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Product Fact Sheet

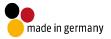
Industrial CFast™ Card

F-56 Series SATA Gen3 - 6.0 Gbit/s, pSLC

Commercial and Industrial Temperature Grade

Date: December 17, 2019 Revision: 1.02





Product Fact Sheet F-56 Series



Product Summary

- Capacities: 4 GBytes, 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes, 128 GBytes
- Form Factor: CFastTM 2.0 (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 510 MBytes/s, Random Read 4K up to 32,000 IOPS
 - o Write Performance: Sequential Write up to 415 MBytes/s, Random Write 4K up to 66,000 IOPS
- Operating Temperature Range¹:
 - 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): 2.1 W; Idle: 248 mW; Slumber: 17 mW
- Data Retention: 10 Years @ Life Begin / 1 Year @ Life End
- Endurance in TeraBytes Written (TBW) Max Capacity²: Client \geq 580; Enterprise \geq 25
- Shock/Vibration: 500 g / 20 g
- Hardware BCH Code ECC: up to 66 bit correction per 1 KByte page
- NAND Flash Technology: Pseudo Single-Level Cell (pSLC)
- Mean Time Between Failure (MTBF): > 2,000,000 hours
- Data Reliability: < 1 non-recoverable error per 10¹⁶ 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
- Enterprise-Grade 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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¹ 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.

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.

Mouser Electronics

Authorized Distributor

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Swissbit:

SFCA004GH2AD1TO-C-GS-23P-STD SFCA004GH2AD1TO-I-GS-23P-STD SFCA008GH2AD2TO-I-GS-23P-STD SFCA016GH2AD4TO-C-GS-23P-STD SFCA032GH2AD4TO-C-GS-23P-STD SFCA032GH2AD4TO-I-GS-23P-STD SFCA032GH2AD4TO-I-LT-23P-STD SFCA032GH2AD4TO-I-LT-23P-STD SFCA064GH2AD4TO-I-LT-23P-STD SFCA08GH2AD4TO-C-GS-23P-STD SFCA08GH2AD2TO-C-GS-23P-STD