Data Sheet

s800 Series Micro

SAS SSD

High-Performance Enterprise-Class SSDs

Sometimes smaller is better and accelerating access to data is a proven success formula for enterprises and service providers worldwide.

HGST® s800 Series Micro SAS 1.8" SSDs are uniquely designed for blade servers, caching and other high-density computing environments that have physical space constraints. This is based on the fourth generation SAS design from HGST and brings sustainable IOPS performance to new levels.

In addition to their world-class performance, s800 Series Micro SAS SSDs are the most reliable, longest lasting SSD solutions now available for the enterprise market. Based on the fourth generation controller technology, HGST takes sustainable IO performance to new levels.

Features and Benefits

Feature / Function	Benefits
Serial Attached SCSI interface in a 1.8-inch form factor	Industry's gold standard for enterprise performance Micro SSDs supporting servers and Tier-0 storage applications in the standard small form factor
High performance	Random transactional performance up to 65,000 sustained IOPS, with sustained random or sequential large block transfers up to 520MB/s
Power/performance efficiency	A single s800 Series Micro 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 deliver enterprise-class endurance through advanced signal processing and adaptive flash management algorithms
s842 Micro SAS SSD	Fourth generation s800 Series Micro SAS products. These come in 200GB & 400GB capacities
s846 Micro SAS SED SSD	Adds hardware based encryption self-encrypting drive (SED) to the s842 for data security and protection

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s800 Series Micro SAS SSD

Information and Technical Support
www.hgst.com (Main Web site)
www.hgst.com/partners (Partner Web site)

North America
support__usa@hgst.com
Toll free: 1 888 426-5214, Direct: 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

Program Support
Partners First Program channelpartners@hgst.com

Specifications

Models
s842
s846

Interface	**s842 Micro SAS SSD**	**s846 Micro SAS SED SSD**
Capacity*	200/400GB	200/400GB
Interface	Micro SAS	Micro SAS
Transfer Rate	6Gb/s	6Gb/s
Availablility	Dual-port	Dual-port
Performance		
Sustained Read Throughput	Up to 520MB/s	Up to 520MB/s
Sustained Write Throughput	Up to 420MB/s	Up to 420MB/s
Max 100% Random Read IOPS	65,000 (4K)	65,000 (4K)
Max 100% Random Write IOPS	37,000 (4K)	37,000 (4K)
Physical		
Form Factor	1.8" x 5mm	1.8" x 5mm
Weight	<0.4kg	<0.4kg
Ecryption		
256-bit	No	Yes
Endurance		
Drive Writes Per Day for 5 Years (max)**	28x Drive Capacity	28x Drive Capacity
Lifetime Petabytes Written (max)	10.1 PBW	20.8 PBW
Environmental		
Operational Temperature	0° to 60°C	0° to 60°C
Non-Operational Temperature	-25° to +85°C	-25° to +85°C
Humidity	Non-condensing 5-95%	Non-condensing 5-95%
Shock	350G	350G
Altitude	-1,000 to 80,000 ft	-1,000 to 80,000 ft
Compliance	Lead Free (RoHS)	Lead Free (RoHS)

[1] One GB is equal to one billion bytes when referring to hard drive capacity. Accessible capacity will vary depending on the operating environment and formatting.
[2] Portion of buffer capacity used for drive firmware
[3] MB is equal to MillionBytes
[4] Excludes command overhead
[5] MTBF target is based on a sample population and is estimated by statistical measurements and acceleration algorithms under median operating conditions. MTBF ratings are not intended to predict an individual drive's reliability. MTBF does not constitute a warranty.
* As used for capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. The available capacity is dependent upon the operating environment and formatting. **100% Random 4KB write workload.

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