

PERFORMANCE

Processor

Processor Family

Up to one Intel® Core™ i9, i7, i5, or i3 processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-8100	4	4	3.6GHz	-	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-8100T	4	4	3.1GHz	-	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-8300	4	4	3.7GHz	-	8MB	DDR4-2400	Intel UHD Graphics 630
Core i3-8300T	4	4	3.2GHz	-	8MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9100	4	4	3.6GHz	4.2GHz	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9100T	4	4	3.1GHz	3.7GHz	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9300	4	4	3.7GHz	4.3GHz	8MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9300T	4	4	3.2GHz	3.8GHz	8MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9320	4	4	3.7GHz	4.4GHz	8MB	DDR4-2400	Intel UHD Graphics 630
Core i5-8400	6	6	2.8GHz	4.0GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8400T	6	6	1.7GHz	3.3GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8500	6	6	3.0GHz	4.1GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8500T	6	6	2.1GHz	3.5GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8600	6	6	3.1GHz	4.3GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8600T	6	6	2.3GHz	3.7GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9400	6	6	2.9GHz	4.1GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9400T	6	6	1.8GHz	3.4GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9500	6	6	3.0GHz	4.4GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9500T	6	6	2.2GHz	3.7GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9600	6	6	3.1GHz	4.6GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9600T	6	6	2.3GHz	3.9GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i7-8700	6	12	3.2GHz	4.6GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-8700T	6	12	2.4GHz	4.0GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-9700	8	8	3.0GHz	4.7GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-9700T	8	8	2.0GHz	4.3GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i9-9900	8	16	3.1GHz	5.0GHz	16MB	DDR4-2666	Intel UHD Graphics 630
Core i9-9900T	8	16	2.1GHz	4.4GHz	16MB	DDR4-2666	Intel UHD Graphics 630

Processor Sockets

1x FCLGA1151

Operating System

Operating System

- Windows® 10 Home 64
- Windows 10 Pro 64
- Ubuntu Linux LTS
- No operating system

Graphics

Integrated Graphics

Intel UHD Graphics 630



View our **P330**
inventory here

Discrete Graphics Support

Supports one optional discrete graphics card on 35W processor models

Discrete Graphics Offering

Graphics	Memory	Power	Connector	SLI / NVlink
Quadro® P620	2GB GDDR5	40W	4x miniDP	None
Quadro P1000	4GB GDDR5	50W	4x miniDP	None

Monitor Support

Monitor Support

Supports multiple displays via onboard video ports and discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel Q370 chipset

Memory

Max Memory^[1]

Up to 64GB

Memory Type

DDR4-2666 non-ECC

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

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 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 2TB

• M.2 SSD up to 1TB each

Storage Type

Disk Type	Interface	RPM	Offering
M.2 PCIe SSD	PCIe NVMe	-	128GB / 256GB / 512GB / 1TB
2.5" SATA HDD	SATA 6Gb/s	5.4K	2TB
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB

Removable Storage

Optical Support

Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
135W	Adapter	88%	Autosensing

DESIGN

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)

37 x 182.9 x 179 mm (1.5 x 7.2 x 7.0 inches)

Weight

1.32kg (2.91lbs)

Bays^[1]

1x 2.5" disk bay

M.2 Slots

Up to 2x M.2 SSD via onboard slots

Expansion Slots

One PCIe 3.0 x16 or x4 slot, low-profile, via riser card

Expansion Slots Offering

One PCIe slot via specific riser card:

PCIe 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card,
PCIe 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter

Notes:

1. 2.5" disk bay is available on models without discrete graphics card

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ45, supports Wake-on-LAN

Optional Ethernet

Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4

WLAN + Bluetooth®

- Intel Dual Band Wireless-AC 8265, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 Card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.1 Gen 1 (Always On and fast charge)
- 1x USB-C 3.1 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Rear Ports^[2]

- 2x USB 3.1 Gen 1
- 2x USB 3.1 Gen 2
- 1x HDMI®
- 1x DisplayPort™
- 1x Ethernet (RJ-45)

Optional Rear Ports

- 2x USB-C 3.1 Gen 1 (via 2-port USB-C expansion card)
- Optional port 1 (one of VGA / 2nd DisplayPort / 2nd HDMI / serial / USB-C 3.1 Gen 1 with DisplayPort function)
- Optional port 2 (serial)
- 4x serial (via 4-port serial expansion card, PCIe x1)

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

Security Chip

Discrete TPM 2.0, TCG certified

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management

- Intel vPro with Intel AMT 12 (vPro-enable processor and WiFi needed)
- Standard Manageability

SERVICE

Warranty

Base Warranty

3-year limited onsite service with 9x5 NBD (for most models)

ENVIRONMENTAL

Operating Environment

Temperature

Operating: 10°C (50°F) to 35°C (95°F)

Altitude

Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)

Humidity

Operating: 20% to 80%

CERTIFICATIONS

Green Certifications

Green Certifications

- EPEAT™ Silver
- ENERGY STAR® 7.0
- GREENGUARD®
- RoHS compliant

Other Certifications

Mil-Spec Test

MIL-STD-810G military test passed

ISV Certifications



ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

