



RocketAIC 7608AW Series

PCIe Gen5 x16 NVMe AIC SSDs



Engineered for Data-Intensive AI, ML Scientific & Engineering Workflows

Introducing the RocketAIC 7608AW Series: Industry's Fastest & Densest Turnkey PCIe Gen5 x16 NVMe Storage Solutions

HighPoint RocketAIC 7608A series NVMe AIC SSDs leverage eight class-leading PCIe Gen5 or Gen4 M.2 SSDs and HighPoint's revolutionary PCIe Switch Architecture & industry leading RAID technology to deliver 56,000GB/s of real-world transfer performance and up to 64TB of storage capacity, from a single PCIe Gen5 x16 slot.

Engineered for performance-hungry industrial and business applications, the compact, robust AIC SSD form factor directly hosts the NVMe media and incorporates a precision engineered cooling system designed to mitigate performance bottlenecks imposed by thermal throttling.

Provides 48 Lanes of Internal PCIe Gen5 Bandwidth

HighPoint's high-performance PCIe Gen5 switching architecture integrates Broadcom's PEX89048 switch IC to provide 48-lanes of internal Gen5 host bandwidth; x16 lanes of which are allocated to the upstream port (connection to the host platform), with x4 lanes dedicated to each device channel. The innovative architecture enables the Rocket 7600 series AICs and Adapters to deliver up to 64GB/s of transfer bandwidth, minimize latency, and facilitate consistent, robust I/O throughput.

8-Dedicated PCIe Gen5 NVMe Device Channels: Each AIC or Adapter provides 8 independent NVMe device channels, each capable of providing x4 lanes of dedicated bandwidth. This ensures each SSD can function concurrently or independently as needed, without sacrificing transfer performance, IOPS or response time.

Equipped with Class-Leading PCIe Gen5 & Gen4 M.2 NVMe Media

RocketAIC 7608AW AIC SSDs are equipped with class-leading PCIe Gen5 or Gen4 M.2 NVMe media. Each model is capable of delivering up to 56GB/s of real-world transfer performance.

- Rocket AIC 7608AW-C32T0-10 (PCIe Gen5): 32TB, 8 x Crucial T705 4TB CT4000T705SSD3
- RocketAIC 7608AW-A32T0-0F (PCIe Gen4): 32TB, 8 x Samsung 990 Pro 4TB MZ-V9P4T0
- RocketAIC 7608AW-B64T0-11 (PCIe Gen4): 64TB, 8x Sabrent Rocket 4 Plus 8TB

Quick & Intuitive Management Suite

Though RocketAIC NVMe AIC SSDs are designed to work right out of the box, customers are free to install HighPoint's intuitive WebGUI and CLI management software suite, which includes our SHI solution (Storage Health Inspector), which provides simple and quick real-time temperature monitoring and endurance tracking. Customers can easily reconfigure the RocketAIC drive and tailor RAID storage for a specific Target Application & Platform.

Striping - This mode delivers Maximum Performance and capacity by linking multiple NVMe SSDs together to act as a single storage unit.

Mirroring - This mode creates a hidden duplicate of the target SSD, and is ideal for applications that require an extra layer of data security, including bootable volumes.

