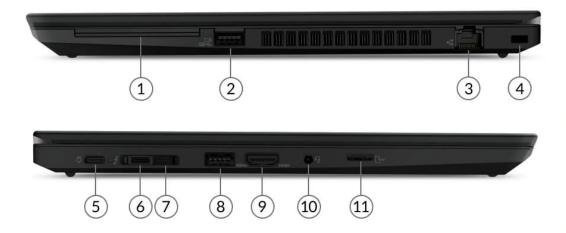


# **OVERVIEW**



1. Smart card reader *	7. Side docking connector
2. USB 3.2 Gen 1 (Always On)	8. USB 3.2 Gen 1
3. Ethernet (RJ-45)	9. HDMI 1.4b
4. Kensington Security Slot	10. Headphone / microphone combo jack (3.5mm)
5. USB-C 3.2 Gen 1	11. MicroSD card reader
6. USB-C 3.2 Gen 2 / Thunderbolt 3	

## Notes:

- Ports with \* are only available on selected models
- Optional nano-SIM card slot on the rear side (not shown on the sample product above)
- The combination of 5, 6 and 7 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
- Ubuntu Linux LTS
- Red Hat Enterprise Linux (certified only)
- No operating system

# **Graphics**

### **Graphics**

Graphics	Туре	Memory	Key Features	
NVIDIA® Quadro® P520	Discrete	2GB GDDR5	DirectX® 12	

# **Monitor Support**

# **Monitor Support**

Supports up to 3 independent displays (native display and 2 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 4096x2160@24Hz
- USB-C supports up to 4096x2304@60Hz
- Thunderbolt supports up to 4096x2304@60Hz

# **Chipset**

# Chipset

Intel SoC (System on Chip) platform

# **Memory**

### Max Memory[1]

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-2666
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-2666

### **Memory Slots**

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

# Memory Type[2]

DDR4-2666 non-ECC

# 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 DDR4-3200 but may run at DDR4-2666 due to processor limitation

# **Storage**

# Storage Support[1]



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

### Storage Type\*\*[2]

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	-	-

#### Notes:

- 1. The storage capacity supported is based on the test results with current Lenovo storage offerings. The system may support larger storage as the technology develops.
- 2. M.2 2242 is special bid only

# **Removable Storage**

## **Optical**

None

#### **Card Reader**

MicroSD card reader

### Multi-Media

#### **Audio Chip**

High Definition (HD) Audio, Realtek® ALC3287 codec

#### **Speakers**

Stereo speakers, 2W x2, Dolby® Audio™

#### Microphone

- Dual array microphone, near-field
- No microphone

#### Camera\*\*

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

## **Battery**

### **Battery**

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

# Max Battery Life[1]

MobileMark® 2014: 16.5 hr MobileMark 2018: 10.48 hr

JEITA 2.0: 16.5 hr

# Notes:

1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, 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 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\*\*[1][2]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

#### Notes:

1. AC adapter offerings depend on the country.



2. No power adapter is for special bid only.

### **DESIGN**

# **Display**

## Display\*\*[1]

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
15.6"	FHD (1920x1080)	None	IPS	250 nits	Anti- glare	16:9	800:1	45% NTSC	170°	-
15.6"	FHD (1920x1080)	Multi- touch	IPS	300 nits	Anti- glare	16:9	800:1	45% NTSC	170°	DC dimming
15.6"	UHD (3840x2160)	None	IPS	600 nits	Anti- glare	16:9	1400:1	100% Adobe® RGB	170°	Dolby Vision™, DisplayHDR™ 400, DC dimming

#### Color Calibration

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

#### Touchscreen

- On-cell touch, supports 10-point touch (FHD models only)
- 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**

### Pen

No support

# Keyboard

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

#### **Keyboard Backlight**

- · LED backlight
- · Non-backlight

#### UltraNav™

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

# **Mechanical**<sup>®</sup>

# Dimensions (WxDxH)

365.8 x 248 x 19.1 mm (14.40 x 9.76 x 0.75 inches)

#### Weight

1.75 kg (3.86 lbs)

# **Case Color**

Black

### **Case Material**

PPS / 50% GF (top), PA / 50% GF (bottom)

#### Notes:

1. The system dimensions and weight vary depending on configurations.

# CONNECTIVITY



### **Network**

#### Onboard Ethernet\*\*

- · Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), supports Wake-on-LAN
- · Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), supports Wake-on-LAN

#### WI AN + Bluetooth®

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- · No WLAN and Bluetooth

### WWAN\*\*

- · Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L850-GL, 4G LTE CAT9, M.2 card
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- No support

#### SIM Card

- Gemalto eSIM
- No SIM card inbox

#### **NFC**

- Near Field Communication
- No support

#### Notes:

1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation

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

### **Standard Ports**

- 2x USB 3.2 Gen 1 (one Always On)
- 1x USB-C 3.1 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery and DisplayPort 1.2)
- 1x HDMI 1.4b
- 1x microSD card reader
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Side docking connector

# Optional Ports\*\*\*

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

# 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 3/4: 40 Gbit/s

# **Docking**

## **Docking**

Various docking solutions supported via side docking connector, Thunderbolt or USB-C. For more compatible docking solutions, please visit <u>Docking for ThinkPad® P15s Gen 1</u>

### **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 SoC
- Disabled (in some regions)

#### **Physical Locks**

Kensington® Security Slot, 3 x 7 mm

#### **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**

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

### **Other Security**

- · (Optional) ThinkShutter camera cover
- (Optional) IR camera for Windows Hello

# **MANAGEABILITY**

# System Management

# System Management[1]

- Intel vPro
- Non-vPro

#### Notes:

1. Intel vPro offers a superset of DASH's defined capabilities.

# **SERVICE**

# Warranty

### Base Warranty\*\*[1]

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

#### Notes:

1. More information of warranty policy, please access https://pcsupport.lenovo.com/warranty

# **ENVIRONMENTAL**

# **Operating Environment**

### Temperature[1]

- 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)

# Humidity

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).

# **ACCESSORIES**

## **Bundled Accessories**

**Bundled Accessories** 

None

# **CERTIFICATIONS**

# **Green Certifications**

# **Green Certifications**

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

## **Other Certifications**

### Mil-Spec Test

MIL-STD-810G military test passed

#### **ISV Certifications**

### **ISV Certifications**

Please visit www.thinkworkstations.com/isv-certifications/

- Feature with \*\* means that only one offering listed under the feature is configured on selected models.
- Feature with \*\*\* means that one or more offerings listed under the feature could be configured on selected models.
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