



PMC ShuttleStor

Removable Mass Storage - up to 120 GB on PMC

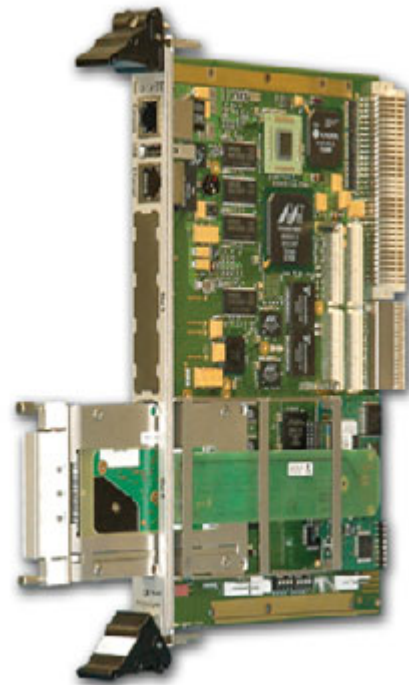
A unique PMC based removable storage solution, the Model 9270 PMC ShuttleStor is a PMC storage option that allows a hard drive mounted onto a carrier to be removed through the front panel of the host board. ACT/Technico has combined security, flexibility, and availability in this latest addition to its family of storage solutions.

Security. Quickly and easily remove vital data for safe keeping as the situation demands.

Flexibility. When storage requirements increase or drive performance is ready to be upgraded, simply remove the existing drive and plug in the upgrade – in standard 2.5” or 1.8” form factors, rotating or solid state.

Availability. System uptime is crucial. PMC ShuttleStor offers the shortest mean time to repair (MTTR) in the industry - with hot swap capability. No tools required.

ACT/Technico has redefined removability with PMC ShuttleStor. A custom designed low profile sliding canister transports the disk through the PMC and host board front panel. A hot swap LED indicator acts in conjunction with an interlocked handle release to enable removal and re-insertion of the drive with power applied to the system and without compromising data integrity.



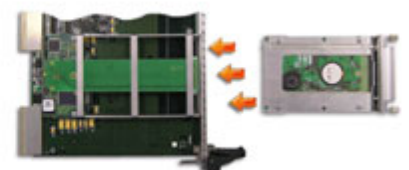
PMC ShuttleStor mounted on a PowerPC Single Board Computer (ACT Model # 5800).

Features:

- Standard PMC Mezzanine form factor IEEE 1386.1
- Uses standard parallel ATA drives
- On board parallel to serial ATA conversion
- SATA control logic supports Hot Swap
- Off-the-shelf device driver support
- One design is compatible with 1.8” – 7 mm ATA hard drives, and 2.5” - 9.5 mm ATA hard drives. (Host board component height cannot exceed 2.5 mm for 9.5 mm thick hard drives)
- On board Hot Plug Power conditioning
- Activity and Hot Swap Indicators on the front panel

Benefits:

- Compact, removable storage
- Standard PCI Mezzanine (PMC) form factor (IEEE P1386.1)
- Complete solution, with drive(s), interface and software driver provided
- High quality, optimized multilayer design
- Option to bring interface out the rear of PMC
- Up to 120 GB currently available



Embedded Systems By Design

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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/ATAPI-5 compliant. The PMCStor supports universal signaling and operates at 3.3 volts, tolerating 5 volt I/O. The PMC ShuttleStor may be used on any board supporting standard PMC sites such as CompactPCI and VMEbus single board computers. We have a selection of SBCs on which the ShuttleStor has been functionally prequalified.

Software compatibility: Windows, VxWorks, and Linux. VxWorks drivers are available - other O/S support is available on request.

Interface

Typically, no other cabling is required to use the PMC ShuttleStor since the drives are on-board. Versions are available supporting external disk I/O from the front or from the rear of the PMC.

Environmental Specifications (board only)

Contact ACT/Technico regarding board environmental specifications including various hard drive options.

