OVERVIEW

1. Nano-SIM card slot *	7. SD Express 7.0 card reader
2. Headphone / microphone combo jack (3.5mm)	8. Smart card reader *
3. Thunderbolt 4	9. Ethernet (GbE RJ-45)
4. USB-A (USB 5Gbps), Always On	10. Thunderbolt 4
5. Kensington Nano Security Slot	11. Power connector
6. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® H Series Core Ultra 7 / 9 Processor; supports up to 16 cores; up to 5.1GHz; TDP ratings of up to 45W

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics	NPU
Core Ultra 7 155H	16 (6 P-core + 8 E-core + 2 LPE-core)	22	P-core 1.4GHz / E-core 900MHz / LPE-core 700MHz	P-core 4.8GHz / E-core 3.8GHz / LPE-core 2.5GHz	24MB	Intel® Arc™ Graphics	Intel® AI Boost
Core Ultra 7 165H	16 (6 P-core + 8 E-core + 2 LPE-core)	22	P-core 1.4GHz / E-core 900MHz / LPE-core 700MHz	P-core 5.0GHz / E-core 3.8GHz / LPE-core 2.5GHz	24MB	Intel® Arc™ Graphics	Intel® AI Boost
Core Ultra 9 185H	16 (6 P-core + 8 E-core + 2 LPE-core)	22	P-core 2.3GHz / E-core 1.8GHz / LPE-core 1GHz	P-core 5.1GHz / E-core 3.8GHz / LPE-core 2.5GHz	24MB	Intel® Arc™ Graphics	Intel® AI Boost

Notes:

[1] Intel® Arc™ graphics only available on select H-series Intel® Core™ Ultra processor powered systems with at least 16GB of system memory in a dual-channel configurations, otherwise it will function as Intel® Graphics.

AI (Artificial Intelligence)

NPU

Integrated Intel® AI Boost, up to 11 TOPS

Operating System

Operating System**

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- Windows® 11 DG Windows® 10 Pro 64
- Ubuntu Linux LTS
- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit Red Hat Certified Hardware)[1]
- No preload operating system

Notes:

[1] Red Hat Enterprise Linux 9.2 certification will be available after June 28th, 2024.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel® Arc™ Graphics[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.2
Intel® Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX 500 Ada Generation Laptop GPU	Discrete	4GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX 1000 Ada Generation Laptop GPU	Discrete	6GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
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 3000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager

Notes:

[1] Intel® Arc™ Graphics only available on select H-series Intel® Core™ Ultra processor powered systems with at least 16GB of system memory in a dual-channel configurations, otherwise it will function as Intel® Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ 4 and HDMI®).
Max resolution for multiple external display:
• 3x 3840x2160@60Hz (Thunderbolt™ 4 and HDMI®)
Max resolution for single external display:
• Thunderbolt™ 4 supports up to 7680x4320@60Hz
• HDMI® supports up to 7680x4320@60Hz

Chipset

Chipset

Intel® SoC (System on Chip) platform

Memory

Max Memory

Up to 96GB (2x 48GB DDR5 SO-DIMM)

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-5600 non-ECC, maximum transfer speeds of up to 5600 MT/s

Storage

Storage Support[1]

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	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, temporal noise reduction
- FHD 1080p with privacy shutter, fixed focus, temporal noise reduction
- No camera

Battery

Battery

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

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
- No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16″	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85° / 85° / 85° / 85°	83.9% screen to body ratio, DC dimming
16″	WUXGA (1920x1200)	On-cell touch	IPS	300nits	Anti-glare	16:10	1000:1	45% NTSC	60Hz	85° / 85° / 85° / 85°	83.9% screen to body ratio, Eyesafe® Certified 2.0, TÜV Low Blue Light, DC dimming
16″	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	89° / 89° / 89° / 89°	83.9% screen to body ratio, TÜV Low Blue Light, DC dimming
16″	WQUXGA (3840x2400)	None	IPS	800nits	Anti-glare	16:10	1500:1	100% DCI-P3	60Hz	85° / 85° / 85° / 85°	83.9% screen to body ratio, DisplayHDR™ 400, Dolby Vision®, Eyesafe® Certified 2.0, TÜV Low Blue Light, X-Rite® Factory Color Calibration, 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

Input Device

Pen

No support

Keyboard

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

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch Trackpad, 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 10.32 x 0.97 inches)

Weight[2]

Starting at 2.22 kg (4.90 lbs)

Case Color

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**

- Gigabit Ethernet, Intel® Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel® Ethernet Connection I219-V (non-vPro® models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®

Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3[1]

WWAN**

- Wireless WAN upgradable to 4G or 5G (with antenna ready)
- Quectel EM160R-GL, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel RM520N-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality[2]
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] 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 visit General Bluetooth® Support Information on Microsoft®.

[2] Quectel RM520N-GL is only available in EMEA and ANZ.

Ports[1]

Standard Ports

- 1x USB-A (USB 5Gbps / USB 3.2 Gen 1), Always On
- 2x USB-C® (Thunderbolt™ 4 / USB4® 40Gbps), with USB PD 3.0 and DisplayPort™ 2.1[2]
- 1x HDMI® 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Ethernet (RJ-45)
- 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 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 theoretical speed.

[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 2

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

Fingerprint Reader

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

BIOS Security

- NVMe® password
- Power-on password
- Supervisor password
- Self-healing BIOS
- More BIOS security features, please visit BIOS Simulator

Other Security

- Camera privacy shutter (camera models)
- (Optional) IR camera for Windows® Hello (facial recognition)
- (Optional) Ultrasonic Human Presence Detection for IR camera

MANAGEABILITY

System Management

System Management

- Intel® vPro® Enterprise
- Non-vPro®

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

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo® HDMI® to VGA Monitor Adapter
- Lenovo® USB-C® to DisplayPort™ Adapter
- Lenovo® USB-C® to VGA Adapter

OPERATING REQUIREMENTS

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)

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).

ENVIRONMENTAL

Sustainability

Material[1]

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
Plastic free packaging with 90% recycled and/or FSC certified content (retail / standard / bluk packaging)

Notes:

[1] PCC: Post Consumer Content, recycled materials from customers.

CERTIFICATIONS

Green Certifications[1]

Green Certifications[2]

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered[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. For ESG & regulatory compliance documents, please visit https://compliance.lenovo.com.

[2] EPEAT™ registration and ENERGY STAR® certification are optional and only available on the models with preloaded OS. Please visit epeat.net and energystar.gov for more information.

[3] EPEAT™ is registered where applicable, please visit 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 option listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
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