HighPoint Technologies, Inc.

SSD7500 Series PCIe Gen4 x16

M.2 NVMe RAID Controllers

NVMe Solution

Cutting Edge, PCIe Gen4 NVMe RAID & Connectivity Solutions; Up to 8 Ports

Cutting-Edge PCIe Gen 4 x16 NVMe RAID Storage Performance

HighPoint's 7500 Series combine dedicated, cutting edge PCIe Gen 4 x16 host connectivity with our industry proven RAID technology to deliver unbeatable storage performance. The dedicated PCIe 4.0 x16 host interface enables each NVMe SSD to interface directly with the system CPU to ensure maximum transfer performance and near instant response time.

Truly Independent, Stand-Alone NVMe RAID Solution for both Intel & AMD Platforms

SSD7500 series controllers are truly independent NVMe RAID solutions; they do not require motherboard platforms with Bifurcation support, or any specialized software released by SSD manufactures; any AMD or Intel based system with a dedicated PCIe 4.0 x16 slot can now take full advantage of the industry's fastest storage solution. In addition, SSD7500 series controllers are fully backwards compatible with PCIe 3.0 platforms, enabling customers to take full advantage of advanced Gen 4 storage media without migrating to a new computing environment.

Bootable RAID Support for Windows and Linux

SSD7500 series NVME RAID controllers can be used to configure bootable RAID or single NVMe SSD configurations for Windows and Linux systems. Optional UEFI downloads and complete installation guides are available for each supported platform.

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 SSD's.

RAID 0 (Speed) - Also known as a "stripe" array, 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. RAID 1 is ideal for bootable volumes.

Comprehensive NVMe RAID Support

HighPoint 7500 Series NVMe RAID controllers will automatically recognize new NVMe SSDS's as single drives- no configuration necessary. In addition, our comprehensive NVMe RAID stack enables each controller to support RAID multiple RAID 0, 1 or 10 arrays, or mixed configurations of single disks and RAID storage.

New for Gen 4! Ultra-Efficient, Low-Noise Hyper-Cooling Solution

HighPoint's Low-Noise Hyper-Cooling solution was developed for Gen4 applications, and ensures your NVMe SSD's consistently operate within recommended temperature thresholds, even under sustained heavy I/O, by combining 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.

Comprehensive NVMe RAID Management Suite

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

The WebGUI is an intuitive graphical interface that works with any web browser, and is ideal for users of any skill level, while the CLI (command line interface) is a powerful, text-only interface designed for advanced users & professional administrators.

Both interfaces share universal layouts across all major operating systems, can be administered locally or remotely via an internet connection, and allow users to configure a real-time event log with email notification.

Key Benefits

- Dedicated PCIe 4.0 x16 direct to CPU NVMe RAID Solutions
- Truly Platform Independent
- 2 to 8 NVMe PCIe 4.0 devices
- PCIe Gen 3 Compatible
- Up to 32TB capacity per controller
- Low-Noise Hyper-Cooling Solution
- Integrated SSD TBW and temperature monitoring capability
- Bootable RAID Support for Windows and Linux
- SRIS/SNRS/Common Clock Architecture/Topology support

Suggested Applications

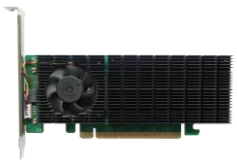
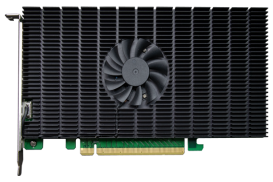
- Best Suited for Content processing Workstations that require up to 32TB of storage via a single device
- Best suitable for performance hungry Read-Intensive applications

