

Lenovo P14s Gen 5 AMD

Version: 2.0 | 03/11/2025

Datasheet Specs

Product Name

Product Display Name	P14s Gen 5 AMD
Information Date	May 14, 2024

SECTION I: Platform Overview

Description	The Lenovo ThinkPad P14s Gen 5 AMD offers on-the-go premium performance in a newly designed 14-inch chassis with an optimized 16:10 display. Powered by AMD Ryzen™ PRO 8000 Series processors, these ultra-advanced and power-efficient processors for elite ultra-thin mobile workstations feature AMD Ryzen™ Artificial Intelligence (AI) built-in, an integrated NPU to provide optimized performance for all your AI workflows.
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CPU

Processor Support	AMD Hawk Point HS-Series Ryzen 5 PRO 8640HS Processor AMD Hawk Point HS-Series Ryzen 7 PRO 8840HS Processor
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Socket Type		BGA	
Disclaimers			

Operating Systems

Preloaded		Windows 11 Pro 64 (23H2) 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) Fedora
Supported		Windows 11 Pro 64 (23H2) 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) Fedora Redhat
Disclaimers		

Memory

Number of DIMM Slots		2 SoDIMM slot
Channels		Quad 32b channels
Type		DDR5
ECC Support		No
Speed		5600 MHz
Max DIMM Size		48GB
Max System Memory		96GB

Min System Memory		8GB
Soldered Memory		NO
Disclaimers		

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
Disclaimers		

Video

Integrated Graphics		AMD Radeon™ 780M (Ryzen 7 PRO 8840HS) AMD Radeon™ 760M (Ryzen 5 PRO 8640HS)
Discrete Graphics		N/A
Adapter		None
Bus Interface		NA
Disclaimers		

Display

Resolutions		FHD+ (1920 x 1200) / 2.8k OLED (2880 x 1800)
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Camera

Resolution		5MP RGB+IR/ 5MP RGB
Frames per Second		30 fps
Focus		Fixed 50cm
Camera Interface		USB 2.0
IR Camera		Yes (optional)

Keyboard

Number of Keys		US : 84 / UK : 85 / JP : 89
Numpad		No
Size		100% ISO
Function Key Features		Yes
Backlit		Yes
Keyboard size		CS24 Top mount Shrunken 14" KBD
Key stroke		1.5mm (normal keys), 1.35mm (Fn keys)
Key pitch		19.05mm
Keyboard backlight		Optional
Keyboard thickness		4.0mm (General)

TrackPad / Fingerprint Reader

TrackPoint Details		COMO TrackPoint module (t5.5mm)
Finger Print Reader Model		Synaprics Metallica 8×8 FPR, MoC
Multi-Touch		Yes
Resolution		1000 ppi
TrackPad/TouchPad thickness		3.3mm

TrackPad/TouchPad 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 USB-C (USB4.0, TBT4, DP2.0)
HDMI		1x HDMI 2.1 TMDS up to 4K/60Hz
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		2x USB-C
VirtualLink		None
Network adapter		Gigabit Ethernet (RJ45)
Disclaimers		

Power Connector

Main		DC-In
USB-C		2x USB-C (USB4.0, TBT4, DP2.0)
Disclaimers		

Ethernet

Vendor		Realtek
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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
Disclaimers		

WWAN

Model		optional: CAT16/Quectel 5G (RM520N-GL) with physical eSIM optional
Disclaimers		

Near Field Communications

Model		Yes, optional
Disclaimers		

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
Disclaimers		

Power adapter

Type		65W AC Slim Adapter	65W AC Adapter
Dimensions		88mm x 51mm x 22mm	108.5mm x 46.5mm x 29.5mm
Input Voltage		100-240V	100-240V
Disclaimers			

Security

TPM		Yes, TPM2.0
Asset ID		Yes
Pro		Yes
Disclaimers		

Chassis Information

Format		Ultraslim Notebook
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Color		Black
Thermal Solutions		Internal Single FAN, Intelligent Cooling
Dimensions		Length 12.44 inches 315.90 millimeters Width 8.81 inches 223.70 millimeters Height (Marketing Z-height) 0.70 inches 17.71 mm
Weight		Starting weight 1.31kg / 2.89lbs
Disclaimers		

