

## HighPoint PCIe Gen5 x16 NVMe Switch Adapters Unlocks True PCIe Scalability to Revolutionize AI, GPU, and Edge Server Storage

As AI, GPU acceleration, and high-performance edge computing continue to push the boundaries of data processing, enterprises face an escalating challenge: **PCIe lane limitations**. Despite advancements from Intel, AMD, and ARM, which have integrated massive PCIe Gen5 bandwidth into their platforms, the demands of AI workloads, GPU acceleration, and large-scale data storage are outpacing available PCIe resources.

HighPoint's PCIe Gen5 NVMe Switch Adapter series was engineered to tackle this imposing challenge head on. Enterprise class endurance and reliability, coupled with unparalleled storage scalability and revolutionary PCIe switching technology enable customers to evade performance pitfalls and maximize storage assets without compromising system integrity.

### The PCIe Lane Bottleneck in AI, GPU & Edge Servers

High-performance computing (HPC), AI/ML training, and GPU-driven applications demand both high-speed and high-capacity NVMe storage to placate the appetite of intensive read/write operations and rapid data processing. While modern enterprise servers offer ample PCIe Gen5 lanes, these are quickly exhausted when a platform is called on to support multiple GPUs, AI accelerators, high-speed NICs, and NVMe storage devices.

- **AI & Machine Learning:** AI models require vast datasets and rapid access to storage, but PCIe bottlenecks threaten to limit the number of **NVMe SSDs** that can be deployed alongside GPUs.
- **GPU Workloads & Data Processing:** Multi-GPU configurations consume considerable PCIe bandwidth, leaving insufficient lanes available for high-performance NVMe-based storage.
- **Edge & High-Density Computing:** Space-constrained environments need to maximize **storage expansion** without additional PCIe slots.

### HighPoint Gen5 x16 NVMe Switch Adapter: Unlocking Scalable, High-Performance Storage

HighPoint Technologies introduces the **Rocket 1600 series Gen5 x16 NVMe Switch Adapter**, a revolutionary solution that **offloads HighPoint PCIe storage traffic** from server CPUs, enabling large-scale NVMe storage expansion without consuming valuable PCIe lanes. **By leveraging a single PCIe Gen5 x16 slot, these adapter empower enterprise systems to scale up to 4 Petabytes of NVMe storage**—a game-changer for AI, HPC, and data-intensive workloads.

Rocket 1600 series NVMe Switch Adapters efficiently expand 32 PCIe Gen5 lanes from a single x16 slot on Intel, AMD, or ARM systems, enabling seamless connectivity for up to 32 enterprise or data center-class NVMe devices. This high-performance solution maximizes bandwidth and scalability while optimizing system resources for demanding storage applications.

## Industry-Leading Storage Expansion for AI, GPU & Edge Computing Applications

HighPoint PCIe Gen5 x16 Rocket 1600 series NVMe Switch Adapters can be seamlessly integrated into a wide range of **third-party storage ecosystems**, and are ideally suited for:

- **Enterprise-Grade NVMe SSD Storage Expansion** – Easily scale up to 32 Enterprise and Datacenter class NVMe devices for data centers & AI-driven applications
- **Software-Defined Storage (SDS) & Software-Based NVMe RAID Solutions**– Native hardware support ensures compatibility all modern OS platforms and seamless integration with existing storage architecture and management interfaces
- **Enterprise NAS & Scale-Out Storage** – Readily expand and upgrade available storage without consuming additional PCIe lanes
- **High-Performance SAN & NVMe-over-Fabrics (NVMe-oF)** – Enabling fast, scalable networked storage
- **Hyper-Converged Infrastructure (HCI) & Edge Computing** – LMP-2 form factor is ideal for High-density, compact NVMe-based storage solutions designed for space-restrained computing environments
- **AI/ML, HPC & Financial Trading**– Proven PCIe switch technology ensures ultra-low latency, rapid data access, and high-sustained transfer performance
- **Enterprise Backup & Disaster Recovery** – Flexible connectivity, native hardware support and hot swap capability streamline service and support workflows

### The Future of NVMe Storage Expansion Starts Here

HighPoint Rocket 1600 series Gen5 NVMe Switch Adapters enable enterprises to break free from PCIe lane constraints, unlocking the full potential of AI, GPU driven applications and high-performance servers by delivering unmatched scalability, efficiency, and storage performance.

HighPoint's revolutionary NVMe Switch Adapters are engineered to offload PCIe storage traffic from the host platform's CPUs, enabling large-scale NVMe storage expansion without consuming valuable PCIe lanes. Rocket 1600 series adapters empower enterprise platforms to scale up to 4 Petabytes of NVMe storage via a single PCIe slot—a game-changer for AI, HPC, and data-intensive workloads.

### Empower Your AI, GPU & Edge Server Storage with HighPoint

**Learn More about HighPoint PCIe Gen5 NVMe Switch Adapters:** <https://www.highpoint-tech.com/nvme-switch-adapter/gen5/rocket-1628a>

#### About HighPoint Technologies, Inc.

HighPoint Technologies stands at the forefront of storage innovation as the industry's -premier manufacturer of high-performance, high-density NVMe Switch and RAID AIC & Adapter solutions for off-the-shelf x86 AMD/Intel and ARM platforms. With a rich history spanning nearly three decades, our dedication to delivering innovative, reliable, and high-performance storage solutions has consistently set us ahead in the marketplace. HighPoint's NVMe storage solutions are powered by industry-proven PCIe Switching technology, and are designed to address the dynamic requirements of AI/ML/LLM applications, Data Centers, Edge Servers, and high-performance workstations, enabling customers to keep pace with today's rapidly evolving technology landscape.