# PERFORMANCE

# Processor

# **Processor Family**

8th / 10th Generation Intel® Core™ i5 / i7 Processor

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

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-8265U	4	8	1.6GHz	3.9GHz	6MB	LPDDR3-2133	Intel UHD Graphics
Core i5-8365U	4	8	1.6GHz	4.1GHz	6MB	LPDDR3-2133	Intel UHD Graphics
Core i5-10210U	4	8	1.6GHz	4.2GHz	6MB	LPDDR3-2133	Intel UHD Graphics
Core i7-8565U	4	8	1.8GHz	4.6GHz	8MB	LPDDR3-2133	Intel UHD Graphics
Core i7-8665U	4	8	1.9GHz	4.8GHz	8MB	LPDDR3-2133	Intel UHD Graphics
Core i7-10510U	4	8	1.8GHz	4.9GHz	8MB	LPDDR3-2133	Intel UHD Graphics
Core i7-10710U	6	12	1.1GHz	4.7GHz	12MB	LPDDR3-2133	Intel UHD Graphics

Notes:

1. 10th Generation Intel Core Processors are NOT available in EMEA

# **Operating System**

### **Operating System**

- Windows® 10 Home 64
- Windows 10 Pro 64
- Linux
- Ubuntu Linux
- No operating system

# Graphics

Graphics

Graphics	Туре	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12

# **Monitor Support**

## **Monitor Support**

Supports up to 3 independent displays via native display and 2 external monitors; supports external monitors via HDMI<sup>®</sup> (up to 4K@24Hz) or Thunderbolt<sup>™</sup> (up to 5K@60Hz)

# Chipset

## Chipset

Intel SoC (System on Chip) platform

# Memory

Memory Type

LPDDR3-2133

# Memory Slots

Memory soldered to systemboard, no slots

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

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable

Notes:

<sup>1.</sup> The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

# Storage

### Storage Support

One drive, up to 2TB M.2 2280 SSD, optional Intel Optane<sup>™</sup> Memory integrated with SSD, M.2 **Storage Type** 

Disk Type	Interface	RPM	Security
M.2 2280 SSD	SATA 6Gb/s	-	Opal2
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal2
Intel Optane Memory with Solid State Storage, M.2 2280	PCIe NVMe, PCIe 3.0 x4	-	-

## **Removable Storage**

### Optical

None

### Card Reader

No card reader

## Multi-Media

### **Audio Chip**

High Definition (HD) Audio, Realtek® ALC3286 codec

### Speakers

Stereo speakers, 2W x2 and 0.8W x2, Dolby® Atmos®

### Microphone

Four array microphones, 360° far-field

#### Camera

- 720p, with ThinkShutter, fixed focus
- IR & 720p, with ThinkShutter, fixed focus

## Sensor

#### Sensors

- Ambient light sensor (ALS)
- eCompass
- Gyroscope sensor
- Accelerometer (G) sensor
- Proximity sensor

# **Battery**

### Battery

Integrated Li-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

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

MobileMark® 2014: 18.1 hr

Notes:

1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, and/or JEITA 2.0 battery-life benchmark tests. Actual battery life will vary and depends 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**

- 45W USB-C AC adapter
- 65W USB-C slim AC adapter
- 65W USB-C AC adapter

# DESIGN

# Display

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

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
14.0″	FHD (1920x1080)	Multi- touch	IPS	400 nits	Anti-reflection Anti-smudge	16:9	800:1	72% NTSC	170°	Low power
14.0″	FHD (1920x1080)	Multi- touch	IPS	400 nits	Anti-reflection Anti-smudge	16:9	1000:1	72% NTSC	170°	ThinkPad® Privacy Guard
14.0″	WQHD (2560x1440)	Multi- touch	IPS	300 nits	Anti-reflection Anti-smudge	16:9	800:1	72% NTSC	170°	-
14.0″	UHD (3840x2160)	Multi- touch	IPS	500 nits	Anti-reflection Anti-smudge	16:9	1400:1	90%	170°	Dolby Vision™, HDR 400

#### Touchscreen

Capacitive-type multi-touch, supports 10-point touch, could reduce the brightness by up to 10%

### Multi-mode

Laptop, tent, stand and tablet modes supported by 360° hinge

#### Notes:

1. California Electronic Waste Recycling Fee

In California, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product. For more information, go to https://www.calrecycle.ca.gov/Electronics/Consumer

# **Input Device**

### Pen

ThinkPad Pen Pro, on-board garaged and rechargeable

### Keyboard

6-row, spill-resistant, multimedia Fn keys

### Keyboard Backlight

LED backlight

## UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad

# Mechanical

# Dimensions (WxDxH)

Models	Dimensions				
Privacy Guard models	323 x 218 x 15.95 mm (12.71 x 8.58 x 0.63 inches)				
Non-Privacy Guard models	323 x 218 x 15.5 mm (12.71 x 8.58 x 0.61 inches)				

#### Weight

Models	Weight
Non-Privacy Guard models	1.36 kg (2.99 lbs)
Privacy Guard models	1.47 kg (3.24 lbs)

## Case Color

Iron grey

### **Case Material**

Aluminium (top), Magnesium (bottom)

# CONNECTIVITY

# **Network**

### **Onboard Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), RJ45 via optional ThinkPad Ethernet Extension Adapter Gen 2
- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), RJ45 via optional ThinkPad Ethernet Extension Adapter Gen 2

#### WLAN + Bluetooth™[1]

Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1

#### WWAN<sup>[2]</sup>

- Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card
- Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card
- Not Support

#### SIM Card

- Gemalto eSIM
- Nano-SIM Card, Verizon LTE (US)
- No SIM card

#### NFC

- Near Field Communication
- Not support

Notes:

1. BT5.1 is supported on Windows 10 version 2004 or above (limited to BT5.0 on earlier version)

2. For non-WWAN model, it means the model is NOT WWAN upgradable

# **Ports**

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

- 1x USB 3.1 Gen 1
- 1x USB 3.1 Gen 1 (Always On)
- 2x USB-C 3.1 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x HDMI 1.4b
- 1x Ethernet extension connector
- 1x headphone / microphone combo jack (3.5mm)
- 1x side docking connector

### **Optional Ports**

1x Nano-SIM card slot (WWAN models)

Notes:

1. Depending on many factors, actual data transfer speed may be lower than theoretical speed

# **Monitor Cable**

### Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

# **SECURITY & PRIVACY**

# Security

## Security Chip

- Discrete TPM 2.0, TCG certified
- Firmware TPM 2.0 integrated in chipset
- Disabled (in some regions)

# Physical Locks

Kensington<sup>®</sup> Security Slot

# Smart Card Reader

No smart card reader

## Fingerprint Reader

Touch style fingerprint reader on palm rest, match-on-chip

### **BIOS Security**

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

## Other Security

- ThinkShutter camera cover
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert

# MANAGEABILITY

# **System Management**

## System Management

- Intel vPro Technology, DASH
- None

# SERVICE

# Warranty

### **Base Warranty**

- 1-year depot service
- 1-year limited onsite service
- 1-year depot with 2-year system board service
- 1-year + 2-year depot service
- 1-year + 2-year limited onsite service
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service
- No base warranty

# ACCESSORIES

# **Bundled Accessories**

## **Bundled Accessories**

- ThinkPad Ethernet Extension Adapter Gen 2
- None

# **CERTIFICATIONS**

# **Green Certifications**

## **Green Certifications**

- EPEAT<sup>™</sup> Gold
- ENERGY STAR® 8.0
- TCO
- RoHS compliant

# **Other Certifications**

## Mil-Spec Test

MIL-STD-810G military test passed