Packaging Parameters

Height (mm)		300
Height (inch)		11.8
Width (mm)		446
Width (inch)		17.6
Depth (mm)		81
Depth (inch)		3.1
Weight (kgs)		0.32kg
Weight (lbs)		0.71lbs
Disclaimers		

Security & Serviceability

Hardware Maintenance Manual		
Drivers & Software		
Self Healing BIOS		Yes

Access Panel		Removeable bottom cover
Number of Screws		6
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		two DIMM
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 TPM 2.0)
Access Panel Key Lock		Bottom Cover Tamper Detection
Boot Sequence Control		Yes
Disclaimers		

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
Disclaimers		

SECTION II: Platform Detail

Supported Components

Processor		AMD Hawk Point HS-Series Ryzen 5 PRO 8640HS Processor AMD Hawk Point HS-Series Ryzen 7 PRO 8840HS Processor
Memory Support		DDR5 5600MHz
Chipset (PCH)		Integrated Soc
Size of BIOS Flash		64 MB
Super I/O		N/A
Clock		Crystal
Audio		Realtek High Definition Audio
Ethernet		Realtek RTL8111EPV
Notes		
Disclaimers		

Memory

System Capacity Options		Upto 96GB
non-ECC		Yes
Brand of non-ECC Memory		Samsung/Ramaxel/Sk Hynix/Micron
ECC		None

Brand of ECC Memory		N/A
Memory clock frequency(MHz)		DDR5 5600 MHz
Disclaimers		

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 Micron
Intel Optane Storage Technology		Yes
RAID		Not Supported
RAID Level and Requirements		
Disclaimers		

Removeable Media

Media Card Reader Specifications		N/A
Disclaimers		

SECTION III: Supported Component Detail

CPU Specifications

CPU		AMD Hawk Point HS-Series Ryzen 5 PRO 8640HS Processor	AMD Hawk Point HS-Series Ryzen 7 PRO 8840HS Processor
Integrated Graphics		AMD Radeon™ 760M	AMD Radeon™ 780M
# of Cores		6 cores	8 cores
# of Threads		12	16
Processor Base Frequency		3.5GHz	3.3GHz
Max Turbo Frequency		4.9GHz	5.1GHz
Cache		22MB	24MB
TDP		28W	28W
AMD Spec Link		https://www.amd.com/en/products/apu/amd-ryzen-5-8640hs	https://www.amd.com/en/products/apu/amd-ryzen-7-8840hs
Disclaimers			

Display Specifications

Model		WUXGA	WUXGA oncell touch	WUXGA low power	WUXGA ePrivacy	2.8k
Resolution		1920 x 1200	1920 x 1200	1920 x 1200	1920 x 1200	2880 x 1800
Diagonal		14"	14"	14"	14"	14"
Aspect Ratio		Ratio 16:10	Ratio 16:10	Ratio 16:10	Ratio 16:10	Ratio 16:10
Backlight		LED	LED	LED	LED	None
PPI		162	162	162	162	243
Active Area		302 x 188	302 x 188	302 x 188	302 x 188	302 x 188
Refresh Rate		60 Hz	60 Hz	60 Hz	60Hz	120 Hz

Contrast Ratio		800:1 (TYP)	800:1 (TYP)	1000:1 (TYP)	1500:1 (TYP)	100000:1 (TYP)
Viewing Angle		85/85/85/85 degree	85/85/85/85 degree	85/85/85/85 degree	85/85/85/85 degree	85/85/85/85 degree
Color gamut		45% NTSC	45% NTSC	100% sRGB	100% sRGB	100% DCI-P3
Brightness		400nit	400nit	400nit	500nit	400nit
Contrast		Ratio 800:1	Ratio 800:1	Ratio 1000:1	Ratio 1500:1	Ratio 100000:1
Color Depth		16M	16M	16M	16M	1074M
Interface		eDP 1.2	eDP 1.2	eDP 1.4	eDP 1.4	eDP 1.4
Panel ID Recognition		EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight		305g max	310g max	245g max	270g max	180g max
Color Calibrator		None	None	Adaptive ICC profile	None	X-Rite Factory Color Calibration, Dolby Vision
Panel Technology		IPS, Anti-Glare	IPS, Anti-Glare	IPS, Anti-Glare, LBL, Eyesafe certified	IPS, Anti-Glare	OLED, Anti-Glare/Anti-reflection/Anti-fingerprint, LBL, Eyesafe certified
Touch Panel		None	YES	None	YES	None
Disclaimers						

