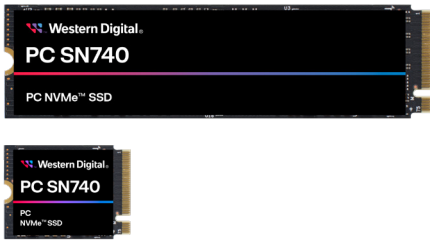




PRODUCT BRIEF

NVMe™ SSD



Western Digital® PC SN740 NVMe™ SSD

Performance Redefined

Innovation Through the PCIe® Gen4 Interface

The Western Digital PC SN740 NVMe SSD resets expectations in performance through innovating with the scalable NVMe architecture bringing a new standard for what users can expect from their storage.

The Western Digital PC SN740 provides the computing customer looking for thin and longer lasting mobile devices with a solution that does not sacrifice performance and offers a range of capacities from 256GB² to 2TB².

Key Benefits and Features:

- Read speeds up to 5,150MB/s¹
- 256GB-2TB² capacities available in M.2 2280 and M.2 2230 form factor
- Endurance of up to 500 TBW³
- 5-year limited warranty⁴

Versatility Takes a Step Forward

With PCIe Gen4x4 compatibility, the PC SN740 is designed to provide higher performance with lower power draw.

A fully integrated solution, the PC SN740 is designed with Western Digital's own in-house controller, 3D NAND and firmware all while going through rigorous testing to provide a reliable and robust supply.

The Western Digital PC SN740 NVMe™ SSD provides performance to meet tomorrow's challenging workloads with read speeds of up to 5,150 MB/s¹ (1TB and 2TB models) and write speeds of up to 4,900 MB/s¹ (1TB model) and endurance of up to 500 TBW³ (2TB model). All this comes in a small and thin but powerful form factor.

Summary

The Western Digital PC SN740 NVMe™ SSD enables manufacturers to create thin and light systems that are ready to accept the challenge of tomorrows demanding workloads with a balance of performance and power efficiency.

Specifications

Capacity ²	256GB	512GB	1TB	2TB
Form Factor	Single side assembly, M key			
Security Protocol for Non-SED	TCG Pyrite 2.01 and ATA Security passthrough over NVMe			
Security Protocol for SED	TCG Opal 2.01			
Interface	PCIe Gen4 x4 NVMe v1.4b			
Performance¹				
Sequential Read up to (MB/s)	4,000	5,000	5,150	5,150
Sequential Write up to (MB/s)	2,000	4,000	4,900	4,850
Random Read up to (IOPS)	270K	460K	740K	650K
Random Write up to (IOPS)	470K	800K	800K	800K
Endurance ³ (TBW)	200	300	400	500
Power				
Peak Power (10µs) (W)	4.7	5	6	6.3
Average Active Power ^{5,6} (mW)	50	50	65	65
Sleep (PSS) ⁵ (mW)	3.3	3.3	3.3	3.3
Supply Voltage (VDC/ ±5%)	3.3	3.3	3.3	3.3
Reliability				
MTTF ⁷	Up to 1.75M hours			
Environmental				
Operating Temperature ⁸	32°F to 185°F (0°C to 85°C)			
Non-Operating Temperature ⁹	-40°F to 185°F (-40°C to 85°C)			
Operating Vibration	5G _{RMS} [†] 10–2000Hz, 3 axes			
Non-Operating Vibration	4.9G _{RMS} [†] 7–800Hz, 3 axes			
Shock	1,500G @0.5 ms half sine, 3 pulses per face			
Certifications	Windows HLK, FCC, UL, TUV, KC, BSMI, VCCI, CE			
Limited Warranty ⁴	5 years			
Physical Dimensions				
Width	22mm ±0.15mm			
Length	M.2 2280: 80mm ±0.15mm, M.2 2230: 30mm ±0.15mm			
Thickness (max)	2.38mm (except M.2 2230 2TB: 2.48mm)			
Weight	M.2 2280: 5.4g ±0.5g, M.2 2230: 2.8g ±0.5g			
Ordering Information				
M.2 2280 Security Type: Non-SED	SDDPNQD-256G	SDDPNQD-512G	SDDPNQD-1T00	SDDPNQE-2T00
M.2 2280 Security Type: SED	SDDQNQD-256G	SDDQNQD-512G	SDDQNQD-1T00	SDDQNQE-2T00
M.2 2230 Security Type: Non-SED	SDDPTQD-256G	SDDPTQD-512G	SDDPTQD-1T00	SDDPTQE-2T00
M.2 2230 Security Type: SED	SDDQTQD-256G	SDDQTQD-512G	SDDQTQD-1T00	SDDQTQE-2T00

¹ 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. Performance is based on the CrystalDiskMark 8.0.1 benchmark using a 1000MB LBA range Asus ROG Maximus XIII Hero desktop with Intel i9-11900K @ 3.50GHz, 128GB 3200MHz DDR4. Microsoft Windows 10 Pro x64 2009 (19043.1023) using Microsoft StorNVMe driver, secondary drive. Performance may vary based on host device.

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

³ TBW (terabytes written) values calculated using JEDEC client workload (JESD219) and vary by product capacity.

⁴ 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.

⁵ Average Power is measured using MobileMark™ 2018 on Dell Mobile precision workstation 3560 CTO, intel® Core™i7-1165G7, Windows 10 (version 19042) Bios version 1.5.1, Intel RST driver.

⁶ Power measurements at 25°C.

⁷ MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing. 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. (Telcordia SR-332, GB, 40°C).

⁸ 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.

⁹ Non-operating storage temperature represents ambient temperature and does not guarantee data retention beyond endurance and data retention specifications.

