



CS310 | SATA | mSATA SSD

SMART's CS310 mSATA solid state drives are designed to meet the demand for a cost-effective solution in general-purpose industrial applications, such as POS/Kiosk, embedded automation and lite-IPC, with advanced features that ensure the high level of operational stability and reliability over the lifetime of the SSDs.

Incorporating the 3D NAND technology, the CS310 SATA SSDs utilize an advanced DRAM-less controller design for the best balance in performance and power consumption. Advanced error detection and correction, and thermal management ensure exceptional data integrity and reliability under variable operating environments.

Features & Benefits

- DRAM-less Controller Design
- 3D NAND Technology with High Endurance
- AES 256 Encryption
- Support I-Temp (-40 °C to +85 °C)
- Compatible with JEDEC MO-300 Standard
- Thermal Throttling Management
- LDPC Error Detection / Correction Circuitry for Superior Data Reliability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) Support

Product Family Overview

Form Factor	Capacity	Sequential Performance
2.5" SSD	128GB to 1TB	R 560MB/s, W 520MB/s
M.2 2242 SSD	128GB to 1TB	R 560MB/s, W 510MB/s
M.2 2280 SSD	128GB to 1TB	R 560MB/s, W 520MB/s
mSATA SSD	128GB to 1TB	R 560MB/s, W 510MB/s



Applications

- Edge Computing
- Industrial Automation Control
- POS Systems
- Networking Routers and Switches
- Single-Board Computers for Gaming

Specifications

CS310 SATA mSATA SSD	
NAND Type	TLC
Performance	
Host Interface Rate (maximum)	SATA 3.0 6Gb/s
Capacities	128GB to 1TB
Sequential Read (maximum)	Up to 560 MB/s
Sequential Write (maximum)	Up to 510 MB/s
Random Read (maximum)	Up to 60K IOPS
Random Write (maximum)	Up to 42K IOPS
Reliability	
MTBF	> 3,000,000 hours
Endurance (JEDEC Client Workload) ¹	1TB: 1200 TBW 512GB: 600 TBW 256GB: 300 TBW 128GB: 150 TBW
Error Correction	LDPC
Power	
Input Voltage	VCC: 3.3 V ± 5%
Environmental	
Shock	1500 g half-sine, 0.5 msec, 1 shock along each axis, X, Y, Z in each direction
Vibration	20G rms 80-2000Hz, 1.52mm 20-80Hz, 3 axis
Operating Temperature	Industrial: -40°C to +85°C
Storage Temperature	-55°C to +95°C
Humidity	40°C, Operation: 90% RH, Storage: 93% RH
Physical	
Length	50.8mm
Width	29.85mm
Height	4.85mm

¹Endurance is directly related to the User Specific Workload.

Ordering Information

Part Number	Density
CS310 SATA mSATA SSD	
Industrial Operating Temperature (-40°C to +85°C)	
FDMST1024TIAA1D2	1TB
FDMST512GTIAA1D2	512GB
FDMST256GTIAA1D2	256GB
FDMST128GTIAA1D2	128GB



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