### ThinkPad P52 Platform Specifications

**8th Generation Intel® Core™ i7 / i9 Processor or Intel Xeon® E 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>Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-8750H</td>
<td>6</td>
<td>12</td>
<td>2.2 GHz</td>
<td>4.1 GHz</td>
<td>9MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 630</td>
</tr>
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<td>7-8850H</td>
<td>6</td>
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<td>2.6 GHz</td>
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<tr>
<td>i9-8950H</td>
<td>8</td>
<td>12</td>
<td>2.9 GHz</td>
<td>4.8 GHz</td>
<td>12MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>E-2176M</td>
<td>6</td>
<td>12</td>
<td>2.7 GHz</td>
<td>4.4 GHz</td>
<td>12MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 630</td>
</tr>
</tbody>
</table>

**Graphics**
- Intel UHD Graphics 630 or P630 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™
- Up to 4 displays with 3 external monitors plus system LCD screen.
- Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable); 5120x2880@30Hz (Thunderbolt); 4096x2160@60Hz (HDMI)

**Chipset**
- Mobile Intel CM246 Chipset
- 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
- *128GB non-ECC memory for special bid only

**Display**
- Some: 15.6” (396mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 160° viewing angle
- Some: 15.6” (396mm) UHD (3840x2160), anti-glare, LED backlight, WVA, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch

**Multi-touch (opt)**
- Capacitive-type multi-touch, supports 10-finger gesture (4K only)

**Pen (opt)**
- Supports pen accessory, please see the accessory compatibility for details

**Storage**
- Up to 3 drives (two M.2 SSD and one HDD), supports single sided M.2 2280 drives only
- Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s

**Optane™ memory**
- Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2

**RAID (opt)**
- Optional: RAID 0/1 support

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

**WLAN**
- 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 (opt)**
- One of the following, configurable by model:
  - Wireless WAN upgradable
  - 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

**Camera**
- One of the following, configurable by model:
  - HD720p camera with ThinkShutter camera privacy, fixed focus
  - HD camera and HD720p camera, fixed focus

**Audio support**
- HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone

**Keyboard**
- 6-row, spill-resistant, multimedia Fk keys, numeric keypad, LED backlight
- 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad

**Battery**
- Swappable Li-ion 90Wh battery
- Max battery life (MobileMark® 2014):
  - 8.9 hr
  - Hybrid mode: 6.1 hr
- 170W slim tip AC adapter

**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
  - 3-year/1-year battery depot repair service
  - 3-year/1-year battery limited onsite service

**Environment**
- EPEAT Silver; ENERGY STAR® 6.1; RoHS-compliant

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

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