Lenovo PSREF
Product Specifications
Reference

OVERVIEW

1. NOVO button hole	5. USB 3.2 Gen 1
2. Card reader	6. HDMI 1.4b
3. USB 2.0	7. USB-C 3.2 Gen 1 (data transfer only)
4. Power connector	8. Headphone / microphone combo jack (3.5mm)

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium® or 11th Generation Intel Core™ i3 / i5 / i7 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 6305	2	2	1.8GHz	-	4MB	DDR4-3200	Intel UHD Graphics
Pentium Gold 7505	2	4	2.0GHz	3.5GHz	4MB	DDR4-3200	Intel UHD Graphics
Core i3-1115G4	2	4	3.0GHz	4.1GHz	6MB	DDR4-3200	Intel UHD Graphics
Core i5-1135G7	4	8	2.4GHz	4.2GHz	8MB	DDR4-3200	Intel Iris® Xe Graphics
Core i7-1165G7	4	8	2.8GHz	4.7GHz	12MB	DDR4-3200	Intel Iris Xe Graphics

Operating System

Operating System

- Windows® 10 Home 64
- Windows 10 Home in S mode
- Windows 10 Pro 64
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12
Intel Iris Xe Graphics	Integrated	Shared	DirectX 12
NVIDIA® GeForce® MX350	Discrete	2GB GDDR5	DirectX 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI® (up to 4K@30Hz)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory[1]

- Up to 12GB (4GB soldered + 8GB SO-DIMM) DDR4-3200 offering
- Up to 16GB (8GB soldered + 8GB SO-DIMM) DDR4-3200 offering

Memory Slots

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

Memory Type

DDR4-3200

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

- Model with 38Wh battery: up to 2 drives, 1x 2.5″ HDD + 1x M.2 SSD
  - 2.5″ HDD up to 1TB

- M.2 2242 SSD up to 512GB
- M.2 2280 SSD up to 512GB
- Model with 45Wh battery: one drive, 1x M.2 SSD
  - M.2 2242 SSD up to 512GB
  - M.2 2280 SSD up to 512GB

Storage Slot

- Model with 45Wh battery: one M.2 slot
  - One M.2 2280 PCIe Gen 3x4 slot, supports M.2 2242/2280 SSD
- Model with 38Wh battery: one 2.5″ drive slot + one M.2 slot
  - One 2.5″ drive slot, supports 2.5″ SATA HDD
  - One M.2 2280 PCIe Gen 3x4 slot, supports M.2 2242/2280 SSD

Storage Type

Disk Type	Interface	RPM	Security
2.5″ SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-

Removable Storage

Optical

- USB external DVD burner (DVD±RW), 9.5mm high
- None

Card Reader

4-in-1 card reader (SD, SDHC, SDXC, MMC)

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 1.5W x2, Dolby® Audio™

Microphone

Dual array microphone

Camera

720p, with privacy shutter, fixed focus

Battery

Battery

- Integrated Li-Polymer 38Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Max Battery Life[1]

- MobileMark® 2018: 5 hr (38Wh)
- MobileMark 2018: 6.5 hr (45Wh)

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

65W round tip (Wall Mount) AC adapter

DESIGN

Display

Display[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
17.3″	HD+ (1600x900)	None	TN	250 nits	Anti-glare	16:9	-	60% NTSC	-	-
17.3″	FHD (1920x1080)	None	IPS	300 nits	Anti-glare	16:9	-	72% NTSC	-	-

Touchscreen

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, multimedia Fn keys, numeric keypad

Keyboard Backlight

Not support

Touchpad

Buttonless Mylar® surface multi-touch touchpad, supports Precision TouchPad (PTP)

Mechanical

Dimensions (WxDxH)

399 x 274 x 19.9 mm (15.71 x 10.79 x 0.78 inches)

Weight[1]

2.1 kg (4.63 lbs)

Case Color

- Abyss blue
- Arctic grey

Surface Treatment

Painting

Case Material

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

Notes:

1. The system weight varies depending on configurations.

CONNECTIVITY

Network

WLAN + Bluetooth™

- 802.11ac 2x2 Wi-Fi + Bluetooth 5.0, M.2 Card
- 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card

Ports[1]

Standard Ports[2]

- 1x USB 3.2 Gen 1
- 1x USB-C 3.2 Gen 1 (support data transfer only)
- 1x USB 2.0
- 1x HDMI 1.4b
- 1x card reader
- 1x headphone / microphone combo jack (3.5mm)

- 1x power connector

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, formely USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
   USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formely 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
2. Depending on many factors, actual data transfer speed may be lower than theoretical speed

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in chipset

Fingerprint Reader

- Touch style fingerprint reader on power button
- No fingerprint reader

BIOS Security

- Power-on password
- Administrator password
- Hard disk password

Other Security

Camera privacy shutter

SERVICE

Warranty

Base Warranty

- 1-year depot service
- 1-year depot with 2-year system board service
- 2-year (1-yr battery) depot service

ENVIRONMENTAL

Operating Environment

Temperature[1]

- At altitudes up to 2438 m (8,000 ft)
  - Operating: 5°C to 35°C (41°F to 95°F)
  - Storage: 5°C to 43°C (41°F to 109°F)
- At altitudes above 2438 m (8,000 ft)
  - Maximum temperature when operating under the unpressurized condition: 31.3°C (88°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 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

- ErP Lot 3
- RoHS compliant

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