PERFORMANCE

Processor

Processor Family
10th Generation Intel® Core™ i5 / i7 / i9 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 i5-10400H</td>
<td>4</td>
<td>8</td>
<td>2.6GHz</td>
<td>4.6GHz</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 i9-10885H</td>
<td>8</td>
<td>16</td>
<td>2.4GHz</td>
<td>5.3GHz</td>
<td>16MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics</td>
</tr>
</tbody>
</table>

Operating System

- Windows® 10 Home 64
- Windows 10 Pro 64
- Linux
- Ubuntu Linux
- 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® GeForce® GTX 1650 Ti Max-Q</td>
<td>Discrete</td>
<td>4GB GDDR6</td>
<td>DirectX 12</td>
</tr>
</tbody>
</table>

Monitor Support

Supports up to 4 independent displays via native display and 3 external monitors; supports external monitors via HDMI® (up to 4K@60Hz) or Thunderbolt™ (up to 5K@60Hz for hybrid model / 4K@60Hz for integrated model)

Chipset

Intel WM490 chipset

Memory

Memory Type
DDR4-2933

Notes:
- Installed memory is actually 3200MHz but run at 2933MHz due to processor limitation

Memory Slots
Two DDR4 SO-DIMM slots, dual-channel capable

Max Memory
Up to 64GB DDR4-2933

Notes:
- The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

Storage

Storage Support
Up to two drives, 2x M.2 2280 SSD
- M.2 2280 SSD up to 2TB
- RAID 0/1 support

RAID
RAID 0/1 support

Storage Type
### Removable Storage

**Optical**
Not Support

**Card Reader**
SD card reader, supports UHS-II SD card

### Multi-Media

**Audio Chip**
High Definition (HD) Audio, Realtek® ALC3286 codec

**Speakers**
Stereo speakers, 2W x2, Dolby® Atmos®, 3-magnet

**Microphone**
- Dual array microphone
- Not configured

**Notes:**
- Microphone not configured is for special bid only

**Camera**
- 720p, with ThinkShutter, fixed focus
- IR & 720p, with ThinkShutter, fixed focus
- Not configured

**Notes:**
- Camera not configured is for special bid only

### Battery

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

**Max Battery Life**
- MobileMark® 2014: 15.6 hr
- MobileMark 2018: 11.8 hr

**Notes:**
- All battery life claims are approximate maximum and based on results using the MobileMark 2014 and/or MobileMark 2018 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

- 135W slim tip AC adapter
- 170W slim tip AC adapter

**Notes:**
- 170W for i9-10885H models only

### 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</th>
<th>Contrast</th>
<th>Color</th>
<th>Viewing</th>
<th>Key</th>
</tr>
</thead>
</table>

---

**Disk Type**

<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe 3.0 x4</td>
<td>-</td>
<td>Opal2</td>
</tr>
</tbody>
</table>

---

**ThinkPad X1 Extreme Gen 3 - December 09 2020**
### ThinkPad X1 Extreme Gen 3

<table>
<thead>
<tr>
<th>Model</th>
<th>Ratio</th>
<th>Ratio</th>
<th>Gamut</th>
<th>Angle</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.6&quot; FHD (1920x1080)</td>
<td>16:9</td>
<td>700:1</td>
<td>72% NTSC</td>
<td>170°</td>
<td>-</td>
</tr>
<tr>
<td>15.6&quot; FHD (1920x1080)</td>
<td>16:9</td>
<td>800:1</td>
<td>72% NTSC</td>
<td>170°</td>
<td>Dolby Vision™, HDR</td>
</tr>
<tr>
<td>15.6&quot; UHD (3840x2160)</td>
<td>16:9</td>
<td>1400:1</td>
<td>100% Adobe® RGB</td>
<td>178°</td>
<td>Dolby Vision, HDR</td>
</tr>
<tr>
<td>15.6&quot; UHD (3840x2160)</td>
<td>16:9</td>
<td>100000:1</td>
<td>100% DCI-P3</td>
<td>170°</td>
<td>Dolby Vision, HDR</td>
</tr>
</tbody>
</table>

**Notes:**
- 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](https://www.calrecycle.ca.gov/Electronics/Consumer)

**Color Calibration**
- X-Rite Pantone factory color calibration (UHD display)
- Not configured

**Touchscreen**
- Capacitive-type multi-touch, supports 10-point touch
- Non-touch

**Input Device**
- **Pen**
  - Lenovo Pen Pro
  - Not configured (pen needs to be purchased separately)
  - Not support (non-touch display doesn't support pen input)
- **Keyboard**
  - 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls
- **Keyboard Backlight**
  - LED backlight
- **UltraNav™**
  - TrackPoint® pointing device and glass surface multi-touch touchpad

**Mechanical**

### Dimensions (WxDxH)

<table>
<thead>
<tr>
<th>Models</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-touch models</td>
<td>361.8 x 245.7 x 18.4 mm (14.24 x 9.67 x 0.72 inches)</td>
</tr>
<tr>
<td>Touch models</td>
<td>361.8 x 245.7 x 18.7 mm (14.24 x 9.67 x 0.74 inches)</td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Models</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-touch models</td>
<td>1.7 kg (3.75 lbs)</td>
</tr>
<tr>
<td>Touch models</td>
<td>1.81 kg (4.0 lbs)</td>
</tr>
</tbody>
</table>

**Case Color**
- Black, Paint
- Black, Weave

**Case Material**
- CFRP + GFRP hybrid (top), Aluminium alloy (bottom)

**CONNECTIVITY**
Network

Onboard Ethernet
Gigabit Ethernet, RJ45 via optional Lenovo USB-C to Ethernet Adapter

WLAN + Bluetooth™
Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card

Notes:
• Intel WiFi 6 full features might be limited by country level restrictions
  • BT5.1 is supported on Windows 10 version 2004 or above (limited to BT5.0 on earlier version)

WWAN
• Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card
• Not configured

Notes:
• For non-WWAN model, it means the model is NOT WWAN upgradable

SIM Card
Not Support

NFC
Not support

Ports

Standard Ports
• 1x USB 3.2 Gen 1
• 1x USB 3.2 Gen 1 (Always On)
• 2x USB-C 3.2 Gen 2 / Thunderbolt 3 (support data, PD and DP 1.4 for discrete graphics / DP 1.2 for integrated graphics)
• 1x HDMI 2.0
• 1x SD card reader
• 1x headphone / microphone combo jack (3.5mm)
• 1x power connector

Notes:
• Depending on many factors, actual data transfer speed may be lower than theoretical speed

Optional Ports
1x Nano-SIM card slot (WWAN models)

Monitor Cable

• Lenovo HDMI to VGA Monitor Adapter
• Lenovo USB-C to DisplayPort™ Adapter
• Lenovo USB-C to VGA Adapter
• Not configured

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

Smart Card Reader
Not Support

Fingerprint Reader
Touch style fingerprint reader on keyboard bezel, match-on-chip
BIOS Security
- Power-on password
- Supervisor password
- Hard disk password
- Self-healing BIOS

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

MANAGEABILITY

System Management
- Intel vPro Technology, DASH
- None

SERVICE

Warranty
Base Warranty
- 1-year depot service
- 1-year limited onsite service
- 1-year depot with 2-year system board service
- 1-year + 2-year depot service
- 1-year + 2-year limited onsite service
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service
- No base warranty

ACCESSORIES

Bundled Accessories
- Lenovo USB-C to Ethernet Adapter
- Not configured

CERTIFICATIONS

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

Other Certifications

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