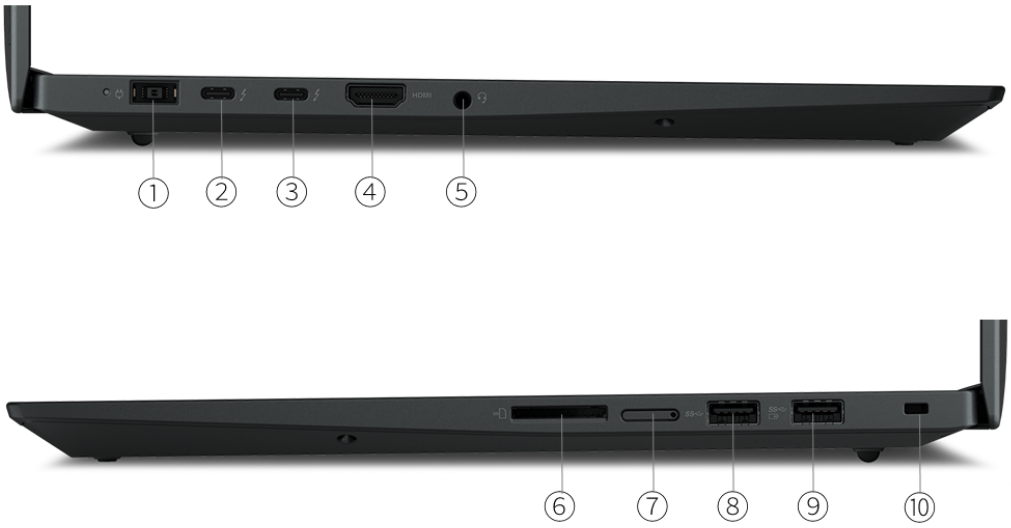
OVERVIEW



1. Power connector	6. SD card reader
2. Thunderbolt 4	7. Nano-SIM card slot
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. USB 3.2 Gen 1 (Always On)
5. Headphone (3.5mm)	10. Kensington Security Slot

PERFORMANCE

Processor

Processor Family

11th Generation Intel® Core™ i7 / i9 or Intel Xeon® Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i7-11800H	8	16	2.3GHz	4.6GHz	24MB	Intel UHD Graphics
Core i7-11850H	8	16	2.5GHz	4.8GHz	24MB	Intel UHD Graphics
Core i9-11950H	8	16	2.6GHz	5.0GHz	24MB	Intel UHD Graphics
Xeon W-11855M	6	12	3.2GHz	4.9GHz	18MB	Intel UHD Graphics

Operating System

Operating System[1]

- Fedora Linux
- Red Hat Enterprise Linux 8.4 (certified only, for detailed and latest information, please visit Red Hat Certified Hardware)
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Windows 11 DG Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] As preloaded OS, Fedora and Ubuntu Linux will be available in October 2021.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12
NVIDIA® GeForce RTX™ 3080 Laptop GPU[1]	Discrete	16GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A5000 Laptop GPU[2]	Discrete	16GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A2000 Laptop GPU	Discrete	4GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA T1200 Laptop GPU	Discrete	4GB GDDR6	DirectX 12
NVIDIA RTX A3000 Laptop GPU[3]	Discrete	6GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA GeForce RTX 3070 Laptop GPU[4]	Discrete	8GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A4000 Laptop GPU[5]	Discrete	8GB GDDR6	Dynamic Boost 2.0, DirectX 12

Notes:

[1], [2], [3], [4], [5] Vapor Chamber cooling is available only with NV RTX A3000 /A4000 / A5000 and GeForce RTX 3070 / 3080 GPUs.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)
• HDMI supports up to 4K@60Hz on NVIDIA T1200 or Intel UHD models, or 8K@60Hz on other discrete graphics models

• Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel WM590 chipset

Memory

Max Memory

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type**

- DDR4-3200 ECC
- DDR4-3200 non-ECC

Memory Protection

ECC on models with ECC DIMMs and Xeon processor

Storage

Storage Support[1]

- One drive, up to 2TB M.2 2280 SSD
- Models with Intel UHD Graphics, NVIDIA T1200, and NVIDIA RTX A2000 Graphics: up to two drives, 2x M.2 SSD
  - M.2 2280 SSD up to 2TB
  - RAID 0/1 support

