swissbit®

Product Fact Sheet

# Industrial CFast™ Card

## F-66 Series

SATA Gen3 – 6.0 Gbit/s, pSLC

Commercial and Industrial Temperature Grade

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everbit™




Made in Germany

# Product Fact Sheet
# F-66 Series

## Product Summary

- **Capacities:** 4 GBytes, 8 GBytes, 16 GBytes, 30 GBytes, 60 GBytes, 120 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 80,000 IOPS
  - Write Performance: Sequential Write up to 415 MBytes/s, Random Write 4K up to 75,000 IOPS
- **Operating Temperature Range[1]:** 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): 1.4 W; Write (Active): 1.8 W; Idle: 380 mW; Slumber: 116 mW
- **Data Retention:** 10 Years @ Life Begin / 1 Year @ Life End
- **Endurance in TeraBytes Written (TBW) Max Capacity[2]:** Client > 1805; Embedded > 495; Enterprise > 465
- **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 $10^{16}$ bits read

## Product Features

- Pseudo SLC Flash with 20,000 Program/Erase Cycles and everbit™ Reduced Write Amplification
- Dynamic and Static Wear Leveling
- Subpage Mode Flash Translation Layer (FTL)
- Active and Passive Data Care Management
- 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
- 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.

[1] 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.

[2] 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.