

OVERVIEW



|                                              |                             |
|----------------------------------------------|-----------------------------|
| 1. Headphone / microphone combo jack (3.5mm) | 6. Kensington Security Slot |
| 2. SD card reader                            | 7. Power connector          |
| 3. HDMI 2.0                                  | 8. Thunderbolt 4            |
| 4. 2x USB 3.2 Gen 1                          | 9. Smart card reader *      |
| 5. Ethernet (RJ-45)                          |                             |

- Notes:
- Ports with \* are only available on selected models
  - Nano-SIM card slot on the rear side (not shown on the sample product above)

## PERFORMANCE

### Processor

**Processor Family**

11th Generation Intel® Core™ i7 / i9 Processor

**Processor\*\***

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Memory Support | Processor Graphics |
|----------------|-------|---------|----------------|---------------|-------|----------------|--------------------|
| Core i5-11400H | 6     | 12      | 2.7GHz         | 4.5GHz        | 12MB  | DDR4-3200      | Intel UHD Graphics |
| Core i5-11500H | 6     | 12      | 2.9GHz         | 4.6GHz        | 12MB  | DDR4-3200      | Intel UHD Graphics |
| Core i7-11800H | 8     | 16      | 2.3GHz         | 4.6GHz        | 24MB  | DDR4-3200      | Intel UHD Graphics |
| Core i7-11850H | 8     | 16      | 2.5GHz         | 4.8GHz        | 24MB  | DDR4-3200      | Intel UHD Graphics |

### Operating System

**Operating System\*\***

- Windows® 10 Pro 64
- Windows 10 Home 64
- Ubuntu Linux LTS
- Red Hat Enterprise Linux (certified only)
- No operating system

### Graphics

**Graphics\*\***

| Graphics                  | Type       | Memory    | Key Features |
|---------------------------|------------|-----------|--------------|
| Intel UHD Graphics        | Integrated | Shared    | DirectX® 12  |
| NVIDIA® GeForce® GTX 1650 | Discrete   | 4GB GDDR6 | 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 4K@60Hz) or Thunderbolt™ (up to 5K@60Hz)

### Chipset

**Chipset**

Intel WM590 chipset

### Memory

**Max Memory<sup>[1]</sup>**

Up to 64GB DDR4-3200

**Memory Slots**

Two DDR4 SO-DIMM slots, dual-channel capable

**Memory Type**

DDR4-3200 non-ECC

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.

### Storage

**Storage Support**

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 2TB

**Storage Slot**

Two M.2 slots

- Two M.2 2280 PCIe® Gen 3x4 slots, support M.2 2280 SSD

Storage Type\*\*\*

| Disk Type    | Interface                          | Offering            | Security |
|--------------|------------------------------------|---------------------|----------|
| M.2 2280 SSD | PCIe NVMe®, PCIe x4                | 256GB / 512GB / 1TB | Opal2    |
| M.2 2280 SSD | PCIe NVMe, PCIe 4.0 x4 Performance | 2TB                 | Opal2    |

RAID<sup>[1]</sup>

RAID 0/1 support

Notes:

1. Opal capability is not available in RAID mode.

Removable Storage

Optical

None

Card Reader

SD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, Dolby® Audio™

Microphone

- Dual array microphone, near-field
- No microphone

Camera\*\*

- 720p, with privacy shutter, fixed focus
- IR & 720p hybrid, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 68Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

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

MobileMark® 2018: 10 hr  
JEITA 2.0: 10.6 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.

