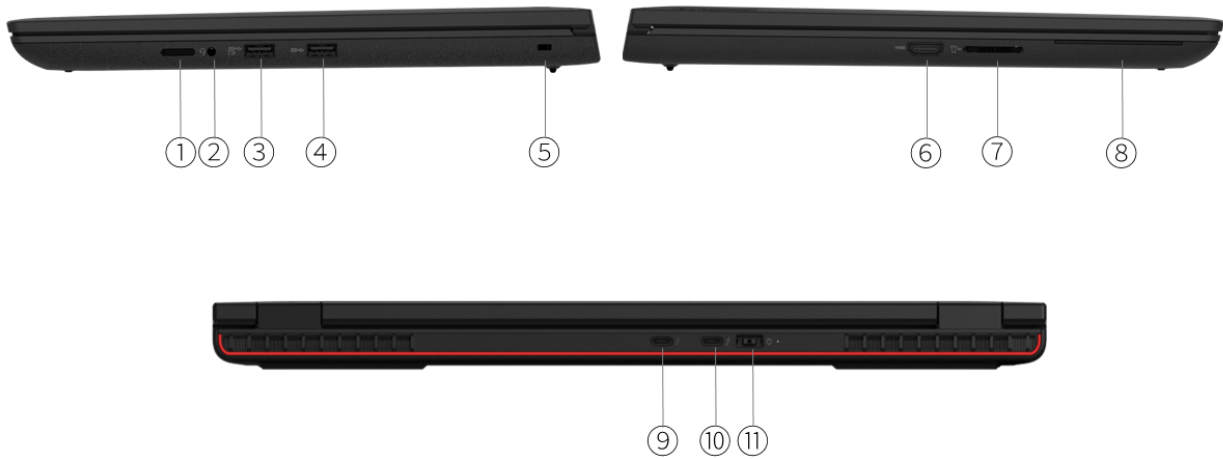


## OVERVIEW



1. Nano-SIM card slot *	7. SD Express 7.0 card reader
2. Headphone (3.5mm)	8. Smart card reader *
3. USB 3.2 Gen 1 (Always On)	9. Thunderbolt 4
4. USB 3.2 Gen 1	10. Thunderbolt 4
5. Kensington Nano Security Slot	11. Power-in (Slim Tip)
6. HDMI	

Notes:

- Items with \* are only available on selected models

## PERFORMANCE

### Processor

#### Processor Family

13th Generation H series Intel® Core™ i5 / i7 / i9 processor, supports up to 14 cores, up to 5.4GHz

#### Processor\*\*

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache
Core™ i5-13500H	12 (4 P-core + 8 E-core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz	18MB
Core™ i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB
Core™ i7-13800H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.2GHz / E-core 4.0GHz	24MB
Core™ i9-13900H	14 (6 P-core + 8 E-core)	20	P-core 2.6GHz / E-core 1.9GHz	P-core 5.4GHz / E-core 4.1GHz	24MB

### Operating System

#### Operating System\*\*

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- 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](#))<sup>[1]</sup>
- Ubuntu Linux LTS<sup>[2]</sup>
- No preload operating system

Notes:

[1] Red Hat Enterprise Linux 9.2 certification will be available after Aug 18, 2023.

[2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

### Graphics

#### Graphics

Graphics	Type	Memory	TGP	Key Features
Intel® Iris® Xe Graphics <sup>[1]</sup>	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX A1000 Laptop GPU	Discrete	6GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager

Notes:

[1] Intel® Iris® Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel® Iris® Xe Graphics will function as Intel® UHD Graphics.

### Monitor Support

#### Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI® supports up to 7680x4320@60Hz
- Thunderbolt™ supports up to 5120x3200@60Hz (Thunderbolt™ or USB-C® to DP)

### Chipset

# ThinkPad P16v Gen 1 (Intel)

## Chipset

Intel® SoC (System on Chip) platform

## Memory

### Max Memory

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

### Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

### Memory Type

DDR5-5600 non-ECC<sup>[1]</sup>

Notes:

[1] System comes with DDR5-5600 memory and will run as DDR5-5200 due to platform limitations.

