

Rocket 7600 Adapter Series

PCIe Gen5 x16 to MCIOx8 NVMe Pro/RAID Adapters

Flexible, Server-Grade PCIe Gen5 x16 4 and 8-Channel NVMe RAID Solutions for Enterprise and Edge Computing Environments

Rocket 7600 PCIe Gen5 NVMe RAID Series AICs & Adapters

Rocket 7600 series adapters are engineered for professional applications that demand both extreme bandwidth and flexible scalability. Each MCIO (SFF-TA-1016) port provides a dedicated PCIe Gen 5 x8 link, providing high-speed, hot-pluggable connectivity for up to four U.2/U.3 or E3.S NVMe SSDs.

48 Lanes of Dedicated PCIe Gen5 Bandwidth

HighPoint's high-performance PCIe Gen5 switching architecture integrates Broadcom's 48-Channel PEX89048 switch IC to provide x16 lanes of dedicated PCIe Gen5 upstream bandwidth and x4 lanes of dedicated downstream bandwidth to each device channel. The innovative architecture enables each adapter to deliver up to 64GB/s of transfer bandwidth, minimize latency, facilitate consistent, robust I/O throughput, and provide true Hot-Swap/Hot-Plug capability by facilitating a more efficient interaction between the host CPU and PCIe switch.

Engineered to Enhance the Efficiency & Serviceability of Datacenter & Server Applications

Rocket 7600 series adapters incorporate a wide range of features designed to enhance the efficiency of day-to-day operations of Enterprise and Edge computing environments. Each adapter is built to the highest standards of quality and reliability, and is fully compliant with PCIe Card Electromechanical (CEM) specifications. In addition, all Rocket 7600 series adapters are field replaceable units (FRU); the VPD (vital product data) stored by each adapter enables administrators and service providers to easily procure replacements with the correct firmware/driver combination.

Advanced, Intelligent Cooling & Hardware Sensor Monitoring Solution

Rocket 7600 series adapters feature an advanced PCIe Gen5 cooling solution, which combines a full-length aluminum heat exchanger with a copper piping system to efficiently dissipate heat from the switch IC and controller componentry. Integrated hardware sensors and an innovative, real-time temperature logging and drive health analytics suite enables administrators to keep close tabs on the adapter and drive media, ensuring optimal performance and long-term reliability.

Optimize Performance and Reliability with HighPoint's Advanced NVMe Hardware Sensor & Analysis Solution: HighPoint's

groundbreaking Active Sensor Logging & Analysis solution closely monitors the NVMe storage environment in real-time. Tracking and logging critical metrics such as temperature, power usage, and drive health enables administrators to take a proactive approach to storage management. Data sets can be reviewed to identify optimal working conditions and zero-in on potential issues to ensure the target platform runs smoothly and efficiently.

Comprehensive Storage Health Monitoring & Management Suite

HighPoint's comprehensive Pro/RAID Management suite consists of the WebGUI, an intuitive web-based graphical interface, the CLI, an advanced command line interface, and the UEFI-HII tool, which provides bootable RAID capability and pre-OS RAID configuration. Integrated Out-of-Band (BMC/MCTP over PCIe) management support is ideal for enterprise and data-center environments.

Full-Featured Data Security Suite

The Rocket 7600 series benefits from a full-feature suite of hardware and software level features designed to enhance the security of critical data assets. Hardware Secure Boot enhances the overall security of the computing platform by preventing the execution of unauthorized software during the boot process; there by halting potentially devastating rootkits and ransoms in their tracks. SMTP Email notification includes SSL data encryption to keep vital storage configuration and status data from prying eyes. Each Rocket 7600 AIC/Adapter is protected by SafeStorage, a revolutionary OPAL SSC TCH based NVMe hardware Encryption Solution designed to safeguard critical assets by preventing access to stored data when physical disks are misplaced or stolen.

Feature Highlights

- Up to 4x MCIO 8i ports directly support up to 8x U.2/U.3 or E3.S SSDs & as many as 32 devices via UBM/VPP backplanes & direct cabling connectivity
- High-Performance 48-Lane Gen5 Switch Architecture: x16 lanes of dedicated upstream & x4 lanes of downstream bandwidth for each device channel
- Delivers up to 64GB/s of Bandwidth & Real-world Sustained transfers up to 56,000MB/s
- Integrated NVMe Hot-Plug & Hot-Swap Capability
- Intelligent, Pro-Active Gen5 Cooling Solution
- Advanced NVMe Hardware Sensor & Analysis Solution
- Comprehensive Storage Health Monitoring & Management Suite
- Industry-proven NVMe RAID Technology supports up to four RAID 0, 1 or 10 configurations
- Optional Boot-RAID Capability for Linux & Windows
- SafeStorage SED Solution
- Hardware Secure Boot
- TAA Compliance (Rocket 7628U)

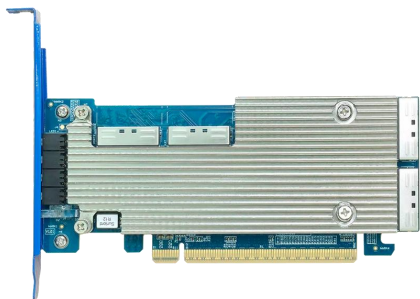
Versatile Cabling Solutions

The flexible MCIO 8i ports enable each adapter to interface with a variety of industry standard storage chassis, including internal 2.5” drive bays, Mobile Racks, and storage backplanes, via a selection of cabling solutions. These include direct to SSD connections such as MCIO to SFF-8639 (U.2/U.3 SSD), and MCIO to SFF-TA-1002 (E3.S SSDs). Options for backplane/mobile rack connectivity include MCIO to MCIO, MCIO to SFF-8654 , MCIO to SFF-8643, and MCIO to SFF-TA-1002 (for E3.S media).

