

FEATURES

- PC/104 Compatible Flash disk adapter module
- Supports 1.8 inch IDE Flash Disks featuring:
 - 4 to 100 Megabyte (formatted) capacity or larger
 - Compatible with MS-DOS, Windows, QNX and other operating systems and kernels supporting a standard IDE/ATA interface
 - No special drivers or flash file system required
 - Supports automatic power management as well as ATA Power Down Commands and Sleep Mode over the Interface
 - Maintenance free, noiseless
 - Resistant to dirt, shock, vibration and temperature
 - Low power consumption
 - Extended temperature modules available
- LED provides visual status during data transfer
- Two IDE connectors provide easy cabling options
- Separate power connector for remote mounting
- Single +5 volt operation

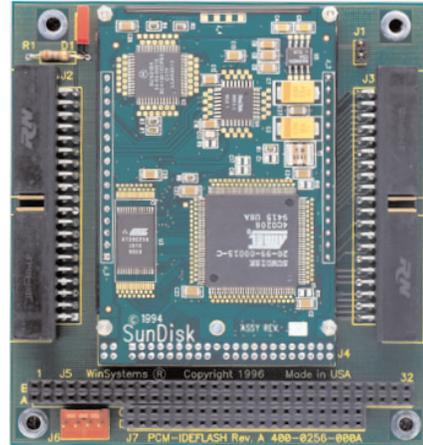
The PCM-IDEFLASH is a low cost adapter that links a 1.8 inch Flash Disk to an IDE (ATA) interface. The adapter is small and designed to mount on a PC/104 stack for use with embedded systems. It permits a user to install a 1.8 inch Flash Disk on a compact board and cable it to a host computer's IDE interface in a convenient manner.

FUNCTIONAL CAPABILITY

Overview - Solid State Disk (SSD) drives are used for applications where the environment is too harsh for hard disks or floppy disk drives. They are designed for mass storage of programs and data for applications such as data collection and logging, diagnostics, etc. in embedded systems.

One popular solid-state mass storage system well suited for mobile computing and embedded applications is the IDE Flash disk. The Flash disk features an extremely light weight, low profile form factor with a formatted storage capacity from 4 to over 100 MB. It is fully compatible with the IDE (PC/AT) interface, requiring no additional driver software to run existing software applications.

Module mounting and cabling problems arise when using small form factor solid state disk drives with embedded systems. The PCM-IDEFLASH provides a cost effective solution with both a solid mechanical and electrical mounting of the Flash disk.



The PCM-IDEFLASH eliminates the need for a hard or floppy disk drive for diskless systems; however, it can operate in addition to a regular hard disk and floppy drive. It can also operate as the boot disk, if no other disk is installed.

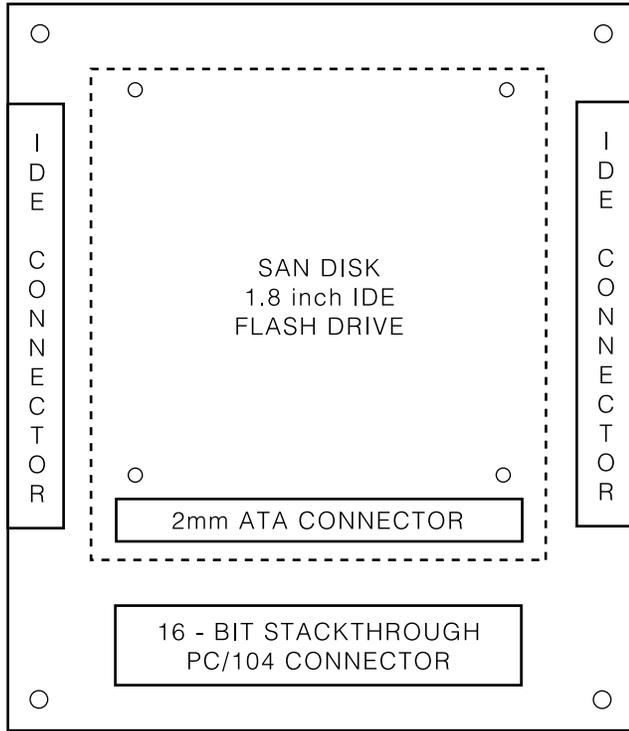
Cable Interface - The PCM-IDEFLASH module converts and combines a standard 40-pin 0.100" IDE connector and Vcc power cable to a 50-pin, 2mm female Flash disk mating connector. The onboard IDE connectors are keyed to prevent the cables from being plugged in backwards.

