s800 Series

SAS SSD

High-Performance Enterprise-Class SSDs

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

HGST® s800 Series SAS SSDs are a uniquely engineered family of solid-state drives (SSDs) that outperform conventional hard disk drives by breaking the bottlenecks associated with rotating media to take sustainable IOPS performance to new levels.

In addition to their world-class performance, s800 Series SAS SSDs are the most reliable, longest lasting SSD solutions now available for the enterprise market. Based on fourth-generation HGST patented SSD controller technology, s800 Series SAS SSDs deliver the best performance, endurance (i.e., device lifetimes) and reliability that is unmatched in the industry.

Features and Benefits

Feature / Function	Benefits
Serial Attached SCSI 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 115,000 sustained IOPS, with sustained random or sequential large block transfers up to 530MB/s
Power/performance efficiency	A single s800 Series 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
s840 SAS SSD	Fourth generation s800 Series SAS products. These come in 200GB and 400GB capacities
s842 SAS SSD	Offers largest capacity SSD in the industry, up to 2TB. Is ideally suited for high-performance applications that need unmatched endurance

HGST

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Specifications

Models	
	s840 SAS SSD
	s842 SAS SSD

Interface	s840 SAS SSD			s842 SAS SSD		
Capacity*	MLC: 200/400GB			200/400/800GB/2TB**		
Type	SAS			SAS		
Transfer Rate	6Gb/s			6Gb/s		
Availablility	Dual-port			Dual-port		

Performance		200GB	400GB	800GB	2TB"
Sustained Read Throughput†	530MB/s	530MB/s	530MB/s	530MB/s	530MB/s
Sustained Write Throughput	265MB/s	380MB/s	380MB/s	453MB/s	295MB/s
Max 100% Read IOPS	115,000	120,000	120,000	118,000	113,000
Max 100% Write IOPS	108,000	110,000	110,000	110,000	103,000
Max 100% Random Read IOPS (4K)	80,000	84,000	84,000	85,000	65,000
Max 100% Random Write IOPS (4K)	12,000	28,500	34,000	17,500	6,000

Max Power		200GB	400GB	800GB	2TB
	9W	9W	9W	9W	12W

MTBF (hours)	
	2M (million) ... 2M (million)

Physical	s840	s842
Form Factor	2.5-inch	2.5-inch
Weight	<0.4kg	<0.4kg
Dimensions	100.2mm(L) x 69.8mm(W) x 15.0mm(H)	100.2mm(L) x 69.8mm(W) x 15.0mm(H)

Operational Temperature	
	0° to 60°C (Commercial) ... 0° to 60°C (Commercial)

Endurance		200GB	400GB	800GB	2TB
Drive Writes Per Day for 5 Years (Up to)	25x	40x	40x	25x	33x
Lifetime Petabytes Written (PBW) (Max)	18	15	30	31	120

[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.
†The drive saturates the I/O bus **1TB = 1000GB *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.
††Recommended for read-intensive applications only.

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One GB is equal to one billion bytes and one TB equals 1,000 GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drive, the computer's operating system, and other factors.

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.

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