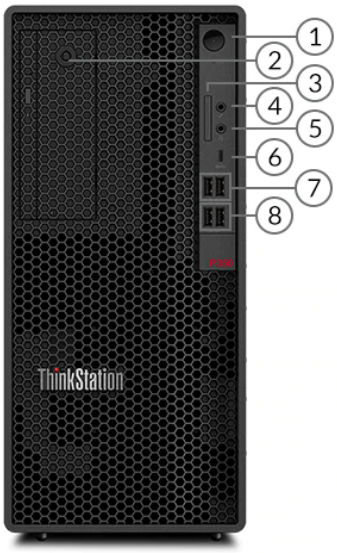
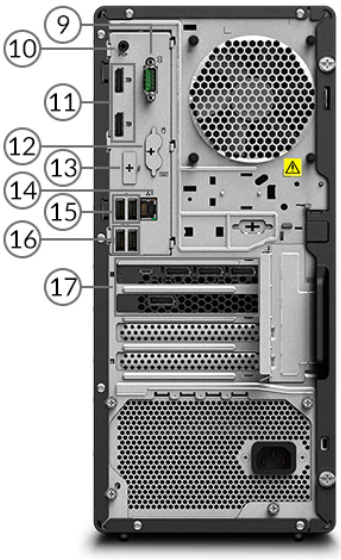
OVERVIEW





1. Power button	10. Line-out (3.5mm)
2. Optical drive *	11. 2x DisplayPort
3. Card reader *	12. 2x PS/2 ports (keyboard / mouse) *
4. Microphone (3.5mm)	13. Video port (DisplayPort, HDMI, or USB-C) *
5. Headphone / microphone combo jack (3.5mm)	14. Ethernet (RJ-45)
6. USB-C 3.2 Gen 2 (data transfer only)	15. 2x USB 3.2 Gen 1
7. 2x USB 3.2 Gen 1	16. 2x USB 3.2 Gen 1
8. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
9. Serial	

Notes:

- Ports with * are only available on selected models

PERFORMANCE

Processor

Processor[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core™ i3-10105	4	8	3.7GHz	4.4GHz	6MB	DDR4-2666	Intel® UHD Graphics 630
Core i3-10305	4	8	3.8GHz	4.5GHz	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10325	4	8	3.9GHz	4.7GHz	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-11400	6	12	2.6GHz	4.4GHz	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-11500	6	12	2.7GHz	4.6GHz	12MB	DDR4-3200	Intel UHD Graphics 750
Core i5-11600	6	12	2.8GHz	4.8GHz	12MB	DDR4-3200	Intel UHD Graphics 750
Core i5-11600K	6	12	3.9GHz	4.9GHz	12MB	DDR4-3200	Intel UHD Graphics 750
Core i7-11700	8	16	2.5GHz	4.9GHz	16MB	DDR4-3200	Intel UHD Graphics 750
Core i7-11700K	8	16	3.6GHz	5.0GHz	16MB	DDR4-3200	Intel UHD Graphics 750
Core i9-11900	8	16	2.5GHz	5.2GHz	16MB	DDR4-3200	Intel UHD Graphics 750
Core i9-11900K	8	16	3.5GHz	5.3GHz	16MB	DDR4-3200	Intel UHD Graphics 750
Xeon W-1350	6	12	3.3GHz	5.0GHz	12MB	DDR4-3200	Intel UHD Graphics P750
Xeon W-1350P	6	12	4.0GHz	5.1GHz	12MB	DDR4-3200	Intel UHD Graphics P750
Xeon W-1370	8	16	2.9GHz	5.1GHz	16MB	DDR4-3200	Intel UHD Graphics P750
Xeon W-1370P	8	16	3.6GHz	5.2GHz	16MB	DDR4-3200	Intel UHD Graphics P750
Xeon W-1390	8	16	2.8GHz	5.2GHz	16MB	DDR4-3200	Intel UHD Graphics P750
Xeon W-1390P	8	16	3.5GHz	5.3GHz	16MB	DDR4-3200	Intel UHD Graphics P750

Notes:

