

# SMART's Storage Solutions

XceedLite 1.8"

MEMORY • FLASH • STORAGE • DISPLAYS • EMBEDDED

## XceedLite 1.8" Storage Products

SMART Modular Technologies' industrial grade XceedLite 1.8" solid state drives (SSDs) bring the advantages of non-volatile memory to mobile and embedded computing applications. Available in PATA and SATA-II interfaces, the XceedLite SSDs provide low-power, high reliability, solid state storage in an ultrasonically welded 1.8" housing. Making them ideal for use in applications such as ruggedized notebooks and other embedded mobile applications.

Available in capacities ranging from 4GB to 64GB, the XceedLite 1.8" SSDs typically require less than 1W active power 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.

Utilizing a 3Gb/s interface, the XceedLite 1.8" SATA-II SSD has sustained throughputs of up to 72MB/s read and 55MB/s write, making it well suited for use in embedded applications such as tablet PC, ruggedized mobile computing, and as the operating system boot drive in a wide range of embedded and industrial applications.

## Industrial Grade Storage

An industrial grade storage solution, the XceedLite SSDs support industrial temperature ranges (-40°C to 85°C) and leverages advanced on-board error detection, correction algorithms and static wear leveling to ensure years of reliable operation. By using only single-level cell (SLC) NAND flash technology, the industrial grade XceedLite SSDs offer higher performance and increased reliability over other technologies. The XceedLite SSDs come with a 3-year limited warranty.

The XceedLite 1.8" 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)
<b>XceedLite 1.8" SATA</b>		
1.8" SATA-II	4, 8, 16, 32, 64	72MB/s Read 55MB/s Write
<b>XceedLite 1.8" PATA</b>		
1.8" PATA	4, 8, 16, 32	45MB/s Read 25MB/s Write

- 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
- Ultrasonically welded housing
- Unhoused version of PATA SSD available for space constrained applications
- Self Monitoring Analysis and Reporting Technology (S.M.A.R.T.) support



	XceedLite 1.8" SATA		XceedLite 1.8" PATA
<b>Performance</b>			
Sustained (MB/s)	Up to 72/55MB/s R/W		Up to 45/25MB/s R/W
<b>Capacity</b>			
Min	4GB		4GB
Max	64GB		32GB
<b>Reliability</b>			
MTBF	1,550,969 hrs <sup>2</sup>		> 2,000,000 hrs <sup>1,4</sup>
Data Reliability	1 in 10 <sup>14</sup> bits read		
Data Retention	10 years @ 25°C		
Endurance	> 260 years @200 GBytes/day write cycles, unlimited reads <sup>2</sup>		
<b>Power</b>			
Input Voltage	3.3V +/- 5%	5V +/- 5%	3.3V +/- 5%
Idle (Typ)	0.57W	0.52W	0.03W
Operational (Typ)	0.94W (Read) 0.96W (Write)	0.945W (Read) 0.955W (Write)	0.22W (Read) 0.20W (Write)
<b>Environmental</b>			
Operating 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-axes	15g peak-to-peak	
Altitude <sup>3</sup> (ft)	80,000 (24,384m)		
Relative Humidity <sup>3</sup>	5% to 95% non-condensing, RH		
Conformal Coating	Not Available		
Storage Temp	-55°C to 95°C		
<b>Physical</b>			
Form Factor	1.8"		
Length (mm)	78.5	71 (H <sup>5</sup> ), 70.6 (U <sup>5</sup> )	
Width (mm)	54	54 (H <sup>5</sup> ), 53.6 (U <sup>5</sup> )	
Height (mm)	5	5 (H <sup>5</sup> ), 1.96 (U <sup>5</sup> )	
Connector	3Gb/s SATA-II		40-pin ZIF

1 Based on the RDF2000 UTE C80-810 Telecom Standard at 25°C  
 2 Based on 64GB Drive  
 3 Based on MIL-STD-810F  
 4 Based on 32GB Drive  
 5 H = Housed, U = Unhoused

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

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)

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