## swissbit®

**Product Fact Sheet** 

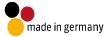
Industrial CFast™ Card

F-50 Series SATA III - 6.0 Gbit/s, MLC

Commercial and Industrial Temperature Grade

Date: February 28, 2019 Revision: 1.05





# Product Fact Sheet F-50 Series



### **Product Summary**

- Capacities: 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes, 128 GBytes, 256 GBytes
- Form Factor: CFast<sup>™</sup> 2.0 (36.4 mm x 42.8 mm x 3.6 mm)
- Compliance: SATA Revision 3.1 6 Gbit/s (3 Gbit/s and 1.5 Gbit/s backward compatible)
- Command Sets: Supports ATA/ATAPI-8 and ACS-2
- Performance:
  - o Read Performance: Sequential Read up to 500 MBytes/s, Random Read IOPS up to 53,500
  - Write Performance: Sequential Write up to 330 MBytes/s, Random Write IOPS up to 74,000
- Operating Temperature Range\*:
  - o Commercial: o °C to 70 °C
  - o Industrial: -40 °C to 85 °C
- Storage Temperature Range: -40 °C to 85 °C
- Operating Voltage: 3.3 V ± 5%
- Power (Max Capacity): Read (Active): 1.2 W; Write (Active): 2.0 W; Idle: 248 mW; Slumber: 17 mW
- Data Retention: 10 Years @ Life Begin / 1 Year @ Life End
- Endurance in TeraBytes Written (TBW) Max Capacity<sup>†</sup>: Client > 150; Enterprise > 7
- Shock/Vibration: 500 g / 20 g
- Hardware BCH Code ECC: up to 66 bit correction per 1 KByte page
- NAND Flash Technology: Multi-Level Cell (MLC)
- Mean Time Between Failure: > 2,000,000 hours
- Data Reliability: < 1 non-recoverable error per 10<sup>16</sup> bits read

### **Product Features**

- Dynamic and Static Wear Leveling
- Subpage Mode Flash Translation Layer (FTL)
- Active Data Care Management: Read Refresh
- Lifetime Enhancements
  - Dynamic Bad Block Remapping
  - Write Amplification Reduction
- On-Board Power Fail Protection
- AHCI, TRIM, and NCQ Support
- ATA Security Feature Set Support
- DEVSLP Compatible
- In-Field Firmware Update
- Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- Controlled "Locked" BOM
- 30 µinch Gold-Plated Connector (on request)
- Conformal coating (on request)
- 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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<sup>\*</sup> Adequate airflow is required to ensure the drive temperature, as reported in the S.M.A.R.T. data, does not exceed the specified maximum operating temperature.

<sup>&</sup>lt;sup>†</sup> According to JEDEC (JESD47I), the time to write the full TBW is a minimum of 18 months. Higher average daily data volume reduces the specified TBW. The values listed are estimates and are subject to change without notice.