There are two identical IDE connectors on opposite sides of the PCM-IDEFLASH to allow the maximum flexibility for routing data cables.

Data Cables - A 40-pin ribbon cable links the PCM-IDEFLASH module and IDE interface. This cable is not supplied with the module. WinSystems offers the optional CBL-126, a #28 AWG 40-pin ribbon cable, in various lengths. Each cable end has a female 40-pin connector with strain relief.

Monitor LED - A red light emitting diode (LED) is on the PCM-IDEFLASH to provide a visual status information during data transfers.

Mounting Configuration - The PCM-IDEFLASH can be installed anywhere in a 16-bit PC/104 stack. Only the +5V power is taken from the bus. No address, data or



PCM-IDEFLASH BLOCK DIAGRAM

control signals are required. Two 0.6 inch spacers and their corresponding nut and screws are shipped with each unit to help secure the PCM-IDEFLASH module in a PC/104 stack.

If PC/104 stack mounting is not desired, then a version of the board is offered called the ADP-IDEFLASH. It has an 4-pin power connector rather than the PC/104 connectors and permits other mounting options.

IDE Flash Disk - Both SanDisk and M-Systems offers a family of 1.8 inch IDE drives. They have a formatted storage capacity from 4 to over 100 Mbytes and are available in both commercial (0°C to +60°C), enhanced (-25°C to +75°C) and extended (-40°C to +85°C) temperature ranges. The Flash disks are also available with Windows and DOS compatible compression software preloaded.

Flash disks offer a simple and easy interface. Since it appears as a standard IDE interface, no special drive software is required. The Flash disk products are 100% compatible with DOS, DOS applications and other operating systems supporting IDE disk drives.

The Flash disks have onboard controller that is compatible with existing small form factor hard disk drives. The controller assures host independence from details of erasing and reprogramming Flash memory. Also it dynamically manages defects to ensure data integrity. Each 512 byte sector is also protected by a powerful error correction code (ECC).

To obtain products or sales information contact:
 SanDisk, Sunnyvale, CA
 Telephone: 408-542-0500, FAX: 408-542-0503
 M-Systems, Newark, CA
 Telephone: 510-494-2090, FAX: 510-494-5545

Flash Disk Mounting - The module is easily installed by the user by plugging it into the 2mm connector. Four corner mounting holes permit the Flash disk to be securely fastened to the PCM-IDEFLASH printed circuit board. A set of nuts, screws and spacers are provided with WinSystems' product.

+5 Volt Only - Flash devices require a +12 VDC power supply to guarantee proper Write and Erase operations. The Flash disk modules are supplied with an onboard DC/DC converter powered from +5 volts. No additional voltages are needed.

SPECIFICATIONS

Mechanical

Dimensions: 3.6" x 3.8" (90mm x 96mm)
 +5V ±5% @ 100mA typ.

Connectors

IDE Interface: Two, 40-pin 0.100" grid
 FlashDrive: 50-pin 2mm grid
 PC/104 16-bit stackthrough

Environmental

Non-condensing relative humidity: 8% to 95%
 Operating Temperature: -40°C to +85°C

ORDERING INFORMATION

| | |
|----------------|-----------------------------------------------------|
| PCM-IDEFLASH-0 | IDEFlash PC/104 Module with no Flash Disk installed |
| ADP-IDEFLASH-0 | IDEFlash Adapter with no Flash Disk installed |
| CBL-126-1 | 5.5 inch 40-pin IDE cable |
| CBL-126-6 | 7.75 inch 40-pin IDE cable |
| CBL-126-7 | 12.25 inch 40-pin IDE cable |

