



RocketRAID 800 Series

PCIe 3.0 x8 6Gb/s SATA RAID Host Bus Adapters

Maximizes SATA SSD Storage Performance; RAID 5 Performance Up to 6,000MB/s!

RocketRAID 800 series host bus adapters are the industry's fastest SATA RAID Controllers. The PCIe Generation 3.0 host interface and dedicated 6Gb/s SATA channels work in tandem to deliver uncompromised transfer performance for up to 16 SSD's or hard disks. Backed by HighPoint's 20 years of RAID technology expertise, and professional-grade RAID Storage reliability and management capabilities, RocketRAID 800 adapters are ideal for a wide range of cost-effective SATA storage applications.

Superior PCIe Gen 3.0 Transfer Bandwidth

RocketRAID 800 series host bus adapters allow customers to take full advantage of the superior transfer performance delivered by PCIe 3.0. Each PCIe lane supports up to 8 GT/s. PCIe 3.0 is ideal for today's high-speed SSDs; the performance capabilities of multi-SSD RAID 5 configurations can achieve up to 6,000MB/s!

Professional-Class RAID Solutions

RocketRAID 800 series host bus adapters capitalize on HighPoint's 2 decades of RAID and storage technology to deliver professional grade RAID storage at a fraction of the cost of conventional host RAID solutions. Each adapter is powered by our industry proven RAID technology, superior Gen 3.0 PCIe express transfer bandwidth, and up to sixteen dedicated 6Gb/s SATA channels, which support robust, high-performance RAID 0, 1, 5, 6, 1/0, 5/0 and JBOD configurations using hard drives of any disk format, including 512, 512e and 4Kn.

RocketRAID 800 adapters were designed to maximize the uptime and accessibility of RAID storage. Advanced storage and RAID recovery tools enhance

data retrieval from failed disks and streamline rebuild sessions. The universal RocketRAID WebGUI interface provides a wide range of preemptive monitoring and maintenance features that enable administrators to easily schedule verification sessions to ensure the health of each RAID storage configuration.

Seamlessly Upgrade RAID Storage

Rocket 800 series host bus adapters deliver unprecedented level of flexibility when it comes to storage configurations. Customers are free to expand or convert RAID storage configurations as needed to keep on top of the evolving demands of the storage application, without sacrificing existing data. Online Capacity Expansion (OCE) allows administrators to add new drives to existing arrays in order to expand available capacity. Online RAID Level Migration (ORLM) allows administrators to convert one RAID level to another in order to tune storage configurations for maximum performance or data security. Arrays created with RocketRAID 800 adapters are future proof, Online RAID Roaming allows customers to move existing RAID arrays to other 800 series RAID controllers, in addition to all future HighPoint RAID products.

Customized Solution Services for Customers

HighPoint offers a range of Customized Solution services for SMB Customers. We can tailor RocketRAID 800 series adapters to meet the requirements of client defined storage applications across Linux, Windows, and macOS platforms, and are ready to assist Solution Providers with unique product branding. A full API library is available for integration projects and we offer a variety of Enclosure Management services including SGPIO and I2C.

Key Benefits

- Features high-performance PCIe 3.0 x8 host Interface
- Enables the Industry's most Cost-Effective RAID 5, 6 & 5/0 Storage Solutions
- Directly Support up to 16 SATA SSD's and hard disks and 256TB of storage capacity
- Customizable Solution Services

Suggested Applications

- NAS (High-end Workstations)
- Surveillance
- Web Servers and Storage Servers

Feature Highlights

- 16 internal 6Gb/s SATA Channels
- OEM Series up to 48x Internal 6Gb/s SATA Channels
- RAID 0, 1, 5, 6,1/0, 5/0, JBOD
- Advanced Data Rescue mode increase chances of data recovery from a failed drive.
- Maximizes RAID Array Accessibility
- Fast Array set up enables immediate Availability
- Robust RAID Monitoring and Management solution ready
- Supports a wide-spectrum of Operating System Platforms



