

Xcel-100



Xcel-100 2.5" SATA SSD

SMART Modular Technologies' Xcel-100 2.5" SATA solid state drive (SSD) combines high performance, superior reliability, and low power consumption into a single design, making it the ideal storage solution for the most demanding defense, industrial automation, transportation, medical and telecommunication applications.

Because of its high random and sequential performance, the Xcel-100 SSD can eliminate performance bottlenecks associated with traditional hard disk drives. A single Xcel-100 SSD can replace several hard drives, improving footprint utilization, lowering the system power requirement as well as lowering the system's total cost of ownership.

Reaching the bandwidth limits of the SATA 3Gb interface, Xcel-100 SSDs deliver 250 MB/s sequential read/write speeds and up to 30,000 random IOPS. Capacities of 50 – 200GB are available using highly reliable single-level cell (SLC) NAND Flash.

SMART's rugged Xcel-100 SSDs are designed to meet the needs of mission-critical applications where high shock, vibration and temperature tolerances are as important as high performance and reliability. A comprehensive set of diagnostic tools is provided through SSD-specific S.M.A.R.T. attributes which can be used to monitor the health of the drive.

Xcel-100 SSDs are more reliable, offer higher data integrity and require less power and cooling than traditional hard disk drives (HDDs). The result is the lowest possible total cost-of-ownership for your storage application.

XCEL-100 Product At-A-Glance

	Capacity (GB)	Sustained Performance	Performance
2.5" SATA	50, 100, 200	250 MB/s Read 250 MB/s Write	Up to 30,000 IOPS (Based on 4KB transfer size)

Features

- High random and sequential I/O performance
- SLC NAND flash for enhanced reliability and durability
- Ideal for high shock, high vibration and high and low temperature applications.
- Comprehensive S.M.A.R.T. attributes



Xcel-100 Specifications

Xcel-100 2.5" SATA	
Performance	
Burst	300 MB/s
Sequential	250 MB/s Read 250 MB/s Write
Random (1)	Up to 30,000 IOPS at 100% Read and 100% Write
Access Time	<100 µsec
Interface	SATA 2.6
Capacity	
SLC	50GB, 100GB and 200GB
Reliability	
MTBF	> 2M hours, Telcordia 25°C, 50GB Drive
Data Reliability	< 1 in 10 ¹⁷ bits read
Error Correction (RS)	Up to 12 9-bit symbols for every 512-byte sector
Data Fail Recovery	Recover up to 1 NAND flash erase block of data
Power Fail Recovery	Array of High Reliability capacitors
Flash Management	
Wear Leveling	Static
Endurance (1)	10,000 terabytes written
Power	
Input Voltage	5V +/-5%
Idle (typ)	0.7 W
Operational (typ)	1.5 W
Environmental	
Operating Temp	-40°C to +85°C
Storage Temp	-55°C to +95°C
Operating Shock (2)	50 g half-sine, 11ms, 3 shocks along each axis: X, Y, Z
Vibration (2)	16.4 g rms, Jet
Altitude (ft) (2)	80,000 (24,384m)
Relative Humidity (2)	5% to 95% non-condensing
Physical	
Form Factor	2.5"
Length (mm)	100.2
Width (mm)	70
Height (mm)	9.5
Connector	SATA

(1) Performance throttling may be invoked to ensure 3 year lifetime

(2) Based on MIL-STD-810F

Ordering Information

Part Number	Capacity (GB)	Interface
SG9XCS2D50GSI01	50	SATA 2.6
SG9XCS2D100GSI01	100	SATA 2.6
SG9XCS2D200GSI01	200	SATA 2.6



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