Lenovo P16v i Gen 3

Version: 3.0 | 03/16/2026

Product Name	P16v Gen 3
Product Display Name	ThinkPad P16v Gen 3
Information Date	Sept 5 2025

SECTION I: SYSTEM OVERVIEW

Description	The Lenovo ThinkPad P16v is a powerful mobile workstation designed for a broad range of power users across various industries who need a reliable and efficient device at an affordable price point.

CPU

Processor Support	Intel Core Ultra Series 2 – H-Series (35W) Core 7 and 9
Socket Type	BGA

Operating Systems

Preloaded	Windows 11 Pro 64-bit (24H2) Windows 11 Home 64-bit Windows 11 Home Single Language 64-bit Windows 11 Home Chinese Language Edition 64-bit Ubuntu Linux 64-bit (Version 24.04) No Operating System
Supported	Ubuntu Linux 24.04 Cert only Red Hat Enterprise Linux (RHEL) 9.4 (depending on NVIDIA open source driver status)

Memory

Number of DIMM Slots	Up to 2 Slots
Channels	Single Channel w/ 1 DIMM Dual Channel w/ 2 DIMMs
Type	DDR5 SoDIMM or DDR5 CSoDIMM
ECC Support	No
Speed	Up to 5600MT/s SoDIMMs or 6400MT/s CSoDIMMs
Max DIMM Size	48GB
Max System Memory	96GB
Min System Memory	16GB
Soldered Memory	None
Disclaimers	No ECC memory on P16v Gen 3

Storage

Storage Slots	2x M.2 2280
SATA	No
PCIe	Solid State Drive, 2x OPAL2 PCIe NVMe M.2 – TLC
SAS	No
Interface	PCIe Gen 5 Performance or Gen 4 Value
Security	OPAL2 for NVMe SSD
Optional Hard Disk Drive Controllers	No
Disclaimers	Dual slot storage is available with all CPU & GPU options

Video

Integrated Graphics	Processor Graphics Intel® Arc Pro Graphics Utilized via “Hybrid Mode” in BIOS
Discrete Graphics	NV RTX PRO 500 Blackwell, 1000 Blackwell, 2000 Blackwell
Adapter	None
Bus Interface	PCI Express 5.0

Display

Resolutions	WUXGA (FHD+) / WQUXGA (UHD+)

Camera

Resolution	5MP RGB Camera or 5MP RGB + IR Hybrid Camera
Frames per Second	30 fps
Focus	Fixed 50cm
Camera Interface	USB 2.0
IR Camera	Yes

Keyboard

Number of Keys	US : 105 / UK : 106 / JP : 110
Numpad	Yes
Size	100% ISO
Function Key Features	Yes
Backlit	Yes
Keyboard size	CS25 KYB with numberpad
Key stroke	1.5mm
Key pitch	19.05mm
Keyboard backlight	Yes
Keyboard thickness	4.0mm

Touchpad / Fingerprint Reader

TrackPoint Details	CS22 TL TrackPoint (t=4.8mm)
Finger Print Reader Model	11*3.24 FPR, MoC with LED
Multi-Touch	Yes
Resolution	n/a
TouchPad/Trackpad thickness	3.4mm
TouchPad/Trackpad type	TrackPad
Trackpad size	115mm x 67.6mm
Trackpad material/finish	Glass like mylar surface

I/O – Ports and Connectors

USB	2x USB-A (10Gbps)
Thunderbolt	2x USB-C® (Thunderbolt™ 4)
HDMI	1x HDMI 2.1
Audio Combo Jack	1x Microphone & Headphone Combo Jack (3.5mm)

Media Card Reader	Dedicated SD Express 7.0 Card Reader (Backwards compatible with UHS-I & UHS-II) (MMC,SD,SDHC SDXC)
Smart Card Reader	Yes (optional)
Power Connector	DC-In via USB-C® (Thunderbolt™ 4) PD 3.1
Docking Port	Docking Via USB-C® (Thunderbolt™ 4) PD 3.1
VirtualLink	None
Network adapter	Full size 1.0Gbps RJ-45 port
Disclaimers	HDMI 2.1: Up to 8K/60Hz

Power Connector

Main	DC-In via USB-C® (Thunderbolt™ 4) PD 3.1
USB-C	see above
Disclaimers	normal charge via 100W and fast charge via 140W charger

Ethernet

Vendor	Intel
Count	1
EEPROM	No
Speeds	1.0Gbps
Functions	Ethernet Connection I219
Connectors	Full size 1.0Gbps RJ-45 port

WWAN

Model	5G: Rolling Wireless RW350R-GL 5G sub-6GHz CAT19/CAT18
Disclaimers	WWAN support country dependent

