

# Lenovo P15 Gen 1

Version: 2.0 | 05/05/2023

## SECTION I: SYSTEM OVERVIEW

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Description	Versatile Power: Power and mobility are optimized in the ThinkPad® P15, Lenovo's most popular mobile workstation. Packed with performance, the P15 features the latest Intel® Xeon® or 10th Gen Core™ processor options and support for the ultra-powerful NVIDIA® Quadro RTX™ 5000 for a top of the line experience ideal for the mobile power user for on the road and in the office.
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## CPU

Processor Support	Intel 10th gen Comet Lake H Series Core i7, i9 Intel 10th gen Comet Lake H Series Xeon
Socket Type	BGA

## Operating Systems

Preloaded	Windows 10 Pro 64-bit for Workstations (20H1) Windows 10 Pro 64-bit (20H1) Windows 10 Home 64-bit (20H1) Windows 10 Single Language Home 64-bit (20H1) Ubuntu 64-bit (Version 18.04 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 (20H1) Windows 10 Pro 64-bit (20H1) Windows 10 Home 64-bit (20H1) Windows 10 Single Language Home 64-bit (20H1) Ubuntu & RedHat Linux 64-bit (Version 18.04 LTS, running the 4.15.0-1039-oem kernel) No Operating System Windows 10 China Government Edition

## Memory

Number of DIMM Slots	4 DIMM sockets: Top x2; Bot x2
Channels	Single Channel w/ 1DIMM Dual Channel w/ 2DIMMs
Type	DDR4 SO-DIMM, ECC / non-ECC
ECC Support	Yes
Speed	Up to 3200 MT/s on Non-ECC Memory Up to 2933 MT/s on ECC Memory
Max DIMM Size	32GB
Max System Memory	128GB
Min System Memory	8GB
Soldered Memory	None

## Storage

Storage Slots	2x M.2 2280-S3
SATA	None
PCIe	Solid State Drive, 2x OPAL2 PCIe-NVMe M.2 2280-S3 - TLC
SAS	None
Interface	PCIe
Security	OPAL2 for NVMe SSD
Optional Hard Disk Drive Controllers	None

## Video

Integrated Graphics	For Intel® i5-10400H Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i7-10750H Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i7-10850H Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i7-10875H Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i9-10885H Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® i9-10980HK Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS For Intel® Xeon® W-10855M Processor Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS
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	For Intel® Xeon® W-10885M Processor Processor Graphics Intel® UHD Graphics Utilized via "Hybrid Mode" in BIOS
Discrete Graphics	NVIDIA Quadro T1000, T2000, RTX3000, RTX4000, RTX5000
Adapter	None
Bus Interface	PEG

## Display

Resolutions	FHD / UHD
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## Camera

Resolution	HD 720p / IR Camera
Frames per Second	30 fps
Focus	Fixed 50cm
Camera Interface	USB 2.0
IR Camera	Select models

## Keyboard

Number of Keys	US : 105 / UK : 106 / JP : 110
Numpad	Yes
Size	100% ISO
Function Key Features	Yes
Backlit	Yes
Keyboard size	Como 2020 Full size KB with NumPad (Top loading)
Key stroke	1.8mm
Key pitch	19.05 mm(Vertical & Horizontal)
Keyboard backlight	Optional
Keyboard thickness	4.55mm

## Touchpad / Fingerprint Reader

TrackPoint Details	COMO TrackPoint module (t5.55mm)
Finger Print Reader Model	8x8 FPR, MoC w/o LED Prometheus 8x8
Multi-Touch	Yes

Resolution	1000 ppi
TouchPad/Trackpad thickness	0.8mm
TouchPad/Trackpad type	TouchPad
Trackpad size	99mm x 58.4mm
Trackpad material/finish	Mylar surface

