

## 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

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

### Graphics

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

#### Notes:

- Discrete graphics is NOT available in EMEA

### 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

Intel SoC (System on Chip) platform

### Memory

#### Memory Type

- DDR4-2133
- DDR4-2400

#### Notes:

- Installed memory is actually 2666MHz but run at 2133MHz or 2400MHz due to processor limitation

#### Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

#### Max Memory

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

#### Notes:

- 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

Up to two drives, 1x 2.5" HDD + 1x M.2 2242 SSD, 1x 2.5" SSD + 1x M.2 2242 SSD, 1x M.2 2280 SSD + 1x M.2 2242 SSD, or 2x 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

Notes:

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

### Storage Type

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)
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:

- Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter limitation

## Removable Storage

### Optical

Not Support

### 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

- Dual array microphone
- Not configured

Notes:

- Microphone not configured is for speical bid only

### Camera

- 720p, with ThinkShutter, fixed focus
- IR & 720p, with ThinkShutter, fixed focus
- Not configured

## Battery

### Battery

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

### Max Battery Life

MobileMark® 2014: 12 hr

Notes:

- All battery life claims are approximate maximum and based on results using the MobileMark 2014 and/or MobileMark 2018 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

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

## DESIGN

### Display

#### Display

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%	90°	-
14.0"	FHD (1920x1080)	None	IPS	250 nits	Anti-glare	16:9	800:1	45%	170°	-
14.0"	FHD (1920x1080)	Multi-touch	IPS	250 nits	Anti-glare	16:9	800:1	45%	170°	-

#### 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>

#### Touchscreen

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

### Input Device

#### Keyboard

6-row, spill-resistant, multimedia Fn keys

#### Keyboard Backlight

- LED backlight
- Not support

#### UltraNav™

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

### Mechanical

#### 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)

## 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™**

- 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
- Not configured

## Notes:

- Realtek RTL8822BE is NOT available in EMEA  
Intel WiFi 6 full features might be limited by country level restrictions  
BT5.1 is supported on Windows 10 version 2004 or above (limited to BT5.0 on earlier version)

**WWAN**

- 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 configured

## Notes:

- 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

**SIM Card**

- Gemalto eSIM
- Not configured

**NFC**

- Near Field Communication
- Not support

**Ports****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

## Notes:

- Depending on many factors, actual data transfer speed may be lower than theoretical speed

**Optional Ports**

- 1x Nano-SIM card slot (WWAN models)
- 1x Smart Card Reader

**Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to DisplayPort Adapter
- Lenovo USB-C to VGA Adapter
- Not configured

**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
- Not configured

**Fingerprint Reader**

- Touch style fingerprint reader on palm rest
- Not configured

**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**

- 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**

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

**Other Certifications****Mil-Spec Test**

MIL-STD-810G military test passed

