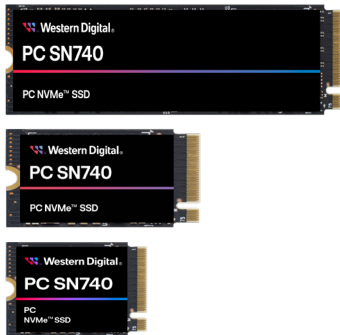




PRODUCT BRIEF

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 2048GB².

Key Benefits and Features:

- Read speeds up to 5,150MB/s¹ (1024GB and 2048GB models)
- 256GB-2TB² capacities available in M.2 2280, M.2 2242, and M.2 2230 form factor
- Endurance of up to 500 TBW³ (2048GB model)
- 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 (1024GB and 2048GB² models) and write speeds of up to 4,900 MB/s¹ (1024GB² model) and endurance of up to 500 TBW³ (2048GB² 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.

Western Digital® PC SN740 NVMe™ SSD

PRODUCT BRIEF

Specifications

Capacity ²	256GB	512GB	1024GB	2048GB
Form Factor	M.2 2280, M.2 2242, M.2 2230, Single side assembly, M key			
Interface ¹⁰	PCIe® Gen 4.0 x4, NVMe™ v1.4b			
NAND Type	Western Digital® TLC 3D NAND			

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)	240K	460K	740K	650K
Random Write up to (IOPS)	470K	800K	800K	800K

Power^{5,6}

Average Maximum Power (W) ⁵	4.4	4.7	5	5.4
Average Active Power (mW) ⁵	50	65	65	65
Sleep (PS5) (mW) ⁶	3.3	3.3	3.3	3.3
Supply Voltage (VDC/ ±5%)	3.3	3.3	3.3	3.3

Security

Security Protocol for Non-SED	TCG Pyrite 2.01 and ATA Security passthrough over NVMe™			
Security Protocol for SED	TCG Opal 2.01 and ATA Security passthrough over NVMe™			

Reliability

Endurance (TBW) ³	200	300	400	500
MTTF ⁷	Up to 1.75M hours			
Limited Warranty ⁴	5 years			

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			

RoHS Compliance¹¹

	Yes			
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Physical Dimensions

Width	22mm ±0.15mm			
Length	M.2 2280: 80mm ±0.15mm, M.2 2242: 42mm ±15mm, M.2 2230: 30mm ±0.15mm			
Thickness (max)	2.38mm			
Weight	M.2 2280: 5.4g ±0.5g, M.2 2242: 3.2g ±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	SDDQNE-2T00
M.2 2242 Security Type: Non-SED	-	SDDPMQD-512G	SDDPMQD-1T00	SDDPMQE-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 Based on read speeds, 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. Performance is based on the CrystalDiskMark 8.0.5 benchmark using a 1000MB LBA range Asus ROG Z590-Pro4 with Intel i9-11900K @ 3.50GHz, 32GB RAM. Microsoft Windows 11 Pro x64 2009 (22000.778). Performance may vary based on host device. IOPS = input/output operations per second.

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 (2280, 2230) 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. Average Power (2242) is measured using MobileMark™ 2025 Dell Precision 3560 Intel Core i5-1145G7,OS: Microsoft Windows 11Pro Version 22H2 Build 22621.1413. Power measurements at 25°C.

⁶ Low power referring to NVMe PS5 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.

¹⁰ Backward compatible with PCIe® Gen4 x2, PCIe® Gen4 x1, PCIe® Gen3 x4, PCIe® Gen3 x2, PCIe® Gen3 x1, PCIe® Gen2 x4, PCIe® Gen2 x2, and PCIe® Gen2 x1

¹¹ 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.

