SanDisk® X300DC Solid State Drive

RELIABLE PERFORMANCE FOR DATA CENTERS

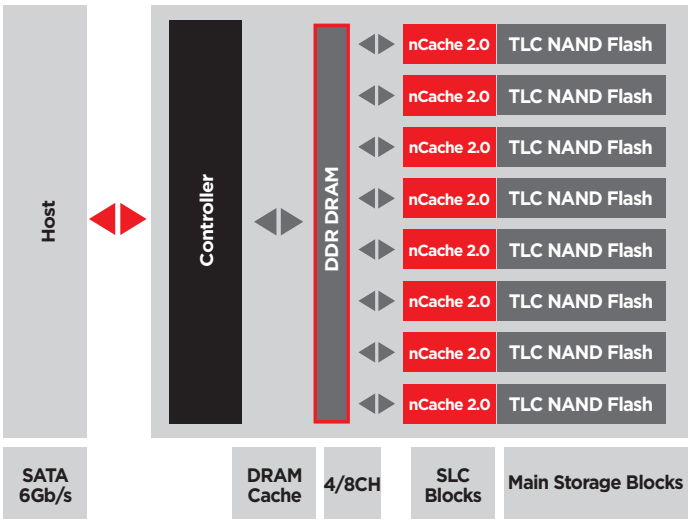
Based on state of the art 1Ynm TLC flash technology, the SanDisk X300DC SSD delivers high read performance with high reliability and low power. It features nCache™ 2.0, SanDisk's next generation tiered caching technology, designed to improve SSD responsiveness for burst write workloads.

The X300DC SSD is available in 2.5" 7mm cased with capacity of 960GB.

SATA | **SAS** | **PCIe**

X300DC KEY FEATURES

- **NCACHE 2.0 – IMPROVES RESPONSIVENESS FOR BURST WRITE WORKLOADS**
- **DATAGUARD CLIENT - PROVIDES AN ADDITIONAL LAYER OF DATA PROTECTION USING PAGE-LEVEL STRIPING WITH DISTRIBUTED PARITY**
- **960GB DRIVE CAPACITY**
- **2.5" 7MM FORM FACTOR**
- **TESTED FOR JEDEC ENTERPRISE WORKLOAD**
- **SATA REVISION 3.2 6GB/S INTERFACE**



nCache™ 2.0 Technology

nCache 2.0 uses a combination of both SLC and TLC flash blocks to improve endurance, increase efficiency, and boost performance. By writing all the data to SLC blocks first, the write amplification on the TLC blocks is reduced. The new On Chip Copy (OCC) mechanism then independently copies the SLC cache blocks into the TLC blocks in main storage, thus offloading the burden from the controller and DDR resources. This leaves the controller and DRAM cache free for other tasks.

DataGuard Client™

The X300DC 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.

Dependibility

With the improved cost structure introduced in X300DC SSD and the use of SanDisk's most manufactured flash technology, there is continuity of supply, better flash availability, improved TCO, and shorter ROI times.

SanDisk® X300DC SSD Product Features and Specifications

Device	SanDisk X300DC SSD
Form Factor	2.5-inch 7mm Cased
Interface	SATA III (6 Gb/s) backward compatible to SATA II (3 Gb/s) and SATA I (1.5 Gb/s)
Product Dimensions & Weight	2.5": 7.00mm x 69.85mm x 100.5mm @ 58g
Performance[1]	960GB
Sustained Seq. Read 128KB up to	520 MB/s
Burst Seq. Write 128KB up to	450 MB/s
Sustained Seq. Write 128KB up to	240 MB/s
Sustained Rand Read 4KB up to	68k IOPS
Burst Rand Write 4KB up to	67k IOPS
Sustained Random Write 4KB up to	2.25k IOPS
Endurance[2]	
JEDEC Enterprise Workload	0.2 DWPD
Seq. Write Workload	1.25 DWPD
Power	
Supply Voltage	5V ± 5%
Max In-Rush Current	1.5A
Reliability	
MTTF[3]	Up to 1,752,000 hours
Error Rate	1 error per 10^{16} bits read
Environmental	
Operating Temperatures	0°C to 70°C
Non-operating Temperatures	-55°C to 85°C
Operating Vibration	5.0 gRMS, 10 – 2000 Hz, 3 axes
Non-operating Vibration	4.9 gRMS, 7 – 800 Hz, 3 axes
Shock	1,500 G @0.5 msec half sine
Certifications	FCC, UL, TUV, KC, BSMI, VCCI

Contact information
businesspartners@sandisk.com

Specifications subject to change without notice.
[1] Up to stated speed. Performance measured with IOMETER 2006 as a secondary drive on Dell PowerEdge R610 with Intel® 5520 & Quad Core Intel Xeon E5603 1.60Ghz, 32GB DRAM, Windows Server 2012 x64 with LSI AHCI driver StorPort V2.0.49.0. For the sustained IO, Q depth=32, aligned with the respective transfer size (i.e. 128KB transfer size and aligned at 128KB, 4K transfer size and aligned at 4KB).
[2] Endurance of the X300DC SSD is calculated using JEDEC enterprise workload (JESD219A). DWPD = Drive Writes Per Day
[3] MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing.

Ordering Information

Model	Form Factor	Capacity	SKU #
SanDisk X300DC	2.5" 7MM	960GB	SD7SB7S-960G

SanDisk®
SOLID STATE FOR BUSINESS

Corporate Headquarters:
951 SanDisk Drive
Milpitas, CA 95035-7933, USA
www.sandisk.com