

# Lenovo ThinkPad P1 Gen 4

Version: 1.0 | 08/24/2021

## SECTION I: SYSTEM OVERVIEW

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Description	Reimaged with the user in mind, the ThinkPad® P1 Gen 4 is the perfect combination of workstation know how, ultra premium design, and true mobility, without sacrificing looks for power.
Hardware Maintenance Manual	X
Drivers & Software	X

### CPU

Processor Support	Intel 11th gen Tiger Lake H Series Core i7, i9, and Xeon
Socket Type	BGA

### Operating Systems

Preloaded	Windows 10 Pro 64-bit for Workstations (20H2) Windows 10 Pro 64-bit (20H2) Windows 10 Home 64-bit (20H2) Windows 10 Single Language Home 64-bit (20H2) Ubuntu 64-bit (Version 20.04 LTS, running the 4.15.0-1039-oem kernel) No Operating System Windows 10 China Government Edition
Supported	Windows 10 Pro 64-bit for Workstations (20H2) Windows 10 Pro 64-bit (20H2) Windows 10 Home 64-bit (20H2) Windows 10 Single Language Home 64-bit (20H2) Ubuntu Linux 64-bit (Version 20.04 LTS, running the 4.15.0-1039-oem kernel) Red Hat (RHEL) 8.4 No Operating System Windows 10 China Government Edition"

### Memory

Number of DIMM Slots	2 DIMM sockets
Channels	Single Channel w/ 1DIMM Dual Channel w/ 2DIMMs
Type	DDR4 SO-DIMM, ECC / non-ECC
ECC Support	Yes
Speed	Up to 3200 MHz on Non-ECC Memory Up to 3200 MHz on ECC Memory
Max DIMM Size	32GB
Max System Memory	64GB
Min System Memory	8GB
Soldered Memory	None

## Storage

Storage Slots	2x M.2 2280-S3 (with UMA, NV T1200, RTX A2000) 1x M.2 2280-S3 (with NV RTX A3/4/5000, GF RTX 3070/80)
SATA	None
PCIe	Solid State Drive, 2x OPAL2 PCIe-NVMe M.2 2280-S3 - TLC
SAS	None
Interface	PCIe Gen 4 or Gen 3
Security	OPAL2 for NVMe SSD
Optional Hard Disk Drive Controllers	None
Disclaimers	NV RTX A3/4/5000 or GF RTX 3070/80 cannot be configured with dual storage

## Video

Integrated Graphics	For Intel® i7-11800H Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i7-11850H vPro Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i9-11950H vPro Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® Xeon® W-11855M vPro Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS
Discrete Graphics	NVIDIA T1200, NVIDIA RTX A2000, NVIDIA RTX A3000, NVIDIA RTX A4000, NVIDIA RTX A5000 NVIDIA GeForce RTX 3070, NVIDIA GeForce RTX 3080
Adapter	None
Bus Interface	PEG

## Display

Resolutions	WQXGA (QHD+) / WQUXGA (UHD+)
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## Camera

Resolution	FHD 1080p / IR Camera
Frames per Second	30 fps
Focus	Fixed 50cm
Camera Interface	USB 2.0
IR Camera	Yes, On Select Model

## Keyboard

Number of Keys	US : 84 / UK : 85 / JP :89
Numpad	No
Size	100% ISO
Function Key Features	Yes
Backlit	Yes
Keyboard size	Como 2021 Full size KB without NumPad (Bottom loading)
Key stroke	1.5mm
Key pitch	19.05 mm (Vertical & Horizontal)
Keyboard backlight	Yes
Keyboard thickness	4.55mm

## Touchpad / Fingerprint Reader

TrackPoint Details	COMO TrackPoint module (t5.55mm)
Finger Print Reader Model	Synaptics Metallica 8x8 FPR, MoC - integrated with Power button
Multi-Touch	Yes
Resolution	1000 ppi
TouchPad/Trackpad thickness	3.3mm
TouchPad/Trackpad type	2 Buttons Clickpad
Trackpad size	115mm x 67.6mm
Trackpad material/finish	Glass surface

