



Comet SATA-II 8 or 12 eF



Features

Designed using Caen's next-generation, custom ASIC266 as a RAID engine, the Comet SATA II eF provides ample margins for flexible load-balancing and multi-pathing algorithms. Boasting a 2GB system bandwidth, the dedicated ASIC architecture features abundant throughput sufficient for the subsystem's various data protection procedures with minimum disturbance to host access.

Caen's RAID functionality is unmatched in the industry in terms of its wide variety of array configuration, maintenance, and monitoring capabilities. The Fibre-to-SATA series provides IT professionals with versatile options to meet their needs.

The subsystem provides two FC-2G host channels with 12 or 8 drive bays for SATA-II disk drives in a smartly managed enclosure. The subsystem combines massive storage capacity with SATA-II benefits, such as high performance and dedicated bandwidth, in a safe environment where the highest level of data availability is assured. High throughput is available by segregating I/O traffic across the separate PCI-X buses, while IOPS performance is delivered through the internal buffer on the XOR engine and CPU with the help of intelligent firmware algorithms.

High Performance

Featuring two (2) 64-bit 133MHz data buses, the subsystem's high data throughput is more than sufficient for small-to-medium-sized servers or workstations. Robust functionality and adaptive algorithms facilitate chip-level operation that is already fast and flexible. For example, a timeout can be configured for individual drive response time. If a specific disk drive fails to respond in time, the firmware accumulates data from the adjacent disk drives of the array to maintain a fast return of data.

The adaptive designs assure sufficient throughput for a wide range of applications running on Windows 2000/2003/XP, Linux, or Unix-based servers. Ideal applications include disk-to-disk backup, database, file, business network, storage consolidation and others.

Enclosure Management

In addition to RAID protection for the disk drives, the PSUs and cooling modules are both redundant and hot-swappable modules. Even the battery backup module can be replaced online.

Highlights

- Two (2) FC-2G host channels, transfer rate up to 200MBps per channel
- Single RAID controller providing complete RAID functionality
- Designed to use 3Gbps SATA-II disk drives; backward compatible with SATA-I disk drives
- Modular, high redundancy enclosure design
- High density 2U chassis providing up to 4.8TB of storage capacity
- Optional, hot-swappable battery backup unit (BBU)
- Dual-speed cooling fans to reduce system noise
- Ease of management through an LCD keypad panel, RS-232C terminal, or an Ethernet link (TCP/IP) to a PC running Java-based RAIDWatch manager.
- Real-time event notification by a variety of methods
- Hardware provider interface ready for third-party management software that supports Windows Server 2003 Virtual Disk Service (VDS)
- High density 2U chassis providing up to 5TB of storage capacity with 500GB SATA drives
- RAID5 configuration end-to-end I/O performance
Sequential Read: 362 MB/sec
Sequential Write: 250 MB/sec

The rotation speed of the enclosure's dual-speed fans is controlled by the firmware. In critical conditions, e.g., PSU or fan failure, the fan rotation speed is raised to a higher level. Control over caching behaviors is a user-configurable option. In the event of component failures, such as UPS failure or low battery charge, the firmware stops caching write requests in cache memory.

Manageability

The Comet SATA II eF includes a number of interface features to keep users constantly aware and automatically notified of array status. The subsystem comes standard with an Ethernet port for local or remote management using simple telnet protocol or the feature-rich RAIDWatch Java GUI. The RAIDWatch manager provides graphical presentations of array components, monitoring windows, and all configuration options. Additionally, the built-in LCD keypad panel displays event messages and provides onsite access to all firmware features.

If two bad blocks occur on two member drives of an array, the integrity of the stored data will be endangered. Media Scan is an innovative intelligent drive handling function that retrieves data from degraded or damaged hard drives and handles low quality drives in both the degraded mode and during the rebuild process.

To further ensure 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.

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Task Scheduler

Media Scan is now armed with a unique function that helps repair media errors on drives. By combining Task Scheduler with Media Scan, the scanning operation can be scheduled to begin at a specified start time and repeated at configured intervals. This hands-free operation allows each such schedule to be defined to operate on individual hard drives, all drives of a certain class, all member drives of a specified logical drive, or all member drives in the subsystem.

Major Markets and Uses

Caen products are used in disk-to-disk backup, server-attached and network data storage and in major industries such as medical imaging, security/CCTV, and digital media including video-on-demand, stream editing and more.

Specifications

Management

- RAIDWatch GUI software
- Terminal via RS-232C
- Telnet over Ethernet
- LCD keypad panel
- Event notification methods
 - Email
 - Fax
 - LAN broadcast
 - SNMP traps
 - Cell phone message (SMS)
 - Instant messengers (MSN/ICQ)

OS Support

- Microsoft Windows NT
- Microsoft Windows 2000 Server
- Microsoft Windows 2003 Server
- Sun Solaris ver. 8/9
- Red Hat Linux ver. 8/9, enterprise ver. 3
- SuSE Linux ver. 8/9

Requirements

- AC Input:
 - 100VAC at 6A; 240VAC at 3A with PFC (auto-switching)
- DC Output:
 - 12V-25A; 5V-25A; 3.3V-20A
- Relative Humidity:
 - 5% to 95% non-condensing
- Operating Temperature:
 - 0 to 40 C

Dimensions

- 2U, 19-inch rackmount chassis
- Without handles:
 - 446(W) x 88(H) x 490(D) mm
 - (17.6" x 3.5" x 19.3")
- With handles:
 - 482(W) x 88(H) x 505(D) mm
 - (19" x 3.5" x 19.9")

Subsystem Characteristics

- 400MHz CPU, 256KB L2 cache
- ASIC266 RAID engine
- DDR cache memory up to 1GB
- 2 FC-2G host channels
- 1 LCD keypad panel
- 1 Serial COM ports 110/100BaseT Ethernet port
- Diagnostic LEDs on all FRUs

Drive Interface

- 8 or 12 disk trays
- SATA-I/II drive supported

Host Interface

- 2 SFP ports to optical fiber
- 200MB/s Data single channel bandwidth
- Tag command queuing
- Multiple target IDs

RAID Configurations

- RAID levels 0, 1(0+1), 3, 5, 10, 30, 50, JBOD
- Max. 16 logical drives
- Max. 128 LUNs
- Multiple array configurations
- Automatic background rebuild
- Intelligent drive handling

High Availability

- Redundant, hot-swappable FRUs
- Subsystem self-diagnostics
- Li-ION battery backup unit (optional)
- Hot-spare drives

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