



PCMCIA Flash Memory Card (256Kbyte through 32Mbyte)

FEATURES

- Low cost High Density Linear Flash Card
- Supports 5V only systems or 5V systems with 12V VPP
- Based on Intel/Sharp/AMD/Catalyst Flash Components
- Fast Read Performance
- 150ns or 250ns Maximum Access Time
- x8 / x16 Data Interface
- High Performance Random Writes
- 8 μ s Typical Word Write Time
- Automated Write and Erase Algorithms
- PC Card Standard Type I Form Factor
- No battery required for Data retention

GENERAL DESCRIPTION

SCM's Flash memory cards offer high density linear Flash solid state storage solutions for code and data storage, high performance disk emulation and execute in place (XIP) applications in mobile PC and dedicated (embedded) equipment. The Flash cards conform to PCMCIA international standard.

The card's control logic provides the system interface and controls the internal Flash memories. The cards can be read/written in byte-wide or word-wide mode which allows for flexible integration into various systems. Combined with file management software, such as Flash Translation Layer (FTL), SCM flash cards provide removable high performance disk emulation. The cards offer low power modes controlled by registers. Standard cards contain (optional) separate 2 - 8kB EEPROM memory for Card Information Structure (CIS) which can be used for easy identification of card characteristics.

ARCHITECTURE OVERVIEW

SCM's Flash Cards are designed to support from 1Mb to 2Mb, 4Mb, 8Mb or 16Mb components, providing a wide range of density options.

Cards are based on the 28F010 (1Mb), 28F020 (2Mb), 28F008SA (8Mb) for 12V VPP applications or on the 28F008SC (8Mb) and 28F016SC (16Mb), 29F040 (4Mb), 29F016/17 (16Mb) devices for 5V only applications.

Devices ID's for the above named Flash components are all different and the right device ID has to be selected, which will be supported by the system.

In support of the PC Card 95 standard for word wide access Flash devices are paired.

SCM's cards conform with the PC Card Standard (PCMCIA) and JEIDA, providing electrical and physical compatibility. The PC Card form factor offers an industry standard pin out and mechanical outline, allowing density upgrades without system design changes.

SCM's standard cards are shipped with SCM Logo. Cards are also available with blank housings (no Logo).



SCM Flash Memory Card – Series C/D

Compliant to the PCMCIA/JEIDA industry standard, SCM's Speedy Flash Memory card is a cost-effective mass-storage cards for Palmtops, Hand-held devices, or Sub-notebook PCs equipped with PC Card slots supporting AMD Flash devices. Featuring low-power consumption, 5-Volt only, high performance, and sector-based single cycle erase/write operations, the card is built with Flash technology's ruggedness, reliability, durability, and convenience. It comes in capacity up to 32 MB.

SCM offers Flash Driver, Formatter, and Utility software to bundle with the Flash cards for various system application. Compatibility with third party solutions such as Award's CardWare software and SCM's Flash File System (FFS) are also proven. Custom design of 8-bit only cards is readily available. SCM's Flash memory cards enable OEM system manufacturers to design and produce mobile PCs, dedicated equipment and instruments where high performance, ruggedness, maintenance free (no battery required), and light weight are basic requirements.

Features

- Industry standard PCMCIA/JEIDA compliant
- PCMCIA Type I form factor
- Single 5-Volt power supply
- Single cycle erase/write operation.
- No erase required prior to any write
- Extremely rugged and reliable
- Very low power consumption with automatic power management
- No battery required for data retention or backup
- Built-in Redundancy for sector replacement
- Mechanical Write protect switch prevents overwriting valuable data
- Hardware and software implementation of data protection
- Fully MS-DOS compatible Flash Driver, Formatter, and Utility software
- Applications for PC, PDA, PCA, Industrial Control, Embedded System, instrumentation, Communication.

Options:

- Attribute memory (8Kbytes)
- Industrial temperature version

Specifications

Dimensions:

- Type I card: 85.6 mm (L) x 54 mm (W) x 3.3 mm (H)
- Weight: 42.5 g or 1.5 oz

Storage Capacities:

- from 1 MB up to 32 MB

Operating System Support:

- DOS, Microsoft Windows 3.xx and Win95/98/NT, Win2K/XP/Vista32: Attribute-Memory mandatory

Performance:

- Read Access time: 200 ns (max.)
- Random Sector Write: 6 ms (typical)

Reliability:

- Over 100,000 write/erase cycles per sector

Operating Voltage:

- Read: 5V \pm 5%
- Write/erase: 5V \pm 5%

Power Consumption:

- Active (Byte mode): 25 mA (typical)
- Standby mode: 400 uA (typical)

Environment conditions:

- Operating temperature: 0° c to 70°c
- Storage temperature: -40°c to 85°c
- Relative Humidity: 95% (max.)

Chip ID

- 01A4, 013D, 01AD

Order code:

- FCL001M Series C
- FCL002M Series C
- FCL004M Series C and Series D
- FCL008M Series C and Series D
- FCL016M Series D
- FCL020M Series D
- FCL024M Series D
- FCL032M Series D