

# Lenovo P1 Gen 7 2024

Version: 1.0 | 05/21/2024

---

Product Display Name	ThinkPad P1 Gen 7
Information Date	23-Apr-24

## SECTION I: SYSTEM OVERVIEW

---

Description	The ThinkPad P1 Gen 7 is Lenovo's ultra sleek, best-in-class performance mobile Workstation perfect for machine learning workloads. The P1 Gen 7 provides on-the-go flexibility to work anywhere at any time. The new aluminum sustainable design hints at what's inside: Lenovo's most powerful Artificial Intelligence (AI) mobile Workstation which offers unmatched power and performance from the latest Intel® vPro, Evo™ Edition featuring Intel® Core™ Ultra processors, integrated Neural Processing Unit (NPU) and support for up to NVIDIA RTX™ 3000 Ada graphics.
-------------	---

### CPU

Processor Support	Intel Core Ultra Meteor Lake H Series (45W) Core 5, 7, and 9
Type	BGA

### Operating Systems

Preloaded	Windows 11SV2 64-bit (Sun Valley 2) Windows 11 Pro 64-bit (23H2) Windows 11 Home 64-bit Windows 11 Home Single Language 64-bit Windows 11 Home Chinese Language Edition 64-bit Windows 10 Normal Patch Special Bid via Windows 11 DPK Ubuntu Linux 64-bit (Version 22.04) Fedora 40 Linux (depending on NVIDIA open source driver status) No Operating System
Supported	Ubuntu Linux 22.04 Cert only Red Hat Enterprise Linux (RHEL) 9.4 (depending on NVIDIA open source driver status) Debian 12 qualification (not for limited configurations only)

## Memory

Number of DIMM Slots	n/a
Channels	Dual Channel
Type	LPDDR5 LPCAMM2
ECC Support	No
Speed	Up to 7467MT/s
Max DIMM LPCAMM2 Size	64GB
Max System Memory	64GB
Min System Memory	16GB
Soldered Memory	None
Disclaimers	No ECC memory on P1 Gen 7

## Storage

Storage Slots	2 x M.2 2280
SATA	No
PCIe	Solid State Drive, 2x OPAL2 PCIe NVMe M.2 – TLC
SAS	None
Interface	PCIe Gen 4 Performance or Gen 4 Value
Security	OPAL2 for NVMe SSD
Optional Hard Disk Drive Controllers	None
Disclaimers	Dual slot storage is available with all CPU & GPU options

## Video

Integrated Graphics	Processor Graphics Intel® Arc Graphics Utilized via "Hybrid Mode" in BIOS
Discrete Graphics	NV RTX 1000 Ada, 2000 Ada, 3000 Ada NV GF RTX 4060, 4070
Adapter	None
Bus Interface	PCI Express 4.0

## Display

Resolutions	WUXGA (FHD+) / WQXGA (QHD+) / WQUXGA (UHD+) OLED Touch
-------------	--

## Camera

Resolution	5MP+ IR Hybrid Camera
Frames per Second	30 fps
Focus	Fixed 50cm
Camera Interface	USB 2.0
IR Camera	Yes

## Keyboard

Number of Keys	US : 84 / UK : 85 / JP :89
Numpad	No
Size	100% ISO
Function Key Features	Yes
Backlit	Yes
Keyboard size	Como 2024 Full size KB without NumPad (Bottom loading)
Key stroke	1.5mm
Key pitch	19.05 mm (Vertical & Horizontal)
Keyboard backlight	Yes
Keyboard thickness	4.0mm

## TrackPad / Fingerprint Reader

TrackPoint Details	CS22 4.8 mm TrackPoint w/ TTS
Finger Print Reader Model	Synaptics Metallica 8x8 FPR, MoC – integrated with Power button
Multi-Touch	Yes
Resolution	1000 ppi
TrackPad/Haptic TouchPad thickness	3.65mm
TrackPad/Haptic TouchPad type	Haptic Haptic TouchPad
TrackPad size	135mm x 85mm
TrackPad material/finish	Glass surface

## I/O – Ports and Connectors

USB	1x USB-A (5Gbps) 1x USB-C (10Gbps)
Thunderbolt	2x USB-C (Thunderbolt™ 4)
HDMI	1x HDMI 2.1

