

N200, MO-300 mSATA

MO-300 mSATA

SMART Modular Technologies' N200 MO-300 solid state drive brings the advantages of non-volatile memory to embedded computing applications. The N200 product provides an economic yet highly reliable mass storage in an mSATA form factor which is available in both commercial and industrial temperature ranges. The mSATA is available in capacities ranging from 32GB to 1TB. In fixed applications, lower power dissipation can reduce cooling requirements and costs in blade or server environments.

The mSATA N200 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 N200 SATA III offers sequential and random read/write performance in high capacity drives for transaction intensive applications.

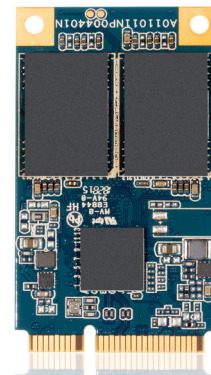
SMART's mSATA SSDs are offered with Triple Level Cell (TLC) 3D NAND. They provide enhanced reliability by incorporating on-board error detection and correction and static wear leveling algorithms to provide reliable operation over the product life.

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

N200 Product Family Overview

Capacity	Performance Sequential
MO-300 mSATA TLC	
32GB to 1TB	Up to 550MB/s (64GB - 1TB) Up to 300MB/s (32GB)



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 TLC	
Performance	
Host Interface Rate	6Gb/s (Backwards compatible to 3Gb/s & 1.5Gb/s)
Capacities	32GB to 1TB
Sequential Read (maximum)	Up to 550MB/s (64GB - 1TB) Up to 300MB/s (32GB)
Sequential Write (maximum)	Up to 500MB/s (1TB) Up to 490MB/s (256 - 512GB) Up to 450MB/s (128GB) Up to 255MB/s (64GB) Up to 125MB/s (32GB)
Reliability	
Data Reliability	< 1 Non-Recoverable Error in 10 ¹⁶ bits read
Data Retention	10 years >90% life remaining 1 year at the end of life
Endurance (JEDEC Client Workload) ¹	32GB: 17 TBW 64GB: 42 TBW 128GB: 75 TBW 256GB: 180 TBW 512GB: 425 TBW 1TB: 835 TBW
Error Correction	LDPC (Equivalent to 200 bits/4KB)
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° to 70°C Industrial: -40° to 85°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

¹Endurance is directly related to the User Specific Workload

Ordering Information

Part Number	Density
MO-300 mSATA Commercial Operating Temperature	
SVMST61024NT51	1TB
SVMST6512GNT51	512GB
SVMST6256GNT51	256GB
SVMST6128GNT51	128GB
SVMST6064GNT51	64GB
SVMST6032GNT51	32GB
MO-300 mSATA Industrial Operating Temperature	
SVMST61024NTI51	1TB
SVMST6512GNTI51	512GB
SVMST6256GNTI51	256GB
SVMST6128GNTI51	128GB
SVMST6064GNTI51	64GB
SVMST6032GNTI51	32GB

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