# **OVERVIEW**



1.	SD card reader	6. Pogo pin connector *
2.	Kensington Nano Security Slot	7. HDMI
3.	USB-C 3.2 Gen 2	8. 2x USB 3.2 Gen 2
4.	Thunderbolt 4	9. Power connector
5.	Headphone / microphone combo jack (3.5mm)	

Notes:

• Items with \* are only available on selected models

# ThinkBook 16p G4 IRH

# PERFORMANCE

### **Processor**

#### **Processor Family**

13th Generation Intel<sup>®</sup> Core<sup>™</sup> i5 / i7 / i9 Processor

#### Processor\*\*

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
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	Intel® Iris® Xe Graphics
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	Intel® Iris® Xe Graphics
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	Intel® Iris® Xe Graphics

# **Operating System**

#### **Operating System**\*\*

- Windows<sup>®</sup> 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- No preload operating system

# Graphics

#### Graphics\*\*

Graphics	Туре	Memory	Boost Clock	TGP	Key Features
NVIDIA® GeForce RTX™ 4050 Laptop GPU	Discrete	6GB GDDR6	2370 MHz	115W	DLSS 3, Dynamic Boost 2.0, DirectX® 12 Ultimate
NVIDIA® GeForce RTX™ 4060 Laptop GPU <sup>[1]</sup>	Discrete	8GB GDDR6	2370 MHz	115W	Advanced Optimus, DLSS 3, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate

Notes:

[1] The feature Advance Optimus only applies to the 3.2K display.

# **Monitor Support**

#### **Monitor Support**

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

- HDMI<sup>®</sup> supports up to 7680x4320@60Hz
- USB-C\* supports up to 5120x3200@60Hz
- Thunderbolt<sup>™</sup> supports up to 5120x3200@60Hz

# Chipset

#### Chipset

Intel® SoC (System on Chip) platform

### Memory

Max Memory<sup>[1]</sup>

Up to 32GB DDR5-5200 offering

#### **Memory Slots**

Two DDR5 SO-DIMM slots, dual-channel capable

#### Memory Type

DDR5-5200

Notes:

[1] The max memory is based on the test results with current Lenovo<sup>®</sup> memory offerings.

## Storage

#### Storage Support<sup>[1][2]</sup>

Up to two drives, 2x M.2 SSD • M.2 2280 SSD up to 1TB

#### Storage Slot

Two M.2 slots

• One M.2 2242 PCIe® 4.0 x4 slot

• One M.2 2280 PCIe<sup>®</sup> 4.0 x4 slot

#### Storage Type

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

Notes:

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

[2] The system supports dual SSD via two M.2 slots, but Lenovo® only offers one SSD configuration, another SSD slot for user self-extension.

### **Removable Storage**

#### **Card Reader**

SD Express 7.0 card reader

#### Multi-Media

#### Audio Chip

High Definition (HD) Audio, Realtek® ALC3306-CG codec

#### Speakers

Stereo speakers, 2W x2 woofers and 2W x2 tweeters, Dolby Atmos®, sound by harman/kardon, Smart Amplifier (AMP)

#### Microphone

Dual-microphone array with noise-cancelling

#### Camera

FHD 1080p + IR hybrid, with privacy shutter, fixed focus

#### Sensor

#### Sensors

Ambient light sensor (ALS)

#### **Battery**

#### Battery

Integrated Li-Polymer 80Wh battery, supports Rapid Charge Pro (charge up to 50% in 30min)

#### Max Battery Life<sup>[1]</sup>

MobileMark® 2018: 10.5 hr Local video (1080p) playback@150nits: 18 hr

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark<sup>®</sup> 2014, MobileMark<sup>®</sup> 2018, MobileMark<sup>®</sup> 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<sup>[1]</sup>

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

Notes:

[1] AC adapter offerings depend on the country.

# **Special Features**

Special Features

AI Chip: LA2-Q

# DESIGN

# Display

### Display\*\*[1]

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	2.5K WQXGA (2560x1600)	None	IPS	400nits	Anti- glare	16:10	1200:1	100% sRGB	60Hz	89°/89°/89°/89°	smart sense panel, X- Rite <sup>®</sup> factory color calibration (average ΔE<2), Dolby Vision <sup>®</sup> , Eyesafe <sup>®</sup>
16"	3.2K (3200x2000)	None	IPS	430nits	Anti- glare	16:10	1200:1	100% DCI- P3	165Hz	89°/89°/85°/85°	Advanced Optimus, smart sense panel, X- Rite® factory color calibration (average ΔE<2), Dolby Vision®, Eyesafe®

