



RocketRAID 4500 Series

HighPoint 6Gb/s SAS/SATA Hardware RAID HBA's for PC & Mac Platforms

Industry's Most Affordable 6Gb/s SAS/SATA Hardware RAID HBA's

HighPoint 6Gb/s SAS Hardware RAID Solutions

HighPoint RocketRAID 4500 HBA's were designed for professional Mac/PC workstation environments and deliver the stability and sustained performance required by 3D or 4K Media Applications. These PCIe x8 2.0 6Gb/SAS/SATA 8-Channel RAID HBA's support hardware RAID 0, 1, 5, 6, 10 and JBOD configurations.

The low-profile form factor allows the HBA to be easily installed into a wide selection of server and workstation chassis.

Superior Reliability

RocketRAID 4500 series HBA's provide an unprecedented level of reliability with an extensive selection of security, recovery, and maintenance features. Built-in NVRAM constantly tracks in-progress writes to preserve the integrity of data in the event of a drive failure or system crash, and streamline recovery procedures while minimizing downtime. The optional battery backup unit improves recovery times and secures valuable data for up to 72 hours in the event of a power outage or severe non-storage related hardware failure.

HighPoint's innovative RAID Recovery tool protects storage configurations by securely storing multiple copies of RAID meta-data, which administrators can utilize to quickly restore a failed or disabled RAID array.

HighPoint DV Mode - Advanced Performance Technology

Video professionals may find that even hardware RAID-based storage systems will experience inconsistent performance when capturing or editing high quality digital video, which can greatly impede or even cripple the post-production process. These inconsistencies are caused by standard RAID caching algorithms, which are designed for server environments rather than media applications.

HighPoint has introduced DV Mode, an innovative caching algorithm designed for the video production applications. DV Mode reorganizes I/O in order to minimize the latency time of write-back caching workflow. This innovative new technology maintains consistent, sustained high-performance data transfer – a key component of any storage system dedicated to post production applications.

Comprehensive RAID & Storage Management Interface

The streamlined web-based user interface simplifies the storage configuration process and allows customers to quickly assess total available capacity, the status of individual hard drives or SSD's, and the health of RAID and JBOD configurations. Optional auto rebuild and hot spare features add additional layers of data security to redundant RAID 5 and 6 configurations.

Feature Highlights

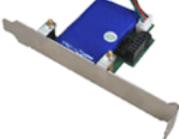
- Hardware RAID 0, 1, 5, 6, 10, 50 & JBOD
- Superior Reliability
- DV Mode Technology
- True Host-to-Target SAS 6Gb/s Connectivity
- Support Windows, Linux, and macOS Operating Systems
- Thunderbolt™ Aware
- Bootable RAID Array Support
- Supports OCE / ORLM
- 4Kn Drive Compatible

Administrators can designate unused drives to automatically take the place of failed units or configure the RocketRAID 4500 HBA to immediately initialize rebuild process by simply plugging in a new drive. Advanced management features allow customers to manage storage remotely via an internet connection or local network, and configure Email notification to inform one or more users of changing storage conditions while outside of the work environment. In addition, optional CLI packages are available for Linux distributions.

