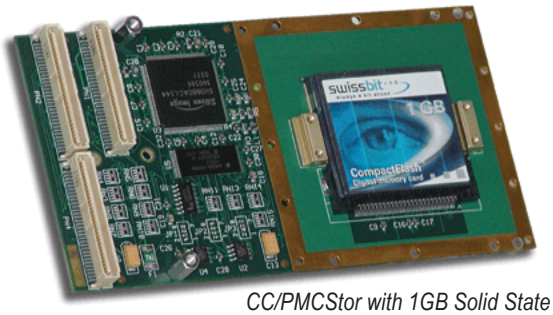
Conduction Cooled *PMCStor*

Introducing the ***CC/PMCStor*** - - a PMC form factor, conduction cooled mass storage device. ACT/ Technico's newest storage module provides a storage solution for both extended temperature and conduction cooled application environments.

The CC/PMCStor is offered as an integrated and tested storage solution, where the memory media and the controller have been qualified with the offered operating systems.

The conduction cooled version, model number 9246 is available with and without conformal coating. The extended temperature version, model number 9245 is available as convection cooled version with front panel, supporting applications requiring extended temperature operation. The CC/PMCStor will operate in environments where extended shock and vibration performance are required.



CC/PMCStor with 1GB Solid State CF-II (up to 8 GB available)

CC/PMCStor Features:

- Complete solution, with drive, interface and software provided
- Ultra ATA/133 mass storage solution using industry standard PMC form factor (IEEE P1386.1)
- Uses industrial temperature range components (-40°C to +85°C degrees operating).
- 32-Kbyte Flash memory provides storage for BIOS
- Supports CompactFlash drives (CF and CF-II) allowing for enhanced environmental performance.
- Each unit (including storage media) undergoes functional testing before, during, and after a 10-cycle environmental stress screen (ESS) to confirm reliable operation of the complete solution
- Available optionally with conformal coating when required

Benefits:

- ❑ Solves rugged embedded mass storage requirements
- ❑ Replaces external hard drives or Disk Modules that require external fixtures or system slots
- ❑ Solves the embedded designer's requirement for cost effective mass storage, eliminating cables and the need to use SCSI based storage solutions for applications requiring moderate storage capacities
- ❑ On-board support to bring standard ATA/IDE interface out the rear for external drives

CF-II Media

- ❑ Solid state storage capacity with rugged, enhanced duty CF-II drives
- ❑ 128 MB to 2 GB CF-II drives (consult factory for higher capacities)
- ❑ Extended operating temperature range (-40°C to +85°C)

With bootable device drivers for **Linux, VxWorks,** and **Windows**, the ***Conduction Cooled PMCStor*** is an ideal embedded storage solution.

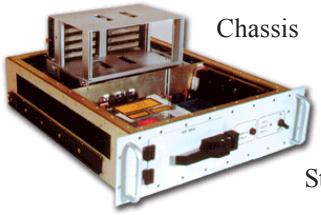
Embedded COTS By Design


SBC


I/O

Software


Design & Documentation


Chassis


Storage

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Specifications

Compatibility

Compliant with PCI Local Bus (v. 2.1), supporting boards that provide PMC sites designed to IEEE P1386.1. The disk controller is ATA/133 compliant. The PMCStor supports universal I/O signaling at 3.3 volts/ 5 volt tolerant. Two versions are available: standard CC/PMCStor provides +5V and 3.3V. The -A version provides 5V only.

Designed for operation on conduction cooled host platforms per the VITA 20 specification. Heat conduction areas are provided at the center and front of the board, as well as at the upper and lower edge of the board. The CC/PMCStor may be used on any board supporting standard PMC sites such as CompactPCI and VMEbus CPUs, as well as expansion adapters.

The CompactFlash device is securely held in place by two screw-down dips at each edge of the CF site. The bottom surface of the CF device directly contacts a solid copper plane thermally connected to the primary and secondary thermal sinks.

Software compatibility: VxWorks, Linux, and Windows.

Interface

Typically, no other cabling is required to use the PMCStor since the drive is on-board. Standard PMCStor versions are available supporting external storage media I/O from the front or from the rear of the PMC.

Environmental Specifications (assembly)

DC Input Voltage with one CF-II card:

P/N 924x: 3.3V ±5% @ .5A typical
P/N 924x-A: 5V ±5% @ .33A typical

	Operating	Non-operating
Shock	40 Gs half sine, 11 msec duration	60 G half sine, 11 msec duration
Vibration	2 G @ 15 to 2,000 Hz, sinusoidal input	TBD
Temperature	-40 C to + 85 C	-50 C to +95 C
Humidity - Uncoated	5% to 95%, non-condensing	0% to 95%, condensing
Conformally coated	5% to 95%, non-condensing	0% to 100%, condensing

Conformal coating is applied in accordance with MIL-I-46508, Type UR.

IDE/ATA Controller Specifications

- 2 independent ATA/133 Channels
- 48-bit sector addressing
- Dual independent DMA channels with 256K FIFO per channel
- 128 Byte Buffer
- Supports multi-word and single-word DMA timing modes
- MDMA Mode 0, 1, 2 and Ultra 33, 66, 100 and 133
- Supports external BIOS and Flash
- 32-bit 33MHz PCI interface
- Supports bus master DMA at 133 MB/sec PCI burst rate
- Supports maximum bus master data transfer of 66 MB/sec
- Compatible with Microsoft IDE/ATA drivers
- Compliant with PCI 2.2
- 3.3V operating voltage with 5V tolerant I/O

CompactFlash Card Specifications

Capacities and manufacturer specs continually improve. Please consult factory for the most current information.

	Industrial CompactFlash
Capacity - Type I Type II	128, 256 & 512 MB 1, 2, 4 and 8 GB
Transfer Rates: Read/Write: Interface:	 up to 5 MB/sec sustained 16.6 MB/sec burst
Weight (in grams)	13.5 max
DC Input Voltage	+3.3 V ± 5%; 5 V ± 10%
MTBF	4,000,000 hours (capacity dependent)
Endurance:	2,000,000 erase/program cycles/sector
Temperature (in °C) Operating: Non-operating:	 -40 to 85 -50 to 100
Humidity:	5% to 85% at 85°C
Vibration:	15G peak to peak 1.5 G @ 60 - 400 Hz 1 G @ 400 - 2000 Hz (1 oct./min)
Shock:	2,000 G max half sine, 11 ms 500 G @ 0.5 ms; 10 G @ 6 ms

CC/PMCStor Part Numbers:

Type:	Description / Function
9245	Convection cooled, extended temperature PMCStor, with solid front panel
9246	Conduction Cooled PMCStor, no front panel

Order Information

Build an assembly that fits your requirements. Use the following part number to create your CC/PMCStor module:

924T-V-*xxx*-O

Type: see P/Ns above

Version: **-A:** 5V *(via 3.3V regulator)*

CompactFlash see table above (use **0xG** for GB sizes)

Options **C** = Conformal coating

Example:

9246-01G-C Conduction Cooled PMCStor, with 1GB CF-II, no front panel, conformally coated.

9245-A-04G Convection Cooled PMCStor, with 4 GB CF-II, with PMC solid front panel.

We offer a wide variety of configurations, and mass storage capacities are always changing. Call **800-445-6194** or visit our website for the most recent information.

www.acttechnico.com

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