

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 Home 64
- Windows 10 Pro 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 via native display and 2 external monitors; supports external monitors via HDMI® (up to 4096x2160@24Hz), USB-C (up to 4096x2304@60Hz)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Memory Type^[1]

- DDR4-2133
- DDR4-2400

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Max Memory^[2]

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

Notes:

1. Installed memory is actually 2666MHz but run at 2133MHz or 2400MHz due to processor limitation
2. 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^[1]

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^[2]

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

Notes:

1. System has one HDD slot or one M.2 2280 slot exclusively for storage
2. 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

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

Notes:

1. Microphone not configured 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

JEITA 2.0: 13.6 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

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

DESIGN

Display

Display¹⁾

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

Keyboard Backlight

- LED backlight
- Not support

UltraNav™

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

Mechanical

Dimensions (WxDxH)

376.5 x 254.5 x 22.95 mm (14.82 x 10.02 x 0.90 inches)

Weight

2.03 kg (4.48 lbs)

Case Color

Black

Case Material

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

CONNECTIVITY

Network

Onboard Ethernet

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

WLAN + Bluetooth™^[1]

- 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 5.2, M.2 card
- No WLAN and Bluetooth

WWAN^[2]

- Wireless WAN upgradable
- Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card
- Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card
- Not Support

SIM Card

- Gemalto eSIM
- No SIM card

NFC

- Near Field Communication
- Not support

Notes:

1. Realtek RTL8822BE is NOT available in EMEA
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. 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**Standard Ports^[1]**

- 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 models)

Notes:

1. 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
- 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 Technology, DASH
- None

SERVICE

Warranty

Base Warranty

- 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

CERTIFICATIONS

Green Certifications

Green Certifications

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

Other Certifications

Mil-Spec Test

MIL-STD-810G military test passed

