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WD BLACK™ SN750 NVMe™ SSD

DATA SHEET | **INTERNAL DRIVE FOR RETAIL**

Highlights

- Read speeds up to 3,400MB/s[1] for improved load times.
- Available in capacities ranging from 250GB to 2TB[1].
- An exclusive WD BLACK™ SSD dashboard* with gaming mode improves game performance.
- 5-year Limited Warranty

INTERFACE
PCIe® Gen3 x4

CAPACITIES
250GB to 2TB[1]

FORM FACTOR
M.2 2280-S3-M

MODEL NUMBERS
WDBRPG0020BNC-WRSN
WDBRPG0010BNC-WRSN
WDBRPG5000ANC-WRSN
WDBRPG2500ANC-WRSN

THE WESTERN DIGITAL ADVANTAGE

Western Digital puts our products through extensive Functional Integrity Testing (F.I.T.) prior to any product launch. This testing ensures our products consistently meet the highest quality and reliability standards of the Western Digital brand.

Western Digital also has a detailed Knowledge Base with more than 1,000 helpful articles as well as software and utilities. Our customer support lines have long operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help, or you can access our Western Digital Support site for additional details.

The WD BLACK™ SN750 NVMe™ SSD delivers top-tier performance for gaming and hardware enthusiasts who are looking to build or upgrade their PC. Available in capacities up to 2TB[1], the WD BLACK™ SN750 NVMe™ SSD rivals some of the best performing drives on the market to help give gamers that competitive edge.

Performance Matters

Live life in the fast lane, whether you're looking to boost your system's overall responsiveness or reduce load times, the WD BLACK™ drive cuts down on your wait time to get back into action and gets you ahead of the game.

Our fastest computing NVMe™ SSD can deliver speeds more than six times faster than our fastest SATA SSD (up to 3,400MB/s[1] vs. 545MB/s[1]) to give hardcore gamers the competitive edge they need.

Space to Play

At the core of the WD BLACK drive is its revolutionary NAND technology. By doubling the storage density from its previous generation, our 64-layer 3D NAND pushes the limitations of storage and showcases the amazing feat of NAND innovation. This means extended capacity up to 2TB[1] on a single-sided drive that's roughly the size of a gumstick, enough to store your large files and video games.

The WD BLACK™ SSD Dashboard

The WD BLACK SSD Dashboard[2] gives you the ability to optimize performance by enabling the gaming mode feature. This disables the low power mode function on the SSD, which keeps your drive firing on all cylinders during intense gaming sessions.

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Specifications[2]

	2TB	1TB	500GB	250GB
Model Number[3]	WDBRPG0020BNC-WRSN	WDBRPG0010BNC-WRSN	WDBRPG5000ANC-WRSN	WDBRPG2500ANC-WRSN
Interface[2,4]				
WD BLACK NVMe SSD M.2 2280	PCIe Gen3 8Gb/s, up to 4 lanes	PCIe Gen3 8Gb/s, up to 4 lanes	PCIe Gen3 8Gb/s, up to 4 lanes	PCIe Gen3 8Gb/s, up to 4 lanes
Performance[2,5]				
Sequential Read MB/s up to (Q=32, T=1)[6]	3,400	3,470	3,470	3,100
Sequential Write MB/s up to (Q=32, T=1)	2,900	3,000	2,600	1,600
Random Read 4KB IOPS up to (Q=32, T=8)	480,000	515,000	420,000	220,000
Random Write 4KB IOPS up to (Q=32, T=8)	550,000	560,000	380,000	180,000
Endurance (TBW)[7]	1,200	600	300	200
Power[8]				
Low Power (PS3)	100mW	100mW	70mW	70mW
Peak Power (10us)	2.8A	2.8A	2.8A	2.8A
Slumber (PS4) Low Power	2.5mW	2.5mW	2.5mW	2.5mW
Reliability				
MTTF[9]	1.75M hours	1.75M hours	1.75M hours	1.75M hours
Environmental				
Operating Temperatures[10]	32 °F to 158 °F (0 °C to 70 °C)	32 °F to 158 °F (0 °C to 70 °C)	32 °F to 158 °F (0 °C to 70 °C)	32 °F to 158 °F (0 °C to 70 °C)
Non-operating Temperatures[11]	-67 °F to 185 °F (-55 °C to 85 °C)	-67 °F to 185 °F (-55 °C to 85 °C)	-67 °F to 185 °F (-55 °C to 85 °C)	-67 °F to 185 °F (-55 °C to 85 °C)
Operating Vibration	5.0 gRMS, 10–2000 Hz, 3 axes	5.0 gRMS, 10–2000 Hz, 3 axes	5.0 gRMS, 10–2000 Hz, 3 axes	5.0 gRMS, 10–2000 Hz, 3 axes
Non-operating Vibration	4.9 gRMS, 7–800 Hz, 3 axes	4.9 gRMS, 7–800 Hz, 3 axes	4.9 gRMS, 7–800 Hz, 3 axes	4.9 gRMS, 7–800 Hz, 3 axes
Shock	1,500 G @ 0.5 ms half sine	1,500 G @ 0.5 ms half sine	1,500 G @ 0.5 ms half sine	1,500 G @ 0.5 ms half sine
Certifications	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick
Limited Warranty[12]	5 years	5 years	5 years	5 years
Physical Dimensions				
Length	80 ± 0.15mm	80 ± 0.15mm	80 ± 0.15mm	80 ± 0.15mm
Width	22 ± 0.15mm	22 ± 0.15mm	22 ± 0.15mm	22 ± 0.15mm
Height	2.38mm	2.38mm	2.38mm	2.38mm
Weight	7.5 ± 1g	7.5 ± 1g	7.5 ± 1g	7.5 ± 1g

Specifications subject to change without notice.

[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. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Performance will vary depending on your hardware and software components and configurations.

[2] Available for download at www.westerndigital.com.

[3] Not all products may be available in all regions of the world.

[4] Backward compatible with PCIe Gen3 x2, PCIe Gen3 x1, PCIe Gen2 x4, PCIe Gen2 x2, and PCIe Gen2 x1.

[5] 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.

[6] Q=Queue, T=Thread.

[7] TBW (terabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity.

[8] Power measurements at 25°C. 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.

[9] 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.

[10] Operational temperature as reported by device (composite temperature).

[11] Non-operational storage temperature does not guarantee data retention.

[12] 5 years or Max Endurance (TBW) limit, which ever comes first. See support.wdc.com for regional specific warranty details.

Western Digital.

5601 Great Oaks Parkway
San Jose, CA 95119, USA
US (Toll-Free): 800.275.4932
International: 408.717.6000

www.westerndigital.com

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