- Operating temperature, w/o hard drive: +0° C to 70° C
- Operating temperature, w/commercial hard drive: +5° C to 55° C
- Storage temperature: -40° C to 85° C
- Operating humidity: up to 90% non-condensing with drive
- Non-operating humidity: 5% to 95% non condensing
- Operating shock: 15G, 11ms
- Operating vibration: 1G, 5 to 500Hz

Designed for optional conformal coating

Power Requirements (Max)

| | Without HDD: | With HDD: |
|----------|--------------|-----------|
| • 5V @ | 52mA | 1.152A |
| • 3.3V @ | 392 mA | 392 mA |

LED Indicators

Status, activity and alert LEDs are located on the front panel.

| | |
|---------|---------------------|
| Yellow: | activity |
| Blue: | hot swap ready |
| Red: | overcurrent warning |

IDE/ATA Controller Specifications

- SATA 1.5Gbps
- SATA 1.0 compliant
- 256MB DMA FIFO
- 32 bit / 66Mhz PCI interface
- 48 bit sector addressing

SATA to ATA Bridge

- Generation 1 SATA speed of 1.5Gbps
- Selectable max speeds, 66/100/144/150 MBps
- Ultra low power consumption

Disk Parameters/Specifications

Rotating Hard Drives

- **1.8" Rotating hard drives**

NOTE: Host board component height cannot exceed 2.5 mm.

4200 rpm, 7 mm: 20 GB, 30 GB

4200 rpm, 8 / 9.5 mm: 40 GB

4200 rpm, 9.5 mm: 60 GB

20% duty cycle, > 500,000 hours MTBF

Rotating Hard Drives (cont'd)

- **2.5" Rotating hard drives – 9.5mm thickness**
7 X 24 Enhanced Duty drives

NOTE: Host board component height cannot exceed 2.5mm.

5400 or 7200 rpm 40 GB / 60 GB / 80 GB

5400 rpm 120 GB

MTBF 50% R/W cycle, 500,000 hours

- **2.5" Rugged rotating hard drives – 9.5mm thickness.**

NOTE: Host board component height cannot exceed 2.5mm.

5400 rpm 20 GB & 40 GB

Extended temperature and vibration capabilities:

Shock (half sine) (Oper.) 11 msec half sine to 110G

Vibration (Operating) 1G (10 - 500Hz)

Temp (Operating) -30° C to +85° C

Rotating hard drives available with average seek times of 13 msec and interface transfer rates of 100MB/sec. Contact ACT/Technico for details.

Solid State Hard Drives

- 2.5" Rugged solid state hard drives are available in capacities ranging from 8GB to 32GB ensure data integrity in harsh environments.

Data transfer rates 10 to 40MB sustained, 66MB burst R/W

Vibration (Operating) 16.3G RMS (20 -2000Hz) MIL-STD 810F compliant

Shock (half sine) (Oper.) 1500G, MIL-STD 810F compliant

Temperature **Operating** **Non-operating**

Commercial 0° C to +70° C

Industrial (ED) -40° C to +85° C -55° C to +95° C

MTBF up to 4,000,000 hours

Contact ACT/Technico to discuss your drive specification requirements

PMC ShuttleStor



Ordering Information

Build an assembly that fits your requirements. Use the following part number to define a PMC ShuttleStor.

9270-Y-xxxGB-AA

| | | |
|-------------|-------------------------------|--------------------|
| RPM | Specify drive capacity | Options |
| 1= 4200 RPM | | 18 = 1.8" drive |
| 2= 5400 RPM | | 25 = 2.5" drive |
| 3= 7200 RPM | | ED = Enhanced duty |
| | | SS = Solid state |
| | | X = Ext temp |
| | | C = Conformal coat |

Example Part Number: 9270-2-40GB-25-ED-CC

Describes a conformal coated unit with 2.5" 5400RPM 40GB enhanced duty hard drive.

Mass storage capacities and capabilities are always improving. Call 1-800-445-6194 or visit our website at www.acttechnico.com for current options.



Member



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