PERFORMANCE

Processor
Processor Family
10th 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 i5-10400</td>
<td>6</td>
<td>12</td>
<td>2.9GHz</td>
<td>4.3GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>Core i7-10700</td>
<td>8</td>
<td>16</td>
<td>2.9GHz</td>
<td>4.8GHz</td>
<td>16MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>Core i7-10700F</td>
<td>8</td>
<td>16</td>
<td>2.9GHz</td>
<td>4.8GHz</td>
<td>16MB</td>
<td>DDR4-2933</td>
<td>-</td>
</tr>
</tbody>
</table>

Operating System
- Windows® 10 Home 64
- Windows 10 Pro 64

Graphics

<table>
<thead>
<tr>
<th>Graphics</th>
<th>Type</th>
<th>Memory</th>
<th>Connector</th>
<th>Max Resolution</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVIDIA® GeForce® GTX 1650 SUPER</td>
<td>Discrete</td>
<td>4GB</td>
<td>GDDR6</td>
<td>1x HDMI® 2.0b, 2x DP 1.4</td>
<td>DirectX® 12</td>
</tr>
<tr>
<td>NVIDIA GeForce GTX 1660 SUPER</td>
<td>Discrete</td>
<td>6GB</td>
<td>GDDR6</td>
<td>1x DVI, 1x HDMI 2.0b, 1x DP 1.4</td>
<td>DirectX 12</td>
</tr>
<tr>
<td>NVIDIA GeForce RTX™ 2060 CD</td>
<td>Discrete</td>
<td>8GB</td>
<td>GDDR6</td>
<td>1x HDMI 2.0b, 3x DP 1.4</td>
<td>DirectX 12</td>
</tr>
</tbody>
</table>

Notes:
- Integrated graphics information and onboard video ports information are not applicable for all models without integrated graphics (for the details, please refer to processor section)

Monitor Support
Supports up to 2 independent displays via onboard ports (VGA and HDMI), more displays support via discrete graphics

Chipset
Intel B460 chipset

Memory
Memory Type
- DDR4-2666
- DDR4-2933

Notes:
- Installed memory is actually 2666MHz or 2933MHz, but may run at 2666MHz or 2933MHz depending on the memory support capability of processor

Memory Slots
Two DDR4 UDIMM slots, dual-channel capable

Memory Protection
Non-ECC

Max Memory
Up to 32GB 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 2 drives, 1x 3.5” HDD + 1x M.2 SSD
• 3.5” HDD up to 1TB
• M.2 SSD up to 512GB

RAID
Not support

Storage Type

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5” SATA HDD</td>
<td>SATA 6Gb/s</td>
<td>7.2K</td>
<td>-</td>
</tr>
<tr>
<td>M.2 2242 SSD</td>
<td>PCIe NVMe</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Removable Storage

Optical
None

Card Reader
• 3-in-1 card reader (SD, SDHC, SDXC)
• No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC222-CG codec

Power Supply

<table>
<thead>
<tr>
<th>Power</th>
<th>Type</th>
<th>Efficiency</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>310W</td>
<td>Fixed</td>
<td>92%</td>
<td>100V - 240V</td>
</tr>
<tr>
<td>380W</td>
<td>Fixed</td>
<td>92%</td>
<td>100V - 240V</td>
</tr>
</tbody>
</table>

DESIGN

Input Device

Keyboard
Lenovo Calliope Keyboard (USB connector), black

Mouse
Lenovo Calliope Mouse (USB connector), black

Mechanical

Form Factor
Tower (13.6L)

Dimensions (WxDxH)
145 x 292.2 x 365 mm (5.71 x 11.5 x 14.37 inches)

Weight
5.8 kg (12.79 lbs)

Case Color
Raven black

Bays
• 1x 2.5” disk bay
• 1x 3.5” disk bay

Expansion Slots
One PCIe 3.0 x16, full height
• One PCIe 3.0 x1, full height
• Two M.2 slots (one for WLAN, one for SSD)

Cooling System (Fan&Cooler)
(Optional) Front system fan, rear system fan

CONNECTIVITY

Network
Onboard Ethernet
Gigabit Ethernet, 1x RJ45

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

Ports
Front Ports
• 2x USB 3.2 Gen 1
• 1x USB-C 3.2 Gen 1
• 1x headphone / microphone combo jack (3.5mm)

Notes:
• 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;

Optional Front Ports
1x card reader

Rear Ports
• 4x USB 2.0
• 1x Ethernet (RJ-45)
• 1x HDMI 1.4b
• 1x VGA
• 1x headphone / microphone combo jack (3.5mm)

Notes:
• For video ports on discrete graphics, please see graphics section

SECURITY & PRIVACY

Security
BIOS Security
• Power-on password
• Administrator password
• Hard disk password

SERVICE

Warranty
Base Warranty
CERTIFICATIONS

Green Certifications

- ENERGY STAR® 8.0 (On some models)
- ErP Lot 3
- RoHS compliant