OVERVIEW

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<thead>
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<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Thunderbolt 4</td>
</tr>
<tr>
<td>2</td>
<td>Thunderbolt 4</td>
</tr>
<tr>
<td>3</td>
<td>Side docking connector</td>
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<tr>
<td>4</td>
<td>USB 3.2 Gen 1</td>
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<tr>
<td>5</td>
<td>HDMI 2.0</td>
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<tr>
<td>6</td>
<td>Headphone / microphone combo jack (3.5mm)</td>
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<tr>
<td>7</td>
<td>MicroSD card reader</td>
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<td>8</td>
<td>Smart card reader *</td>
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<tr>
<td>9</td>
<td>USB 3.2 Gen 1 (Always On)</td>
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<td>10</td>
<td>Ethernet (RJ-45)</td>
</tr>
<tr>
<td>11</td>
<td>Kensington Security Slot</td>
</tr>
</tbody>
</table>

Notes:
- Ports with * are only available on selected models
- Optional nano-SIM card slot on the rear side (not shown on the sample product above)
- The combination of 1, 2 and 3 is side docking connector
PERFORMANCE

Processor

Processor Family
11th Generation Intel® Core™ i5 / i7 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 i5-1135G7</td>
<td>4</td>
<td>8</td>
<td>2.4GHz</td>
<td>4.2GHz</td>
<td>8MB</td>
<td>DDR4-3200</td>
<td>Intel Iris® Xe Graphics</td>
</tr>
<tr>
<td>Core i5-1145G7</td>
<td>4</td>
<td>8</td>
<td>2.6GHz</td>
<td>4.4GHz</td>
<td>8MB</td>
<td>DDR4-3200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1185G7</td>
<td>4</td>
<td>8</td>
<td>3.0GHz</td>
<td>4.8GHz</td>
<td>12MB</td>
<td>DDR4-3200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1165G7</td>
<td>4</td>
<td>8</td>
<td>2.8GHz</td>
<td>4.7GHz</td>
<td>12MB</td>
<td>DDR4-3200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
</tbody>
</table>

Operating System

Operating System
- Windows® 10 Home 64
- Windows 10 Pro 64
- 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>Intel Iris Xe Graphics</td>
<td>Integrated</td>
<td>Shared</td>
<td>DirectX 12</td>
</tr>
<tr>
<td>NVIDIA® Quadro® T500</td>
<td>Discrete</td>
<td>4GB GDDR6</td>
<td>DirectX 12</td>
</tr>
</tbody>
</table>

Notes:
1. Intel Iris Xe Graphics requires dual channel memory. On models with single channel memory, Intel Iris Xe Graphics will function as Intel UHD graphics.

Monitor Support

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

Notes:
1. Refresh rates >60hz also supported, however max resolution will be limited

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory
- Up to 48GB (16GB soldered + 32GB SO-DIMM)
- Up to 40GB (8GB soldered + 32GB SO-DIMM)

Memory Slots
One memory soldered to system board, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type
DDR4-3200 non-ECC

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.
**Storage**

**Storage Support**
One drive, up to 2TB M.2 2280 SSD

**Storage Slot**
One M.2 2280 PCIe Gen 3 slot, supports one M.2 PCIe Gen 4 or Gen 3 SSD

**Storage Type**

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Offering</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe 4.0</td>
<td>-</td>
<td>2TB</td>
<td>Opal2</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe 3.0</td>
<td>-</td>
<td>256GB / 512GB / 1TB</td>
<td>Opal2</td>
</tr>
</tbody>
</table>

**RAID**
Not support

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**Notes:**
1. M.2 PCIe Gen 4 SSD in a M.2 PCIe Gen 3 slot runs at PCIe Gen 3 speeds
2. System comes with one M.2 SSD slot that supports PCIe 3.0