Storage Slot[2]

Two M.2 slots
• One M.2 2280 PCIe® 3.0 x4 slot
• One M.2 2280 PCIe 4.0 x4 slot

Storage Type***[3]

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal 2.0

RAID[4]

RAID 0/1 support (All M.2 SSD drives will work at PCIe Gen 3 in RAID mode)

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.
[2] M.2 PCIe Gen 4 SSD in a M.2 PCIe Gen 3 slot runs at PCIe Gen 3 speeds.
[3] PCIe x4 SSD may be PCIe 3.0 x4 or PCIe 4.0 x4 as substitution.
[4] Opal capability is not available in RAID mode.

Removable Storage

Optical

None

Card Reader

SD card reader, supports UHS-II SD card

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, Dolby® Atmos®

Microphone

- Dual-microphone array, far-field

- No microphone

Camera**

- FHD 1080p + IR, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Max Battery Life[1]

MobileMark® 2018: 10.9 hr
JEITA 2.0: 13.7 hr

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter**[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16″	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/-/-	Low blue light, 85.8% screen to body ratio, DC dimmimg
16″	WQUXGA (3840x2400)	None	IPS	600nits	Anti-glare	16:10	1500:1	100% Adobe® RGB	85°/85°/-/-	Low blue light, Dolby Vision™, DisplayHDR™ 400, 85.4% screen to body ratio, DC dimmimg[2]
16″	WQUXGA (3840x2400)	Multi-touch	IPS	600nits	Anti-reflection, anti-smudge	16:10	1500:1	100% Adobe RGB	85°/85°/-/-	Low blue light, Dolby Vision, DisplayHDR 400, 85.4% screen to body ratio, DC dimmimg[3]

Color Calibration

- X-Rite® factory color calibration
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
[2], [3] For non-OLED display, HDR is only supported under hybrid mode.

Input Device

Pen

- Lenovo Pen Pro
- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and glass surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

Models	Dimensions
Non-touch models	359.5 x 253.8 x 17.7 mm (14.15 x 9.99 x 0.7 inches)
Touch models	359.5 x 253.8 x 18.2 mm (14.15 x 9.99 x 0.72 inches)

Weight[2]

Models	Weight
Non-touch models	Starting at 1.81 kg (3.99 lbs)
Touch models	Starting at 1.86 kg (4.1 lbs)

Case Color**

- 37-degree twill CF weave
- Black

Case Material**

- CFRP / GFRP (top), aluminium (bottom)
- CFRP / GFRP hybrid (top), aluminium (bottom)

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.

CONNECTIVITY

Network

Ethernet[1]

No onboard Ethernet

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)[2]

WWAN[3]

- Qualcomm® Snapdragon™ X55 5G Modem-RF System, Sub-6 GHz, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Ethernet support via optional docking or Lenovo USB-C® to Ethernet Adapter.
[2] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.
[3] WWAN is only available on models with Intel UHD graphics, NVIDIA T1200, and NVIDIA RTX A2000.

Ports[1]

Standard Ports

- 2x USB 3.2 Gen 1 (one Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x SD card reader
- 1x Headphone / microphone combo jack (3.5mm)

Optional Ports***

- 1x HDMI 2.1, up to 4K/60Hz (models with integrated graphics)
- 1x Nano-SIM card slot (WWAN support models)
- 1x HDMI 2.1, up to 4K/60Hz (models with NVIDIA T1200 graphics)
- 1x HDMI 2.1, up to 8K/60Hz (models with Geforce RTX graphics)
- 1x HDMI 2.1, up to 8K/60Hz (models with NVIDIA RTX graphics)

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;
USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.
For more compatible docking solutions, please visit Docking for ThinkPad® P1 Gen 4

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

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

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

(Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management[1]

- Intel vPro®
- Non-vPro

Notes:

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

SERVICE

Warranty

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

ENVIRONMENTAL

Operating Environment

Temperature[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories[1]

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

Notes:

[1] For more compatible accessory solutions, please visit Accessories for ThinkPad P1 Gen 4

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered[2]
- RoHS compliant

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 https://www.epeat.net for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

ISV Certifications

ISV Certifications

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

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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