

## E5402E 3Gb SAS-SAS/SATA-II RAID



**The E5402E combines Serial Attached SCSI (SAS) connectivity with SAS and Serial ATA (SATA) disk drive technology, redefining system flexibility and availability.**

Business dynamics and requirements are in a constant state of flux. System and IT professionals are battling to balance system performance within budgetary constraints. The Xyratex E5402E SAS-SAS/SATA RAID gives these professionals a performance tool to meet their growing needs in both the direct attached and networked storage environment and continues Xyratex's commitment to the Small and Medium Business market.

Today's businesses demand ever more affordable high-performance data storage and retrieval systems for performing a variety of critical business functions. The Xyratex E5402E offers the high performance and continuous availability demanded by today's market and provides customers with choices in performance and capacity. Customers can use the E5402E to create tiered storage solutions by mixing both SAS and SATA-II drives in the same system. This results in optimal performance and accelerated return on investment.

The Xyratex E5402E leverages SAS full duplex, point-to-point architecture with dedicated connections for maximum data throughput. With cost-effective connectivity, maximum flexibility, superior performance and continuous availability, the Xyratex E5402E sets new standards for entry-level RAID storage offerings.

Xyratex's management software also differentiates the Xyratex E5402E over other entry level storage solutions on the market today. All models in the Xyratex 5000 series of RAID systems feature StorView for intuitive administration and performance monitoring. Automated control of an individual controller's cache, arrays, and devices via a web-based interface simplifies storage administration, resulting in decreased management costs and improved storage utilization.

StorView also features a full-function Command Line Interface (CLI) allowing customers to integrate array management into existing operational procedures. Additionally, customers can upgrade to StorView Global Manager. This provides greater control of configuration and monitoring, and enables users to manage any 5000 Series RAID controller from any location on the network.

### Features

- Single (2) or Dual (4) 3Gb/s high speed SAS host connections per system
- Mix up to 60 high performance SAS and cost effective SATA-II drives
- StorView™ controller based management software
- Dual active high availability and low cost single controller configurations
- Host based dynamic multi-pathing for high availability
- Exceptional expandability with 30TB of total capacity
- Online capacity growth through dynamic array and LUN expansion
- Redundant modular design with hot-swappable components
- Fully customizable fascia and management

## Technical Specification

### General Information

<b>Product Code</b>	RS-1220-E3-5402E
<b>External Interface</b>	3Gb 4-lane SAS connection via LSI SAS3442x SAS HBA
<b>Supported Operating Platforms</b>	Windows 2003 (IA32 and EM64T); RedHat Linux AS3/AS4 (32 & 64 bit); SuSE Linux 8/9 (32 & 64 bit)
<b>Supported Hosts</b>	256, 512 LUNs, LUN Masking, >2TB LUNs
<b>Total Capacity per Unit</b>	6TB
<b>Expansion Chassis</b>	RS-1220-E3-XPN (4 maximum), SAS connected (SFF-8470), single & dual IO Module configurations
<b>Total Expansion Capacity</b>	30TB, 512MB and 1GB Cache per controller (selectable by volume – read, adaptive read-ahead, write through, write-back), battery backup

### Disk Drives

<b>Disk Drives Supported</b>	Seagate SAS (15K/36G/73G/146G), Seagate SATA-II (7.2K/250G/500G/750G)
<b>Interface Types</b>	SAS (3Gb/s), SATA-II (3Gb/s), NCQ, dedicated bandwidth to each drive
<b>Max Drives per Enclosure</b>	12, 512 Logical Drives/system, automatic bad sector assignment

### RAID Controllers

<b>No. of Raid Controllers</b>	1 (single) or 2 (dual – HA)
<b>RAID Levels Supported</b>	Up to 60 disk arrays with independent RAID level 0, 1, 5, 10, and 50 support, selectable strip sizes (64K, 128K, and 256K)
<b>RAID Protection Features</b>	Background initialization, background parity checking, and automatic drive rebuild with redundant RAID arrays

### System Management

<b>Software</b>	StorView, StorView Global, StorView Path Manager
<b>Interfaces supported</b>	Ethernet (out-of-band), FC host based (in-band), Xyratex Command Line Interface (CLI) for RAID

### System Availability

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

### Dimensions

<b>Height</b>	87.9mm (3.46") 2 EIA units
<b>Width</b>	443.7mm (17.49") 1EC rack compliant
<b>Depth</b>	550mm (21.65")
<b>Weight</b>	32.2Kg (71 lbs.) dual controller configuration with drives

### Altitude, Power and Temperatures

<b>Operational Altitude</b>	2,133m (7,000 ft)
<b>Non-operational Altitude</b>	12,192m (40,000 ft)
<b>Voltage</b>	100-240VAC 5.0A maximum per input
<b>Frequency</b>	60/50 Hz, single-phase
<b>Power Consumption</b>	300W typical
<b>Temperature Range</b>	Operating: 5° to 40°C (41° F to 104° F)
<b>Humidity</b>	Operating: 10% to 80% (non condensing)

### Shock and Vibration

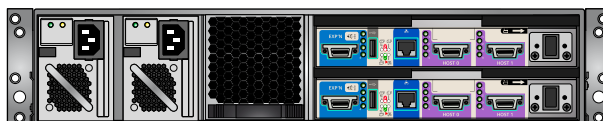
<b>Operational Shock</b>	5g 10ms 1/2 sine
<b>Operational Vibration</b>	Random .21grms 5-500Hz
<b>Non-operational Shock</b>	30g 10ms 1/2 sine
<b>Non-operational Vibration</b>	Random .1.04 grms 2-200Hz
<b>Relocation Vibration</b>	Swept Sine 0.9g 2-200Hz
<b>Acoustics</b>	<58 dB LpA @20°C

### Approvals

CCC, BSMI, CE, UL, cUL, RoHS (R5), Microsoft WHQL, Microsoft RAID System Submission – MPIO (Single Host)

### Warranty Information

**Enclosures with drives** Up to 3 years  
Please contact Xyratex for detailed warranty information.



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