Audio Combo Jack	1x Microphone & Headphone Combo Jack (3.5mm)
Media Card Reader	Dedicated SD Express 7.0 Card Reader (Backwards compatible with UHS-I & UHS-II) (MMC,SD,SDHC SDXC)
Smart Card Reader	None
Power Connector	DC-In
Docking Port	Docking Via USB-C® (Thunderbolt™ 4)
VirtualLink	None
Network adapter	No native RJ-45 port RJ-45 functionality provided via USB-C® to Ethernet Adapter
Disclaimers	HDMI 2.1: Up to 8K/60Hz

## Power Connector

Main	DC-In
USB-C	1x USB-C® (Thunderbolt™ 4)
Disclaimers	full charge via 100w and via above USB-C charger for UMA configs only

## Ethernet

Vendor	N/A
Count	N/A
EEPROM	N/A
Speeds	N/A
Functions	N/A
Connectors	No native RJ-45 port RJ-45 functionality provided via USB-C® to Ethernet Adapter

## WWAN

Model	N/A
Disclaimers	N/A

## Near Field Communications

Model	Foxconn NXP NPC300 NFC
-------	------------------------

## Audio

Vendor	Realtek
--------	---------

Type	Intel High Definition Audio (2 channel)
Internal Speaker	2 channel
Connectors	Microphone & Headphone Combo Jack (3.5mm)
Chipset	ALC3306 w/ Smart Amp
Number of Channels	4-channel DAC, 4-channel ADC
Number of Bits/Audio Resolution	16/20/24-bit PCM format
Sampling Rate (Recording/Playback)	44.1k/48k/96k/192kHz sample rate
Signal to Noise Ratio	Mic In: 95dB FSA Headphone Out@32ohm: 100dB FSA
Analog Audio	None
Dolby Digital	Dolby ATMOS
Digital Out (S/PDIF)	No
Speaker Power Rating	2W@4ohm/ch

## Power adapter

Type	Slim 135W AC Adapter	Slim 170W AC Adapter
Dimensions	(126 x 77 x 22mm)	(150 x 77 x 22mm)
Weight	Max 370g	Max 385g
Input Voltage	100-240V	100-240V

## Security

TPM	Version 2.0
Asset ID	Yes
vPro	Intel vPro for WS

## Chassis Information

Format	16" Thin & Light
Color	Black Aluminum
Thermal Solutions	Internal Dual FAN, Intelligent Cooling, KBD air intake, Dual by-pass design Vapor Chamber and Liquid Metal Cooling
Dimensions	Length 13.95 inches 354.40 millimeters Width 9.49 inches 241.20 millimeters Height 0.67 inches

	17.05 millimeters
Weight	Touch Model: 4 Cell Battery 1.83kgs/4.04lbs

## Packaging Parameters

	Standard
Height (mm)	329mm
Height (inch)	12.95in
Width (mm)	518mm
Width (inch)	20.39in
Depth (mm)	80mm
Depth (inch)	3.14in
Weight (kgs)	3.2kgs
Weight (lbs)	7.05lbs

## Security & Serviceability

Hardware Maintenance Manual	P1 Gen 7 HMM	must add link
Drivers & Software	P1 Gen 7 Drivers & Software	must add link
Self Healing BIOS	Yes	
Access Panel	Removable bottom cover	
Number of Screws	6	
Swappable Components	Bottom cover, memory module, M.2 solid-state drive, coin-cell battery, TrackPoint pointing cap	
Storage Slots	2 slots	
Memory	n/a	
System Board	n/a	
Restore CD/DVD/USB Set	None, Restore Media available via Lenovo Customer Support Center	
Cable Lock Support	Security-lock slot, Optional Kensington Cable Lock	
Power-On Password	Yes	
Hard Disk Password	Yes; User and Master hard disk password	
Supervisor Password	Yes	
NIC LEDs (integrated)	None	
Security Chip	Yes (for TPM 2.0)	
Access Panel Key Lock	Bottom Cover Tamper Detection	
Boot Sequence Control	Yes	

# Operating Environment

Operating – Air Temperature	At altitudes up to 2438 m (8000 ft) – Operating: 5°C to 35°C (41°F to 95°F)
Non Operating – Air Temperature	At altitudes up to 2438 m (8000 ft) – Storage: 5°C to 43°C (41°F to 109°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)
Corrosive Gas	G1
Particulates	P1

