

## PERFORMANCE

### Processor

#### Processor Family

Intel® Celeron®, Intel Pentium® Gold, or 8th / 9th Generation Intel Core™ i3 / i5 / i7 Processor

#### Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G4900	2	2	3.1GHz	-	2MB	DDR4-2400	Intel UHD Graphics 610
Celeron G4930	2	2	3.2GHz	-	2MB	DDR4-2400	Intel UHD Graphics 610
Pentium Gold G5400	2	4	3.7GHz	-	4MB	DDR4-2400	Intel UHD Graphics 610
Pentium Gold G5420	2	4	3.8GHz	-	4MB	DDR4-2400	Intel UHD Graphics 610
Core i3-8100	4	4	3.6GHz	-	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9100	4	4	3.6GHz	4.2GHz	6MB	DDR4-2400	Intel UHD Graphics 630
Core i5-8400	6	6	2.8GHz	4.0GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9400	6	6	2.9GHz	4.1GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9400F	6	6	2.9GHz	4.1GHz	9MB	DDR4-2666	-
Core i7-8700	6	12	3.2GHz	4.6GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-9700	8	8	3.0GHz	4.7GHz	12MB	DDR4-2666	Intel UHD Graphics 630

### Operating System

#### Operating System

- Windows® 10 Home 64
- Windows 10 Pro 64
- FreeDOS
- No operating system

### Graphics

#### Graphics<sup>[1]</sup>

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics 630	Integrated	Shared	1x HDMI® 1.4, 1x VGA	1920x1080@30Hz(HDMI), 1920x1200@60Hz(VGA)	DirectX® 12
Intel UHD Graphics 610	Integrated	Shared	1x HDMI 1.4, 1x VGA	1920x1080@30Hz(HDMI), 1920x1200@60Hz(VGA)	DirectX 12
AMD Radeon™ RX 550	Discrete	2GB GDDR5	1x HDMI 2.0, 1x VGA, 1x DP 1.4	4096x2160@60Hz(HDMI), 2048x1536@60Hz(VGA), 5120x2880@60Hz(DP)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x VGA, 1x DP 1.4	4096x2160@60Hz(HDMI), 2048x1536@60Hz(VGA), 5120x2880@60Hz(DP)	DirectX 12
AMD Radeon RX 560	Discrete	4GB GDDR5	1x HDMI 2.0, 1x DP 1.4, 1x DVI	4096x2160@60Hz(HDMI), 5120x2880@60Hz(DP), 2560x1600@60Hz(DVI)	DirectX 12
NVIDIA® GeForce® GT 730	Discrete	1GB GDDR5	1x HDMI 1.4, 1x VGA	3840x2160@60Hz(HDMI), 2048x1536@75Hz(VGA)	DirectX 12
NVIDIA GeForce GT 730	Discrete	2GB GDDR5	1x HDMI 1.4, 1x VGA	3840x2160@30Hz(HDMI), 2048x1536@75Hz(VGA)	DirectX 12
NVIDIA GeForce GTX 1050 Ti	Discrete	4GB GDDR5	1x HDMI 2.0, 1x DP 1.4, 1x DVI	4096x2160@60Hz(HDMI), 7680x4320@60Hz(DP), 2560x1600@60Hz(DVI)	DirectX 12
NVIDIA GeForce GTX 1650	Discrete	4GB GDDR5	1x HDMI 2.0b, 2x DP 1.4	4096x2160@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12

**Notes:**

1. 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

**Monitor Support**

Supports up to 2 independent displays via onboard ports (VGA + HDMI)

## Chipset

**Chipset**

Intel B360 chipset

## Memory

**Memory Type<sup>[1]</sup>**

DDR4-2666

**Memory Slots**

Two DDR4 UDIMM slots, dual-channel capable

**Memory Protection**

Non-ECC

**Max Memory<sup>[2]</sup>**

Up to 16GB DDR4-2666

**Notes:**

1. Installed memory is actually 2666MHz, but may run at 2400MHz or 2666MHz depending on the memory support capability of processor
2. 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 3 drives, 2x 3.5" HDD + 1x M.2 SSD or 1x 3.5" HDD + 1x 2.5" SSD + 1x M.2 SSD

- 3.5" HDD up to 2TB each
- 2.5" SSD up to 128 GB
- M.2 SSD up to 1TB
- Optional Intel Optane™ Memory or Optane Memory Integrated with SSD, M.2

**RAID**

Not support

**Storage Type**

Disk Type	Interface	RPM	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
2.5" SATA SSD	SATA 6Gb/s	-	-
M.2 2242 SSD	PCIe NVMe	-	-
M.2 2280 SSD	PCIe NVMe	-	-
Intel Optane Memory with Solid State Storage, M.2 2280	PCIe NVMe, PCIe 3.0 x4	-	-
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

## 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, Realtek® ALC233 codec

## Power Supply

### Power Supply

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100V - 240V
210W	Fixed	85%	100V - 240V

## DESIGN

### Input Device

#### Keyboard

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Keyboard (USB connector), silver
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Calliope Wireless Keyboard, silver
- No keyboard

#### Mouse

- Lenovo Calliope Wireless Mouse, silver
- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Mouse (USB connector), silver
- No mouse

### Mechanical

#### Buttons

- Power button
- Optical drive eject button(for the models with ODD)

#### Form Factor

Tower (15L)

#### Dimensions (WxDxH)

145 x 285.2 x 366.03 mm (5.71 x 11.22 x 14.41 inches)

#### Weight

5.8 kg (12.79 lbs)

#### Case Color

Black

#### Bays

- 1x slim ODD bay
- 1x 3.5" disk bay
- 1x 3.5" or 2.5" disk bay, HDD / SSD

#### Expansion Slots

- One PCIe 3.0 x16, full height, half length
- One PCIe 3.0 x1, full height, half length
- Two M.2 slots (one for WLAN, one for SSD)

#### Cooling System (Fan&Cooler)

(Optional) Front and rear system fan

## CONNECTIVITY

### Network

#### Onboard Ethernet

Gigabit Ethernet, 1x RJ45

**WLAN + Bluetooth™**

- 802.11ac 1x1 Wi-Fi + Bluetooth 4.0, M.2 card
- 802.11ac 2x2 Wi-Fi + Bluetooth 4.0, M.2 card
- No WLAN and Bluetooth

## Ports

**Front Ports<sup>[1]</sup>**

- 2x USB 3.1 Gen 1
- 2x USB 3.1 Gen 2
- 1x USB-C 3.1 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

**Optional Front Ports**

1x card reader

**Rear Ports<sup>[2]</sup>**

- 4x USB 2.0
- 1x Ethernet (RJ-45)
- 1x HDMI 1.4
- 1x VGA
- 1x headphone / microphone combo jack (3.5mm)
- 1x power connector

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**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**

Kensington® Security Slot

**BIOS Security**

- Power-on password
- Administrator password
- Hard disk password

## SERVICE

### Warranty

**Base Warranty**

- 1-year depot or mail-in service
- 2-year depot service

## CERTIFICATIONS

### Green Certifications

**Green Certifications**

- ErP Lot 3

- RoHS compliant

