PDF

PATAFlash ™

PATAFlash 40-pin HotBackup

DESCRIPTION

The PATA/ IDE HotBackup Drive enables the two CompactFlash (CF) cards to work as a synchronised pair providing increased resilience and fault-tolerance. The HotBackup Drive is offered with standard IDE 40-pin rear connectors in a 2.5 inch and 3.5 inch form factors and operates with CF cards of up to 256GB in capacity. The solid state drive does not use SATA/ PATA adapters.

Incorporating twin CompactFlash drives, HotBackup enables the two CompactFlash (CF) cards to work as a mirrored pair providing increased resilience and fault-tolerance.

The HotBackup drive is presented to the host system as a single logical drive that will continue to operate seamlessly while continuously updating a copy of the user's data.

This also allows one CF card to be removed or dismounted for backup over the Ethernet port, giving a full disk image backup without dismounting the drive from the host. The HotBackup functionality ensures that any previously paired CF card, maintains a log file of the sectors written so that it can be used to quickly re-synchronize with the removed or replaced second card to re-establish a synchronised pair.

For making full image backups, it also includes a remote dismount feature which operates independently from the control of the host system to enable any CF card in a synchronised pair to be taken offline with the minimum of operational interruption to the host. An image can be restored to a CF card either by inserting a backup CF card or writing to a CF card over the Ethernet port.

The HotBackup drive fully integrates with SSD's Recovery Manager network software which is used for control and configuration as well as network backup and restore operations.

HotBackup is ideally suited for use in process critical legacy computer systems where downtime for maintenance and backup cause major disruption and expense. These are found in a range of industries including telecommunications, semiconductor manufacturing, industrial process control, engineering and manufacturing, power generation, oil & gas, military & aerospace, flight simulation and post-production.

The PATAFlash is an integrated solution that utilizes proven PATA/IDE drive architecture and industry-standard Compact Flash Card technology, providing a solid state, drop-in replacement for electro-mechanical hard drives.

The PATAFlash is an industrial OEM grade solid state drive which allows Compact Flash (CF) cards of up to 256GB (host dependant) to be attached to a regular IDE bus. It will be seen as an IDE drive by the host computer. The PATAFlash can emulate many PATA / IDE drives and can be programmed to suit the host systems requirement. It is capable of working in LBA or CHS mode, allowing it to support a range of BIOS versions.

The PATAFlash FLASH PCB allows service providers & OEM's to have a quick, low-cost flash memory solution for their legacy system through our configurable firmware that matches legacy systems software.

Benefit

- Firmware controlled by a PATA / IDE interface is adaptable to hosts' software PATA / IDE drivers
- Provides a transparent interface from the PATA/IDE bus to solid state Flash media
- Eliminates the problems found in traditional electro-mechanical/magnetic media storage devices
- Fast, efficient field replacement
- Lower power consumption, noise and heat
- Fast write speeds
- Increased reliability
- Reduced unplanned downtime
- No additional software required for operation due to its PATA / IDE data storage/bootable drive
  - a drop-in replacement

FEATURES

- Small format PCB converts Compact Flash Media to appear as a PATA / IDE device on a Host's PATA / IDE bus
- 3.5" form factor PCB which will replace any 3.5" disk drive or larger drives with adaptor
- Will fit in a 3.5" disk slot using the same mountings
- PATA / IDE Host will typically see the device as a disk drive of any selected emulation
- Custom device geometry (CHS or LBA) can be set to match specific BIOS requirements
- Board is low power, using 5V only
- Microcode is field upgradable via integral USB port
- Optional integration support available if required

SPECIFICATIONS

Form Factor:
3.5" form factor – 102mm (4") wide x 147mm (5.75") long x 25mm (1") high*   * Other form factor options are available

Compact Flash:
2x Standard 3M header for Type 1 & 2 cards

Power:
5 Volts only @ 0.8 Watt (Typical) + CF requirement

Host connector:
Standard IDE 44 pin, 2mm pitch data connector and device select jumper pins. Adapter to standard PATA 40 Pin Data + 4 Pin Molex Power connectors for 3.5" form factor use

PATA / IDE transfer rate:
10Mbytes/second (Burst)

USB and Serial Ports for microcode load and real time diagnostics

Ethernet capability

Master Image (.img) /mirroring capability

Example fixed disk emulations:
3.5" Quantum, Samsung, Seagate, Toshiba

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STATE DISKS

Solid State Disks Ltd manufacture, design & support sales of the SCSIFlash™ drive through our head office in Reading, United Kingdom.