## SECTION II: SUPPORTED COMPONENTS

---

### Supported Components

Processor	Intel® Core™ Ultra 5 135H processor (E-cores up to 3.6 GHz P-cores up to 4.6 GHz) Intel® Core™ Ultra 7 155H processor (E-cores up to 3.8 GHz P-cores up to 4.8 GHz) Intel® Core™ Ultra 7 165H processor (E-cores up to 3.8 GHz P-cores up to 5.0 GHz) Intel® Core™ Ultra 9 185H processor (E-cores up to 3.8 GHz P-cores up to 5.1 GHz)
Memory Support	LPDDR5x 7467MT/s
Chipset (PCH)	OnPkg PCH-P
Size of BIOS Flash	64MB + 16MB
Super I/O	None
Clock	Crystal
Audio	Realtek High Definition Audio
Ethernet	No native RJ-45 port RJ-45 functionality provided via USB-C® to Ethernet Adapter

### Memory

System Capacity Options	16GB 32GB 48GB
Memory Types	16GB LPDDR5x 7467MT/s LPCAMM2 32GB LPDDR5x 7467MT/s LPCAMM2 48GB LPDDR5x 7467MT/s LPCAMM2
Brand of Memory	Samsung SK Hynix Ramaxel Micron
Memory Speed	7467MT/s
Disclaimers	No ECC memory on P1 Gen 7

## Storage

2.5" SAS Hard Disk Drive (HDD)	None
2.5" SATA Hard Disk Drive (HDD)	None
2.5" SATA Solid State Drive (SSD)	None
M.2 (NGFF) PCIe Solid State Drive (SSD)	256GB OPAL2 PCIe 4x4 Value TLC (M.2 2280-S3) 512GB OPAL2 PCIe 4x4 Value TLC (M.2 2280-S3) 1TB OPAL2 PCIe 4x4 Value TLC (M.2 2280-S3) 512GB OPAL2 PCIe 4x4 Performance TLC (M.2 2280-S3) 1TB OPAL2 PCIe 4x4 Performance TLC (M.2 2280-S3) 2TB OPAL2 PCIe 4x4 Performance TLC (M.2 2280-S3) 4TB OPAL2 PCIe 4x4 Performance TLC (M.2 2280-S3)
2.5" PCIe Solid State Drive (SSD)	None
Brand of Drive	Samsung Micron Hynix Kioxia Union Memory
Intel Optane Storage Technology	None
RAID	Optional, Selectable in BIOS
RAID Level and Requirements	RAID-0/1

## Removeable Media

Media Card Reader Specifications	SD Express 7.0 UHS-II
----------------------------------	-----------------------

## SECTION III: Supported Component Detail

---

### CPU Specifications

CPU	Intel® Core™ Ultra 5 135H processor (E-cores up to 3.6 GHz P-cores up to 4.6 GHz)	Intel® Core™ Ultra 7 155H processor (E-cores up to 3.8 GHz P-cores up to 4.8 GHz)	Intel® Core™ Ultra 7 165H processor (E-cores up to 3.8 GHz P-cores up to 5.0 GHz)	Intel® Core™ Ultra 9 185H processor (E-cores up to 3.8 GHz P-cores up to 5.1 GHz)
Integrated Graphics	Intel® Arc Graphics	Intel® Arc Graphics	Intel® Arc Graphics	Intel® Arc Graphics
# of Cores	4 P-cores and 8 E-cores	6 P-cores and 8 E-cores	6 P-cores and 8 E-cores	6 P-cores and 8 E-cores
# of Threads	18	22	22	22
Processor Base Frequency	P-cores up to 1.7 GHz / E-cores up	P-cores up to 1.4 GHz / E-cores up	P-cores up to 1.4 GHz / E-cores up	P-cores up to 2.3 GHz / E-cores up

	to 1.2 GHz	to 900 MHz	to 900 MHz	to 1.8 GHz
Max Turbo Frequency	E-cores up to 3.6 GHz / P-cores up to 4.6 GHz	E-cores up to 3.8 GHz / P-cores up to 4.8 GHz	E-cores up to 3.8 GHz / P-cores up to 5.0 GHz	E-cores up to 3.8 GHz / P-cores up to 5.1 GHz
Cache	18 MB	24 MB	24 MB	24 MB
TDP	45 W	45 W	45 W	45 W

