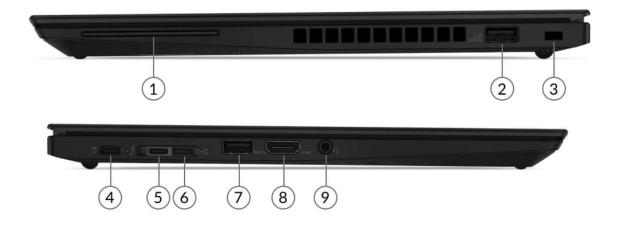


# **OVERVIEW**



1. Smart card reader *	6. Ethernet extension connector
2. USB 3.2 Gen 1 (Always On)	7. USB 3.2 Gen 1
3. Kensington Security Slot	8. HDMI 1.4b
4. USB-C 3.2 Gen 1	9. Headphone / microphone combo jack (3.5mm)
5. USB-C 3.2 Gen 2 / Thunderbolt 3	

#### Notes:

- Ports with \* are only available on selected models
- Card slot on the rear side (not shown on the sample product above) is for microSD card (WLAN model) or nano-SIM + microSD card (WWAN model)
- The combination of 5 and 6 is side docking connector



# **PERFORMANCE**

## **Processor**

### **Processor Family**

10th Generation Intel® Core™ i5 / i7 Processor

#### **Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-10210U	4	8	1.6GHz	4.2GHz	6MB	DDR4-2666	Intel UHD Graphics
Core i5-10310U	4	8	1.7GHz	4.4GHz	6MB	DDR4-2666	Intel UHD Graphics
Core i7-10510U	4	8	1.8GHz	4.9GHz	8MB	DDR4-2666	Intel UHD Graphics
Core i7-10610U	4	8	1.8GHz	4.9GHz	8MB	DDR4-2666	Intel UHD Graphics
Core i7-10710U	6	12	1.1GHz	4.7GHz	12MB	DDR4-2666	Intel UHD Graphics
Core i7-10810U	6	12	1.1GHz	4.9GHz	12MB	DDR4-2666	Intel UHD Graphics

# **Operating System**

## **Operating System**

- Windows® 10 Pro 64
- Windows 10 Home 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® (up to 4096x2160@24Hz), USB-C (up to 4096x2304@60Hz) or Thunderbolt™ (up to 4096x2304@60Hz)

# Chipset

### Chipset

Intel SoC (System on Chip) platform

# **Memory**

# Max Memory[1]

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

# **Memory Slots**

Memory soldered to systemboard, no slots, dual-channel

### Memory Type<sup>[2]</sup>

DDR4-2666

#### Notes:

- 1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.
- 2. Installed memory is actually 3200MHz but run at 2666MHz due to processor limitation

## **Storage**

### **Storage Support**

One drive, up to 512GB M.2 2242 SSD or 2TB M.2 2280 SSD, optional Intel Optane™ Memory integrated with SSD, M.2



### **Storage Type**

Disk Type	Interface	RPM	Security
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x2	-	-
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**

- MicroSD card slot (WLAN model)
- Nano-SIM + microSD card slot (WWAN model)

## Multi-Media

### **Audio Chip**

High Definition (HD) Audio, Realtek® ALC3287 codec

#### **Speakers**

Stereo speakers, 1W x2, Dolby® Audio™

### Microphone

- · Dual array microphone, far-field
- · No microphone

#### Camera

- 720p, with ThinkShutter, fixed focus
- · IR & 720p hybrid, with ThinkShutter, fixed focus
- · No camera

# **Battery**

## **Battery**

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

### Max Battery Life[1]

MobileMark® 2014: 21 hr MobileMark 2018: 14.28 hr

JEITA 2.0: 23.1 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 (2-pin) AC adapter
- 45W USB-C (3-pin) AC adapter
- 65W USB-C slim (3-pin) AC adapter
- 65W USB-C slim (2-pin) AC adapter
- 65W USB-C (2-pin) AC adapter
- 65W USB-C (3-pin) AC adapter

# **DESIGN**

# Display

## Display[1]

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect	Contrast	Color	Viewing	Key Features
------	------------	-------	------	------------	---------	--------	----------	-------	---------	--------------



