swissbit®

Product Fact Sheet
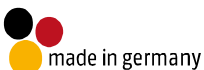
Industrial microSDHC / SDXC Memory Card

S-45u Series
UHS-I Interface, MLC

Extended and Industrial
Temperature Grade

Date: April 08, 2019
Revision: 1.24

durabit™
"the better MLC"

Product Summary

- **Capacities:** 4 GBytes, 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes, 128 GBytes
- **Form Factor:** Standard microSD Memory card form factor – 15.0mm x 11.0mm x 0.7mm (1.0mm)
- **Compliance:** Fully compliant with SD Memory Card specification 2.0 and 3.0 and MICRO SD Memory Card Addendum 4.00
  - SDHC/SDXC default/high speed mode and UHS supported
  - Up to speed class 10 and U1 and according SD3.0 specification
  - FAT32 / exFAT preformatted
- **Performance:**
  - SD Default speed, SD High speed, SD UHS-I
  - Read Performance: Sequential Read up to 44 MBytes/s, Random Read IOPS up to 1,349
  - Write Performance: Sequential Write up to 22 MBytes/s, Random Write IOPS up to 966
- **Operating Temperature Range[1]:**
  - Extended: –25 °C to 85 °C
  - Industrial: –40 °C to 85 °C
- **Storage Temperature Range:**
  - Extended: –25 °C to 100 °C
  - Industrial: –40 °C to 100 °C
- **Operating Voltage:** 2.7...3.6V normal operating voltage (Low-power CMOS technology)
- **Data Retention:** 10 Years @ Life Begin / 1 Year @ Life End
- **Humidity:** 85% RH @85°C 1000h
- **Electromagnetic Compatibility Test:** Radiated Emission; Radiated Immunity; Electrostatic Discharge

Product Features

- Optimized FW algorithms especially for high read access and long data retention applications
  - Patented power-off reliability technology, Wear Leveling technology
  - Write Endurance technology, Read Disturb Management
  - Data Care Management, Near miss ECC technology
  - Diagnostic features with Life Time Monitoring tool support
- High reliability
  - Designed for industrial market especially read intensive application like navigation, infotainment, POS/POI, medical and general boot medium use case
  - The product is optimized for long life cycle and provides excellent data retention in high temperature mission profiles.
  - Number of card insertions/removals 20,000
  - SIP (System In Package) process for extreme dust, water and ESD proof
  - Selected AEC-Q100 qualification
- Manufactured in a TS 16949 certified factory
- Controlled BOM & PCN process
- Customized options like CID registers, CPRM keys, firmware incl. settings and marking by projects
- In-Field Firmware Update
- Swissbit Life Time Monitoring (SBLTM) Tool and SDK for SBLTM (on request)

Why Swissbit?

Swissbit strives to create innovative technologies for future market opportunities utilizing a highly skilled in-house product research and development team. Swissbit maintains a marketing edge by continuing to manufacture world-class high quality memory products and providing customers with both high value and low cost of ownership achieved through efficient processes and procedures.

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[1] High Temperature storage without operation reduces the data retention, in operation the data will be refreshed, if data error issues were detected

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X-ON Electronics

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SDCFXSB-128G-G46 SDSDQB-032G-B35 SDSDQM-032G-B35A SDU4GDMGRB SDU4GDPGRB 5788667-1-CUT-TAPE RP-
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