



6Gb/s SAS Enterprise 2.5 SSDs

Lightning® Product Family of 6Gb/s SAS SSDs

Outstanding performance for a variety of write-intensive, mixed-use and read-intensive applications

Lightning Write-Intensive Application Workloads

- High Performance Computing (HPC)
 - Oil and Gas
 - Life Sciences
 - Aerospace
 - Engineering
- Media Editing
- Analytics
- Indexing
- Database Logging

Lightning Mixed-Use Application Workloads

- On-Line Transaction Processing (OLTP) Databases
- Financial Transactions
- E-Commerce
- E-Mail/Messaging
- Virtual Desktop
- Collaboration

Lightning Read-Intensive Application Workloads

- Data Warehousing
- Web Servers
- Media Streaming
- Virtual Tape Libraries (VTL)
- Video on Demand (VOD)
- Web-Based Applications
- File Servers

The challenges for predictable performance and increased storage capacity are ever present in today's data centers. Managers are tasked to satisfy demand without new IT capital investment or the cost of increasing floor space. Enterprise SSDs provide substantial performance and footprint benefits over traditional HDDs. This enables IT service providers to replace up to 10 HDDs with a single SSD creating a more efficient and reliable network while reducing capital expenditures, space and energy consumption. Lightning SSDs rank among the most competitive solutions in the industry, offering high I/O sustained performance with a history of successful implementations into existing IT infrastructures.

Lightning Write-Intensive SSDs

Since not all data centers are created equal, the key to achieving increased data and system performance is in understanding the specific application workload. Lightning Write-Intensive SSDs are optimized for data management and endurance of high-speed storage and server environments with a 50/50 read/write mix. Lightning Write-Intensive SSDs are available in 200GB and 400GB² SLC capacities and deliver random read/write performance up to 118K/33K IOPS and sequential read/write data transfer rates of up to 450/250 MB/s¹.

Lightning Mixed-Use SSDs

Mixed-Use SSDs offer solid I/O cost-to-performance benefits where quick access to data is vital with a 70/30 read/write mix. Lightning Mixed-Use SSDs are available in 200GB, 400GB and 800GB² SLC capacities and deliver random read/write performance up to 100K/11K-16K IOPS and sequential read/write data transfer rates of up to 450/220 MB/s¹.

Lightning Read-Intensive SSDs

Lightning Read-Intensive SSDs are designed for multiple-user applications that demand low latency read speeds and greater bandwidth with a 90/10 read/write mix. Lightning Read-Intensive SSDs are available in 400GB, 800GB and 1.6TB² MLC capacities and deliver random read/write performance of up to 78K/4K-8K IOPS and sequential data throughput rates of up to 410/140 MB/s¹.

Lightning SSDs are a cost-effective solution for predictable performance and trusted reliability. Lightning SSDs have been specifically designed for demanding, mission-critical, 24/7 applications.

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Lightning SAS SSDs are certified on the following hardware compatibility lists.

	WI	MU	RI
LSI RAID/HBA	•	•	•
Windows Certification	•	•	•
VMware Flash Ready Cache		400GB/ 800GB	
VMware Virtual SAN		400GB/ 800GB	
Nexenta		•	•
Intel Server Systems (All)	•	•	•

Lightning Product Family of 2.5" SAS Enterprise SSDs Product Specifications

	Write-Intensive	Mixed-Use	Read-Intensive
Performance			
Interface	6Gb/s SAS		
Interface Ports	Dual (2) full-duplex		
Sequential Read/Write (MB/s) ¹	Up to 450/250	Up to 385*-450/220	Up to 310***-410/140
Random Read/Write (IOPS) (4K-single port)	Up to 118K/33K	Up to 100K/11K-16K	Up to 78K/4K-8K
Capacity	SLC	SLC	MLC
User Capacities ²	200GB, 400GB	200GB, 400GB, 800GB	400GB, 800GB, 1.6TB
Reliability			
Sector Sizes	512, 520, 528 byte		
Data Reliability (UBER)	<1 sector in 10 ¹⁷ bits read	<1 sector in 10 ¹⁷ bits read	<1 sector in 10 ¹⁶ bits read
MTBF ³	2M hours		
Warranty ⁴	5 Years	5 Years	3 Years
Power			
Idle	3.9W		
Active (Typ)	5.9W		
Environmental			
Shock	1000 g half-sine, 0.5 msec, 3 shocks along each axis, X, Y, Z, in each direction		
Vibration	2.17 g rms, 7-800 Hz		
Operating Temperature	0° C to 60° C		
Storage Temperature	-40° C to 85° C		
Humidity	5% to 95%, non-condensing, relative humidity		
Altitude	5486.4 m [18,000 ft]		
Mechanical			
Length	100.45 mm		
Width	70.1 mm		
Height	15.0 mm		
Weight	0.238 Kg		

Contact information

ESS.channelsales@sandisk.com
 ESS.OEMsales@sandisk.com
 businesspartners@sandisk.com

SanDisk Americas

951 SanDisk Drive
 Milpitas, CA 95035-7933, USA
 T: 1-866-744-2165

SanDisk Europe, Middle East, Africa

Unit 100, Airside Business Park,
 Swords, County Dublin, Ireland
 T: 1-866-744-2165

SanDisk Asia Pacific

Suite C,D,E, 23/F, No. 918 Middle
 Huahai Rd., Jiu Shi Renaissance Building,
 Shanghai, 20031, P.R. China
 T: 1-866-744-2165

For more information, please visit:

www.sandisk.com/enterprise

SanDisk®

At SanDisk, we're expanding the possibilities of data storage. For more than 25 years, SanDisk's ideas have helped transform the industry, delivering next generation storage solutions for consumers and businesses around the globe.

951 SanDisk Drive | Milpitas | CA 95035 | USA

Specifications subject to change without notice.

(1) Based on internal testing, performance may be lower depending upon host device, OS and application.

(2) 1 gigabyte (GB) = 1 billion bytes. Some capacity not available for data storage.

(3) MTBF = Mean Time Between Failures based on parts stress analysis.

(4) The earlier of (i) five (5) years or (ii) the time at which such Product unit's total cumulative data recorded on such unit at its S.M.A.R.T. attribute (log page 2Fh, parameter 25) or log page 11h, parameter 1 (Percentage Used Endurance Indicator) reaches 100% of the Product unit's endurance value. For more warranty information, please visit kb.sandisk.com.

*This MB/s applies to the 200GB and 400GB capacities for the Lightning Mixed-Use SSDs.

**This MB/s applies to the 400GB and 800GB capacities for the Lightning Read-Intensive SSDs.

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