## OVERVIEW

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Headphone / microphone combo jack (3.5mm)</td>
</tr>
<tr>
<td>2.</td>
<td>SD card reader</td>
</tr>
<tr>
<td>3.</td>
<td>HDMI 2.0</td>
</tr>
<tr>
<td>4.</td>
<td>2x USB 3.2 Gen 1</td>
</tr>
<tr>
<td>5.</td>
<td>Ethernet (RJ-45)</td>
</tr>
<tr>
<td>6.</td>
<td>Kensington Security Slot</td>
</tr>
<tr>
<td>7.</td>
<td>Power connector</td>
</tr>
<tr>
<td>8.</td>
<td>USB-C 3.2 Gen 2 / Thunderbolt 3</td>
</tr>
<tr>
<td>9.</td>
<td>Smart card reader *</td>
</tr>
</tbody>
</table>

**Notes:**
- Ports with * are only available on selected models
PERFORMANCE

Processor

Processor Family

10th Generation Intel® Core™ i5 / i7 or Intel Xeon® Processor

<table>
<thead>
<tr>
<th>Processor Name</th>
<th>Cores</th>
<th>Threads</th>
<th>Base Frequency</th>
<th>Max Frequency</th>
<th>Cache</th>
<th>Memory Support</th>
<th>Processor Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core i5-10300H</td>
<td>4</td>
<td>8</td>
<td>2.5GHz</td>
<td>4.5GHz</td>
<td>8MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-10750H</td>
<td>6</td>
<td>12</td>
<td>2.6GHz</td>
<td>5.0GHz</td>
<td>12MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-10850H</td>
<td>6</td>
<td>12</td>
<td>2.7GHz</td>
<td>5.1GHz</td>
<td>12MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-10875H</td>
<td>8</td>
<td>16</td>
<td>2.3GHz</td>
<td>5.1GHz</td>
<td>16MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Xeon W-10855M</td>
<td>6</td>
<td>12</td>
<td>2.8GHz</td>
<td>5.1GHz</td>
<td>12MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics</td>
</tr>
</tbody>
</table>

Operating System

Operating System

- Windows® 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Windows 10 Home 64
- Ubuntu Linux LTS
- Red Hat Enterprise Linux (certified only)
- No operating system

Graphics

<table>
<thead>
<tr>
<th>Graphics</th>
<th>Type</th>
<th>Memory</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel UHD Graphics</td>
<td>Integrated</td>
<td>Shared</td>
<td>DirectX® 12</td>
</tr>
<tr>
<td>NVIDIA® Quadro® P620</td>
<td>Discrete</td>
<td>4GB GDDR5</td>
<td>DirectX 12</td>
</tr>
</tbody>
</table>

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and Thunderbolt™)
- HDMI supports up to 4K@60Hz
- Thunderbolt supports up to 5K@60Hz

Chipset

Chipset

Intel WM490 chipset

Memory

Max Memory

Up to 64GB DDR4-2933

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

- DDR4-2933 ECC
- DDR4-2933 non-ECC

Memory Protection

ECC on models with ECC DIMMs and Xeon processor

Notes:

1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.
2. Non-ECC memory is actually DDR4-3200 but may run at DDR4-2933 due to processor limitation
### Storage

**Storage Support**

Up to two drives, 2x M.2 SSD
- M.2 2280 SSD up to 2TB

<table>
<thead>
<tr>
<th>Storage Type</th>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe® NVMe®, PCIe 3.0 x4</td>
<td>-</td>
<td></td>
<td>Opal2</td>
</tr>
</tbody>
</table>

**RAID**

RAID 0/1 support

**Notes:**
1. The storage capacity supported is based on the test results with current Lenovo storage offerings. The system may support larger storage as the technology develops.

### Removable Storage

**Optical**

None

**Card Reader**

SD card reader

### Multi-Media

**Audio Chip**

High Definition (HD) Audio, Realtek® ALC3287 codec

**Speakers**

Stereo speakers, Dolby® Audio™

**Microphone**

- Dual array microphone, near-field
- No microphone

**Camera**

- HD 720p, with ThinkShutter, fixed focus
- IR & HD 720p hybrid, with ThinkShutter, fixed focus
- No camera

### Battery

**Battery**

Integrated Li-Polymer 68Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

**Max Battery Life**

- MobileMark® 2014: 10 hr
- MobileMark 2018: 7.2 hr
- JEITA 2.0: 11 hr

**Notes:**
1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary and depends on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

### Power Adapter

**Power Adapter**

- 135W slim tip (2-pin) AC adapter, 100-240V, 50-60Hz
- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

