

HighPoint Revolutionizes High-Density AICs with the SSD7749M2; The Industry's First 16x M.2 Port Single-Sided NVMe RAID AIC.

August 2024, Fremont CA- HighPoint has unveiled the industry's first 16x M.2 Ports NVMe RAID AIC; the SSD7749M2. Featuring an unprecedented 16 independent M.2 device channels, and armed with HighPoint's proven PCIe Gen4 Switch Architecture and NVMe cooling technology, SSD7749M2 RAID AICs are capable of delivering 28GB/s of transfer throughput while supporting an astounding 128TB of client-class NVMe storage; attributes that are particularly beneficial for AI driven workflows that require high-speed storage solutions capable of rapidly processing vast quantities of data. The compact, professional-grade PCIe AIC storage solution can be easily integrated into any x86 workstation or server platform capable of supporting modern dual-width GPUs, and is equipped with a comprehensive suite of management and monitoring tools designed to optimize and streamline the platforms NVMe storage ecosystem.

Advanced Architecture Maximizes Capacity and Performance

Innovative, dual-sided, vertically aligned M.2 loading trays can directly host up to sixteen 2280 form factor M.2 SSDs using only one side of the PCB. This unique architecture results in an impressively slim hardware footprint, with a form factor similar to that of a high-end dual-width GPU. The sixteen device channels can operate independently or concurrently, and enable the SSD7749M2 to support an astonishing 128TB of M.2 storage, with the potential to scale up to 256TB in the near future, all from a single PCIe slot!

To ensure each SSDs operates and perform optimally, the AIC incorporates HighPoint's proven x48 lane PCIe Switching Technology, which allocates a dedicated x16 lanes of upstream bandwidth (connection to the host platform), and x2 lanes of dedicated downstream bandwidth to each SSD. This enables the SSD7749M2 to optimize signal integrity, reduce latency and deliver an astonishing level of data throughput; upwards of 28GB/s of real-world transfer performance! All of this results in a truly one-of-a-kind, feature-rich NVMe Storage solution, perfectly suited for data-intensive applications such as Healthcare Diagnostics, Scientific Research and Simulation, Deep Learning Model Training, AI-Powered Video and Image Processing, and AI-Powered Cybersecurity.

State-of-the-Art Three—Pronged Cooling Solution Enhances NVMe Reliability and Performance

One of the driving forces behind the SSD7749M2 industry-leading storage capacity and performance capability is HighPoint's advanced, three-pronged, dual-width NVMe cooling system, which leverages a full-length aluminum casing and heat sink, 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/DWPD rating) of each hosted NVMe storage 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.

Comprehensive NVMe Storage Management and Monitoring Suite

The SSD7749M2's comprehensive NVMe storage management and monitoring suite enables administrators to easily configure and maintain the platform's NVMe storage ecosystem with a few simple clicks and commands, from within and outside of the OS. RAID arrays will be recognized as single, physical disks, and can be configured and tailored for a variety of roles, such as application drive or virtual scratch disk, data archiving or even for hosting bootable OS's or virtualization platforms.

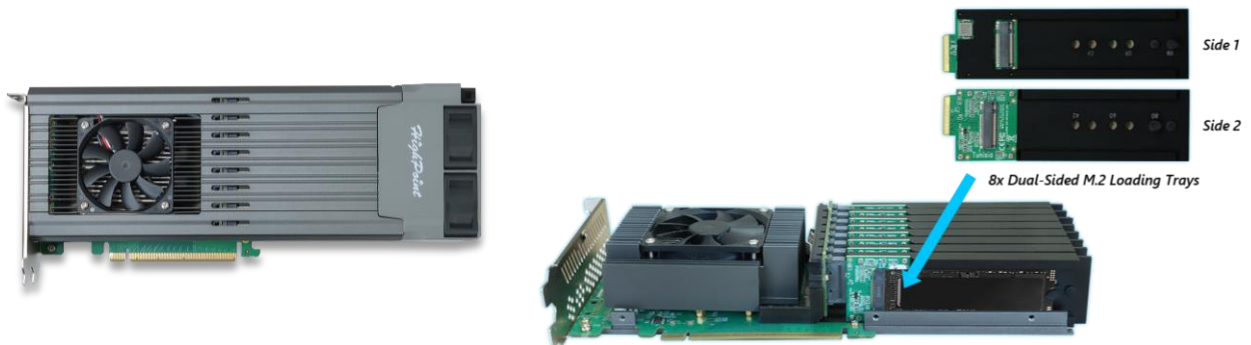
In addition, a simple and easy 1-click Log Collection solution has been integrated into our WebGUI and CLI management utilities to streamline the troubleshooting process and expedite the service/support process.

Advanced Gen4 Data Security Suite

SSD7749M2 RAID AICs are protected by HighPoint's Gen4 Data Security Suite, which includes SafeStorage, a state-of-the-art data encryption solution for OPAL SSC compliant SED drives and arrays. Stored data is automatically locked down whenever storage is unplugged from the AIC, effectively preventing unauthorized access to sensitive information should physical disks be misplaced or stolen. In addition, SSD7749M2 feature Hardware Secure Boot, which prevents unauthorized code, such as a rootkit or ransomware, from executing during the system's boot-up sequence.

Qualified with Major M.2 NVMe Product Lines

The SSD7749M2 has been fully qualified with major M.2 SSD series, such as Samsung's 990 PRO, and Phison E18 based 8TB SSDs, such as the Sabrent Rocket 4 Plus.



Shipping & Availability

HighPoint's 7749M2 series NVMe solutions will begin shipping towards the end of August 2024, and will be available worldwide direct from our E-Store and our approved Global Resale and Distribution partners.

[Where to Buy](#)

SSD7749M2 16-Channel 2280 M.2 PCIe Gen4 x16 NVMe RAID AIC – MSRP USD\$ 1999.00

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

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

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.