swissbit®

Product Fact Sheet

Industrial SD Memory Card

S-250 Series

SPI and SD Compliant, SLC

Extended and Industrial Temperature Grade

Date: March 30, 2021
Revision: 1.01

Made in Germany

Product Fact Sheet
S-250 Series

Product Summary

- **Capacities:** 512 MBytes, 1 GBytes, 2 GBytes
- **Form Factor:** Standard SD Memory card form factor – 32.0mm x 24.0mm x 2.1mm, Write Protect slider
- **Compliance[1]:**
  - Fully compliant with SD Memory Card specification 2.0 and Micro SD Memory Card specification 2.0 addendum
  - Speed class 6 according SD2.0 specification
- **Environmental:** RoHS / REACH Compliant
- **Compatibility:** Supports SD SPI mode
- **Performance (max. capacity):**
  - SD burst up to 25MB/s
  - SD Low speed 0...25MHz clock rate
  - SD High speed 25...50MHz clock rate
  - Up to 24.2/13.5 MB/s sustained read/write speed
  - Flash burst up to 25MB/s
  - "Default speed cards" with disabled high speed mode available
- **Operating Temperature Range:**
  - Extended Temperature Range: -25° up to 85°C
  - Industrial Temperature range: -40° up to 85°C
- **Operating Voltage:** 2.7...3.6V normal operating voltage
- **Data Retention:** 10 years @ life begin; 1 year @ life end
- **High reliability:**
  - Best available SLC NAND Flash technology
  - Designed for embedded market
  - MTBF: > 3,000,000 hours
  - Number of insertions: > 10,000

Product Features

- Wear Leveling: equal wear leveling of static and dynamic data.
  Wear leveling assures that dynamic data as well as static data is balanced evenly across the memory to guarantee the maximum write endurance of the device.
- Patented power-off reliability
  - No data loss of older sectors
  - Max. 16 sectors data loss (old data kept) if power off during writing
- Hot swappable
- Low-power CMOS technology
- Controlled "Locked" BOM
- Life Time Monitoring SD/SPI with standard or vendor commands

Why Swissbit?

Swissbit is focused on the design, development, manufacture, and support of leading edge memory and storage solutions for the worldwide OEM/ODM marketplace. As a global supplier, Swissbit recognizes and addressees the higher level of application requirements of today's industrial, Netcom, and automotive customers by providing best-in-class products and services, with uncompromised attention to driving overall value and quality.

[1] The verification of host system and storage device compatibility is in customer's responsibility. Swissbit can provide guidance and support on request.