

## PERFORMANCE

### Processor

#### Processor Family

8th generation Intel® Core™ i5 / i7 Processor

#### Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor 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
- Red Hat Enterprise Linux (certified only)
- Ubuntu Linux LTS
- No operating system

### Graphics

Graphics	Type	Memory	Key Features
NVIDIA® Quadro® P520	Discrete	2GB GDDR5	DirectX® 12

### Monitor Support

Supports up to 3 independent displays via native display and 2 external monitors; supports external monitors via HDMI® (up to 3840x2160@30Hz) or USB-C (up to 3840x2160@60Hz)

### Chipset

Intel SoC (System on Chip) platform

### Memory

#### Memory Type

DDR4-2400

#### Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

#### Max Memory

- Up to 40GB (8GB soldered + 32GB SO-DIMM)
- Up to 48GB (16GB soldered + 32GB SO-DIMM)

#### 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

One drive, up to 2TB M.2 2280 SSD

#### 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	-	-
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

Not Support

### 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, far-field
- Not configured

### Camera

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

## Battery

### Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

### Max Battery Life

MobileMark® 2014: 15 hr (FHD ) or 10 hr (UHD)

#### 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

- 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
15.6"	FHD (1920x1080)	Multi-touch	IPS	250 nits	Anti-glare	16:9	700:1	45%	170°	-
15.6"	UHD (3840x2160)	None	IPS	500 nits	Anti-glare	16:9	1200:1	100% Adobe®	170°	Dolby Vision™, HDR

#### 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

### Pen

Not support

### Keyboard

6-row, spill-resistant, multimedia Fn keys, numeric keypad

### Keyboard Backlight

LED backlight

### UltraNav™

3-button TrackPoint® pointing device and 3-button Mylar® surface multi-touch touchpad

## Mechanical

### Dimensions (WxDxH)

365.8 x 248 x 19.1 mm (14.40 x 9.76 x 0.75 inches)

### Weight

1.75 kg (3.87 lbs)

### Case Color

Black

### Case Material

PPS / 50% GF (top), PA / 50% GF (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™

- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Not configured

#### 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

#### SIM Card

- Gemalto eSIM
- Nano-SIM Card, Verizon LTE (US)
- Not configured

#### NFC

- Near Field Communication
- Not support

### Ports

#### Standard Ports

- 2x USB 3.1 Gen 1 (one Always On)
- 1x USB-C 3.1 Gen 1 (support data transfer, Power Delivery and DisplayPort™)
- 1x USB-C 3.1 Gen 2 / Thunderbolt™ 3 (support data transfer, Power Delivery and DisplayPort)
- 1x HDMI 1.4b
- 1x microSD card reader
- 1x Ethernet (RJ-45)
- 1x headphone / microphone combo jack (3.5mm)
- 1x side docking connector
- 1x Security keyhole

**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, match-on-chip
- 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

**ACCESSORIES**

## Bundled Accessories

Not Support

## CERTIFICATIONS

### Green Certifications

- EPEAT™ Gold
- ENERGY STAR® 8.0
- RoHS

### Other Certifications

#### Mil-Spec Test

MIL-STD-810G military test passed

### ISV Certifications

Please visit [www.thinkworkstations.com/isv-certifications/](http://www.thinkworkstations.com/isv-certifications/)