## Display Specifications

Model	WUXGA Non-Touch	WQXGA Non-Touch	WQUXGA OLED Touch
Resolution	FHD+ (1920 x 1200)	QHD+ (2560 x 1600)	UHD+ (3840 x 2400)
Diagonal	16"	16"	16"
Aspect Ratio	16:10	16:10	16:10
Backlight	LED	LED	LED
PPI	142	189	283
Active Area	FHD+: 344.68mm x 215.42mm	QHD+: 344.68mm x 215.42mm	UHD+: 344.448mm x 215.280mm
Refresh Rate	Max 60Hz	Max 165Hz	Max 60Hz
Contrast Ratio	FHD+: 1200:1	QHD+: 1200:1	UHD+: 100,000:1
Viewing Angle	FHD+: 89/89/89/89 degree	QHD+: 89/89/89/89 degree	UHD+: 87.5/87.5/87.5/87.5 degree
Color gamut	100% sRGB	100% sRGB	100% DCI-P3
Brightness	400 nits	500 nits	400 nits
HDR	N/A	N/A	HDR400 Dolby Vision
Color Depth	FHD+: 16.7M (8-bit)	QHD+: 1064.3M (8-bit + 2 FRC)	RGB 8-bit + 2 FRC (HDR) RGB 8-bit (SDR)
Interface	FHD+: eDP 1.4	QHD+: eDP 1.4	UHD+: eDP 1.4b
Panel ID Recognition	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight	325g max	325g max	200g max
Color Calibrator	X-Rite Factory Color Calibration	X-Rite Factory Color Calibration	X-Rite Factory Color Calibration
Panel Technology	IPS, Anti-Glare	IPS, Anti-Glare	OLED, ARAS
Touch Panel	None	None	Multi-Finger Touch Panel

## SSD Specifications

2.5" SATA Solid State Drive (SSD)	N/A
M.2 (NGFF) PCIe Solid State Drive (SSD)	2x M.2 2280-S3 PCIe

2.5" PCIe Solid State Drive (SSD)	N/A
Intel Optane Storage Technology	N/A

## Solid State Storage Devices

Supported Types	M.2	M.2	M.2
Dimensions inches/centimeters (W x D x H)	22.0 (+-0.15) x 80.0 (+-0.15) x 2.3 (max)	22.0 (+-0.15) x 80.0 (+-0.15) x 2.3 (max)	22.0 (+-0.15) x 80.0 (+-0.15) x 3.5 (max)
Size	M.2 2280-S3	M.2 2280-S3	M.2 2280-D2
Interface Type	PCIe NVMe	PCIe NVMe	PCIe NVMe
Read/Write IOPS Specifications	Read: 600K (2TB, 1TB), 450K (512GB), 250K (256GB) Write: 500K (2TB, 1TB, 512GB), 400K (256GB) IOPS, 4K Random, 8 threads, queue depth of 32, data set size of 1GB.	Read: 700K (2TB), 600K (1TB), 350K (512GB), Write: 600K (2TB, 1TB, 512GB) IOPS, 4K Random, 8 threads, queue depth of 32, data set size of 1GB.	Read: 700K (4TB) Write: 600K (4TB) IOPS, 4K Random, 8 threads, queue depth of 32, data set size of 1GB.
Bandwidth Performance	PCIe Gen4x4 Value	PCIe Gen4x4 Performance – 512G-2TB	PCIe Gen4x4 Performance – 4TB only
Power Consumption (Max)	3.0A (duration for 10 us)	3.0A (duration for 10 us)	3.0A (duration for 10 us)
Active(AVG)	5W	8W	8W
Idle	5mW (L1.2)	5mW (L1.2)	5mW (L1.2)
Min MTBF	2,000,000 (h)	2,000,000 (h)	2,000,000 (h)
Min Sequential Read	5000MB/s (2TB/1TB), 4800MB/s (512GB), 4000MB/s (256GB)	6400MB/s (2TB/1TB/512GB)	6400MB/s (4TB)
Min Sequential Write	4500MB/s (2TB), 4000MB/s (1TB/512GB), 2000MB/s (256GB)	5000MB/s (2TB), 4400MB/s (1TB), 4000MB/s (512GB),	5000MB/s (4TB)
Hardware Encryption	Yes	Yes	Yes

## Discrete Graphics Adapter

Laptop GPUs	NVIDIA RTX 1000 Ada Laptop GPU	NVIDIA RTX 2000 Ada Laptop GPU	NVIDIA RTX 3000 Ada Laptop GPU	NVIDIA GeForce RTX 4060	NVIDIA GeForce RTX 4070
NVIDIA CUDA Processing Cores	2560	3072	4608	3072	4608
NVIDIA RT Cores	20 (3rd Gen)	24 (3rd Gen)	36 (3rd Gen)	24 (3rd Gen)	36 (3rd Gen)
Tensor Cores	80 (4th Gen)	96 (4th Gen)	144 (4th Gen)	96 (4th Gen)	144 (4th Gen)