## I/O - Ports and Connectors

USB	2x USB-A 3.2 Gen1 (1x Powered) 1 x USB-C
Thunderbolt	2 x Thunderbolt 3 (USB Type-C)
HDMI	1x HDMI (2.0) DP1.4
Audio Combo Jack	1x Microphone & Headphone Combo Jack (3.5mm)
Media Card Reader	1x SD Card Reader (SD, SDHC, SDXC, MMC)
Smart Card Reader	1x Smart Card Reader
Power Connector	DC-In
Docking Port	Docking Via Thunderbolt 3 / USB-C
VirtualLink	None
Network adapter	Gigabit Ethernet (RJ45)

## Power Connector

Main	DC-In
USB-C	2x Thunderbolt 3 (USB-C/DP/PD)

## Ethernet

Vendor	Intel
Count	x1
EEPROM	BIOS/MEFW SPI ROM TBT FW SPI ROM VBIOS SPI ROM
Speeds	10/100/1000 Mbps
Functions	Wake On LAN MAC Address Pass Through PXE Boot Flash Over LAN
Connectors	RJ45

## WWAN

Model	L860-GL CAT16 M.2 (Optional)
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## Near Field Communications

Model	None
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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	ALC3286
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 170W AC Adapter	Slim 230W AC Adapter
Dimensions	240cc (142 x 77 x 22mm)	353cc (160 x 87 x 25.4mm)
Input Voltage	450g	710g
Disclaimers	100-240V	100-240V

## Security

TPM	Version 2.0
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Asset ID	Yes
vPro	Intel vPro for WS

## Chassis Information

Format	Clamshell
Color	Midnight Black
Thermal Solutions	Internal Dual FAN, Intelligent Cooling
Dimensions	Length 14.78 inches 375.4 millimeters Width 9.93 inches 252.3 millimeters Height 0.96 inches (front) 24.5mm (front) (Thinnest) 1.23 inches (rear) 31.45mm (rear) (Thickest)
Weight	with 6 cell 94Whr Battery, Min 6.05 lbs / 2.74kg Max 6.35 lbs/2.88 kg

## Packaging Parameters

Height (mm)	341
Width (mm)	105
Depth (mm)	493

## Security & Serviceability

Hardware Maintenance Manual	P15 HMM
Drivers & Software	P15 Drivers & Software
Self Healing BIOS	Yes
Access Panel	Removeable bottom cover
Number of Screws	See Hardware Maintenance Manual for Details
Swappable Components	Bottom cover, memory module, M.2 solid-state drive, speaker assembly, coin-cell battery, TrackPoint pointing cap, keyboard, WLAN Card, WWAN Card, Power Button Cable, Hinge Caps, LCD Unit, Chassis Assembly, Dummy Smart Card Reader, System Board, SIM Tray
Storage Slots	2 slots
Memory	4 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 TMP 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™ i5-10400H vPro processor (2.6 GHz/4 Core/8M/ V-Pro) Intel® Core™ i7-10750H processor (2.6 GHz/6 Core/12M) Intel® Core™ i7-10850H vPro processor (2.7 GHz/6 Core/12M/V-Pro) Intel® Core™ i7-10875H vPro processor (2.3 GHz/8 Core/16M/V-Pro) Intel® Core™ i9-10885H vPro processor (2.4 GHz/8 Core/16M/V-Pro) Intel® Core™ i9-10980HK processor (2.4 GHz/8 Core/16M) Intel® Xeon™ W-10855M v7 vPro processor (2.8 GHz/6 Core/12M/V-Pro)
Memory Support	DDR4 3200MT/s SO-DIMM with non-ECC Memory DDR4 2933MT/s SO-DIMM with ECC Memory
Chipset (PCH)	Mobile Intel® WM490 Chipset
Size of BIOS Flash	8MB for Non-vPro model, 16MB for vPro model
Super I/O	None
Clock	Crystal
Audio	Realtek High Definition Audio
Ethernet	Intel® Ethernet Connection I219

