



6Gb/s SAS Enterprise 2.5" SSDs

Lightning® Read-Intensive SAS SSDs

An enterprise solution that provides on-demand performance for multiple users

Features

- End-to-End Data Protection
- Capacitor-Backed Cache
- Reliability: 2M hour MTBF
- UBER: <1 sector 10¹⁶ bits read
- 3-Year Warranty⁴

Benefits

- Predictable Performance
- Trusted Reliability
- Cost-Effective I/O

Application Workloads

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

Enterprise SSDs provide substantial performance and footprint benefits over traditional HDDs where data centers can realize significant cost savings while improving performance flexibility, and increasing storage capacity. 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 Read-Intensive 6Gb/s (SAS) SSDs offer solid I/O cost-to-performance benefits for applications that demand low latency read speeds and greater bandwidth for server and storage environments.

Available in 400GB, 800GB and 1.6TB² MLC capacities and delivers random read/write performance of up to 78K/4K-8K IOPS and sequential read/write data throughput of up to 310-410/140 MB/s¹. Lightning Read-Intensive SSDs provide superior performance for read cache and I/O patterns that are designed predominately for application workloads such as Data Warehousing, Web Servers, Media Streaming, Video on Demand (VOD) and Web-Based Applications, with a workload comprised of a 90/10 read/write mix.

Lightning Read-Intensive SSDs are designed with an advanced innovative controller that uses a parallel processing architecture with single firmware binary for superior reliability. Lightning SSDs rank among the most competitive solutions in the industry, offering high speeds with a history of successful implementations into existing server and storage IT infrastructures.

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)	•	•	•

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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.

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Lightning Read-Intensive 2.5" SAS Enterprise SSDs Product Specifications

	LB 406R	LB 806R	LB 1606R
Performance/IOPS			
Data Throughput (Sequential Read/Write) ¹	310/140 MB/s	310/140 MB/s	410/140 MB/s
Total IOPS (Random Read)	78,000 IOPS	78,000 IOPS	78,000 IOPS
Random Write 4KB - 90/10 (single port)	4,000 IOPS	4,000 IOPS	8,000 IOPS
Random Write 8KB - 90/10 (single port)	14,000 IOPS	17,000 IOPS	26,000 IOPS
Interface, Capacity, and Memory Technology			
Host Interface	6Gb/s SAS		
Interface Ports	Dual (2) full-duplex		
Form Factor	2.5 inch		
MLC User Capacities ²	400GB	800GB	1.6TB
Sector Sizes Supported	512, 520 or 528 bytes/sector		
Reliability			
MLC Page Pairing Protection	No risk of data loss		
Unrecovered Bit Error Rate (UBER)	<1 sector in 10 ¹⁶ bits read		
End-to-End Data Protection	No performance impact		
Patrol Read (automatic)	No performance impact		
Power-on Hours	8760 hours per year		
MTBF ³	2 million hours		
Warranty ⁴	Lesser of 3 years or maximum endurance used		
Physical Dimensions			
Height (max)	15.0 mm		
Width (max)	70.1 mm		
Length (max)	100.45 mm		
Weight	0.238 Kg		
Power Consumption			
Idle	3.9 watts		
Typical	5.9 watts		
Environment			
Operating Temperature (ambient)	0 to 60° C		
Non-operating Temperature	-40 to 85° C		
Start-up Time (Power-on to Ready)	<15 seconds		

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.

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