



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 87K 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

**Product images are for promotional purposes only. Labels may not be representative of the actual product.*

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