

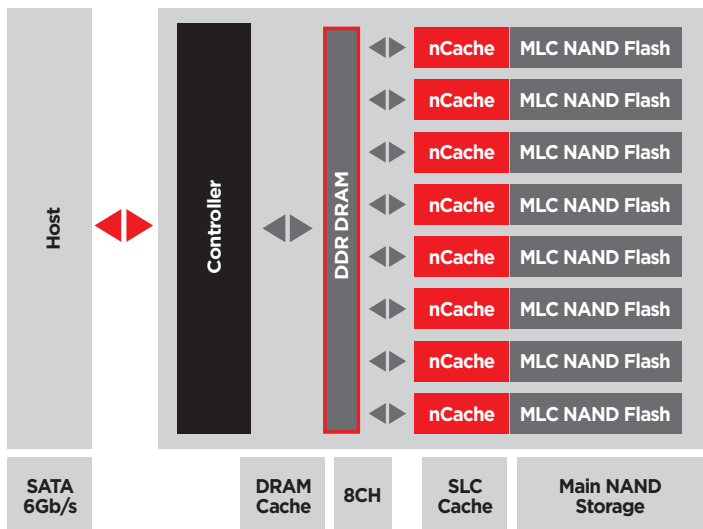


SanDisk® X300s SSD (Solid State Drive)

INTRODUCING SECURITY, LOW POWER, HIGH PERFORMANCE, AND RELIABILITY FOR AN UNCOMPROMISING USER EXPERIENCE.

Ideal for corporate PCs and notebooks, the SanDisk X300s SED¹ (Self-Encrypting Drive) is built on industry-leading 1Ynm multi-level cell (MLC) NAND flash technology and incorporates hardware-based full disk encryption and advanced power management.

The X300s features support for the TCG Opal 2.0 and Windows® 8 eDrive security standards and a SATA DEVSLP low-power mode that is compatible with Microsoft® InstantGo. Users will appreciate greater productivity with more useable hours per battery charge² while companies can seamlessly secure their data for their on-the-go employees.



SATA	SAS	PCIe
------	-----	------

X210 KEY FEATURES

AVAILABLE IN TWO FORM FACTORS: 2.5" 7MM AND M.2 2280

CAPACITIES OF UP TO 1TB

SED (SELF-ENCRYPTING DRIVE)

- HARDWARE-BASED FULL-DISK ENCRYPTION USING 256-BIT AES ENCRYPTION

TCG OPAL AND WINDOWS® EDRIIVE - COMPLIANT WITH INDUSTRY-STANDARD SECURITY SPECIFICATIONS (3RD PARTY ISVs-INQUIRE WITHIN)

ADVANCED POWER MANAGEMENT WITH DEVSLP LOW-POWER MODE - COMPATIBLE WITH MICROSOFT® INSTANTGO

TESTED FOR >80 TERABYTES WRITTEN (TBW) - EQUIVALENT TO 43GB/DAY OVER 5 YEARS

NCACHE™ - NON-VOLATILE WRITE CACHE

SATA REVISION 3.0 6GB/S INTERFACE

WINDOWS® WHCK CERTIFIED

DYNAMIC THERMAL THROTTLING

Performance

The X300s uses a tiered caching structure to improve random write performance. Modern operating systems typically access the storage device using small 4KB access blocks. These small access blocks conflict with the physical block structure (>1MB) of newer flash memory technology. To bridge this difference, the X300s employs three storage layers: Volatile cache - DDR DRAM cache, nCache™ - A non-volatile flash write cache, Mass storage - MLC NAND flash.

The nCache™ write cache is used to accumulate small writes at high speed then flush and consolidate them into the larger MLC section of the NAND flash memory array.



Security³

The X300s SED seamlessly encrypts the drive data on the fly using hardware-based 256-bit AES encryption. It supports the following industry-standard security specifications: ATA Security Feature Set, TCG Opal 2.0, Microsoft® eDrive (TCG OPAL 2.0 + IEEE 1667)

Thermal Throttling

A performance throttling technique is used as a safety measure to protect the integrity of the data and prevent excessive heat dissipation. The X300s employs an on-board thermal sensor to monitor the SSD's critical component temperature. If it exceeds the normal range, drive performance is reduced until the temperature decreases to an acceptable level, at which time full performance is restored.

