Optimus Eco™ SAS SSDs

Cost-effective storage for mixed-use and read-intensive workloads with excellent performance.

Features

- 3 Full Random DWPD[4]/****
- Five Year Warranty****
- Data integrity – BER 10^{18}
- FlashGuard – Enhances Flash Endurance
- DataGuard – Ensures Data Integrity
- EverGuard – Reliable 24x7 operation

Mixed-Use (400GB - 1.6TB) Applications Workloads

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

Read-Intensive (2TB) Application Workloads

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

The Optimus Eco™ SSD from SanDisk® ushers in a new era of flash storage bringing together a combination of high performance, capacity, endurance and reliability, while using cost-effective 19nm eMLC flash. This combination makes the Optimus Eco SSD the ideal solution for a wide variety of mixed-use application workloads such as On-line Transaction Processing (OLTP), Financial Transactions, and E-mail/Messaging, and read-intensive application workloads such as Web Servers, Video on Demand (VOD) and Web-based Applications. The Optimus Eco can be deployed by Cloud service providers or hyper-scale data centers, in existing directly attached, SAN, and NAS storage architectures.

Available in capacities of 400GB - 2TB*, the Optimus Eco SSD provides random read/write performance up to 90K/35K IOPS and sequential read/write data transfer rates of up to 530/530 MB/s**. The Optimus Eco SSD is dual ported with 1GB/s Read/800 MB/s Write in active/active operation for sequential read/write performance. The Optimus Eco SSD provides 3 random DWPD[4]/****. Optimus Eco SSDs have a 5 year warranty****.

Guardian Technology™ Platform

Optimus Eco SAS SSDs are powered by SanDisk's proprietary Guardian Technology Platform, a comprehensive suite of enterprise features comprised of FlashGuard™, DataGuard™ and EverGuard™ technologies.

FlashGuard Technology combines Aggregated Flash Management, which treats all flash elements as a single system, and Advanced Signal Processing, which dynamically adjusts flash parameters throughout the life of the SSD, to reliably extract significantly more life from commercial-grade MLC flash, making it suitable for mixed-use and read-intensive application workloads.

DataGuard Technology features full data path protection, safeguarding user data from corruption along all data paths in the SSD.

EverGuard Technology protects against loss of user data in the event of unexpected power interruptions using a 3rd generation backup power circuit design and high-reliability discrete capacitors. Optimus Eco SAS SSDs are designed for I/O intensive, mission-critical, 24/7 applications.

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Optimus Eco™ 2.5" SAS SSDs

Performance	
Interface	6Gb/s SAS
Interface Ports	Dual
Sequential Read/Write (MB/s)**	Up to 530/530 MB/s[1] per port/ 1 GB/s Read/800 MB/s Write in Active/Active operation
Random Read/Write (IOPS)	Up to 90K/35K IOPS[2]
Capacity	
19nm eMLC User Capacities*	400GB, 800GB, 1.6TB, 2TB
Reliability	
Sector Sizes	512, 520, 528 byte
Data Reliability (BER)	1 unrecoverable error in 10^{18} bits read*****
MTBF***	2.5M hours
Data Fail Recovery	F.R.A.M.E. (Flexible Redundant Array of Memory Elements)
Power Fail Recovery	EverGuard Technology: Backup Power Circuitry
Data Path Protection	DataGuard Technology, T10 DIF
Warranty****	The lesser of 5 years or maximum endurance used
Endurance	
Random workload****	3 DWPD[4]
Power	
Vcc	5V/12V
Active (Typ)	7W
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 70° C[3]
Storage Temperature	-40° C to 90° C
Humidity	5% to 95%, non-condensing, relative humidity
Altitude	5486.4 m [18,000 ft]
Mechanical	
Length	100.20 mm
Width	69.85 mm
Height	9.5/15 mm

(1) Based on a 128KB transfer rate, using Oakgate SVF exerciser
(2) Based on 4KB transfer rate using Oakgate SVG exerciser
(3) As measured by the internal sensor
(4) 2TB endurance specified at 1 DWPD for random workload.

Optimus Eco 2.5" SAS SSDs - Ordering Information

Part Number	Capacity
SDLKODDR-400G-5Cxx	400GB
SDLKOCDR-800G-5Cxx	800GB
SDLLOCDR-016T-5Cxx	1.6TB
SDLLOCDR-020T-5Cxx	2TB

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

Specifications subject to change without notice.
*1 GB = 1,000,000,000 bytes. Actual user capacity less.
**Up to stated speed. Based on internal testing; performance may vary depending upon drive capacity, host device, OS and application.
  1 megabyte (MB) = 1 million bytes.
***MTBF - Mean Time Between Failures based on parts stress analysis.
****Warranty/DWPD - The lesser of 5 years from the date of manufacture of the product or the date on which the product's relevant endurance thresholds set
  forth in the product specifications are reached.
*****1 recoverable error in 10^{18}

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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.