



s841 SAS

Highlights

- cMLC NAND Flash for higher ROI while delivering high performance and endurance
- 6Gb/s SAS interface for maximum throughput
- Advanced power loss data management technology
- Outperforms competitive SATA SSDs while delivering enterprise endurance

Applications/Environments

- Cloud and Datacenters
- Enterprise-class servers and High Performance Computing
- Space and/or power constrained environments
- Web servers
- Video on demand, Streaming media
- Database acceleration/Archival storage



Endurance Through Innovation

The s841 SSD combines commercial-grade MLC NAND flash memory, advanced endurance management firmware and power loss data management techniques to extend reliability, endurance and sustained performance over the life of the SSD. With an MTBF rating of 2M hours, the 2TB model can endure an impressive 25PB of random writes over the life of the drive. HGST's innovative CellCare™ technology is key to the s841 endurance success and extends the life of flash media to deliver enterprise-class endurance through advanced signal processing and adaptive flash management algorithms.

For complete data protection and reliability, the s841 incorporates extended error correction code (ECC), Secure Array of Flash Elements™ (SAFE) technology to protect against flash die failure and an exclusive power loss data management feature using super capacitors. The s841 is also backed by a five-year limited warranty or the maximum petabytes (PB) written (based on capacity).



400/800/2000GB | cMLC
2.5-inch SFF | SAS 6Gb/s



Performance and Capacity for the Data Center

Accelerating access to data is a proven success formula for enterprises and service providers worldwide.

The s841 SAS SSDs from HGST are engineered to take performance to new levels in the data center and eliminate data access bottlenecks. The s841 delivers up to a massive industry-leading 2TB capacity, ideally suited for read-intensive applications, and also offers capacities for today's sweet-spot, 800GB and 400GB. With sustained IOPs of up to 83,200 read and 30,800 write, and maximum sequential throughput of 525MB/s read and 395MB/s write, the s841 SSD enables rapid access to "hot" enterprise data for improved productivity and operational efficiency.



HGST Quality and Service

HGST's s841 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 HDD/SSD solutions to satisfy today's monumental computing needs.

Features & Benefits

	Performance	Capacity	Reliability	Integration
Feature/function	• SAS 6Gb/s • cMLC NAND flash memory • Up to 525/395 MB/s sequential R/W • Up to 83K / 30K IOPS random R/W	• 2000GB • 800GB • 400GB	• 2M Hours MTBF • 1E-17 bit error rate • Power loss data management • Unlimited reads, up to 25 PB writes (2000 GB)	HDD architecture commonality
Benefit	• 6G Active-Active Dual port for enhanced reliability • Consistent write performance and endurance • Maximum throughput and IOPs for ultra-fast access to data. • Significantly faster than typical HDD and SATA SSD drives	More capacity for less space and power	• Reduced field replacement effort • Enhanced error detection and correction for optimal data integrity • Assures data integrity during power failure • Maximum endurance over the life of SSD	Higher reliability increases return on investment.



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Specifications

Model / Part No.	HS8422T2TASS600 HS8422T80ASS600 HS8404040ASS600	OT00166 OT00197 OT00183
Configuration		
Interface	SAS 6Gb/s	
Capacity (GB) ¹ at 512 Bytes/sector	2000GB*/ 800GB / 400GB	
Form factor	2.5"	
Flash memory technology	Multi Level Cell (cMLC)	
Performance		
Read Throughput (max MB/s, Seq.64K)	520/525/525	
Write Throughput (max MB/s, Seq.64K)	345/395/360	
Read IOPS (max IOPS, Rnd.4K)	63,000/83,200/70,000	
Write IOPS (max IOPS, Rnd.4K)	5,300/16,200/30,800	
Reliability		
Error rate (non-recoverable bits read)	1 in 10 ¹⁷	
MTBF ² (M hours)	2.0	
Availability (hrs/day x days/wk)	24x7	
Endurance (max PB ¹ , Rnd write)	25 (16K) / 14.4 (8K) / 7.2 (4K)	

Power

Requirement	+5 VDC (+/-5%) +12 VDC (+/-5%)
Operating (W, typical)	12/9/9

Physical size

z-height (mm)	15.0
Dimensions (width x depth, mm)	69.8 x 100.2
Weight (g, max.)	<400g

Environmental (operating)

Case temperature	0° to 60° C
Shock (half-sine wave)	150G (1.0ms)
Vibration, random (G RMS)	2.00 (10 to 500 Hz)

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

² MTBF target is based on a sample population and is estimated by statistical measurements and acceleration algorithms under nominal operating conditions. MTBF ratings are not intended to predict an individual drive's reliability. MTBF does not constitute a warranty.

* 2000GB recommended for Read Intensive applications