

Introducing HighPoint's NVMe Switch Gen5 & Gen4 x16 AIC and Adapter Series: Unleashing Native NVMe Connectivity for Modern Workstations and Servers

HighPoint PCIe Gen5 and Gen4 x16 NVMe Switch series AICs and Adapters leverage the power of Broadcom's industry-leading PCIe Switch ICs to deliver unmatched speed, reliability and scalability for today's performance hungry workstation and server environments. Natively supported by all modern Linux and Windows platforms, and capable of hosting up to 32 2.5" NVMe devices via Adapter or up to 8x M.2 SSDs via Add-in-Card (AIC), at speeds up to 60GB/s and 7.5 Million IOPS, HighPoint NVMe Switch solutions are capable of accommodating a wide range of data-intensive workflows.

Industry Fastest and Most Reliable PCIe NVMe Switch Technology

HighPoint NVMe Switch AICs and Adapters are powered by industry proven PCIe Switching architecture, which are engineered to maximize data throughput by minimizing latency and enhancing signal integrity.

Rocket 1600 Series PCIe Gen5 x16 are equipped with Broadcom's state-of-the-art PEX89048 switch IC. In a similar vein, Rocket 15xx series PCIe Gen4 x16 AICs and Adapters utilize Broadcom's PEX88048 switch IC. Both series provide x48 lanes of internal bandwidth, and enable each AIC or Adapter to allocate x16 lanes of dedicated upstream bandwidth (to the host platform), and x4 lanes to each device port to ensure each hosted device performs optimally under the most challenging conditions.

Native OS Compatibility for Seamless Integration

HighPoint NVMe Switch AICs and Adapters are natively supported by all modern operating systems, including major Linux distributions such as RHEL, Ubuntu and Rocky Linux, Microsoft's Windows Server, Hyper-V and Azure, FreeBSD/FreeNAS, VMware ESXi, and more. This ensures seamless deployment across a wide range of computing environments and largely eliminates the need for maintenance post installation. HighPoint Switch solutions are highly flexible by design, are ideal for environments that employ Software Defined Storage technology and other 3rd party storage management solutions, and can be easily tailored for specific use-cases and applications.

Enterprise-Grade Flexibility and Performance for Data Center Environments

HighPoint's NVMe Switch Series AICs and Adapters are engineered to meet the rigorous demands of enterprise class applications, and are fully compliance with the advanced drive features provided by enterprise grade 2.5" NVMe SSDs. In addition to the standard 1x4 mode, which delivers maximum transfer speed, HighPoint NVMe Switch solutions support the 2x2 drive mode for enhanced workload distribution and bandwidth efficiency.

The 2x2 mode splits the connection of a single NVMe SSD into two separate logical "paths", each of which is assigned x2 PCIe lanes. The operating system will recognize each path as a distinct drive. Enterprise environments capable of utilizing this technology, such as a virtualization, AI/ML or analytics platform, will benefit from improved bandwidth allocation and performance, as tasks can be distributed across both paths simultaneously.

Uncompromised Security for Edge Servers and Workstations, Powered By Broadcom PEX89000 Technology

HighPoint's Gen5x16 NVMe Switch Architecture employs Broadcom's advanced Hardware Secure Boot technology to help fortify edge servers and workstations against the threat of malware or ransomware. Hardware Secure Boot rigorously validates the integrity of any code that attempts to run during the platform's boot process in order to prevent the execution of unauthorized software.

Why Choose HighPoint NVMe Switch Solutions?

HighPoint NVMe Switch AICs and Adapters are ideal storage solutions for any business or organization that requires maximized transfer performance, superior scalability and seamless compatibility with any x86 platform. Designed for professional servers and workstations, Rocket and SSD series NVMe Switch solutions deliver the transfer throughput, endurance and reliability for AI driven, data-intensive applications, and large-scale content workflows.

Uncompromised Performance: HighPoint PCIe Switch Architecture, which incorporated Broadcom's industry-leading PEX series Switch ICs, can maximize transfer throughput over x16 lanes of PCIe Gen5 or Gen4 bandwidth; up to 60GB/s and 28GB's of real-world transfer performance, respectively.

- Sequential Read: Up to 60GB/s
- Sequential Write: Up to 55GB/s
- Random Read: Up to 7.5 million IOPS
- Random Write: Up to 7.0 million IOPS

Superior Scalability: HighPoint Switch AICs and Adapters are available with up to 16 independent device ports, and can support as many as 32 NVMe Devices.

Seamless Compatibility: Native OS Driver support streamlines installation and service workflows, and ensures seamless compatibility with all modern Linux and Windows based operating systems.

Unmatched Flexibility: Switch AICs can directly support M.2 or E1.S SSDs. Switch Adapters can support 2.5" NVMe media, including U.2, U.3 and E3.S form factor SSDs. Customers can tailor each solution for specific use cases and performance or capacity needs, from high-speed data ingestion to large-scale server storage and asset libraries.

HighPoint NVMe Switch Series Product Lines

NVMe Switch AICs:

Gen5 x16

Rocket 1608A: 8x Gen5 M.2 ports (Native NVMe Driver support only)

Gen4 x16

SSD7749E: 8x Gen4 E1.S ports with optional HighPoint or Native NVMe Driver support

SSD7749M2: 16x Gen4 M.2 ports with optional HighPoint or Native NVMe Driver support

Rocket 1508: 8x Gen4 M.2 ports (Native NVMe Driver support only)

NVMe Switch Adapters:

Gen5 x16

Rocket 1628A: 4x MCIO supporting up to 8x 2.5" devices via cable or 32x 2.5" by backplane connectivity (Native NVMe Driver support only)

Gen4 x16

Rocket1528D: 4x Gen4 SlimSAS (SFF-8654), supports up to 8x 2.5" devices via cable connectivity (Native NVMe Driver support only)

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 and Intel 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.