Near Field Communications

Model	Foxconn NXP NPC300 NFC

Audio

Vendor	Realtek
Type	Intel High Definition Audio
Internal Speaker	2 channel
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)	44.1K/48K/96K/192KHz sample rate
Signal to Noise Ratio	Mic In: 90dB FSA Headphone Out@32ohm: 97dB FSA
Analog Audio	None
Dolby Digital	Dolby Atmos
Digital Out (S/PDIF)	No
Speaker Power Rating	2W@4ohm/ch

Power adapter

Type	140W Type-C PD 3.1 EPR AC Adapter
Dimensions	(120 x 62.5 x 22mm)
Weight	Max 340g
Input Voltage	100-240V

Security

TPM	Version 2.0
Asset ID	Yes
vPro	Intel vPro for WS

Chassis Information

Format	16" Clamshell
Color & Material	Black Aluminum and Plastic
Thermal Solutions	Internal Dual Fan, Intelligent Cooling
Dimensions	Length 14.23 inches 361.50 millimeters

	Width 9.79 inches 248.60 millimeters Height 0.50 (front) / 0.77 (rear), 1.04 (max) inches 12.8 (front) / 19.55 (rear), 26.3 (max) millimeters
Weight	4.60lbs/2.1kg

Packaging Parameters

Height (mm)	25.05, MKT : 22.3
Height (inch)	0.986, MKT : 0.878
Width (mm)	365
Width (inch)	14.37
Depth (mm)	261.92
Depth (inch)	10.31
Weight (kgs)	start from 2.32 kg
Weight (lbs)	start from 4.92 lbs

Security & Serviceability

Hardware Maintenance Manual	P16v Gen 3 HMM
Drivers & Software	P16v Gen 3 Drivers & Software
Self Healing BIOS	Yes
Access Panel	Removeable bottom cover
Number of Screws	6+2
Swappable Components	Bottom cover, battery, M.2 Solid State Drive, SoDIMM & CSoDIMM memory module, WWAN module, SIM tray, keyboard, RTC battery
Storage Slots	2 slots
Memory	2 slots
System Board	FR4
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)	Yes
Security Chip	Yes (for TMP 2.0)
Access Panel Key Lock	Bottom Cover Tamper Detection

Boot Sequence Control	Yes

Operating Environment

Operating – Air Temperature	Meet MIL810G At altitude 15,000 feet for 1 hour 43°C for 2hrs -21°C for 2hrs
Non Operating – Air Temperature	Meet MIL810G At altitude 15,000 feet for 1 hour 63°C for 4hrs -25°C for 24hrs
Humidity	Meet MIL810G 95% RH, 30~60C, 24hrs*10cycles
Corrosive Gas	G1
Particulates	P1

SECTION II: SUPPORTED COMPONENTS

Supported Components

Processor	Intel® Core™ Ultra 7 255H processor (E-cores up to 4.4 GHz P-cores up to 5.1 GHz) Intel® Core™ Ultra 7 265H processor (E-cores up to 4.5 GHz P-cores up to 5.3 GHz) Intel® Core™ Ultra 9 285H processor (E-cores up to 4.5 GHz P-cores up to 5.4 GHz)
Memory Support	DDR5 5600MT/s SoDIMM or DDR5 6400MT/s CSoDIMM
Chipset (PCH)	N/A
Size of BIOS Flash	64MB
Super I/O	None
Clock	Crystal
Audio	Dolby Atmos
Ethernet	Full size 1.0Gbps RJ-45 port

Memory

System Capacity Options	16GB (16GB*1) 32GB (32GB*1 or 16GB*2) 48GB (42GB*1) 64GB (32GB*2) 96GB (48GB*2)
Memory Types	16GB DDR5 5600MT/s SoDIMM 32GB DDR5 5600MT/s SoDIMM

	32GB DDR5 6400MT/s CSoDIMM 48GB DDR5 6400MT/s CSoDIMM
Brand of Memory	Samsung Micron Hynix Ramaxel
Memory clock frequency(MHz)	5600MT/s (SoDIMM) or 6400MT/s (CSoDIMM)
Disclaimers	No ECC memory on P16v Gen 3

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)	512GB OPAL2 PCIe 4×4 Value TLC (M.2 2280-S3) 1TB OPAL2 PCIe 4×4 Value TLC (M.2 2280-S3) 512GB OPAL2 PCIe 5×4 Performance TLC (M.2 2280-S3) 1TB OPAL2 PCIe 5×4 Performance TLC (M.2 2280-S3) 2TB OPAL2 PCIe 5×4 Performance TLC (M.2 2280-S3)
2.5" PCIe Solid State Drive (SSD)	None
Brand of Drive	Samsung Union Memory WD Micron Hynix Kioxia
Intel Optane Storage Technology	None
RAID	Optional, Selectable in BIOS
RAID Level and Requirements	RAID-0/1

