swissbit®

Product Fact Sheet

Industrial CFast Card

F-86 Series

SATA Gen3 – 6.0 Gbit/s, 3D pSLC

Commercial and Industrial Temperature Grade

Date: February 12, 2021
Revision: 1.02

Made in Germany

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F-86 Series

Product Summary

- **Capacities:** 10 GBytes, 20 GBytes, 40 GBytes, 80 GBytes, 160 GBytes (3D pSLC)
- **Form Factor:** CFast-Sized Solid State Drive (36.4 mm x 42.8 mm x 3.6 mm)
- **Interface[1]:** 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-4
- **CFast 2.0 compliant**
- **Performance:**
  - Burst Transfer Rate: Up to 600 MBytes/s in SATA Gen3 – 6.0 Gbit/s
  - Read Performance: Sequential Read up to 372 MBytes/s, Random Read 4K up to 13,100 IOPS
  - Write Performance: Sequential Write up to 223 MBytes/s, Random Write 4K up to 8,300 IOPS
- **Operating Temperature Range[2]:**
  - 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 (160 GBytes) typ:**
  - Read (Active): 1,090 mW
  - Write (Active): 810 mW
  - Idle: 191 mW
  - Slumber: 50 mW
  - DEVSLP: 2.6 mW
- **Data Retention:** 10 Years @ Life Begin / 1 Year @ Life End
- **Endurance in DiskWritesPerDay (DWPD):**
  - JEDEC Enterprise Workload: up to 2.7
  - JEDEC Client Workload: up to 13
- **Shock/Vibration:** 500 *g* / 20 *g*
- **High-Performance Dual Core 32-Bit Processor with Integrated, Parallel Flash Interface Engines:**
  - Triple-Level Cell (TLC) 3D NAND Flash in pSLC mode
  - Flexible BCH and GCC ECC engines provide superior error correction performance
- **High Reliability:**
  - Mean Time Between Failure (MTBF): > 2,000,000 hours @ 25 °C
  - Data Reliability: < 1 non-recoverable error per 10^{16} bits read
  - 30 µinch Gold-Plated Connector

[1] The verification of host system and storage device compatibility is in customer's responsibility. Swissbit can provide guidance and support on request.

[2] Adequate airflow is required to ensure the temperature, as reported in the S.M.A.R.T. data, does not exceed 120 °C (industrial temperature drive) and 105 °C (commercial temperature drive) respectively.