

# EonStor™ A16U-G2421

**3U Profile, Single-controller,  
Dual SCSI-320 Host Channels  
16-drive SATA-II RAID Subsystem**



## HIGHLIGHTS

- Compatible with the latest 3.0Gbps, SATA-II disk drives
- RAID 5 configuration end-to-end IO performance achieve 450 MBps sequential (read) and 302 MBps sequential (write)
- Highest density in 3U chassis providing up to 6.4TB storage capacity
- Two (2) dual stacked VHDCI connectors for host connection and cascading
- BBU hot-swappable design
- Dual-speed fans to reduce system noise
- Configuration client for real-time event notification over variety of methods
- Management through LCD keypad, RS-232C terminal, or GUI manager over Internet
- Java-based, remote access using the RAIDWatch™ manager

## OVERVIEW

The subsystem comes in a cableless, backplane-based, high-density 3U chassis, with two (2) SCSI-320 host channels connected to two (2) separate, dual-stacked VHDCI connectors. The VHDCI connectors can either be connected to a host computer or cascaded to a second ES subsystem.

The sixteen (16) SATA-II drive channels are routed through the backplane board to the sixteen (16) drive trays installed on the front panel of the ES subsystem. The system combines massive storage capacity with SATA-II benefits, such as high performance and full bandwidth 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-G2421 subsystem provides IT professionals with versatile options to meet their needs.

## 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 Messenger, ICQ, SMS messages, and the configuration utility screen.

## ARCHITECTURE

Based on a highly innovative architecture designed for the most demanding applications, the ESA16U-G2421 subsystem is equipped with Infotrend's latest core technology -- the ASIC266 RAID engine. The ASIC serves as a backbone integrating the 133MHz CPU bus and dual PCI/PCI-X buses for I/O transactions. The calculation of parity and distribution of data can be optimized with the free association between individual logical arrays and different optimization modes.

## HIGH PERFORMANCE

Featuring two (2) 64-bit 133MHz data 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 2132MB/second. The dual independent system bus design virtually eliminates all imminent bottlenecks on I/O traffic, providing ample throughput for a wide range of applications on workstations, Windows 2000//XP/2003, Linux-, or Unix-based servers. These applications include disk-to-disk backup, video-on-demand, CCTV, stream editing and others. The A16U-G2421 subsystem exhibited performance, which meets the highest industry standards. The end-to-end, dual host channel performance reaches 450MB/second read and 302MB/second write with RAID 5 configuration.

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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. Media Scan 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 non-responsive hard drives, power-failure management and bad-drive handling during LD expansion.

### TASK SCHEDULER

For hands-free operation, the Task Scheduler is combined with Media Scan so that the scanning operation can be scheduled to begin at a specified start time and repeated at configured intervals. Each such schedule can 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 CONTROLLERS

- State-of-the-art 600MHz RISC processor with 512KB embedded L2 cache
- Custom-built ASIC266 with XOR engine and ECC inside
- Standard 256MB to 1GB cache memory in one (1) DDR RAM DIMM
- Optional battery backup unit (BBU)
- LCD control panel interface
- System fan speed/voltage/temperature self-monitoring
- Two (2) COM ports: one for remote management and one for UPS support
- One (1) 10/100BaseT Ethernet port
- 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 (2) SCSI-320 channels

#### DRIVE INTERFACES

- SATA-II 3Gps via backplane; backward compatible with SATA-I
- Sixteen (16) 1-inch drive trays
- Optional dongle board for PATA drives

#### MANAGEMENT

- LCD keypad on a foldable handle
- System monitoring via out-of-band Ethernet
- RAIDWatch manager software for all major platforms via an Ethernet port
- COM port for local access to firmware-embedded utility that is platform independent
- Configuration client for real-time event notification
- Module failure alert through I<sup>2</sup>C bus

#### REQUIREMENTS

- Input Voltage: 100VAC at 10A; 240VAC at 5A with PFC (auto-switching)
- DC Output: 12V-32A; 5V-32A; 3.3V-30A
- Relative Humidity: 5 to 95% non-condensing
- Operating Temperature: 0 to 40°C

#### EXTERNAL CONNECTIONS

- Four (4) ports in two (2) dual-stacked VHDCI SCSI connectors
- Two (2) COM ports (38400, n, 8, 1)
- One (1) RJ-45 Ethernet port

#### DIMENSIONS

- 3U, 19-inch rackmount chassis
- Chassis without handles:  
445(W) x 130(H) x 488.2(D) mm
- Chassis with handles:  
482.6(W) x 131(H) x 504.3(D) mm

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