

# XceedLite Storage Products

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SMART Modular Technologies' industrial grade XceedLite solid state drives (SSDs) bring the advantages of non-volatile memory to embedded computing applications. Available with a SATA-II or PATA interface, the XceedLite SSDs provide low-power, high-reliability, solid state storage in a 1.8" or 2.5" form factor and can be used as a direct replacement for a hard disk drive.

Available in capacities ranging from 1GB to 64GB, the XceedLite SSDs typically requires less than 1W at all densities. Low power requirements make the XceedLite SSDs well suited for mobile applications, where power savings can result in longer battery life. In fixed applications, lower power dissipation can also reduce the need and cost of cooling in blade server or server environments.

Featuring sustained throughputs of up to 72MB/s read and 55MB/s write, the XceedLite SSDs are designed for use in embedded applications, such as medical devices, transportation systems, ruggedized mobile computing, and as the operating system boot drive in a wide range of embedded applications.

The XceedLite SSDs are part of SMART's growing storage products portfolio of industrial grade SSD solutions. With a wide range of densities, performance, power requirements and interfaces, SMART storage products meet the needs of the most demanding applications.

Visit [www.smartm.com](http://www.smartm.com) for more storage products from SMART.

## XCEEDLITE Product Family At-A-Glance

	Capacity (GB)	Performance (Sustained)
1.8" SATA-II	4, 8, 16, 32, 64	72MB/s Read 55MB/s Write
1.8" PATA	4,8,16,32	45MB/s Read 25MB/s Write
2.5" SATA-II	4,8,16,32,64	72MB/s Read 55MB/s Write
2.5" PATA	1,2,4,8,16,32,64	40MB/s Read 23MB/s Write

### Features

- Typically requires less than 1W active power at all densities
- Up to 72MB/s sustained read, 55MB/s write
- Available in industrial (-40°C to 85°C) operating temperature range
- Advanced flash management for enhanced reliability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) support



## Specifications

XceedLite				
	SATA		PATA	
	1.8	2.5	1.8	2.5
<b>Performance</b>				
Sustained (MB/s)	Up to 72/55 Read/Write		Up to 45/25 Read/Write	Up to 40/23 Read/Write
<b>Capacity</b>				
Min (GB)	4		4	1
Max (GB)	64		32	64
<b>Reliability</b>				
MTBF	1,550,969 hrs <sup>2</sup>	1,550,969 hrs <sup>1,2</sup>	> 2,000,000 hrs <sup>1,4</sup>	> 1,900,000 hrs <sup>1,2</sup>
Data Reliability	1 in 10 <sup>14</sup> bits read			
Data Retention	10 years at 25°C			
Endurance	> 260 years @ 200GB/day write cycles, unlimited reads <sup>2</sup>			
<b>Power</b>				
Input Voltage	3.3V or 5V +/- 5%	5V +/- 5%	3.3V +/- 5%	5V +/- 5%
Idle (Typ)	0.57W/0.52W	0.52W	0.03W	<0.05W
<b>Environmental</b>				
Operational (Typ)	0.94W/0.945W Read 0.96W/0.955 Write	0.945W Read 0.955 Write	0.22W Read 0.20W Write	<0.75W Read/Write
Operational Temp	Commercial (0°C to 70°C), Industrial (-40°C to 85°C)			
Operating Shock <sup>3</sup>	50g half-sine, 11msec, 3 shocks along each axis, X,Y,Z in each direction			
Vibration <sup>3</sup>	16.4g rms, 3-axis		15g peak-to-peak	16.4g rms, 3-axis
Altitude <sup>3</sup> (ft)	80,000 (24,384m)			
Relative Humidity <sup>3</sup>	5% to 95% non-condensing, RH			
Storage Temp	-55°C to 95°C			
<b>Physical</b>				
Length (mm)	78.5	101.9	71(H <sup>5</sup> ), 70.6(U <sup>5</sup> )	100.3
Width	54	69.85	54(H <sup>5</sup> ), 53.6(U <sup>5</sup> )	69.9
Height (mm)	5	9.5	5(H <sup>5</sup> ), 1.96(U <sup>5</sup> )	6.1
Connector	3Gb/s SATA-II	3Gb/s SATA-II	40-pin ZIF	44-pin PATA

## Ordering Information

Part Number	Capacity (GB)	Interface
<b>XceedLite - 1.8" SATA - 3.3V</b>		
SG9STL1C4GDz02	4	3Gb/s SATA-II
SG9STL1C8GCz02	8	3Gb/s SATA-II
SG9STL1C16GBz02	16	3Gb/s SATA-II
SG9STL1C32GBz02	32	3Gb/s SATA-II
SG9STL1C64GBz02	64	3Gb/s SATA-II
<b>XceedLite - 1.8" SATA - 5V</b>		
SG9STL1B4GDz02	4	3Gb/s SATA-II
SG9STL1B8GCz02	8	3Gb/s SATA-II
SG9STL1B16GBz02	16	3Gb/s SATA-II
SG9STL1B32GBz02	32	3Gb/s SATA-II
SG9STL1B64GBz02	64	3Gb/s SATA-II
<b>XceedLite - 1.8" PATA</b>		
SG9PAx1G4GSMEAz	4	ATA-7
SG9PAx1G8GSMEBz	8	ATA-7
SG9PAx1G16GSMEBz	16	ATA-7
SG9PAx1G32GSMEBz	32	ATA-7
<b>XceedLite2 - 2.5" SATA SSD</b>		
SG9STL2B4GDz02	4	3Gb/s SATA-II
SG9STL2B8GCz02	8	3Gb/s SATA-II
SG9STL2B16GBz02	16	3Gb/s SATA-II
SG9STL2B32GBz02	32	3Gb/s SATA-II
SG9STL2B64GBz02	64	3Gb/s SATA-II
<b>XceedLite2 - 2.5" PATA SSD</b>		
SG9IDE2F1GPHA4z	1	PATA
SG9IDE2F2GPHADz	2	PATA
SG9IDE2F4GPHACz	4	PATA
SG9IDE2F8GPHABz	8	PATA
SG9IDE2F16GPHABz	16	PATA
SG9IDE2F32GPHABz	32	PATA
SG9IDE2F64GPHABz	64	PATA

x (Housing)  
 x = T Housed  
 x = U Unhoused  
 z (temperature)  
 z = null (0°C to 70°C, Commercial),  
 z = I (-40°C to 85°C, Industrial)

<sup>1</sup> Based on the RDF2000 UTE C80-810 Telecom Standard at 25°C

<sup>2</sup> Based on 64GB Drive

<sup>3</sup> Based on MIL-STD-810F

<sup>4</sup> Based on 32GB Drive

<sup>5</sup> H = Housed, U = Unhoused



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