

## 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 |

### Operating System

#### Operating System

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

### Graphics

#### Graphics

| Graphics           | Type       | Memory | Key Features |
|--------------------|------------|--------|--------------|
| Intel UHD Graphics | Integrated | Shared | DirectX® 12  |

### 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@30Hz) or USB-C (up to 4096x2304@60Hz)

### Chipset

#### Chipset

Intel SoC (System on Chip) platform

### Memory

#### Memory Type<sup>[1]</sup>

- DDR4-2133
- DDR4-2400

#### Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

#### Max Memory<sup>[2]</sup>

- Up to 32GB DDR4-2133
- Up to 32GB DDR4-2400

#### Notes:

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

One drive, 1x M.2 2280 SSD or 1x M.2 2242 SSD

- M.2 2280 SSD up to 1TB
- M.2 2242 SSD up to 256GB

- Optional Intel Optane™ Memory integrated with SSD, M.2

Storage Type

| Disk Type                                              | Interface              | RPM | Security |
|--------------------------------------------------------|------------------------|-----|----------|
| M.2 2242 SSD                                           | PCIe NVMe, PCIe 3.0 x2 | -   | -        |
| M.2 2280 SSD                                           | SATA 6Gb/s             | -   | Opal2    |
| M.2 2280 SSD                                           | PCIe NVMe, PCIe 3.0 x4 | -   | Opal2    |
| Intel Optane Memory with Solid State Storage, M.2 2280 | PCIe NVMe, PCIe 3.0 x4 | -   | -        |

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® Audio™ Premium

Microphone

Dual array microphone

Camera

720p, fixed focus

Battery

Battery

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

Max Battery Life<sup>[1]</sup>

MobileMark® 2014: 14.61 hr  
JEITA 2.0: 15.4 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

Display<sup>[1]</sup>

| Size  | Resolution      | Touch | Type | Brightness | Surface    | Aspect Ratio | Contrast Ratio | Color Gamut | Viewing Angle | Key Features |
|-------|-----------------|-------|------|------------|------------|--------------|----------------|-------------|---------------|--------------|
| 13.3" | HD (1366x768)   | None  | TN   | 250 nits   | Anti-glare | 16:9         | 500:1          | 45% NTSC    | 90°           | -            |
| 13.3" | FHD (1920x1080) | None  | IPS  | 250 nits   | Anti-glare | 16:9         | 700:1          | 45% NTSC    | 170°          | -            |

|       |                    |                 |     |          |                |      |       |             |      |   |
|-------|--------------------|-----------------|-----|----------|----------------|------|-------|-------------|------|---|
| 13.3" | FHD<br>(1920x1080) | Multi-<br>touch | IPS | 250 nits | Anti-<br>glare | 16:9 | 800:1 | 45%<br>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
- Not support

**UltraNav™**

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

**Mechanical****Dimensions (WxDxH)**

321.8 x 224.2 x 18.8 mm (12.67 x 8.83 x 0.74 inches)

**Weight**

1.46 kg (3.22 lbs)

**Case Color**

- Black
- Silver

**Case Material**

Aluminium (top), GFRP (bottom)

**CONNECTIVITY****Network****Onboard Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), RJ45 via optional ThinkPad® Ethernet Extension Cable or Lenovo USB-C to Ethernet Adapter
- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), RJ45 via optional ThinkPad Ethernet Extension Cable or Lenovo USB-C to Ethernet Adapter

**WLAN + Bluetooth™<sup>[1]</sup>**

- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card

**WWAN**

Not Support

**SIM Card**

No SIM card

**NFC**

- Near Field Communication
- Not support

**Notes:**

1. BT5.1 is supported on Windows 10 version 2004 or above (limited to BT5.0 on earlier version)

**Ports****Standard Ports<sup>[1]</sup>**

- 1x USB 3.1 Gen 1
- 1x USB 3.1 Gen 1 (Always On)
- 2x USB-C 3.1 Gen 1 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x HDMI 1.4b
- 1x microSD card reader
- 1x Ethernet extension connector
- 1x headphone / microphone combo jack (3.5mm)

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**Notes:**

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

## Monitor Cable

### Monitor Cable

- Lenovo USB-C to DisplayPort Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to HDMI Adapter with Power Pass-through
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to VGA Adapter with Power Pass-through
- 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 palm rest
- No fingerprint reader

#### BIOS Security

- Power-on password
- Supervisor password
- Hard disk password
- Self-healing BIOS

## 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

## ACCESSORIES

### Bundled Accessories

#### Bundled Accessories

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- ThinkPad Ethernet Extension Cable
- None

## 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

