ThinkPad P50 Platform Specifications

Processor

6th Generation Intel® Core™ i7 Processor or Intel Xeon® Processor E3 v5 Family

Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics
i7-6700HQ	4	8	2.6 GHz	3.5 GHz	6MB	DDR4-2133	Intel HD Graphics 530
i7-6820HQ			2.7 GHz	3.6 GHz	8MB		
E3-1505M v5			2.8 GHz	3.7 GHz	8MB		Intel HD Graphics P530
E3-1535M v5			2.9 GHz	3.8 GHz	8MB		

Graphics

Intel HD Graphics 530 or P530 in processor and
NVIDIA Quadro® M1000M (2GB or 4GB memory) or M2000M (4GB memory);
supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™;
supports four independent displays;
Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable);
3840x2160@60Hz (Thunderbolt); 3840x2160@30Hz (HDMI)

Chipset

Mobile Intel CM236 Chipset (Intel GL82CM236 PCH)

Memory

64GB max[7] / 2133MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets

Display

Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 600:1 contrast ratio, 45% gamut, 160° viewing angle
Some: 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 178° viewing angle

Multi-touch *(opt)*

Capacitive-type multi-touch, supports 10-finger gesture, 220 nits

Pen *(optional)*

ThinkPad Pen Pro, active pen for multi-touch display

Storage

Up to 3 drives (two M.2 SSD and one HDD)
Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)
Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe)
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Shock Mounted Hard Drive, Active Protection System™

Optical

None

Ethernet

Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)
vPro model: Intel Ethernet Connection I219-LM (Jacksonville)

WLAN[4]

11ac+BT, Intel Dual Band Wireless-AC 8260, 2x2, M.2 card

Bluetooth™

Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter

WWAN *(optional)*

Wireless WAN, Sierra Wireless EM7455,
Qualcomm® 4G LTE-Advanced/DC-HSPA+/HSPA+/HSPA/UMTS/GNSS, M.2 card

SIM card

Micro-SIM card slot

Dimensions[3]

WxDxH: 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm
WxDxH(Touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm

Weight[2]

Models	*4-cell*	*6-cell*
Non-touch	5.6 lb / 2.55kg	5.9 lb / 2.67kg
Multi-touch	6.2 lb / 2.82kg	6.4 lb / 2.90kg

Case material

Display cover: Glass-Fiber Reinforced Plastic;
Bottom: Magnesium/Aluminum

Smart card reader

Optional: Smart card reader

ExpressCard

One slot (ExpressCard/34)

Media reader

4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card

Ports

Four USB 3.0 (one Always On), USB Type-C / Thunderbolt 3, Mini DisplayPort, HDMI, Ethernet (RJ-45), Dock connector

Camera *(optional)*

HD720p resolution, low light sensitive, fixed focus

Audio support

HD Audio, Realtek® ALC3268 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack

Keyboard

6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight

UltraNav™

3-button TrackPoint® pointing device and
3-button crystal silk surface multi-touch touchpad

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Discrete TPM 1.2 TCG Certified and Firmware TPM 2.0 integrated in chipset

ThinkEngine

Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures

vPro *(optional)*

Intel vPro Technology

Fingerprint reader

Touch style fingerprint reader on the palm rest

Color calibration

Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest

Battery

Lithium Polymer 4-cell *(66Wh)* or 6-cell *(90Wh)*

Max battery life[10] (*MobileMark® 2014*)

Model	*4-cell*	*6-cell*
Discrete Graphics	7.1 hr	9.7 hr
Hybrid Graphics	9.6 hr	13.2 hr

AC adapter

170W AC adapter

Preload

Some: Genuine Windows® 7 Professional 64
Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64

- Lenovo Solution Center
- Lenovo SHAREit
- ThinkVantage Product Recovery
- Rescue and Recovery™
- ThinkVantage System Update
- Adobe® Reader®
- Microsoft® Office preloaded; purchase a product key to activate
- McAfee® LiveSafe™ (30-day trial)

Windows 10 Pro 64

- Lenovo Solution Center
- Lenovo SHAREit
- Lenovo Companion
- Lenovo Setting
- Microsoft Office preloaded; purchase a product key to activate
- McAfee® LiveSafe™ (30-day trial)

For ISV certifications, please visit www.lenovo.com/support/ISV

Limited warranty[12]

One of the following, configurable by model:

- 3-year/1-yr battery depot repair service
- 3-year/1-yr battery limited onsite service[24]
- 3-year/1-yr battery limited onsite service, OID (Onsite International Delivery)

Mil-Spec test

MIL-STD-810G military certification

Environment

EPEAT™ Gold (US only); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant

Model	20EN002MUS
Product	ThinkPad P50
Region	US
Machine Type	20EN
TopSeller	TopSeller
Processor	Core i7-6820HQ (4C, 2.7 / 3.6GHz, 8MB)
vPro	vPro
Graphics	NVIDIA Quadro M2000M 4GB
Chipset	Intel CM236
Memory	16GBx1 non-ECC
Display	15.6" FHD (1920x1080) IPS
Multi-touch	None
Pen	None
Storage	256GB SSD M.2 Opal2
RAID	No
Optical	None
WLAN + Bluetooth	Intel 8260 ac, 2x2 + BT4.1
WWAN	None
SIM Card	None
Smart Card Reader	None
Camera	720p
Keyboard	Backlit
Fingerprint Reader	Fingerprint Reader
Color Calibrator	None
Battery	6-cell (90Wh)
Power Adapter	170W
Operating System	Windows 10 DG Windows 7 Pro 64
Warranty	3-year, Depot
Global	No
Ann Date (mm/yy)	11/15
















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CapsLock
Shift
Alt


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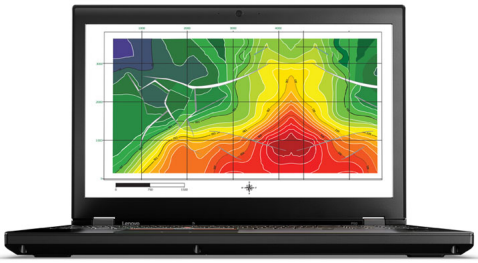



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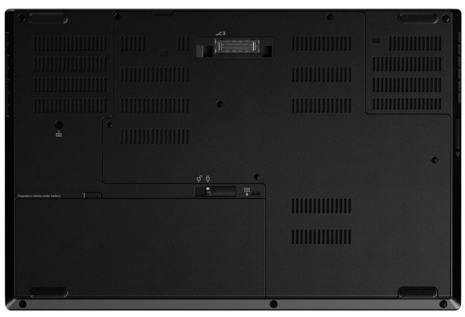



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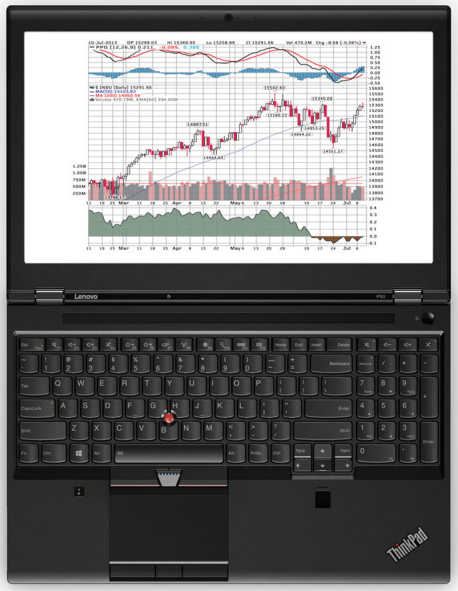



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