## OVERVIEW

1. Power button
2. Microphone (3.5mm)
3. Card reader
4. Headphone / microphone combo jack (3.5mm)
5. 2x USB 2.0
6. 2x USB 3.2 Gen 1
7. Optical drive *
8. Line-out (3.5mm)
9. HDMI 1.4b
10. VGA
11. 2x USB 2.0
12. Ethernet (RJ-45)
13. 2x USB 3.2 Gen 1
14. Power connector

**Notes:**
- Ports with * are only available on selected models
PERFORMANCE

Processor

Processor Family
Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / 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>Celeron G5900</td>
<td>2</td>
<td>2</td>
<td>3.4GHz</td>
<td>-</td>
<td>2MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 610</td>
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<tr>
<td>Celeron G5905</td>
<td>2</td>
<td>2</td>
<td>3.5GHz</td>
<td>-</td>
<td>4MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 610</td>
</tr>
<tr>
<td>Pentium Gold G6400</td>
<td>2</td>
<td>4</td>
<td>4.0GHz</td>
<td>-</td>
<td>4MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 610</td>
</tr>
<tr>
<td>Core i3-10100</td>
<td>4</td>
<td>8</td>
<td>3.6GHz</td>
<td>4.3GHz</td>
<td>6MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<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 i5-10400F</td>
<td>6</td>
<td>12</td>
<td>2.9GHz</td>
<td>4.3GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
<td>-</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>
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<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

Operating System
- Windows® 10 Home 64
- Windows 10 Pro 64
- No operating system

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>Intel UHD graphics 610</td>
<td>Integrated</td>
<td>Shared</td>
<td>1x HDMI® 1.4b, 1x VGA</td>
<td>4096x2160@24Hz(HDMI), 2048x1536@50Hz(VGA)</td>
<td>DirectX® 12</td>
</tr>
<tr>
<td>Intel UHD graphics 630</td>
<td>Integrated</td>
<td>Shared</td>
<td>1x HDMI 1.4b, 1x VGA</td>
<td>4096x2160@24Hz(HDMI), 2048x1536@50Hz(VGA)</td>
<td>DirectX 12</td>
</tr>
<tr>
<td>NVIDIA® GeForce® GT 730</td>
<td>Discrete</td>
<td>2GB GDDR5</td>
<td>1x HDMI 1.4, 1x VGA</td>
<td>3840x2160@60HZ(HDMI), 2048x1536@75Hz(VGA)</td>
<td>DirectX 12</td>
</tr>
</tbody>
</table>

Notes:
1. The information of integrated graphics are not applicable for the models without integrated graphics (for the details, please refer to processor section)

Monitor Support

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

Chipset

Chipset
Intel B460 chipset

Memory

Max Memory[1]
Up to 32GB DDR4-2666

Memory Slots
Two DDR4 UDIMM slots, dual-channel capable

Memory Type[2]
DDR4-2933
Memory Protection
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.
2. Installed memory is actually 2933MHz, but may run at 2666MHz or 2933MHz depending on the memory support capability of processor.

Storage
Storage Support
Up to 2 drives, 1x 3.5” HDD + 1x M.2 SSD
- 3.5” HDD up to 2TB
- M.2 SSD up to 512GB
- Optional Intel Optane™ Memory Integrated with SSD, M.2

<table>
<thead>
<tr>
<th>Storage Type</th>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.5” SATA HDD</td>
<td>SATA 6Gb/s</td>
<td>7.2K</td>
<td>-</td>
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<tr>
<td></td>
<td>M.2 2242 SSD</td>
<td>PCIe NVMe</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Intel Optane Memory with Solid State Storage, M.2 2280</td>
<td>PCIe NVMe, PCIe 3.0 x4</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

RAID
No support

Removable Storage
Optical
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader
- 7-in-1 card reader (SD, SDHC, SDXC, MMC, MS, MS-Pro, MMC plus)
- No card reader

Multi-Media
Audio Chip
High Definition (HD) Audio

Power Supply
Power Supply

<table>
<thead>
<tr>
<th>Power</th>
<th>Type</th>
<th>Efficiency</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>180W</td>
<td>Fixed</td>
<td>85%</td>
<td>100V - 240V</td>
</tr>
<tr>
<td>260W</td>
<td>Fixed</td>
<td>85%</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
SFF (7.4L)
**Dimensions (WxDxH)**
100 x 274.5 x 312.5 mm (3.93 x 10.8 x 12.3 inches)

**Weight**
4.35 kg (9.59 lbs)

**Case Color**
Mineral grey

**Bays**
- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

**Expansion Slots**
- One PCIe 3.0 x1, low-profile
- One PCIe 3.0 x16, low-profile
- Two M.2 slots (one for WLAN, one for SSD)

**CONNECTIVITY**

**Network**

**Onboard Ethernet**
Gigabit Ethernet, 1x RJ45

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

**Ports**

**Front Ports**
- 4x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

**Optional Front Ports**
1x card reader

**Rear Ports**
- 2x USB 2.0
- 2x USB 3.2 Gen 1
- 1x VGA
- 1x HDMI 1.4b
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

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. For video ports on discrete graphics, please see graphics section

**SECURITY & PRIVACY**

**Security**

**Physical Locks**
No physical locks
BIOS Security
• Administrator password
• Power-on password
• Hard disk password

SERVICE

Warranty
Base Warranty
• 1-year mail-in service
• 1-year depot service
• 1-year limited onsite service
• 2-year depot service

ENVIRONMENTAL

Operating Environment
Temperature
Storage: -40°C (-40°F) to 60°C (140°F)
Humidity
• Operating: 20% to 80%
• Storage: 10% to 90%
Altitude
• Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
• Storage: -15.2 m (-50 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications
Green Certifications
• ENERGY STAR® 8.0 (only available for MT 90NS)
• ErP Lot 3
• RoHS compliant