

swissbit®

Product Fact Sheet

**Industrial
microSD/SDHC Memory Card**

S-455u Series
UHS-I Interface, SLC



S-455u Series – Industrial microSD/SDHC Memory Card, SLC

Product Summary

- **Capacities:** 512 MBytes, 1 GBytes, 2 GBytes, 4 GBytes, 8 GBytes
- **Form Factor:** Standard microSD Memory Card form factor – 15.0 x 11.0 x 0.7mm (1.0mm)
- **Compliance:** Fully compliant with SD Memory Card specification 3.0
 - SD ultra high speed mode, speed class 1
 - SD high speed mode, up to speed class 10
 - SD2.0 SDHC backward compliant, default speed and high speed mode
- **Performance:**
 - SD burst up to 50MB/s
 - SD Normal speed 0...25MHz clock rate
 - SD High speed 0...50MHz clock rate
 - SD UHS-I speed 0...50MHz (DDR) and 0...100MHz (SDR)
 - Up to 38MByte/sec sequential data rate
- **Operating Temperature Range:** 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 (Low-power CMOS technology)
- **Power (Max Capacity):** 90mA
- **Data Retention:** 10 Years @ Life Begin / 1 Year @ Life End
- **Shock/Vibration:** 1,500 g/50 g
- **Electromagnetic Compatibility Tests:** 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 that requires good data retention because of high temperature mission profile.
 - 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
- 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)

For more information on SD Memory card Specification, please visit SD association (www.sdcard.org)

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 addresses 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.