Power Adapter

Power Adapter

135W slim tip (3-pin) AC adapter

DESIGN

Display

Display\*\*<sup>[1]</sup>

| Size | Resolution | Touch | Type | Brightness | Surface | Aspect Ratio | Contrast Ratio | Color Gamut | Viewing Angle | Key Features |
|------|------------|-------|------|------------|---------|--------------|----------------|-------------|---------------|--------------|
|------|------------|-------|------|------------|---------|--------------|----------------|-------------|---------------|--------------|

|       |                 |             |     |          |            |      |        |                 |      |                        |
|-------|-----------------|-------------|-----|----------|------------|------|--------|-----------------|------|------------------------|
| 15.6" | FHD (1920x1080) | None        | IPS | 300 nits | Anti-glare | 16:9 | 800:1  | 45% NTSC        | 170° | -                      |
| 15.6" | FHD (1920x1080) | None        | IPS | 300 nits | Anti-glare | 16:9 | 1200:1 | 100% sRGB       | 170° | -                      |
| 15.6" | FHD (1920x1080) | Multi-touch | IPS | 300 nits | Anti-glare | 16:9 | 800:1  | 45% NTSC        | 170° | -                      |
| 15.6" | UHD (3840x2160) | None        | IPS | 600 nits | Anti-glare | 16:9 | 1400:1 | 100% Adobe® RGB | 170° | Dolby Vision™, HDR 400 |

Touchscreen

- On-cell touch, supports 10-point touch (FHD models only)
- Non-touch

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>

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- No support

UltraNav™

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

Mechanical

Dimensions (WxDxH)

| Models     | Dimensions                                         |
|------------|----------------------------------------------------|
| All models | 366.5 x 250 x 22.7 mm (14.43 x 9.84 x 0.89 inches) |

Weight<sup>[1]</sup>

| Models     | Weight             |
|------------|--------------------|
| All models | 2.07 kg (4.58 lbs) |

Case Color

Black

Case Material

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

Notes:

- The system weight varies depending on configurations.

CONNECTIVITY

Network

Onboard Ethernet\*\*

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), supports Wake-on-LAN

WLAN + Bluetooth<sup>[1]</sup>

Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2

WWAN\*\*

- Wireless WAN upgradable to 4G (with antenna ready)

- Integrated Mobile Broadband 4G LTE, Quectel EM120R-GL, M.2 card, with embedded eSIM functionality
- No support

**SIM Card**

- Nano SIM card, Lenovo Connect 24 months, 4G LTE
- No SIM card inbox

**NFC**

No support

**Notes:**

1. Intel WiFi 6 full features might be limited by country level restrictions.  
Bluetooth 5.2 is supported with driver version 22.30 and later.

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

- 2x USB 3.2 Gen 1 (one Always On)
- 1x Thunderbolt 4 / USB4™ 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x HDMI 2.0
- 1x SD card reader
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)

**Optional Ports<sup>\*\*\*</sup>**

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN model)

**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: 40 Gbit/s;  
FireWire 400: 400 Mbit/s;  
FireWire 800: 800 Mbit/s

**Monitor Cable****Monitor Cable<sup>\*\*\*</sup>**

- 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<sup>\*\*</sup>**

- 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, match-on-chip

**BIOS Security**

- Supervisor password

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

**Other Security**

- (Optional) Camera privacy shutter
- (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 depot with 2-year system board service
- 1-year limited onsite 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

## ENVIRONMENTAL

### Operating Environment

**Temperature<sup>[1]</sup>**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F ) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

**Humidity**

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

**Altitude**

Maximum altitude (without pressurization): 3048 m (10,000 ft)

---

**Notes:**

1. When you charge the battery, its temperature must be no lower than 10°C (50°F).

## CERTIFICATIONS

### Green Certifications

**Green Certifications**

- EPEAT™ Gold
- ENERGY STAR® 8.0
- RoHS compliant

### Other Certifications

**Mil-Spec Test**

MIL-STD-810H military test passed

## ISV Certifications

### ISV Certifications

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

- Feature with \*\* means that only one offering listed under the feature is configured on selected models.
- Feature with \*\*\* means that one or more offerings listed under the feature could be configured on selected models.
- Lenovo reserves the right to change specifications or other product information without notice. Lenovo is not responsible for photographic or typographical errors. LENOVO PROVIDES THIS PUBLICATION “AS IS,” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore this disclaimer may not apply to you.
- The specifications on this page may not be available in all regions, and may be changed or updated without notice.

