

Enterprise F15-HA RAID

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INTELLIGENT AND INNOVATIVE STORAGE SUBSYSTEM

DUAL REDUNDANT RAID CONTROLLERS FOR ACTIVE-ACTIVE
OPERATION!

SERIAL ATA: THE NEXT GENERATION INTERNAL STORAGE
INTERCONNECT

540GB TO 6,000GB CAPACITIES IN 19" 3U RACKMOUNT

UP TO 200MB/SEC DATA TRANSFER RATE

Enterprise™ F15-HA Serial ATA to Fibre Channel RAID is an intelligent and innovative storage subsystem for mission critical and high bandwidth applications requiring high availability. Purpose-built for high volume, fail-safe data storage applications, the Enterprise F15-HA RAID sets new standards in its class.

Dynamic Network Factory presents



Enterprise

Enterprise F15-HA RAID

540GB to 6TB - Active-Active
15 Drive 3U SATA to 2Gb FC RAID

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RAID FUNCTIONALITY

The Enterprise F15-HA RAID is equipped with two Serial ATA-to-2Gb LC Optical SFP Fibre Channel RAID controllers, each with 512MB of ECC-Protected cache with battery-backup to offer highly available fault-tolerant data protection. All major components including the Active-Active RAID controllers, drives, trays, dual load-sharing 360 Watt power supplies and cooling fans are redundant and removable for easy serviceability.

OPERATING SYSTEM TRANSPARENCY

The Enterprise F15-HA RAID is 100% transparent to the host operating system and requires no custom drivers. It is a full featured data protection subsystem supporting RAID levels 0, 1, 0+1, and 5. It is the ideal storage solution for applications requiring high data throughput, availability, total redundancy and flexibility in configuration.

SERIAL ATA FEATURES

Serial ATA's point-to-point signaling provides full bandwidth to each connected device, hot plug capability, smaller connectors, standardized connector placement and layout, simpler cabling and longer cable lengths. The cost advantages and performance of Serial ATA can make it a compelling alternative to other technologies.

MONITORING & CONFIGURATION

Monitoring and configuration are a snap. The Enterprise F15-HA RAID features both a Java GUI Utility as well as an out-of-band Ethernet interface for remote management. The front panel has an easy-to-read menu-driven LCD display with control buttons along with LED status indicators for visual status and monitoring.

REPLICATION OPTIONS

Additional high availability options include Remote Mirroring which allows the Enterprise F15-HA RAID to be synchronously mirrored to a second Enterprise F15-HA RAID subsystem, and Instant Copy which allows a logical unit to be duplicated within the enclosure.

DESIGN FEATURES

The Enterprise F15-HA RAID's scalable design makes expansion easy when storage needs increase. It is the ideal storage solution for applications requiring high data throughput, availability, and flexibility in configuration.

UNIT FEATURES

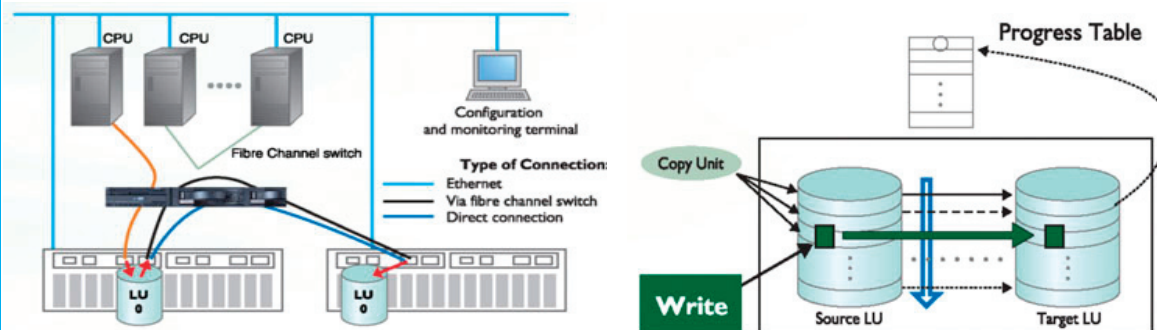
- 540GB to 6,000GB Capacities in 19" 3U Rackmount
- Dual Redundant RAID Controllers for Active-Active Operation!
- Four 2Gb Optical SFP LC Fibre Channel Host Ports
- Multi-Host Capability - Easy Volume Sharing with Dynamic Share (Optional)
- Supports RAID levels 0, 1, 0+1, and 5
- 512MB ECC-Protected Cache Memory on Each RAID Controller
 - Up to 36-Hour Battery Backup on Each Module
 - Features Write Through/Write Back Modes and Multi-Stream Look Ahead
- Serial ATA: The Next Generation Internal Storage Interconnect
- Multiple Array Support
- Supports up to 64 LUNs, Multiple Hot Spares, and LUN Masking
- Fifteen Hot-Swappable Hard Disk Drives & Trays
- Hot-Swappable Redundant Cooling Fans
- Redundant Load-Sharing Hot-Swappable 360 Watt Power Supplies
- Transparent Data Protection for all Popular Operating Systems
- Background Error Recovery - Minimum Disturbance to Host Access
- Automatic Data Reconstruction
- Remote Mirroring - Synchronous Mirroring of 2 RAID Subsystems (Optional)
- Instant Copy - Instantaneous Copy of Logical Units within One Enclosure (Optional)
- Status Monitoring and Configuration
 - Java GUI Utility
 - Out-of-Band Interface (Ethernet)
 - LCD Display and Control Buttons
 - LED Status Indicators for Visual Status and Monitoring
- Time Scheduled Pre-Maintenance Operations
 - Background Surface Verify
 - S.M.A.R.T. Checking
- Industry Standard 3U 19" Rack Mountable Chassis
- Up to 3 Years Parts & Labor Warranty (1 Year Standard)

MIRRORING AND INSTANT COPY

The Enterprise F15-HA RAID is available with two optional software packages: Remote Mirroring and Instant Copy.

