 83 kHz 50 Hz - 75 Hz 1280 x 1024 VGA : 205 MHz DVI : 165 MHz 7200K 17 17 5	
ENVIRONMENTAL		DIMENSIONS (W x D x H)		
Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating	0°C - 45°C -20°C - 60°C (non-condensing) 10% - 80% 5% - 95% (non-condensing) 8,000 ft	Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand	432 × 428 × 140 17.01" × 16.85" × 5.51" 374.5 × 200 × 373.9 14.74" × 7.87" × 14.72"	
Operating Non-operating Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins Low Halogen	40,000 ft Yes Yes Yes No	(Monitor Head Only) (mm) (inches) Distance from Table to Panel (mm / inches) Lowest Pixel at Bottom of Screen Highest Pixel at Top of Screen Stand Base Footprint Area	374.5 × 53 × 306.9 14.74" × 2.09" × 12.08" 84.5 / 3.33" 356.4 / 14.03"	
WARRANTY AND AVAILA	WARRANTY AND AVAILABILITY		200 × 200 / 7.87" × 7.87"	
Warranty Geography Availability ThinkVision Logo	3 Years PRC + AP Yes	Weight Packed (EPS) Unpacked Monitor Hood Only	Starting at 8.6 lbs (3.9 kg) Starting at 5.75 lbs (2.61 kg) Starting at 5.11 lbs (2.73 kg)	





Global Model

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Monitor Head Only

Starting at 5.11 lbs (2.32 kg)













Lenovo ThinkVision T1714p Essential Monitor

SPECIFICATIONS

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DΙ	3	\mathbf{r}	_,	-	T

Panel Size Panel Type TN WLED Backlight Viewable Area (Diagonal) 17" Screen Dimensions (W x H) (mm) 270.34 x 337.92 Resolution 1280 x 1024 Aspect Ratio Viewing Angle (H/V at CR 10:1) 170°/160° Maximum Brightness (Typical) 250 cd/m² 1000:1 Contrast Ratio (Typical) Dynamic Contrast Ratio ΝΑ Pixel Pitch (W x H) (mm) 0.26 x 0.26 Dot/Pixel Per Inch (DPI / PPI) 96.21 Color Gamut (CIF 1931) 72% 16.7 Million Number of Colors Response Time 5 ms (On / Off) Anti-Glare

MECHANICAL

Tilt Angle (Front / Back) -5° ~ 22° Swivel Angle (Left / Right) No Lift 110 Pivot No VESA Mount (mm) 100 x 100 Kensington Lock Slot Yes Cable Management Yes Ambient Light Sensor No Control Buttons Yes Raven Black Bezel Color

Bezel Width

Sides (mm / inches) 17.5 / 0.69" 17.5 / 0.69" Top (mm / inches) Bottom (mm / inches) 17.5 / 0.69"

SIGNAL INPUT

Video Input Signals VGA, DVI, DisplayPort VGA, DVI Video Cables Supplied Video Cable Length 1.8 m USB Hub No USB Cable Supplied No

SIGNAL INTERFACE / PERFORMANCE

30 kHz - 83 kHz Horizontal Frequency 50 Hz - 75 Hz Vertical Frequency Native Resolution 1280 x 1024 Maximum Pixel Clock Speed / VGA

205 MHz Bandwidth DVI 165 MHz DisplayPort : 165 MHz

Default Color Temperature 7200K Preset Display Modes 22 User-defined Display Modes 22 OSD Buttons 5 8 OSD Languages

POWER CONSUMPTION

Power Consumption 14 W Typical 18 W Maximum 0.5 W Sleen-Mode Off-Mode 0.3 W Heat Dissipation

47.74 Btu/h Typical 61.38 Btu/h Maximum Power Supply Internal

90 VAC - 264 VAC, 1.5 A Power Voltage Voltage Dynamic Frequency 50 Hz - 60 Hz

244.2 x 240 / 9.61" x 9.45"

EPEAT Silver **ENERGY STAR Rating** ULE Gold TCO 70 TCO Edge 20 TUV Yes RoHS (EU 2002/95/EC)

Windows Certification Windows 10 / Windows 8.1 / Windows 8 / Windows 7 China Energy Efficiency Standard Tier 1 (New Standard Tier 2)

DIMENSIONS (W x D x H)

Size Packed 454 x 406 x 191 (mm) (inches) 17.87" x 15.98" x 7.52" Size Unpacked with Stand

374.5 x 244.2 x 337.9~447.9 14.74" × 9.61" × 13.3"~17.63" (inches)

Size Unpacked without Stand (Head Only)

(mm) 374.5 x 53 x 306.9 14.74" x 2.09" x 12.08" (inches)

Distance from Table to Panel

(mm / inches)

Lowest Pixel at Bottom of Screen 66 / 2.6" Highest Pixel at Top of Screen 337.9 / 13.3"

Stand Base Footprint Area (mm / inches)

With Cable Cover Without Cable Cover

240 × 240 / 9.45" × 9.45" Weight Packed (EPS) Starting at 12.57 lbs (5.7 kg)

Unpacked Starting at 8.71 lbs (3.95 kg) Monitor Head Only Starting at 5.14 lbs (2.33 kg)

ENVIRONMENTAL

COMPLIANCE

Temperature Operating 0°C - 45°C

Non-operating -20°C - 60°C (non-condensing)

Humidity

Operating 10% - 80%

Non-operating 5% - 95% (non-condensing)

Altitude

Operating 8,000 ft Non-operating 40,000 ft Arsenic-Free Glass Yes PVC-Free Yes Mercury-Free Yes PCC % of Plastic Resins 85% Low Halogen No

WARRANTY AND AVAILABILITY

3 Years Warranty Geography Availability World Wide ThinkVision Logo Yes Global Model Yes





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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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