**Notes:**
1. AC adapter offerings depend on the country.
### DESIGN

#### Display

**Display**

<table>
<thead>
<tr>
<th>Size</th>
<th>Resolution</th>
<th>Touch</th>
<th>Type</th>
<th>Brightness</th>
<th>Surface</th>
<th>Aspect Ratio</th>
<th>Contrast Ratio</th>
<th>Color Gamut</th>
<th>Viewing Angle</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.6”</td>
<td>FHD (1920x1080)</td>
<td>None</td>
<td>IPS</td>
<td>250 nits</td>
<td>Anti-glare</td>
<td>16:9</td>
<td>800:1</td>
<td>45% NTSC</td>
<td>170°</td>
<td>-</td>
</tr>
<tr>
<td>15.6”</td>
<td>FHD (1920x1080)</td>
<td>Multi-touch</td>
<td>IPS</td>
<td>300 nits</td>
<td>Anti-glare</td>
<td>16:9</td>
<td>800:1</td>
<td>45% NTSC</td>
<td>170°</td>
<td>DC dimming</td>
</tr>
<tr>
<td>15.6”</td>
<td>UHD (3840x2160)</td>
<td>None</td>
<td>IPS</td>
<td>600 nits</td>
<td>Anti-glare</td>
<td>16:9</td>
<td>1400:1</td>
<td>100% Adobe® RGB</td>
<td>170°</td>
<td>Dolby Vision™, DisplayHDR™ 400, DC dimming</td>
</tr>
</tbody>
</table>

**Color Calibration**
- X-Rite® Pantone® factory color calibration (UHD display)
- No color calibration

**Touchscreen**
- On-cell touch, supports 10-point touch
- Non-touch

---

**Notes:**
1. California Electronic Waste Recycling Fee
   - In California, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product.
   - For more information, go to https://www.calrecycle.ca.gov/Electronics/Consumer

#### Input Device

**Pen**
- No support

**Keyboard**
- 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

**Keyboard Backlight**
- LED backlight
- Non-backlight

**UltraNav™**
- 3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad

#### Mechanical

**Dimensions (WxDxH)**
- 366.5 x 250 x 22.7 mm (14.43 x 9.84 x 0.89 inches)

**Weight**

<table>
<thead>
<tr>
<th>Models</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHD models</td>
<td>2.07 kg</td>
</tr>
</tbody>
</table>

**Case Color**
- Black

**Case Material**
- PC + ABS (top), PC + ABS (bottom)

---

**Notes:**
1. The system dimensions and weight vary depending on configurations.

### CONNECTIVITY

#### Network
Onboard Ethernet**
- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), supports Wake-on-LAN

WLAN + Bluetooth®[1]
- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

WWAN**
- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L850-GL, 4G LTE CAT9, MIMO 2x2, M.2 card
- No support

SIM Card
No SIM card inbox

NFC
No support

Notes:
1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation

Ports[1]
Standard Ports
- 2x USB 3.2 Gen 1 (one Always On)
- 1x USB-C® 3.2 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort™)
- 1x HDMI 2.0
- 1x SD card reader
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)

Optional Ports***
- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:
1. The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
   - USB 2.0: 480 Mbit/s;
   - USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
   - USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
   - USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
   - Thunderbolt 3/4: 40 Gbit/s

Docking

Docking
Various docking solutions supported via Thunderbolt or USB-C.
For more compatible docking solutions, please visit Docking for ThinkPad® P15v Gen 1

Monitor Cable

Monitor Cable***
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to DisplayPort Adapter
- Lenovo USB-C to VGA Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip**
- Discrete TPM 2.0, TCG certified
- Firmware TPM 2.0 integrated in chipset
• Disabled (in some regions)

**Physical Locks**
Kensington® Security Slot, 3 x 7 mm

**Smart Card Reader**
• Smart card reader
• No smart card reader

**Fingerprint Reader**
Touch style fingerprint reader on palm rest, match-on-chip

**BIOS Security**
• Power-on password
• Supervisor password
• Hard disk password
• Self-healing BIOS

**Other Security**
• (Optional) ThinkShutter camera cover
• (Optional) IR camera for Windows Hello

**MANAGEABILITY**

**System Management**

**System Management**[1]
• Intel vPro
• Non-vPro

Notes:
1. Intel vPro offers a superset of DASH’s defined capabilities.

**SERVICE**

**Warranty**

**Base Warranty**[1]
• 1-year depot service
• 1-year depot with 2-year system board service (Korea only)
• 1-year limited onsite service
• 3-year (1-yr battery) depot service
• 3-year (1-yr battery) limited onsite service
• No base warranty

Notes:
1. More information of warranty policy, please access https://pcsupport.lenovo.com/warranty

**ENVIRONMENTAL**

**Operating Environment**

**Temperature**[1]
• Operating: 5°C (41°F) to 35°C (95°F)
• Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
• Storage without package: 5°C (41°F) to 43°C (109°F)

**Humidity**
• Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
• Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

**Altitude**
Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:
1. When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories
None

CERTIFICATIONS

Green Certifications
Green Certifications
- EPEAT™ Gold
- ENERGY STAR® 8.0
- RoHS compliant

Other Certifications
Mil-Spec Test
MIL-STD-810G military test passed

ISV Certifications
Please visit www.thinkworkstations.com/isv-certifications/

• Feature with ** means that only one offering listed under the feature is configured on selected models.
• Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
• Lenovo reserves the right to change specifications or other product information without notice. Lenovo is not responsible for photographic or typographical errors. LENOVO PROVIDES THIS PUBLICATION “AS IS,” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore this disclaimer may not apply to you.
• The specifications on this page may not be available in all regions, and may be changed or updated without notice.