

Informacije o proizvodu (EN)

LENOVO laptop ThinkPad P16s Gen 2 (Villi Black)
(21HK0011CX)

Lenovo

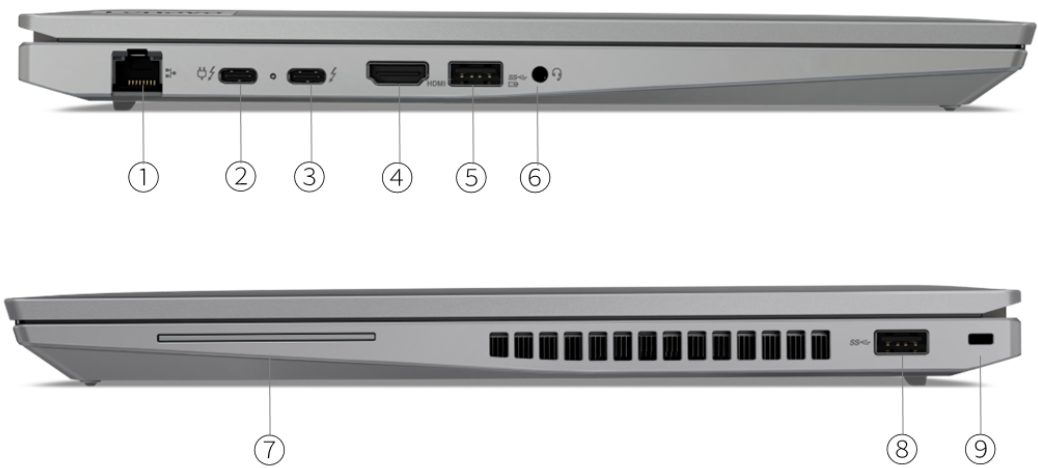


Tehnoteka je online destinacija za upoređivanje cena i karakteristika bele tehnike, potrošačke elektronike i IT uređaja kod trgovinskih lanaca i internet prodavnica u Srbiji. Naša stranica vam omogućava da istražite najnovije informacije, detaljne karakteristike i konkurentne cene proizvoda.

Posetite nas i uživajte u ekskluzivnom iskustvu pametne kupovine klikom na link:

<https://tehnoteka.rs/p/lenovo-laptop-thinkpad-p16s-gen-2-villi-black-21hk0011cx-akcija-cena/>

OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	7. Smart card reader *
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation P series Intel® Core™ i5 / i7 processor, supports up to 14 cores, up to 5.2GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core™ i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel® Iris® Xe Graphics
Core™ i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel® Iris® Xe Graphics
Core™ i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel® Iris® Xe Graphics
Core™ i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel® Iris® Xe Graphics

Operating System

Operating System**

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- Windows® 11 DG Windows® 10 Pro 64
- Red Hat Enterprise Linux 9.1 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS
- No preload operating system

Notes:

[1] Red Hat Enterprise Linux 9.1 certification will be available after Sep 29, 2023.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel® Iris® Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	30W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager

Notes:

[1] Intel® Iris® Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel® Iris® Xe Graphics will function as Intel® UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI® supports up to 3840x2160@60Hz
- Thunderbolt™ supports up to 7680x4320@60Hz

Chipset

Chipset

Intel® SoC (System on Chip) platform

Memory

Max Memory

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with 64GB LPDDR5x: 64GB soldered memory, not upgradable
- Models with DDR5 memory: up to 48GB (16GB soldered + 32GB SO-DIMM)

Memory Slots**

- Models with DDR5 memory: one memory soldered to systemboard, one DDR5 SO-DIMM slot, dual-channel capable
- Models with LPDDR5x memory: memory soldered to systemboard, no slots, dual-channel

Memory Type**

- DDR5-5600 non-ECC (models with integrated graphics)^[1]
- LPDDR5x-7500 non-ECC (models with discrete graphics)^[2]

Notes:

- [1] System comes with DDR5-5600 memory and will run at DDR5-5200 due to platform limitations.
- [2] System comes with LPDDR5x-7500 memory and will run at LPDDR5x-4800 due to platform limitations.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby® Voice

Camera**

- 5.0MP + IR discrete, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 135W AC adapter

Power Adapter

Power Adapter**^[1]

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C® (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C® slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

- 65W USB-C® slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C® slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 135W USB-C® slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS ^[1]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ICC Template color calibration, Low power, Low Blue Light, Eyesafe® Certified 2.0, 85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
16"	WQUXGA (3840x2400)	None	OLED	400nits	Anti-reflection, anti-smudge	16:10	100,000:1	100% DCI-P3	85°/85°/85°/85°	X-Rite® Factory Color Calibration, Low Blue Light, Eyesafe® Certified 2.0, DisplayHDR™ 400, Dolby® Vision™, 85.4% screen to body ratio

Color Calibration

- X-Rite® factory color calibration (OLED display)
- ICC Template color calibration (low power display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™
3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67 x 115 mm (2.64 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
NVIDIA® graphics models	361.9 x 255.5 x 21.1 mm (14.25 x 10.06 x 0.83 inches)
Integrated graphics models	361.98 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)

Weight^[2]

Models	Weight
Models with black cover	Starting at 1.70 kg (3.76 lbs)
Models with grey cover	Starting at 1.73 kg (3.83 lbs)

Case Color**

- Storm grey
- Villi black

Case Material**

- Models with black cover: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel® Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel® Ethernet Connection I219-V (non-vPro® models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**

- Qualcomm® Wi-Fi® 6E NFA725A, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3^[1]
- Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

- [1], [2] Wi-Fi® 6E full features might be limited by country-level restrictions.
- Wi-Fi® 6E is only enabled on Windows® 11 and operates as Wi-Fi® 6 with Windows® 10.
- 6GHz Wi-Fi® 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi® 6E, and the regional regulatory certifications & spectrum allocation.
- Bluetooth® 5.3 operation requires Windows® 11. For more information please see [General Bluetooth® Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 2x USB 3.2 Gen 1 (one Always On)
- 2x Thunderbolt™ 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)
- 1x HDMI® 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Ethernet (RJ-45)
- 1x Security keyhole

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4® 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt™ or USB-C®.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P16s Gen 2 \(Intel®\)](#)

Monitor Cable

Monitor Cable

- Lenovo® HDMI® to VGA Monitor Adapter
- Lenovo® USB-C® to VGA Adapter
- Lenovo® USB-C® to DisplayPort™ Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe® password
- Self-healing BIOS

Other Security

- (Optional) IR camera for Windows® Hello (facial recognition)
- (Optional) Ultrasonic Human Presence Detection for IR camera

- (Optional) Camera privacy shutter
- Bottom cover tamper detection

MANAGEABILITY

System Management

System Management

- Intel® vPro® Enterprise^[1]
- Non-vPro®

Notes:

[1] Intel® vPro® offers a superset of DASH's defined capabilities.

SERVICE

Warranty

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

ENVIRONMENTAL

Sustainability

Material

85% PCC recycled plastic used in key caps (backlight)
70% PCC recycled plastic used in key caps (non-backlight)
98% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the battery
90% PCC recycled plastic used in 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Relative Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories^[1]

- Lenovo® USB-C® to Ethernet Adapter (1Gbps)
- None

Notes:

[1] For more compatible accessory solutions, please visit [Accessories for ThinkPad® P16s Gen 2 \(Intel®\)](#)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered^[3]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT™ registration and ENERGY STAR® certification are dependent on system OS. Please visit [epeat.net](#) and [energystar.gov](#) for more information.

[3] EPEAT™ is registered where applicable, please see [epeat.net](#) for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe® Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo® Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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Za najnovije informacije o ceni, dostupnim akcijama i tehničkim karakteristikama proizvoda koji se pominje u ovom dokumentu, molimo posetite našu stranicu klikom na sledeći link:

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