SHI – Storage Health Inspector: **SHI** can help you track and monitor the status of drives hosted by the controller – it can report useful information about each NVMe SSD such as temperature, SMART status, and TBW (Terabytes Written)

nvm EXPRESS

Product feature	SSD7502	SSD7505	SSD7540
Bus Interface	PCI-Express 4.0 x16		
Number of Channel / Port	2x M.2	4x M.2	8x M.2
Data Transfer Rates	16GT / 16Gbps per lane		
Number of Devices	2x M.2 NVMe SSD	4x M.2 NVMe SSD	8x M.2 NVMe SSD
SSD Form Factor	2242/2260/2280 (supports single & double sided)	2242/2260/2280/22110 (supports single & double sided)	2242/2260/2280 (supports single & double sided)
Form Factor	Half-Height (Low-Profile)	Full-Height	Full-Height
Card Dimensions	6.57" (W) x 2.72" (H) x 0.80" (D)	7.68" (W) x 4.41" (H) x 0.81" (D)	11.22"(W) x 4.37"(H) x 0.83"(D)
Card Weight	0.82 lbs.	1.32 lbs.	1.70 lbs.
Cooling	Full length anodized aluminum heat sink with built-in Low-Noise fan	Full length anodized aluminum heat sink with built-in Low-Noise fan	Full length anodized aluminum heat sink with built-in Low-Noise fans
Windows Support	Windows 11 and 10, Windows Server 2022/Server 2019/Server 2016/Server 2012 R2, Microsoft Hyper-V		
Linux Support	Linux Kernel 3.10 or later		
macOS Support	macOS 12 Monterey macOS 11 Big sur macOS 10.15 Catalina macOS 1014 Mojave macOS 10.13 High Sierra		
PC Platform Support	• Any PC or Motherboard with an industry standard PCIe x16 physical Slot (Bifurcation is not required). *Note: PCIe 4.0 required for maximum performance.* • Thunderbolt™ 3 Connectivity (requires a PC platform with a Thunderbolt 3 port) & Thunderbolt™ Expansion chassis: RocketStor6661A	• Any PC or Motherboard with an industry standard PCIe x16 physical Slot (Bifurcation is not required). *Note: PCIe 4.0 required for maximum performance.* • Thunderbolt™ 3 Connectivity (requires a PC platform with a Thunderbolt 3 port) & Thunderbolt™ Expansion chassis: RocketStor6661A	• Any PC or Motherboard with an industry standard PCIe x16 physical Slot (Bifurcation is not required). *Note: PCIe 4.0 required for maximum performance.*
Mac Platform Support	• 2012 and later Mac Pro systems; 5.1, 7.1 (2019) / *Note: PCIe 4.0 required for maximum performance* • Apple M1 Platform compatible • Thunderbolt™ 3 Connectivity via Thunderbolt™ Expansion chassis: RocketStor6661A	• 2012 and later Mac Pro systems; 5.1, 7.1 (2019) / *Note: PCIe 4.0 required for maximum performance* • Apple M1 Platform compatible • Thunderbolt™ 3 Connectivity via Thunderbolt™ Expansion chassis: RocketStor6661A	• 2012 and later Mac Pro systems; 5.1, 7.1 (2019) / *Note: PCIe 4.0 required for maximum performance* • Apple M1 Platform compatible
NVMe Configuration	**SSD7502**	**SSD7505**	**SSD7540**
RAID Support	Single, 0, 1	Single, 0, 1, 10	Single, 0, 1, 10
TRIM RAID Support	Single, 0, 1	Single, 0, 1, 10	Single, 0, 1, 10
Storage Mode - NVMe	Bootable & Data RAID	Bootable & Data RAID	Data RAID

HighPoint SSD7500 Series Gen 4 Series NVMe RAID Controllers

NVMe RAID Management	SSD7502	SSD7505	SSD7540
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		
Cross-Sync RAID Solution Across Controllers	Yes		
Operating Environment	**SSD7502**	**SSD7505**	**SSD7540**
Work Temp	+5°C ~ + 55°C		
Storage Temp	-20°C ~ +80°C		
Operating Voltage	PCI-e: 12V, 3.3V	PCI-e: 12V, 3.3V	PCI-e: 12V, 3.3V
Power	Typical: 15.48W	Typical: 16.44W	Typical: 17.28W
MTBF	920,585 Hours		
Certification / Approval	CE, FCC, RoHS, REACH, WEEE		
Kit Contents	**SSD7502**	**SSD7505**	**SSD7540**
	1x SSD7502	1x SSD7505	1x SSD7540
	QIG, Low-Profile bracket	QIG	QIG
SSD7500 Series			
Product Image			

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