



RocketRAID 4460 The Industry's First
24-Port PCI-Express 2.0 x8
 SAS/SATA Hardware RAID Host Adapter



RocketRAID 4460

“PCI-Express 2.0 RAID Performance Powered By Robust Drive Aggregation”

Highlights

- 24 Dedicated Ports on a Single Host Adapter
- PCI-Express 2.0 x8 up to 4000MB/s
- 24 Direct Attached SAS/SATA Devices
- 128 SAS/SATA Devices with SAS expander
- Port Configuration Flexibility
 - 20 Internal and 4 External
 - 24 Internal
- Intel Xscale IOP348 1.2GHz
Maximizes RAID 5/6 Performance
- 1GB of DDR2-533 with ECC protection
upgradeable to 4GB
- Optional Battery Backup (BBU)
- RAID 0,1,3,5,6,10,50, single disk, JBOD
- TerabyteSaver BBU with write journaling
maximizes data protection and performance
- SMART monitoring for hard drive status
and reliability
- SMTP/SNMP/SAF-TE/SES-2
enclosure management
- Comprehensive operating system support
(Windows, Linux, FreeBSD and Mac OSX)

Accelerate RAID Performance to PCI-Express 2.0

The RocketRAID 4460 marks a major breakthrough in the industry by fully leveraging the PCI-Express 2.0 performance with 24-ports on a single host adapter. The high port count RocketRAID 4460 efficiently aggregates a large number of direct attached storage devices to realistically reach the maximum bandwidth of PCI-Express 2.0.

Terabyte RAID Technologies

It is a robust RAID technologies suite designed to achieve highly sustained performance and advance data protection to achieve business continuity. Comprehensive RAID support includes 0, 1, 3, 5, 6, 10, 50, Single Disk or JBOD for maximum RAID configuration flexibility.

The technologies suite includes TerabyteStream™ - an intelligent algorithm delivering maximum sustained performance by dynamically detecting I/O streams leveraging the Intel IOP348 1.2GHz.

TerabyteGuard™ - a selection of security features designed to maintain RAID integrity via routine inspection of storage devices for defects induced by wear and tear.

TerabyteSaver™ - maximizes the rate of data recovery and prevents data loss in the event of unexpected failures; ensuring data availability and business continuity.

Idea of Scalability

SAS technology is widely deployed in today's business environments because of storage scalability able (cost, performance and capacity) to meet dynamic business needs.

The RocketRAID 4460 can support 24 direct connect and SAS expandable up to 128 devices. It supports SAS devices to deliver the speed, reliability and scalability demanded in high availability enterprise environments, while high-capacity SATA devices are ideal for bulk and cost-effective storage applications.

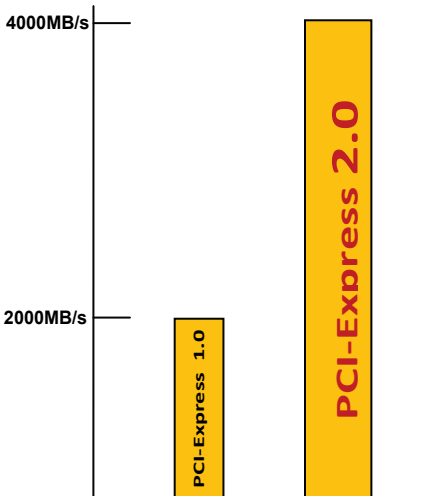
Connect and Manage

The HighPoint RAID Management (HRM) is an independent RAID module embedded into the RocketRAID 4460 controller. It offers robust and simple automated management for storage arrays.

The HRM interfaces include: The BIOS RAID management provides a faster and time saving method for RAID configuration in pre-boot mode. The Web GUI RAID management is a graphical interface offer friendly and intuitive experience. The CLI (Command Line Interface) is a designed for text or command base management usage.

Broad OS Interoperability

Comprehensive support for Microsoft Windows, FreeBSD, Mac OS X, VMware and in kernel support for Linux.



APPLICATIONS FOR HIGHPOINT RAID CONTROLLERS

Servers

Security/Surveillance

Video Editing

Super Computing

NAS

Video On-Demand

Pro Audio

Disk-to-Disk Backup

Serial Attached SCSI

RocketRAID 4460

Adapter Architecture

- PCI-Express 2.0 x8 up to 4000MB/s
- Intel Xscale IOP348 1.2GHz I/O Processor
- 1GB on-board DDR2-533 memory with ECC protection upgradable to 4GB
- Support write-through or write-back cache
- Support 24 Direct Attached SAS/SATA Devices
- Multi-adapter support for large storage requirements
- BIOS boot support for greater fault tolerance
- BIOS PnP (plug and play) and BBS (BIOS boot specification) support
- NVRAM for RAID event & transaction log
- Redundant flash image for adapter availability
- Optional Battery Backup Module (BBU)
- RoHS Compliant

RAID Features

- RAID level 0, 1, 3, 5, 6, 10, 50, Single Disk or JBOD
- Multiple RAID selection
- RAID array roaming
- Dynamic caching algorithm
- Online Capacity Expansion (OCE) and Online RAID level migration (ORLM)
- Instant availability and background initialization
- Auto resume after power loss during array rebuild and initialization
- Configurable stripe size
- Check consistency for background data integrity
- Global hot spare
- Hot plug
- SMART monitoring with SHI (Storage Health Inspector)
- VSS (Variable Sector Size) support for greater than 2TB per volume set
- Automatic drive insertion / removal detection
- Automatic rebuild
- Staggered drive spin-up support
- Spindown Idle Mode support
- Disk scrubbing/ array verify scheduling for automatic repair of all configured RAID sets
- Support NTP protocol to synchronize RAID controller clock

Monitors/Notification

- HDD Activity/Failed LED indicators and alarm buzzer
- SMTP support for email notification
- SNMP support for remote manager
- Enclosure management (SES2, SGPIO, I2C) ready

RAID Management

- Field-upgradeable and remote firmware flash ROM
- **In-Band Manager**
 - Hot key at boot-up" Adapter BIOS
 - Web GUI - graphical user interface
 - Command Line Interface (CLI)
 - API library for customizing RAID storage monitoring utility
- **Out-of-Band Manager**
 - Firmware-embedded Web browser-based manager,
 - SMTP manager and SNMP agent for Ethernet port

Operating System Support

- Microsoft Windows, Red Hat Enterprise Linux, Open SuSE, Fedora Core, Debian, Ubuntu, FreeBSD and Mac OS X Linux in kernel support

Environment

- Work Temperature Range +5°C to 55°C
- Power Requirements 10W maximum
- Relative Humidity Range: 5% to 60% non condensing
- Dimensions 10.44"L x 4.38"H (265.0mm L x 111.0mm H)
- MTBF 920, 585 Hours

Service and Support

- 3-year warranty
- Support via email at support@highpoint-tech.com
- For latest motherboard and hard drive compatibility lists go to: www.highpoint-tech.com

Accessories

- BBU-03 Battery Backup Unit
- Int-MS-1M4S (1m (3ft) SFF-8087 to SATA)
- Ext-MS-1M4ES (1m (3ft) SFF-8088 to eSATA)
- Ext-MS-1M1B (Latch) (1m (3ft) SFF-8088 to SFF-8470)
- Ext-MS-1MSB (Screw) (1m (3ft) SFF-8088 to SFF-8470)

Packaging Contents

- RocketRAID 4460 controller
- Quick Installation Guide
- CD with software drivers
- (6) SFF-8087 to SFF-8087 cables



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