



PRELIMINARY

XceedStor™ 500S SATA SSD

SMART Storage Systems™ XceedStor™ 500S 2.5" SATA SSD offers enterprise-class performance and reliability to the cost sensitive server market. Leveraging tier-one OEM-enterprise firmware, proven power fail technology and the latest generation of MLC NAND flash, the XceedStor 500S offers all the features expected from an enterprise-class drive at the right value.

Features

The XceedStor 500S SSD was designed specifically to address the growing need for fast and reliable solid-state storage in the server and cloud computing markets. It offers significantly better performance and reliability metrics than competing client-class SSDs currently used in this market. Available in capacities of 60, 120, 240, 480GB, the XceedStor 500S features a 6Gb/s SATA interface and provides 500MB/s sequential read/write and 60K/20K IOPS random read/write performance.

Highest Data Integrity

The XceedStor SSD offers industry-leading data integrity by employing a combination of powerful error correction and detection, full data path protection, thermal monitoring, and data fail and recovery of up to 1 NAND flash page. Comprehensive diagnostic tools are provided through SSD-specific S.M.A.R.T. attributes.

Enterprise-Class Reliability

Incorporating OEM enterprise-class firmware, the XceedStor 500S features a high reliability backup-power circuitry to ensure the highest level of data integrity. The XceedStor 500S SSD further benefits from the high reliability features of its embedded enterprise class controller, which includes AES-256 bit encryption. Additionally, the XceedStor 500S achieves an MTBF of 2 million hours, and market-leading uncorrectable bit error rate (UBER) of less than 1 in 1018 bits read, an 100x improvement over the JEDEC JESD 218 spec for enterprise grade SSDs.

Enterprise Storage Expertise

Extensive industry and design experience in enterprise storage applications, combined with enterprise-class support and comprehensive testing that includes Design Verification Testing, System Integration Testing, Reliability Demonstration Testing and Ongoing Reliability Testing, the XceedStor 500S delivers a true enterprise grade storage offering to the server and cloud computing market.

Features

- High-Reliability Backup Power Circuitry
- Data Path Protection
- Data Fail Recovery
- Thermal Management
- Advanced Power Management
- AES-256 Bit Encryption
- Powerful Error Correction and Detection
- Advanced S.M.A.R.T. Attributes

XceedStor SATA Product Family

	Capacity (GB)	Sustained Performance	Random Performance
MLC	60, 120, 240, 480	500 MB/s	60 K/20 K IOPS



XceedStor SATA Specifications

2.5" Form Factor	
Performance	
Burst	600 MB/s
Sustained Read/Write	Up to 500 MB/s ¹
Random IOPS Read/Write	Up to 60 K/20 K ²
Access Time	< 1.0ms
Interface	SATA 6 Gb/s
Capacity	
MLC	60, 120, 240, 480 GB
Reliability	
Data Reliability	<1 in 10 ¹⁸ bits read ³
Endurance	5 Year Lifetime ⁴
Error Correction/Error Detection (BCH)	24-bits for every 512-byte sector
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
Power	
Vcc	5V ± 5%
Active (Typ)	1.2 A (Typical)
Idle	0.5 A (Typical)
Environmental	
Shock (operating)	200g half-sine, 10msec, 1 shock along each axis, X, Y, Z, in each direction
Vibration (operating)	0.67 g rms 5-500 Hz, 3 axes
Operating Temperature	0°C to 70°C (Internal)
Storage Temperature	-40°C to 90°C
Humidity	5% to 95%, non-condensing, relative humidity ⁵
Altitude	24,384m (80,000 ft)
Humidity	
Length	100.2 mm
Width	70.0 mm
Height	9.5 mm

(1) Based on a 128KB transfer rate, using Iometer 2008

(2) Based on 4KB transfer rate using Iometer 2008

(3) The JEDEC 64.8 specification requires 1 in 10 (16) for enterprise-class SSDs

(4) Performance throttling may be activated to ensure a 5-year lifetime for specific workloads.

(5) Based on MIL-STD 810-F, Method 507.4

XceedStor SATA Ordering Information

Part Number	Capacity (GB)
XceedStor 500S SATA SSD	
TX32C10060GA3001	60
TX32C10120GA3001	120
TX32C10240GA3001	240
TX32C10480GA3001	480

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