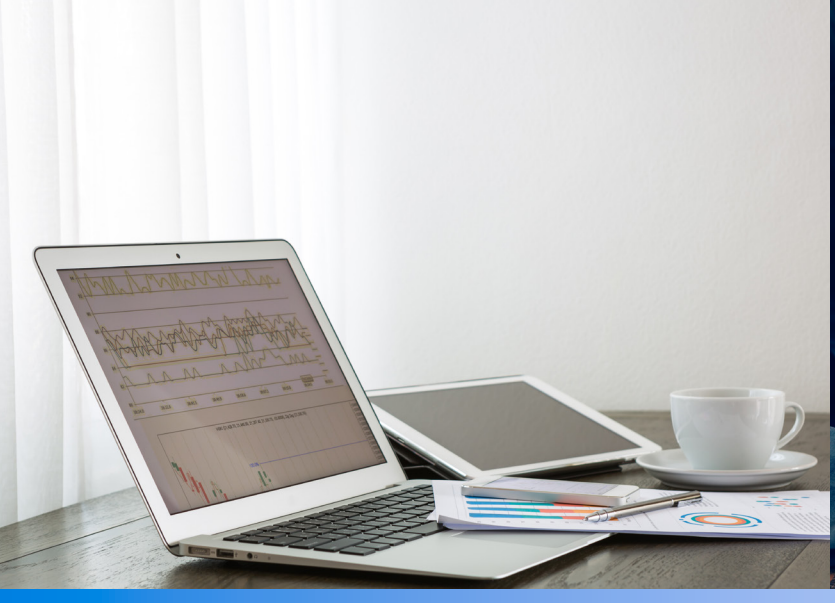




Western Digital® PC SN520 NVMe™ SSD

Thin Is In

Innovative Solutions

With future-ready, scalable NVMe architecture, the Western Digital PC SN520 NVMe SSD offers both manufacturers and end-users the solution to innovate and expand their computing effectiveness. The Western Digital PC SN520 NVMe SSD not only triples the read speed over SATA SSDs, but further optimizes the low power consumption level to a low 2.5mW.

This NVMe SSD enables greater design flexibility for ultra-thin notebook or tablet designs that require a cost effective, reliable storage device with a small form factor and capacity points up to 512GB.

Versatile Options for Mobility

The Western Digital PC SN520 NVMe SSD, supporting PCIe Gen3 x2, is designed for a multitude of applications that require both high performance and low power.

Equipped with a fully integrated solution which includes an in-house controller, 64-layer 3D NAND, firmware, and extensive testing, Western Digital provides longevity of supply in 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 is 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, enables customers to build ultra-thin, ultra-small boards and systems that address the ever-changing computing platforms, 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 Capacities[1]			128GB, 256GB, 512GB
Performance[2]	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			
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.

Western Digital
5601 Great Oaks Parkway
San Jose, CA 95119, USA
www.wdc.com

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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. (Telecordia 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.