## ThinkPad P1 (2nd Gen) Platform Specifications

### Processor

<table>
<thead>
<tr>
<th>Processor Number</th>
<th># of Cores</th>
<th># of Threads</th>
<th>Base Frequency</th>
<th>Max Turbo Frequency</th>
<th>Cache</th>
<th>Memory Types</th>
<th>Processor Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2276M</td>
<td>12</td>
<td>24</td>
<td>2.8 GHz</td>
<td>4.7 GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>i5-9400H</td>
<td>4</td>
<td>8</td>
<td>2.5 GHz</td>
<td>4.3 GHz</td>
<td>8MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>i7-9750H</td>
<td>6</td>
<td>12</td>
<td>2.6 GHz</td>
<td>4.5 GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
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<tr>
<td>i7-9850H</td>
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<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>i9-9880H</td>
<td>8</td>
<td>16</td>
<td>2.3 GHz</td>
<td>4.8 GHz</td>
<td>16MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
</tbody>
</table>

### Graphics

Intel UHD Graphics 630 in processor only or Intel UHD Graphics 630 or P630 in processor and NVIDIA Quadro T1000 or T2000, 4GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt®; up to 4 displays with 3 external monitors plus system LCD screen.

Max resolution: 5K@60Hz (Thunderbolt®); 4K@60Hz (HDMI)

### Chipset

Mobile Intel CM246 Chipset

### Memory

64GB max / 2666MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, two DDR4 SO-DIMM sockets

### Display

<table>
<thead>
<tr>
<th>Size</th>
<th>Resolution</th>
<th>Type</th>
<th>Brightness</th>
<th>Aspect Ratio</th>
<th>Contrast Ratio</th>
<th>Color Gamut</th>
<th>Viewing Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.6&quot;</td>
<td>FHD (1920x1080)</td>
<td>WVA Anti-glare</td>
<td>300 nits</td>
<td>16:9</td>
<td>700:1</td>
<td>72% NTSC</td>
<td>170°</td>
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<td>16:9</td>
<td>1200:1</td>
<td>72% NTSC</td>
<td>170°</td>
</tr>
<tr>
<td>15.6&quot;</td>
<td>UHD (3840x2160)</td>
<td>WVA Anti-glare</td>
<td>500 nits</td>
<td>16:9</td>
<td>1200:1</td>
<td>100% Adobe</td>
<td>170°</td>
</tr>
<tr>
<td>15.6&quot;</td>
<td>UHD (3840x2160)</td>
<td>OLED Anti-reflection / Anti-smudge</td>
<td>600 nits, HDR 300nit (peak)</td>
<td>16:9</td>
<td>10000:1</td>
<td>100% DCI-P3</td>
<td>170°</td>
</tr>
</tbody>
</table>

### Multi-touch (optional)

Capacitive-type multi-touch, supports 10-finger gesture (UHD OLED only), AR (anti-reflection) / AS (anti-smudge) coating

### Pen (optional)

Lenovo Pen Pro (special bid only)

### Storage

Up to two M.2 SSD, supports single sided M.2 2280 drives only

### RAID (optional)

RAID 0/1 support None

### Optical

None

### Ethernet

Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Cable

### WLAN (optional)

Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.1

### Bluetooth (optional)

Bluetooth 5.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter

### WWAN

None

### SIM card

None

### 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

### Weight

- Non-touch model: starting at 3.75 lb / 1.7 kg
- Multi-touch model: starting at 4.0 lb / 1.81 kg

### Case color

Black paint (FHD model) or black weave (UHD model)

### Case material

Display cover: CFPR/GFPR hybrid

**Bottom:** Aluminum alloy

### Smart card reader

Optional: Smart card reader

### Media reader

SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card

### 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 2.0, Ethernet extension connector, headphone / microphone combo jack, 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

### Monitor cable (optional)

USB-C to VGA: Lenovo USB-C to VGA Monitor Adapter

### Bundled Accy

Optional: ThinkPad Ethernet Extension Cable

### Camera (optional)

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 + stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system

### 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 + stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system

### Security

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

### System Mgl (optional)

- Power-on password, hard disk password, supervisor password, security keyhole
- Discrete TPM 2.0, TCG Certified
- Intel vPro Technology

### Fingerprint reader

Touch style match on chip fingerprint reader on the keyboard bezel

### Color calibration

Optional: X-Rite Pantone factory color calibration (UHD model only)

### Battery

Integrated Li-Polymer 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

### Max battery life

- MobileMark® 2014: 13.8 hr

### AC adapter

* Battery life varies significantly with hardware configurations, settings, usage, & other factors

### Operating system

One of the following, configurable by model:

- Windows® 10 Home 64
- Windows 10 Pro 64
- Windows 10 Pro 64 for Workstations

### 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

### Mi-Spec test

MIL-STD-810G military testing

### Environment

EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant