



CS310 | SATA | M.2 2242 & M.2 2280 SSDs

SMART's CS310 SATA M.2 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.



M.2 2280



M.2 2242

Features & Benefits

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

Applications

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

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

Specifications

	M.2 2242 SSD	M.2 2280 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	Up to 520 MB/s
Random Read (maximum)	Up to 88K IOPS	Up to 96K IOPS
Random Write (maximum)	Up to 62K IOPS	Up to 71K 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	-40°C to +85°C	-55°C to +95°C
Humidity	40°C, Operation: 90% RH, Storage: 93% RH	
Physical		
Length	42mm	80mm
Width	22mm	22mm
Height	3.6mm	3.6mm

¹Endurance is directly related to the User Specific Workload.

Ordering Information

Part Number	Density
CS310 SATA M.2 2242 SSD Industrial Operating Temperature (-40°C to +85°C)	
FDM241024TIAA1D2	1TB
FDM24512GTIAA1D2	512GB
FDM24256GTIAA1D2	256GB
FDM24128GTIAA1D2	128GB
CS310 SATA M.2 2280 SSD Industrial Operating Temperature (-40°C to +85°C)	
FDM281024TIAA1D2	1TB
FDM28512GTIAA1D2	512GB
FDM28256GTIAA1D2	256GB
FDM28128GTIAA1D2	128GB



For more information, please visit: www.smartm.com

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