## Memory

System Capacity Options	8GB 16GB 32GB 64GB 128GB
non-ECC	8GB DDR4 3200 SoDIMM 16GB DDR4 3200 SoDIMM 32GB DDR4 3200 SoDIMM
Brand of non-ECC Memory	Samsung SK Hynix Micron Ramaxel
ECC	8GB DDR4 2933 ECC SoDIMM 16GB DDR4 2933 ECC SoDIMM 32GB DDR4 2933 ECC SoDIMM
Brand of ECC Memory	SK Hynix Samsung
Memory clock frequency(MHz)	3200MT/s with non-ECC Memory 2933MT/s 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) 2TB OPAL2 PCIe 3x4 (M.2 2280-S3)
2.5" PCIe Solid State Drive (SSD)	None
Brand of Drive	Samsung Western Digital Hynix Toshiba
Intel Optane Storage Technology	None
RAID	Optional, Selectable in BIOS
RAID Level and Requirements	RAID-0/1

## Removeable Media

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

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### CPU Specifications

CPU	Intel® Core™ i5-10400H (2.6 GHz/4 Core/8M/V-Pro)	Intel® Core™ i7-10750H processor (2.6 GHz/6 Core/12M)	Intel® Core™ i7-10850H vPro processor (2.7 GHz/6 Core/12M/V-Pro)	Intel® Core™ i7-10875H vPro processor (2.3 GHz/8 Core/16M/V-Pro)	Intel® Core™ i9-10885H vPro processor (2.4 GHz/8 Core/16M/V-Pro)
Integrated Graphics	Intel® UHD Graphics 630	Intel® UHD Graphics 630	Intel® UHD Graphics 630	Intel® UHD Graphics 630	Intel® UHD Graphics 630
# of Cores	4	6	6	8	8
# of Threads	8	12	12	16	16
Processor Base Frequency	2.60 GHz	2.60 GHz	2.70 GHz	2.30 GHz	2.40 GHz
Max Turbo Frequency	4.60 GHz	5.00 GHz	5.10 GHz	5.10 GHz	5.30 GHz
Cache	8 MB	12 MB	12 MB	16 MB	16 MB
TDP	35 - 45 W	35 - 45 W	35 - 45 W	35 - 45 W	35 - 45 W
Intel ARK Spec Link	Intel Core i5-9400H	Intel Core i7-9750H	Intel Core i7-9850H	Intel Core i7-9850H	Intel Core i9-9880H

### CPU Specifications

CPU	Intel® Core™ i9-10980HK processor (2.4 GHz/8 Core/16M)	Intel® Xeon™ W-10855M v7 vPro processor (2.8 GHz/6 Core/12M/V-Pro)	Intel® Xeon™ W-10885M vPro processor (2.4 GHz/8 Core/16M/V-Pro)
Integrated Graphics	Intel® UHD Graphics 630	Intel® UHD Graphics P630	Intel® UHD Graphics P630
# of Cores	8	6	8
# of Threads	16	12	16
Processor Base Frequency	2.40 GHz	2.80 GHz	2.40 GHz
Max Turbo Frequency	5.30 GHz	5.10 GHz	5.30 GHz
Cache	16 MB	12 MB	16 MB
TDP	35 - 45 W	35 - 45 W	35 - 45 W
Intel ARK Spec Link	Intel Core i9-9880H	Intel Xeon E-2276M	Intel Xeon E-2276M

