



RocketRAID 3500 Series High-Performance PCI-Express x8 to Serial ATA II

“Going Green Makes Sense”

Highlights

- Intel® IOP341(800MHz) RAID Engine with hardware RAID (XOR) and RAID 6 (P+Q)
- 780MB/s sequential reads and 689MB/s write RAID 6 performance.
- Port Configurations 4,8,12,16,24 ports
- PCI-Express x8 bus technology for fast data transfers

HighPoint TerabyteArchitecture™

- 1) TerabyteStream™ - An intelligent algorithm delivering maximum sustained performance by dynamically detecting I/O streams leveraging a powerful I/O processor with onboard cache.
 - 2) TerabyteGuard™ - A selection of security features designed to maintain RAID integrity via routine inspection of storage hardware for defects induced by wear and tear.
 - 3) TerabyteSaver™ - Maximizes the rate of data recovery and prevents data loss in the event of unexpected failures; ensuring data availability and business continuity.
- Supports advanced SATA II features including 3Gb/s and NCQ
 - RAID levels 0, 1, 3, 5, 6, 10, 50 and JBOD

The RocketRAID 3500 series based on HighPoint's TerabyteArchitecture™ and high-performing Intel®IOP341 I/O Processor delivers enterprise-class SATA RAID 5 and RAID 6 performance (780MB/s read and 689MB/s write) for storage applications that need high bandwidth and high capacity sequential performance.

Intel® IOP341 (800MHz) - RAID I/O Processor

The Intel® IOP341(800MHz) I/O Processor is one of the industry's highest performing RAID I/O processor engines for multi-channel SATA hardware RAID 5/6 controllers.

The RocketRAID 3500 series of PCI-Express hardware RAID controllers leverages HighPoint TerabyteArchitecture™ and a powerful Intel® IOP341 I/O Processor to deliver the industry's leading RAID 6 performance with sustained transfer rates over 780MB/s Read and 685MB/s Write.

The RocketRAID 3500 series offer a comprehensive line of hardware RAID controllers via cutting edge multi-lane connectors from 4,8,12,16 and 24 ports. All RocketRAID 3500 series controllers support RAID level 0, 1, 3, 5, 6, 10, and JBOD.

RAID 6 Dual Parity Protection

The RocketRAID 3500 series offers a robust hardware RAID 6 protection, an additional disk drive failure tolerance provided by a second independent distributed parity scheme. It provides protection for mission-critical data from two concurrent disk failures. For instance, eliminating the risk of data loss if a second drive fails while rebuilding is in process.

An optional Battery Back Up with integrated write journaling enhances data availability through rapid data recovery from power outage events.

4 SATA - In-1 via Multi-lane Connectivity

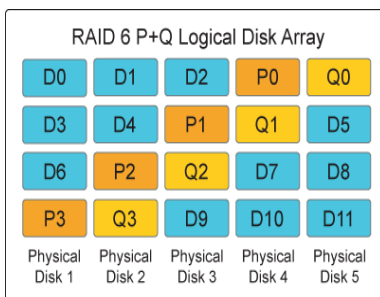
4 SATA - In-1 is aggregating four lanes of high speed SATA traffic into a single locked connection traveling through one cable. It significantly increases higher port count support and reduces the number of cables needed for a host adapter.

Multi-lane connectivity delivers fast, secure, simple and cluster free designs that significantly provide better airflow and reliability in large storage systems.

Vertical Application Tuning

Vertical applications like NAS, storage clusterservers, supercomputing, backup and archival, security systems and pro audio and video applications often require I/O tuning to meet the sustained Read/Write performance and protection mode needs.

Advance features in the RocketRAID 3500 series of controllers allow users the flexibility to tune the RAID I/O settings to optimal mode for the best sustained Read/Write performance or protection mode for applications that require the highest level of data protection and reliability.



RAID 6: Two independent distributed parity schemes maximizing data protection during rebuilding mode by allowing up to two drive failures concurrently.

