VALUE SERIES

SMART® **Modular Technologies**

MO-300 mSATA

SMART Modular Technologies' Values Series MO-300 Solid state drive brings the advantages of non-volatile memory to embedded computing applications. Similar to SMART's standard mSATA, the Value Series provides economic, highly reliable mass storage that can replace a hard disk drive. The mSATA is available in capacities ranging from 8GB to 64GB. Low power requirements make the mSATA SSD ideal for mobile applications, where power savings can result in longer battery life. In fixed applications, lower power dissipation can also reduce cooling requirements and costs in blade or server environments.

The mSATA Values Series product line is a SATA III solid state storage solution that offers excellent sequential read/write performance. It is suitable for embedded applications that require lower drive capacity and utilize the drive for boot up code and OS code storage. The new mSATA Values Series SATA III offers sequential and random read/write performance in high capacity drives for transaction intensive applications.
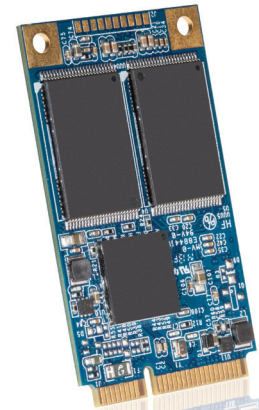
SMART's mSATA SATA SSDs are offered with multi-level cell (MLC) NAND. They provide enhanced reliability by incorporating on-board error detection and correction and static wear leveling algorithms to provide reliable operation over the product life. S.M.A.R.T. ID reporting provides health information to determine the expected life of the SSD.

Features & Benefits

- Advanced wear leveling – static and dynamic wear leveling
- Advanced Error Detection/Correction circuitry for superior data reliability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T. support
- Supports for 48bit LBA addressing with larger maximum transfer size
- Improved shock and vibration performance over rotating media

Product Family Overview

Capacity	Performance Sequential
MO-300 Value Series MLC	
8GB to 64GB	450 MB/s Read (Max) 190 MB/s Write (Max

Applications

- NAS / SAN storage systems
- x86 server-storage appliances
- Distributed scale-out cloud servers
- Telecom and networking routers and switches
- ATCA compute blades
- Industrial control
- Single board computers for defense, gaming and industrial control applications
- Printers

Specifications

MO-300 mSATA	
Performance	
Host Interface Rate	6Gb/s (Backwards compatible to 3Gb/s & 1.5Gb/s)
Capacities	8GB to 64GB
Sequential Read (maximum)	140GB/s to 450MB/s
Sequential Write (maximum)	100GB/s to 190GB/s
Sequential Read (maximum)	45K IOPS
Sequential Read (maximum)	28K IOPS
Reliability	
Data Reliability	< 1 Non-Recoverable Error in 10^{15} bits read
Data Retention	10 years >90% life remaining 1 year at the end of life
Endurance[1]	2.4 TBW / GB
Error Correction (BCH)	Up to 43 bits /1 Kbyte sector
Environmental	
Shock	1500 *g* half-sine, 0.5 msec, 1 shock along each axis, X,Y,Z in each direction
Vibration	20G 80-2000Hz, 1.52mm 20-80Hz, 3 axis
Operating Temperature - Commercial	0°C to 70°C
Storage Temperature	-40°C to 85°C
Humidity	40°C, Operation: 90% RH, Storage: 93% RH
Altitude	24,384 m [80,000 ft]
Physical	
Length	50.80 mm
Width	29.85 mm
Height	4.0 mm
Weight (max)	< 10.0 g [0.35OZ]

[1]Endurance for 100% Sequential Workload; endurance is directly related to the User Specific Workload

Ordering Information

Part Number	Capacity
MO-300	
SV9MST6D008GJM21	8GB
SV9MST6D016GJM21	16GB
SV9MST6D032GJM21	32GB
SV9MST6D064GJM21	64GB

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