



Highlights

- Two 320MB/second SCSI (SCSI-320) host channels each interfaced through two dual-stacked VHDCI connectors
- Supports 3.5" profile, SATA-II, 3Gbps interface disk drives
- Convertible as either a tower or desktop subsystem
- Scalability to 12TB by four cascaded subsystems. In the desktop configuration four subsystems can be stacked for capacity expansion
- Intelligent Drive Handling: Manages bad blocks during rebuild and Media Scan function for normal data maintenance
- Scheduled Maintenance: Media Scan can be scheduled starting at a specified start time and repeated at regularly timed intervals. The start time and time intervals can be manually selected.
- Variable rebuild and maintenance task priorities
- Auto Cache Flush and Auto Shutdown on critical conditions

Overview

The new, highly versatile Comet 8 Cube RAID subsystems are the latest of Caen's highly acclaimed SATA RAID products. The Cube subsystem can conveniently be configured as either a desktop or a tower subsystem and its modular architecture is designed to provide the same protection as offered by an enterprise-class solution.

Each of the two 320MB/second SCSI host channels is connected to two separate, dual-stack connectors. The VHDCI connectors can either be connected to a host computer or cascaded to a second Comet 8 Cube subsystem. A maximum of four Cube subsystems can be cascaded together. In the desktop configuration four subsystems can be stacked on top of each other.

The eight drive bays receive 3.0Gbps SATA-II disk drives and are routed through a drive-plane board to the RAID controller unit in the back. SATA-to-PATA dongle kits are also available, enabling a user to install PATA drives into the subsystem for an economic solution.

With two redundant, single-fan cooling modules, two redundant 250W power supply unit (PSU) modules, and an optional cache battery backup unit (BBU), the Comet 8 Cube subsystems operate with extreme reliability.

Management

A variety of management interfaces are available. The array can be accessed through the LCD keypad panel, RS-232C terminal, telnet, or remotely through the Java-based RAIDWatch manager. Users are constantly aware and automatically notified of array status using any or all of the following notification methods: Email, Fax, LAN broadcast, SNMP Traps, MSN messaging, ICQ, SMS short messages, and the configuration utility screen.

Architecture

Based on architecture designed for the most demanding applications, the subsystem is capable of very high levels of performance. Its 64-bit separate-bus backbone is built around dedicated XOR engines running at twice the data bus speed.

The calculation of parity and distribution of data can be optimized with the free association between individual logical arrays and different optimization settings.

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Specifications

High Performance

Featuring a 64-bit, 133MHz memory bus, the unparalleled bandwidth makes the subsystem's high data throughput more than sufficient for small-to-medium-sized servers or workstations. Data can be distributed at a burst rate up to 1066MBps. The dual-independent PCI bus design virtually eliminates all imminent bottlenecks on I/O traffic, providing sufficient throughput for a wide range of applications on workstations, Windows 2000/2003/XP-, Linux-, or Unix-based servers. These applications include disk-to-disk backup, video-on-demand, CCTV, stream editing, and others.

Intelligent Drive Handling

If bad blocks occur on two member drives of an array, the integrity of the stored data is endangered. Media Scan, Caen's innovative intelligent drive handling function, repairs and retrieves data from the affected or adjacent sectors. Media Scan handles low quality drives in both the degraded mode and during the rebuild process. For additional data security, other intelligent drive management features include the transparent resetting of non-responsive hard drives, power-failure management, and bad-drive handling during LD expansion.

Auto-Switch Cache Policy and Auto-Shutdown

When a RAID controller detects conditions that exceed the preset thresholds, the following actions will be initiated to protect the hardware:

1. Cached data will be automatically flushed and the array's caching mode will be switched from write-back to write-through.
2. If the conditions persist past a preset period of time, auto shutdown of the controller will commence.

All the thresholds associated with this mechanism are user configurable and, once a subsystem manager restores the normal operating conditions, the caching mode will change back from write-through to write-back mode.

RAID Controllers

- RISC processor with 256KB embedded L2 cache
- Caen Proprietary ASIC133 XOR engine and ECC inside
- Standard 128MB cache memory in one SDRAM protected by optional battery backup
- LCD keypad panel
- System voltage/temperature self-monitoring
- One (1) RS-232C (audio jack) serial port for text mode management
- One 10/100 BaseT Ethernet port
- 32KB NVRAM with RTC (Real-Time Clock)
- Beeper

RAID Operation

- RAID level 0, 1 (0+1), 3, 5, 10, 30, 50, JBOD, and NRAID
- Multiple RAID selection
- Dedicated and global hot-spare drives
- Drive hot-swapping
- Automatic background rebuild
- Online expansion by adding drives, or replacing members with larger drives
- Intelligent drive handling

Host Interfaces Two SCSI-320 host channels

Management Software

- System monitoring via out-of-band Ethernet
- RAIDWatch manager software for all major platforms via an Ethernet port
- Firmware-embedded manager via RS-232C (audio jack) that is platform independent
- Event notifications via an independent Configuration Client utility

External Connections

- Four dual-stacked VHDCI connectors SCSI connection
- One RS-232C (audio jack) serial port connector (38400, n, 8,1)
- One RJ-45 10/100BaseT Ethernet port

Enclosure Dimensions 5.43W x 14.25H x 12.87Din.

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