## I/O – Ports and Connectors

USB	2x USB-A 3.2 (Gen1) (1 powered)
Thunderbolt	2x Thunderbolt 4 (USB-C/DP/PD) (DP 1.4 for discrete, DP 1.2 for integrated graphics)
HDMI	1x HDMI (2.1/2.0)
Audio Combo Jack	1x Microphone & Headphone Combo Jack (3.5mm)
Media Card Reader	Dedicated MicroSD Card Reader (UHS-II) (MMC,SD,SDHC SDXC)
Smart Card Reader	None
Power Connector	DC-In
Docking Port	Docking Via Thunderbolt 4 / USB-C
VirtualLink	None
Network adapter	RJ-45 via USB-C to Ethernet Adapter
Disclaimers	NV T1200 or Intel UMA come with HDMI 2.0 NV RTX A2/3/4/5000 or GF RTX 3070/80 come with HDMI 2.1

## Power Connector

Main	DC-In
USB-C	2x Thunderbolt 4 (USB-C/DP/PD)

## Ethernet

Vendor	N/A
Count	N/A
EEPROM	N/A
Speeds	N/A
Functions	N/A
Connectors	RJ-45 via USB-C to Ethernet Adapter

## WWAN

Model	Qualcomm Snapdragon X55 5G CAT20 (On Select Model) Quectel EM05CEFC 4G LTE CAT4 (PRC only)
Disclaimers	NV RTX A3/4/5000 or GF RTX 3070/80 cannot be configured with WWAN Not WWAN-Ready

## Near Field Communications

Model	No NFC Support
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## 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	Slim 230W AC Adapter
Dimensions	200cc (118 x 77 x 22mm)	240cc (142 x 77 x 22mm)	353cc (160 x 87 x 25.4mm)
Weight	Max 370g	Max 475g	Max 815g
Input Voltage	100-240V	100-240V	100-240V

## Security

TPM	Version 2.0
Asset ID	Yes
vPro	Intel vPro for WS

## Chassis Information

Format	Thin-Light
Color	Deep Black Carbon Fiber Weave (for UHD+ only)
Thermal Solutions	Internal Dual FAN, Intelligent Cooling Vapor Chamber (for NV RTX A3/4/5000 or GF RTX 3070/80)
Dimensions	Length 14.15 inches 359.5 millimeters Width 9.99 inches 253.8 millimeters Height Non-Touch 0.69 inches 17.7 millimeters Touch 0.71 inches 18.2 millimeters
Weight	Non-Touch Model: 4 Cell Battery 1.81kgs/3.99lbs Touch Model: 4 Cell Battery 1.86kgs/4.10lbs

## Packaging Parameters

Height (mm)	235
Height (inch)	9.25
Width (mm)	531
Width (inch)	20.9
Depth (mm)	80
Depth (inch)	3.14
Weight (kgs)	Standard:3.4kgs / Retail:4.1kgs
Weight (lbs)	Standard:7.49lbs / Retail:9.03lbs

## Security & Serviceability

Hardware Maintenance Manual	P1 Gen 4 HMM
Drivers & Software	P1 Gen 4 Drivers & Software
Self Healing BIOS	Yes
Access Panel	Removable bottom cover
Number of Screws	7
Swappable Components	Bottom cover, memory module, M.2 solid-state drive, coin-cell battery, TrackPoint pointing cap, SIM Tray
Storage Slots	2 slots
Memory	2 SODIMM slots

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

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### Supported Components

Processor	Intel® Core™ i7-11800H processor (2.3 GHz/8 Core/24M) Intel® Core™ i7-11850H vPro processor (2.5 GHz/8 Core/24M/vPro) Intel® Core™ i9-11950H vPro processor (2.6 GHz/8 Core/24M/vPro) Intel® Xeon™ W-11855M vPro processor (3.2 GHz/6 Core/18M/vPro)
Memory Support	DDR4 3200MHz SO-DIMM
Chipset (PCH)	Mobile Intel® WM590 Chipset
Size of BIOS Flash	32MB
Super I/O	None
Clock	Crystal
Audio	Realtek High Definition Audio
Ethernet	Via bundled or optional USB-C to RJ-45 dongle

## Memory

System Capacity Options	8GB 16GB 32GB 64GB
non-ECC	8GB DDR4 3200MHz SoDIMM 16GB DDR4 3200MHz SoDIMM 32GB DDR4 3200MHz SoDIMM
Brand of non-ECC Memory	Samsung SK Hynix Micron Ramaxel
ECC	8GB DDR4 3200MHz ECC SoDIMM 16GB DDR4 3200MHz ECC SoDIMM 32GB DDR4 3200MHz ECC SoDIMM
Brand of ECC Memory	SK Hynix Samsung
Memory Speed	3200MHz with non-ECC Memory 3200MHz with ECC Memory

