

# Lenovo P16s i Gen 2

Version: 1.0 | 05/05/2023

## SECTION I: Platform Overview

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Description	<p>ThinkPad P16s i</p> <p><b>PERFORMANCE AT THE SPEED OF LIGHT</b></p> <p>The ThinkPad® P16s i provides a perfect mix of performance and power on-the-go at a comfortable price point, packed in a thin and light 16-inch chassis. Built with the latest Intel® Core™ processors and NVIDIA professional graphics, the ISV certified P16s i is designed to move with its users and keep up with them when running AutoCAD®, Revit®, SolidWorks®, and more.</p> <p>Designed with enhanced usability including a fingerprint reader, full numeric keypad, wider touchpad, and all-day battery capacity, the P16s i is the ideal solution for engineers, architects, and students, whether collaborating in the office, on a job site, or when visiting customers.</p>
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## CPU

Processor Support	Raptor Lake P28 Series Core i5/i7
Socket Type	BGA
Preloaded	Windows 11 Pro 64 (22H2) Windows 10 Pro (preinstalled through downgrade rights in Windows 11 Pro) Windows 11 Home 64 Windows 11 Home Single Language 64 Windows 11 Home Chinese Language Edition 64 CMIT Government Edition Ubuntu (Version22.04)
Supported	Windows 11 Pro 64 (22H2) Windows 10 Pro (preinstalled through downgrade rights in Windows 11 Pro) Windows 11 Home 64 Windows 11 Home Single Language 64 Windows 11 Home Chinese Language Edition 64 CMIT Government Edition Ubuntu (Version22.04)

## Memory

Number of DIMM Slots	1 soldered-down DIMM + 1 DIMM slot
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Channels	Single Channel w/ 1 soldered DIMM Dual Channel w/ 1 soldered DIMM + 1 add-in DIMM
Type	DDR5, LPDDR5x
ECC Support	No
Speed	5600, 7500 MHz
Max DIMM Size	32GB
Max System Memory	UMA: 48GB DDR5; SWG: 64GB LPDDR5x
Min System Memory	UMA: 16GB DDR5; SWG: 16GB LPDDR5x
Soldered Memory	16GB/32GB/64GB

## Storage

Storage Slots	1 x PCIe Gen 4 M.2 2280
SATA	/
PCIe	Solid State Drive, OPAL2 PCIe-NVMe Gen 4 M.2 2280- TLC
SAS	None
Interface	PCIe Gen 4
Security	PCIE
Optional Hard Disk Drive Controllers	OPAL2 for NVMe SSD

## Video

Integrated Graphics	Processor Graphics Intel® Iris Xe (dual RAM channel required)
Discrete Graphics	NVIDIA RTX A500
Adapter	None
Bus Interface	PEG
Disclaimers	Dual RAM channel required

## Display

Resolutions	FHD+ / 4k OLED
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## Camera

Resolution	HD 720p/FHD 1080p/5MP
Frames per Second	30 fps

Focus	Fixed 50cm
Camera Interface	USB 2.0
IR Camera	Yes (optional)

## Keyboard

Number of Keys	US : 105 / UK : 106 / JP : 110
Numpad	Yes
Size	100% ISO
Function Key Features	Yes
Backlit	Yes
Keyboard size	CS20 KYB with numberpad
Key stroke	1.5mm
Key pitch	19.05mm
Keyboard backlight	Optional
Keyboard thickness	Standard

## Touchpad / Fingerprint Reader

TrackPoint Details	COMO TrackPoint module (t5.5mm)
Finger Print Reader Model	Synaprics Metallica 8x8 FPR, MoC
Multi-Touch	Yes
Resolution	1000 ppi
TouchPad/Trackpad thickness	3.3mm
TouchPad/Trackpad type	3 BCP
Trackpad size	115mm x 61 mm
Trackpad material/finish	Mylar surface

## I/O – Ports and Connectors

USB	2x USB-A 3.2 (Gen 1) (1 powered)
Thunderbolt	2x Thunderbolt 4 (USB 4/USB-C 3.2 Gen 2/DP2.0/PD)
HDMI	1x HDMI 2.0b
Audio Combo Jack	1x Microphone & Headphone Combo Jack (3.5mm)
Media Card Reader	N/A
Smart Card Reader	Yes (optional)

Power Connector	DC-In
Docking Port	Docking Via Thunderbolt 4
VirtualLink	None
Network adapter	Gigabit Ethernet (RJ45)

