

PRODUCT BRIEF

Intel® Solid-State Drive DC S3700 Series

Non-Volatile Memory Storage Solutions from Intel

Consistently Amazing

Feed your I/O-starved applications with outstanding performance, extended endurance, and consistently low latency.

The Intel® Solid-State Drive DC S3700 Series offers the next generation of data center SSDs combining fast consistent performance with high endurance, and strong data protection.

Fast and Consistent Performance

Deliver data at a breakneck pace, with consistently low latencies and tight IOPS distribution.

The Intel® Solid-State Drive DC S3700 Series delivers superior performance with 4KB random read performance of up to 75,000 IOPS¹ and 4KB random write performance of up to 36,000 IOPS¹. With a 10% input/output operations per second (IOPS)² distribution and max latencies² of <500µs for 99.9% of the time, the DC S3700 Series will ensure quick and consistent command response times. All this performance delivered with low active power consumption (less than or equal to 6 watts¹) means this Intel SSD will help reduce your overall energy costs—making it an excellent value for data center storage applications upgrades!

Stress-free data protection

Protect your data center applications with multiple secure checkpoints providing protection against data loss and corruption. The Intel SSD DC S3700 Series combines the following features to provide an SSD you can count on.

Full End to End data protection. Protects your data from the time it enters the drive to the time it leaves. The DC S3700 uses an advance error correction scheme that ensures data integrity by protecting against possible data corruption in the NAND, SRAM, and DRAM memory. The DC S3700 also protects the data in transit through several techniques such as parity checks, Cyclic Redundancy Checks (CRC) and LBA tag validation. Once an error is detected, an immediate attempt will be made to correct it, and any uncorrectable error will be reported to the host. To further improve data assurance, the Intel SSD DC S3700 provides an array of surplus flash memory that caches data to minimize potential data loss.

Advanced Encryption Standard (AES) Capable. Protects your data from external threats and internal system issues with 256-bit encryption technology, giving you the peace of mind that your company's data is secure and safe.

Enhanced Power-Loss Data Protection. Reduces potential data loss by detecting and protecting data from an unexpected system power loss. The drive saves all cached data in the process of being written before shutting down, thereby minimizing potential data loss.

High Endurance Technology

Meet your most demanding needs with marathon-like write endurance.

Incorporating High Endurance Technology (HET), the Intel® Solid-State Drive DC S3700 Series delivers single-level cell (SLC) solid-state drive like endurance in a multi-level cell (MLC) SSD package. By combining SSD NAND management techniques and NAND silicon enhancements, HET enables the DC S3700 to achieve 10 Drive Writes per Day (DWPD) over a 5 year drive life. For the DC S3700 800GB that's equivalent to recording over 186 years of HD video over the life of the drive.

Solid-State Computing Starts with Intel Inside®. For more information, visit www.intel.com/go/ssd



Product Spotlight

Performance¹

4KBs

100GB 75K/19K random R/W 4K IOPS
200GB 75K/32K random R/W 4K IOPS
400GB 75K/36K random R/W 4K IOPS
800GB 75K/36K random R/W 4K IOPS



Intel® Solid-State Drive DC S3700 Series

Technical Specifications ¹		
Model Name	Intel® Solid-State Drive DC S3700 Series	
Capacity	2.5": 100GB, 200GB, 400GB and 800GB 1.8": 200GB, and 400GB	
NAND Flash Memory	25nm Intel® NAND Flash Memory Multi-Level Cell Compute-Quality Components with High Endurance Technology	
Bandwidth ²	Sustained Sequential Reads	Sustained Sequential Write
	100GB: up to 500 MB/s	100GB: up to 200 MB/s
	200GB: up to 500 MB/s	200GB: up to 365 MB/s
	400GB: up to 500 MB/s	400GB: up to 460 MB/s
	800GB: up to 500 MB/s	800GB: up to 460 MB/s
Read / Write Latency	45 µs / 65 µs	
Random I/O Operations per Second (IOPS) ²	4KB Reads / Writes	8KB Reads / Writes
	100GB: up to 75,000 IOPS / 19,000 IOPS	100GB: up to 47,500 IOPS / 9,500 IOPS
	200GB: up to 75,000 IOPS / 32,000 IOPS	200GB: up to 47,500 IOPS / 16,500 IOPS
	400GB: up to 75,000 IOPS / 36,000 IOPS	400GB: up to 47,500 IOPS / 19,500 IOPS
	800GB: up to 75,000 IOPS / 36,000 IOPS	800GB: up to 47,500 IOPS / 20,000 IOPS
Interface	SATA 6Gb/s, compatible with SATA 3Gb/s and 1.5Gb/s.	
Form Factor, Height and Weight	2.5 inch and 1.8" Industry Standard Form Factor	
	Height: 2.5" 100GB, 200GB, 400GB, and 800GB 7.0 mm thick; 1.8" 5 mm thick	
	Weight: 2.5" 200,400,800 GB: 73.6 grams ± 2 grams; 2.5" 100GB: 70 grams ± 2 grams; 1.8" 200, 400GB: 49 grams ± 2 grams	
Life Expectancy	2 million hours Mean Time Between Failures (MTBF)	
Lifetime Endurance	Up to 10 Drive Writes Per Day ³	
Power Consumption	Active: up to 6 W Typical Idle: 650 mW Typical	
Operating Temperature	0° C to 70° C	
RoHS Compliance	Meets the requirements of European Union (EU) RoHS Compliance Directives	
Product Health Monitoring	Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T.) commands	
Product Ordering Information	To order, visit intel.com/go/ssd	

¹ Based on the Intel® SSD DC S3700 Series Product Specification.

² Device measured using Iometer with 4K Random Writes QD=32 across 100% span of the drive. Latency measured using write transfer size of 4KB (4,096 bytes) and queue depth set to 1.

³ Based on JESD218 standard

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, go to: http://www.intel.com/performance/resources/benchmark_limitations.htm.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order. Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting Intel's Web site at www.intel.com.

*Other names and brands may be claimed as the property of others.

Copyright © 2012 Intel Corporation. All rights reserved. Intel, the Intel logo, and Intel Inside are trademarks of Intel Corporation in the U.S. and other countries.