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**Removable Storage**

**Card Reader**
MicroSD card reader

**Multi-Media**

**Audio Chip**
High Definition (HD) Audio, Realtek® ALC3287 codec

**Speakers**
Stereo speakers, 2W x2, Dolby® Audio™

**Microphone**
Dual array microphone, far-field

**Camera**
- 720p, with privacy shutter, fixed focus
- IR & 720p, with privacy shutter, fixed focus

**Battery**

**Battery**
Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

**Max Battery Life**
Battery life data is still under tuning and pending availability

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**Notes:**
1. All battery life claims are approximate maximum and based on results using the MobileMark® 2014, MobileMark 2018, and/or JEITA 2.0 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**
- 65W USB-C slim AC adapter (3-pin)
- 65W USB-C slim AC adapter (2-pin)
- 65W USB-C AC adapter (2-pin)
- 65W USB-C AC adapter (3-pin)

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**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&quot;</td>
<td>FHD (1920x1080)</td>
<td>None</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>-</td>
</tr>
<tr>
<td>15.6&quot;</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>-</td>
</tr>
<tr>
<td>15.6&quot;</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™, HDR 400</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.carecycle.ca.gov/Electronics/Consumer

Input Device

Pen
Not support

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

Keyboard Backlight
- LED backlight
- Not support

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

Mechanical

Dimensions (WxDxH)
365.8 x 248 x 19.1 mm (14.40 x 9.76 x 0.75 inches)

Weight

<table>
<thead>
<tr>
<th>Models</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium models</td>
<td>1.783 kg (3.93 lbs)</td>
</tr>
<tr>
<td>PC + ABS models</td>
<td>1.75 kg (3.86 lbs)</td>
</tr>
</tbody>
</table>

Case Color

- Black
- Storm grey

Case Material

- PC + ABS (top), PC + ABS / Talc15 + magnesium alloy (keyboard cover), PA / 50% GF (bottom)
- Aluminium (top), PC + ABS / Talc15 + magnesium alloy (keyboard cover), PA / 50% GF (bottom)

CONNECTIVITY

Network

Onboard Ethernet
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models)
- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models)
WLAN + Bluetooth™
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2
- Intel Wi-Fi 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2
- None

WWAN
- Integrated Mobile Broadband 4G LTE, Quectel EM12OR-GL, M.2 card, with embedded eSIM functionality
- Integrated Mobile Broadband 4G LTE, Quectel EM160R, MIMO 4x4, M.2 card, with embedded eSIM functionality
- Wireless WAN upgradable to 4G
- Not Support

SIM Card
- eSIM
- No SIM card

NFC
- Near Field Communication
- Not support

Ports
Standard Ports
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4™ 40Gbps / USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x HDMI 2.0
- 1x microSD card reader
- 1x Ethernet (RJ-45)
- 1x headphone / microphone combo jack (3.5mm)
- 1x side docking connector

Optional Ports
- 1x Smart card reader

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: 40 Gbit/s;
   - FireWire 400: 400 Mbit/s;
   - FireWire 800: 800 Mbit/s
2. Depending on many factors, actual data transfer speed may be lower than theoretical speed

Monitor Cable
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to DisplayPort Adapter
- Lenovo USB-C to VGA Adapter

SECURITY & PRIVACY

Security
Security Chip
Discrete TPM 2.0, TCG certified

Physical Locks
Kensington® Security Slot

Smart Card Reader
- Smart card reader
- No smart card reader

Fingerprint Reader
• Touch style fingerprint reader on palm rest, match-on-chip
• No fingerprint reader

BIOS Security
• Power-on password
• Supervisor password
• NVMe password
• Self-healing BIOS

MANAGEABILITY

System Management
System Management
• Intel vPro Technology, DASH
• None

SERVICE

Warranty
Base Warranty
• 1-year depot service
• 1-year depot with 2-year system board service
• 3-year (1-yr battery) depot service
• 3-year (1-yr battery) limited onsite service

ENVIRONMENTAL

Operating Environment
Temperature
• Storage without packaging: 5°C (41°F) to 43°C (109°F)
• Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)

Humidity
Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

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

ACCESSORIES

Bundled Accessories
Bundled Accessories
None

CERTIFICATIONS

Green Certifications
Green Certifications
• EPEAT™ Gold
• ENERGY STAR® 8.0
• TCO Certified Notebooks 8
• RoHS compliant

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

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