HighPoint Technologies, Inc.

SSD7140 8-Channel High Port Count Series

M.2 NVMe RAID Controller

NVMe Solution

Doubles Capacity and Performance Potential of PCIe 3.0 Gen3 M.2 NVMe SSDs

Double Capacity and Transfer Performance for M.2 Configurations

HighPoint SSD7140 high port count (HPC) NVMe RAID controller is ideal for professional applications that require a small-footprint, mass-storage M.2 NVMe solution that can take full advantage of the PCIe 3.0 x16 transfer bandwidth. Our performance-focused NVMe RAID architecture ensures that up to x4 lanes can be assigned to each device channel to ensure maximum transfer throughput – ideal for professional media workstation and server environments designed to support a wide range of editing, rendering, capture and streaming applications.

HighPoint HPC M.2 NVMe Controllers allow customers to saturate x16 lanes of PCIe 3.0 bus-bandwidth with sustained transfer performance over 14,000MB/s while doubling your M.2 port count.

Massive Storage Capacity

Each SSD7140 RAID controller features eight independent M.2 channels, and can support RAID, non-RAID, and mixed NVMe storage configurations. No other M.2 NVMe controller in today's marketplace can match the SSD7140's storage capability, transfer performance, or flexibility.

Truly Platform Independent NVMe RAID Solution

HighPoint high port count series NVMe RAID controllers are truly independent NVMe storage solutions. Unlike most NVMe devices in today's marketplace, which are tied to a specific hardware platform or brand of SSD or motherboard, SSD7000 series controllers do not require a hardware environment with Bifurcation support, or any specialized software released by SSD manufacturers; any AMD or Intel motherboard with a dedicated PCIe 3.0 x16 slot can now support up to 8 M.2 NVMe SSDs, and experience sustained transfer performance in excess of 14GB/s via a single compact PCIe device.

Comprehensive RAID Storage Solution

RAID 1/0 (Security & Speed) - RAID 1/0 (also known as RAID 10) requires a minimum of 4 NVMe SSD's – it will mirror the data of one stripe array to a second, hidden stripe array for security.

RAID 0 (Speed) – this mode delivers Maximum Performance, and requires a minimum of 2 NVMe SSD's.

RAID 1 (Security) - This mode creates a hidden duplicate of the target SSD, and requires 2 NVMe SSD's to configure.

Ultra-Efficient, Multi-Stage Cooling Solution

The SSD7140 employs our new ultra-efficient, multi-stage cooling solution that combines a high-conductivity thermal pad with an anodized aluminum heatsink equipped with dual built-in, low noise fans. This design ensures the M.2 SSDs, NVMe chipset and RAID componentry remain cool, even under heavy load, while minimizing the risk of distraction in the work environment.

Comprehensive NVMe RAID Management

When it comes to maintaining critical storage configurations, each customer has specific needs and preferences.

The Web RAID Management Interface (WebGUI) is a simple, intuitive web-based management tool and is ideal for customers who are new to RAID technology.

The CLI (command line interface) is a powerful, text-only management interface designed for advanced users and professional administrators. Comprehensive user guides are available for both interfaces are available from each controller's Software Updates webpage.

Both interfaces were designed to streamline NVMe Storage Management. Customers can easily track TBW (Terabytes Written) and the temperature of each individual NVMe SSD, ensure the SSD7000 controller is using the fastest available PCIe slot, configure an event log with email notification, and monitor the status of critical RAID configurations in person or remotely via an internet connection.

Key Benefits

- 8x M.2 Ports Double Storage Capacity – up to 32TB
- Dedicated PCIe 3.0 x16 Bandwidth
- Truly Platform Independent NVMe RAID Solution for AMD & Intel motherboards with PCIe 3.0/4.0 x16 slots
- Comprehensive RAID Storage Solution: RAID 0, 1, 10 and single-disk
- Supports all major operating system platforms: Windows, macOS, Linux
- Ultra-Efficient, Multi-Stage Cooling Solution

Key Features	
Bus Interface	PCI-Express 3.0 x16
Number of Channel / Port	8x M.2 NVMe port (Dedicated PCIe 3.0 x**4** per port)
Port Type	M.2 NVMe
Data Transfer Rate	8GT per lane / 8Gbps per lane
Number of device	8x M.2 NVMe SSDs
SSD Form Factor	2242/2260/2280
Form Factor	Full-Height
Card Dimensions	11.22"(W)*4.37"(H)*0.83"(D)
Card Weight	TBA
Operating System	Windows 10, Windows Server 2016 or later, Linux Kernel 3.10 or later, macOS 10.13 or later
Cooling	Full-length anodized aluminum heat sink with built-in low-noise fans
NVMe Configuration	
RAID Support	Single, RAID 0, 1, 1/0
TRIM RAID Support	Single, RAID 0, 1, 1/0
Storage Mode - NVMe	Data RAID: Windows, Linux, macOS
NVMe RAID Management	
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
Automatic and configurable RAID Rebuilding Priority	Yes
Auto resume incomplete rebuilding after	Yes
Single-RAID or Multi-RAID Arrays per Controller	Yes
Operating Environment	
Work Temp	+5°C ~ + 55°C
Storage Temp	-20°C ~ +80°C
Operating Voltage	PCI-e: 12V, 3.3V
Power	Typical: 7.16W
MTBF (Mean Time Before Failure)	920,585 Hours
Certification / Approval	CE, FCC, RoHS, REACH, WEEE
Kit Contents	
Kit Contents	SSD7140
	QIG

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