ThinkPad P52 Platform Specifications

Processor Fold Fold Fold Base Max Turbo Cache Memory Fold F	Processor	sor 8th Generation Intel® Core™ i7 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	
P-7-850PT F-7-850PT F-7-		Number Cores		Frequency	y Frequency	, Cacne		Graphics	Weight	Non-touch model: starting at 5.4 lb (2.45kg);	
Carphics Carphic Ca		i7-8850H 6	12	2.6 GHz	4.3 GHz	9MB	DDR4-2400	630	Case Color	Black Display cover: PPS;	
NVIDIA Quadró" P1000 (4GB memory), P2000 (4GB memory), r P3200 (6GB memory), F1200 (3GB memory), r P3200 (6GB memory), F1200 (3GB memory), r P3200 (6GB memory), F1200 memory), r P3200 (6GB memory), F1200 memory, r P3200 (6GB memory), r P3200 (6GB memory), F1200 memory, r P3200 (6GB memory), r P3200 (6GB memo		E-2176M		2.7 GHz	4.4 GHz	12MB			Smart card reade		
Memory 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 1826B non-ECC memory for special bid only	Graphics	NVIDIA Quadro® P1000 (4GB memory), P2000 (4GB memory), or P3200 (6GB memory, VR ready); supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; supports four independent displays; Max resolution: 3840X2160 @60Hz (DisplayPort via Mini DisplayPort cable);							ExpressCard Media reader Ports None 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, 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),		
Some: 15.6° (396mm) 4K (3940x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 100% form, 15.6° (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch (opt) 100% gamut, 170° viewing angle, multi-touch, supports 10-finger gesture (4K only) Pen Supports pen accessory, please see the accessory compatibility for details Storage	Memory	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						DIMM sockets e to Intel limitation		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec, stereo speakers, 2W x 2, Dolby® Audio™ Premium, headphone / microphone	
Multi-touch (opt) Pen Capacitive-type multi-touch, supports 10-finger gesture (4K only) Pen Logicitive-type multi-touch, supports 10-finger gesture (4K only) Pen Logicitive-type multi-touch, supports 10-finger gesture (4K only) Some: MD / SATA 6.06(b) x 2.5° wide, 7mm high, Active Protection System™ Some: MD / SATA 6.06(b) x 2.5° wide, 7mm high, Active Protection System™ Some: MD / SATA 6.06(b) x 2.5° wide, 7mm high, Active Protection System™ Some: MB / SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s Some: MD / SATA 6.06(b) x 2.5° wide, 7mm high, Active Protection System™ Some: MB / SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s Some: MB / Some:	Display	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 160° viewing angle Some: 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS.								6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and	
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: 16GB Intel Optane™ memory, PCle NVMe, PCle 3.0 x 2, 16Gb/s RAID (optional) Optical Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) wPro model: Intel Ethernet Connection I219-LM (Jacksonville) wPro model: Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) Near Field Communication Battery (MobileMark* 2014) ** Battery life varies significantly with settings, usage, & other factors 170W slim tip AC adapter Preload One of the following, configurable by model: Windows 10 Pro 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations WWAN (optional) Intel ZMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card Mil-Spec test Mil-STD-810G military certification Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant		100% gamut, 170° viewing angle, multi-touch Capacitive-type multi-touch, supports 10-finger gesture (4K only) Supports pen accessory, please see the accessory compatibility for details						for details	Security chip vPro <i>(optional)</i> Fingerprint reade	Discrete TPM 2.0, TCG Certified Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest	
RAID (optional) Optical RAID (optional) Optical Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth combo adapter WWAN (optional) Bluetooth™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card Mil-Spec test Mil-Spec test Max battery life (MobileMark® 2014) Max battery life (MobileMark® 2014) AC adapter **Battery life varies significantly with settings, usage, & other factors **Battery life (MobileMark® 2014) AC adapter **Battery life varies significantly with settings, usage, & other factors **Battery life (MobileMark® 2014) AC adapter **Battery life varies significantly with settings, usage, & other factors **Battery life (MobileMark® 2014) AC adapter **Battery life varies significantly with settings, usage, & other factors **Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr **Battery life varies significantly with settings, usage, & other factors **Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr **Battery life varies significantly with settings, usage, & other factors **Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr **Battery life varies significantly with settings, usage, & other factors **Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr **Battery life varies significantly with settings, usage, & other factors **Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr **Battery life varies significantly with settings, usage, & other factors **Discrete mode: 6.1 hr; Hybrid mode: 9.1 hr **Battery life varies significantly with settings, usage, & other factors **One of the following, configurable by model: 1.1 hr **Unidows 10 Pro 64 or Workstations **Immitted warranty of the following, configurable by model: 1.1 hr **Immitted warranty of the following, configurable by model: 1.1 hr **One of the following, configurable by model: 1.1 hr **Immitted warranty of the following configurable by model: 1.1 hr **Immitted warranty of the following configurable by model: 1.1 hr **Immitted warranty of the follow	Storage	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™						ction System™			
vPro model: Intel Ethernet Connection I219-LM (Jacksonville) Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Windows* 10 Home 64 * Windows* 10 Pro 64 * Windows 10 Pro 64 for Workstations WWAN (optional) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card 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 Mill-Spec test Mill-STD-810G military certification Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant		Some: 16GB Intel Optane™ memory, PCIe NVMe, PCIe 3.0 x 2, 16Gb/s RAID 0/1 support						2, 16Gb/s	Max battery life (MobileMark® 2014)	Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr **Battery life varies significantly with settings, usage, & other factors	
WLAN Bluetooth™ Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter • Windows 10 Pro 64 • Windows 10 Pro 64 for Workstations WWAN (optional) SIM card (opt) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card Limited warranty Plant of the following, configurable by model: 1-year depot repair service 1-year depot repair service 2-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service Mill-Spec test Mill-Spec test Mill-STD-810G military certification Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant	Ethernet										
Intel XMM™ 7360 (Fibocom L850-GL), M.2 card SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military certification Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant										Windows 10 Pro 64	
Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant	` , , ,	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card							Limited warranty	 1-year depot repair service 3-year/1-yr battery depot repair service 	
									l		
Note: The specifications above may not be available in all regions.									Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant Lenovo	

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