

4Gb FC-SAS/SATA-II RAID F6412E

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 F6412E sets a new performance standard for Xyratex RAID systems, with up to twice the performance of previous Xyratex RAID storage.

• Realize Value from Storage 24/7 - Xyratex RAID Solutions

Xyratex's F6412E storage solution solves the complex and ever-changing storage challenges small and medium businesses face. Combining Fibre Channel (FC) connectivity with Serial Attached SCSI (SAS) and Serial ATA (SATA) drive technology, the F6412E provides maximum flexibility to solutions integrators and OEMs, resulting in a cost-effective, ultra-high performance solution with the scalability and functionality necessary to meet the demands of today's most rigorous applications.

Businesses can choose the appropriate storage to support their specific applications, resulting in an economical solution with both functionality and reliability. By leveraging the SAS full duplex, point-to-point architecture with dedicated connections, the F6412E delivers maximum data throughput, thereby providing faster, more responsive applications. In addition, the F6412E sustains maximum throughput (MB/s) for high bandwidth applications ranging from video editing and high performance computing to database-intensive online transaction processing.

SAS drives in the F6412E storage system deliver the exceptional performance required in primary storage. SATA-II drives in the F6412E provide the combination of high-capacity and cost-effective data storage normally found in near-line storage. Using SATA disks with their low cost-per-gigabyte design, the F6412E provides a cost-effective online repository for non-business-critical data, and offers the many advantages of tiered storage to the Small and Medium Business (SMB) market.

• Manage Storage and Recovery from a Single Pane of Glass

Xyratex's StorView software configures and administers the F6412E 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.

All RAID storage systems are also equipped with Snapshot, providing a point-in-time record of critical data stores. Four snapshots are available to start implementing immediate recovery capabilities, while an optional Snapshot upgrade allows for up to 24 snapshots per Logical Drive and up to 512 snapshots per RAID system. The StorView software also 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

- Single (2) or Dual (4) 4Gb/s high speed Fibre Channel host connections per system
- Up to 96 high performance SAS drives, 60 cost effective SATA drives or a combination of both in one system
- Full RAID 6 & Snapshot support for up to 512 snaps
- StorView™ controller or host-based management software
- Dual active high availability and low cost single controller configurations
- Host-based dynamic multi-pathing for high availability
- Online capacity growth through dynamic array and LUN expansion
- Redundant, modular design: hot-swappable components
- Fully customizable fascia & management interface
- RAID Advanced Power Management

4Gb FC-SAS/SATA-II RAID F6412E

Technical Specification

General Information

Product Code	RS-1220-F4-6412E
External Interface	4Gb FC, point-to-point, loop and fabric (switched) topologies
Supported Operating Platforms	Windows 2003 (IA32, EM64T, IA64); RedHat Linux AS4/EL5 (IA32, EM64T, IA64); SuSE Linux 9/10 (IA32, EM64T, IA64)
Supported Hosts	256, 512 LUNs, LUN Masking, >2TB LUNs
Expansion Chassis	RS-1220-E311-XPN (7 maximum), SAS connected (SFF-8470), single & dual IO Module configurations
Total Expansion Capacity	60TB

Disk Drives

Interface Types	SAS (3Gb), SATA-II (3Gb) dedicated bandwidth to each drive
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 SAS disk arrays or 60 SATA 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, Snapshot
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 Snapshot - Up to 24 snapshots per Logical Drive, Up to 512 snapshots per RAID system

Dimensions

Height	87.9mm (3.46") 2 EIA Units
Width	443.7mm (17.49") IEC Rack Compliant
Depth	550mm (21.65")
Weight	32.21Kg (71 lbs.) dual controllers with drives

Electrical

Voltage	100-240 V AC @ 50/60 Hz Single Phase
Input Current	6.0A (115 VAC), 3.0A (230 VAC)
Input Power	300W Typical

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 (R5)

Operating System Certifications

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

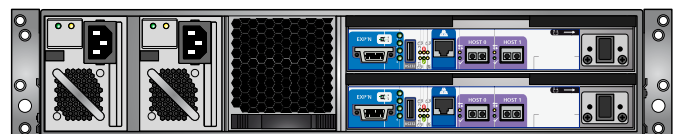
Warranty Information

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

Environmental Standards



ISO 14001: 2004 Cert No. EMS91560



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