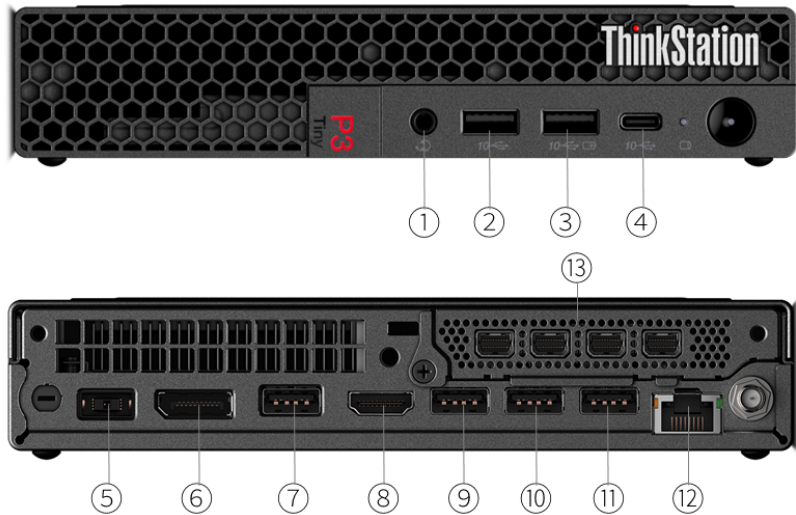


OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI 2.1 TMDs
2. USB-A (USB 10Gbps)	9. USB-A (USB 5Gbps), with Smart Power On
3. USB-A (USB 10Gbps), Always On	10. USB-A (USB 10Gbps)
4. USB-C (USB 10Gbps), data transfer only	11. USB-A (USB 10Gbps)
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort 1.4	13. 2 Punch out ports or expansion card *
7. USB-A (USB 5Gbps)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one 13th Gen Intel® Core™ i3 / i5 / i7 / i9 processor, supports up to 24 cores, up to 5.6GHz

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core™ i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	DDR5-4800	Intel® UHD Graphics 730
Core™ i3-13100T	4 (4 P-core + 0 E-core)	8	P-core 2.5GHz	P-core 4.2GHz	12MB	DDR5-4800	Intel® UHD Graphics 730
Core™ i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	DDR5-4800	Intel® UHD Graphics 730
Core™ i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz	20MB	DDR5-4800	Intel® UHD Graphics 730
Core™ i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel® UHD Graphics 770
Core™ i5-13500T	14 (6 P-core + 8 E-core)	20	P-core 1.6GHz / E-core 1.2GHz	P-core 4.6GHz / E-core 3.2GHz	24MB	DDR5-4800	Intel® UHD Graphics 770
Core™ i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	DDR5-4800	Intel® UHD Graphics 770
Core™ i5-13600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.4GHz	24MB	DDR5-4800	Intel® UHD Graphics 770
Core™ i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	DDR5-5600	Intel® UHD Graphics 770
Core™ i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-5600	Intel® UHD Graphics 770
Core™ i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	DDR5-5600	Intel® UHD Graphics 770
Core™ i9-13900T	24 (8 P-core + 16 E-core)	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz	36MB	DDR5-5600	Intel® UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

[1] Intel® Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 DG Windows® 10 Pro 64
- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- No operating system

Graphics

Integrated Graphics**

- Intel® UHD Graphics 730
- Intel® UHD Graphics 770

Discrete Graphics Support^[1]

Supports up to one NVIDIA® T1000 8GB

Discrete Graphics Offering

Graphics	Memory	Power	Connector	SLI / NVLink
NVIDIA® T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	None
NVIDIA® T1000	4GB GDDR6	50W	4x miniDP 1.4	None
NVIDIA® T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	None

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Onboard graphics supports up to 4 independent displays via (onboard DP, onboard HDMI®, punch out port 1 [VGA / HDMI® / DP / USB-C®], and punch out port 2 [VGA / HDMI® / DP]); the number of maximum monitors also depends on the discrete graphic card in use

Chipset

Chipset

Intel® Q670 chipset

Memory

Max Memory^[1]

Up to 64GB (2x 32GB DDR5 SO-DIMM)

Memory Type

- DDR5-4800 SO-DIMM non-ECC
- DDR5-5600 SO-DIMM non-ECC^[2]

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

^[2] System may come with DDR5-5600 memory and will run at lower speed due to platform limitations: 1x 32GB / 2x 32GB configurations run at DDR5-5200

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD, up to 2TB each

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe® controller	Standard	PCIe® NVMe®	0/1	None

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Optical Support

No optical support

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Single speaker
- Single speaker, premium

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
170W	Adapter	90%	100V - 240V
230W	Adapter	90%	100V - 240V
300W	Adapter	90%	100V - 240V

DESIGN

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 37mm with rubber feet (7.0 x 7.2 x 1.5 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Weight^[2]

Models	Weight
Tiny only	1.4 kg (3 lbs, maximum configuration)

Bays

No bays

M.2 Slots

- Two M.2 PCIe® Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

Expansion Slots

One PCIe® 4.0 x8, low-profile^[3]

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- [3] Supports discrete graphic card by x16 riser card (x8 signal), and supports Ethernet card / Thunderbolt 4 / serial card by x4 riser card. Riser card comes with the expension cards.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel® Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional ethernet adapter support, up to one additional 2.5GbE port

- Gigabit Ethernet, Intel® I350-T2, 2x RJ-45, PCIe® x4
- Gigabit Ethernet, Intel® I350-T4, 4x RJ-45, PCIe® x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe® x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe® x4
- 2.5 Gigabit Ethernet, Realtek® RTL8125BGS, 1x RJ-45, BTB

WLAN + Bluetooth®**

- Realtek® Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi® + Bluetooth® 5.1
- Intel® Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1 (Bluetooth® 5.2 hardware ready)
- Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1 (Bluetooth® 5.3 hardware ready), Intel® vPro® technology support^[1]
- No WLAN and Bluetooth®

Notes:

^[1] Bluetooth® 5.3 is hardware ready but may run at a lower version due to OS limitations.
Wi-Fi® 6E is only enabled on Windows® 11 and operates as Wi-Fi® 6 with Windows® 10.

Ports^[1]

Front Ports

- 1x USB-C® (USB 10Gbps / USB 3.2 Gen 2), data transfer only
- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2), Always On
- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2)
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports^[2]

- 1x HDMI® 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1), one supports Smart Power On
- 2x USB-A (USB 10Gbps / USB 3.2 Gen 2)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort™ / HDMI® / serial / USB-C® 5Gbps with DisplayPort™ and PD 3.0 functions)
- Punch out port 2 (one of VGA / DisplayPort™ / HDMI® / serial / RJ-45)
- 1x Thunderbolt™ 4 (via additional PCIe® adapter)
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1), occupies port 1 and 2
- 4x USB-A (USB 5Gbps / USB 3.2 Gen 1), share 5Gbps bandwidth, occupy port 1 and 2
- 2x GbE RJ-45, via additional PCIe® adapter
- 4x GbE RJ-45, via additional PCIe® adapter
- 4x serial, via additional PCIe® adapter

Notes:

^[1] The transfer speed of the 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 the theoretical speed.

^[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Cable lock
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel® vPro® Enterprise with Intel® AMT 16
- Non-vPro®

Notes:

[1] Intel® vPro® offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/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: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

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

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT™ is registered where applicable, please see epeat.net for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo® Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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