

Xcel-10



Xcel-10 2.5" SATA SSD

SMART Modular Technologies' Xcel-10 2.5" SATA solid state drive (SSD) is a rugged, high performance, highly reliable storage solution for applications requiring both sequential and random I/O performance. Embedded applications found in defense, industrial automation, transportation, medical, and telecommunications industries will benefit from the high reliability and low total cost-of-ownership of SMART's rugged solid state drives.

SMART's 2.5-inch Xcel-10 SSDs are available with a SATA interface for easy integration into your storage environment.

SMART's rugged Xcel-10 SSDs are designed to meet the needs of mission-critical applications in the defense, aerospace and industrial markets where high shock, vibration and temperature tolerances are as important as high performance and reliability. The Xcel-10 also includes both Normal and Enhanced Security Erase modes as defined by ATA-7 for applications where data security is important.

Xcel-10 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-10 Product Family At-A-Glance

	Capacity (GB)	Performance (sustained)	Random
2.5" SATA	32, 64, 128	110 MB/s Read 110 MB/s Write	6,100 IOPS at 100% Read, 800 IOPS at 67% Read, 33% Write 290 IOPS at 100% Write

Features

- High random and sequential I/O performance
- SLC NAND flash for enhanced reliability and durability
- Ideal for rugged applications.
- Highest SLC NAND flash capacity in a 9.5 mm height form factor



Specifications

Xcel-10 2.5" SATA	
	Rugged
Performance	
Burst	300 MB/s
Sequential	110MB/s Read 110 MB/s Write
Random (1)	6,100 IOPS at 100% Read, 800 IOPS at 67% Read, 33% Write 290 IOPS at 100% Write
Capacity	
Min	32 GB
Max	128 GB
Reliability	
MTBF	> 1.1M hours, Telcordia 25°C, 32GB Drive
Data Reliability	< 1 non-recoverable error in 10 ¹⁴ bits read
Data Retention	> 10 years at 25°C
Flash Management	
Wear Leveling	Static
Endurance (2)	> 50 years @ 200 GB/day write/erase cycles ²
Power	
Input Voltage	5V +/-5%
Idle (typ)	1.1 W
Operational (typ)	1.2 W
Environmental	
Operating Temp	Industrial (-40°C to +85°C)
Operating Shock (3)	50g half-sine, 11ms, 3 shocks along each axis: X, Y, Z (pending)
Vibration (3)	16.4g rms, Jet (pending)
Altitude (ft) (3)	80,000 (24,384m)
Relative Humidity (3)	5% to 95% non-condensing
Conformal Coating	Available
Storage Temp	-55°C to 95°C
Physical	
Form Factor	2.5"
Length (mm)	100.2
Width (mm)	69.9
Height (mm)	9.5
Connector	SATA

(1) Based on 32GB Drive

(2) Based on 128 KByte block transfers and continuous, sequential writes to the drive. The number does not include file system overhead, which may vary depending on the file system. The total life span of the drive depends on both the write endurance numbers and MTBF. One kilobyte, or KByte, equals 1024 bytes.

(3) Based on MIL-STD-810F, tested on a 128GB drive

Ordering Information

Part Number	Capacity (GB)	Interface
A25FD-32GI32N	32	SATA 2.6
A25FD-64GI32N	64	SATA 2.6
A25FD-128GI32N	128	SATA 2.6



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