# durabit<sup>™</sup> "the better MLC"

## swissbit®

**Product Fact Sheet** 

Industrial CFast™ Card

F-60 Series SATA Gen3 - 6.0 Gbit/s, MLC

Commercial and Industrial Temperature Grade

Date: October 22, 2019 Revision: 1.06





# Product Fact Sheet F-60 Series



### **Product Summary**

- Capacities: 8 GBytes, 16 GBytes, 30 GBytes, 60 GBytes, 120 GBytes, 240 GBytes
- Form Factor: CFast-Sized Solid State Drive (36.4 mm x 42.8 mm x 3.6 mm)
- Compliance: SATA Gen3 6 Gbit/s (Gen2 3 Gbit/s and Gen1 1.5 Gbit/s backward compatible)
- Command Sets: Supports ATA/ATAPI-8 and ACS-2
- Performance:
  - Read Performance: Sequential Read up to 520 MBytes/s, Random Read 4K up to 72,000 IOPS
  - o Write Performance: Sequential Write up to 180 MBytes/s, Random Write 4K up to 43,000 IOPS
- Operating Temperature Range\*: Commercial: 0 °C to 70 °C; 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): 1.3 W; Write (Active): 1.6 W; Idle: 363 mW; Slumber: 115 mW
- Data Retention: 10 Years @ Life Begin / 1 Year @ Life End
- Endurance in TeraBytes Written (TBW) Max Capacity†: Client > 540; Embedded > 145; Enterprise > 135
- Shock/Vibration: 1,500 g / 50 g
- Hardware BCH Code ECC: up to 66 bit correction per 1 KByte page
- Mean Time Between Failure: > 2,000,000 hours
- Data Reliability: < 1 non-recoverable error per 10<sup>16</sup> bits read

#### **Product Features**

- Best-in-Class Performance and Endurance with durabit™ Technology
- Dynamic and Static Wear Leveling
- Active and Passive Data Care Management
- Lifetime Enhancements
  - Dynamic Bad Block Remapping
  - o Write Amplification Reduction
- On-Board Power Fail Protection
- AHCI, TRIM, and NCQ Support
- ATA Security Feature Set Support
- DEVSLP Compatible
- In-Field Firmware Update
- Enterprise Grade Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- AES256 Encryption (on request)
- 30 µinch Gold-Plated Connector (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.

<sup>\*</sup> Adequate airflow is required to ensure the temperature, as reported in the S.M.A.R.T. data, does not exceed 115°C (industrial temperature drive) and 100°C (commercial temperature drive) respectively.

<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.

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