RocketAIC 7749M2 - Revolutionizing NVMe AIC Storage Capacity with the Industry's First 128TB PCIe Gen4 x16 AIC Drive Family

HighPoint Unveils RocketAIC 7749M2: The World's First 128TB PCIe Gen4 x16 AIC Drive Family

August 2024, Fremont CA – HighPoint, an industry-leading NVMe storage and connectivity solutions manufacturer, has announced the launch of the RocketAIC 7749M2 product series, a line of ground breaking NVMe storage drives designed for professional workstation and server platforms that accommodate high-performance, data-intensive workloads.

RocketAIC 7749M2 drives have redefined the concept of high-density storage by effectively packaging 16 2280 form-factor M.2 SSDs into a device with a hardware footprint smaller than most high-end PCIe GPUs. Engineered to satisfy the demands of data-intensive AI & ML, scientific/medical and media applications, Rocket 7749M2 drives offer a revolutionary blend of performance, reliability, efficiency and scalability that empowers enterprises to unlock new levels of data management and processing capability.

Unique Architecture Delivers Unprecedented Storage Density

The RocketAIC 7749M2 is the first NVMe AIC drive to deliver 128TB of capacity via a single PCIe Gen4 x16 slot, establishing a new benchmark for compact storage solutions. This is made possible by the AIC's revolutionary hardware architecture. Each aspect of the AIC was designed to work in harmony to optimize performance and reliability, from the vertical SSD mounting system, to the fully enclosed aluminum casing and innovative three-pronged cooling system.

The unique design enables the AIC drive to maintain a remarkably slim profile, in-line with industry-standard dual-width GPU's. In addition, all storage is hosted on one side of the PCB, to enhance chassis compatibility and prevent interference with neighboring PCIe devices

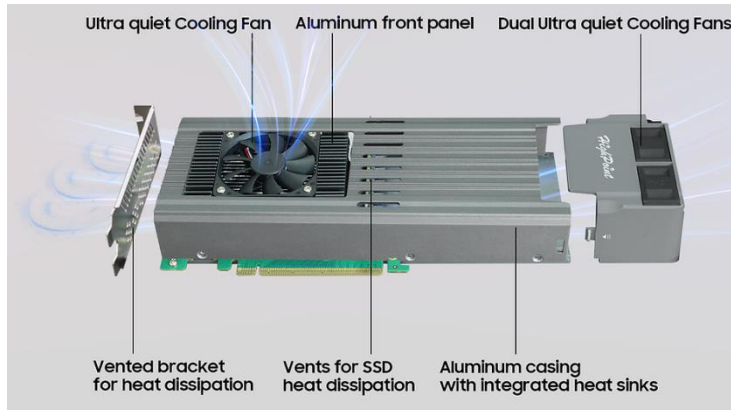**Proven PCIe Switching Architecture Maximizes PCIe Gen4 Performance Potential**

To ensure each SSDs operates and perform optimally, RocketAIC 7749M2 drives incorporate HighPoint's proven x48 lane PCIe Switching Technology, which allocates a dedicated x16 lanes of upstream bandwidth (PCIe connection to the host computing platform), and x2 lanes of dedicated downstream bandwidth to each of the 16 Sabrent or Samsung SSDs. This technology enables the AIC drive to optimize signal integrity, reduce latency and deliver an astonishing level of transfer speed; upwards of 28GB/s!

Versatile Storage Options

RocketAIC 7749M2 AIC drives are available with 64TB or 128TB of pre-configured RAID storage. Out of the box, the drives are setup in RAID 0 striping mode, to maximize storage performance and capacity. Advanced administrators can easily reconfigure the drives into RAID 1 (mirroring) or RAID 10 (striped mirroring) for unique applications or workflows. RAID 1 provides optimal data security by essentially creating a hidden backup of the target disk. RAID 10 combines the performance benefits of striping with mirrored data protection. Each RocketAIC 7749M2 SSD is capable of supporting four of these volumes, and can even be used to host bootable operating systems or virtualization platforms.

