

HighPoint Unveils Industry's Most Comprehensive PCIe Gen5 P2P and GPU Direct Storage (GDS) Solution Portfolio for White-Box AI and Edge Infrastructure

HighPoint's high-density switch AICs and adapters eliminate host CPU bottlenecks, delivering unthrottled 64GB/s line-rate data streams directly to GPU accelerators.

FREMONT, CA — June 2026 — HighPoint Technologies, Inc., a leading provider of high-performance PCIe switching and NVMe storage solutions, today announced the launch of its comprehensive Peer-to-Peer (P2P) and NVIDIA® GPU Direct Storage (GDS) hardware solution portfolio. Engineered specifically for AI inference, autonomous data logging, and real-time edge processing, this new lineup enables regional Managed Service Providers (MSPs), Cloud Service Providers (CSPs), and system integrators to instantly deploy hyper-scaler tier AI data paths using standard, off-the-shelf "White-Box" server hardware and NVMe storage.

As AI models grow exponentially, traditional server architectures have hit a hard physical bottleneck. Detouring data from high-speed NVMe flash arrays through host system RAM and the CPU creates severe latency and limits transfer throughput while starving expensive GPU accelerators. While NVIDIA's GDS software layer solves this by enabling direct storage-to-GPU communication, achieving its maximum potential requires an underlying physical hardware fabric capable of isolating these massive pipelines.

HighPoint's new product family breaks this barrier, offering architects two distinct, budget-conscious hardware deployment topologies with zero performance compromises.

Two Optimized Topologies, One Non-Blocking Fabric

HighPoint's P2P and GDS solutions utilize high-lane-count Broadcom PEX89048 (Gen5) and PEX88048 (Gen4) PCIe switch engines to deliver up to 64GB/s of real-world transfer bandwidth and microsecond-level latency, split across two primary hardware topologies:

1. High-Density Storage Feeders (Motherboard CPU-Routed)

For platforms that utilize onboard motherboard PCIe slots for compute, HighPoint offers ultra-high-density storage Add-In-Cards (AICs), Adapters, and Storage Enclosures. These boards are capable of consolidating hundreds of terabytes of fast flash under a unified switch architecture to **saturate local GPUs directly through a shared CPU Root Complex**

PCIe Gen5 Switching Infrastructure (Up to 64GB/s):

- **Gen5 NVMe AICs (On-Board Slots):** Rocket 1608A (8x M.2 slots), Rocket 1604A (4x M.2 slots)
- **Gen5 NVMe Adapters (Port Connectivity):** Rocket 1628A (4x internal MCIO 8i), Rocket 1624A (4x internal MCIO 4i)

PCIe Gen4 Switching Infrastructure (Up to 32GB/s):

- **Gen4 NVMe AICs (On-Board Slots):** SSD7749M2 (16x M.2 slots), SSD7749M (8x M.2 slots), Rocket 1508 (8x M.2 slots), Rocket 1504 (4x M.2 slots)
- **Gen4 NVMe Adapters (Port Connectivity):** Rocket 1528D (4x internal SlimSAS 8i)
- **Gen4 NVMe External Storage Enclosures (External Connectivity):** RocketStor 6542AW (8-Bay U.2/U.3), RocketStor 6541AW (4-Bay M.2/U.2)

Industry-Standard Slot Flexibility: These non-blocking matrices support industry-standard form factors, allowing architects to seamlessly mix standard NVMe storage with compact M.2, E1.S & U.2/U.3 AI Compute Accelerator modules on a single card.

2. Balanced Compute & Storage Loops (Hardware-Isolated)

For mission-critical virtualized environments, HighPoint's PCIe switch expansion adapters are **engineered to host both the GPU and the NVMe storage on the exact same physical switch**. The unique architecture **handles all data transfers 100% locally on the switch adapter**, completely isolated from the motherboard layout, bypassing the host CPU entirely and eliminating the hypervisor IOMMU/ACS security blocks that frequently throttle motherboard-routed P2P paths.

- **Rocket 1628A (Localized Single-Slot GDS Matrix):** Features four internal MCIO 8i ports. By aggregating two ports via HighPoint's MCIO-PClex16-G5 bridge card, it delivers uncompromised Gen5 x16 bandwidth to a single GPU, while the remaining ports feed data from up to 16 NVMe devices via UBM backplane connectivity.
- **Rocket 7638D & Rocket 7634D (Composable External Bridges):** Engineered for external server-to-chassis routing. These adapters feature external CDFP-CopprLink connectivity to drive full-bandwidth external Gen5 x16 eGPU enclosures, such as the RocketStor 8631D and RocketStor 8631C, directly alongside high-speed local storage arrays.

Democratizing Tier-1 Cloud Architecture

"Until now, predictable, hardware-isolated GDS configurations were the exclusive domain of hyper-scalers or restricted to high-cost, proprietary OEM system architectures with pre-soldered switch topologies," said May Hwang, VP of Marketing at HighPoint Technologies, Inc. "With our new product matrix, mid-market enterprise cloud builders can drop that exact same non-blocking, isolated PCIe Gen5 switch fabric into any standard server slot. We are delivering true performance sovereignty to the white-box ecosystem, allowing architects to scale their storage density and accelerate their AI pipelines without breaking their budgets."

Availability

HighPoint's complete family of P2P and GDS optimized Gen5 and Gen4 switch AICs, adapters, and high-density connectivity bridge accessories are available immediately through HighPoint's global network of distributors and system integration partners.

For more information, product specifications, and concrete architectural blueprints, please visit <https://www.highpoint-tech.com/>

Learn More

[Rocket 1628A PCIe Gen5 x16 Switch Adapter \(4x MCIO 8x ports\)](#)

[Rocket 1624A PCIe Gen5 x16 Switch Adapter \(2x MCIO 8x ports\)](#)

[Rocket 7638D Hybrid PCIe Gen5 x6 Switch Adapter \(2x MCIO 8x ports, 1x External CDFP-CopprLink port\)](#)

[Rocket 7634D External PCIe Gen5 x16 CDFP Adapter Card](#)

[Rocket 1528D PCIe Gen4 x16 Switch Adapter \(4x SlimSAS ports\)](#)

[MCIO-PCIEX16-G5 MCIO to PCIe Expansion Bridge Card](#)

[RocketStor 8631D PCIe Gen5 x16 eGPU Expansion Chassis \(1300W\)](#)

[RocketStor 8631C PCIe Gen5 x16 eGPU Expansion Chassis \(600W\)](#)

[RocketStor 8531AW PCIe Gen4 x16 eGPU Expansion Chassis \(600W\)](#)

About HighPoint Technologies, Inc.

HighPoint Technologies, Inc. is a leading developer of high-performance storage and connectivity solutions for enterprise, industrial, AI, media, and HPC applications. For over two decades, HighPoint has delivered innovative PCIe, NVMe, RAID, and storage networking technologies that enable organizations to maximize performance, scalability, and reliability across mission-critical environments.