The RAIDStor NAS is an innovative appliance approach to seamless, reliable embedded storage.

Drive level hot swap in a 6U cPCI / PICMG 2.16 form factor make ACT/Technico’s RAIDStor the first network centric RAID blade solution in the embedded space. Key features include:

- Dual gigabit Ethernet ports
- The lowest MTTR in the industry
- Automatic and transparent duplication of data across the network
- Automatic data re-sync with no impact to the top level application
- Instantaneous drive to drive fail over with no service interruption
- A much smaller footprint than conventional box level RAID storage

The cPCI RAIDStor represents leading edge technology in highly available (HA) systems designed for maximum data security, preservation and integrity. This Network Attached Storage device is a leap in technology over conventional box level RAID solutions. An advancement in embedded storage technology, RAIDStor eliminates difficult file synchronization issues required when implementing HA systems. Used in a dual star network, the RAIDStor is a client/server model for storage access.

- Drive shuttles allow removal through the front panel
- Manage cPCI RAIDStor as an appliance or via SNMP
- Web browser interface with e-mail for event notification
- Heartbeat support for seamless fail over
- Windows, Linux and Solaris diskless client boot support
- Configurable RAID levels: 0, 1, 0+1, 1+, and 5

Embedded Systems By Design

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Redundant NAS Architecture

RAIDStor’s advanced features allow automatic network synchronization of data written to an active RAIDStor operating in a mirrored NAS configuration. Using redundant NAS controllers, data can be mirrored between RAIDStor blades over the network or within each blade in RAID 1, 0+1 or 1+1 configuration. Automatic fail over between RAIDStors provides a highly available storage solution, achieved by implementing an active/active architecture across the network.

The NAS architecture supports fail over and recovery of an individual drive, a NAS controller, a fabric switch, or an Ethernet port on the client requesting a transaction.

Web Browser Interface

The web browser interface makes managing the RAIDStor as easy as an appliance – from anywhere in the world. With the look and operability of a web page, RAIDStor’s web browser allows the user to:

- Unified control, command, and event reporting via Web Browser or SNMP interface
- Monitor system status; primary/secondary blade status, synchronization level, synchronization status, system bandwidth, system uptime, network link status.
- Monitor drive status
- Halt and reboot blades after repair and replacement
- Edit email notification targets and events
- Log in to the system with password protection
- Protocols such as FTP, Telnet, relogin and others
**Expansion Kits**

RAIDStor expansion kit is now available. The single-slot, 6U expansion module holds two high capacity rotating or solid state hard drives, and attaches directly to the RAIDStor host board. The result is a two-slot, four-drive, high capacity NAS solution.

This dual slot RAIDStor Expansion Kit offers 500 GB of storage in only two slots. In a dual architecture network, it can offer over a terabyte of storage, with two 500 GB RAID-Stor Kits communicating across the network. Usable capacity depends on the configured RAID level.

In addition to supporting RAID levels 0 and 1, the dual slot RAIDStor Expansion Kit supports RAID 5 capability to a Network Attached Storage system. An extra Expansion Module can be added which enables a DVD-R/W to be incorporated with the NAS board-level solution.

**Reliability**

The availability of the RAIDStor is expected to be four nines or better.

**Assembly Environmental Specifications**

- Form Factor: 6U by 4HP (single slot)
- Processor Core: PowerPC
- 2 Gigabit Ethernet ports out a cPSB (PICMG 2.16) backplane
- Disks: Two 2½” ATA rotating drives
- Power: +5V @ 2.0 A, +3.3V @ 1.5A, +12V @50 ma, -12V @25 ma
- Operating Shock: 15Gs @ 11 msec (Standard drives)
  Consult factory for extension using rugged drives
- Operating Vibration: 2 Gs @ 10 to 150 Hz
- Operating Temperatures: -5 to +55°C Standard drives
  -20 to +75°C Extended Temp
- Operating Humidity: 8 to 95% non-condensing (Std.)
  5 to 95% non-condensing (Ext.)
- NEBS Compliance: designed to meet NEBS Level 3
- Regulatory: EN55022, Class A
- Safety: EN60950; UL 94V-0

**Specifications**

**Protocols Supported**

<table>
<thead>
<tr>
<th>Network File System</th>
<th>NFS Version 3+, Linux / Unix CIFS/SMB MS Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>TCP/IP UDP</td>
</tr>
<tr>
<td>IP</td>
<td>IPv4 IPv6</td>
</tr>
<tr>
<td>Boot</td>
<td>DHCP BootP PXE</td>
</tr>
<tr>
<td>File</td>
<td>UFS, NTFS, FAT32 Journal FS (EXT3)</td>
</tr>
</tbody>
</table>

**Network Performance**

Under NFS or CIFS/SMB:
- Reads 7 to 11 MB/sec
- Writes 4 to 7 MB/sec
Please Ask About...

...our range of extended temperature and rugged storage media that can be implemented in a RAIDStor where applications require tougher specifications. Extended temperature 2.5” drives will operate in temperatures extending from -30°C to +85°C. The solid state flash drives will operate in a range up to -40°C to +85°C. Please ask about optional conformal coating, applied in accordance with MIL-I-46058C, Type UR.

...our systems and chassis for embedded NAS applications. We offer several solutions and configuration options.

...Visit our website for more information on storage options, chassis, and systems for embedded NAS applications.

Ordering Information and Part Number Guide

Please contact factory to put together an order number with your specific RAIDStor configuration. Below are the base part numbers:

- **6210-1**: CPCI RAIDStor in single slot configuration with 2 drives
- **6210-2**: CPCI RAIDStor in two-slot configuration with 4 drives
- **6210-3**: CPCI RAIDStor in 3-slot configuration with 4 drives in 2 slots, plus an expansion slot with 1 DVDRW and 1 drive

*Note:* Total system capacity depends upon RAID level specified. RAID level is factory configured.