Lightning Eco™ Gen. II SAS SSDs

Maximize bandwidth with low latency read speeds for the highest, most cost-effective performance

Features

- Full data path protection, End-to-end T10-DIF support
- Temperature-based performance control
- MTBF - 2.5 Million Hours[3]
- 5 Year Warranty[4]

Benefits

- High, Predictable Performance
- Industry-leading Reliability
- Highest Cost-to-performance value
- Low latency data access for high quality of service (QoS)
- Maximum bandwidth for high speed data transfer rates

Read-Intensive Application Workloads

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

The Lightning Eco™ Gen. II 12Gb/s SAS SSD doubles interface speed, providing the highest performance for mission-critical hyperscale, cloud and virtualized data center application workloads. This next generation Lightning® SSD offers a feature-rich robust design, combined with SanDisk's custom controller and innovative parallel processing architecture to deliver full data path protection (T10-DIF support), temperature based power control, SED instant secure erase, an MTBF of 2.5 million hours, and power fail protection. This SSD is backward-compatible with 6Gb/s SAS and offers a single firmware binary platform for seamless integration and reduced qualification times.

Lightning Eco™ Gen. II SAS SSDs offer solid I/O cost to performance benefits with low latency data access for high quality of service (QoS). Available in 19nm eMLC capacities from 800GB - 1.6TB[2] and with random read/write performance of up to 195K/80K IOPS* and sequential read/write speed of up to 980/600 MB/s[1]/*. These SSDs are designed for read-intensive applications such as Data Warehousing, Media Streaming, Video on Demand (VOD), Web-based Applications, Virtual Tape Libraries (VTL) and File Servers, with a heavy read workload comprised of a 90/10 read/write mix. This SSD offers 3 full drive writes per day (DWPD) with a limited 5 year warranty[4].

Lightning Eco Gen. II SAS SSDs are a product of SanDisk's vertical integration - spanning from the fabrication of the NAND technology and wafer to the manufacturing of the finished SSD. This vertical integration, results in a customized solution that takes full advantage of each component to deliver maximum performance and quality assurance. Lightning Eco Gen. II SSDs provide high, predictable performance, industry-leading reliability and maximum value.

SanDisk®

Lightning Eco™ Gen. II 12Gb/s SAS 2.5″ SSDs

	800GB - 1.6TB
Performance/IOPS	
Data Throughput (Sequential Read/Write)[1]/*	Up to 980/600 MB/s
Total IOPS* (Random Read) 4KB – (single port)	Up to 195,000 IOPS
Total IOPS* (Random Write) 4KB – (single port)	Up to 80,000 IOPS
Interface, Capacity, and Memory Technology	
Host Interface	12Gb/s SAS
Interface Ports	Dual full-duplex
Form Factor	2.5 inch
19nm eMLC User Capacities[2]	800GB, 1.6TB
Sector Sizes Supported	512, 520, 4K bytes/sector T10-DIF 1, DIF 2 Support
Reliability	
MLC Page Pairing Protection	No risk of data loss
Unrecovered Bit Error Rate (UBER)	<1 sector in 10^{17} 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]	2.5 million hours
Warranty[4]	Lesser of 5 years or maximum endurance used
Endurance	
DWPD (Random Read)	3 DWPD
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

Lightning Eco™ Gen. II 12Gb/s SAS 2.5″ SSDs - Ordering Information

Part Number	Capacity
SDLTODKR-800G-5Cxx	800GB
SDLTOCKR-016T-5Cx	1.6TB

xx - Pack Out Option:
Generic/Sample: A1
10 Pack: 02
Bulk Pack: 03

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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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