## Power Connector

Main	DC-In
USB-C	1x Thunderbolt 4 (USB-C/DP/PD)

## Ethernet

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

## WWAN

Model	optional: CAT16/CAT4 with physical eSIM optional
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## Near Field Communications

Model	Yes, optional
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## Audio

Vendor	Realtek
Type	High Definition Audio Codec
Internal Speaker	Yes, dual speakers
Connectors	Microphone & Headphone Combo Jack (3.5mm)

Chipset	ALC3287
Number of Channels	4-channel DAC, 4-channel ADC
Number of Bits/Audio Resolution	16/20/24-bit PCM format
Sampling Rate (Recording/Playback)	n
Signal to Noise Ratio	90dB Signal-to-Noise Ratio (A-weighting) for ADC input. 100dB Signal-to-Noise Ratio (A-weighting) for DAC output
Analog Audio	None
Dolby Digital	Yes
Digital Out (S/PDIF)	No
Speaker Power Rating	2W@4ohm/ch

## Power adapter

Type	135W AC Adapter	100W AC Adapter	65W AC Slim Adapter	65W AC Adapter
Dimensions	139.5mm x 77mm x 22mm	108mm x 56mm x 26.5mm	88mm x 51mm x 22mm	108.5mm x 46.5mm x 29.5mm
Input Voltage	100-240V	100-240V	100-240V	100-240V

## Security

TPM	Yes, TPM2.0
Asset ID	Yes
vPro	Yes on vPro model

## Chassis Information

Format	Ultraslim Notebook
Color	Thunder Black/Storm Grey
Thermal Solutions	Internal Single FAN, Intelligent Cooling
Dimensions	Length 14.25 inches 361.98 millimeters Width 10.05 inches 255.5 millimeters Height UMA : 23.7 mm (design value) 20.5 mm (Mkt claim) SWG : 24.95 mm (design value) 20.82 mm (Mkt claim) UMA : 0.93 in (design value) 0.80 in (Mkt claim) SWG : 0.98 in (design value) 0.82 in (Mkt claim)

Weight	Starting weight 1.70kg / 3.76 lbs
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## Packaging Parameters

Height (mm)	332
Height (inch)	13
Width (mm)	488
Width (inch)	19.2
Depth (mm)	87
Depth (inch)	3.4
Weight (kgs)	0.373
Weight (lbs)	0.822

## Security & Serviceability

Self Healing BIOS	No
Access Panel	Removeable bottom cover
Number of Screws	8
Swappable Components	Base cover assembly, TrackPoint pointing stick, Lenovo factory recovery USB key, Power cord, ac power adapter (65W)
Storage Slots	1 storage slot
Memory	1 soldered down RAM + 1 SODIMM slot
System Board	1190 System Board. No self-service CRU.
Restore CD/DVD/USB Set	None. Purchase via Lenovo Customer Support Center
Cable Lock Support	Security-lock slot
Power-On Password	Yes
Hard Disk Password	Yes; User and Master hard disk password
Supervisor Password	Yes
NIC LEDs (integrated)	Yes (if it means the LED for Ethernet)
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)
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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: Platform Detail

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### Supported Components

Processor	Intel® Core™ i5-1340P (4+8C) Intel® Core™ i5-1350P (4+8C), vPro Intel® Core™ i7-1360P (4+8C) Intel® Core™ i7-1370P (4+8C), vPro
Memory Support	DDR5 ,LPDDR5x
Chipset (PCH)	Integrated Soc
Size of BIOS Flash	16 MB
Super I/O	N/A
Clock	Crystal
Audio	Realtek High Definition Audio
Ethernet	Non-vPro model: Intel® Ethernet Connection I219-V (Jacksonville) vPro model: Intel® Ethernet Connection I219-LM (Jacksonville)

### Memory

System Capacity Options	UMA: Up to 48GB DDR5 (8,16,32 DIMM + 16 soldered down) SWG: Up to 64GB LPDDR5x (soldered down only)
non-ECC	DDR5 : 8GB/16GB/32GB LPDDR5x " 16GB/32GB/64GB
Brand of non-ECC Memory	Samsung SK Hynix Micron Ramaxel
ECC	None
Brand of ECC Memory	N/A
Memory clock frequency(MHz)	DDR5 5600 MHz LPDDR5x 7500 MHz