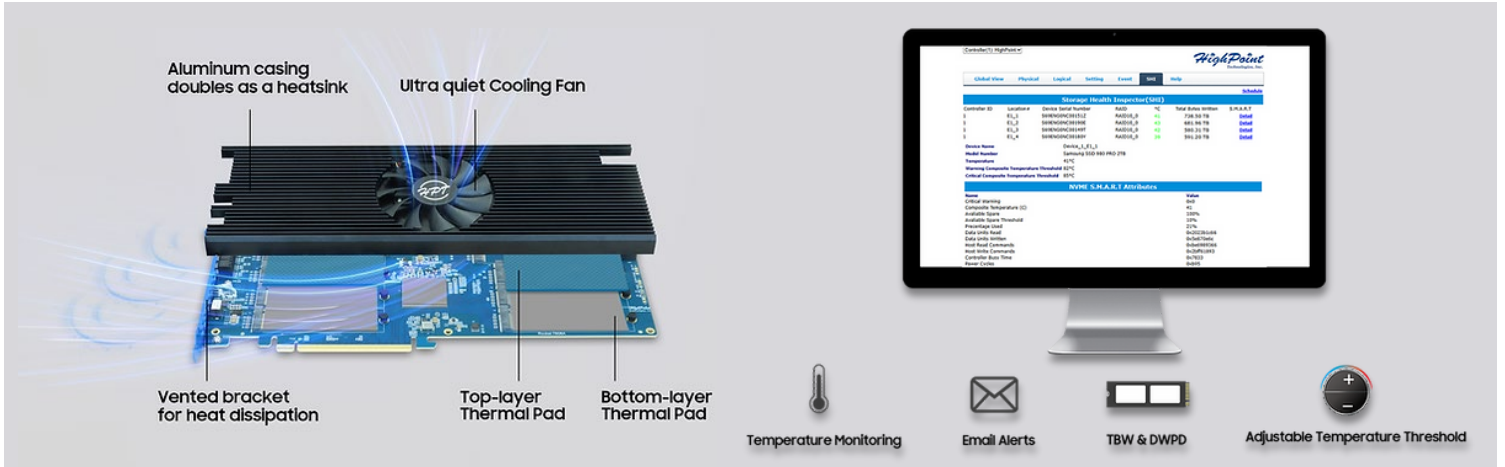
Security & Speed - This mode offers the best of both worlds. Two mirrored arrays are striped together to maximize performance with a layer of data redundancy.

Feature Highlights

- 32TB and 64TB PCIe 5.0 x16 NVMe AIC Drives
- High-Performance PCIe-Gen5 Switch Architecture: x16 lanes of dedicated upstream with x4 lanes of downstream bandwidth for each NVMe SSD
- Sustained transfer speeds up to 56,000MB/s
- Equipped with 8x Crucial & T705 (Gen5), 8x Samsung 990 (Gen4), or 8x Sabrent Rocket 4 (Gen4)
- Intelligent Pro-Active Gen5 Cooling Solution Prevents Thermal Throttling
- Quick & Intuitive Management Suite: Easily Reconfigure RAID storage for your target application and platform
- Optional Boot-RAID Capability for Linux & Windows
- SafeStorage SED Solution

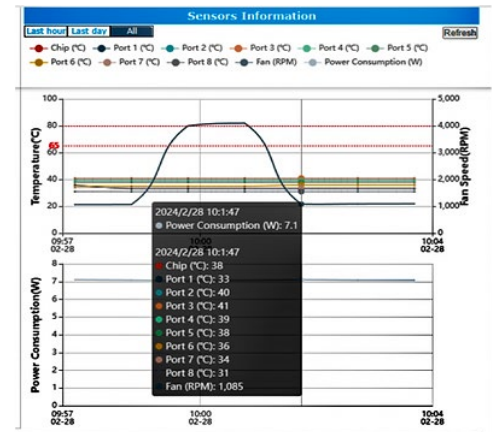
Intelligent, Pro-Active PCIe Gen5 Cooling Solution

RocketAIC 7608AW's intelligent Pro-Active PCIe Gen5 cooling solution employs a Full-Length Aluminum Heatsink with copper SSD contacts, two layers of thermal padding and a powerful low-decibel cooling to maximize the lifespan and transfer performance of the integrated M.2 media. The advanced hardware cooling system was designed to work in conjunction with a suite of pro-active monitoring and management tools designed to keep temperatures in check under the most grueling working conditions.