Feature Specifications	
Bus Interface	8-lane, 8 GT/s PCI Express 3.0 Compliant
Data Transfer Rates	Up to 6Gb/s per port
Port Type	SFF-8643 mini-SAS HD
Storage Device Support	16x SATA Hard Drive/SSD. Note: Only Enterprise and NAS drives are supported
Form Factor	Low-Profile
Dimensions	RR840A: 5.97" x 2.68" x 0.53" / RR840C: 5.63" x 2.71" x 0.72"
Weight	RR840A: 0.60 lbs. / RR840C: 0.64 lbs.
RAID Mode	0, 1, 5, 6, 1/0, 5/0 and JBOD / Non-RAID Mode (Note: RAID 6 not supported on macOS. Bootable RAID 6 arrays are not supported. RAID 1/0 is the equivalent of RAID 10. RAID 5/0 is the equivalent of RAID 5.)
Operating System Support	Window Server 2008 and Window 7 and later
	Linux (Supports Linux Driver auto Compile)
	macOS 10.9 and later
Advanced RAID Features	
Flash ROM for Upgradeable BIOS	Yes
Storage Health Inspector	Yes
Redundant RAID Configurations	Yes
BIOS PnP (plug and play) and BBS (BIOS boot specification) support	Yes
Bootable RAID Array	Yes
UEFI support for PC Platforms	Yes
Multiple RAID Partitions supported	Yes
Storage Configurations Support Details	Direct Attached
Multiple RAID Adapters supported	Support multiple RAID controllers per system
Online Array Roaming	Yes
Online RAID Level Migration (ORLM) – (not supported by macOS)	Yes
Online Capacity Expansion (OCE) – (not supported by macOS)	Yes
Quick RAID Initialization for fast array setup	Yes
Drive hot-plug support	Yes
Global Hot Spare Disk support	Yes
Automatic and configurable RAID Rebuilding Priority	Yes
Auto resume incomplete rebuilding after power on or reboot system	Yes
Disk Format compatible: 512, 512e, 4Kn	Yes
Larger than 2 TB Drive and RAID Array support	Yes
Spin down Massive Arrays of Idle Disks support	Yes
Native Command Queuing	Yes
Disk media scan and repair	Yes
Device Error Recovery support	Yes
Automatic remap and fix drive bad block for RAID array	RAID 1, 5, 6, 1/0, 5/0
Staggered Drive Spin Up	Yes
Write Back and Write Through	Yes
RAID Monitoring and Management Suite	
<ul style="list-style-type: none"> BIOS/UEFI/Firmware configuration tool Browser-Based management tool 	<ul style="list-style-type: none"> CLI (Command Line Interface- scriptable configuration tool) API package
Enclosure Management Interface: SGPIO and I2C (Drive LEDs supported: SGPIO and LED Header)	Yes
SMTP Email Alert Notification	Yes
Alarm Buzzer	Yes
Operating Environment	
Work Temp:	+5°C ~+ 55°C
Storage Temp:	-20°C ~ +80°C
Operating Voltage	PCI-e: 12V, 3.3V
Power	Typical: 14W
MTBF (Mean Time Before Failure)	920,585 Hours
Certification / Approval	CE, FCC, RoHS, REACH, WEEE

PCIe 3.0 6Gb/s SATA RAID HBA	RocketRAID 840A	RocketRAID 840C
Product Image		
Product Dimensions	5.97" x 2.68" x 0.53"	5.63" x 2.71" x 0.72"
Retail Box Dimensions	6.81" x 7.76" x 1.57"	6.69" x 7.83" x 1.89"
Retail Box Weight	0.60 lbs.	0.64 lbs.
Kit Contents	1x controller card 1x Low Profile Bracket 1x Quick Installation Guide	
Optional Accessories		
	8643-4SATA-1M - 1 Meter Cable length, SFF-8643 to Controller and 4x SATA to 4x SATA Drives	

OEM Series offer a Wide Selection of Drive Connectivity Solutions

With up to twelve Mini-SAS HD ports and 48 6Gb/s SATA channels, and powered by HighPoint’s industry proven RAID technology and the superior transfer bandwidth provided by PCIe 3.0, RocketRAID 800 adapters are an ideal connectivity platform for affordable, high-performance, direct attached mass storage applications.

OEM Series		
No. of Channels	Ports	Model
8x SATA 6Gb/s	2x Int. Mini-SAS HD	RocketRAID 820A
8x SATA 6Gb/s	2x Ext. Mini-SAS HD	RocketRAID 822A
16x SATA 6Gb/s	4x Ext. Mini-SAS HD	RocketRAID 844A
32x SATA 6Gb/s	8x Ext. Mini-SAS HD	RocketRAID 880A
80x SATA 6Gb/s	16x Ext. Mini-SAS HD	RocketRAID 800P

OEM Series RocketRAID 800 Host Bus Adapters are available direct from HighPoint for customized storage projects. For more information, please contact our Sales Department at sales@highpoint-tech.com.

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