

# **OVERVIEW**



1. Smart card reader *	6. HDMI
2. Nano-SIM card slot *	7. 2x Thunderbolt 4
3. USB-A (USB 5Gbps)	8. USB-A (USB 5Gbps), Always On
4. Ethernet (GbE RJ-45)	9. Headphone jack (3.5mm)
5. Kensington Nano Security Slot	

## Notes:

• Items with \* are only available on selected models



# **PERFORMANCE**

## **Processor**

#### **Processor Family**

Intel $^{\circ}$  H Series Core Ultra 5 / 7 / 9 Processor; supports up to 16 cores; up to 5.1GHz; TDP ratings of up to 55W

#### Processor\*\*[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics	NPU
Core Ultra 5 125H	14 (4 P-core + 8 E-core + 2 LPE- core)	18	P-core 1.2GHz / E-core 700MHz / LPE-core 700MHz	P-core 4.5GHz / E-core 3.6GHz / LPE-core 2.5GHz	18MB	Intel® Arc™ Graphics	Intel® AI Boost
Core Ultra 5 135H	14 (4 P-core + 8 E-core + 2 LPE- core)	18	P-core 1.7GHz / E-core 1.2GHz / LPE-core 700MHz	P-core 4.6GHz / E-core 3.6GHz / LPE-core 2.5GHz	18MB	Intel® Arc™ Graphics	Intel® AI Boost
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 24ME 2.5GHz		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.

# Al (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
- Ubuntu Linux LTS<sup>[1]</sup>
- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit Red Hat Certified Hardware)
- No preload operating system

### Notes:

[1] Ubuntu Linux LTS will be available after August 6th, 2024.

# **Graphics**

# **Graphics**

Graphics	Туре	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



#### 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<sup>M</sup> 4 and HDMI $^{\otimes}$ ). 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 (with DSC)[1]

#### Notes:

[1] 8K (7680x4320@60Hz) support needs 2 display pipes. That is, simultaneous display number will "-1" when 8K resolution displayed.

# 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]

One drive, up to 2TB M.2 2280 SSD

## **Storage Slot**

One M.2 2280 PCIe® 4.0 x4 slot

### Storage Type\*\*

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCle® NVMe®, PCle® 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

#### Notes:

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

# **Removable Storage**

#### Card Reader

No card reader

## Multi-Media

# Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

## **Speakers**

Stereo speakers, 2W x2, Dolby Audio™

#### Microphone

Dual-microphone array, far-field, Dolby Voice®

#### Camera\*\*



- 5.0MP + IR with privacy shutter and Ultrasonic Human Presence Detection, fixed focus, temporal noise reduction
- 5.0MP + IR with privacy shutter, fixed focus, temporal noise reduction
- 5.0MP with privacy shutter, fixed focus, temporal noise reduction

# **Battery**

## Battery\*\*

- 75Wh Rechargeable Li-ion Battery, supports Rapid Charge (charge up to 80% in 1hr)
- 57Wh Rechargeable Li-ion Battery, supports Rapid Charge (charge up to 80% in 1hr)

# **Power Adapter**

## Power Adapter\*\*[1]

- 100W USB-C® slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 135W USB-C® slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter<sup>[2]</sup>

#### Notes:

- [1] AC adapter offerings depend on the country.
- [2] No power adapter is for special bid only.

## **DESIGN**

# **Display**

#### Display\*\*

Size	Resolution	Touch	Туре	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°	88% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	On- cell multi- touch	IPS	300nits	Anti-glare	16:10	1000:1	45% NTSC	60Hz	85° / 85° / 85° / 85°	88% 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° /	88% screen to body ratio, Eyesafe® Certified 2.0, DC dimming
16"	WQUXGA (3840x2400)	None	OLED	400nits	Anti- reflection, anti- smudge	16:10	100,000:1	100% DCI- P3	60Hz	89° / 89° / 89° / 89°	88% screen to body ratio, Eyesafe® Certified 2.0, TÜV Low Blue Light, Dolby Vision®, DisplayHDR™ True Black 500, X-Rite® Factory Color Calibration, PWM dimming

# **Color Calibration**

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

# Touchscreen



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

# **Input Device**

Pen

No support

Keyboard

6-row, spill-resistant, multimedia Fn keys, numeric keypad, Copilot key

**Keyboard Backlight** 

LED backlight

UltraNav™

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

#### Mechanical

Dimensions (WxDxH)[1]

361.5 x 248.6 x 21.13 mm (14.24 x 9.79 x 0.83 inches)

Weight<sup>[2]</sup>

Starting at 1.82 kg (4.01 lbs)

**Case Color** 

Black

**Case Material** 

Aluminium (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**

WLAN + Bluetooth®

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

#### **WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Quectel EM160R-GL, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

#### SIM Card

No physical SIM card inbox

### 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

#### NEC

No support

# Notes:

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

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 <u>General Bluetooth® Support Information on Microsoft®</u>.

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

**Standard Ports** 



- 1x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 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
- 1x HDMI® 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Ethernet (RJ-45)
- 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.

# **Docking**

### **Docking**

Various docking solutions supported via Thunderbolt™ or USB-C®. For more compatible docking solutions, please visit Docking for ThinkPad® P16s Gen 3

# **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**

- NVMe® password
- · Power-on password
- Supervisor password
- Self-healing BIOS
- More BIOS security features, please visit <u>BIOS Simulator</u>

#### Other Security

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

## Notes:

[1] The BIOS simulator is just for reference. Default settings and some options may vary depending on the hardware, operating system and BIOS version.

# **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
- No base warranty

# **ACCESSORIES**

#### **Bundled Accessories**

#### **Bundled Accessories\*\*\***

- Lenovo® HDMI® to VGA Monitor Adapter
- Lenovo® USB-C® to DisplayPort™ Adapter
- Lenovo® USB-C® to Ethernet Adapter (1Gbps)
- 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

98% PCC recycled plastic used in speaker enclosure

97% PCC recycled plastic used in the battery

90% PCC recycled plastic used in 100W and 135W adapters

Notes:

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

# **CERTIFICATIONS**

# Green Certifications

#### Green Certifications[2]

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered
- · RoHS compliant



• TCO Certified 10.0

#### 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 <a href="https://compliance.lenovo.com">https://compliance.lenovo.com</a>. [2] EPEAT™ registration and ENERGY STAR® certification are optional and only available on the models with preloaded OS. Please visit <a href="https://compliance.lenovo.com">epeat.net</a> and <a href="https://compliance.lenovo.com">energystar.gov</a> for more information.

### **Other Certifications**

## Mil-Spec Test

MIL-STD-810H military test passed

#### **Other Certifications**

- (Optional) Eyesafe® Certified 2.0
- 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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