

Lenovo P16s Gen2 AMD

Version: 1.0 | 07/18/2023

SECTION I: Platform Overview

Description	Have it all with the P16s Gen 2 AMD featuring powerful AMD Ryzen™ PRO 7000 Series Processors and integrated AMD Radeon™ 700M Graphics, based on RDNA™ 3 Architecture with AMD PRO graphics Driver delivering the perfect performance engine for entry-level professionals looking for a workstation class system at an also perfect price point.
-------------	--

CPU

Processor Support	AMD Phoenix Ryzen 7 PRO 7840U Processor AMD Phoenix Ryzen 5 PRO 7540U Processor
Socket Type	BGA

Operating Systems

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	No
Channels	Dual Channel LPDDR5x
Type	LPDDR5x
ECC Support	No
Speed	6400 MHz
Max DIMM Size	64GB
Max System Memory	64GB
Min System Memory	16GB
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	AMD Radeon™ Graphics
Discrete Graphics	N/A
Adapter	None
Bus Interface	NA

Display

Resolutions	FHD+/4k OLED
-------------	--------------

Camera

Resolution	720p HD/1080p FHD/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	CS22 Top mount Shrunken 15.6" KBD w/ Numeric Pad
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	1x USB4.0 and 1xUSB-C 3.2Gen2

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	2x USB-C
VirtualLink	None
Network adapter	Gigabit Ethernet (RJ45)

Power Connector

Main	DC-In
USB-C	1x USB4.0 and 1xUSB-C 3.2Gen2

Ethernet

Vendor	Realtek
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
-------	--

Near Field Communications

Model	Yes, optional
-------	---------------

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	100W AC Adapter	65W AC Slim Adapter	65W AC Adapter
Dimensions	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

Security

TPM	Yes, TPM2.0
Asset ID	Yes
AMD Pro Technology	Yes

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 23.7 mm (design value) 20.5 mm (Mkt claim) 0.93 in (design value) 0.80 in (Mkt claim)
Weight	Starting weight 1.70kg / 3.76 lbs

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	Yes
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
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)
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

Supported Components

Processor	AMD Phoenix Ryzen 7 PRO 7840U Processor AMD Phoenix Ryzen 5 PRO 7540U Processor
Memory Support	LPDDR5x 6400MHz
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

Memory

System Capacity Options	16/32GB/64GB soldered-down
non-ECC	16/32GB/64GB soldered-down
Brand of non-ECC Memory	Samsung SK Hynix Micron
ECC	None
Brand of ECC Memory	N/A
Memory clock frequency(MHz)	LPDDR5x 6400 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 WD Hynix Kioxia Micron
Intel Optane Storage Technology	No
RAID	Not Supported

Removeable Media

Media Card Reader Specifications	N/A
----------------------------------	-----

SECTION III: Supported Component Detail

CPU Specifications

CPU	AMD Phoenix Ryzen 5 PRO 7540U Processor	AMD Phoenix Ryzen 7 PRO 7840U Processor
Integrated Graphics	AMD Radeon™ Graphics + AMD Pro APU Driver	AMD Radeon™ Graphics + AMD Pro APU Driver
# of Cores	6 cores	8 cores
# of Threads	12	16
Processor Base Frequency	3.2GHz	3.3GHz
Max Turbo Frequency	4.9GHz	5.1GHz

Cache	22MB	24MB
-------	------	------

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	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

WLAN

Model	Qualcomm NFA-725A onboard	Mediatek RZ616 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)

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 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

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
AMD KVM	Yes
AMD Platform Security Processor	Yes
Memory Modes	N/A

EMC & Safety

EMC	Published, Certified Existing Reports EMC - Australia EMC - Canada EMC - China EMC - EU/EFTA EMC - Japan EMC - New Zealand 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	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, 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

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.