

# EonStor<sup>®</sup> A12E-G2121

2U-Profile, iSCSI to SATA-II  
Cost-effective iSCSI RAID Storage



## HIGHLIGHTS

- Shared storage over standard Ethernet networks
- Compliant with IETF iSCSI standard (RFC 3720)
- CHAP authentication security
- 12 drive bays for 3Gbps, SATA-II disk drives
- Storage volumes presented via SCSI-like ID/LUN mapping as iSCSI targets
- High-density 2U chassis providing up to 24TB storage capacity
- Optional BBU for protection of cached data
- Dual-speed fans to reduce system noise
- Real-time event notification by a variety of methods

## OVERVIEW

The EonStor A12E-G2121 provides cost-effective storage by combining Infotrend's sophisticated RAID technology with the iSCSI protocol that encapsulates SCSI data blocks and carries them over standard Ethernet infrastructures. Access to its storage volumes is made with connectivity of two 1Gbps Ethernet (GbE) ports via Gigabit Ethernet using standard copper cabling or point-to-point to application hosts.

The A12E storage array is ideal for building a shared storage pool for disk-to-disk volume distribution, backup, storage consolidation, and replication of data among networked servers. The storage array operates with advantages of the iSCSI protocol in terms of block-based performance and lower training and maintenance costs, without the complexity of other networking technologies such as Fibre Channel.

The EonStor A12E-G2121 is built around Infotrend's next-generation, custom-built ASIC266 XOR engine. Boasting a 2GB/sec internal bandwidth, the architecture features the PowerPC CPU and the dual PCI/PCI-X buses for fast I/O transactions.

## HIGH PERFORMANCE

Featuring a 64-bit 133MHz data bus, 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 stripes of the array to satisfy applications that require fast return of data.

These adaptive designs assure sufficient throughput for a wide range of applications running on Windows, Linux, or Unix-based servers. Ideal applications include CCTV and IP surveillance networks, disk-to-disk backup, small business networks, storage consolidation and others.

## ENCLOSURE MANAGEMENT

The EonStor A12E-G2121 subsystem incorporates massive storage capacity in a safe environment where a variety of hardware and firmware mechanisms ensure the highest level of data availability. In addition to RAID protection for the disk drives, the PSUs and cooling modules come implemented as redundant/hot-swappable modules. Even the battery module can be replaced online.

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.

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## TASK SCHEDULER

Media Scan is now armed with a unique function that helps repair media errors on drives. By combining the 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 of all logical drives.

## SPECIFICATIONS

### RAID CONTROLLER

- 600MHz RISC processor with 512KB embedded L2 cache
- Infotrend custom-built ASIC266 with XOR engine and ECC support
- Standard 512MB cache memory in one DDR RAM DIMM with optional BBU
- System Voltage/Temperature self-monitoring
- One RS-232C (Audio Jack) serial port, for text mode management
- Two 1Gbps Ethernet ports
- Audible alarm

### RAID OPERATION

- RAID level 0, 1 (0+1), 3, 5, 10, 30, 50, JBOD and NRAID
- Hot-spare drive operation
- Drive hot-swapping
- Automatic background rebuild
- Online expansion

### HOST INTERFACES

- Two 1Gbps Ethernet

### MANAGEMENT SOFTWARE

- GUI, Telnet, and SSH system monitoring via Ethernet
- RAIDWatch manager software for Windows and Linux platforms
- Firmware-embedded manager via RS-232C (Audio Jack) (platform independent)
- Widest range of event notification methods, including Email, LAN broadcast, Fax, SNMP Traps, SMS, MSN, and ICQ

### EXTERNAL CONNECTIONS

- Two RJ-45 Ethernet ports
- One Audio Jack serial port connector (38400, n, 8, 1)

### ENCLOSURE DIMENSIONS

- 2U, 19-inch rackmount chassis
- Chassis without forearm handles:  
446(W) x 88(H) x 490(D) mm
- Chassis with forearm handles:  
482(W) x 88(H) x 505(D) mm

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