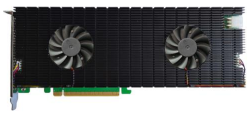
HighPoint Technologies, Inc.



SSD7140A

PCIe 3.0 x16 8-Port U.2 NVMe RAID HBA

Maximize NVMe Storage Performance & Capacity for PCIe Gen3 Platforms

Double Your PCIe Gen3 Storage Performance & Capacity Potential

The SSD7140A is our 2nd generation high port count (HPC) M.2 NVMe RAID controller, and was designed for professional workflows that require a small-footprint, mass-storage solution that can take full advantage of PCIe 3.0 x16 transfer bandwidth, and is ideal for professional media workstation and server environments designed to support a wide range of editing, rendering, capture and streaming applications.

The SSD7140A allows customers to saturate x16 lanes of PCIe 3.0 bus-bandwidth with sustained transfer performance over 14,000MB/s while supporting up to 64TB of storage.

Performance-Focused NVMe Architecture

The SSD7140A benefits from the latest generation of our industry proven, performance-focused NVMe hardware architecture. Designed to deliver uncompromised end to end PCIe 3.0 x16 bandwidth, the integrated Smart-Switching technology can allocate up to 4x dedicated lanes for each SSD to ensure maximum transfer speed and immediate response time.

Multi-CPU/Core Performance Optimizer: multi-core/Multi-CPU platforms have plentiful resources, but these may not be properly allocated to the target application and NVMe media. HighPoint's HPT-Optimize utility Simplifies the Complicated Tuning Process for all Multi-Core platforms.

Cross-Sync RAID Technology: The SSD7140A enables administrators to optimize RAID performance by scaling available bus bandwidth up to 32 lanes, and deliver up to 28,000MB/s of transfer performance

Advanced NVMe Cooling Solution

The SSD7104F's advanced NVMe cooling solution mitigates the risk of thermal throttling by ensuring NVMe SSDs consistently operate within their recommended temperature thresholds, even under sustained heavy I/O.

The full-length anodized aluminum heat sink is equipped with an ultra-durable, low-decibel fan and high-conductivity thermal padding. This innovative, ultra- efficient cooling system rapidly transfers waste heat away from critical NVMe and controller componentry, without introducing unwanted distraction into your work environment.

Industry Proven NVMe RAID Technology

HighPoint 7000 Series NVMe RAID controllers will automatically recognize new NVMe SSDS's as single drives; no configuration necessary. In addition, our proven NVMe RAID stack enables each controller to support multiple RAID arrays or mixed configurations of single disks and RAID storage.

RAID 10 (Security & Speed) - RAID 10 requires a minimum of 4 NVMe SSD's and is comprised of a stripe between two RAID 1 arrays. RAID 10 capable of delivering read performance on par with RAID 0, and is superior to RAID 5 for NVMe applications. Unlike RAID 5, RAID 10 doesn't necessitate additional parity related write operations, which reduce the TBW life span of NVMe SSDs.

RAID 0 (Speed) - Also known as a "stripe" array, this mode delivers Maximum Performance, and requires a minimum of 2 NVMe SSDs.

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

Key Benefits

- 8x M.2 Ports Double Storage Capacity – up to 64TB
- 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

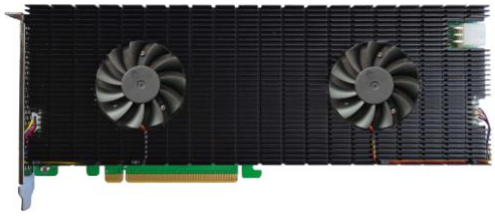
Universal Software Suite Easily Manages & Monitors RAID Storage

HighPoint's comprehensive NVMe management suite streamlines installation, service and upgrade workflows.

***OS-Level Management*:** The WebGUI is an intuitive graphical user interface designed to work with all modern Web Browsers.

The CLI(Command Line Interface) is ideal for seasoned administrators and platforms that do not utilize graphical operating systems.

***1-Click Self Diagnostic & Logging Service*:** The WebGUI's Diagnostic tab enables the interface to gather all necessary hardware, software and storage configuration data and compile it into a single file.

Product feature	SSD7140A
Product Image	
Bus Interface	PCI-Express 3.0 x16
Number of Channel / Port	8x M.2 NVMe port (up to PCIe 3.0 x4 per port)
Port Type	8x M.2 NVMe
Data Transfer Rate	8GT/s
Number of device	8x M.2 NVMe SSD
SSD Form Factor	2242/2260/2280 (supports single & double sided)
Form Factor	Full-Height
Card Dimensions	11.22"(W) x 4.37"(H) x 0.83"(D) / 1.70 lbs.
Card Weight	1.70 lbs.
Warranty	2 Years
Windows (only supports 64-bit operating system)	Windows 11, 10 Windows Server 2022, 2019, 2016 Microsoft Hyper-V
Linux (only supports 64-bit operating system)	RHEL/Debian/Ubuntu/Fedora/Proxmox/Rocky Linux(Linux kernel 3.10 and later)
macOS	macOS 10.13 ~ macOS Ventura 13.x
ARM Platform Support(NVIDIA model)	Yes (Linux)
System Requirements	**Mac Platforms:** • Apple Mac Pro Systems: 2012 and later Mac Pro systems; 5.1, 7.1 (2019) • Intel & Apple M1 Platform compatible
	PC Platforms: • Any PC Systems or Motherboard with an industry standard PCIe x16 physical Slot (Bifurcation is not required)
Secure Boot(PC platforms)	Windows: Supports Secure Boot enable or disabled Linux: Supports Secure Boot disabled
Cooling System	Full-length anodized aluminum heat sink with integrated cooling fans & thermal padding
Fan Control	Yes (Windows, Mac)

NVMe Configuration	
RAID Support	Single, RAID 0, 1, 10
TRIM RAID Support	Single, RAID 0, 1, 10
Data RAID(Non-Bootable)	Windows, Linux, Mac
Boot RAID	Windows: Not supported
	Linux: Not supported
	Mac: Bootable using one (non-RAID) M.2 SSD as the boot drive. Only supports up to macOS 10.15.
NVMe RAID Management	
Management Suites	WebGUI (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 & 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 (Windows, Linux, Mac)
Advanced RAID features	
Flash ROM for Upgradeable UEFI	No
Bootable RAID Array	No
Multiple RAID Partitions supported	Yes
Online Array Roaming	Yes
RAID Quick Initialization for fast array setup	Yes
Global Hot Spare Disk support	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	1x SSD7140A
	1x Quick Installation Guide
Optional Accessories	
HS8008F	Replacement cooling system for the SSD7140A

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