GPU Memory	6GB	8GB	8GB	8GB	8GB
Peak Memory Bandwidth	192 GB/s	256 GB/s	256 GB/s	192 GB/s	256 GB/s
Memory Type	GDDR6	GDDR6	GDDR6	GDDR6	GDDR6
Memory Interface	96-bit	128-bit	128-bit	128-bit	128-bit
DisplayPort	1.4a	1.4a	1.4a	1.4a	1.4a
Open GL	4.6	4.6	4.6	Coming Soon	Coming Soon
Shader Model	7	7	7	Coming Soon	Coming Soon
DirectX	12 Ultimate	12 Ultimate	12 Ultimate	Coming Soon	Coming Soon
PCIe Generation	4	4	4	4	4
Single Precision Floating-Point Performance	12.1	14.5	19.9	Coming Soon	Coming Soon
Tensor Performance	193	231.6	318.6	233	321
NVIDIA FXAA/TXAA Anti-Aliasing	Yes	Yes	Yes	Yes	Yes
NVIDIA RTX Desktop Manager	No	No	No	No	No
Vulkan Support	Yes	Yes	Yes	Yes	Yes
NVIDIA Optimus	Yes	Yes	Yes	Yes	Yes
NVIDIA Max-Q Technology	Yes	Yes	Yes	Yes	Yes
NVENC/NVDEC	Yes	Yes	Yes	Yes	Yes

## WLAN

Model	Intel Wi-Fi 7 BE200 (Gale Peak 2) + BT5.4 (HW Ready)
Antenna Diversity	Supported
MIMO	Supported
Radio ON/OFF Control	Supported
Connector interface	M.2 PCIe
Operating Temperature (Adapter Shield)	0c to +80c
Humidity Non-Operating	50%~90% Rh non condensing (at temperatures of 25c to 35c)
Operating Systems	Microsoft Windows 11, Windows 10, Linux
Wi-Fi Alliance	Wi-Fi CERTIFIED 7, Wi-Fi CERTIFIED 6 with Wi-Fi 6E, Wi-Fi CERTIFIED a/b/g/n/ac, WMM, WMM-PowerSave, WPA3, Protected Management Frames, Wi-Fi Direct, Wi-Fi Agile Multiband
IEEE WLAN Standard	IEEE 802.11-2020 and select amendments (selected feature coverage) IEEE 802.11a, b, d, e, g, h, i, k, n, r, u, v, w, ac, ax, be; Fine Timing Measurement based on 802.11-2016, Wi-Fi Location R2 (802.11az) HW readiness
Roaming	Support seamless roaming between access points
Bluetooth	Bluetooth 5.3

Authentication Protocols	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0 – MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')
Encryption	128-bit AES-CCMP, 256-bit AES-GCMP
Regulatory	For a list of country approvals, please contact your local Intel representatives
US Government	FIPS 140-3
Product Safety	UL, C-UL, CB (62368-1)
Disclaimers	1) For more details, please refer to the Intel document as below. <a href="https://www.intel.com/content/www/us/en/products/sku/230078/intel-wifi-7-be200/specifications.html">https://www.intel.com/content/www/us/en/products/sku/230078/intel-wifi-7-be200/specifications.html</a> 2) Bluetooth version may be limited by OS

## Battery

Dimension	L: 306.9 mm*W: 59.0 mm*T 8.365 mm
Weight	MAX 351.9 g
Type (Chemistry and Cell)	Li-Polymer (4S1P), 4-cell
Voltage	15.6 V
Battery Capacity	90Wh
Charging Time	On Charge Time (0- 100%) * 120 min Off Charge Time (0 – 80%) ** 60 min Off Charge Time (0 – 100%) ** 120 min
Operating Temperature Range	between 10°C (50°F) and 35°C (95°F)
Warranty	1 Year / 3 Year Available
Coin Cell Battery (Model)	CR2016

## SECTION IV: BIOS / Certifications / Standards / Environmental

---

### BIOS Specifications

WMI Support	Yes, if it is BIOS Setup change by WMI.
ROM-Based Setup Utility (F1)	Yes
Bootblock Recovery	No
Replicated Setup	Yes, it supported with SRSETUP tool.
Boot Control	Yes, it means Boot order change.
Discrete Mode	No
Memory Change Alert	N/A
Thermal Alert	N/A
Asset Tag	Yes