1. 10th Core i5, i7, and i9 processors are available after August 2021

Operating System

Operating System

- Windows® 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Red Hat Enterprise Linux (certified only)
- Ubuntu Linux LTS
- No operating system

Graphics

Integrated Graphics

- Intel UHD Graphics 630
- Intel UHD Graphics 730
- Intel UHD Graphics 750
- Intel UHD Graphics P750

Discrete Graphics Offering

Graphics	Memory	Power	Connector	SLI / NVlink
Quadro® P2200	5GB GDDR5	75W	4x DP	None
NVIDIA® T400	2GB GDDR6	40W	3x miniDP	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP	None
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP	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 W580 chipset

Memory

Max Memory[1]

Up to 128GB

Memory Type

- DDR4-3200 UDIMM Non-ECC
- DDR4-3200 UDIMM ECC

Memory Slots

Four DDR4 UDIMM slots, dual-channel capable

Memory Protection

ECC on models with ECC DIMMs and Xeon processor

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[1]

Up to 2x 3.5" SATA HDD / 4x 2.5" SATA HDD + 3x M.2 SSD
• 3.5" HDD up to 4TB each
• 2.5" HDD up to 1TB each
• M.2 SSD up to 2TB each

Storage Type

Disk Type	Interface	RPM	Offering	Security
M.2 2280 SSD	PCIe Gen 4 NVMe	-	256GB / 512GB / 1TB / 2TB	Opal
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 1TB FIPS	-

Storage Controllers[2]

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RST PCIe RAID	Standard	PCIe NVMe	0/1	None
Onboard Intel RST SATA RAID	Standard	SATA 6.0Gb/s	0/1	None

Notes:

1. Model with Core i3 processor supports 2x M.2 SSD
2. Cannot install OS in SATA RAID 1 volume

Removable Storage

Optical Support

Optional one 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
500W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
750W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)

170 x 315.35 x 376 mm (6.7 x 12.4 x 14.8 inches)

Weight

9.4 kg (20.7 lbs, maximum configuration)

Bays

- 1x 3.5″ disk bay (standard)
- 1x 3.5″ disk bay (optional)
- 2x 2.5″ disk bay (optional)

M.2 Slots[1]

- Up to 2x M.2 SSD on model with 10th Core processor:
  - 1 via onboard slot with M.2 PCIe Gen 3
  - 1 via Single M.2 to PCIe adapter, PCIe Gen 3
- Up to 3x M.2 SSD on models with Xeon or 11th Core processor:
  - 2 via onboard slots with 1x M.2 PCIe Gen 4 and 1x M.2 PCIe Gen 3
  - 1 via Single M.2 to PCIe adapter, PCIe Gen 3

Expansion Slots

- One PCIe 4.0 x16
- One PCIe 4.0 x16 (x4 lanes)
- One PCIe 3.0 x1

Notes:

1. M.2 Gen 4 SSD works at Gen 3 speed on Gen 3 slot

CONNECTIVITY

Network

Onboard Ethernet

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

Optional Ethernet

Additional Ethernet options via PCIe adapter

WLAN + Bluetooth™

- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2, M.2 Card
- No WLAN and Bluetooth

Ports[1]

Front Ports

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

Rear Ports[2]

- 4x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x serial (9-pin)
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 2x DisplayPort™

Optional Rear Ports

- 2x USB-C
- 2x USB 2.0
- 1x video (DisplayPort, HDMI®, or USB-C)
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 1x parallel
- 2x PS/2
- None

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, formely USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
   USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formely 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

Physical Locks

- (Optional) E-lock
- (Optional) Cable lock
- Kensington® Security Slot
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security

- Power-on password
- Administrator password

MANAGEABILITY

System Management

System Management

- Intel vPro with Intel AMT 14 (vPro-enable processor and WiFi needed)
- Standard Manageability

SERVICE

Warranty

Base Warranty

- 1-year limited onsite service

- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

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)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications

Green Certifications

- EPEAT™ Gold (on some models)
- ENERGY STAR® 8.0
- RoHS compliant

ISV Certifications

ISV Certifications

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