HighPoint
Technologies, Inc.

Rocket 700 Series
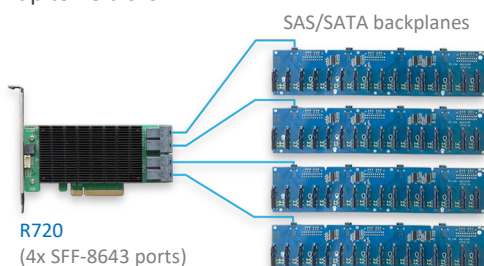## 8 & 16 Channel 12G SAS/ 6G SATA PCIe 3.0 HBAs

Streamlined SAS Connectivity Solutions for High-Density, Single HBA Storage Configurations

Why invest in Tri-Mode technology if you only need HDD support?

HighPoint Rocket 700 series 12G SAS connectivity solutions represent the industry's most affordable SAS/SATA mass-storage solution. A single Rocket 720 HBA can support up to 128 SAS/SATA hard drives for less than half the cost of a Tri-Mode controller!

Cost-Effective High-Density SAS Expansion Solution

The compact half-height PCIe 3.0 x8 HBAs can be easily integrated into any industry standard x86 or ARM platform with PCIe 3.0 or 4.0 host connectivity, and are available with 8 or 16 dedicated device channels. Rocket 700 series HBAs are capable of supporting up to 128 SAS or SATA hard disk drives or SSDs. Each SFF-8643 port can host up to 48 disks.

SAS/SATA backplanes

R720
(4x SFF-8643 ports)

OS RAID & Software Defined Storage Ready

Rocket 700 series HBAs are fully compatible with OS level RAID solutions and Software-Defined Storage Suites such as CEPH and Microsoft S2D. Hard disks hosted by Rocket 700 series HBAs will be recognized as independent, stand-alone drives, which can be formatted, partitioned and configured into software RAID arrays or JBOD/span configurations using the default Windows and Linux storage management interfaces.

Staggered Power Up Solution

Hard disk drives require considerably more power during their initial spin-up phase.

Powering on 36 or more drives simultaneously can place a great deal of strain on the platform's PSU. To mitigate this problem, Rocket 700 series enable administrators to power-up groups of PUIS enabled hard disks at timed intervals; a feature known as Staggered Drive Spin-Up. This feature can be enabled or disabled by the administrator as needed, using the Web-based or CLI management interfaces.

OOB Management via HII

Rocket 700 series HBAs can accommodate OOB (out-of-band) remote management via HII (human interface infrastructure) capability. This feature is designed for use with motherboards and computing platforms that support IPMI (Intelligent Platform Management Interface).

Comprehensive Support for Linux & Windows Platforms

Rocket 700 series HBAs are compatible with all current Windows operating system and Linux distributions that utilize kernel v3.10 and later. Device drivers are routinely updated to keep in sync with official OS updates.

Linux Open-Source Package with Auto-Compilation The administrator need only install the root package; the driver will handle all future updates automatically, such as checking/monitoring the status of kernel releases, preparing the system environment, recompiling a new driver, and installation.

HighPoint SHI (Storage Health Inspector)

The SHI monitoring interface allows administrators to instantly check the operating status of storage devices in real-time. SHI utilizes SMART technology to log and report the characteristics of each physical drive, such as temperature, voltage, and disk related warnings or errors.
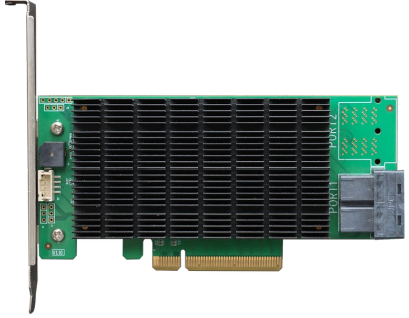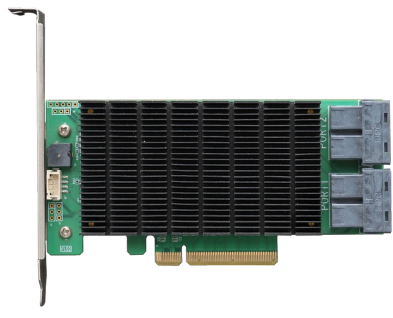
Feature Highlights