## 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 Opal 2 PCIe G4 NVMe M.2 2280 512GB Opal 2 PCIe G4 NVMe M.2 2280 512GB Opal 2 PCIe G4 NVMe Performance M.2 2280 1TB Opal 2 PCIe G4 NVMe M.2 2280 1TB Opal 2 PCIe G4 NVMe Performance M.2 2280 2TB Opal 2 PCIe Gen4 Performance NVMe M.2 2280
2.5" PCIe Solid State Drive (SSD)	None
Brand of Drive	Samsung UnionMem WD Hynix Kioxia SSSTC
Intel Optane Storage Technology	Yes
RAID	Not Supported

## Removeable Media

Media Card Reader Specifications	N/A
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## SECTION III: Supported Component Detail

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### CPU Specifications

CPU	Intel® Core™ i5-1340P (4+8C)	Intel® Core™ i5-1350P (4+8C)	Intel® Core™ i7-1360P (4+8C)	Intel® Core™ i7-1370P (6+8C)
Integrated Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics
# of Cores	4 P Core+8 E Core	4 P Core+8 E Core	4 P Core+8 E Core	6 P Core+8 E Core
# of Threads	16	16	16	20
Max Turbo Frequency	4.6 GHz	4.7 GHz	5.0 GHz	5.2 GHz



P-core Max Turbo Frequency	4.6 GHz	4.7 GHz	5.0 GHz	5.2 GHz
E-core Max Turbo Frequency	3.4 GHz	3.5 GHz	3.7 GHz	3.9 GHz
Cache	12MB	12MB	18MB	24MB
TDP	20W-28W	20W-28W	20W-28W	20W-28W
Intel ARK Spec Link	<a href="https://ark.intel.com/content/www/us/en/ark/products/232126/intel-core-i51340p-processor-12m-cache-up-to-4-60-ghz.html">https://ark.intel.com/content/www/us/en/ark/products/232126/intel-core-i51340p-processor-12m-cache-up-to-4-60-ghz.html</a>	<a href="https://ark.intel.com/content/www/us/en/ark/products/232103/intel-core-i51350p-processor-12m-cache-up-to-4-70-ghz.html">https://ark.intel.com/content/www/us/en/ark/products/232103/intel-core-i51350p-processor-12m-cache-up-to-4-70-ghz.html</a>	<a href="https://ark.intel.com/content/www/us/en/ark/products/232155/intel-core-i71360p-processor-18m-cache-up-to-5-00-ghz.html">https://ark.intel.com/content/www/us/en/ark/products/232155/intel-core-i71360p-processor-18m-cache-up-to-5-00-ghz.html</a>	<a href="https://ark.intel.com/content/www/us/en/ark/products/232146/intel-core-i71370p-processor-24m-cache-up-to-5-20-ghz.html">https://ark.intel.com/content/www/us/en/ark/products/232146/intel-core-i71370p-processor-24m-cache-up-to-5-20-ghz.html</a>
Disclaimers	Dual RAM channel required	Dual RAM channel required	Dual RAM channel required	Dual RAM channel required

## Display Specifications

Model	WUXGA	WUXGA w/oncell touch	WUXGA low power	WQUXGA OLED
Resolution	1920 x 1200	1920 x 1200	1920 x 1200	3840x2400
Diagonal	16"	16"	16"	16"
Aspect Ratio	Ratio 16:10	Ratio 16:10	Ratio 16:10	Ratio 16:10
Backlight	LED	LED	LED	No Backlight
PPI	142	142	142	283
Active Area	344.68 x 215.42	344.68 x 215.42	344.68 x 215.42	344.45 x 215.28
Refresh Rate	60Hz	60Hz	60Hz	60Hz
Contrast Ratio	800:1 (TYP)	800:1 (TYP)	1000:1 (TYP)	100000:1
Viewing Angle	85/85/85/85 degree	85/85/85/85 degree	89/89/89/89 degree	170 degree
Color gamut	45% NTSC	45% NTSC	100% sRGB	100% DCI-P3
Brightness	300nit	300nit	400nit	400nit
Contrast	800:1 (TYP)	800:1 (TYP)	1000:1 (TYP)	100000:1
Color Depth	16.7M	16.7M	16.7M	1074M
Interface	eDP 1.2	eDP 1.2	eDP 1.4	eDP 1.4b
Panel ID Recognition	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight	410g max	410g max	330g max	220g max
Color Calibrator	None	None	ICC Template color calibration	X-Rite Pantone Factory Color Calibration
Panel Technology	IPS, Anti-Glare	IPS, Anti-Glare	IPS, Anti-Glare, LBL, Eyesafe certified	OLED,LBL,Eyesafe certified,Anti-reflection / Anti-smudge
Touch Panel	None	YES	None	None

