OVERVIEW

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

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

PERFORMANCE

Processor

Processor Family

10th Generation Intel® Core™ i5 / i7 / i9 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 i9-10885H	8	16	2.4GHz	5.3GHz	16MB	DDR4-2933	Intel UHD Graphics

Operating System

Operating System

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

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12
NVIDIA® GeForce® GTX 1650 Ti Max-Q	Discrete	4GB GDDR6	DirectX 12

Monitor Support

Monitor Support

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

Chipset

Chipset

Intel WM490 chipset

Memory

Max Memory[1]

Up to 64GB DDR4-2933

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type[2]

DDR4-2933

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 2933MHz due to processor limitation

Storage

Storage Support

Up to two drives, 2x M.2 2280 SSD
• M.2 2280 SSD up to 2TB
• RAID 0/1 support

Storage Type

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

RAID

RAID 0/1 support

Removable Storage

Optical

None

Card Reader

SD card reader, supports UHS-II SD card

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3286 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®, 3-magnet

Microphone[1]

- Dual array microphone
- No microphone

Camera[2]

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

Notes:

1. No microphone is for speical bid only
2. No camera is for speical bid only

Battery

Battery

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

Max Battery Life[1]

MobileMark® 2014: 15.6 hr
MobileMark 2018: 11.8 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]

- 135W slim tip AC adapter
- 170W slim tip AC adapter

Notes:

1. 170W for i9-10885H models only

DESIGN

Display

Display[2]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect	Contrast	Color	Viewing	Key

						Ratio	Ratio	Gamut	Angle	Features
15.6″	FHD (1920x1080)	None	IPS	300 nits	Anti-glare	16:9	700:1	72% NTSC	170°	-
15.6″	FHD (1920x1080)	None	IPS	500 nits	Anti-glare	16:9	800:1	72% NTSC	170°	Dolby Vision™, HDR
15.6″	UHD (3840x2160)	Multi-touch	OLED	SDR 400nit, HDR 500nit (peak)	Anti-reflection Anti-smudge	16:9	100000:1	100% DCI-P3	170°	Dolby Vision, HDR
15.6″	UHD (3840x2160)	None	IPS	600 nits	Anti-glare	16:9	1400:1	100% Adobe® RGB	178°	Dolby Vision, HDR

Color Calibration

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

Touchscreen

*   Capacitive-type multi-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
*   No pen (pen needs to be purchased separately)
*   No support (non-touch display doesn't support pen input)

Keyboard

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

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad

Mechanical

Dimensions (WxDxH)

Models	Dimensions
Touch models	361.8 x 245.7 x18.7 mm (14.24 x 9.67 x 0.74 inches)
Non-touch models	361.8 x 245.7 x18.4 mm (14.24 x 9.67 x 0.72 inches)

Weight[1]

Models	Weight
Non-touch models	1.7 kg (3.75 lbs)
Touch models	1.81 kg (4.0 lbs)

Case Color

*   Black, paint
*   Black, weave

Case Material

Carbon fiber hybrid (top), aluminium alloy (bottom)

Notes:

1. The system weight varies depending on configurations

CONNECTIVITY

Network

Onboard Ethernet

Ethernet support via optional Lenovo USB-C to Ethernet Adapter

WLAN + Bluetooth™[1]

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

WWAN[2]

- Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card
- No support

SIM Card

No SIM card inbox

NFC

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[1]

Standard Ports[2]

- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort™ 1.4 for discrete graphics / DisplayPort 1.2 for integrated graphics)
- 1x HDMI 2.0
- 1x SD card reader
- 1x headphone / microphone combo jack (3.5mm)
- 1x power connector

Optional Ports

1x Nano-SIM card slot (WWAN model)

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, formely USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
   USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formely 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

No smart card reader

Fingerprint Reader

Touch style fingerprint reader on keyboard bezel, match-on-chip

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

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]

- 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)
- Operating: 5°C (41°F) to 35°C (95°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

- Lenovo USB-C to Ethernet Adapter
- 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