State-of-the-Art Three-Pronged Cooling Solution Enhances NVMe Reliability and Prevents Thermal Throttling

The RocketAIC 7749M2's advanced, three-pronged, dual-width NVMe cooling system leverages a full-length aluminum casing and heat sink, a trio of powerful low-decibel cooling fans, and a unique SSD mounting system to enhance reliability and stave off the threat of thermal throttling.

The aluminum casing fully encloses the M.2 media and sensitive controller componentry, effectively sealing it away from the surrounding hardware environment. The innovative, tool less SSD loading system arranges M.2 media vertically to optimize airflow within the AIC. Three cooling fans; one mounted directly atop the integrated heatsink, and a pair installed into the side-mounted access hatch, work in unison to condense and circulate cool air throughout the casing, and eject waste heat through the ventilated PCIe bracket.

To compliment the hardware side of the equation, HighPoint has developed an intelligent temperature monitoring and alert system, which is integrated directly into the NVMe storage management & monitoring suite. Administrators can track the temperature and endurance (TBW) of each NVMe device in real-time via HighPoint's innovative SHI (storage health inspector) service, which can be used to configure warning thresholds based on each SSDs specifications and adjust the AIC's triple cooling fans to ensure hosted M.2 media perform optimally, even under the most demanding workflow. The service can be instructed to activate an audible warning alarm or contact one or more administrators via email if temperature thresholds are crossed.

Intuitive NVMe Storage Management and Monitoring Suite

HighPoint's intuitive NVMe storage management and monitoring suite enables administrators to easily configure and maintain the RocketAIC 7749M2 AIC drive using a few simple clicks and commands. The AIC will be recognized as single physical drive, and can be configured and tailored for a variety of roles, such an application drive, virtual scratch disk, data archive, or media library.
In addition, a simple and easy 1-click Log Collection solution has been integrated into our WebGUI and CLI management utilities to streamline the troubleshooting process and expedite the service/support process.

Out of the Box Ready for a Wide-Range of Storage Applications

RocketAIC 7749M2 AIC drives are feature-rich, turnkey NVMe Storage solutions perfectly suited for a wide range of data-intensive applications such as Big-Data & Analytics, Research and Simulation, Deep Learning, ML and AI Model Training, media editing, and Enterprise backup and disaster recovery.

Big Data & Analytics: The RocketAIC 7749M2's massive storage capacity and performance potential is perfect for handling and processing large datasets

AI/ML Workloads: The RocketAIC 7749M2's proven PCIe Switching technology provide a massive 28GB/s pipeline; ideal for the throughput data streams required for AI and machine learning operations.

M & E (Media & Entertainment): RocketAIC 7749M2 drives are designed to handle high-throughput workflows, making them particularly well suited for professional media applications that must rapidly access and process large files such as video editing, post production, visual effects (VFX) and animation.

Enterprise Backup & Disaster Recovery: The simple single-device, AIC form factor and unprecedented storage capacity is ideal for emergency backup sessions. The drive can be quickly added or removed from any target system with a free PCIe Gen4 or Gen5 x16 slot to rapidly offload or restore critical assets.

Transformational Storage Solution

The RocketAIC 7749M2 Series enables customers to maximize the capacity and performance potential of M.2 NVMe storage media. RocketAIC 7749M2 NVMe RAID drives represent a significant leap forward in NVMe storage technology. To put it simply, this means you can get 128TB at speeds up to 28GB/s, per PCIe x16 slot. This innovation is set to transform data management and storage strategies across industries.

Shipping & Availability

HighPoint's [RocketAIC 7749M2 NVMe RAID Drives](#) will begin shipping in September 2024, and will be available worldwide direct from our E-Store and our approved Global Resale and Distribution partners.

[Where to Buy](#)

RocketAIC 7749M2W-B128T0-10 128TB PCIe Gen4 NVMe AIC SSD (16x Sabrent Rocket 4 Plus 8TB M.2) MSRP USD$: $25,999.00

RocketAIC 7749M2W-A64T0-0F 64TB PCIe Gen4 NVMe AIC SSD (16x Samsung 990 Pro 4TB M.2) MSRP USD$: $9,900.00

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.