						Ratio	Ratio	Gamut	Angle	
14.0"	FHD (1920×1080)	None	IPS	250 nits	Anti- glare	16:9	700:1	45% NTSC	170°	-
14.0"	FHD (1920×1080)	None	IPS	400 nits	Anti- glare	16:9	800:1	72% NTSC	170°	Low power
14.0"	FHD (1920x1080)	Multi- touch	IPS	300 nits	Anti- glare	16:9	700:1	45% NTSC	170°	-
14.0"	FHD (1920x1080)	Multi- touch	IPS	500 nits	Anti- glare	16:9	1000:1	72% NTSC	170°	ThinkPad® Privacy Guard
14.0"	UHD (3840x2160)	None	IPS	500 nits	Glossy	16:9	1500:1	100% DCI-P3	170°	Dolby Vision™, HDR 400

#### **Touchscreen**

- On-cell touch, supports 10-point touch
- Non-touch

#### 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**

### Keyboard

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

## **Keyboard Backlight**

- · LED backlight
- No support

#### UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad

### Mechanical

### Dimensions (WxDxH)

Models	Dimensions
Model with black cover and FHD Low Power / UHD display	328.8 x 225.8 x 16.1 mm (12.94 x 8.89 x 0.63 inches)
Model with black cover and FHD touch / FHD non-touch / FHD Privacy Guard display	329.0 x 226.15 x 16.7 mm (12.95 x 8.90 x 0.66 inches)
Silver models	329.15 x 226.45 x 17.2 mm (12.96 x 8.92 x 0.68 inches)

#### Weight[1]

Models	Weight
Model with black cover and FHD Low Power / UHD display	1.27 kg (2.81 lbs)
Model with black cover and FHD touch / FHD non-touch / FHD Privacy Guard display	1.35 kg (2.98 lbs)
Silver models	1.49 kg (3.29 lbs)

## **Case Color**

- Black
- Silver

# Case Material<sup>[2]</sup>

- Black models: carbon fiber hybrid (top), magnesium (keyboard cover & bottom)
- Silver models: aluminium (top), magnesium (keyboard cover & bottom)

### Notes:

- 1. The system weight varies depending on configurations
- 2. CFRP Hybrid top cover for black models; Aluminum top cover for silver models



# 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 Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2

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

- · Wireless WAN upgradable to 4G
- Integrated Mobile Broadband 4G LTE-A, CAT9, Fibocom L850-GL, M.2 card
- Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card
- No support

#### SIM Card

- Gemalto eSIM
- No SIM card inbox

#### **NFC**

- · Near Field Communication
- No support

#### Notes:

- 1. Intel WiFi 6 full features might be limited by country level restrictions Bluetooth 5.2 is supported with driver version 22.30 and later
- 2. For non-WWAN model, it means the model is NOT WWAN upgradable

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

### Standard Ports[2]

- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x USB-C 3.2 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 & microSD card slot (WWAN model)
- 1x microSD card slot (WLAN model)
- 1x Smart card reader

#### 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;

USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

Thunderbolt 3: 40 Gbit/s:

FireWire 400: 400 Mbit/s;

FireWire 800: 800 Mbit/s

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

### **Monitor Cable**

## **Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to DisplayPort Adapter
- Lenovo USB-C to VGA 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® Security Slot

#### **Smart Card Reader**

- · Smart card reader
- · No smart card reader

### **Fingerprint Reader**

- Touch style fingerprint reader on palm rest, match-on-chip
- No fingerprint reader

### **BIOS Security**

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

### **Other Security**

- (Optional) 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 depot with 2-year system board service
- 1-year limited onsite 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

## **ENVIRONMENTAL**

# **Operating Environment**

## Temperature[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

#### 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  $10^{\circ}\text{C}$  ( $50^{\circ}\text{F}$ )

# **ACCESSORIES**

# **Bundled Accessories**

### **Bundled Accessories**

- ThinkPad Ethernet Extension Adapter Gen 2
- None

# **CERTIFICATIONS**

## **Green Certifications**

## **Green Certifications**

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

# **Other Certifications**

## **Mil-Spec Test**

MIL-STD-810G military test passed





















