SSD7104F & SSD7101A-1 4x M.2 NVMe RAID Controllers Deliver Unbeatable PCIe Gen3 Storage Performance

October 2021 – Milpitas, CA – HighPoint launches the SSD7104F; a new PCIe 3.0 Gen4 4x M.2 NVMe RAID controller with an advanced cooling system and compact design, as a sister solution to our industry-proven SSD7101A-1 controller.
The SSD7104F and SSD7101A-1 now comprise a new product family known as the SSD710x Series.
SSD710x RAID controllers benefits from our performance-focused NVMe PCIe Gen3 hardware architecture. Designed to deliver uncompromised end to end x16 bandwidth, SSD710x controllers employ Smart-Switching technology, which is capable of allocating up to 4x dedicated lanes for each SSD to ensure maximum transfer speed and immediate response time.
The SSD710x Series are the industry's fastest PCIe Gen3 4-Port M.2 NVMe RAID controllers, and are capable of delivering up to 14,000MB/s of sustained transfer performance. The compact single-width, full-height controller cards can directly host up to four M.2 NVMe SSDs of any form factor (2242/2260/2280/22110) in one or more RAID 0, 1, and 10 configurations.

For Extreme Applications: Cross-Sync RAID Technology

Customers can link two SSD710x controllers to act as a single storage device. Cross-Sync technology can effectively double available storage capacity and deliver transfer speeds up to 28,000MB/s!
Cross-Sync is proprietary technology and is unique to HighPoint products and solutions. Cross-Sync combines two (or more) RAID controllers to act as a single device, which doubles the potential transfer bandwidth and storage capability. In order to maximize performance, the customer must have two free PCIe slots with required number of lanes.
For example, two SSD7101A-1 or SSD7104F NVMe RAID controllers can be combined using Cross-Sync to act as a single 8-port M.2 controller. This combination would require two dedicated PCIe 3.0 slots, each with x16 lanes.

Ultra-Efficient, Low-Noise Cooling Solution with Full Fan Control

The SSD7104F employs HighPoint's 2nd Generation Low-Noise Hyper-Cooling solution, which ensures hosted NVMe SSD's consistently operate within their recommended temperature thresholds, even under sustained heavy I/O. Originally developed for HighPoint's SSD7500 Series PCIe Gen4 RAI controllers, the Hyper-Cooling solution combines a full length anodized aluminum heat sink with an ultra-durable, near-silent fan, and high-conductivity thermal pad. 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.

Full Fan Control – the WebGUI management tool now provides 3 speed settings for the Hyper-Cooling system, including options to fully disable the fan for projects that require complete silence.
This feature is ideal for media and design applications that require low-noise or silent working environments, and platforms already equipped with robust cooling systems. Administrators can monitor temperatures of each NVMe SSD using HighPoint's SHI technology (Storage Health Inspector), which can track the state of individual devices via SMART attributes, and adjust fan speeds on the fly to keep temperatures in check.

Comprehensive OS Platform Support

Linux Distributions: A dedicated team of engineers proactively monitors and updates support for all major Linux distributions. Our innovative Auto Compile feature is now embedded directly into our open-source driver packages.

macOS Ready: SSD710x NVMe RAID controllers are fully compatible with Apple's 2019 Mac Pro workstation platform, and are macOS 11x ready.

Windows Platforms: Like the entire SSD7000 series product family, SSD710x controllers are fully compatible with current Windows operating systems including Windows 11, 10 and Server 2019.
Complete Fan Control

Advanced RAID Technology

SSD710x controllers utilize our advanced NVMe RAID engine to support RAID 0, 1, 10, and single-drive configurations. The controllers are capable of hosting multiple arrays, or mixed configurations of arrays and single SSDs.

RAID 0 (Striping) - Also known as a “stripe” array, this mode delivers Maximum Performance and capacity by linking multiple NVMe SSD's together to act as a single storage unit.

RAID 1 (Mirroring) - This mode creates a hidden duplicate of the target SSD, and is ideal for applications that require an extra layer of data security.

RAID 10 (Security & Speed) - RAID 10 offers the Best of Both Worlds. Two RAID 1 arrays are striped together to maximize performance. RAID 10 is 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 DWPD/TBW life span of NVMe SSDs.

Pricing and Availability

SSD710x NVMe RAID controllers are now shipping to our North American Reseller and Distribution partners.