## Storage

### Storage Support<sup>[1]</sup>

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 4TB, 2TB each

### Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

### Storage Type\*\*

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

## RAID

RAID 0/1 support

Notes:

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

## Removable Storage

### Card Reader

SD Express 7.0 card reader

## Multi-Media

### Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

### Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

### Microphone

- Dual-microphone array, far-field, Dolby® Voice®
- No microphone

### Camera\*\*

- 5.0MP + IR with privacy shutter and Ultrasonic Human Presence Detection, 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)

## Power Adapter

### Power Adapter\*\*<sup>[1]</sup>

# ThinkPad P16v Gen 1 (Intel)

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W 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"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light, 83.9% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	IPS	800nits	Anti-glare	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby® Vision®, Eyesafe® Certified 2.0, TÜV Low Blue Light, X-Rite® Factory Color Calibration, 83.9% screen to body ratio, DC dimming

#### Color Calibration

- X-Rite® factory color calibration (WQUXGA display)
- No color calibration

#### Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

### Input Device

#### Keyboard

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

#### Keyboard Backlight

LED backlight on optional keyboard

#### UltraNav™

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

### Mechanical

#### Dimensions (WxDxH)[1]

365 x 262 x 24.66 mm (14.37 x 10.31 x 0.97 inches)

#### Weight[2]

Starting at 2.2 kg (4.85 lbs)

#### Case Color

Thunder black

### Case Material

PC-ABS (top), PC-ABS (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

No onboard Ethernet<sup>[1]</sup>

#### WLAN + Bluetooth®

Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3<sup>[2]</sup>

#### WWAN\*\*

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

#### SIM Card

No physical SIM card inbox

#### NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional docking or Lenovo® USB-C® to Ethernet Adapter.

[2] Wi-Fi® 6E full features might be limited by country-level restrictions.

Wi-Fi® 6E is only enabled on Windows® 11 and operates as Wi-Fi® 6 with Windows® 10.

6GHz Wi-Fi® 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi® 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth® 5.3 operation requires Windows® 11. For more information please see [General Bluetooth® Support Information on Microsoft®](#).

### Ports<sup>[1]</sup>

#### 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™ 1.4)<sup>[2]</sup>
- 1x HDMI® 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x Security keyhole

#### Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

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.

[2] Power Delivery only supports power-out for charging peripherals.

## Docking

### Docking

Various docking solutions supported via Thunderbolt™ or USB-C®.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P16v Gen 1 \(Intel®\)](#)

## 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

- 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 (facial recognition)
- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection

## MANAGEABILITY

### System Management

#### System Management

- Intel® vPro® Enterprise<sup>[1]</sup>
- Non-vPro®

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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

## ENVIRONMENTAL

### Sustainability

#### Material<sup>[1]</sup>

- 85% PCC recycled plastic used in key caps
- 90% PCC recycled plastic used in speaker enclosure
- 90% PCC recycled plastic used in the battery
- 30% PCC recycled plastic used in SIM tray
- 30% PCC recycled plastic used in 135W and 170W adapters
- 90% recycled and/or sustainable packaging

Notes:

- [1] PCC: Post Consumer Content, recycled materials from customers.
- FSC: Forest Stewardship Council.

### Operating Environment

#### Temperature<sup>[1]</sup>

- 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)

#### Relative 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<sup>[1]</sup>

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

Notes:

- [1] For more compatible accessory solutions, please visit [Accessories for ThinkPad® P16v Gen 1 \(Intel®\)](#)

## CERTIFICATIONS

### Green Certifications<sup>[1]</sup>

#### Green Certifications<sup>[2]</sup>

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered<sup>[3]</sup>
- 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™ registration and ENERGY STAR® certification are dependent on system OS. Please visit [epeat.net](#) and

[energystar.gov](https://www.energystar.gov) for more information.

[3] EPEAT™ is registered where applicable, please see [epeat.net](https://www.epeat.net) for registration status by country.

## Other Certifications

### Mil-Spec Test

MIL-STD-810H military test passed

### Other Certifications

- (Optional) Eyesafe® Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light

## 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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