

# EonStor<sup>®</sup> Fibre-to-Fibre Series for the 4Gb SAN

Performance, Scalability,  
Unrivalled Price/Performance Ratio

## OVERVIEW

The F16F Fibre-to-Fibre series features a maximum of 12 x 4Gb/s channel bandwidth. With extraordinary scalability and high throughput, your demands for capacity and performance can be easily fulfilled.

The F16F series comes in a backplane-based enclosure with redundant, hot-swappable component pairs whose operation statuses are constantly available via comprehensive interfaces such as LCD screen, firmware utility, or across the network via telnet console and browser-/Java-based RAIDWatch software.

Drive expansion is easily made through the extension of the dual loop within or the connection to F16F SBODs by converting two of the FC channels to drive mode.

## APPLICATIONS

Infotrend products are widely applied in server-attached and network data storage and in major applications such as OLTP, ILM, CDP, VOD, MOD, stream editing, and others that require high-speed transactions.

## HIGHLIGHTS

- 4Gb/s host & drive Fibre Channels
- High availability dual-active RAID controllers and fault-tolerant hardware
- Affordable & upgradable single-controller option
- Scalable to dozens of TBs, maximum 13 chassis, in F16F-J4000 Switched Bunch of Drives
- Loop switched, high efficiency drive loops
- 5th generation, ASIC400 backbone:
  - Hardware RAID5 + RAID6 engine
  - Dedicated, 18Gb/s sync. cache channels
  - Path redundancy with bypass/hubbed channels
- EonPath™ Multipathing software



### High Availability

- \* Active-active redundancy
- \* Hot-swap mechanisms
- \* Component redundancy
- \* Dedicated sync. cache channels
- \* Intelligent reactive & preventive mechanisms
  - Automated cache flush
  - Automated Media Scan
  - Auto rebuild on hot spares
  - Automated caching mode switch

### Advanced RAID Features

- \* RAID levels 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60
- \* EonPath multipathing software
- \* RAID Parity regeneration
- \* 64-bit LBA support
- \* 3 spare disk types: dedicated, global, enclosure-specific
- \* Instant array availability
- \* Stripe size and caching mode configurable per logical drive
- \* Online array expansion by adding drives or copying & replacing drives
- \* Online disk cloning

### Management

- \* Browser-based RAIDWatch manager
- \* Java-based RAIDWatch manager
- \* LCD keypad panel
- \* Terminal console via RS-232
- \* Telnet

### Configurations

- \* F16F-R/S4031-6
  - 4 host + 2 drive channels (112 HDD)
  - 2 host + 4 drive channels (224 HDD)
- \* 4G or 2G FC disk drives (loop speed configurable)

### Expansion

- \* Loop switched w/ access fairness
- \* SES monitoring via in-band connection
- \* Maximum up to 224 disks

### Monitoring

- \* SMART status pooling
- \* Voltage, module presence, temp. Monitoring
- \* Automated FRU status pooling

### Operation Robustness

- \* Intelligent read algorithms
- \* Write cache threshold purge
- \* Bad sector reassignment
- \* Adaptive write policy
- \* Configurable task priority
- \* Multiple, co-existing RAID arrays w/ stripe sizes ranging from 4K to 1MB
- \* RAID level migration
- \* RAID configuration on drives (drive roaming)
- \* RAID and SBOD controller transparent failover/failback



## MODELS

Models	Controller	FC Ports	Channels	Drive Bays	Scalability
F16F-R4031-6	Dual	12	6	16	1+13 chassis
F16F-S4031-6	Single	12	6	16	1+13 chassis

Dual-controller, high-availability F16F-R4031

Single-controller, affordable F16F-S4031

Business continuity, fault-tolerant components, ease of capacity expansion, and failover capabilities.

Capacity- or performance-oriented storage, with affordable hardware and scalability.

## SPECIFICATIONS

### F16F-R/S4031 (RAID Subsystem)

#### Subsystem Characteristics

- 800MHz PowerPC GL RISC CPU, 1MB L2
- ASIC400 RAID engine
- Up to 2GB cache per controller
- FC SFP ports 12
- Total capacity w/ expansion (300GB) 67TB
- LCD keypad panel 1
- BBU (per controller) 1
- Default DDR cache memory (per controller) 512MB
- 10/100 Ethernet port (per controller) 1
- COM ports (per controller) 2
- PSUs 2
- Cooling modules 2
- Diagnostic LEDs on all FRUs

#### Drive Interface

- No. of disk trays 16
- 4G FC
- Drive-side SES service

#### Host Connection Ports

- Data single path bandwidth 4Gb/s
- Tag command queuing 256
- SFP ports (optical Fibre) 12

#### RAID Configurations

- RAID levels 0, 1(0+1), 3, 5, 6, 10, 30, 50, 60, NRAID
- Up to 32 logical drives (varied by memory size)
- Up to 1024 LUNs (varied by memory size)
- Multiple array configurations
- Background rebuild/scan/initialization
- Infortrend Smart fault management technologies

#### High Availability

- Redundant, hot-swappable FRUs
- Subsystem self-diagnostics
- Li-Ion battery backup unit
- UPS status detection
- Cluster ready

#### Management Software

- Browser- or Java-based RAIDWatch software
- Terminal via RS-232C
- Telnet over Ethernet
- LCD keypad panel
- Event notification methods: Email/Fax/LAN broadcast/SNMP traps/SMS/MSN

#### OS Support

- Microsoft Windows 2000 Server/2003 Server
- Sun Solaris ver. 9/10
- Red Hat Linux ver. 8/9, 64bit, Enterprise ver. 3
- SuSE: Linux ver. 8/9, 64bit
- Fedora 64bit
- MAC OSX Version 10.4

#### Approvals

- BSMI, CB, CE, FCC, UL, cUL, RoHS
- Windows WHQL-Windows Server 2003

#### Requirements

- AC Input: 100 ~ 240VAC 530W with PFC
- DC Output: 12V-32A; 5V-32A; 3.3V-30A
- Relative Humidity: 5% to 95% non-condensing
- Operating Temperature: 0°C to 40°C (without BBU) 0°C to 35°C (with BBU)

#### Dimensions

- 3U, 19-inch rackmount chassis
- Without handles: 445(W) x 130(H) x 488.2(D) mm (17.5 x 1.7 x 20.1 inches)
- With handles: 482.6(W) x 131(H) x 504.3(D) mm (18.8 x 1.7 x 20.1 inches)

### F16F-J4000-R/S (SBOD)

#### JBOD Characteristics

- Single/redundant controller
- SFP ports per controller 2
- Transfer rate 4Gb/s
- PSUs 2
- Cooling module 2
- Diagnostic LEDs panel

#### Drive Interface

- 4G/2G FC
- Number of disk trays 16

#### Maximum Connection

- To RAID per dual-loop 7

#### Requirements

- AC Input: 100 ~ 240VAC 530W with PFC
- DC Output: 12V-32A 5V-32A 3.3V-30A
- Relative Humidity: 5% to 95% non-condensing
- Operating Temperature: 0°C to 40°C

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