



Highlights

- Read speeds up to 3,470MB/s¹ for improved load times.
- Available in capacities ranging from 500GB to 2TB.
- Sleek heatsink design to customize and intensify your gaming rig while helping to maintain peak performance¹.
- 5-year Limited Warranty

INTERFACE

PCIe® Gen3 x4

CAPACITIES

500GB to 2TB¹

FORM FACTOR

M.2 2280-S3-M with heatsink

MODEL NUMBERS

WDBGMP5000ANC-WRSN
WDBGMP0010BNC-WRSN
WDBGMP0020BNC-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.

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 3,470MB/s¹ vs. 545MB/s¹) 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 2TB¹ on a single-sided drive that's roughly the size of a gumstick, enough to store your large files and video games.

Sleek Heatsink Design

Every system is not created equal. From different graphics cards and CPUs to DRAM and storage, PCs all differ in performance and appearance. The WD BLACK™ SSD's sleek and modern heatsink model goes well with desktop PC builds that support the M.2 form factor and is the perfect component to complement systems with RGB lighting and other cooling technologies, such as water cooling.^{**}

The EKWB heatsink is designed to help keep the WD BLACK NVMe™ SSD running at peak performance for longer sustained periods. Its sleek and non-intrusive design not only gives your system an enhanced appearance, but also helps your drive maintain optimal levels of performance with its passive cooling features.

The WD BLACK™ SSD Dashboard

The WD BLACK SSD Dashboard² 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.

WD BLACK™ SN750 NVMe™ SSD + HEATSINK

DATA SHEET

INTERNAL DRIVE FOR RETAIL

Specifications²

	2TB	1TB	500GB
Model Number³	WDBGMP0020BNC-WRSN	WDBGMP0010BNC-WRSN	WDBGMP5000ANC-WRSN
Interface^{2,4}			
WD BLACK NVMe SSD M.2 2280 with heatsink	PCIe Gen3 8 Gb/s, up to 4 lanes	PCIe Gen3 8 Gb/s, up to 4 lanes	PCIe Gen3 8 Gb/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
Sequential Write MB/s up to (Q=32, T=1)	2,900	3,000	2,600
Random Read 4KB IOPS up to (Q=32, T=8)	480,000	515,000	420,000
Random Write 4KB IOPS up to (Q=32, T=8)	550,000	560,000	380,000
Endurance (TBW) ⁷	1,200	600	300
Power⁸			
Low Power (PS3)	100mW	100mW	70mW
Peak Power (10us)	2.8A	2.8A	2.8A
Slumber (PS4) Low Power	100mW	100mW	100mW
Reliability			
MTTF ⁹	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)
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)
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
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
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
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
Limited Warranty ¹²	5 years	5 years	5 years
Physical Dimensions			
Length	80.15mm	80.15mm	80.15mm
Width	24.2mm	24.2mm	24.2mm
Height	8.10mm	8.10mm	8.10mm
Weight	33.2g	33.2g	33.2g

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.

** Heatsink model recommended for desktop PC only.

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