8Gb FC-SAS/SATA-II RAID
F6500E

Today's data-rich business environment presents a unique challenge for the storage manager. Balancing the demands of applications, performance requirements, capacity, management tools, environment and cost can be an impossible task, and often results in an inefficient and expensive solution. The F6500E sets a new performance standard for Xyratex RAID systems, with 8Gb/s high performance Fibre Channel connections and faster internal bus architecture.

Realize Value from Storage 24/7 - Xyratex RAID Solutions

The Xyratex Model F6500E RAID systems are designed for speed, integrity, and always-on-availability using newly available 8Gb/s Fibre Channel and SAS technologies. The F6500E RAID controller provides full featured hardware redundancy, high performance host connections, and easy expansion with fault-tolerant, full-duplex, high-speed SAS external ports. An internal SAS interface delivers a total of 96 drives in a single RAID system. Xyratex dual controller configurations provide the ultimate in high availability with complete hardware and firmware redundancy and automatic fail-over/fail-back capabilities. The Model F6500E RAID system adapts to a broad range of applications, and the capability to mix both SATA and SAS technology within a single disk enclosure provides an optimum tiered storage environment for Information Lifecycle Management.

Manage Storage and Recovery from a Single Pane of Glass

Xyratex's StorView software configures and administers the F6500E storage system. Automated control of individual controller's cache, arrays and devices via a web-based interface simplifies storage administration, while StorView's full-function Command Line Interface (CLI) allows integration of array management into existing operational procedures. Xyratex's entire series of RAID storage systems comes standard with StorView management software, allowing for intuitive administration and performance monitoring. An optional upgrade to StorView Global Manager enables configuration, monitoring and management of RAID controllers from any location, anywhere on the network.

The StorView software enables access to the RAID Advanced Power Management which can be used to reduce the operational costs of the RAID storage system, while ensuring continuous availability to data.

Features

- Four 8Gb/s high speed Fibre Channel host connections per system
- RAID Controller Module for the OneStor 2U12 enclosure providing redundant, modular design with hot swappable components
- Up to 96 high performance or cost effective near-line SAS drives in one system
- StorView™ controller based management software
- Host-based dynamic multi-pathing for high availability
- Online capacity growth through dynamic array and LUN expansion

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8Gb FC-SAS/SATA-II RAID
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Technical Specification

General Information

Product Code	HB-1235-F8-6500E (2U-12 Bay)
External Interface	2 - 8Gb FC ports, point-to-point, loop and fabric (switched) topologies 1- 3Gb SAS expansion port (SFF-8088)
Supported Operating Platforms	Windows 2003 and Windows 2008 (IA32, EM64T); RedHat Linux AS4/EL5 (IA32, EM64T); SuSE Linux 9/10 (IA32, EM64T)
Supported Hosts	256, 512 LUNs, LUN Masking, >2TB LUNs
Expansion Chassis	HB-1235-E311-XPN (7 maximum), like-with-like only, SAS connected (SFF-8088), single & dual IO Module configurations
Total Expansion Capacity	192TB (based on 2TB 3½" SAS Drives)

Disk Drives

Interface Types	SAS (3Gb), SATA-II (3Gb) dedicated bandwidth to each drive
Drives Supported	12 2TB SAS Nearline, 7200 rpm 12 600GB SAS Enterprise, 15200 rpm 12 drive blank covers
Max Drives per Enclosure	12, 512 logical drives/system, automatic bad sector assignment

RAID Controllers

No. RAID Controllers	1 (single) or 2 (dual – HA)
RAID Levels Supported	Up to 96 disk arrays with independent RAID level 0, 1, 5, 6, 10, and 50 support, selectable strip sizes (64K, 128K, and 256K)
RAID Protection Features	Background initialization, background parity checking, and automatic drive rebuild with redundant RAID arrays
RAID Controller Cache	2GB cache per controller (selectable by volume: read, adaptive read-ahead, write through, write-back), battery backup

System Management

Software	StorView, StorView Global, StorView Path Manager
Interfaces Supported	Ethernet (out-of-band), FC host based (in-band)

System Availability

Hot Swappable Components	Disk drives, RAID controllers, power supplies and cooling module
Additional Reliability Features	StorView Path Manager – Windows host based dynamic multi-path failover

Electrical

Voltage	100-240 V AC @ 50/60 Hz Single Phase
Input Current	6.0A (115 VAC), 3.0A (230 VAC)

Environmental: Operating

Temperature	5° to 40°C (41° to 104° F)
Humidity	8% to 80% non-condensing
Altitude	0 to 2,133m (0 to 7,000')
Shock	5g 10ms ½ sine
Vibration	Random 0.21 grms 5-500Hz
Acoustics	<58 dB LpA @20° C

Environmental: Non-Operating

Temperature	1° to 50°C (33.8° to 122° F)
Humidity	8% to 80% non-condensing
Altitude	0 to 12,192m (0 to 40,000')
Shock	30g 10ms ½ sine
Vibration	Random 1.04 grms 2-200Hz

Environmental: Storage

Temperature	1° to 60°C (33.8° to 140° F)
Humidity	8% to 80% non-condensing
Altitude	0 to 12,192m (0 to 40,000')
Shock	30g 10ms ½ sine
Vibration	Random 1.04 grms 2-200Hz

Approvals

CCC, CE, UL, cUL, RoHS (R6)

Operating System Certifications

Microsoft WHQL, Microsoft RAID System Submission – w/MPIO (2-Node Cluster)

Warranty Information

Enclosures with drives	3 years, 5 years on battery. Please contact Xyratex for detailed warranty information.

Environmental Standards

Xyratex is registered through BSI to the international environmental management systems standard ISO 14001:2004, and holds certificates for each of its three manufacturing sites at Havant, UK; Sacramento, CA and Seremban, Malaysia.

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