

# ThinkPad P1 Platform Specifications

Product Specifications Reference (PSREF)

|                             |  |            |              |                |                     |       |              |                        |   |  |
|-----------------------------|--|------------|--------------|----------------|---------------------|-------|--------------|------------------------|---|--|
| Processor                   | 8th Generation Intel® Core™ i5 / i7 Processor or Intel Xeon® E Processor   |            |              |                |                     |       |              |                        | Smart card reader<br>ExpressCard<br>Media reader<br>Ports | <i>Optional:</i> Smart card reader<br>None<br>SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card<br>Two USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3, HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole<br>* Depending on many factors, actual data transfer speed may be lower than theoretical speed |
|                             | Processor Number   | # of Cores | # of Threads | Base Frequency | Max Turbo Frequency | Cache | Memory Types | Processor Graphics     |   |  |
|                             | i5-8400H   | 4          | 8            | 2.5 GHz        | 4.2 GHz             | 8MB   | DDR4-2666    | Intel UHD Graphics 630 |   |  |
|                             | i7-8750H   | 6          | 12           | 2.2 GHz        | 4.1 GHz             | 9MB   |              |                        |   |  |
|                             | 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) or P2000 (4GB memory); supports external digital monitor via HDMI or Thunderbolt™; supports four independent displays; Max resolution: 5120x2880@30Hz (Thunderbolt); 4096x2160@60Hz (HDMI)  |            |              |                |                     |       |              |                        | Monitor cable<br>(optional)                               | HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter<br>USB-C to DP: Lenovo USB-C to DisplayPort Adapter  |
| Chipset<br>Memory           | Mobile Intel CM246 Chipset<br>64GB max / 2666MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, two DDR4 SO-DIMM sockets  |            |              |                |                     |       |              |                        | Camera (optional)   | One of the following, configurable by model:<br>• HD720p camera with ThinkShutter camera privacy, fixed focus<br>• IR camera and HD720p camera, fixed focus  |
| 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, 170° viewing angle<br><i>Some:</i> 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1200:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch, anti-reflection (AR) |            |              |                |                     |       |              |                        | 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   |
| Multi-touch (opt)<br>Pen    | Capacitive-type multi-touch, supports 10-finger gesture (4K only)<br>Supports pen accessory, please see the accessory compatibility for details  |            |              |                |                     |       |              |                        | Keyboard<br>UltraNav™                                     | 6-row, spill-resistant, multimedia Fn keys, LED backlight<br>TrackPoint® pointing device and buttonless glass surface multi-touch touchpad   |
| Storage                     | Up to 2 drives (two M.2 SSD)<br>M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s  |            |              |                |                     |       |              |                        | Security<br>Security chip<br>vPro (optional)              | Power-on password, hard disk password, supervisor password, security keyhole<br>Discrete TPM 2.0, TCG Certified<br>Intel vPro Technology   |
| RAID (optional)<br>Optical  | RAID 0/1 support<br>None   |            |              |                |                     |       |              |                        | Fingerprint reader<br>Color calibration<br>NFC            | Touch style match on chip fingerprint reader on the keyboard bezel<br>None<br>None   |
| Ethernet                    | Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable  |            |              |                |                     |       |              |                        | Battery   | Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)  |
| WLAN<br>Bluetooth™          | Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card<br>Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter  |            |              |                |                     |       |              |                        | Max battery life<br>(MobileMark 2014)                     | Discrete mode: 7.36 hr; Hybrid mode: 13.87 hr<br>* Battery life varies significantly with settings, usage, & other factors   |
| WWAN<br>SIM card            | None<br>None   |            |              |                |                     |       |              |                        | AC adapter  | 135W slim tip AC adapter   |
| Dimensions                  | <i>WxDxH (non-touch):</i> 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm<br><i>WxDxH (multi-touch):</i> 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm   |            |              |                |                     |       |              |                        | Preload   | One of the following, configurable by model:<br>• Windows® 10 Home 64<br>• Windows 10 Pro 64<br>• Windows 10 Pro 64 for Workstations   |
| Weight                      | <i>Non-touch model:</i> starting at 3.76 lb (1.7 kg);<br><i>Multi-touch model:</i> starting at 4.06 lb (1.8 kg)  |            |              |                |                     |       |              |                        | Limited warranty  | One of the following, configurable by model:<br>• 1-year depot repair service<br>• 3-year/1-yr battery depot repair service<br>• 3-year/1-yr battery limited onsite service  |
| Case color<br>Case material | Black<br><i>Display cover:</i> CFRP/GFRP hybrid;<br><i>Bottom:</i> Aluminum alloy  |            |              |                |                     |       |              |                        | Mil-Spec test   | MIL-STD-810G military certification  |
|                             |  |            |              |                |                     |       |              |                        | Environment   | EPPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant   |

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

Lenovo  
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