swissbit®

Product Fact Sheet

Industrial
USB Flash Drive Module

U-500 Series
USB3.1 SuperSpeed, SLC

Commercial and Industrial
Temperature Grade

Date: January 26, 2023
Revision: 1.01

SFUI008GK1AE1TO
-I-DB-2B1-STD
60504030
609171

Made in Germany

Product Summary

- **Capacities:** 4 GBytes, 8 GBytes, 16 GBytes, 32 GBytes
- **Form Factor:** 26.65 x 36.8mm with 2.54mm or 2.00mm connector with keyed pin9
- **Compliance:** Fully compliant with USB specification 3.1 Gen 1 (backward compliance with USB 2.0/1.1)
- **Performance:**
  - Read performance: sequential read up to 175 MBytes/s, random read IOPS up to 3,000
  - Write performance: sequential write up to 90 MBytes/s, random write IOPS up to 1,100
- **Operating Temperature Range:**
  - Commercial: 0 °C to 70 °C
  - Industrial: −40 °C to 85 °C
- **Storage Temperature Range:** −40 °C to 100 °C
- **Operating Voltage:** 3.1 to 5.5V
- **Data Retention:** 10 years @ life begin; 1 year @ life end
- **Endurance in TeraBytes Written (TBW) @ Max Capacity:** 3216 (seq. write 128KB); 184 (random write 4KB)
- **Shock/Vibration:** 1,500 g / 50 g (JESD22-B110 / MIL-STD-883H M2007.3)
- **Mean Time Between Failure:** > 3,000,000 hours
- **Data Reliability (UBER):** <10^{-17} bits read

Product Features

- Optimized FW algorithms especially for high read access and long data retention applications
- Designed with sophisticated firmware architecture for industrial and NetCom market especially 24/7 application
- SLC NAND Flash with highest program erase cycles per block
- Patented power-off reliability technology
- Near Miss ECC technology
- Read Disturb Management
- Wear Leveling technology
- Data Care Management
- Mounting hole electrically not connected (optional grounded)
- Fixed drive (USB hard drive, optional removable)
- LED for operation indication
- Write protect switch (optional)
- In-field firmware update
- Swissbit Life Time Monitoring (SBLTM) tool and SDK for SBLTM (on request)

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.

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