

# XceedStor 500S SATA SSD (Preliminary)

## XceedStor 500S SATA SSD

SMART Modular Technologies' 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 10<sup>18</sup> 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.

### XceedStor 500S Product Family

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

### 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



## Specifications (Preliminary)

XceedStor 500S SATA SSD	
2.5" Form Factor	
<b>Performance</b>	
Burst	600MB/s
Sustained Read/Write	Up to 500 MB/s <sup>1</sup>
Random IOPS Read/Write	Up to 60K/20K <sup>2</sup>
Access Time	< 1.0ms
Interface	SATA 6Gb/s
<b>Capacity</b>	
MLC	60, 120, 240, 480GB
<b>Reliability</b>	
Data Reliability	<1 in 10 <sup>18</sup> bits read <sup>3</sup>
Endurance	5 Year Lifetime <sup>4</sup>
Error Correction/Error Detection (BCH)	55 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
<b>Power</b>	
Vcc	5V ± 5%
Active (Typ)	TBD
Idle	TBD
<b>Environmental</b>	
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 <sup>5</sup>
Altitude	24,384m (80,000 ft)
<b>Humidity</b>	
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<sup>16</sup> 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

## Ordering Information

Part Number	Capacity (GB)	Capacity (GB)
XceedStor 500S SATA SSD		
TX32D10060GA0001	60G	MLC
TX32D10120GA0001	120G	MLC
TX32D10240GA0001	240G	MLC
TX32D10480GA0001	480G	MLC



### Corporate Headquarters

39870 Eureka Dr.  
Newark CA 94560  
Tel: (+1) 800-956-7627  
Tel: (+1) 510-623-1231  
Fax: (+1) 510-623-1434  
Email: info@smartm.com

### Customer Service

Tel: (+1) 978-303-8500  
Fax: (+1) 978-303-8757  
Email: customers@smartm.com

### Latin America

Tel: (+55) 11 4417-7200  
Fax: (+55) 11 4417-7219  
Email: sac@smartm.com

### Europe

Phone: (+33) 1 43 54 58 80  
Fax: (+33) 1 43 26 64 81  
Email: euro.sales@smartm.com

### Asia/Pacific

Phone: (+65) 6232-2858  
Fax: (+65) 6232-2300  
Email: infoasia@smartm.com

[www.smartm.com](http://www.smartm.com)