## OVERVIEW

1. Headphone / microphone combo jack (3.5mm)  
2. USB-C 3.2 Gen 1 (data transfer / DP 1.4 only)  
3. USB-C 3.2 Gen 2 / Thunderbolt 3  
4. USB 3.2 Gen 1 (Always On)  
5. HDMI 2.0  
6. USB 3.2 Gen 2  
7. Ethernet (RJ-45)  
8. USB 3.2 Gen 2  
9. Power connector  
10. Kensington Security Slot
PERFORMANCE

Processor

Processor Family
10th Generation Intel® Core™ 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 i7-10870H</td>
<td>8</td>
<td>16</td>
<td>2.2GHz</td>
<td>5.0GHz</td>
<td>16MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-10875H</td>
<td>8</td>
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<td>2.3GHz</td>
<td>5.1GHz</td>
<td>16MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i9-10980HK</td>
<td>8</td>
<td>16</td>
<td>2.4GHz</td>
<td>5.3GHz</td>
<td>16MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics</td>
</tr>
</tbody>
</table>

Operating System

Operating System
- Windows® 10 Home 64
- Windows 10 Pro 64
- FreeDOS
- 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>NVIDIA® GeForce RTX™ 2060</td>
<td>Discrete</td>
<td>6GB GDDR6</td>
<td>VR ready, DirectX® 12</td>
</tr>
<tr>
<td>NVIDIA GeForce RTX 2070 Max-Q</td>
<td>Discrete</td>
<td>8GB GDDR6</td>
<td>VR ready, DirectX 12</td>
</tr>
<tr>
<td>NVIDIA GeForce RTX 2070 SUPER Max-Q</td>
<td>Discrete</td>
<td>8GB GDDR6</td>
<td>VR ready, DirectX 12</td>
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<tr>
<td>NVIDIA GeForce RTX 2080 SUPER Max-Q</td>
<td>Discrete</td>
<td>8GB GDDR6</td>
<td>VR ready, DirectX 12</td>
</tr>
</tbody>
</table>

Monitor Support

Monitor Support
Supports up to 3 independent displays via native display and 2 external monitors; supports external monitors via HDMI® (up to 4096x2304@60Hz) or USB-C (up to 4096x2304@60Hz)

Chipset

Chipset
Intel HM470 chipset

Memory

Memory Type
DDR4-3200

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

Max Memory
Up to 32GB DDR4-3200 offering

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 2280 SSD
• M.2 2280 SSD up to 1TB

RAID
RAID 0 support (RAID preset on some models)
### Storage 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>
</tbody>
</table>

### Removable Storage

**Optical**
None

**Card Reader**
No card reader

### Multi-Media

**Audio Chip**
High Definition (HD) Audio, Realtek® ALC3306 codec

**Speakers**
Stereo speakers, 2W x2, Dolby® Atmos® for gaming

**Microphone**
Dual array microphone

**Camera**
720p, with privacy shutter, fixed focus

### Battery

**Battery**
Integrated Li-Polymer 80Wh battery, supports Rapid Charge Pro (charge up to 50% in 30min)

**Max Battery Life**
MobileMark® 2018: 7.3 hr

**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**
230W slim tip AC adapter

### 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>-</td>
<td>100% sRGB</td>
<td>-</td>
<td>Refresh rate 144Hz, Dolby Vision™, DC dimmer</td>
</tr>
<tr>
<td>15.6&quot;</td>
<td>FHD (1920x1080)</td>
<td>None</td>
<td>IPS</td>
<td>500 nits</td>
<td>Anti-glare</td>
<td>16:9</td>
<td>-</td>
<td>100% Adobe® RGB</td>
<td>-</td>
<td>Refresh rate 144Hz, Dolby Vision, HDR 400, G-Sync, DC dimmer</td>
</tr>
</tbody>
</table>

**Color Calibration**
X-Rite Pantone factory 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.carecycle.ca.gov/Electronics/Consumer

Input Device
Keyboard
6-row, spill-resistant, multimedia Fn keys, numeric keypad, CORSAIR iCUE

Keyboard Backlight
RGB LED backlight

Touchpad
Buttonless Mylar® surface multi-touch touchpad, supports Precision TouchPad (PTP)

Mechanical
Dimensions (WxDxH)
359.34 x 259.04 x 19.9 mm (14.15 x 10.20 x 0.78 inches)

Weight
2.25 kg (4.96 lbs)

Case Color
Slate grey (top), black (bottom)

Surface Treatment
Anodizing sandblasting

Case Material
Aluminium (top), aluminium (bottom)

System Lighting
"Y" Logo RGB lighting on top cover
RGB lighting on power button
"U" Strip RGB lighting
RGB lighting on rear thermal vent

CONNECTIVITY

Network
Onboard Ethernet
Gigabit Ethernet

WLAN + Bluetooth™
802.11ax 2x2 Wi-Fi + Bluetooth 5.0, M.2 Card

Ports(1)

Standard Ports(2)
• 1x USB 3.2 Gen 1 (Always On)
• 2x USB 3.2 Gen 2
• 1x USB-C 3.2 Gen 2 / Thunderbolt™ 3 (support data transfer and DisplayPort™ 1.4)
• 1x USB-C 3.2 Gen 1 (support data transfer and DisplayPort 1.4)
• 1x HDMI 2.0
• 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: 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

SECURITY & PRIVACY

Security
Physical Locks
Kensington® Security Slot
Fingerprint Reader
No fingerprint reader
BIOS Security
• Power-on password
• Supervisor password
• Hard disk password
Other Security
Camera privacy shutter

SERVICE

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

ENVIRONMENTAL

Operating Environment
Temperature
At altitudes up to 2438 m (8000 ft)
- Operating: 5°C to 35°C (41°F to 95°F)
- Storage: 5°C to 43°C (41°F to 109°F)

At altitudes above 2438 m (8000 ft)
- Maximum temperature when operating under the unpressurized condition: 31.3°C (88°F)

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

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

CERTIFICATIONS

Green Certifications
Green Certifications
• ErP Lot 3
• RoHS compliant