



Western Digital® PC SN520 NVMe™ SSD

Fueling Innovation

Design Flexibility

With future-ready, scalable NVMe architecture, the Western Digital PC SN520 NVMe SSD offers a robust solution to fuel generations of innovative IoT applications. Scalable NVMe offers a significant performance increase over SATA SSDs while further optimizing low power consumption to the low level of 2.5mW.

This NVMe SSD enables greater design flexibility for IoT and embedded customers, who seek a cost effective, small form factor, reliable and rugged storage device with low capacity points from 128GB to 512GB.

Robust Construction Suited for IoT

The Western Digital PC SN520 NVMe SSD, supporting PCIe Gen3 x2, is designed for applications that have a limited number of PCIe lanes available for storage, however, require both high performance and low power. Partners that could benefit from NVMe technology include:

- **Commercial:** Interactive kiosks, ATMs and Point-of-Sales (POS), Multi-Functional Printers (MFP) and industries that require high-volume transaction processing
- **Edge Equipment and IoT Gateway:** Such as network equipment, industrial machinery, medical equipment, or embedded PC that need the high capacities to capture the floor's and sensors' data and the high IOPS to support the system's data analytics
- **Media Content Delivery and Streaming:** In-flight entertainment systems, train control and monitoring systems, data recorder and video surveillance that require high capacity and reliability

Versatile Options for IoT

Equipped with a fully integrated solution which includes in-house controller, 64-layer 3D NAND, firmware, and testing, Western Digital provides longevity, supply and a robust and reliable design.

Designed with Western Digital's in-house tiered-caching NVMe architecture, the Western Digital PC SN520 NVMe SSD delivers high performance with sequential read and write speeds up to 1,700MB/s and 1,400MB/s respectively and high endurance up to 300 TBW, all of which are available in a variety of small form factors: M.2 2230, M.2 2242, M.2 2280.

Summary

Western Digital PC SN520 NVMe SSD, in variety of small, single-sided form factors such as M.2 2230, M.2 2242 and M.2 2280, enables customers to build ultra-thin, ultra-small boards and systems that address multiple IoT segments, without sacrificing performance and power consumption.



WESTERN DIGITAL PC SN520 NVMe SSD KEY BENEFITS & FEATURES

READ SPEEDS UP TO 1,700MB/S AND LOW POWER CONSUMPTION LEVERAGES BOTH THE PCIe GEN3 x2 INTERFACE, AS WELL AS SOPHISTICATED NVMe POWER MANAGEMENT

128GB-512GB CAPACITIES AVAILABLE IN THREE SMALL FORM FACTORS: M.2 2230, M.2 2242, M.2 2280

ENDURANCE OF UP TO 300 TBW

5 YEAR LIMITED WARRANTY

Western Digital PC SN520 NVMe SSD

Specifications are subject to change

| | | | |
|---|--|-------|-------|
| Form Factors | M.2 2230, M.2 2242, M.2 2280 | | |
| Interface | PCIe Gen3 x2 NVMe v1.3 | | |
| Formatted Capacities¹ | 128GB, 256GB, 512GB | | |
| Performance² | 128GB | 256GB | 512GB |
| Sequential Read up to (MB/s) | 1,500 | 1,700 | 1,700 |
| Sequential Write up to (MB/s) | 800 | 1,300 | 1,400 |
| Random Read up to (IOPS) | 95K | 220K | 270K |
| Random Write up to (IOPS) | 90K | 175K | 280K |
| Endurance ³ (TBW) | 100 | 200 | 300 |
| Power | 128GB | 256GB | 512GB |
| Peak Power (10µs) (A) | 1.2 | 1.4 | 1.8 |
| Avg. Active Power ^{4,5} (mW) | 75 | 75 | 75 |
| Low Power (PS3) ⁵ (mW) | 25 | 25 | 25 |
| Sleep (PS4) ⁵ (mW) | 2.5 | 2.5 | 2.5 |
| Supply Voltage (V / ±5%) | 3.3 | 3.3 | 3.3 |
| Reliability | Up to 1.752M hours | | |
| MTTF ⁶ | Up to 1.752M hours | | |
| Environmental | | | |
| Operating Temperature ⁷ | 32°F to 158°F (0°C to 70°C) | | |
| Non-operating Temperature ⁸ | -67°F to 185°F (-55°C to 85°C) | | |
| Operating Vibration | 5 gRMS, 10–2000 Hz, 3 axes | | |
| Non-operating Vibration | 4.9 gRMS, 7–800 Hz, 3 axes | | |
| Shock | 1,500G @0.5 ms half sine | | |
| Certifications | FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick | | |
| Limited Warranty ⁹ | 5 years | | |
| Physical Dimensions | | | |
| Width | 22mm ±0.15mm | | |
| Length | 2230: 30mm ±0.15mm; 2242: 42mm ±0.15mm; 2280: 80mm ±0.15mm | | |
| Thickness (max) | 2.38mm | | |
| Weight | 2230: 3.5g ±1g; 2242: 4.0g ±1g; 2280: 6.5g ±1g | | |

| SKU | Form Factor | Capacity |
|--------------|-----------------|----------|
| SDAPTUW-128G | M.2 2230 S3-B-M | 128GB |
| SDAPTUW-256G | M.2 2230 S3-B-M | 256GB |
| SDAPTUW-512G | M.2 2230 S3-B-M | 512GB |
| SDAPMUW-128G | M.2 2242 S3-B-M | 128GB |
| SDAPMUW-256G | M.2 2242 S3-B-M | 256GB |
| SDAPMUW-512G | M.2 2242 S3-B-M | 512GB |
| SDAPNUW-128G | M.2 2280 S3-B-M | 128GB |
| SDAPNUW-256G | M.2 2280 S3-B-M | 256GB |
| SDAPNUW-512G | M.2 2280 S3-B-M | 512GB |



Western Digital

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¹ As used for storage capacity, one gigabyte (GB) = one billion bytes and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment.
² Test Conditions: Performance is based on the CrystalDiskMark 5.2.2 benchmark using a 1000MB LBA range ASUS Z170A desktop with Intel® i7-6700K 4.0GHz, 8GB 2133MHz DDR4. Windows 10 Pro 64-bit using Microsoft StorNVMe driver, secondary drive. Performance may vary based on host device. 1 MB = 1,000,000 bytes. IOPS = input/output operations per second.
³ TBW (terabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity.
⁴ Measured using MobileMark™ 2014 on HP EliteBook X360 1030 G2 with i7-7600U, 8GB RAM. Windows 10 Pro, 64-bit RS3 using Microsoft StorNVMe driver, primary drive.
⁵ Power measurements at 25°C.
⁶ MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing. MTTF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTTF does not predict an individual drive's reliability and does not constitute a warranty. (Telcordia SR-332, GB, 40°C)
⁷ Operational temperature as reported by device (composite temperature.)
⁸ Non-operational storage temperature does not guarantee data retention.
⁹ 5 years or Max Endurance (TBW) limit, whichever occurs first. 5 year warranty in regions not recognizing "limited." See <http://support.wdc.com> for more details.

Product specifications subject to change without notice. Not all products are available in all regions of the world.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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