## HDD Specifications

2.5" SAS Hard Disk Drive (HDD)	N/A
2.5" SATA Hard Disk Drive (HDD)	N/A

## HDD Storage Device Specifications

Connector	N/A
Transfer Rate (Gb/sec)	N/A

## HDD Performance

Spindle Speed(RPM)	N/A
Power off to Spindle Stop(sec)	N/A
DC Power to Drive Ready(sec)	N/A
Receipt of Start Unit Command to Drive Ready(sec)	N/A
Average Latency(msec)	N/A

## HDD Power Management

Input (VDC)	N/A
Typical (Watts)	N/A
Idle (Watts)	N/A

## HDD Dimensions

Height (mm - Max)	N/A
Width (mm)	N/A
Depth (mm - Max)	N/A
Weight (grams)	N/A

## HDD Temperature

Operating(C) Ambient	N/A
Operating(C) Base Casting	N/A
Non-Operating(C) Ambient	N/A
Gradient(C per Hour)	N/A

## HDD Shock

Operating(Gs @ 2ms)	N/A
Non-Operating(Gs @ 2ms)	N/A

## SSD Specifications

2.5" SATA Solid State Drive (SSD)	N/A
M.2 (NGFF) PCIe Solid State Drive (SSD)	1x M.2 2280 PCIe Gen4
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 2280S3
Interface Type	PCIe NVMe Gen4
Read/Write IOPS Specifications	Performance PCIe Gen4 Read: 700k (2TB), 600k (1TB) Write: 600k (2TB, 1TB) Value PCIe Gen4 Read: 300k (1TB), 250k (512GB), 200k (256GB) Write: 240k (1TB, 512GB), 190k (256GB)
Bandwidth Performance	PCIe Gen4 x 4 (16Gbps)
Power Consumption (Max)	3.0A (10us average)
Active(AVG)	5W
Idle	5mW (L1.2)
Min MTBF	2'000'000

Min Sequential Read	Performance PCIe Gen4 6400MB/s (2TB, 1TB) Value PCIe Gen4 3500MB/s (1TB, 512GB), 3200MB/s (256GB)
Min Sequential Write	Performance PCIe Gen4 5000MB/s (2TB), 4400MB/s (1TB) Value PCIe Gen4 2900MB/s (1TB), 2500MB/s (512GB), 1800MB/s (256GB)
Hardware Encryption	Yes

## Discrete Graphics Adapter

GPU Name	NVIDIA RTX A500
CUDA Processing Cores	2048
GPU Memory	4 GB
Memory Bandwidth	96 GB/s
Memory Type	GDDR6
Memory Interface	64-bit
TGP Max Power Consumption	30
Display Port	0
OpenGL	4.6
Shader Model	7
DirectX	12
PCIe Generation	4
Floating-Point Performance	1.1
VR Ready	NO
Simultaneous Multi-Projection	No
NVIDIA FXAA/TXAA Antialiasing	Yes
NVIDIA nView Display Management Technology	Yes
GPU Direct for Video	NO
Vulkan Support	Yes
NVIDIA Optimus	Yes

## WLAN

Model	INTEL WIFI 6E_AX211 CNVi_2X2AX+BT5.2	Qualcomm NFA-725A PCIE_2X2AX+BT5.2
Connector: Main, Aux/GNSS, GNSS	ANT1:AUX WiFi + BT; ANT2: Main WiFi	ANT1:AUX WiFi + BT; ANT2: Main WiFi
Antenna Diversity	Supported	Supported