## 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 3x4 TLC (M.2 2280-S3) 512GB OPAL2 PCIe 3x4 TLC (M.2 2280-S3) 1TB OPAL2 PCIe 3x4 (M.2 2280-S3) 512GB OPAL2 PCIe 4x4 TLC (M.2 2280-S3) 1TB OPAL2 PCIe 4x4 (M.2 2280-S3) 2TB OPAL2 PCIe 4x4 (M.2 2280-S3)
2.5" PCIe Solid State Drive (SSD)	None
Brand of Drive	Samsung Western Digital Hynix Kioxia Micron
Intel Optane Storage Technology	None
RAID	Optional, Selectable in BIOS
RAID Level and Requirements	RAID-0/1

## Removeable Media

Media Card Reader	UHS-II
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## SECTION III: Supported Component Detail

### CPU Specifications

CPU	Intel® Core™ i7-11800H processor (2.3 GHz/8 Core/24M)	Intel® Core™ i7-11850H vPro processor (2.5 GHz/8 Core/24M/vPro)	Intel® Core™ i9-11950H vPro processor (2.6 GHz/8 Core/24M/vPro)	Intel® Xeon™ W-11855M vPro processor (3.2 GHz/6 Core/18M/vPro)
Integrated Graphics	Intel® UHD Graphics	Intel® UHD Graphics	Intel® UHD Graphics	Intel® UHD Graphics
# of Cores	8	8	8	6
# of Threads	16	16	16	12
Processor Base Frequency	2.30 GHz	2.50 GHz	2.60 GHz	3.20 GHz
Max Turbo Frequency	4.60 GHz	4.80 GHz	5.00 GHz	4.90 GHz
Cache	24 MB	24 MB	24 MB	18 MB
TDP	35 - 45 W	35 - 45 W	35 - 45 W	35 - 45 W

### Display Specifications

Model	WQXGA Non-Touch	WQUXGA Non-Touch	WQUXGA Touch
Resolution	QHD+ (2560 x 1600)	UHD+ (3840 x 2400)	UHD+ (3840 x 2400)
Diagonal	16"	16"	16"
Aspect Ratio	16:10	16:10	16:10
Backlight	LED	LED	LED
PPI	QHD+: 189	UHD+: 283	UHD+: 283
Active Area	QHD+: 344.68mm x 215.42mm	UHD+: 343.99mm x 214.99mm	UHD+: 343.99mm x 214.99mm
Refresh Rate	Max 60Hz	Max 60Hz	Max 60Hz
Contrast Ratio	QHD+: 1200:1	UHD+: 1500:1	UHD+: 1500:1
Viewing Angle	QHD+: 85/85/85/85 degree	UHD+: 85/85/85/85 degree	UHD+: 85/85/85/85 degree
Color gamut	100% sRGB	100% Adobe	100% Adobe
Brightness	400 nits	600 nits	600 nits
HDR	N/A	HDR400 Dolby Vision	HDR400 Dolby Vision
Color Depth	QHD+: 16.7M (8-bit)	UHD+: 1064M (8-bit +	UHD+: 1064M (8-bit +

		FRC)	FRC)
Interface	QHD+: eDP 1.4	UHD+: eDP 1.4	UHD+: eDP 1.4
Panel ID Recognition	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight	330g max	330g max	330g max
Color Calibrator	None	X-Rite Pantone Color Calibration (Windows OS only)	X-Rite Pantone Color Calibration (Windows OS only)
Panel Technology	IPS, Anti-Glare	IPS, Anti-Glare	IPS, Anti-Reflective/Anti-Smudge
Touch Panel	None	None	Multi-Finger Touch Panel with Pen Controller, Wacom. Pen Tilt support

