s842 SAS

Highlights

- MLC NAND Flash for ultra-high performance and endurance
- Highest levels of throughput and low latencies, even under RAID5 deployments
- Up to 2x the endurance levels seen with competitive SAS or SATA

Applications/Environments

- Enterprise-class servers and high performance computing
- Space and/or power constrained environments
- Online Transaction Processing (OLTP)
- Financial and e-commerce
- Database analytics
- Cloud data center servers

HGST Enterprise Storage Experience

HGST leverages decades of proven enterprise storage expertise in Serial Attached SCSI (SAS) design, reliability, firmware, customer qualification and system integration to the s842 solid-state drive (SSD). The synergistic relationship between HGST's new throughput-enhancing SSDs and traditional HDDs provides cost effective, end-to-end enterprise-class storage solutions, delivering reliability, compatibility, capacity, cost and system performance. This combination makes HGST a leading SSD/HDD provider with the experience and technology needed to meet escalating reliability, endurance and performance in the most demanding enterprise environments.

2000GB, 1600GB, 800GB, 400GB and 200GB
MLC | 2.5-inch SFF | SAS 6Gb/s

High Performance, Reliability and Endurance

In today's economy, time is money—and accelerating access to data is a proven success formula for enterprises and service providers worldwide.

The s842 SAS SSD is purpose-built for enterprise environments, cloud data center servers and storage solutions, taking capacity, reliability and endurance to the next level to deliver superior application performance for all real-world workloads. With up to 2TB capacity, the s842 SSDs offer high capacity in a compact 2.5" SAS enclosure.

In addition to their world-class performance, the s842 SAS SSD is the most reliable, longest lasting SSD solution now available for the enterprise market. Based on fourth-generation HGST patented SSD controller technology, the s842 delivers the best performance, endurance (i.e., device lifetimes) and reliability that is unmatched in the industry.

HGST Quality and Service

HGST's s842 family extends the company's long-standing tradition of performance and reliability leadership. A balanced combination of new and proven technologies enables high reliability and availability to customer data.

HGST drives are backed by an array of technical support and services, which may include customer and integration assistance. HGST is dedicated to providing a complete portfolio of SSD/HDD solutions to satisfy today's monumental computing needs.

Information & Technical Support
www.hgst.com
www.hgst.com/partners

North America
support_usa@hgst.com
+1 888 426-5214
+1 408 717-8087

Asia Pacific
support_ap@hgst.com
+65 6840 9595

EMEA and UK
support_uk@hgst.com
+44 20 7133 0032

Germany
support_uk@hgst.com
+49 6929 993601

Partners first program support
channelpartners@hgst.com

s842 SAS

Features & Benefits

Feature / Function	Benefits
Serial Attached SCSI (SAS) interface in a 2.5-inch form factor	Industry's gold standard for enterprise performance SSDs supporting servers and tier-0 storage applications
High performance	Random transactional performance exceeds 85,000 sustained IOPS, with sustained random or sequential large block transfers up to 530MB/s
Power/performance efficiency	A single s842 SAS SSD replaces large numbers of enterprise HDDs while delivering superior performance and data persistence, instant backup and recovery in the event of an unplanned power failure
Secure Array of Flash Elements™ (SAFE) technology	Provides the ability to recover from NAND Flash page, block, die and chip failures, and maximizes the Mean Time Between Failure (MTBF) and Mean Time To Data Loss (MTTDL)
CellCare® technology	Extends the life of Flash media to delier enterprise-class endurance through advanced signal processing and adaptive Flash management algorithms

Specifications

Model / Part No.	S842E2000M2 / 0T00163 S842E1600M2 / 0T00158 S842E800M2 / 0T00191 S842E400M2 / 0T00177 S842E200M2 / 0T00169
Configuration	
Interface	SAS 6Gb/s
Capacity (GB[1]) at 512 bytes/sector	2000 / 1600 / 800 / 400 / 200
Form factor	2.5-inch
Flash memory technology	Multi Level Cell (MLC)
Performance	
Read throughput (max MB/s, sequential 64K)	520 / 520 / 530 / 530 / 530
Write throughput (max MB/s, sequential 64K)	295 / 295 / 440 / 380 / 380
Read IOPS (max IOPS, random 4K)	65,000 / 78,000 / 85,000 / 84,000 / 84,000
Write IOPS (max IOPS, random 4K)	6,000 / 12,000 / 17,500 / 34,000 / 28,500

Reliability	
MTBF[2] (M hours)	2.0
Endurance (DW/D for up to 5 years)	14 / 30 / 25 / 40 / 40
Lifetime PB[1] Written (max PBW, random)	52 / 87 / 31 / 30 / 15
Power	
Requirement (W)	9 / 9 / 9 / 12 / 12
Physical	
z-height (mm)	15.0
Dimensions (width x depth, mm)	69.8 x 100.2
Environmental (operating)	
Ambient temperature	0º to 60º C

[1] One gigabyte (GB) is equal to one billion bytes, one terabyte (TB) is equal to 1,000GB (one trillion bytes), and one petabyte (PB) is equal to 1,000TB (one quadrillion bytes) when referring to solid-state drive or hard drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the drive, the computer's operating system, and other factors.

[2] MTBF and AFR targets are based on a sample population and are estimated by statistical measurements and acceleration algorithms under median operating conditions. MTBF and AFR ratings do not predict an individual drive's reliability and do not constitute a warranty.