## Color Calibration

X-Rite® factory color calibration

### Touchscreen

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, SMB Service Hot key, numeric keypad

#### Keyboard Backlight

Smart sense keyboard backlight

### Touchpad

Buttonless glass surface multi-touch touchpad, supports Precision TouchPad (PTP), 80 x 135 mm (3.15 x 5.31 inches)

# **Mechanical**

# Dimensions (WxDxH)<sup>[1]</sup> 354.6 x 255 x 19.9 mm (13.96 x 10.04 x 0.78 inches) Weight<sup>[2]</sup> Around 2.2 kg (4.85 lbs) Case Color Storm grey, dual-tone design

#### Surface Treatment

Anodizing sandblasting

#### **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<sup>®</sup> 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<sup>[1][2]</sup>

No onboard Ethernet

#### WLAN + Bluetooth®\*\*[3]

- Wi-Fi<sup>®</sup> 6, 802.11ax 2x2 Wi-Fi<sup>®</sup> + Bluetooth<sup>®</sup> 5.2, M.2 card
- Wi-Fi<sup>®</sup> 6E, 802.11ax 2x2 Wi-Fi<sup>®</sup> + Bluetooth<sup>®</sup> 5.3, M.2 card<sup>[4]</sup>

#### Notes:

[1] Wake-on-LAN needs the power adapter plugged in.

[2] Ethernet support via optional Lenovo® USB-C® to Ethernet Adapter.

[3] Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

[4] Wi-Fi<sup>®</sup> 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.

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

#### Standard Ports

• 2x USB 3.2 Gen 2

- 1x USB-C<sup>®</sup> 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort<sup>™</sup> 1.4)
- 1x Thunderbolt<sup>™</sup> 4 / USB4<sup>®</sup> 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort<sup>™</sup> 1.4)
- 1x HDMI<sup>®</sup> 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD card reader
- 1x Power connector

#### **Optional Ports**

1x Magic Bay (pogo pin connector)

#### 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 <u>Docking for ThinkBook 16p G4 IRH</u>

# **SECURITY & PRIVACY**

# ThinkBook 16p G4 IRH

# Security

#### Security Chip

Firmware TPM 2.0 integrated in SoC

#### Physical Locks

Kensington<sup>®</sup> Nano Security Slot<sup>™</sup>, 2.5 x 6 mm

#### Fingerprint Reader

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

#### **BIOS Security**

- Power-on password
- Supervisor password
- Hard disk password
- Self-healing BIOS

#### **Other Security**

- IR camera for Windows® Hello (facial recognition)
- Camera privacy shutter

# SERVICE

## Warranty

#### Base Warranty\*\*

- 1-year courier or carry-in service
- 2-year (1-yr battery) courier or carry-in service

# ACCESSORIES

# **Bundled Accessories**

#### Bundled Accessories<sup>[1]</sup>

- Lenovo<sup>®</sup> Magic Bay Light
- None

Notes:

[1] For more compatible accessory solutions, please visit Accessories for ThinkBook 16p G4 IRH.

# **OPERATING REQUIREMENTS**

# **Operating Environment**

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

- At altitudes up to 2438 m (8,000 ft)
  Operating: 5°C to 35°C (41°F to 95°F)
- Storage: 5°C to 43°C (41°F to 109°F)
- At altitudes above 2438 m (8,000 ft)
  Maximum temperature when operating
  - Maximum temperature when operating under the unpressurized condition: 31.3°C (88°F)

#### **Relative Humidity**

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 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).

# CERTIFICATIONS

# **Green Certifications**<sup>III</sup>

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

- ENERGY STAR<sup>®</sup> 8.0
- EPEAT<sup>™</sup> Gold Registered<sup>[3]</sup>
- ErP Lot 6
- ErP Lot 26
- FSC certified package
- RoHS compliant
- TCO Certified 9.0
- Volatile Organic Compound Certification

#### 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 <u>https://compliance.lenovo.com</u>.

[2] EPEAT<sup>™</sup> registration and ENERGY STAR<sup>®</sup> certification are dependent on system OS. Please visit <u>epeat.net</u> and <u>energystar.gov</u> for more information.

[3] EPEAT<sup>™</sup> is registered where applicable, please visit <u>epeat.net</u> for registration status by country.

## **Other Certifications**

#### Mil-Spec Test

MIL-STD-810H military test passed

#### Other Certifications

- Eyesafe<sup>®</sup> Certified 2.0
- TÜV Rheinland<sup>®</sup> Low Blue Light (Hardware Solution)
- Feature with \*\* means that only one offering listed under the feature is configured on selected models.
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