MIMO	N/A	Supported
GNSS Bian	N/A	N/A
Radio ON/OFF Control	Supported	Supported
Connector interface	CNVi	PCIE
Operating Temperature (Adapter Shield)	0c to +80c	0c to +80c
Humidity Non-Operating	50%~90% Rh non condensing (at temperatures of 25c to 35c)	50%~90% Rh non condensing (at temperatures of 25c to 35c)
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1*, Microsoft Windows 10*, Linux* (limited feature support), Android	Microsoft Windows 7*, Microsoft Windows 8.1*, Microsoft Windows 10*, Linux* (limited feature support), Android
Wi-Fi Alliance	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Direct* for peer to peer device connections, Wi-Fi Miracast* as Source.	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Direct* for peer to peer device connections, Wi-Fi Miracast* as Source.
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc
Roaming	Support seamless roaming between access points	Support seamless roaming between access points
Bluetooth*	Dual Mode Bluetooth® 5.0, BLE	Dual Mode Bluetooth® 5.0, BLE
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA, EAP-AKA	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP	64-bit and 128-bit WEP, 128-bit AES-CCMP
Regulatory	For a list of country approvals, please contact your local Intel representatives.	For a list of country approvals, please contact your local Intel representatives.
US Government	FIPS10, FISMA	FIPS10, FISMA
Product Safety	UL,C-UL,CB (IEC 60950-1)	UL,C-UL,CB (IEC 60950-1)
Disclaimers	6GHz channel of Wi-Fi 6E is only available with Windows 11	6GHz channel of Wi-Fi 6E is only available with Windows 11

## Battery

Dimension	300 mm x 91 mm x 6.2 mm	300 mm x 91 mm x 6.2 mm
Weight	223g	320g
Type (Chemistry and Cell)	Li-ion Polymer	Li-ion Polymer
Voltage	15.44V ~ 15.48V	15.44V ~ 15.48V
Battery Life	Up to 9.3 hrs (MM18)	Up to 9.3 hrs (MM18)
Battery Capacity	Integrated 4-cell 52.5Wh battery	Integrated 4-cell 86Wh battery

Charging Time	0% to 100% 0% to 80% Battery Charging Time (in-operation) 2.39hr Battery Charging Time (off) 1.98 hr 0.99 hr	0% to 100% 0% to 80% Battery Charging Time (in-operation) 2.03 hr Battery Charging Time (off) 1.93 hr 0.93 hr
Operating Temperature Range	between 10°C (50°F) and 35°C (95°F)	between 10°C (50°F) and 35°C (95°F)
Warranty	1 Year / 3 Year Available	1 Year / 3 Year Available
Coin Cell Battery (Model)	CR2016	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	N/A
Replicated Setup	Yes, it supported with SRSETUP tool.
Boot Control	Yes, it means Boot order change.
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.
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            Not Applicable / Not Required            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 PCR B 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 8.0            For more information about ENERGY STAR, go to:  <a href="https://www.energystar.gov">https://www.energystar.gov</a></p>
EPEAT	<p>EPEAT Declaration of Conformance For Machine Types: 21HK, 21HL</p>
IT ECO declaration	<p>The latest environmental information about Lenovo products is available at:  <a href="https://www.lenovo.com/ecodeclaration">https://www.lenovo.com/ecodeclaration</a></p>
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</p>

	<p>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>
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## Manageability

Industry Standard Specifications	This product meets the following industry standard specifications for manageability functionality: Intel LAN with AMT
Remote Manageability Software Solutions	Lenovo ThinkManagement Console Microsoft System Center Configuration Manager LANDesk Management Suite for ThinkVantage Technologies ( <a href="http://www.landesk.com/lenovo">www.landesk.com/lenovo</a> )
System Software Manager	Lenovo ThinkPad supports software management tools from the Lenovo Vantage 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.

## Environmentals

Energy Star	ENERGY STAR® 8.0
EPEAT	EPEAT® Gold
RoHS Compliant	RoHS Compliant
TCO	TCO 9.0
Sustainability	97% PCC recycled plastic: Speaker enclosure 97% recycled plastic: 52.5Whr Battery 95% PCC recycled plastic: 65W PSU 90% recycled/sustainable packaging Low-temperature solder
Disclaimers	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.
Materials Used	50% Recycled Aluminum A Cover 90% Recycled Magnesium C Cover 85% PCC Plastic in Key Caps, Backlit 70% PCC Plastic in Key Caps, non-Backlit 90% PCC Plastic Speaker Enclosure 90% PCC Plastic Battery Pack Enclosure 90% PCC Plastic Slim 65W AC Adapter 90% PCC Plastic Standard 65W AC Adapter 30% PCC Plastic 100W AC Adapter (90% Plastic coming soon) 90% PCC Plastic Slim 135W AC Adapter Low Temperature Solder (motherboard, memory, SSD, fingerprint reader module, ClickPad) Plastic free packaging with 90% recycled and/or FSC certified content (standard)



TCO Certification	9.0
Disclaimers	<ol style="list-style-type: none"><li>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.</li><li>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</li></ol>