APPLICATIONS FOR HIGHPOINT RAID CONTROLLERS

RocketRAID 3500 Series

RocketRAID 3500 Series Features

- HighPoint TerabyteArchitecture™ - (TerabyteStream™, TerabyteGuard™ and TerabyteSaver™)
- HighPoint TerabyteStream™ leverages Intel® ADMA to deliver Hardware Embedded Acceleration for RAID 5 XOR and RAID 6 (P+Q)
- Intel® IOP341 (800MHz) processor and RAID offload provides true hardware RAID
 - SCSI device driver model to take advantage of the benefits of SCSI using inexpensive Serial ATA drives
- Bootable array support for greater fault tolerance of your OS
- Variable stripe size for performance tuning by application
- 64-bit LBA support (greater than 2TB volume)
- ATA pass-through mode support
- Up to 256MB DDR2 memory with ECC protection
- RAID Management suite
 - RocketRAID 3500 series BIOS/Firmware configuration tool
 - RocketRAID web GUI - browser-based management tool
 - Command Line Interface (CLI) – scriptable configuration tool
- SNMP (Simple Network Transport Protocol)
- SMTP - for email notification of RAID events
- Independent RAID Module on Board - remote management and troubleshooting of RAID array
- Variable Sector Size (VSS) for auto address over 2TB of storage
- Battery Backup Unit (BBU) support
- Multiple logical unit sizes and RAID levels on one card
- Multiple card support within a system for large storage requirements
- Hot-swap and hot-spare support for data availability
- Dynamic sector repair and remapping to reduce dropped drives
- S.M.A.R.T. disk drive monitoring for reliability
- Auto Rebuild with new drive insertion
- Drive activity LED and Failed LED support
- Online Capacity Expansion and Online RAID Level Migration
- Write journaling for improved performance and data protection
- Automatic drive insertion and removal notification (Spare / New Inserted Hard Drive)
- Chassis Control Unit for enclosure management via I2C and SGPIO
- RoHS compliant

Operating System Support

- Microsoft® Windows® 2008/2003/XP/2000, Vista 32 and 64 bit WHQL Certified Windows (2003/2008, Vista 32 and 64bit)
- Red Hat Enterprise Linux, Open SuSE, Fedora Core, Debian, Ubuntu FreeBSD and Mac OS X.
- Linux driver embedded into kernel 2.6.25 and higher.

RocketRAID 3500 Series Specifications

- Low profile form factor (4 and 8-port configurations)
- Full-height form factor (12 and 16 port configurations)
- PCI Express x8 configurations, PCI Express 1.1 compliant
- Serial ATA 2.6 Specification support
- BIOS PnP (plug and play) and BBS (BIOS boot specification) support
- Operating Temperature Without BBU: 0°C to 50°C
With BBU: 10°C to 40°C
- Power Requirements 18W maximum
- Dimensions
 - RocketRAID 3560 9.54" L x 4.38" H (242.0mm x 111.0mm)
 - RocketRAID 3540 7.95"L x 3.77"H (202.0mm L x 96.0mm H)
 - RocketRAID 3530 6.75"L x 2.63"H (167.0mm L x 67.0mm H)
 - RocketRAID 3522 6.75"L x 2.63"H (167.0mm L x 67.0mm H)
 - RocketRAID 3520 6.75"L x 2.63"H (167.0mm L x 67.0mm H)
 - RocketRAID 3510 6.75"L x 2.63"H (167.0mm L x 67.0mm H)

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-1MIB (Latch) (1m (3ft) SFF-8088 to SFF-8470)
- Ext-MS-1MSB (Screw) (1m (3ft) SFF-8088 to SFF-8470)

RocketRAID 3500 Series Selection Guide

	RocketRAID 3510	RocketRAID 3520	RocketRAID 3522	RocketRAID 3530	RocketRAID 3540	RocketRAID 3560
Form Factor	Low profile	Low profile	Low profile	Full height	Full height	Full height
Port Count	4	8	8	12	16	24
I/O Processor	Intel 341 (800Hz)	Intel 341 (800MHz)	Intel 341 (800MHz)	Intel 341 (800MHz)	Intel 341 (800MHz)	Intel 341 (800MHz)
Onboard Memory	256 MB DDR2	256 MB DDR2	256 MB DDR2	256 MB DDR2	256 MB DDR2	1GB
PCI Express Lanes	8	8	8	8	8	8
RAID Levels	0,1,3,5,6,10, and JBOD	0,1,3,5,6,10,50 and JBOD	0,1,3,5,6,10, and JBOD	0,1,3,5,6,10,50 and JBOD	0,1,3,5,6,10,50 and JBOD	0,1,3,5,6,10,50 and JBOD
Ethernet Port	No	No	Yes	Yes	Yes	Yes
Connector Type	Internal mini-SAS	Internal mini-SAS	External mini-SAS	Internal mini-SAS	Internal mini-SAS	External / Internal mini-SAS
BBU Support	Yes	Yes	Yes	Yes	Yes	Yes
UPC Code	643653351008	643653352005	643653352203	643653353002	643653354009	6436533560003



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