PRODUCT BRIEF

Product Highlights

- Fueled by Western Digital® in-house controller and 3D NAND
- Read speeds up to 1,700MB/s
- Lower power draw over our SATA drive

WD Blue™ SN500 NVMe™ SSD

Step-up to NVMe Performance

Drive Performance Beyond SATA

The WD Blue™ SN500 NVMe™ SSD steps up performance three times over our high-end SATA SSDs with a superior NVMe solution for high-performance and mainstream PCs. The WD Blue SN500 NVMe SSD allows resellers, system builders and consumers to take advantage of a reliable NVMe storage solution when creating their next PCs. Available in 250GB and 500GB capacities in an M.2 2280 form factor, the WD Blue SN500 NVMe SSD will give your system the boost you need.[1]

Read Speeds Up to 1700MB/s

The WD Blue PC SN500 NVMe SSD is designed to deliver high performance with sequential read speeds up to 1700MB/s and sequential write speeds up to 1450MB/s (500GB model) with efficient power consumption as high as 2.7W.[2]

Low Power Draw

Based on proven technology descended from our WD Black™ SN750 NVMe SSD, the WD Blue SN500 NVMe SSD enables a low power draw while maintaining significantly higher performance over our SATA SSD.

In-house Controller and 3D NAND

Fueled by the Western Digital in-house controller and 3D NAND supporting the PCIe® NVMe™ interface and DRAM-less configurations.

Download WD SSD Dashboard

Monitor your drive's available capacity, operating temperatures, SMART attributes and more with the WD SSD Dashboard.

5 Year Limited Warranty

Every WD Blue SN500 NVMe SSD comes with a 5-year limited warranty, so you can be confident of your storage when you upgrade or replace any of your drives.

WD Blue SN500 NVMe SSD Product Features and Specifications

Specification		
Interface M.2 2280[1,2,3]		PCIe Gen3 8 Gb/s, up to 2 Lanes
Formatted Capacity[4]		250GB, 500GB
Performance[3]	**250GB**	**500GB**
Sequential Read up to (MB/s) (Queues=32, Threads=1)	1,700	1,700
Sequential Write up to (MB/s) (Queues=32, Threads=1)	1,300	1,450
Random Read 4KB IOPS up to (Queues=32, Threads=1)	210K	275K
Random Write 4KB IOPS up to (Queues=32, Threads=8)	170K	300K
Endurance[5] (TBW)	150	300
Power		
Average Active Power[6]	75mW	75mW
Peak Power (10us)	1.8A	1.8A
Low Power (PS3)[6]	25mW	25mW
Sleep (PS4) (low power)[6]	2.5mW	2.5mW
Reliability		
MTTF[7]	1.75M hours (Telcordia SR-332, GB, 25°C)	1.75M hours (Telcordia SR-332, GB, 25°C)
Environmental		
Operating Temperatures[8]	32°F to 158°F (0°C to 70°C)	32°F to 158°F (0°C to 70°C)
Non-operating Temperatures[9]	-67°F to 185°F (-55°C to 85°C)	-67°F to 185°F (-55°C to 85°C)
Certifications	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick
Limited Warranty[10]	5 years	5 years
Physical Dimensions		
Form Factor	M.2 2280	M.2 2280
Length	80 ± 0.15mm	80 ± 0.15mm
Width	22 ± 0.15mm	22 ± 0.15mm
Height	2.38mm	2.38mm
Weight	6.5g ± 1g	6.5g ± 1g
Ordering Information[4]		
Model Number	WDS250G1B0C	WDS500G1B0C

1 As used for storage capacity, one gigabyte (GB) = one billion bytes. Total accessible capacity varies depending on operating environment.
2 As used for transfer speed, megabyte per second (MB/s) = one million bytes per second. Performance will vary depending on your hardware and software components and configurations.
3 Backward compatible with PCIe Gen3 x2, PCIe Gen3 x1, PCIe Gen2 x4, PCIe Gen2 x2, and PCIe Gen2 x1.
4 Not all products may be available in all regions of the world. 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.
5 TBW (terabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity.
6 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.
7 MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing (Telcordia SR-332, GB, 25°C). 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.
8 Operational temperature as reported by device (composite temperature).
9 Non-operational storage temperature does not guarantee data retention.
10 5 years or Max Endurance (TBW) limit, whichever occurs first. See support.wdc.com for regional specific warranty details.

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