

PERFORMANCE

Processor

Processor Family

10th Generation Intel® Core™ i5 / i7 / i9 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i7-10700K	8	16	3.8GHz	5.1GHz	16MB	DDR4-2933	Intel UHD Graphics 630
Core i7-10700KF	8	16	3.8GHz	5.1GHz	16MB	DDR4-2933	-
Core i9-10850K	10	20	3.6GHz	5.2GHz	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900K	10	20	3.7GHz	5.3GHz	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900KF	10	20	3.7GHz	5.3GHz	20MB	DDR4-2933	-

Notes:

- Intel UHD Graphics 630 in processor is disabled

Operating System

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

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon™ RX 5700XT	Discrete	8GB GDDR6	1x HDMI® 2.0, 3x DP 1.4	7680x4320@60Hz(DP)	DirectX® 12
NVIDIA® GeForce® RTX™ 2060 CD	Discrete	6GB GDDR6	1x HDMI 2.0b, 3x DP 1.4	4096x2160@60Hz(HDMI), 7680x4320@60Hz with DSC(DP)	DirectX 12
NVIDIA GeForce RTX 2070 CD	Discrete	8GB GDDR6	1x HDMI 2.0b, 3x DP 1.4	7680x4320@60Hz(DP)	DirectX 12 VR ready
NVIDIA GeForce RTX 2070 SUPER	Discrete	8GB GDDR6	1x HDMI 2.0b, 1x USB Type-C Gen 2, 3x DP 1.4	7680x4320@60Hz(DP)	DirectX 12 VR ready
NVIDIA GeForce RTX 3060 Ti	Discrete	8G GDDR6	3x DP 1.4a, 1x HDMI 2.1	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12
NVIDIA GeForce RTX 3070	Discrete	8G GDDR6	3x DP 1.4a, 1x HDMI 2.1	7680x4320@60Hz(HDMI); 7680x4320@60Hz(DP)	DirectX 12
NVIDIA GeForce RTX 3080	Discrete	10G GDDR6X	3x DP 1.4a, 1x HDMI 2.1	7680x4320@60Hz(HDMI); 7680x4320@60Hz(DP)	DirectX 12
NVIDIA GeForce RTX 3090	Discrete	24G GDDR6X	3x DP 1.4a, 1x HDMI 2.1	7680x4320@60Hz(HDMI); 7680x4320@60Hz(DP)	DirectX 12
NVIDIA GeForce RTX 2080 SUPER	Discrete	8GB GDDR6	1x HDMI 2.0b, 3x DP 1.4	7680x4320@60Hz(DP)	DirectX 12 VR ready

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 5 independent displays via discrete graphics ports** (DP, HDMI, USB-C 3.2 Gen2, and DVI)

Notes:

- Ports may vary by the discrete graphics.

Chipset

Intel Z490 chipset

Memory

Memory Type

- DDR4-3200
- DDR4-3200, Armor
- DDR4-3600, RGB Armor, XMP

Notes:

- Installed memory is actually 3200MHz or 3600MHz, but may run at 2933MHz depending on the memory support capability of processor

Memory Slots

Four DDR4 UDIMM slots, dual-channel capable

Memory Protection

Non-ECC

Max Memory

Up to 128GB 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 4 drives, 2x 3.5" HDD + 2x M.2 SSD

- 3.5" HDD up to 2TB each
- M.2 SSD up to 1TB each

RAID

RAID 0/1/5 support

Storage Type

Disk Type	Interface	RPM	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-

Removable Storage

Optical

- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- Not configured

Card Reader

Not Support

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC892 codec

Speakers

Not Support

Power Supply

Power	Type	Efficiency	Key Features
550W	Fixed	88%	220V
650W	Fixed	90%	100V - 240V
850W	Fixed	90%	100V - 240V

DESIGN

Input Device

Keyboard

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo USB Keyboard (USB connector), black
- Not configured

Mouse

- USB Mouse, black
- Lenovo Calliope Mouse (USB connector), black

Mechanical

Form Factor

Tower (34L)

Dimensions (WxDxH)

211 x 450 x 483 mm (8.3 x 17.7 x 19 inches)

Weight

12.5 kg (27.6 lbs)

Case Color

Raven black

Bays

- 2x 3.5" disk bay
- 4x 2.5" disk bay

Expansion Slots

- Two PCIe 3.0 x16
- Three PCIe 3.0 x1
- Three M.2 slots (one for WLAN, two for SSD)

Cooling System (Fan&Cooler)

- (Optional) Front system fan, rear system fan for airflow or liquid
- (Optional) Front system fan, rear system fan with ARGB
- (Optional) Three front system fan with ARGB, one rear system fan with ARGB
- (Optional) Three front system fan with ARGB, one rear system fan with ARGB, two top system fan with ARGB
- (Optional) 150W side flow Air-Cooler, or 200W Liquid-Cooler

System Lighting

Front panel light; optional ARGB cooler light and ARGB system fan light

Others

- Carry handle
- None

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, 1x RJ45

WLAN + Bluetooth™

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

Ports

Rear Ports

- 4x USB 2.0
- 2x USB 3.2 Gen 1
- 1x USB 3.2 Gen 2
- 1x USB-C 3.2 Gen 2
- 1x Ethernet (RJ-45)

- 1x microphone in (pink)
- 1x line in (blue)
- 1x line out/one front output (green)
- 1x centre and subwoofer combine output (orange)
- 1x side surround output (grey)
- 1x rear surround output (black)
- 1x power connector

Notes:

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

Top Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 1
- 1x headphone (3.5mm)
- 1x microphone (3.5mm)

SECURITY & PRIVACY

Security

BIOS Security

- Power-on password
- Administrator password

SERVICE

Warranty

Base Warranty

- 1-year mail-in service
- 1-year depot service
- 1-year limited onsite service
- 2-year depot service
- OB

CERTIFICATIONS

Green Certifications

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

