HighPoint
Technologies, Inc.

SSD7101A-1
4x dedicated 32Gbps M.2 Ports to PCIe 3.0 x16 RAID Controller

NVMe Solution

HighPoint's SSD7101A-1 RAID Controller Unlocks the True Performance of NVMe SSD's

The SSD7101A-1 is the industry's fastest NVMe M.2 RAID Controller. Designed for high-end desktop & workstation platforms, is capable of delivering transfer performance up to 8x faster than onboard NVMe solutions, and up to 44x faster than conventional SATA SSD's. The SSD7101A-1 RAID Controller's unique hardware architecture provides dedicated PCIe 3.0 x4 (32Gb/s) bus bandwidth for each M.2 SSD, and unlocks the true performance potential of NVMe based storage configurations.

Shatter the DMI 3.0 Performance Bottleneck

HighPoint's SSD7101A-1 NVMe RAID Controllers deliver truly mind-blowing levels of performance! Unlike onboard DMI 3.0 based NVMe solutions, which are forced to share a single PCIe 3.0 x4 lane with the motherboard's SATA and USB ports, SSD7101A-1 RAID Controllers feature dedicated PCI 3.0 x16 bus bandwidth. This unique architecture allows the SSD's to interface directly with the platform's CPU; shattering the constrictive performance bottleneck imposed by DMI 3.0, and unlocking the true potential of your NVMe storage.

Independent, Stand-Alone NVMe SSD Solution

The SSD7101A-1 RAID controller is a truly independent NVMe RAID solution and was designed for today's high-end desktops, custom gaming PC's and media workstations.
Unlike most NVMe controllers or drive solutions featured in today's marketplace, SSD7171A-1 NVMe RAID Controllers can be used with any system with a free PCIe 3.0 x16 slot running a Windows operating system, Linux distribution or macOS.

Robust, Compact & Efficient – Shield & Cool Your SSD's

It's no secret that PCIe devices can generate a great deal of heat, especially during peak operation. HighPoint is no stranger to PCIe design, and has engineered the SSD71001A-1 NVME RAID Controller to excel in high-stress environments. The all-aluminum casing naturally dissipates waste heat away from the SSD modules, and features an integrated fan and heat sink that work in conjunction to eject excess heat away from vital components and keep ambient temperatures manageable and cool.

Scale Performance across Multiple SSD7101A-1 NVMe RAID Controllers

Multiple SSD7101A-1 NMVe RAID controllers can be linked and installed into a single system, and deliver up to 25GB/s of performance – 8xfaster than NVMe drives locked behind the Intel DMI 3.0 architecture . A single SSD7101A-1 RAID controller can aggregate multiple M.2 SSD modules at PCIe x16 bandwidth, and double that when used in dual configurations!

HighPoint NVMe Manager

Each SSD7101A-1 RAID controller includes a simple, intuitive web-based management interface designed to provide a wealth of monitoring and configuration options for novice and experts alike. A Quick Configuration menu allows new users to get everything up and running with a few simple clicks. Experienced Pros can fine tune configurations for specific applications using the Advanced Options men.

Key Benefits

- Dedicated PCIe 3.0 x16 bus bandwidth
- Over 8X faster than NVMe storage locked behind Intel DMI 3.0
- Independent, Stand-Alone NVMe SSD Solution
- Scale Performance across Multiple SSD7101A-1 NVMe RAID Controllers
- Supports Windows, Linux & macOS Systems

Suggested Applications

- High-End Desktops
- Custom Gaming PC's
- Media Workstations

Integrated TRIM & SMART Monitoring with TBW Tracking

NVMe Manager features TRIM support, and SMART monitoring with total Terabyte Written (TBW) tracking. TRIM support promotes the longevity and endurance of NVMe storage by enabling each SSD to handle garbage collection more efficiently, which helps eliminate write speed degradation. SMART monitoring allows you to check a variety of physical attributes of each NVMe M.2 SSD, including temperature readings, voltage and TBW. The interface updates attribute data in real time, and can be even be configured to notify you by Email, in the event of an error condition or threshold warning.

Feature Specifications	
Bus Interface	PCI-Express 3.0 x16
Number of Channel / Port	4x 2280 M.2 NVMe Ports (Dedicated PCIe 3.0 x4 per M.2 Port)
Data Transfer Rates:	8GT/ 8Gbps per lane
Number of Devices	Up to 4x M.2 NVMe SSD's (Qualified: Samsung 960EVO & Pro SSD)
Form Factor	Full-Height
Dimensions	8.39" L x 5.00" H x 0.85 D"
Weight	0.77 lbs
Operating System Support	Windows 10, Windows Server 2012 R2 or later
	Linux Kernel 3.3 or later
	macOS 10.13 and later
Cooling Fan	Aluminum casing with single 50mm x50mm cooling fan
Storage Mode	Data Storage only (non-bootable)
NVMe Configurations	
RAID Mode Support	Single, RAID 0, 1, 5*, 1/0* *(Note: RAID 1/0 is the equivalent of RAID 10)*
NVMe RAID Management	
RAID Management Suites	Browser-Based management tool CLI (Command Line Interface- scriptable configuration tool) API package
SMTP Email Alert Notification	Yes
Alarm Buzzer	Yes
Storage Health Inspector	Yes
NVMe SMART status	Yes
Redundant RAID Configurations	Yes
Single-RAID and Multi-RAID Arrays per Controller	Yes
Cross-Sync RAID Solution over multi-SSD7101A-1 Controllers	Yes
Operating Environment	
Work Temp:	+5°C ~+ 55°C
Storage Temp:	-20°C ~ +80°C
Relative Humidity:	5% ~ 60% non-condensing
Operating Voltage	PCI-e: 12V, 3.3V
Power	Typical: 8W
MTBF (Mean Time Before Failure)	920,585 Hours
Compliance Certification	FCC, CE, RoHS, REACH, WEEE

RAID 5 and 0/1 do not support TRIM

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NVMe PCIe 3.0 RAID Controller	SSD7101A-1
Product Image	
Retail Box Dimensions	13.38" L x 7.68" H x 2.76"
Retail Box Weight	1.29 lbs
Kit Contents	1x -SSD7101A-1 RAID Controller 1x Quick Installation Guide
Product Dimensions	5.97" x 2.68" x 0.06"

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