Remote Mirroring allows two Enterprise F15-HA RAID subsystems to be synchronously mirrored over Fibre Channel. Updated content is constantly copied to both enclosures. The source and target logical units are always synchronized. The mirroring process can be executed directly between enclosures as well as via a Fibre Channel switch or Fibre Channel hub.

The updated data is reflected in the target logical unit whenever it is updated; at the same time, it is sequentially copied from the beginning of the logical unit as a background process. If the mirroring process is cancelled or fails, it can be easily resumed. If the target logical unit is disconnected for backup, mirroring can be resumed immediately after reconnect.



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Front Panel



Rear Panel



Fibre Channel Ports
RAID Controller Unit



Ethernet Port
RS-232 Port



Operation Panel



Accessories

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TECHNICAL SPECIFICATIONS

MODEL

Enterprise F15-HA Fibre Channel RAID (Dual Controllers)
3U 19" Rackmount

FORM FACTOR

2

NUMBER OF RAID CONTROLLERS

RAID LEVELS

0, 1, 0+1, 5

CACHE MEMORY (PER CONTROLLER)

512MB ECC Protected Cache Memory

CACHE BATTERY BACKUP

Up to 36 Hours

NO. OF CHANNELS (HOST)

4 (Two per Controller)

NO. OF CHANNELS (DISK)

15

HOST BUS INTERFACE

2Gb FC (AL and Fabric)

Hot-Pluggable SFP

DISK BUS INTERFACE

SATA 1.5Gb/s (150MB/Sec)

DATA TRANSFER RATE

Up to 200MB/Sec

BACKPLANE BOARD

SATA 1.5Gb/s (150MB/Sec)

HOT-SWAPPABLE TRAYS

Fifteen (15) 1" Trays

HOT-SWAPPABLE POWER SUPPLIES

Two (2) 360 Watt

HOT-SWAPPABLE COOLING FANS

Yes

HOT-SWAPPABLE RAID CONTROLLERS

Yes

HOT-SWAPPABLE BATTERY BACKUP UNITS

Yes

NUMBER OF LOGICAL UNITS (LUNS)

Up to 64

HOT SPARE DRIVES MULTIPLE LUN MASKING

Yes

JAVA GUI UTILITY FOR MONITORING/CONFIG

Yes

OUT OF BAND INTERFACE (ETHERNET)

Yes

LCD DISPLAY AND CONTROL BUTTONS

Yes

LED STATUS INDICATORS FOR VISUAL STATUS

Yes

AUTOMATIC DATA RECONSTRUCTION

Yes

BACKGROUND SURFACE VERIFY

Yes

S.M.A.R.T. CHECKING

Yes

OPERATING SYSTEM INDEPENDENT

Yes

POWER REQUIREMENT

AC 100V ~ 240V, 50Hz / 60Hz

RELATIVE HUMIDITY

8% to 80% Non-Condensing

OPERATING TEMPERATURE

5°C ~ 40°C

DIMENSIONS

5.1" H x 17.6" W

ABOUT DYNAMIC NETWORK FACTORY

COMPANY VISION

Dynamic Network Factory is dedicated to creating cost-effective and high quality storage solutions while relying on innovative spirit and engineering excellence. With this singular focus, DNF is primed to become one of the leading providers of storage solutions for diverse organizations worldwide.

RAID CERTIFICATION

DNF is committed to building rock-solid systems from the bottom-up. Each drive used by DNF goes through a sophisticated and grueling 120 hour testing process, weeding out units that exhibiting signal quality problems, data mismatch errors, temperature and power regulation issues, or other conditions that escaped the manufacturer's testing process. The survivors receive our "RAID Certified" seal of approval.

COMPANY PROFILE

Dynamic Network Factory (DNF) has a long heritage of creating cutting-edge customer-driven products. As an engineering-focused company, with a history specializing in storage solutions, DNF is poised to rapidly expand its customer base and define the next generation of storage solutions ranging from workgroup RAID systems to iSCSI engines, and modular enterprise Fibre Channel solutions. DNF started as US subsidiary of Japanese publicly-traded IT conglomerate CSK Electronics in 1989. In 1998 the company refined its strategy and began to focus the hardware group on storage solutions. Within a year, DNF's rapid growth resulted in its emergence as an independent, privately-held spin-off. Serving over 20,000 customers since its inception in 1989, DNF has provided custom solutions for organizations of all sizes and built products for many familiar computer manufacturers as an OEM.

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