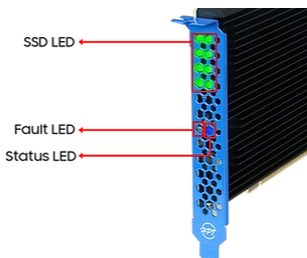


Optimize NVMe Storage HighPoint with Active Sensor Logging!

Rocket 7600 RAID/Pro series AICs and Adapters incorporate a real-time NVMe logging system that tracks and records the temperature, fan-speed and power consumption of the AIC/Adapter and each hosted SSD. The system can record 5-working days of data, which are presented via simple graphs and line charts. These records can be exported as needed, and can help administrators optimize storage configurations for specific workflows by analyzing the electrical characteristics and thermal status of each SSD at peak I/O, or narrow the scope of troubleshooting tasks by identifying potential faults and at-risk storage media, and then implement preventative measures to maximize the lifespan of the RAID array and maintain optimal performance.



Intuitive Onboard LED notification system



A built-in LED notification system enables administrators to instantly assess the current status, temperature and host connectivity of the RocketAIC 7608AW and hosted NVMe storage. One Led is provided for each of the 8 device channels; these are designed to work in tandem with a dedicated Status and Fault LED – simple color coding and flashing patterns can indicate everything from the strength of the current PCIe connection to progress of a RAID rebuild session.

SafeStorage NVMe SSD Encryption Solution

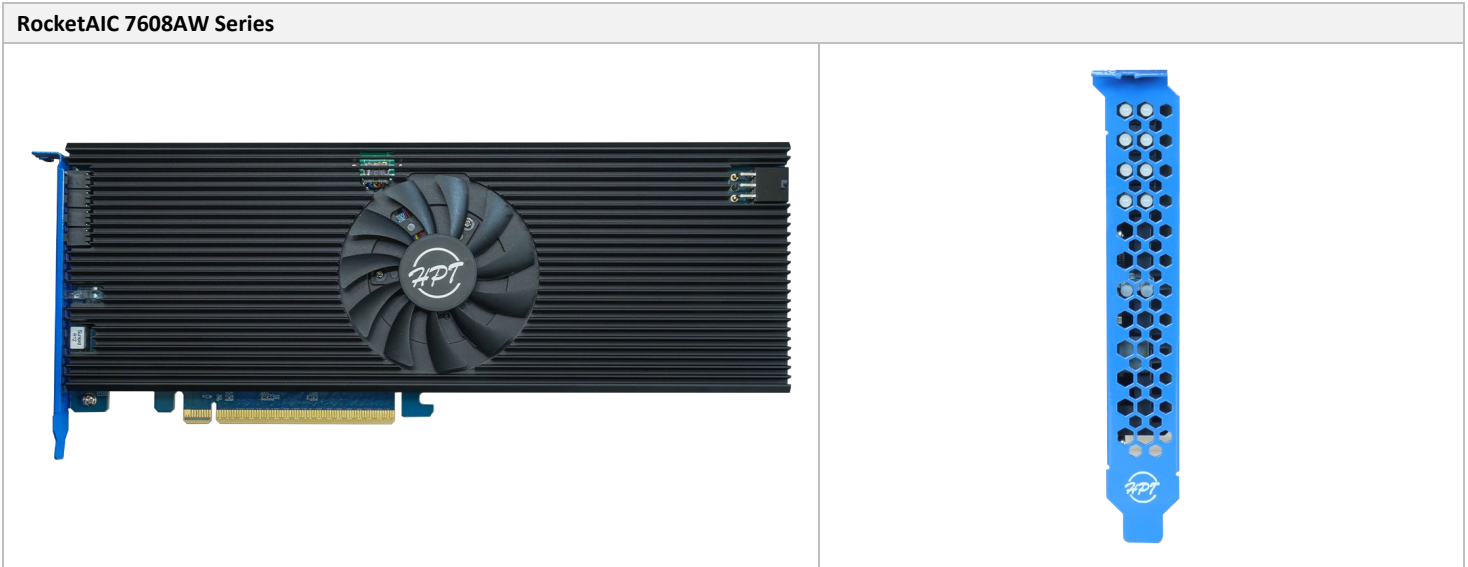
RocketAIC 7608AW NVMe AIC SSDs are compatible with HighPoint's SafeStorage, a comprehensive NVMe Hardware Encryption Solution designed to accommodate large-scale RAID arrays and individual SSDs. Developed in line with leading SED technology and based on OPAL SSC TCG specifications, SafeStorage is designed to safeguard critical assets by preventing access to stored data when physical disks are misplaced or stolen. Volumes encrypted with SafeStorage activate each disk member's self-encryption capabilities, providing robust data protection.