Removeable Media

Media Card Reader Specifications	SD Express 7.0
Disclaimers	Backwards compatible with UHS-I and UHS-II

CPU	Intel® Core™ Ultra 7 255H processor (E-cores up to 4.4 GHz P-cores up to 5.1 GHz)	Intel® Core™ Ultra 7 265H processor (E-cores up to 4.5 GHz P-cores up to 5.3 GHz)	Intel® Core™ Ultra 9 285H processor (E-cores up to 4.5 GHz P-cores up to 5.4 GHz)
Integrated Graphics	Intel® Arc Pro Graphics	Intel® Arc Pro Graphics	Intel® Arc Pro Graphics
# of Cores	6 P-cores and 8 E-cores	6 P-cores and 8 E-cores	6 P-cores and 8 E-cores

# of Threads	16	16	16
Processor Base Frequency	E-cores up to 1.5 GHz / P-cores up to 2.0 GHz	E-cores up to 1.7 GHz / P-cores up to 2.2 GHz	E-cores up to 2.7 GHz / P-cores up to 2.9 GHz
Max Turbo Frequency	E-cores up to 4.4 GHz / P-cores up to 5.1 GHz	E-cores up to 4.5 GHz / P-cores up to 5.3 GHz	E-cores up to 4.5 GHz / P-cores up to 5.4 GHz
Cache	24 MB	24 MB	24 MB
TDP	45 W	45 W	45 W

Display Specifications

Model	WUXGA IPS Non-Touch	WUXGA IPS Non-Touch, Low Power	WQUXGA OLED Touch
Resolution	FHD+ (1920 x 1200)	FHD+ (1920 x 1200)	UHD+ (3840 x 2400)
Diagonal	16"	16"	16"
Aspect Ratio	Ratio 16:10	Ratio 16:10	Ratio 16:10
Backlight	LED	LED	N/A
PPI	141.5 (Pixel Pitch:0.17952mm x 0.17952mm)	141.5 (Pixel Pitch:0.17952mm x 0.17952mm)	283 (Pixel Pitch: 0.09mm x 0.09mm)
Active Area	FHD+: 344.68mm x 215.42mm	FHD+: 344.68mm x 215.42mm	UHD+: 344.678mm x 215.424mm
Refresh Rate	Max 60Hz	Max 60Hz	Max 60Hz
Contrast Ratio	FHD+: 1200:1	FHD+: 1200:1	UHD+: 1500:1
Viewing Angle (*1)	FHD+: 89/89/89/89 degree	FHD+: 89/89/89/89 degree	UHD+: 85/85/85/85 degree
Color gamut	45% NTSC	100% sRGB	100% DCI-P3
Brightness	400nit	500nit	400nit
HDR	N/A	N/A	Dolby Vision
Color Depth	FHD+: 16.7M (8-bit)	FHD+: 16.7M (8-bit)	UHD+: 1064M (8-bit + 2 FRC)
Interface	FHD+: eDP 1.4b	FHD+: eDP 1.4b	UHD+: eDP 1.4b
Panel ID Recognition	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight	max 410g	max 320g	max 221g
Color Calibrator	AICCP Factory Color Calibration	AICCP Factory Color Calibration	X-Rite Factory Color Calibration
Panel Technology	IPS, Anti-Glare	IPS, Anti-Glare	OLED, AGARAS
Touch Panel	None	None	Multi-Finger Touch Panel

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: 600K (1TB), 450K (512GB) Write: 500K (1TB,512GB) IOPS, 4K Random, 8 threads, queue depth of 32, data set size of 1GB.	Read: 1500K (2TB), 1200K (1TB), 1000K (512GB) Write: 1500K (2TB/1TB), 1200K (512GB) IOPS, 4K Random, 8 threads, queue depth of 32, data set size of 1GB.
Bandwidth Performance	PCIe Gen4x4 Value – 512GB-1TB	PCIe Gen5x4 Performance – 512GB-2TB
Power Consumption (Max)	3.0A (duration for 10 us)	4.5A (duration for 10 us)
Active(AVG)	5W	10W
Idle	5mW (L1.2)	5mW (L1.2)
Min MTBF	2,000,000 (h)	2,000,000 (h)
Min Sequential Read	5000MB/s (1TB), 4800MB/s (512GB),	14000MB/s (2TB/1TB), 11000MB/s (512GB)
Min Sequential Write	4000MB/s (1TB/512GB)	12000MB/s (2TB), 11000MB/s (1TB), 5500MB/s (512GB)
Hardware Encryption	OPAL	OPAL

