

swissbit®

Product fact sheet

**Industrial  
CompactFlash™ Card**

**C-50 Series (MLC)**

up to UDMA6 / MDMA4 / PIO6

PRELIMINARY TARGET SPECIFICATION



# C-50 SERIES – INDUSTRIAL COMPACTFLASH™ CARD (MLC)

## Product Summary

- **Capacities:** 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes, 128 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 100 MBytes/s, Random Read IOPS up to 2,800
  - Write Performance: Sequential Write up to 65 MBytes/s, Random Write IOPS up to 2,250
- **Operating Temperature Range:**
  - Commercial: 0 °C to 70 °C
  - Industrial: -40 °C to 85 °C
- **Storage Temperature Range:**
  - -50 °C to 100 °C
- **Operating Voltage:** 3.3V or 5.0V power supply, card drives bus with 3.3V, 5V input compatible
- **Data Retention:** 10 years (JEDEC47)
- **Shock/Vibration:** 1,500 g/20 g
- **Mean Time Between Failure:** > 3,000,000 hours
- **Data reliability:** < 1 non-recoverable error per 10<sup>16</sup> bits read
- **Electromagnetic Compatibility Tests:** Radiated Emission; Radiated Immunity; Electrostatic Discharge

## Product Features

- Low-power CMOS technology
- Power saving mode (with automatic wake-up)
- S.M.A.R.T. support and extended vendor information
- Page based Flash management for increased endurance and random performance
- Wear Leveling: equal wear leveling of static and dynamic data. The wear leveling assures that dynamic data, as well as static data usage is balanced evenly across the memory. With that, the maximum write endurance of the device is guaranteed.
- Patented power-loss data protection: No data corruption of static data, FW and finished written blocks
- High reliability
  - Number of connector insertions/removals: > 10,000
  - Flexible 96-Bit/1K BCH ECC capability
- Highly-integrated memory controller
  - Fix drive (IDE mode) & removable drive (PC card mode) as default in the same card
  - Hot swappable in PC card modes
  - Signal termination resistors to improve signal quality
  - Near Miss ECC handling at read (correct and rewrite data, if increased number of correctable errors are detected)
- Read Disturb Management (RDM, correct and rewrite data after a high number of read commands per block occurred)
- Operating System support: Standard Software Drivers operation CompactFlash™
- In-Field Firmware Update
- 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 addresses 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.