## OVERVIEW

<table>
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<tr>
<th>1. USB 3.2 Gen 1</th>
<th>5. Ethernet (RJ-45)</th>
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<tr>
<td>2. USB 3.2 Gen 1</td>
<td>6. Thunderbolt 4</td>
</tr>
<tr>
<td>3. Headphone / microphone combo jack (3.5mm)</td>
<td>7. Power connector</td>
</tr>
<tr>
<td>4. HDMI 2.0</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Thunderbolt 4 is not available on models with NVIDIA GeForce RTX 3060 graphics cards.
**PERFORMANCE**

**Processor**

**Processor Family**
12th Generation Intel® Core™ i5 / i7 Processor

**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 i5-12450H</td>
<td>8 (4 P-core + 4 E-core)</td>
<td>12</td>
<td>P-core 2.0GHz / E-core 1.5GHz</td>
<td>P-core 4.4GHz / E-core 3.3GHz</td>
<td>12MB</td>
<td>DDR5-4800</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i5-12500H</td>
<td>12 (4 P-core + 8 E-core)</td>
<td>16</td>
<td>P-core 2.5GHz / E-core 1.8GHz</td>
<td>P-core 4.5GHz / E-core 3.3GHz</td>
<td>18MB</td>
<td>DDR5-4800</td>
<td>Intel Iris® Xe Graphics</td>
</tr>
<tr>
<td>Core i7-12650H</td>
<td>10 (6 P-core + 4 E-core)</td>
<td>16</td>
<td>P-core 2.3GHz / E-core 1.7GHz</td>
<td>P-core 4.7GHz / E-core 3.5GHz</td>
<td>24MB</td>
<td>DDR5-4800</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-12700H</td>
<td>14 (6 P-core + 8 E-core)</td>
<td>20</td>
<td>P-core 2.3GHz / E-core 1.7GHz</td>
<td>P-core 4.7GHz / E-core 3.5GHz</td>
<td>24MB</td>
<td>DDR5-4800</td>
<td>Intel Iris Xe Graphics</td>
</tr>
</tbody>
</table>

**Operating System**

**Operating System**
- Windows® 11 Pro 64
- Windows 11 Home 64
- Windows 11 Home 64 Single Language
- No operating system

**Graphics**

**Graphics**

<table>
<thead>
<tr>
<th>Graphics</th>
<th>Type</th>
<th>Memory</th>
<th>Boost Clock</th>
<th>TGP</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVIDIA® GeForce RTX™ 3050 Laptop GPU</td>
<td>Discrete</td>
<td>4GB GDDR6</td>
<td>1740 MHz</td>
<td>85W</td>
<td>Resizable BAR, Dynamic Boost 2.0, DirectX® 12</td>
</tr>
<tr>
<td>NVIDIA GeForce RTX 3050 Ti Laptop GPU</td>
<td>Discrete</td>
<td>4GB GDDR6</td>
<td>1695 MHz</td>
<td>85W</td>
<td>Resizable BAR, Dynamic Boost 2.0, DirectX 12 Ultimate</td>
</tr>
<tr>
<td>NVIDIA GeForce RTX 3060 Laptop GPU</td>
<td>Discrete</td>
<td>6GB GDDR6</td>
<td>1642 MHz</td>
<td>105W</td>
<td>Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate</td>
</tr>
</tbody>
</table>

**Monitor Support**

**Monitor Support**
Supports up to 3 independent displays (native display and 2 external monitors via HDMI®, USB-C® or Thunderbolt™)
- HDMI supports up to 4K@30Hz
- Thunderbolt supports up to 8K@60Hz
- USB-C supports up to 5120x3200@120Hz

**Chipset**

**Chipset**
Intel SoC (System on Chip) platform

**Memory**

**Max Memory**
Up to 16GB DDR4-3200 offering

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

**Memory Type**
DDR4-3200
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

Up to two drives, 2x M.2 SSD
- M.2 2280 SSD up to 1TB
- M.2 2242 SSD up to 1TB

Storage Slot

Two M.2 slots
- One M.2 2242 PCIe® Gen 4x4 slot, supports M.2 2242 SSD
- One M.2 2280 PCIe Gen 4x4 slot, supports M.2 2242/2280 SSD

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 2242 SSD</td>
<td>PCIe NVMe®, PCIe 4.0 x4</td>
<td>256GB / 512GB / 1TB</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe 3.0 x4</td>
<td>512GB / 1TB</td>
</tr>
</tbody>
</table>