Specifications subject to change without notice.

¹ Also available in models without security support.
² As compared to 7200 RPM SATA 2.5" hard drive.
Based on published specifications and internal benchmarking tests.

³ The X300s is also available in models without security support.

⁴ Up to stated speed. Based on internal testing; performance may vary based on host device. 1 megabyte (MB) = 1 million bytes. IOPS = input/output operations per second. TBW = terabytes written.

⁵ Approximations based on SanDisk internal metrics that quantifies how much data can be written to an SSD in its lifespan expressed in TBW.

⁶ Power measurements 25°C. Based on FW version with H1PM-enabled.

⁷ Typical power for 256GB product.

⁸ MTTF = Mean time between failures based on parts stress analysis.

⁹ 5 year warranty in regions not recognizing "limited". See www.sandisk.com/wug for more details.

SanDisk is a trademark of SanDisk Corporation, registered in the United States and other countries. nCache is a trademark of SanDisk Corporation. Other brand names mentioned herein are for identification purposes only and may be the trademarks of their respective holder(s).

Contact information

businesspartners@sandisk.com

SanDisk®

SOLID STATE FOR BUSINESS

Corporate Headquarters:

951 SanDisk Drive

Milpitas, CA 95035-7933, USA

www.sandisk.com

SanDisk® X300s SSD Product Features and Specifications

Specifications are preliminary and subject to change

Device	SanDisk X300s SSD				
Form Factor	7mm 2.5-inch Cased, M.2 2280				
Interface	SATA Revision 3.1 (6 Gb/s) backward compatible to SATA Revision 2.0 (3 Gb/s) and SATA Revision 1.0 (1.5 Gb/s)				
Performance ⁴	64GB	128GB	256GB	512GB	1TB
Seq. Read up to (MB/s)	450	510	510	520	TBD
Seq. Write up to (MB/s)	140	300	450	460	TBD
Ran. Read up to (IOPS)	68k	80k	89k	96k	TBD
Ran Write up to (IOPS)	35k	63k	77k	79k	TBD
Endurance (TBW) ⁵	>40	>80	>80	>80	TBD
Latency Read	55µs	55µs	55µs	55µs	55µs
Latency Write	65µs	65µs	65µs	65µs	65µs
Power (Average)	64GB	128GB	256GB	512GB	1TB
Active Power (mW) ⁶	100	110	120	130	TBD
Max Read Operating (mW)	2,300	2,350	2,350	2,450	TBD
Max Write Operating (mW)	1,950	2,750	3,800	3,850	TBD
Slumber (mW)	80	80	80	80	TBD
DEVSLP (mW) ⁷	3.5	4.0	4.5	5.0	TBD
MTTF ⁸	Up to 2,000,000 hours				
Weight (g) 2.5"/M.2 2280	51±3/7±0.5		55±3/7±0.5		TBD
Product Dimensions	2.5": 7.0mm x 69.85mm x 100.5mm M.2 2280: 2.23mm x 22.0mm x 80.0mm				
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				
Operating/Non-operating Shock	1,500 G @0.5 msec half sine				
Certifications	FCC, UL, TUV, BSMI, VCCI				
Warranty ⁹	5 Years				

Ordering Information

SKU #	Details
SD7SN3Q-064G-1022/1122	64GB (without security)
SD7SB3Q-064G-1022/1122	64GB (without security)
SD7UN3Q-128G-1022/1122	128GB (security enabled)
SD7UB3Q-128G-1022/1122	128GB (security enabled)
SD7UB3Q-256G-1022/1122	256GB (security enabled)
SD7UN3Q-256G-1022/1122	256GB (security enabled)
SD7UB2Q-512G-1022/1122	512GB (security enabled)
SD7UN3Q-512G-1022/1122	512GB (security enabled)
SD7UB2Q-010T-1022/1122	1TB (security enabled)