## Display Specifications

Model	FHD	FHD	UHD Non-Touch	OLED with Touch
Resolution	FHD (1920 x 1080)	FHD (1920 x 1080)	4K UHD (3840 x 2160)	4K UHD (3840 x 2160)
Diagonal	15.6"	15.6"	15.6"	15.6"
Aspect Ratio	Ratio 16:9	Ratio 16:9	Ratio 16:9	Ratio 16:9
Backlight	LED	LED	LED	OLED
PPI	FHD : 141	FHD : 141	UHD : 282	UHD : 282
Active Area	FHD : 344.16mm x 193.59mm	FHD : 344.16mm x 193.59mm	UHD : 344.2176mm x 193.6224	UHD : 344.2176mm x 193.6224
Refresh Rate	Max 60Hz	Max 60Hz	Max 60Hz	Max 60Hz
Contrast Ratio	FHD : Typ 700	FHD : Typ 1200	UHD : Typ 1200	UHD : Typ 100000
Viewing Angle (*1)	FHD: 85/85/85/85 degree	FHD: 85/85/85/85 degree	UHD: 85/85/85/85 degree	UHD: 85/85/85/85 degree
Color gamut	FHD 100% sRGB	FHD 100% sRGB	UHD 100% Adobe	UHD 100% DCI-P3
Brightness	300 nits FHD w/o touch	500 nits for FHD w/o touch HDR400	600 nits w/o touch HDR400	400 cd/m2 (Peak 540 cd/m2 10% area) HDR500
Contrast	FHD: 700:1	FHD: 800:1	UHD 1400:1	UHD 100,000:1
Color Depth	FHD: 16M (RGB 6-bit + FRC)	FHD: Native 1B (RGB 6-bit + FRC)	UHD: Native 1B (RGB 8-bit data driver)	UHD: Native 1B (RGB 8-bit + FRC)
Interface	FHD: eDP 1.2	FHD: eDP 1.4	UHD: eDP 1.3	UHD: eDP 1.4
Panel ID Recognition	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight	FHD: 304g	FHD: 305g	UHD: 300g	UHD: 200g
Color Calibrator	None	None	X-Rite Pantone Color Calibration	X-Rite Pantone Color Calibration
Panel Technology	IPS, Anti-Glare	IPS, Anti-Glare	IPS, Anti-Glare	OLED, Anti-Reflection / Anti-Smudge
Touch Panel	None	None	None	10-Finger Touch Panel with Pen Controller, Wacom. Pen Tilt support.

## SSD Specifications

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

## Solid State Storage Devices

Supported Types	M.2
Dimensions inches/centimeters (W x D x H)	22.0 (+-0.15) x 80.0 (+-0.15) x 2.3 (max)
Size	M.2 2280
Interface Type	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
Bandwidth Performance	PCIe Gen3x4 (8Gb/S)
Power Consumption (Max)	5.0W
Active(AVG)	5.0W (Sequential read)
Idle	5mW (Low power state)
Min MTBF	2,000,000 (h)
Min Sequential Read	3000MB/s (512GB/1TB/2TB), 2900MB/s (256GB)
Min Sequential Write	1600MB/s (512GB/1TB/2TB), 900MB/s (256GB)
Hardware Encryption	Yes

## Discrete Graphics Adapter

GPU Name	Quadro T1000	Quadro T2000	Quadro RTX3000	Quadro RTX4000 with Max-Q Design	Quadro RTX5000 with Max-Q Design
CUDA Processing Cores	768	1024	2304	2560	3072
GPU Memory	4GB	4GB	6GB	8GB	16GB
Memory Bandwidth	128GBps	128GBps	336GBps	448GBps	448GBps
Memory Type	GDDR5	GDDR5	GDDR6	GDDR6	GDDR6
Memory Interface	128-bit	128-bit	192-bit	256-bit	256-bit
TGP Max Power Consumption	50W	60W	80W	90W	90W
Display Port	1.4	1.4	1.4	1.4	1.4
OpenGL	4.6	4.6	4.6	4.6	4.6
Shader Model	5.1	5.1	5.1	5.1	5.1

