PRODUCT BRIEF NVMe™ SSD

Key Benefits and Features:

- Read speeds up to 5,150MB/s[1]
- 256GB-2TB[2] capacities available in M.2 2280 and M.2 2230 form factor
- Endurance of up to 500 TBW[3]
- 5-year limited warranty[4]

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 256GB[2] to 2TB[2].

Versatility Takes a Step Forward

With PCIe Gen4×4 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/s[1] (1TB and 2TB models) and write speeds of up to 4,900 MB/s[1] (1TB model) and endurance of up to 500 TBW[3] (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.

Western Digital PC SN740 NVMe™ SSD

PRODUCT BRIEF **NVMe™ SSD**

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		
Performance[1]				
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 (PS5)[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. (Telecordia 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.

Western Digital.

5601 Great Oaks Parkway
San Jose, CA 95119, USA
www.westerndigital.com

02-00-WW-04-00063-AA00 July 2022