

EonStor™ A16U-G1410

16-drive SATARAID Subsystem

3U Profile
Single-controller
Dual SCSI-320 Host channel



FEATURE HIGHLIGHTS

- **Two SCSI-320 Host Channels;** Transfer rates up to 320MB/second
- **SATA hard drive support**
- Full-featured single controller architecture
- Online array expansion by adding drives or replacing with larger drives
- Tunable array stripe size and optimization schemes
- Multiple logical drive configurations, each with a different RAID level
- Auto detection, auto rebuild, hot spare, and hot-swap capability
- **Auto Switch Cache Policy and Auto Shutdown**
- LUN Filtering: RAID-based and centralized access management in SAN
- **Intelligent Drive Handling:** Manages bad blocks during rebuild and the manual Media Scan function for data maintenance
- Up to 64TB maximum capacity per logical drive
- Up to 1GB SDRAM
- Variable rebuild priority to meet a variety of applications
- **RAIDWatch™:** Browser-based GUI Manager on all major platforms

OVERVIEW

The EonStor A16U-G1410 single RAID controller subsystem comes in a cableless, backplane-based, high-density 3U chassis, with two SCSI-320 host channels and 16 SATA drives. The system combines massive storage capacity with SATA benefits, such as high performance and full bandwidth to connected devices, in a safe subsystem environment where the highest level of data availability is assured. Infotrend's RAID functionality is unmatched in the industry in terms of its wide variety of array configuration, maintenance, and monitoring capabilities. The EonStor A16U-G1410 subsystem provides IT professionals with versatile options to meet their needs.

The system supports SATA drives. For a less expensive option, the system also supports PATA drives by using a separate dongle kit.

ARCHITECTURE

This high-performance system runs on the architecture trusted by the most demanding applications. Its 64-bit separate-bus backbone is built around the 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

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 1066MB/second. The dual independent PCI bus design virtually eliminates all imminent bottlenecks on IO traffic, providing ample throughput for a wide range of applications on SCSI-based PCs, single-user workstations, NT-, Linux-, or Unix-based servers. These applications include disk-to-disk backup, Video on Demand, CCTV, and stream editing

AUTO SWITCH CACHE POLICY AND AUTO SHUTDOWN

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

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

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

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INTELLIGENT DRIVE HANDLING

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

SPECIFICATIONS

RAID CONTROLLERS

- State-of-the-art 400MHz RISC processor with 256KB embedded L2 cache
- Proprietary ASIC133 with XOR engines and ECC inside
- Standard 128MB-1GB cache memory in one SDRAM with optional BBU
- LCD control panel interface
- System fan speed/voltage/temperature self-monitoring
- Two RS-232C (audio jack) serial ports, one for text mode management and one for UPS support
- One 10/100M Ethernet port
- 32KB NVRAM with RTC (Real Time Clock)
- Beeper

RAID OPERATION

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

HOST INTERFACES

- Two SCSI-320 channels
- SAN ready

DRIVE INTERFACES

- Serial ATA 1.5GB/second via backplane
- Sixteen (16) 1-inch trays
- Optional dongle board for parallel ATA drive (PATA)

MANAGEMENT

- LCD keypad on a foldable forearm handle
- 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
- Module failure alert through I2C bus

REQUIREMENTS

- Input Voltage: 90VAC at 8AC; 260VAC at 4AC with PFC (auto-switching)
- DC Output: 12V-38A; 5V-25A; 3.3V-20A
- Relative Humidity: 5~95% non-condensing
- Operating Temperature: 0~40°

EXTERNAL CONNECTIONS

- One dual-VHDCI SCSI ports for external connection
- Two RS-232C (audio jack) serial port connectors (38400, n, 8, 1)
- One RJ45 Ethernet port

DIMENSIONS

- 3U 19-inch rackmount chassis
- Chassis without handles: 446.2(W) x 131(H) x 500(D) mm
- Chassis with handles: 485(W) x 131(H) x 532(D) mm
- SI/ODM controller board: 255(L) x 142(W) mm

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