Feature Specifications	
Onboard RAID Processor	RAID-On-Chip onboard
Onboard Cache	512MB DDR 3 Cache memory with ECC protection
Optional BBU Module	Yes
Port Type	RocketRAID 4520SGL - 2x SFF-8087 (Mini-SAS) / RocketRAID 4522SGL - 2x SFF-8088 (Mini-SAS)
Number of Channel / Port	8x 6Gb/s SAS/SATA Channels
Number of Devices	8x SAS or SATA Hard Drives/SSD's
Bus Interface	PCIe 2.0 x8
Form Factor	Low Profile
Dimensions	6.57" L x 2.68" H x 0.76" D (RR4520SGL) / 6.57" L x 2.68" H x 0.65" D (RR4522SGL)
Weight	RocketRAID 4520SGL - 0.55 lbs. / RocketRAID 4522SGL - 0.60lbs.
RAID Mode	0, 1, 5, 6, 1/0, 5/0 and JBOD / Non-RAID Mode <i>Note: Bootable RAID 6 arrays are not supported.</i>
Operating System	Window Server 2008 and Window 7 and later
	Linux: RedHat Enterprise, Open SuSE, Fedora Core, Debian, Ubuntu
	Linux Driver embedded into Kernel 3.9.4 and later
	macOS 10.6 and later
Advanced RAID Features	Driver embedded into macOS 10.9 and later
	Configurable RAID Block Size up to 1MB
	Flash ROM for Upgradeable Firmware
	BIOS PnP (plug and play) and BBS (BIOS boot specification) support
	Bootable RAID Array
	Battery Backup unit retains data when power outage occurs
	NVRAM with Write Journaling enhances RAID integrity
	Multiple RAID Partitions supported
	Disk Format compatible: 512, 512e, 4Kn
	Larger than 2 TB Drive and RAID Array support
	Native Command Queuing
	Multiple RAID Adapters supported
	DV Mode Technology
	Storage Health Inspector
	Redundant RAID Configurations
	Online Array Roaming
	Online RAID Level Migration (ORLM) – <i>(not supported by macOS)</i>
	Online Capacity Expansion (OCE) – <i>(not supported by macOS)</i>
	RAID Initialization Background/Foreground/Quick
	Global Hot Spare Disk support
Automatic and configurable RAID Rebuilding Priority	
Spin down Massive Arrays of Idle Disks support	
Staggered Drive Spin Up	
Write Back and Write Through	

RAID Monitoring and Management Suite	
RAID Management Suites: BIOS/UEFI/Firmware configuration tool, Browser-Based management tool, CLI(Command Line Interface- scriptable configuration tool) API package	
Password Secured RAID management Suites	
Enclosure Management Protocol Support: SES2 and SGPIO (Device LEDs supported Via: SGPIO, SES-2 and LED Header)	
SMTP Email Alert Notification	
Alarm Buzzer	

Operating Environment		
Work Temp:	+5°C ~+ 55°C	
Storage Temp:	-20°C ~ +80°C	
Operating Voltage:	PCI-e: 12V/3.3V Power: 11W	
MTBF (Mean Time Before Failure)	920,585 Hours	
Certification Approval	CE, FCC, RoHS, REACH, WEEE	
Kit Contents		
RocketRAID 4500 Series	RocketRAID 4520SGL	RocketRAID 4522SGL
Controller card	1x RocketRAID 4520SGL Controller card	1x RocketRAID 4522SGL Controller card
Cable	N/A	N/A
Low Profile Bracket	1x Low Profile Bracket	1x Low Profile Bracket
Quick Installation Guide	1x Quick Installation Guide	1x Quick Installation Guide

HighPoint Certified Accessories	
	HPTBBU-05 - Battery Backup Unit designed for use with RocketRAID 4500 Series HBA's. Battery Backup Units grant additional layers of data protection in the case of critical system faults and hardware failures.
	EXT-MS-1MMS (for RocketRAID 4522SGL) - The Ext-MS-1MMS is a high-speed cable that supports a data bandwidth up to 4x 6Gb/s between the RocketRAID 4522SGL RAID controller installed in the host system, and the drive enclosure via SFF-8088 ports. Each cable can connect up to 4x Hard Drives or SSDs.
	INT-MS-1M4SC (for RocketRAID 4520SGL) - The HighPoint INT-MS-1M4SC is an internal mini-SAS (SFF-8087) to 4x SATA device cable designed for use with HighPoint RocketRAID SAS/SATA controllers, and has been tested with a wide range of Enterprise and Pro-NAS class SAS/SATA hard drives and SSD's up to 16TB in capacity.
	RocketStor 6414S - The RocketStor 6414S is a 4-Bay JBOD enclosure designed for use with the RocketRAID 4522 to house up to 4x 2.5" or 3.5" Hard Drives or SSDs. Two RocketStor 6414S can be used with each RocketRAID 4522SGL HBA.
	RocketStor 6418S - The RocketStor 6418S is an 8-Bay JBOD enclosure designed for use with the RocketRAID 4522SGL to house up to 8x 2.5" or 3.5" Hard Drives or SSDs.

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