PERFORMANCE

Processor

Processor Family

Intel® Celeron® or 8th Generation Intel Core™ i3 / i5 / i7 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 4305U	2	2	2.2GHz	-	2MB	DDR4-2133	Intel UHD Graphics
Core i3-8145U	2	4	2.1GHz	3.9GHz	4MB	DDR4-2400	Intel UHD Graphics
Core i5-8265U	4	8	1.6GHz	3.9GHz	6MB	DDR4-2400	Intel UHD Graphics
Core i5-8365U	4	8	1.6GHz	4.1GHz	6MB	DDR4-2400	Intel UHD Graphics
Core i7-8565U	4	8	1.8GHz	4.6GHz	8MB	DDR4-2400	Intel UHD Graphics
Core i7-8665U	4	8	1.9GHz	4.8GHz	8MB	DDR4-2400	Intel UHD Graphics

Operating System

Operating System

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

Graphics

Graphics[1]

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12
AMD Radeon™ 535	Discrete	2GB GDDR5	DirectX 12

Notes:

   1. Discrete graphics is NOT available in EMEA.

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and USB-C®)
• HDMI supports up to 4096x2160@24Hz
• USB-C supports up to 4096x2304@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory[1]

- Up to 64GB DDR4-2400
- Up to 64GB DDR4-2133

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type[2]

- DDR4-2133
- DDR4-2400

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 2666MHz but run at 2133MHz or 2400MHz depending on the memory support capability of processor.

Storage

Storage Support[1][2]

Up to two drives, 1x 2.5″ HDD/SSD + 1x M.2 2242 SSD or 1x M.2 2242/2280 SSD + 1x M.2 2242 SSD
• 2.5″ HDD up to 2TB
• 2.5″ SSD up to 256GB
• M.2 2280 SSD up to 1TB
• M.2 2242 SSD up to 256GB
• Optional Intel Optane™ Memory, M.2

Storage Type[3]

Disk Type	Interface	RPM	Security
2.5″ SATA HDD	SATA 6Gb/s	5.4K	APS (Active Protection System™)
2.5″ SATA HDD	SATA 6Gb/s	7.2K	APS (Active Protection System)
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal2
2.5″ SATA SSD	SATA 6Gb/s	-	Opal2
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

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. System has one HDD slot or one M.2 2280 slot exclusively for storage.
3. Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter 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® Advanced Audio

Microphone[1]

• Dual array microphone
• No microphone

Camera

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

Notes:

1. No microphone is for special bid only.

Battery

Battery

Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Max Battery Life[1]

MobileMark® 2014: 12 hr
Local video (1080p) playback@150nits: 12 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.

DESIGN

Display

Display[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
14.0″	HD (1366x768)	None	TN	220 nits	Anti-glare	16:9	500:1	45% NTSC	90°	-
14.0″	FHD (1920x1080)	None	IPS	250 nits	Anti-glare	16:9	800:1	45% NTSC	170°	-
14.0″	FHD (1920x1080)	Multi-touch	IPS	250 nits	Anti-glare	16:9	800:1	45% NTSC	170°	-

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

Keyboard Backlight

• LED backlight
• Non-backlight

UltraNav™

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

Mechanical[1]

Dimensions (WxDxH)

335 x 235 x 22.5 mm (13.19 x 9.25 x 0.89 inches)

Weight

1.69 kg (3.72 lbs)

Case Color

Black

Case Material

PC + ABS (top), PC + ABS (bottom)

Notes:

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

CONNECTIVITY

Network

Ethernet

• Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models)
• Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models)

WLAN + Bluetooth®[1][2]

- Realtek RTL8822BE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 4.2, M.2 card
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX200, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

WWAN[3]

- Wireless WAN upgradable to 4G
- Fibocom L850-GL, 4G LTE CAT9, M.2 card
- Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card
- No support

SIM Card

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
2. Realtek RTL8822BE is NOT available in EMEA.
   Wi-Fi 6 full features might be limited by country level restrictions.
3. In EMEA, WWAN upgradable is for special bid only.
   Fibocom L830-EB is only available in EMEA.
   For non-WWAN model, it means the model is NOT WWAN upgradable.

Ports[1]

Standard Ports

- 1x USB 3.1 Gen 1
- 1x USB 3.1 Gen 1 (Always On)
- 1x USB-C 3.1 Gen 1 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x USB-C 3.1 Gen 2 (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

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader on palm rest
- 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

- Intel vPro
- None

SERVICE

Warranty

Base Warranty[1]

- 1-year depot 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

CERTIFICATIONS

Green Certifications

Green Certifications

- EPEAT™ Silver
- ENERGY STAR® 8.0
- TCO Certified
- RoHS compliant

Other Certifications

Mil-Spec Test

MIL-STD-810G military test passed

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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.