swissbit®

Product Fact Sheet

Industrial CompactFlash™ Card

C-56 Series

up to UDMA6 / MDMA4 / PIO6, pSLC

Commercial and Industrial Temperature Grade

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Revision: 1.02

everbit™



Made in Germany

Product Summary

- **Capacities:** 4 GBytes, 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes
- **Form Factor:** CompactFlash Type I Card (36.4mm x 42.8mm x 3.3mm)
- **Compliance:** CFA 5.0 (CFA 6.1 compatible)
  PCMCIA spec. 2.1 & PC Card ATA Interface spec. 8, 7, 6, and 5,
  ATA-7 standard compatible in True IDE mode, up to UDMA6 / MDMA4 / PIO6 support
- **Performance:**
  - Read Performance: Sequential Read up to 115 MBytes/s, Random Read IOPS up to 5,000
  - Write Performance: Sequential Write up to 66 MBytes/s, Random Write IOPS up to 3,300
- **Operating Temperature Range[1]:**
  - Commercial: 0 °C to 70°C
  - Industrial: -40 °C to 85°C
- **Storage Temperature Range:**
  - -50 °C to 100 °C
- **Operating Voltage:** 3.3V ± 10% / 5V ± 10%
- **Data Retention**: 10 Years at Life Begin (JESD47), 1 Year at Life End
- **Shock/Vibration:** 1,500 *g* / 20 *g*
- **Mean Time Between Failure:** > 3,000,000 hours
- **Data reliability:** < 1 non-recoverable error per 10^{16} bits read
- **Electromagnetic Compatibility Tests:** Radiated Emission; Radiated Immunity; Electrostatic Discharge

Product Features

- MLC Flash in pSLC mode with 20,000 Program/Erase Cycles and everbit™ Reduced Write Amplification
- Global, Dynamic and Static Wear Leveling to maximize system write endurance
- Page Mode Flash Translation Layer (FTL) for best in class write performance and endurance
- Data Care Management
  - Read Disturb Management and Dynamic Data Refresh for maximized retention
  - Passive: Background Media Scan
- Lifetime Enhancements
  - Dynamic Bad Block Remapping
  - Write Amplification Reduction
  - Intelligent Garbage Collection
- Management of unexpected power loss
- Up to UDMA6, MDMA4, PIO6 interface speed (max 133 MB/s burst)
- Security Feature Set Support
- Optimized for fast boot-up times
- In-Field Firmware Update without user data loss
- Detailed Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- Life Cycle Management
- Controlled "Locked" BOM
- 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 drive temperature, as reported in the S.M.A.R.T. data, does not exceed the specified maximum operating temperature.