

It's All About Your Data

FastTrak[®] SX4300/SX8300 PCI-X RAID Controller

FastTrak[®] SX4300/ SX8300 Serial ATA 3Gb/s PCI-X RAID Controller



**Cost-Effective, High-Performance Serial ATA
3Gb/s RAID Solution from the Worldwide
Leader in SATA RAID Technology**

The Price/Performance Leader

The FastTrak SX4300/8300 SATA 3Gb/s PCI-X RAID 5 controller delivers industry-leading RAID 5 performance at an unprecedented price/performance ratio. For companies running popular applications like web services, file/email servers, audio/video streaming and nearline storage, the FastTrak SX4300/8300 opens the world of professional RAID 5 performance and data protection and combines it with cost-effective Serial ATA (SATA) 3Gb/s drives for the ultimate internal storage solution. Based on Promise's OEM-proven RAID 5 technology, the FastTrak SX4300/8300 competes with SCSI RAID 5 controllers—at one-half to one-third of the price.

SATA 3Gb/s Support

The FastTrak SX4300/8300 controller supports Serial ATA 3Gb/s drives and conforms to Serial ATA II, Extensions to SATA I.0 specification with Native Command Queuing and Disk Activity LED headers support. Command Queuing increases I/O performance by intelligently reordering data requests so that the data can be accessed more quickly.

Hardware-Assisted RAID 5 Architecture

RAID 5 implementation involves striping data and parity information (XOR) across the storage array. Since those parity calculations are so processor-intensive, RAID 5 controllers traditionally require a dedicated CPU to perform the XOR calculations and manage the array. Instead of adding a costly dedicated I/O processor to the controller, Promise's FastTrak SX4300/8300 controller uses an integrated XOR engine for parity calculations, delivering extraordinary performance at a dramatically lower price. This approach takes advantage of today's ultra-powerful PC CPUs to manage the array and outperform traditional RAID 5 solutions.

Improved RAS Functions

Based on an architecture similar to the widely successful FastTrak S150 SX4-M, the FastTrak SX4300/8300 adds enhanced features for improved RAS (Reliability, Availability and Serviceability). In addition to an improved RAID algorithm, among the enhanced features are multiple logical drive support, media patrol™ and read check table. Equipped with the new web-based Promise Array Manager (WebPAM™) software, FastTrak SX4300/8300 is extremely easy to manage for



FastTrak[®] SX4300

:: 4 Serial ATA 3Gb/s ports



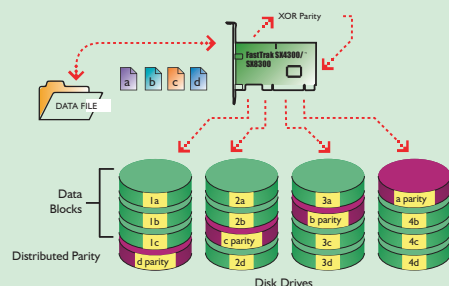
FastTrak[®] SX8300

:: 8 Serial ATA 3Gb/s ports

- :: 4-port and 8-port SATA RAID □ controllers with 3.0 Gb/s per port
- :: 64-Bit/133MHz PCI-X Host Bus Interface
- :: Low Profile form factor
- :: Support for RAID level 0, 1, 5, 10, and JBOD
- :: Improved RAS (Reliability, Availability, and Serviceability) functions
- :: Online capacity expansion and RAID level migration to add capacity as needed
- :: Hardware-Assisted RAID 5 Architecture
- :: Multiple logical drive support
- :: Automatic/manual rebuild of hot spare drive
- :: PerfectRAID™ technology for robust error handling and recovery

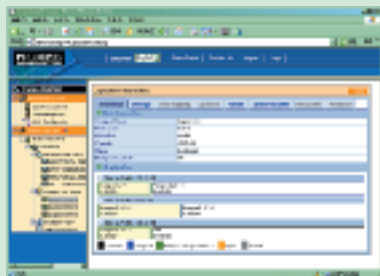


Boosts Storage Performance and Protects User Data and Programs RAID 5



Shares work among up to 4 drives (RAID 5) for huge storage capacity. Dramatically increases read and write data transfer speeds. Calculates and distributes parity to protect data against drive failure.

