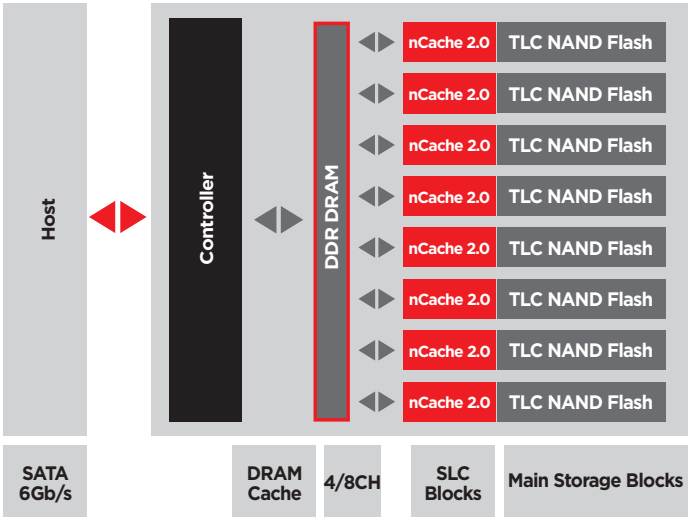
SanDisk® X300 SSD (Solid State Drive)

RELIABLE AND RESPONSIVE PERFORMANCE WITH LOW POWER

Based on state of the art 1Ynm X3 flash technology, the SanDisk X300 SSD delivers performance with high reliability and low power. It features nCache™ 2.0, SanDisk's next generation tiered caching technology, designed to improve SSD responsiveness for most corporate and consumer workloads.

The X300 is highly versatile and can accommodate a wide range of computing platforms. It is available in 2.5" 7mm cased, M.2 2280, and mSATA form factors with capacities of 128GB, 256GB, 512GB, and 1TB*.



SATA | SAS | PCIe

X300 KEY FEATURES

- NCACHE 2.0 – IMPROVES SSD RESPONSIVENESS FOR HIGH PRODUCTIVITY WORKLOADS
- DATAGUARD CLIENT - PROVIDES AN ADDITIONAL LAYER OF DATA PROTECTION USING PAGE-LEVEL STRIPING WITH DISTRIBUTED PARITY
- LOW POWER WITH DEVSLP SUPPORT
- UP TO 1TB* CAPACITIES IN 2.5" 7MM, M.2 2280, AND MSATA FORM FACTORS
- TESTED FOR 65 TBW (128GB) AND 80 TBW (256GB-1TB)
- SATA REVISION 3.2 6GB/S INTERFACE
- WINDOWS* WHCK CERTIFIED
- DYNAMIC THERMAL THROTTLING

nCache™ 2.0 Technology

nCache 2.0 uses a combination of SLC and X3/TLC flash blocks to improve endurance, increase efficiency, and boost performance. By first writing all of the data to SLC blocks, the write amplification on the X3 blocks is minimized.

DataGuard Client™

The X300 SSD also includes a new and robust on-the-fly error handling mechanism called DataGuard Client. It uses page-level striping with distributed parity for an added layer of data protection and can recover errors that other traditional error correction mechanisms cannot.

Low Power

The X300 utilizes a SATA DEVSLP low-power mode to minimize its power consumption during idle periods. DEVSLP enables the SSD to completely shut off its SATA PHY, thus resulting in much lower power consumption compared to SATA Slumber. This increases the amount of usable hours per battery charge, which is essential for modern mobile devices.

TCO

SanDisk SSDs can improve total cost of ownership (TCO) by reducing downtime due to hard drive failures. They also offer lower latency and greater read/write speeds over traditional HDDs[6]. IT departments can extend the useful life of their PC inventory by upgrading the HDDs to the X300 SSD, thus prolonging replacement cycles and maximizing asset value.

Specifications subject to change without notice.
* Only available as (8-channel) SATA 2.5" 7mm cased form factor.
[1] Up to stated speed. Performance is based on the CrystalDiskMark benchmark using a 1000MB range for an X300 SSD setup as a secondary drive on a GIGABYTE GA-Z77X-UD5H host system consisting of an Intel® i7-3770 3.4GHz, 8M, Ivy Bridge, 8GB RAM, Windows 8 , and iRST 12.9. Performance may vary based on host device. 1 megabyte (MB) = 1 million bytes. IOPS = input/output operations per second.
[2] Endurance of the X300 SSD is calculated using JEDEC client workload (JESD219). TBW = terabytes written.
[3] Power measurements 25°C. Based on FW version with HIPM-enable.
[4] MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing.
[5] 5 year warranty in regions not recognizing "limited". See www.sandisk.com/
[6] As compared to 7200 RPM SATA 2.5" hard drive. Based on published specifications and internal benchmarking tests. wug for more details.

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SanDisk® X300 SSD Product Features and Specifications

Specifications are preliminary and subject to change

Device			SanDisk X300 SSD		
Form Factor			7mm 2.5-inch Cased, M.2 2280, mSATA		
Interface			SATA III (6 Gb/s) backward compatible to SATA II (3 Gb/s) and SATA I (1.5 Gb/s)		
Performance[1]	128GB	256GB	512GB	512GB*	1TB*
Seq. Read up to (MB/s)	520	520	525	530	520
Seq. Write up to (MB/s)	450	470	470	470	460
Rand Read up to (IOPS)	73k	91k	96k	94k	98k
Rand Write up to (IOPS)	40k	57k	68k	70k	67k
Endurance (TBW)[2]	65	80	80	80	80
Power (Average)	128GB	256GB	512GB	512GB*	1TB*
Active Power (mW)[3]	95	95	95	95	95
Max Read Operating (mW)	2,300	2,450	2,500	2,500	2,500
Max Write Operating (mW)	2,950	3,900	3,900	3,900	3,900
Slumber (mW)	70	70	70	70	70
DEVSLP (mW)	<7	<7	<7	<7	<7
MTTF[4]	Up to 1,752,000 hours				
Product Dimensions & Weight	2.5":	7.00mm x 69.85mm x 100.5mm @ 58 ± 3g			
	M.2 2280:	2.23mm x 22.00mm x 80.0mm @ 7.5 ± 0.5g			
	mSATA:	3.82mm x 29.85mm x 50.8mm @ 7.5 ± 0.5g			
Environmental					
Operating Temperatures			0°C to 70°C		
Non-operating Temperatures			-55°C to 85°C		
Operating Vibration			5.0 gRMS, 10 – 2000 Hz		
Non-operating Vibration			4.9 gRMS, 7 – 800 Hz		
Shock			1,500 G @0.5 msec half sine		
Certifications			FCC, UL, TUV, KC, BSMI, VCCI		
Warranty[5]			3 Years		

Ordering Information

Form Factor	Capacity	SKU #
M.2 2280	128GB	SD7SN6S-128G-1022/1122
M.2 2280	256GB	SD7SN6S-256G-1022/1122
M.2 2280	512GB	SD7SN6S-512G-1022/1122
mSATA	128GB	SD7SF6S-128G-1022/1122
mSATA	256GB	SD7SF6S-256G-1022/1122
mSATA	512GB	SD7SF6S-512G-1022/1122
2.5" 7mm	128GB	SD7SB6S-128G-1022/1122
2.5" 7mm	256GB	SD7SB6S-256G-1022/1122
2.5" 7mm	512GB	SD7SB7S-512G-1022/1122
2.5" 7mm	1TB	SD7SB7S-010T-1022/1122

Pack-Out Option Use:
-1022 = Bulk
-1122 = Individual Package