



PRODUCT BRIEF



Western Digital CL SN720 NVMe SSD

Western Digital® CL SN720 NVMe™ SSD

Performance Fortified

With future-ready, scalable NVMe™ architecture, the Western Digital® CL SN720 NVMe SSD is breaking through performance limits for commercial and industrial applications. With a broad temperature range and high endurance for today's markets, this SSD is available in a compact storage device with capacity points from 256GB to 2TB.

Highlights

- 0°C – 85°C Operating Temperature
- Up to 1,600 TBW Endurance
- Extended Longevity
- 5 Year Limited Warranty
- Read Speeds up to 3,470MB/s
- 256GB – 2TB Capacities in M.2 2280 Form Factor

Powerful Construction Suited for Commercial Applications

The Western Digital CL SN720 NVMe SSD is a PCIe Gen3 x4 storage solution, designed for applications that require high performance, a wide temperature range, increased reliability at a low power consumption. Customers can take advantage of the following features:

- **Endurance up to 1600 TBW:** With new applications that generate large datasets, or alternatively work around the clock, SSDs must handle high write intensive workloads. Data intensive applications like surveillance and gateways need a more write capable drive. The Western Digital CL SN720 NVMe SSD's high endurance capability allows applications to write a significant amount of data over the life of the drive.
- **Wide Operating Temperature of 0°C – 85°C:** Applications like in-flight entertainment systems, factory 2.0 / machinery automation, edge gateways tend to operate within high operating temperature range, but companies are often required to invest both resources and power to maintain system cool. A wide operating temperature of up to 85°C means that Western Digital CL SN720 NVMe SSDs can reduce the need for cooling investment and enable applications to run longer with minimal heat sink and airflow requirements.
- **Reliability and Ruggedness:** Commercial applications require high error resistance to maintain a stable operational environment. The Western Digital CL SN720 NVMe SSD provides low 10^{-17} UBER. For applications like factory automation, and industrial equipment where more ruggedness is required, the Western Digital CL SN720 NVMe SSD complies with industry standard JESD22-B103B and supports operating vibration of up to 20G (20–2,000Hz, linear sweep).
- **Longevity:** Customers building for commercial applications value supply continuity and long availability cycles. Based on a fully integrated solution which includes an in-house controller, 64-layer 3D NAND, firmware and validation, the Western Digital CL SN720 NVMe SSD offers an extended longevity, for an efficient supply and a long-term availability.
- **Performance¹:** Based on PCIe Gen3 x4, Western Digital CL SN720 NVMe SSD delivers extreme performance with sequential read and write speeds of up to 3,470MB/s and 3,000MB/s respectively, as well as random read and write speeds of up to 500K/560K IOPS.

Summary

The Western Digital CL SN720 NVMe SSD enables outstanding performance, high endurance and wide temperatures for the demanding commercial and industrial applications. With capacities from 256GB to 2TB and an extended supply longevity, the Western Digital CL SN720 NVMe SSD delivers a robust, reliable, and future-ready storage solution.

¹ For 2TB model.

Western Digital CL SN720 NVMe SSD Product Features and Specifications

Model Number	SDAQNTW-256G-1022	SDAQNTW-512G-1022	SDAQNTW-1T00-1022	SDAQNTX-2T00-1022
Form Factor	M.2 2280 S3-M	←	←	←
Interface	PCIe Gen3 x4 NVMe v1.3	←	←	←
Formatted Capacity ¹	256GB	512GB	1TB	2TB
SED TCG Opal 2.01	Yes	Yes	Yes	Yes
Performance²				
Sequential Read up to (MB/s)	3,000	3,400	3,400	3,470
Sequential Write up to (MB/s)	1,600	2,400	2,800	3,000
Random Read up to (IOPS)	225K	400K	500K	460K
Random Write up to (IOPS)	185K	330K	400K	560K
Endurance ³ (TBW)	200	400	800	1,600
Power⁴				
Peak Power (10µs) (W)	9.25	←	←	←
Operating Power (1s) (W)	5.3	5.7	6.0	←
Low Power (PS3) ⁴ (mW)	40	40	40	←
Sleep (PS4) ⁴ (mW)	2.5	←	←	←
Supply Voltage (VDC/ ±5%)	3.3	←	←	←
Reliability				
MTTF ⁵	Up to 9M hours	Up to 7M hours	Up to 4M hours	Up to 2M hours
UBER	10 ⁻¹⁷	←	←	←
Environmental				
Operating Temperature ⁶	32°F to 185°F (0°C to 85°C)	←	←	←
Non-Operating Temperature ⁷	-67°F to 185°F (-55°C to 85°C)	←	←	←
Operating and Non-Operating Vibration	20G, 20-2000 Hz, linear sweep	←	←	←
Operating and Non-Operating Shock	1,500G @0.5 ms half sine, 3 pulses per face	←	←	←
Certifications	FCC, UL, TUV, KCC, BSMI, VCCI, C-Tick	←	←	←
Limited Warranty ⁸	5 years	←	←	←
Physical Dimensions				
Width	22mm ±0.15mm	←	←	←
Length	80mm ±0.15mm	←	←	←
Thickness (max)	2.23mm	2.38mm	←	←
Weight	7.2g ±1g	←	←	←

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 Power measurements at 25°C.

⁵ MTTF = Mean Time To Failure based on internal testing and by using Telcordia stress part testing (Telecordia SR-332, GB, 40°C, 12 hours/day). 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.

⁶ Operational temperature as reported by device (composite temperature).

⁷ Non-operational storage temperature does not guarantee data retention.

⁸ 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.

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