



6Gb/s SATA Enterprise 2.5" SSDs

## CloudSpeed Ascend™ SATA SSDs

Cost-effective storage for read-intensive workloads with excellent performance and industry-leading reliability.

### Features

- Guardian Technology™ Platform
- Up to 5x Better Endurance than Client MLC SSDs
- Powerful Error Correction and Detection
- Consistent Performance Over Warranted Lifetime
- High-Reliability Backup Power Circuitry
- Data Path Protection
- Data Fail Recovery
- Thermal Management
- Comprehensive S.M.A.R.T. Attributes

### Read-Intensive Application Workloads

- File Servers
- Web-based Applications
- Virtual Tape Libraries (VTL)

CloudSpeed Ascend™ SATA SSDs from SanDisk are the next generation of 19nm eMLC NAND flash technology, providing higher performance than the previous generation and are optimized for enterprise server and cloud computing environments. CloudSpeed Ascend SSDs are ideally suited for read-intensive applications such as, File Servers, Web-based Applications and Virtual Tape Libraries (VTL). The CloudSpeed Ascend SSDs excellent price-performance makes it an ideal replacement for hard disk drives.

Available in capacities of 120GB to 960GB\*, CloudSpeed Ascend SSDs feature a 6Gb/s SATA interface and provide data transfer rates up to 470/450 MB/s\*\* sequential read/write and performance up to 70K/14K IOPS random read/write. CloudSpeed Ascend SSDs offer high data integrity by employing a combination of powerful error correction and detection, full data path protection, thermal monitoring, and data fail recovery.

### Guardian Technology™ Platform

CloudSpeed Ascend SATA SSDs are powered by SanDisk's proprietary Guardian Technology Platform, a suite of enterprise features that include 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 cost-effective 19nm eMLC flash, making it suitable for 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.

**SanDisk®**

## CloudSpeed Ascend™ 2.5" SATA SSDs Preliminary Specifications subject to change

Performance	
Interface	SATA 6Gb/s
Sequential Read/Write (MB/s)**	Up to 470/450 MB/s <sup>1</sup>
Random Read/Write (IOPS)	Up to 70K/14K IOPS <sup>2</sup>
Access Time	< 2.0 ms
Capacity	
19nm eMLC User Capacities*	120GB, 240GB, 480GB, 960GB
Reliability	
Data Reliability (BER)	1 unrecoverable error in 10 <sup>17</sup> bits read <sup>3</sup>
MTBF***	2.5 Million Hours
Data Fail Recovery	Recover up to 1 NAND flash erase block of data
Power Fail Recovery	High-reliability backup-power circuitry
Temperature Monitoring	Performance throttling upon warning/critical temperature
Warranty****	The lesser of 5 years or maximum endurance used
Endurance	
DWPD (Random Workload)****	1 DWPD <sup>5</sup>
Power	
Vcc	5V ± 5%
Active (Typ)	5.2W
Idle	2.2W
Environmental	
Shock (operating)	1000g @ 1.0 msec, 1 shock along each axis, X, Y, Z, in each direction
Vibration (operating)	2.17 g rms 7-800 Hz
Operating Temperature	0° C to 70° C (internal)
Storage Temperature	-40° C to 95° C
Humidity	5% to 95%, non-condensing, relative humidity <sup>4</sup>
Altitude	-200 feet to 10,000 feet
Mechanical	
Length	100.2 mm
Width	69.85 mm
Height	7 mm

(1) Based on a 128KB transfer rate, using Oakgate SVF exerciser  
(2) Based on 4KB transfer rate using Oakgate SVG exerciser  
(3) The JEDEC 64-B specification requires 1 in 10<sup>17</sup> for enterprise-class SSDs  
(4) Based on MIL-STD 810-F, Method 507.4  
(5) Endurance @ JEDEC 219 Workload

## CloudSpeed Ascend™ 2.5" SATA SSDs - Ordering Information

Part Number	Capacity
SDLFOEAR-120G-1Hxx	120GB
SDLFODAR-240G-1Hxx	240GB
SDLFODAR-480G-1Hxx	480GB
SDLFOCAR-960G-1Hxx	960GB

### xx - Pack Out Option:

Generic/Sample: A1  
10 Pack: 02  
Bulk Pack: 03

### 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](http://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 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.

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