## 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
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)
Size	M.2 2280-S3	M.2 2280-S3
Interface Type	PCIe NVMe	PCIe NVMe
Read/Write IOPS Specifications	Read: 250K (512GB/1TB/2TB), 200K (256GB) Write: 240K (512GB/1TB/2TB), 190K (256GB) IOPS, 4K Random, 32 q depth, 4 threads	Read: 550K (1TB/2TB), 350K (512GB), 190K (256GB) Write: 400K (1TB/2TB), 370K (512GB), 200K (256GB) IOPS, 4K Random, 32 q depth, 8 threads
Bandwidth Performance	PCIe Gen3x4 (8Gb/S)	PCIe Gen4x4 (16Gb/S)
Power Consumption (Max)	5.0W	8.0W
Active(AVG)	5.0W (Sequential read)	8.0W (Sequential read)
Idle	5mW (Low power state)	5mW (Low power state)
Min MTBF	2,000,000 (h)	2,000,000 (h)
Min Sequential Read	3000MB/s (512GB/1TB/2TB), 2900MB/s (256GB)	6400MB/s (1TB/2TB), 6000MB/s (512GB), 5000MB/s (256GB)

Min Sequential Write	1600MB/s (512GB/1TB/2TB), 900MB/s (256GB)	5000MB/s (2TB), 3800MB/s (1TB), 3200MB/s (512GB), 1600MB/s (256GB)
Hardware Encryption	Yes	Yes for OPAL, No for Pyrite

## Discrete Graphics Adapter

Laptop GPUs	NVIDIA T1200 with Max-Q Design	NVIDIA RTX A2000 with Max-Q Design	NVIDIA RTX A3000 with Max-P Design	NVIDIA RTX A4000 with Max-Q Design	NVIDIA RTX A5000 with Max-Q Design	NVIDIA GeForce RTX 3070 with Max-Q Design	NVIDIA GeForce RTX 3080 with Max-Q Design
NVIDIA CUDA Processing Cores	1024	2560	4096	5120	6144	5120	6144
NVIDIA RT Cores	N/A	20 (2nd Gen)	32 (2nd Gen)	40 (2nd Gen)	48 (2nd Gen)	40 (2nd Gen)	42 (2nd Gen)
Tensor Cores	N/A	80 (3rd Gen)	128 (3rd Gen)	160 (3rd Gen)	192 (3rd Gen)	160 (3rd Gen)	192 (3rd Gen)
GPU Memory	4GB	4GB	6GB	8GB	16GB	8GB	16GB
Peak Memory Bandwidth	192GB/s	192GB/s	264GB/s	384GB/s	448GB/s	384GB/s	384GB/s
Memory Type	GDDR6	GDDR6	GDDR6	GDDR6	GDDR6	GDDR6	GDDR6
Memory Interface	128-bit	128-bit	192-bit	256-bit	256-bit	256-bit	256-bit
TGP Max Power Consumption	35W	35W	80W	80W	80W	80W	80W
DisplayPort	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Open GL	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Shader Model	7.0	7.0	7.0	7.0	7.0	-	-
DirectX	12.1	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate
PCIe Generation	4	4	4	4	4	4	4
Single Precision Floating-Point Performance	3.7	9.3	12.8	17.8	21.7	-	-
Tensor Performance	N/A	74.7	102.2	142.5	174.0	-	-
NVIDIA FXAA/TXAA Anti-Aliasing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NVIDIA RTX Desktop Manager	Yes	Yes	Yes	Yes	Yes	-	-
Vulkan Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NVIDIA Optimus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3rd Gen Max-Q Technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NVENC/NVDEC	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## WLAN

Model	Typhoon Peak 2 Intel Wi-Fi 6E AX210 (Gig+) + BT5.2
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 10, Linux
Wi-Fi Alliance	Wi-Fi CERTIFIED 6, 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 802.11-2016 and select amendments (selected feature coverage) IEEE 802.11a, b, d, e, g, h, i, k, n, r, u, v, w, ac, ax; Fine Timing Measurement based on 802.11-2016, Wi-Fi Location R2 (802.11az) HW readiness
Roaming	Support seamless roaming between access points
Bluetooth	BT 5.2
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 140-2
Product Safety	UL,C-UL,CB (IEC 60950-1)

## Battery

Dimension	L: 312mm*W: 58.8mm*T 9.4mm
Weight	MAX 343.2g
Type (Chemistry and Cell)	Li-Polymer (4S1P), 4-cell
Voltage	15.52 V
Battery Life	Up to 10.5hrs (Condition: QHD+/i7-11850H vPro/8GB DIMM/1x 256GB SSD/UMA/Hybrid Graphics Mode/Better Battery Mode/MobileMark2018)
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

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### 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	Yes
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:

	<p><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</p>
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## 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.