

EonStor™ A16F-R1211/S1211

**3U profile, 16-drive SATA RAID Subsystem
with embedded hub**



The EonStor A16F (ES A16F) RAID subsystems are the newest products in Infortrend's line of highly acclaimed SATA RAID products. These high storage density subsystems combine unprecedented dependability with extreme scalability and superior performance.

Two models in the series, the ES A16F-R1211 (redundant controller model) and the ES A16F-S1211 (single controller model), provide users with flexible configuration options. In the redundant controller subsystems, fully featured redundant RAID controllers with transparent failover and failback functionality ensure unprecedented data security. Two 2Gbit/sec Fibre Channel (FC-2G) host channels on each controller module (in both models) are routed through an onboard hub to four SFP modules, of which two can connect to external host computers and two can connect to another ES A16F RAID subsystem for expansion purposes.

The embedded hub on the FC-2G host channels eliminates the need for a FC switch when connecting to external host computers. An additional FC-2G channel, connected to a drive expansion port, enables the subsystem to connect to up to seven cascading JBODs. The 16x 1.5Gbit/sec SATA drive channels come with 16 pre-installed SATA-to-SATA MUX kits to ensure the easy installation of 16 high-performance SATA drives. SATA-to-PATA MUX kits are also available, enabling a user to install PATA drives into the subsystem for an economic yet reliable RAID subsystem.

With two redundant dual-fan cooling modules and two redundant 460W power supply units, the ES A16F subsystems operate with unsurpassed reliability in today's most extreme storage environments.

Architecture

Based on an 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.

Features and Benefits

2Gbit/sec hub embedded Fibre host channels per controller; transfer rate up to 200MB/sec for each channel

One 2Gbit/sec Fibre Channel expansion port per controller; transfer rate up to 200MB/sec for each channel

Host side multi-path load balancing

Full-featured redundant controller architecture

Transparent RAID controller failover and failback operation

Multiple Logical Drive configurations, each with a different RAID level

Auto detection, auto rebuild, hot spare, and hot - swap capability

LUN Filtering: RAID-based and centralized access management in SAN

Up to 1024 LUNs for host mapping

Intelligent Drive Handling: Manages bad blocks during rebuild and Media Scan function for data maintenance

Up to 64TB per LD

Up to 1GB SDRAM per controller

Variable rebuild priority

RAIDWatch: Browser-based GUI manager on all major platforms

Auto Cache Flush and Auto Shutdown

Specifications

RAID Controllers

State-of-the-art 400 MHz RISC Processor with 256 kB embedded L2 cache

Infotrend Proprietary ASIC133 with XOR engine and ECC inside

Standard 256 MB ~ 1 GB cache memory in one SODIMM with BBU, each Controller

LCD controller panel interface

System Fan Speed, Voltage, and Temperature self-monitoring

Two RS-232C (Audio Jack) serial ports, one serial port is for text mode management and the other provides UPS support

One 10/100M Ethernet Port

32kB NVRAM with RTC (Real Time Clock)

Beeper

RAID Operation

Drives	Serial ATA 1.5 Gbit/sec compatible (Parallel ATA applicable with dongle kit) with hot swap mechanism
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Hosts	2x 2Gbit/sec Fibre Channel pro controller
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RAID Operation

RAID Level 0, 1, 0+1, 3, 5, 10, 30 and 50, NRAID, JBOD

Multiple RAID selection

Hot-spare drive operation

Drive hot-swapping

Automatic background rebuild

Online drive expansion

Intelligent drive handling

Controls and Indicators

Front LCD control panel for setup and configuration

LED indicators for power, battery, controller, and other system operation status

Component failure indication through LCD, RS-232C, and GUI

Built-in beeper / alarm mute button

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), platform independent

External Connections

Six SFP-Ports for optical Fibre connection

Four connectors for RS-232C (Audio Jack) serial port (38400, n, 8, 1)

One RJ45 Ethernet port

Power Supply

2 redundant hot-swappable power supplies with PFC

Input: 90-260VAC, 47-63 Hz

Output: +5V, 25A max.; +12V, 32A max.; +3.3V, 20A max.; 460watts capacity

Cooling Fan

Two separate cooling modules each with 2 individual fans

Environmental

Operating Temperature: 0° to 40°C

Relative Humidity: 5-95%, non-condensing

Altitude: Sea Level to 10,000ft

Dimensions

131 x 446.2 x 500 mm (H x W x D) - Standard 19" Rackmount with 3U