

PERFORMANCE

Processor

Processor Family

8th / 10th Generation Intel® Core™ i5 / i7 Processor

Processor^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-8265U	4	8	1.6GHz	3.9GHz	6MB	LPDDR3-2133	Intel UHD Graphics
Core i5-8365U	4	8	1.6GHz	4.1GHz	6MB	LPDDR3-2133	Intel UHD Graphics
Core i5-10210U	4	8	1.6GHz	4.2GHz	6MB	LPDDR3-2133	Intel UHD Graphics
Core i7-8565U	4	8	1.8GHz	4.6GHz	8MB	LPDDR3-2133	Intel UHD Graphics
Core i7-8665U	4	8	1.9GHz	4.8GHz	8MB	LPDDR3-2133	Intel UHD Graphics
Core i7-10510U	4	8	1.8GHz	4.9GHz	8MB	LPDDR3-2133	Intel UHD Graphics
Core i7-10710U	6	12	1.1GHz	4.7GHz	12MB	LPDDR3-2133	Intel UHD Graphics

Notes:

1. 10th Generation Intel Core Processors are NOT available in EMEA

Operating System

Operating System

- Windows® 10 Home 64
- Windows 10 Pro 64
- Fedora Linux
- Linux
- 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 4K@24Hz) or Thunderbolt™ (up to 5K@60Hz)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots

Memory Type

LPDDR3-2133

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

One drive, up to 2TB M.2 2280 SSD, optional Intel Optane™ Memory integrated with SSD, M.2

Storage Type

Disk Type	Interface	RPM	Security
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

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3286 codec

Speakers

Stereo speakers, 2W x2 and 0.8W x2, Dolby® Atmos®

Microphone

Four array microphones, 360° far-field

Camera

- 720p, with ThinkShutter, fixed focus
- IR & 720p hybrid, with ThinkShutter, fixed focus

Battery

Battery

Integrated Li-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Max Battery Life^[1]

MobileMark® 2014: 18.3 hr

JEITA 2.0: 18.9 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^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
14.0"	FHD	Multi-	IPS	300 nits	Anti-	16:9	700:1	72%	170°	-

ThinkPad X1 Carbon (7th Gen)

	(1920x1080)	touch			glare			NTSC		
14.0"	FHD (1920x1080)	None	IPS	400 nits	Anti-glare	16:9	1000:1	72% NTSC	170°	ThinkPad® Privacy Guard
14.0"	FHD (1920x1080)	None	IPS	400 nits	Anti-glare	16:9	800:1	72% NTSC	170°	Low power
14.0"	UHD (3840x2160)	None	IPS	500 nits	Glossy	16:9	1400:1	90%	170°	Dolby Vision™, HDR 400
14.0"	WQHD (2560x1440)	None	IPS	300 nits	Anti-glare	16:9	700:1	72% NTSC	170°	-

Touchscreen

- Capacitive-type multi-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

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad

Mechanical

Dimensions (WxDxH)

Models	Dimensions
FHD Privacy Guard models	323 x 217 x 15.4 mm (12.72 x 8.54 x 0.61 inches)
Non-Privacy Guard models	323 x 217 x 14.95 mm (12.72 x 8.54 x 0.59 inches)

Weight⁽¹⁾

Models	Weight
FHD Privacy Guard models	1.21 kg (2.66 lbs)
Non-Privacy Guard models	1.09 kg (2.4 lbs)

Case Color

- Black, paint
- Black, weave

Case Material

Carbon fiber (top), magnesium alloy (bottom)

Notes:

1. The system weight varies depending on configurations

CONNECTIVITY

Network

Onboard Ethernet

- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), RJ45 via optional ThinkPad Ethernet Extension Adapter Gen 2
- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), RJ45 via optional ThinkPad Ethernet Extension Adapter Gen 2

WLAN + Bluetooth^[1]

Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1

WWAN^[2]

- Wireless WAN upgradable to 4G
- Integrated Mobile Broadband 4G LTE-A, CAT9, Fibocom L850-GL, M.2 card
- Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card
- No support

SIM Card

- Gemalto eSIM
- No SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

1. BT5.1 is supported on Windows 10 version 2004 or above (limited to BT5.0 on earlier version)
2. WWAN upgradable is for special bid only
For non-WWAN model, it means the model is NOT WWAN upgradable

Ports^[1]

Standard Ports^[2]

- 1x USB 3.1 Gen 1
- 1x USB 3.1 Gen 1 (Always On)
- 2x USB-C 3.1 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x HDMI 1.4b
- 1x Ethernet extension connector
- 1x headphone / microphone combo jack (3.5mm)
- 1x side docking connector

Optional Ports

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

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip^[1]

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot

Smart Card Reader

No smart card reader

Fingerprint Reader

ThinkPad X1 Carbon (7th Gen)

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

- ThinkShutter camera cover
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert

Notes:

1. Discrete TPM 2.0 with L3 Security Support is for special bid only

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
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service

ACCESSORIES

Bundled Accessories

Bundled Accessories

- ThinkPad Ethernet Extension Adapter Gen 2
- None

CERTIFICATIONS

Green Certifications

Green Certifications

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

Other Certifications

Mil-Spec Test

MIL-STD-810G military test passed