Hardware Features	
Bus Interface	PCIe 5.0 x16
Number of Channel / Port	8x Device Channels / 8x NVMe Ports (Dedicated PCIe 5.0 x4 per port)
Performance	Up to 64GB/s
Capacity	32TB
SSD Form Factor	M.2 (2280)
External Power Support	Yes (uses PCIe Standard 2x3 Power Connector)
LED Indication	Intelligent, Self-Diagnostic LEDs
Audible Alarm	Yes
NVMe Sensor Suite	Real Time Power & Temperature Tracking
Storage Security Suite	
SED Support	SafeStorage SED Solution
Hardware Secure Boot	Yes
Mechanical Specifications	
Form Factor	Full-Height, Single-Width
Card Dimensions	284mm x 110mm
Card Weight	1.59 lbs.
PCIe Bracket	Full-Height Ventilated Bracket
Cooling Solution	Intelligent, Pro-Active PCIe Gen5 Cooling Solution
	<ul style="list-style-type: none"> • Full-Length Aluminum Heatsink with Low-Decibel Cooling Fan & 2 layers of thermal padding • Copper contact for SSDs accelerates heat dissipation • Compliant with PCIe Specifications
Toolless SSD mounting system	Yes
Supported Systems	
OS	<u>Only Supports 64-bit operating systems</u>
	Windows 11, 10 / Windows Server 2022, 2019, 2016 / Microsoft Hyper-V RHEL, Debian, Ubuntu, Fedora, Proxmox & Rocky Linux (Linux kernel 3.10 and later)

Secure Boot	Windows Only: Requires corresponding UEFI driver
NVMe RAID Management	
Management Suites	WebGUI (Browser-Based management tool), CLI (Command Line Interface - scriptable configuration tool), API package, UEFI HII
SMTP Email Alert Notification	Yes
Alarm Buzzer	Yes
Storage Health Inspector	Yes
NVMe SMART status	Yes
Automatic and configurable RAID Rebuilding Priority	Yes
Auto resume incomplete rebuilding after power on or reboot system	Yes
Single-RAID or Multi-RAID Arrays per Controller	Yes
Cross-Sync RAID Solution Across Controllers	Yes
Advanced RAID features	
Online Array Roaming	Yes
RAID Quick Initialization for fast array setup	Yes
Global Hot Spare Disk support	Yes
Operating Environment	
Working Temp.	0°C ~ + 55°C
Storage Temp.	-20°C ~ +80°C
Operating Voltage	PCIe: 12V(+/- 8%), 3.3V (+/- 8%)
Power	82.64W
MTBF	1.5 Million Hours

Product	RocketAIC 7608AW-A32T0-0F	RocketAIC 7608AW-C32T0-10
Warranty	TBW (Total SSDs): 19200TB TBW (Single SSD): 2400TB	
	Period: 3 Years	
Kit Contents	1x RA7608AW-A32T0-0F (includes 8 x Samsung 990 Pro 4TB MZ-V9P4T0 M.2 SSDs)	1x RA7608AW-C32T0-10 (includes 8 x Crucial T705 4TB CT4000T705SSD3 M.2 SSDs)
	8 x additional M.2 rubber twist-pins	8 x additional M.2 rubber twist-pins
	1x QIG	1x QIG



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