HDD Specifications

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

HDD Storage Device Specifications

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

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
Disclaimers		

HDD Power Management

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

HDD Dimensions

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

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
Disclaimers		

HDD Shock

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

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
Disclaimers		

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
Disclaimers		

Discrete Graphics Adapter

GPU Name		N/A
CUDA Processing Cores		N/A
GPU Memory		N/A
Memory Bandwidth		N/A
Memory Type		N/A
Memory Interface		N/A
TGP Max Power Consumption		N/A
Display Port		N/A

OpenGL		N/A
Shader Model		N/A
DirectX		N/A
PCIe Generation		N/A
Floating-Point Performance		N/A
VR Ready		N/A
Simultaneous Multi-Projection		N/A
NVIDIA FXAA/TXAA Antialiasing		N/A
NVIDIA nView Display Management Technology		N/A
GPU Direct for Video		N/A
Vulkan Support		N/A
NVIDIA Optimus		N/A
Disclaimers		

WLAN

Model		Qualcomm NFA-725A onboard
Connector: Main, Aux/GNSS, GNSS		ANT1:AUX WiFi + BT; ANT2: Main WiFi
Antenna Diversity		Supported
MIMO		Not supported
GNSS Bian		N/A
Radio ON/OFF Control		Supported
Connector interface		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 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.
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
Roaming		Support seamless roaming between access points
Bluetooth*		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
Authentication Protocols		PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2
Encryption		64-bit and 128-bit WEP, 128-bit AES-CCMP
Regulatory		For a list of country approvals, please contact your local Intel representatives.
US Government		FIPS10, FISMA
Product Safety		UL,C-UL,CB (IEC 60950-1)
Disclaimers		

Battery

Dimension		270 mm x 68.5 mm x 6.16 mm	270 mm x 68.5 mm x 6.16 mm
Weight		173g	212g
Type (Chemistry and Cell)		Li-ion Polymer	Li-ion Polymer
Voltage		11.58V ~ 11.61V	15.44V ~ 15.48V
Battery Life			
Battery Capacity		Integrated 3-cell 39.3Wh battery	Integrated 4-cell 52.5Wh battery
Charging Time		0% to 100% 0% to 80% Battery Charging Time (in-	0% to 100% 0% to 80% Battery Charging Time (in-

		operation) 2.06 hr Battery Charging Time (off) 1.89 hr 0.92 hr	operation) 2.39hr Battery Charging Time (off) 1.98 hr 0.99 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
Disclaimers			

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		N/A
Replicated Setup		Yes, it supported with SRSETUP tool.
Boot Control		Yes, it means Boot order change.
Discrete Mode		
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> <ul style="list-style-type: none"> 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
Safety		<p>To access the latest User Guide and Safety and Warranty Guide, go to: https://support.lenovo.com Low Halogen Declaration of Conformance TNOT-2017-0040 Section 9 – Low Halogen Scorecard Izod Test – EPEAT Compliant Homologation PCR B 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,</p>

		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
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Environmentals

Energy Star		ENERGY STAR® Version 8.0 For more information about ENERGY STAR, go to: https://www.energystar.gov
EPEAT		EPEAT Declaration of Conformance For Machine Types: 20S4, 20S5
IT ECO declaration		The latest environmental information about Lenovo products is available at: https://www.lenovo.com/ecodeclaration
Hazardous Substances		The latest environmental information about Lenovo products is available at: https://www.lenovo.com/ecodeclaration 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:
<https://www.lenovo.com/rohs-communication>

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 (www.landesk.com/lenovo).
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.