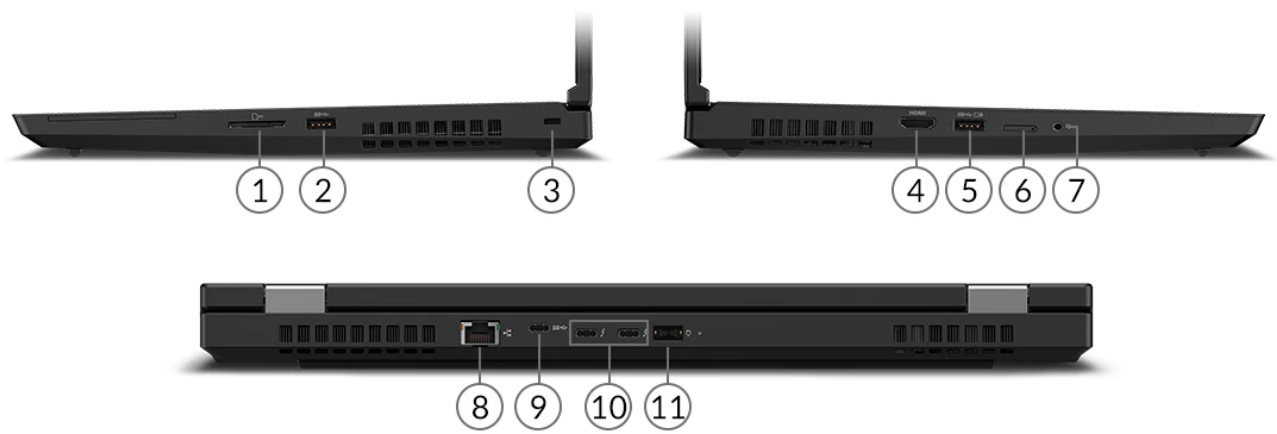


OVERVIEW



1. SD card reader	7. Headphone / microphone combo jack (3.5mm)
2. USB 3.2 Gen 1	8. Ethernet (RJ-45)
3. Kensington Security Slot	9. USB-C 3.2 Gen 1
4. HDMI 2.0	10. 2x USB-C 3.2 Gen 2 / Thunderbolt 3
5. USB 3.2 Gen 1	11. Power connector
6. Nano-SIM card slot *	

- Notes:
- Ports with * are only available on selected models

PERFORMANCE

Processor

Processor Family

10th Generation Intel® Core™ i5 / i7 / i9 or Intel Xeon® Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-10400H	4	8	2.6GHz	4.6GHz	8MB	DDR4-2933	Intel UHD Graphics
Core i7-10750H	6	12	2.6GHz	5.0GHz	12MB	DDR4-2933	Intel UHD Graphics
Core i7-10850H	6	12	2.7GHz	5.1GHz	12MB	DDR4-2933	Intel UHD Graphics
Core i7-10875H	8	16	2.3GHz	5.1GHz	16MB	DDR4-3200	Intel UHD Graphics
Core i9-10885H	8	16	2.4GHz	5.3GHz	16MB	DDR4-2933	Intel UHD Graphics
Core i9-10980HK	8	16	2.4GHz	5.3GHz	16MB	DDR4-3200	Intel UHD Graphics
Xeon W-10855M	6	12	2.8GHz	5.1GHz	12MB	DDR4-2933	Intel UHD Graphics
Xeon W-10885M	8	16	2.4GHz	5.3GHz	16MB	DDR4-2933	Intel UHD Graphics

Operating System

Operating System**

- Windows® 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Windows 10 Home 64
- Fedora Linux
- Ubuntu Linux LTS
- Red Hat Enterprise Linux (certified only)
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Key Features
NVIDIA® GeForce® RTX™ 2070 SUPER with Max-Q Design	Discrete	8GB GDDR6	VR ready, DirectX® 12
NVIDIA GeForce RTX 2080 SUPER with Max-Q Design	Discrete	8GB GDDR6	VR ready, DirectX 12

Monitor Support

Monitor Support

Supports up to 5 independent displays (native display and 4 external monitors via HDMI®, USB-C and Thunderbolt™)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz
- Thunderbolt supports up to 4K@60Hz / 5K@60Hz

Chipset

Chipset

Intel WM490 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 SO-DIMM slots, dual-channel capable

Memory Type**^[2]

- DDR4-2933 ECC
- DDR4-2933 non-ECC

Memory Protection

ECC on models with ECC DIMMs and Xeon processor

- 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. Non-ECC memory is actually DDR4-3200 but may run at DDR4-2933 due to processor limitation

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 2TB

Storage Type

Disk Type	Interface	RPM	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	Opal2

RAID^[2]

RAID 0/1 support

- 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. Opal capability is not available in RAID mode.

Removable Storage

Optical

None

Card Reader

SD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3286 codec

Speakers

Stereo speakers, Dolby® Atmos®

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 94Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 230W AC adapter

Max Battery Life^[3]

MobileMark® 2014: 16.4 hr
MobileMark 2018: 10.3 hr
JEITA 2.0: 17.4 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]

- 170W slim tip (2-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

1. AC adapter offerings depend on the country.

DESIGN

Display

Display**[1][2]

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	700:1	72% NTSC	160°	-
15.6"	FHD (1920x1080)	None	IPS	500 nits	Anti-glare	16:9	1200:1	72% NTSC	160°	Dolby Vision™, HDR
15.6"	UHD (3840x2160)	None	IPS	600 nits	Anti-glare	16:9	1400:1	100% Adobe® RGB	178°	Dolby Vision, HDR
15.6"	UHD (3840x2160)	Multi-touch	OLED	SDR 400nits, HDR 500nits (peak)	Anti-reflection Anti-smudge	16:9	100000:1	100% DCI-P3	170°	Dolby Vision, HDR

Color Calibration

No color calibration

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>

2. For non-OLED display, HDR is only supported under hybrid mode.

Input Device

Pen

- Lenovo Pen Pro (for UHD OLED models)
- No support (non-touch display doesn't support pen input)

Keyboard

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

Keyboard Backlight

LED backlight

UltraNav™

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

Mechanical[1]

Dimensions (WxDxH)

Models	Dimensions
Touch models	375.4 x 252.3 x 25.25-32.2 mm (14.24 x 9.67 x 0.99-1.27 inches)

Non-touch models	375.4 x 252.3 x 24.5-31.45 mm (14.24 x 9.67 x 0.96-1.24 inches)
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Weight

Models	Weight
FHD models	2.74 kg (6.05 lbs)

Case Color

Black

Case Material

PPS695 + GF 50% (top), PPS + 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

WLAN + Bluetooth^[1]

- 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)
- Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, CAT16, MIMO 4x4, M.2 card, with embedded eSIM functionality
- No support

NFC

No support

Notes:

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

Ports^[1]

Standard Ports

- 2x USB 3.2 Gen 1 (one Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery and DisplayPort™ 1.4)
- 2x USB-C 3.2 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort 1.4)
- 1x HDMI 2.0
- 1x SD card reader
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)

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;
FireWire 400: 400 Mbit/s;
FireWire 800: 800 Mbit/s

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, 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

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
- 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. More information of warranty policy, please access <https://pcsupport.lenovo.com/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°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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