Sophisticated Array Management Tools



Web-based Promise Array Management (WebPAM) software offers professional management tools in a simple-to-use, straightforward format. Array configurations, management and monitoring features are available via the web based interface. Moreover, the FastTrak SX family supports industry standard SNMP so third party management application integration is simplified.

The Leader in SATA RAID

Promise Technology, Inc., recognized as the originator and worldwide leader of ATA RAID, has offered high-performance solutions for PC storage since 1988. Today the world's biggest OEMs and resellers look to Promise for ongoing innovations in ATA and SATA RAID design as the company continues to lead with the most powerful and economical alternatives to traditional RAID controllers and subsystems.

www.promise.com

Specifications

Controller Specifications

- Four or eight SATA ports at 3.0Gb/s (300MB/sec)
- Storage capacity up to 4.0/8.0 terabytes (with four/eight 500GB drives x2 controllers/system)
- 64-bit, 133MHz PCI-X host bus interface*
- Promise 41721/81731 RAID Processor with XOR engine for RAID parity calculations and memory controller for local cache memory
- On-board ECC DDR cache memory: 32MB for SX4300, 64MB for SX8300
- FRAM for RAID5 transaction log to avoid data corruption in the event application hangs
- Dual controller support within a system
- Supports SAF-TE enclosure management
- Low-profile form factor ideal for 1U/2U server
- Combine with the SuperSwap 4100 for an advanced internal storage system

RAID Levels Supported

- RAID 0 — Data striped across 2-8 drives for increased performance but no data protection
- RAID 1 — Mirrored pairs of drives for data protection with increased read performance
- RAID 5 — Striped parity on 3-8 drives, ultimate data protection, capacity and performance balance
- RAID 10 — Data mirrored then striped across up to eight drives, for double drive failure protection
- JBOD — Just a Bunch Of Drives: independent connected drives with no RAID interconnection

RAID Fault Tolerance and Robustness Features

- Multiple logical drive support enables combining different RAID levels on one set of disks
- Read Check table to avoid data read errors
- Media Patrol™ on all configured drive space
- Online capacity expansion and RAID level migration to add capacity "on the fly" as needed
- PerfectRAID™ technology for error handling and recovery of fatal, media and disk errors
- Support hot swap of failed drives and hot spares
- Automatic/manual rebuild of hot spare drive
- Background initialization for instant drive availability
- Variable stripe block size support to meet various application requirements
- Synchronization can be scheduled periodically for RAID array data consistency

Advanced Performance Features

- Multiple caching policy support
- Packet commands and interrupt coalescing minimize interrupts for better performance
- Elevator seek streamlines commands based upon data location on the disk

Web-based Promise Array Manager

- Creates, deletes, expands, and converts disk arrays remotely
- Array synchronization and rebuild scheduling
- Monitors drive, array, and enclosure status and provides online event logging
- E-mail notification of drive, array, controller or enclosure events (e.g. error or degrade conditions)

Operating Systems**

- Microsoft Windows 2000/XP/2003
- Red Hat Linux, SuSE Linux, Linux partial open source driver

Platform Support

- Intel IA32, EM64T, and AMD64
- Single and dual CPU servers

FastBuild™ BIOS

- Array configuration utility at the BIOS level
- BIOS Boot Specification support: boot system from any array
- Flash-upgradeable BIOS for future upgrades

Cable in Kit

- 4/8 x 26" (650mm) serial ATA cables

Physical Dimension

- 7.7" x 2.54" (195 x 64.1 mm)

Limited Warranty 3 Years

* Controller does not support use in PCI slot

** Check www.promise.com for latest operating system drivers

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