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
No card reader

**Multi-Media**

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

Speakers
Stereo speakers, 2W x2, Nahimic Audio

Microphone
Dual array microphone

Camera
HD 720p, with privacy shutter, fixed focus

**Battery**

Battery**

- Integrated Li-Polymer 45Wh battery, supports Rapid Charge Boost (get 2 hours of runtime with a 15-minute charge)
- Integrated Li-Polymer 60Wh battery, supports Rapid Charge Boost (get 2 hours of runtime with a 15-minute charge)

Max Battery Life**

- Models with 45Wh battery:
  MobileMark® 2018: 4.4 hr
  Local video (1080p) playback@150nits: 5.4 hr
- Models with 60Wh battery:
  MobileMark 2018: 7.1 hr
  Local video (1080p) playback@150nits: 7.7 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 (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:
1. AC adapter offerings depend on the country.

**DESIGN**

**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>250 nits</td>
<td>Anti-glare</td>
<td>16:9</td>
<td>800:1</td>
<td>45% NTSC</td>
<td>170°</td>
<td>Refresh rate 120Hz, DC dimmer</td>
</tr>
<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>1000:1</td>
<td>100% sRGB</td>
<td>160°</td>
<td>Refresh rate 165Hz, DC dimmer</td>
</tr>
<tr>
<td>15.6&quot;</td>
<td>WQHD (2560x1440)</td>
<td>None</td>
<td>IPS</td>
<td>350 nits</td>
<td>Anti-glare</td>
<td>16:9</td>
<td>1200:1</td>
<td>100% sRGB</td>
<td>160°</td>
<td>Refresh rate 165Hz, DC dimmer</td>
</tr>
</tbody>
</table>

**Color Calibration**

No color calibration

**Touchscreen**

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**

**Keyboard**

6-row, multimedia Fn keys, numeric keypad

**Keyboard Backlight**

- 4-Zone RGB backlight
- Blue backlight
- White backlight

**Touchpad**

Buttonless Mylar® surface multi-touch touchpad, supports Precision TouchPad (PTP), 75 x 120 mm (2.95 x 4.72 inches)

**Mechanical**

**Dimensions (Wx DxH)**

359.6 x 266.4 x 21.8 mm (14.16 x 10.49 x 0.86 inches)

**Packaging Dimensions (Wx DxH)**

551 x 349 x 85 mm (21.69 x 13.74 x 3.35 inches)

**Weight**

Around 2.315 kg (5.1 lbs)

**Case Color**

- Glacier white
- Onyx grey

**Surface Treatment**

Painting

**Case Material**

PC + ABS (top), PC + ABS (bottom)

Notes:

1. The system dimensions and weight vary depending on configurations.

### CONNECTIVITY

**Network**

**Ethernet**

Gigabit Ethernet, 1x RJ-45

**WLAN + Bluetooth®**

- 802.11ac 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card

Notes:

1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation
2. Wi-Fi 6 full features might be limited by country-level restrictions.

**Ports**

**Standard Ports**

- 2x USB 3.2 Gen 1
- 1x HDMI 2.0
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo Jack (3.5mm)
- 1x Power connector

**Optional Ports**

- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4, for RTX 3050/RTX 3050 Ti graphics models)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4, for RTX 3060 graphics 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

### SECURITY & PRIVACY

**Security**

**Security Chip**

Firmware TPM 2.0 integrated in SoC

**Fingerprint Reader**

No fingerprint reader

**BIOS Security**

- Administrator password
- Power-on password
- Hard disk password
- Self-healing BIOS

**Other Security**
Camera privacy shutter

SERVICE

Warranty

Base Warranty**(1)

- 1-year courier or carry-in with 2-year system board service
- 1-year courier or carry-in service
- 2-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) courier or carry-in service
- No base warranty

Notes:

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

ENVIRONMENTAL

Operating Environment

Temperature**(1)

- Operating: 0°C (32°F) to 40°C (104°F)
- Storage: -20°C (-4°F) to 60°C (140°F)
- Maximum temperature when operating under unpressurized conditions: 31.3°C (88°F)

Humidity

- Operating: 0% to 90% at wet-bulb temperature 23°C (73°F)
- Storage: 20% to 90% 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

Bundled Accessories

- Lenovo Gaming M100 RGB Mouse (USB connector)
- None

CERTIFICATIONS

Green Certifications

Green Certifications

- ErP Lot 3
- RoHS compliant

- Feature with ** means that only one offering listed under the feature is configured on selected models.

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