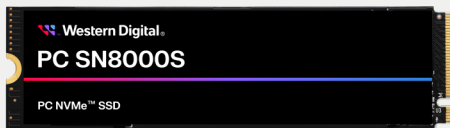


DATA SHEET



Features

● PERFORMANCE AT SCALE

Delivering PCIe® Gen4 sequential read speeds up to 7,300MB/s² (1024GB-4096GB¹ models) and random read speeds up to 1.2M IOPS³, the Western Digital® PC SN8000S NVMe™ SSD provides performance at scale for rapidly evolving applications and modern workloads like artificial intelligence, 3D modeling, gaming and professional content creation tools.

● SCALABILITY FOR YOUR WORKFLOW

Workflows with multiple applications and large datasets or files demand large amounts of storage space. The Western Digital® PC SN8000S NVMe™ SSDs provide high capacities from 512GB to 4096GB¹ to help scale with your needs.

● KEEP INNOVATING

Multitasking is critical for professional creators that need to use multiple applications. The Western Digital® PC SN8000S SSD with NVMe™ 2.0 delivers fast responses and low latencies for switching between applications.

● FAST AND RELIABLE

Corporations demand security for their most sensitive data and a safe way to decommission retired drives. The Western Digital® PC SN8000S NVMe™ SSD includes the latest TCG Opal 2.02 standard for booting securely, data-at-rest encryption, and crypto erase to help protect your data every step of the way.

● BUILT FOR STAYING POWER

With an endurance rating of up to 2400 TBW⁴ and a MTTF⁷ of 1.75M hours, the Western Digital® PC SN8000S NVMe™ SSD can be deployed in intensive compute environments without worrying about failure. Plus, all of our SSDs are backed by our 5-year limited warranty¹¹.

Western Digital® PC SN8000S NVMe™ SSD

Helping to meet the demands of AI-enabled applications

The Western Digital® PC SN8000S NVMe™ SSD is the next generation of performance storage for PCs and workstations to help meet the demands of modern applications and workloads like artificial intelligence, 3D modeling, gaming and professional content creation tools. Designed with the next generation Western Digital® 162-layer BiCS6 TLC 3D NAND, the Western Digital® PC SN8000S with PCIe® Gen4 delivers up to 7,300MB/s² (1024GB-4096GB¹ models) sequential and up to 1.2M IOPS³ random read speeds for compute systems requiring high performance NVMe™ storage. Equipped with high capacities up to 4096GB¹ on M.2 2280, the Western Digital® PC SN8000S NVMe™ SSD is the ideal choice for customers building PCs, workstations, or systems designed for performance at scale.

Highlights

- Western Digital® BiCS6 TLC 3D NAND
- PCIe® Gen4 x4 with NVMe™ 2.0
- Capacities: 512GB, 1024GB, 2048GB, 4096GB¹
- Form Factor: M.2 2280 S3-M
- Sequential read speeds up to 7,300MB/s² and write speeds up to 6,800MB/s² (1024GB-4096GB¹ models)
- High endurance up to 2,400 TBW⁴ (4096GB¹ model)
- Western Digital® nCache™ 4.0 Technology
- Self-encrypting drive with TCG OPAL 2.02, Non-self-encrypting drive with TCG Pyrite 2.01, ATA Security

Western Digital® PC SN8000S NVMe™ SSD

512GB¹

1024GB¹

2048GB¹

4096GB¹

Product specifications

Interface ²	PCIe® Gen4 x4 NVMe™ 2.0			
Form Factor	M.2 2280 S3-M			
NAND Type	Western Digital® BiCS6 TLC 3D NAND			

Performance

Seq. Read up to (MB/s) ² (Queues=32, Threads=1)	7,000	7,300	7,300	7,300
Seq. Write up to (MB/s) ² (Queues=32, Threads=1)	6,300	6,800	6,800	6,800
Rand Read up to 4KB (IOPS) ³ (Queues=32, Threads=16)	920K	1,200K	1,200K	1,200K
Rand Write up to 4KB (IOPS) ³ (Queues=32, Threads=16)	1,300K	1,300K	1,300K	1,300K

Power

Peak Power ⁵	10 W
Average Active Power ⁵	150 mW
Sleep (PS4) ⁸	3.5 mW

Reliability

Endurance ⁴ (TBW)	300	600	1,200	2,400
MTTF ⁷	1.75M hours			
Limited Warranty ¹¹	5 years			

Regulatory

ROHS compliant ⁸	Yes
Certifications	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick

Environmental

Operating Temperatures ⁹	32°F to 176°F (0°C to 80°C)
Non-operating Temperatures ¹⁰	-40°F to 185°F (-40°C to +85°C)
Operating Vibration	5gRMS, 10 to 2,000Hz. 15min/axis on 3 axes
Non-operating Vibration	4.9gRMS, 7 to 800Hz. 15min/axis on 3 axes
Shock	1,500G @0.5 ms half sine

Physical Dimensions

Length	80 ± 0.15mm
Width	22 ± 0.15mm
Height	1.36 mm
Weight	7.25 g ± 0.35g

Ordering Information

Form Factor	Security	512GB ¹	1024GB ¹	2048GB ¹	4096GB ¹
M.2 2280 S3-M	non-SED	SDEPNRK-512G	SDEPNRK-1T00	SDEPNRG-2T00	SDEPNRG-4T00
M.2 2280 S3-M	SED	SDEQNRK-512G	SDEQNRK-1T00	SDEQNRG-2T00	SDEQNRG-4T00

¹ 1GB = 1 billion bytes and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.

² Based on read speed, unless otherwise stated. 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.

³ IOPS = input/output operations per second.

⁴ TBW (terabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity.

⁵ Average Power is measured using MobileMark™ 25 on Windows 11 Pro (Version 10.0.22621 Build 22621) Bios version Insyde Corp v1.06, Intel RST driver at 25°C. Peak power is the maximum instantaneous power measured while continuously processing sequential read and write commands (tested separately) for at least 1 minute, with a transfer size of 256 sectors per command (128KB), queue depth of 32 and 1 threads, with sampling interval of 10us.

⁶ Low Power referring to NVMe PS4 at 25°C.

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 This drive is in compliance with the European Union Directive 2011/65/EU and Directive (EU) 2015/863 on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment.

⁹ Operational temperature is defined as temperature reported by the drive. Note that drive temperature readings are expected to be higher than ambient temperature when the SSD is placed inside a system. The SSD box package is rated up to 60°C.

¹⁰ Non-operational storage temperature does not guarantee data retention.

¹¹ 5 years or Max Endurance (TBW) limit, whichever occurs first. See support.WesternDigital.com for regional specific warranty details.

¹² Backward compatible with PCIe Gen4 x2, PCIe Gen3 x4, PCIe Gen3 x2, PCIe Gen3 x1, PCIe Gen2 x4, PCIe Gen2 x2, and PCIe Gen2 x1

Product specifications subject to change without notice. Pictures shown may vary from actual products.

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