Discrete Graphics Adapter

Laptop GPUs	NVIDIA RTX PRO 500 Blackwell Laptop GPU	NVIDIA RTX PRO 1000 Blackwell Laptop GPU	NVIDIA RTX PRO 2000 Blackwell Laptop GPU
NVIDIA CUDA Processing Cores	1792	2560	3328
NVIDIA RT Cores	4th Gen	4th Gen	4th Gen
Tensor Cores	5th Gen	5th Gen	5th Gen
GPU Memory	6GB	8GB	8GB
Peak Memory Bandwidth	288 GB/s	384 GB/s	384 GB/s
Memory Type	GDDR7	GDDR7	GDDR7
Memory Interface	96-bit	128-bit	128-bit
DisplayPort	2.1b	2.1b	2.1b

Open GL	4.6	4.6	4.6
Shader Model	7	7	7
DirectX	12 Ultimate	12 Ultimate	12 Ultimate
PCIe Generation	5	5	5
Single Precision Floating-Point Performance	9.2	13.6	17.7
Tensor Performance	147.4	193	231.6
NVIDIA FXAA/TXAA Anti-Aliasing	Yes	Yes	Yes
NVIDIA RTX Desktop Manager	No	No	No
Vulkan Support	Yes	Yes	Yes
NVIDIA Optimus	Yes	Yes	Yes
NVIDIA Max-Q Technology	Yes	Yes	Yes
NVENC/NVDEC	Yes	Yes	Yes

WLAN

Model	Intel Wi-Fi 7 BE201 (Fillmore Peak 2) + BT5.4 (HW Ready)
Connector: Main, Aux/GNSS, GNSS	ANT1:AUX WiFi + BT; ANT2: Main WiFi
Antenna Diversity	Supported
MIMO	Supported
GNSS Bian	N/A
Radio ON/OFF Control	Supported
Connector interface	M.2: CNVio2
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 11, Linux
Wi-Fi Alliance	n/a
IEEE WLAN Standard	IEEE 802.11a, b, d, e, g, h, i, k, n, r, u, v, w, ac, ax, be
Roaming	Support seamless roaming between access points
Bluetooth*	Bluetooth 5.4
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	IEC62368-1 and IEC60950-1
Disclaimers	1) 6GHz channel of Wi-Fi 6E/7 is only available with Windows 11 2) Bluetooth may be limited by OS

Battery

Dimension	L: 306.9mm*W: 59mm*T 8.13mm
Weight	MAX 318g
Type (Chemistry and Cell)	Li-Polymer (4S1P), 4-cell
Voltage	15.6 V
Battery Capacity	90Wh
Charging Time	On Charge Time (0- 100%) * 105 min Off Charge Time (0 – 80%) ** 56 min Off Charge Time (0 – 100%) ** 100 min
Operating Temperature Range	between 10°C (50°F) and 35°C (95°F)
Warranty	1 Year / 3 Year Available
Coin Cell Battery (Model)	CR2032

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	Support NIST
Replicated Setup	Yes, it supported with SRSETUP tool.
Boot Control	Yes, it means Boot order change.
Discrete Mode	No
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	Only support WOL when system is connected with Dock.
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
UEFI	UEFI 2.9A

EMC & Safety

EMC	Published, Certified Existing Reports EMC – Australia EMC – Canada EMC – China EMC – EU/EFTA EMC – Japan EMC – Kazakhstan 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 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, Dijbouti, 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 9.0 For more information about ENERGY STAR, go to: https://www.energystar.gov
EPEAT	EPEAT Gold Certification Available on select models
IT ECO declaration	The latest environmental information about Lenovo products is available at: https://www.lenovo.com/us/en/compliance/eco-declaration/
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/content/dam/lenovo/site-design/esg-document-library/global/corp-policies/materials/Lenovo_Commitment_to_RoHS.pdf

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 (www.landesk.com/lenovo)
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 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.
Materials Used	75% Recycled Aluminum A Cover 30% PCC Plastic C Cover 30% PCC Plastic D Cover 90% PCC Plastic 140W Slim AC Adapter Low Temperature Solder (SSD, fingerprint reader module, motherboard and FHD+) Plastic free packaging with 90% recycled

	and/or FSC certified content (standard/ bulk)
TCO Certification	TCO 10.0
MIL-STD	Meets MIL-STD-810H METHOD 516.8 procedure IV (transit drop with and without packaging)
Disclaimers	1. EPEAT registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country. 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