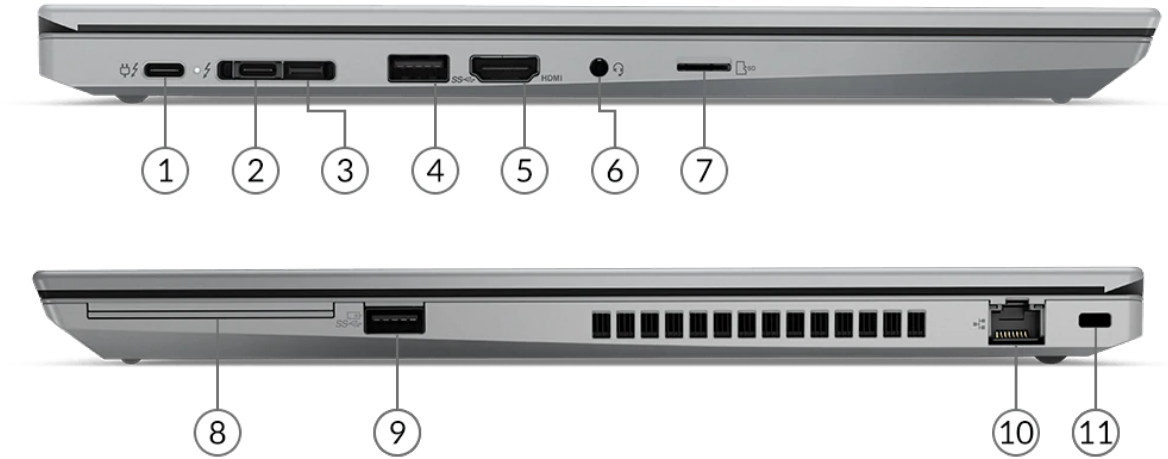


OVERVIEW



1. Thunderbolt 4	7. microSD card reader
2. Thunderbolt 4	8. Smart card reader *
3. Side docking connector	9. USB 3.2 Gen 1 (Always On)
4. USB 3.2 Gen 1	10. Ethernet (RJ-45)
5. HDMI 2.0	11. Kensington Security Slot
6. Headphone / microphone combo jack (3.5mm)	

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 1, 2 and 3 is side docking connector

PERFORMANCE

Processor

Processor Family

11th Generation Intel® Core™ i5 / i7 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-1135G7	4	8	2.4GHz	4.2GHz	8MB	DDR4-3200	Intel Iris® Xe Graphics
Core i5-1145G7	4	8	2.6GHz	4.4GHz	8MB	DDR4-3200	Intel Iris Xe Graphics
Core i7-1185G7	4	8	3.0GHz	4.8GHz	12MB	DDR4-3200	Intel Iris Xe Graphics
Core i7-1165G7	4	8	2.8GHz	4.7GHz	12MB	DDR4-3200	Intel Iris Xe Graphics

Operating System

Operating System

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

Graphics

Graphics^[1]

Graphics	Type	Memory	Key Features
NVIDIA® GeForce® MX450	Discrete	2GB GDDR6	DirectX® 12
Intel Iris Xe Graphics	Integrated	Shared	DirectX 12

Notes:

1. Intel Iris Xe Graphics capability requires system to be configured with Intel Core i5 or i7 processor and dual channel memory. On the system with Intel Core i5 or i7 processor and single channel memory, Intel Iris Xe Graphics will function as Intel UHD graphics

Monitor Support

Monitor Support^[1]

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

Notes:

1. Refresh rates >60hz also supported, however max resolution will be limited

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Memory Type

DDR4-3200

Memory Slots

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

Max Memory^[1]

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

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.

Storage

Storage Support

One drive, 1x M.2 2280 SSD or 1x M.2 2242 SSD

- M.2 2280 SSD up to 2TB
- M.2 2242 SSD up to 128GB

Storage Type^[1]

Disk Type	Interface	Security
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe x4	Opal2
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	Opal2

Notes:

1. The SSD with PCI 4.0 performance is downgraded to closer to PCIe 3.0x4 performance due to the system slot limitation

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^[1]

- Dual array microphone, far-field
- No microphone

Camera

- 720p, with privacy shutter, fixed focus
- IR & 720p, with privacy shutter, fixed focus
- No camera

Notes:

1. Microphone not configured is for special bid only

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® 2018: 12 hr

JEITA 2.0: 16.8 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^[1]

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

Notes:

- In EMEA only 65W USB-C AC adapter is available

DESIGN**Display****Display^[1]**

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

Touchscreen

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

Notes:

- 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, numeric keypad

Keyboard Backlight

- LED backlight
- Not support

UltraNav™

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

Mechanical**Dimensions (WxDxH)**

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

Weight

Models	Weight
FHD non-touch model with PPS top cover	1.82 kg (4.02 lb)
FHD non-touch model with aluminium top cover	1.79 kg (3.96 lb)
FHD touch model with PPS top cover	1.84 kg (4.07 lb)
FHD touch model with aluminium top cover	1.81 kg (3.999 lb)
UHD model with PPS top cover	1.75 kg (3.86 lbs)

Case Color^[1]

- Black
- Storm grey

Surface Treatment

- ISO 22196 compliant anti-microbial surface treatment (not including keyboard, display, and display bezel)
- Not anti-microbial surface treatment

Case Material

- Aluminium (top), PC + ABS / Talc15 + magnesium alloy (keyboard cover), PA / 50% GF (bottom)

- PC + ABS (top), PC + ABS / Talc15 + magnesium alloy (keyboard cover), PA / 50% GF (bottom)

Notes:

1. Storm grey case is NOT available in EMEA

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM

WLAN + Bluetooth™^[1]

- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2
- Intel Wi-Fi 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2

WWAN

- Wireless WAN upgradable
- Not Support
- Integrated Mobile Broadband 4G LTE, Quectel EM160R, MIMO 4x4, M.2 card, with embedded eSIM functionality
- Integrated Mobile Broadband 4G LTE, Quectel EM120R-GL, M.2 card, with embedded eSIM functionality

SIM Card

No SIM card

NFC

- Near Field Communication
- Not support

Notes:

1. Intel WiFi 6 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^[1]

Standard Ports^[2]

- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4™ 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x HDMI 2.0
- 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 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: 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

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro Technology, DASH
- None

SERVICE

Warranty

Base Warranty^[1]

- 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

Notes:

1. No base warranty is for special bid only

ACCESSORIES

Bundled Accessories

Bundled Accessories

None

CERTIFICATIONS

Green Certifications

Green Certifications

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

Other Certifications

Mil-Spec Test

Work in progress



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