OVERVIEW

1. Headphone / microphone combo jack (3.5mm)  
2. USB 3.2 Gen 1  
3. Ethernet (RJ-45)  
4. USB-C 3.2 Gen 2  
5. HDMI  
6. USB 3.2 Gen 1  
7. USB 3.2 Gen 1 (Always On)  
8. Power connector  
9. Thunderbolt 4  
10. USB-C 3.2 Gen 2 (data transfer / DP 1.4 only)
PERFORMANCE

Processor

Processor Family
12th Generation Intel® Core™ 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 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
- No operating system

Graphics

Graphics

<table>
<thead>
<tr>
<th>Graphics 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 Ti Laptop GPU</td>
<td>Discrete 4GB GDDR6</td>
<td>1695 MHz</td>
<td>95W</td>
<td>Advanced Optimus, Resizable BAR, Dynamic Boost 2.0, DirectX® 12 Ultimate</td>
</tr>
</tbody>
</table>

Monitor Support

Monitor Support
Supports up to 5 independent displays (native display and 4 external monitors via HDMI® and USB-C®)
- HDMI supports up to 7680x4320@60Hz
- USB-C supports up to 7680x4320@60Hz

Notes:
1. For Max resolution, DSC-enabled display is required. Three external output display devices cannot be supported at the same time when displaying 8K resolution.

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory
Up to 16GB DDR5-4800 offering

Memory Slots
Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type
DDR5-4800

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 2242 SSD up to 512GB
- M.2 2280 SSD up to 1TB
Storage Slot
Two M.2 slots
• Two M.2 2280 PCIe® Gen 4x4 slots, support M.2 2242/2280 SSD

Storage Type

<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>512GB</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe 4.0 x4</td>
<td>512GB / 1TB</td>
</tr>
</tbody>
</table>

RAID
No 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
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 E-camera shutter, fixed focus

Battery
Battery
Integrated Li-Polymer 80Wh battery, supports Super Rapid Charge (charge up to 80% in 30min)
Max Battery Life
MobileMark® 2018: 5.37 hr ( discrete mode) or 7.08 hr (hybrid mode)

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
230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

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

DESIGN
Display
Display
### Connectivity

#### Network

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**Notes:**

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

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Onboard Ethernet
Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth®[1][2]
- 802.11ac 2x2 Wi-Fi® + Bluetooth 5.1, M.2 Card
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Wi-Fi 6E, 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 and Wi-Fi 6E full features might be limited by country-level restrictions.
   Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports[1]

Standard Ports
- 2x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer and DisplayPort™ 1.4)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 135W and DisplayPort 1.4)
- 1x Thunderbolt™ 4 / USB4® 40Gbps (support data transfer and DisplayPort 1.4)
- 1x HDMI, up to 8K/60Hz
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector

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
E-Camera shutter

SERVICE

Warranty

Base Warranty[1]
- 1-year depot service
- 1-year depot with 2-year system board service (Korea only)
- 2-year (1-yr battery) depot service
- 3-year (1-yr battery) depot service

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

ENVIRONMENTAL

Operating Environment

Temperature
At altitudes up to 2438 m (8,000 ft)
- Operating: 5°C to 35°C (41°F to 95°F)
- Storage: 5°C to 43°C (41°F to 109°F)

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

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

CERTIFICATIONS

Green Certifications

ErP Lot 3
RoHS compliant

Other Certifications

TÜV Rheinland® High Gaming Performance (WQXGA display model only)
TÜV Rheinland Low Blue Light (Hardware Solution)

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