

# ThinkPad P52 Platform Specifications

Product Specifications Reference (PSREF)

Processor	8th Generation Intel® Core™ i7 Processor or Intel Xeon® E Processor								Dimensions <i>WxDxH:</i> 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm <i>WxDxH(Touch):</i> 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm <i>Non-touch model:</i> starting at 5.65 lb (2.57kg); <i>Multi-touch model:</i> starting at 6.4 lb (2.9kg)
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	
	i7-8750H	6	12	2.2 GHz	4.1 GHz	9MB	DDR4-2400	Intel UHD Graphics 630	
	i7-8850H			2.6 GHz	4.3 GHz	9MB			
E-2176M	2.7 GHz			4.4 GHz	12MB				
Graphics	Intel UHD Graphics 630 in processor and 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); 5120X2880@30Hz (Thunderbolt); 4096x2160@60Hz (HDMI)								Smart card reader <i>Optional:</i> Smart card reader ExpressCard None Media reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Ports 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), side docking connector, security keyhole
Chipset	Mobile Intel CM246 Chipset								Camera <i>(optional)</i> <i>One of the following, configurable by model:</i> • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus
Memory	64GB max / 2400MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets <i>* Installed DIMMs are actually 2666MHz but run at 2400MHz due to Intel limitation</i>								Audio support HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / headphone / microphone combo jack, Dolby Atmos® headphone, dual array microphone
Display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 160° viewing angle <i>Some:</i> 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								Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight UltraNav™ 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad
Multi-touch <i>(opt)</i>	Capacitive-type multi-touch, supports 10-finger gesture (4K only)								Security Power-on password, hard disk password, supervisor password, security keyhole
Pen	None								Security chip Discrete TPM 2.0, TCG Certified vPro <i>(optional)</i> Intel vPro Technology Fingerprint reader Touch style match on chip fingerprint reader on the palm rest Color calibration None NFC <i>(optional)</i> Near Field Communication
Storage	<i>Up to 3 drives (two M.2 SSD and one HDD)</i> <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>Some:</i> M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s <i>Some:</i> 16GB Intel Optane™ memory, PCIe NVMe, PCIe 3.0 x 2, 16Gb/s								Battery Li-Ion 90Wh battery Max battery life <i>Discrete mode:</i> 6.1 hr <i>(MobileMark® 2014) Hybrid mode:</i> 8.9 hr AC adapter 170W slim tip AC adapter
Optical	None								Preload <i>One of the following, configurable by model:</i> • Windows® 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro 64 for Workstations
Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I219-V (Jacksonville) <i>vPro model:</i> Intel Ethernet Connection I219-LM (Jacksonville)								Limited warranty <i>One of the following, configurable by model:</i> • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service
WLAN	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card								Mil-Spec test MIL-STD-810G military certification
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant
WWAN <i>(optional)</i>	Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card								
SIM card <i>(opt)</i>	Nano-SIM card slot, optional Verizon LTE (US) SIM card								