HighPoint Announces Comprehensive UBM/VPP Support for PCIe Gen5 and 2nd-Gen Gen4 NVMe Adapter Families in Enterprise Server Environments

March 2025 – Fremont, CA-HighPoint Technologies is proud to announce the availability of customizable UBM (Universal Backplane Management)/VPP (Virtual Presence and Power) firmware packages for its PCIe Gen5 and 2nd-Gen PCIe Gen4 NVMe adapter families. This update ensures seamless integration and compatibility with enterprise-grade storage server environments, providing enhanced flexibility and reliability for data-centric applications.

The latest updates include support for the following adapters:

Rocket 1628A and 7628A PCIe Gen5 x16 NVMe Adapters

Rocket 1528D and 7528D PCIe 2nd-Gen Gen4 NVMe Adapters

These updates guarantee full compliance with the latest UBM specifications, enabling enterprises to leverage high-performance NVMe storage solutions while maintaining compatibility with their existing infrastructure. Additionally, HighPoint has introduced new features such as the ability to disable or enable LEDs, allowing users to tailor the system to the specific needs of their host hardware environment.

Comprehensive Universal Backplane Management (UBM) Support for Enterprise Storage Server

HighPoint UBM and VPP support is crucial for Enterprise Storage Infrastructure and high-performance Datacenter and Server platforms. The new firmware provides the following benefits:

High-Density Storage Expansion: Rocket 1628A and 7628A support up to 32 enterprise-grade NVMe SSDs via a single PCIe Gen5 x16 slot, enabling storage capacities of up to 4 petabytes. This effectively maximizes storage density while minimizing the number of PCIe lanes required, making it perfect for space-constrained data centers.

Low-Latency, High-Performance Storage: Leverages PCIe Gen5's high-bandwidth capabilities to deliver ultra-low latency and high-throughput performance, ideal for demanding workloads such as AI/ML, HPC, and real-time data processing.This solutions ensures fast and efficient data access, reducing bottlenecks in storage-intensive applications.

Enterprise-Class Reliability and Compliance: These solutions are fully UBM compliant, ensuring seamless integration with enterprise storage backplanes and management systems. Its robust error correction and data integrity mechanisms ensure reliable operation in mission-critical environments.

Customizable LED System: The Integrated LED indicator can be turned on or off according to the specific requirements of the host hardware environment. This feature provides visual feedback on drive status, system health, and operational alerts, enhancing manageability and user experience.

Comprehensive Firmware Support: HighPoint's UBM/VPP firmware packages are fully customizable, allowing enterprises to tailor the behavior of their NVMe adapters to meet specific use-case

requirements.Regular firmware updates ensure compatibility with the latest UBM standards and emerging enterprise storage technologies.

Seamless Integration with Existing Infrastructure: Designed to work with a wide range of third-party storage ecosystems, including software-defined storage (SDS) and NVMe RAID solutions.

Native hardware support ensures compatibility with modern operating systems and storage management interfaces, simplifying deployment and management.

Applications

The PCIe Gen5 x16 NVMe adapters with UBM support are ideally suited for a wide range of enterprise and high-performance computing applications, including:

Enterprise-Grade NVMe SSD Storage Expansion: Enables seamless scaling of storage infrastructure for large-scale data centers, supporting cloud computing, AI, and machine learning workloads.No additional PCIe lanes required, helping businesses save space and improve storage density.

Software-Defined Storage (SDS) and NVMe RAID: Supports software-defined storage architectures and NVMe RAID configurations, enabling enterprises to build flexible and scalable storage solutions.Native hardware support for modern SDS platforms and storage management tools ensures seamless integration.

Enterprise NAS and Scale-Out Storage: Easily expand and upgrade available storage capacity for NAS systems, enabling seamless scalability without the need for additional PCIe slots.

Meet enterprises' needs for high-throughput and low-latency shared storage solutions.

High-Performance SAN and NVMe-over-Fabrics (NVMe-oF): Supports fast, scalable networked storage solutions, enabling enterprises to leverage NVMe-oF for high-speed data access across distributed environments.

Hyper-Converged Infrastructure (HCI) and Edge Computing: Compact design, efficient deployment, ideal for space-constrained environments such as edge computing and HCI, supporting real-time data processing and storage-intensive tasks.

AI/ML, HPC, and Financial Trading: Proven PCIe switch technology ensures ultra-low latency and high-sustained transfer performance, making it ideal for AI/ML training, HPC simulations, and financial trading applications.Enables faster data access and processing, accelerating time-to-insight for data-intensive workloads.

Enterprise Backup and Disaster Recovery: Flexible connectivity and hot-swap capabilities streamline backup and recovery workflows, ensuring business continuity in the event of a disaster.

Robust data protection features, such as RAID and SED support, ensure data integrity and security during backup and recovery operations.

Conclusion

HighPoint's PCIe Gen5 and 2nd-Gen Gen4 NVMe adapters with UBM/VPP support represent a significant advancement in enterprise storage solutions, offering unparalleled scalability, performance, and reliability. By leveraging customizable firmware packages and advanced UBM compliance, HighPoint empowers enterprises to unlock the full potential of their storage infrastructure, supporting a wide range of applications from AI/ML and HPC to edge computing and disaster recovery.

With its high-density storage capabilities, low-latency performance, and enterprise-grade reliability, HighPoint's Rocket 1628A, 7628A, 1528D, and 7528D adapters are the ideal choice for modern data-centric environments. Whether you're scaling your data center, enhancing your AI workloads, or ensuring business continuity in edge environments, HighPoint's solutions are designed to meet the demands of tomorrow's storage challenges.

Learn More

Gen5 Switch Series: Rocket 1628A
https://www.highpoint-tech.com/nvme-switch-adapter/gen5/rocket-1628a

Gen5 RAID Series: Rocket 7628A
https://www.highpoint-tech.com/nvme-raid-adapter/gen5/rocket-7628a

2nd-Gen Gen4 Switch Series: Rocket 1528D
https://www.highpoint-tech.com/nvme-switch-adapter/gen4/rocket-1528d

2nd-gen Gen4 RAID Series: Rocket 7528D
https://www.highpoint-tech.com/nvme-raid-adapter/gen4/rocket-7528d

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.