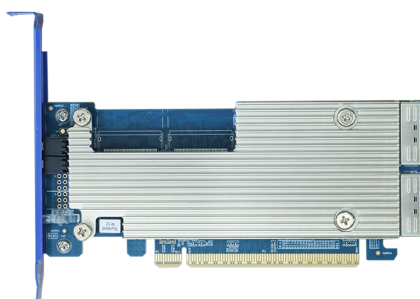
Category	Rocket 7624A	Rocket 7628A / Rocket 7628U
Hardware Features		
Bus Interface	PCI-Express 5.0 x16	
Number of Channel / Port	4x NVMe Ports (Dedicated PCIe 5.0 x4 per port)	8x NVMe Ports (Dedicated PCIe 5.0 x4 per port)
Connector Type	2x MCIO (SFF-TA-1016 8x)	4x MCIO (SFF-TA-1016 8x)
Connector Pinout Definition	SFF-9402 Compliant	
Number of devices	4 (up to 16 via UBM Backplane)	8 (up to 32 via UBM Backplane)
Data Port Reconfiguration - Downstream Configuration: 1x16 /2x8 /4x4 /8x2 /16x1	Yes	
SSD Form Factor	U.2, U.3, E3.S (via cabling accessories)	
SRIS and REFCLK Support	Please contact Sales for more information	
Downstream port containment	Yes	
Read tracking	Yes	
Synthetic Hierarchy	Yes	
LED Indication	Intelligent, Self-Diagnostic LEDs	
Audible Alarm	Yes	
Power Measurement	Real Time Power Measurement	
FRU Support	Yes	
SSD HotPlug Support	Yes	
OOB Management	Yes (BMC and MCTP over PCIe)	
TAA Compliance	Please contact Sales for more information	Yes (Rocket 7628U)
Storage Security Suite		
SED Support	SafeStorage OPAL SED Solution (Windows & Linux)	
Hardware Secure Boot	Yes	
Backplane Features		
UBM Support	Yes	
VPP Support	Yes	
Mechanical Specifications		
Form Factor	LP-MD2	LP-MD2
Card Dimensions	155mm x 68.9mm	155mm x 68.9mm
Card Weight	0.75 lbs.	0.75 lbs.
PCIe Bracket	Full-Height and Low-Profile Ventilated Brackets	
Cooling Solution	Intelligent, Pro-Active PCIe Gen5 Cooling Solution	
	<ul style="list-style-type: none"> • Full-Length Aluminum Heatsink (Passive) • Copper piping • Compliant with PCIe Specifications 	
Supported Systems		
OS	Only Supports 64-bit operating systems; Microsoft Windows/Window Server/ Hyper-V; RHEL, Debian, Ubuntu, Fedora, Proxmox & Rocky Linux (Linux kernel 3.10 and later)	
Secure Boot	Yes (Windows Only)	

Category	Rocket 7624A	Rocket 7628A / Rocket 7628U
Storage Mode - NVMe		
Data RAID		Yes
Boot RAID		Yes
NVMe RAID Management		
Management Suites	WebGUI (Browser-Based management tool), CLI (Command Line Interface - scriptable configuration tool), API package, UEFI HII	
SMTP Email Alert Notification		Yes
Alarm Buzzer		Yes
Storage Health Inspector		Yes
NVMe SMART status		Yes
Automatic and configurable RAID Rebuilding Priority		Yes
Auto resume incomplete rebuilding after power on or reboot system		Yes
Single-RAID or Multi-RAID Arrays per Controller		Yes
Cross-Sync RAID Solution Across Controllers		Yes
Advanced RAID features		
Online Array Roaming		Yes
RAID Quick Initialization for fast array setup		Yes
Global Hot Spare Disk support		Yes
Operating Environment		
Work Temp.	0°C ~ + 55°C	0°C ~ + 55°C
Storage Temp.	-20°C ~ +80°C	-20°C ~ +80°C
Operating Voltage	PCIe: 12V (+/- 8%), 3.3V (+/- 8%)	PCIe: 12V (+/- 8%), 3.3V (+/- 8%)
Power	16.26W	16.26W
MTBF (Mean Time Before Failure)	> 5,000,000 hours at 40° C	> 5,000,000 hours at 40° C
Kit Contents		
Kit Contents	R7624A NVMe RAID Adapter	R7628x NVMe RAID Adapter
	Low Profile Ventilate Bracket	Low Profile Ventilate Bracket
	QIG	QIG
Optional Accessories		
Cables		CIO8-8639-110
		CIO8-CIO8-110
		CIO8-1002-110
		8654-CIO8-110

Rocket 7628A / Rocket 7628U



Rocket 7624A



HighPoint Headquarters
Phone: 1-408-942-5800
Fax: 1-408-942-5801
E-mail: sales@highpoint-tech.com
Website: www.highpoint-tech.com
Address: 41650 Christy St. Fremont, CA, 94538