- High-Density SAS Expansion Solution: Up to 128 SAS/SATA HDDs per HBA
- Available with 2 & 4 SFF-8643 Ports and up to 16 dedicated 12G device channels
- PCIe 3.0 x8 host interface
- Optional RAID 0, 1, 10 & JBOD
- OS RAID & SDS Ready
- Comprehensive Windows & Linux driver support for both x86 & ARM Platforms
- Advanced, CLI and Web-based Monitoring & Management interfaces
- 1-Click Self-Diagnostic Solution for Troubleshooting & Technical Support

1-Click Self-Diagnostic Solution

HighPoint's Web-based graphical management suite (WebGUI) now includes a host of automated diagnostic tools designed to streamline troubleshooting and Technical Support inquiries, even for fist-time users. 1-Click streamlines the support process by minimizing back-and-forth communication between the customer and FAE Team Members (Field Application Engineering). Administrators no longer have to manually assemble a collection of screenshots, logs and status reports. 1-click enables the interface to gather all necessary hardware, software and storage configuration data and compile it into a single file, which can be transmitted directly to our FAE Team.

Feature Specifications	Rocket 720	Rocket 710
Bus Interface	8-lane, 8 GT/s PCI Express 3.0 Compliant (PCIe 3.0 x8)	
Number of Channel / Port	16x 12Gb/s SAS / 6Gb/s SATA Channels 4x SFF-8643 Ports	8x 12Gb/s SAS / 6Gb/s SATA Channels 2x SFF-8643 Ports
No. of Devices (DAS mode)	Up to 16 SAS/SATA HDD	Up to 8 SAS/SATA HDD
No. of Devices (SAS Expansion)	Up to 128 SAS/SATA HDD	Up to 96 SAS/SATA HDD
RAID Level Support	0, 1, 10 & JBOD	0, 1, 10 & JBOD
Form Factor	Half-height, Full-Length	Half-Height, Full-Length
Dimensions	5.51"W * 2.482"H * 0.67"D	5.51"W * 2.482"H * 0.67"D
Weight	0.66 lbs.	0.66 lbs.
Storage Mode	Non-RAID (HBA)	Non-RAID (HBA)
Operating System Support (*Only supports 64-bit operating systems*)	• Windows 11, 10 • Windows Server 2022, 2019, 2016 • Microsoft Hyper-V • Linux (Supports Linux Driver Auto-Compile) • Redhat/Ubuntu/Debian/Fedora (Kernel v3.10 and later） • Arch Linux (Kernel v5.17.5 and later)	
Advanced Features		
OOB Management (HII)	Yes *(requires platform with IPMI capability)*	
BIOS PnP (plug and play) and BBS (BIOS boot specification)	Yes	
UEFI Support for PC Platforms	Yes	
SHI: Storage Health Inspector	Yes	
Spin down Massive Arrays of Idle Disks support	Yes	
Staggered Drive Spin Up	Yes	
Native Command Queuing	Yes	
SAS TCQ	Yes	
Disk media scan and repair	Yes	
Device Error Recovery support	Yes	
Monitoring and Management Suite		
Management & Monitoring Interface	• Browser-Based management • CLI (Command Line Interface- scriptable configuration tool • API package	
Enclosure Management Interface	SGPIO, SES-2 and I2C (Drive LEDs supported: SGPIO, SES-2 and LED Header)	
SMTP Email Alert Notification	Yes	Yes
Alarm Buzzer	Yes	Yes
Compliance Certification	CE FCC RoHS REACH WEEE	
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	
Kit Contents	**Rocket 720**	**Rocket 710**
	1x Rocket 720 Controller card	1x Rocket 710 Controller card
	1x Quick Installation Guide	1x Quick Installation Guide
	1x Low-Profile bracket	1x Low-Profile bracket

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Rocket 710 (R710)	Rocket 720 (R720)

Certified Cabling Accessories

8643-4SAS-1M - 1 Meter Cable length, SFF-8643 to Controller and 4x SFF-8482 to 4x SAS Drives

8643-4SATA-1M - 1 Meter Cable length, SFF-8643 to Controller and 4x SATA to 4x SATA Drives

PCI EXPRESS®

Serial Attached SCSI

SERIAL ATA 6Gb/s