DirectX	12.1	12.1	12.1	12.1	12.1
PCIe Generation	3	3	3	3	3
Floating-Point Performance	2.6	3.5	6.4	8	9.4
VR Ready	X	X	Yes	Yes	Yes
Simultaneous Multi-Projection	Yes	Yes	Yes	Yes	Yes
NVIDIA FXAA/TXAA Antialiasing	Yes	Yes	Yes	Yes	Yes
NVIDIA nView Display Management Technology	Yes	Yes	Yes	Yes	Yes
GPU Direct for Video	X	Yes	Yes	Yes	Yes
Vulkan Support	Yes	Yes	Yes	Yes	Yes
NVIDIA Optimus	Yes	Yes	Yes	Yes	Yes

## WLAN

Model	Harrison Peak 2 Intel Wi-Fi 6 AX201 2*2ax+BT5.1 vPro PCIE M.2 1216 Module (CNVi)
Antenna Diversity	Supported
MIMO	Supported
Radio ON/OFF Control	Supported M.2 1216
Connector interface	M.2 CNVio
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*(limited feature support), Chrome*
Wi-Fi Alliance	Wi-Fi CERTIFIED* a/b/g/n/ac/ax with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Miracast* as Source, and Wi-Fi Direct (For Microsoft Windows* only)
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac/ax, 802.11d,802.11e, 802.11h, 802.11i, 802.11w, 802.11r, 802.11k, 802.11v, pending OS support; Fine Timing Measurement based on 802.11-2016
Roaming	Support seamless roaming between access points
Bluetooth*	BT5.1
Regulatory	All compliance
US Government	FIPS12, FISMA
Product Safety	UL,C-UL,CB (IEC 60950-1)

## Battery

Dimension	L: 74.95mm*W: 204.5mm*T 13.66mm
Weight	MAX 410g

Type (Chemistry and Cell)	Li-Polymer (3S2P), 6-cell
Voltage	11.25V
Battery Life	On Charge Time (0- 100%) * 120 min Off Charge Time (0 - 80%) ** 58 min Off Charge Time (0 - 100%) ** 118 min
Battery Capacity	94Wh
Charging Time	No Quick charge capability On Charge Time (0- 100%) * 131min Off Charge Time (0 - 80%) ** 65 min Off Charge Time (0 - 100%) ** 125 min
Operating Temperature Range	between 10°C (50°F) and 35°C (95°F)
Warranty	1 Year/ 3 Year SB10K97665 need new cell longevity test, plan finish 2019/07/17.
Coin Cell Battery (Model)	CR2032-J056(MHLF)

## 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
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
Remote Wakeup/Remote Shutdown	Yes, if Remote wakeup is Wake on LAN from S4/S5. I don't know the Remote shutdown situation.
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	<p>Published, Certified Existing Reports</p> <p>EMC - Australia  EMC - Belarus  EMC - Canada  EMC - China  EMC - EU/EFTA  EMC - Japan  EMC - Kazakhstan  EMC - New Zealand  EMC - Russia  EMC - South Korea  EMC - Taiwan  EMC - USA/Territories</p> <p>Not Applicable / Not Required</p> <p>EMC - Israel  EMC - Moldova  EMC - Serbia  EMC - Turkey  EMC - Uzbekistan  EMC - Vietnam</p>
Safety	<p>To access the latest User Guide and Safety and Warranty Guide, go to:  <a href="https://support.lenovo.com">https://support.lenovo.com</a></p> <p>Low Halogen Declaration of Conformance  TNOT-2017-0040  Section 9 - Low Halogen Scorecard  Izod Test - EPEAT Compliant  Homologation PCRB Compliant</p> <p>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>

## Environmentals

Energy Star	<p>ENERGY STAR® Version 7.1  For more information about ENERGY STAR, go to:  <a href="https://www.energystar.gov">https://www.energystar.gov</a></p>
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	<p>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></p>

## Manageability

Industry Standard Specifications	This product meets the following industry standard specifications for manageability functionality:
Remote Manageability Software Solutions	<p>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>)</p>
System Software Manager	<p>Lenovo ThinkStation supports software management tools from the ThinkVantage System Update suite:          System Update          Update Retriever</p>
Service, Support, and Warranty	<p>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 â€" 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.</p>