System/Emergency ROM Flash Recovery with Video	N/A But FW based ROM flash recovery is supported.
Remote Wakeup/Remote Shutdown	Yes, if Remote wakeup is Wake on LAN from S4/S5.
Keyboard-less Operation	N/A
Per-port Control	Yes, if it is I/O port enable/disable by BIOS Setup.
Adaptive Cooling	Yes, if it is thermal & fan control.
Security	Yes, BIOS password / Hard disk password / Finger print
Intel(R) AMT (includes ASF 2.0)	Yes. If you select vPro model
Intel(R) TXT	Yes. If you select vPro model
Memory Modes	N/A

## EMC & Safety

EMC	Published, Certified Existing Reports EMC – Australia EMC – Belarus EMC – Canada EMC – EU/EFTA EMC – Japan EMC – Kazakhstan EMC – New Zealand EMC – Russia EMC – United Kingdom EMC – USA/Territories
Safety	To access the latest User Guide and Safety and Warranty Guide, go to: <a href="https://support.lenovo.com">https://support.lenovo.com</a> Low Halogen Declaration of Conformance TNOT-2017-0040 Section 9 – Low Halogen Scorecard Homologation PCRB Compliant In the following countries: Albania, Algeria, Andorra, Angola, Antigua and Barbuda, Argentina, Armenia, Aruba, Australia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bermuda, Bolivia, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Cayman Islands, Central African Republic, Chad, China, Colombia, Comoros, Congo, Costa Rica, Djibouti, Dominican Republic, Egypt, El Salvador, Eritrea, Ethiopia, EU/EFTA, Fiji, Gabon, Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Haiti, Honduras, Hong Kong, India, Indonesia, Israel, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Laos, Lebanon, Liberia, Macau, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Namibia, Nepal, New Zealand, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Russia, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, South Africa, South Korea, Sri Lanka, Swaziland, Taiwan, Tajikistan, Tanzania, Thailand, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uruguay, USA/Territories, Uzbekistan, Venezuela, Vietnam, Zambia, Zimbabwe, Brazil – Inmetro 170 Govt Bids, Guinea-Bissau, Lesotho

## Environmental

Energy Star	ENERGY STAR® Version 8.0 For more information about ENERGY STAR, go to: <a href="https://www.energystar.gov">https://www.energystar.gov</a>
-------------	---

EPEAT	EPEAT Certification Available on select models
IT ECO declaration	The latest environmental information about Lenovo products is available at: <a href="https://www.lenovo.com/ecodeclaration">https://www.lenovo.com/ecodeclaration</a>
Hazardous Substances	The latest environmental information about Lenovo products is available at: <a href="https://www.lenovo.com/ecodeclaration">https://www.lenovo.com/ecodeclaration</a> European Union RoHS This Lenovo product, with included parts (cables, cords, and so on) meets the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("RoHS recast" or "RoHS 2"). For more information about Lenovo worldwide compliance on RoHS, go to: <a href="https://www.lenovo.com/rohs-communication">https://www.lenovo.com/rohs-communication</a>

## Manageability

Industry Standard Specifications	This product meets the following industry standard specifications for manageability functionality:
Remote Manageability Software Solutions	Lenovo ThinkManagement Console Microsoft System Center Configuration Manager LANDesk Management Suite for Lenovo Vantage Technologies ( <a href="http://www.landesk.com/lenovo">www.landesk.com/lenovo</a> )
System Software Manager	Lenovo ThinkStation supports software management tools from the ThinkVantage System Update suite: System Update Update Retriever
Service, Support, and Warranty	On-site Warranty and Service: Three-years, limited warranty and service offering delivers on-site, next business-day service for parts and labor and includes free telephone support 8am to 5pm. Global coverage ensures that any product purchased in one country and transferred to another, non-restricted country will remain fully covered under the original warranty and service offering.
Materials Used	90% Recycled Magnesium C Cover 55% Recycled Aluminum D Cover 90% PCC Plastic Speaker Enclosure 90% PCC Plastic Battery Pack Enclosure 30% PCC Plastic 135W & 170W AC Adapter Low Temperature Solder (SSD, fingerprint reader module) Plastic free packaging with 90% recycled and/or FSC certified content (standard)
TCO Certification	TCO 9.0
Disclaimers	1. EPEAT registered where applicable. EPEAT registration varies by country. See <a href="http://www.epeat.net">www.epeat.net</a> for registration status by country. 2. Product packaging shall contain, on average, a minimum total percentage of 90% by weight of any combination of the following materials: Recycled content, biobased plastic, non-wood biobased fiber material, and/or sustainably forested material