



Rocket 1624L
PCIe Gen5 x16 Retimer Expansion Adapter

Cost-Performance Gen5 Connectivity Solution for Industrial Server Platforms & Workstation Environments

The **Rocket 1624L** is a retimer-based PCIe 5.0 x16 expansion adapter engineered to deliver high-speed, flexible, and cost-effective NVMe storage and PCIe slot expansion from a single host slot.

Equipped with dual Gen5 x8 MCIO ports and an onboard Hardware DIP Switch Configurator, the Rocket 1624L provides exceptional PCIe infrastructure flexibility for space-constrained industrial servers and high-performance workstations.

Feature Highlights

- **Dedicated PCIe 5.0 x16 Host Interface**
- **Dual MCIO x8 Ports** (SFF-1016)
- **Versatile Device Expansion:** up to 4x NVMe drives or PCIe Devices
- **Onboard DIP Switch** delivers flexible lane configurations: x16 / x8, x8 / x4, x4, x4, x4
- **Driverless Plug & Play Integration:** Natively Supported by Windows & Linux Platforms

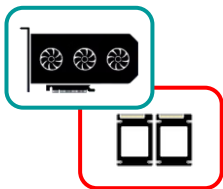
Key Features & Benefits

PCIe**GEN5**
RETIMER

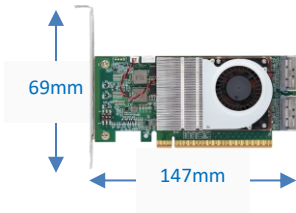
Next-Gen PCIe 5.0 Performance: Leverages advanced retimer technology to ensure maximum signal integrity and full PCIe Gen5 x16 bandwidth throughput over cable extensions without compromising system reliability.



Onboard DIP Switch Configurator: Delivers unique hardware-level lane flexibility. While standard retimers are restricted to fixed, rigid layouts, the integrated physical DIP switches work in tandem with host bifurcation settings to actively alter and enforce downstream MCIO lane topologies.



Seamless Storage & Slot Expansion: Connect up to four direct-attach NVMe devices or bypass rigid layout restrictions by deploying the MCIO-PClex16-G5 Expansion Bridge Card to transform the adapter's dual x8 MCIO ports into standard PCIe Gen5 slots.



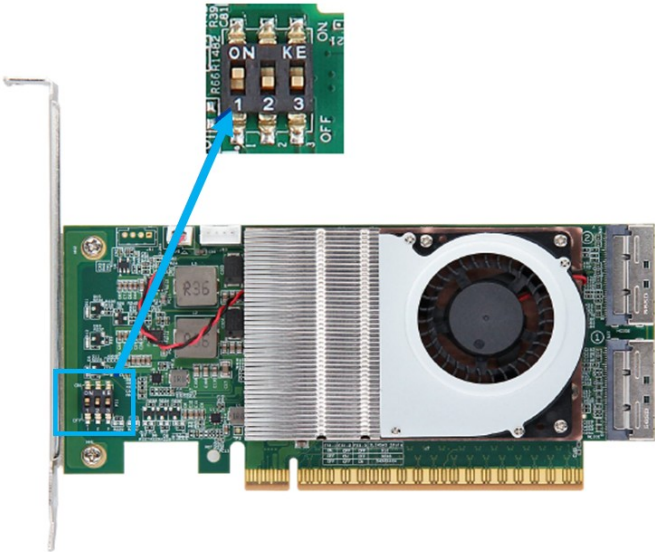
Compact, Universal Form Factor: The low-profile, full-length design ensures seamless physical compatibility with space-constrained 1U/2U rackmount servers and compact workstation chassis.



Plug-and-Play Architecture: Supported entirely by native operating system drivers, ensuring instant deployment across mainstream Windows and Linux environments without the hassle of proprietary software or third-party driver installations.

Versatile Downstream PCIe Lane Configurations

The Rocket 1624L eliminates the rigid constraints of traditional adapters. Onboard hardware DIP switch settings enable administrators to easily reconfigure downstream lanes to suit evolving workflow demands:



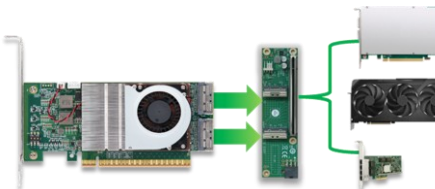
Configuration Mode	Downstream Architecture
Combined Mode	Single PCIe 5.0 x16 Slot
Dual Mode	Dual PCIe 5.0 x8 Slots
Default Mode	Four PCIe 5.0 x4 Slots

Target Applications

The Rocket 1624L eliminates the rigid constraints of traditional adapters. Onboard hardware DIP switch settings, users can reconfigure downstream lanes to suit evolving workflow demands:



Maximize your storage footprint without sacrificing precious motherboard PCIe slots. The Rocket 1624L allows industrial and data center servers to connect up to four direct-attach Gen5 NVMe storage devices via its dual MCIO ports, delivering massive IOPS for data-intensive applications, caching tiers, and intense virtualization workloads.



Turn compact MCIO cable connectivity into physical, versatile expansion slots. By pairing the Rocket 1624L with the HighPoint MCIO-PClelex16-G5 Bridge Card, system builders can convert MCIO connections back into standard PCIe slots. This enables cost-effective scaling for extra video capture cards, high-speed network controllers (NICs), or specialized hardware components exactly where the chassis space allows.



Industrial server environments demand extreme spatial efficiency. The low-profile, full-length architecture of the Rocket 1624L makes it an ideal fit for dense, density-optimized servers and sleek workstation chassis, bringing full PCIe Gen5 performance to tight spaces; where traditional, bulky cards simply cannot fit.

Hardware Features	
Bus Interface	PCI-Express 5.0 x16
Chipset	Gen5 Retimer
Number of Channel / Port	2x MCIOx8 (SFF-1016 8x)
Number of devices	4
Data Transfer Rate	64GB/s
PCIe Downstream Configuration (DIP Switch Settings)	x16 (Default Setting)
	x8, x8
	x4, x4, x4, x4
SSD Form Factor	U.2, U.3, E3.S (via cabling accessories)
Mechanical Specifications	
Form Factor	Low-Profile, Full-Length, Single-Width
Card Dimensions	147mm x 68.5mm
Card Weight	0.16kg (0.35 lbs.)
Cooling Solution	Aluminum Heatsink with Active Cooling Fan. Full-Height and Low-Profile Ventilated Brackets
Management	
Management Tools	HighPoint MPT (log collection for system and hosted NVMe drives)
Supported Systems	
OS	Any OS with native NVMe Driver support
Operating Environment	
Work Temp.	5°C~40°C
Storage Temp.	-40°C~70°C
Operating Voltage	PCIe: 3.3V
Power Consumption	15.7W (typical)
Warranty	2 Years
Optional Accessories	
Cabling	CIO8-8639-110
	CIO8-CIO8-110
	CIO8-1002-110
PCIe Expansion	MCIO-PCIEX16-G5

Kit Contents	R1624L PCIe Retimer Adapter
	QIG
	Low-Profile Ventilated Bracket

Rocket 1642L