



SSD7110

3x dedicated M.2 Ports & 4x SFF-8643 SAS/SATA ports to PCIe 3.0 x16 RAID Controller



Hybrid Connectivity - M.2 + SAS/SATA Ports, All in-One-RAID Controller

Equipped with three M.2 NVMe ports and four SFF-8643 Connectors, the SSD7110 can host blazing fast NVMe RAID storage and up to 16 SAS or SATA hard drives for high-density configurations. This unique approach to secondary storage expansion makes the SD7110 ideally suited for applications that require Hot and Cool RAID Storage in an All-in-One solution. The SSD7110 is capable of supporting up to 160TB of storage capacity, including up to 140TB in a dual-parity redundant RAID 6 configuration, in addition to 6TB of high-speed NVMe storage.

Dedicated PCIe 3.0 x16 Shatters the DMI Performance Bottleneck

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, SSD7100 series RAID Controllers feature dedicated PCIe 3.0 x16 bus bandwidth. This unique architecture allows each SSD 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 SSD7110 is not tethered to specific motherboards or chipset families. Its unique controller architecture supports both hot and cold storage configurations, and is ideal for Rackmount Storage applications such as Rendering Servers or local Storage Servers that require high speed data processing and mass storage capability in a single solution.

Comprehensive NVMe Booting Solution

The SSD7110 can support a variety of NVMe-based boot configurations. Customers can configure up to three M.2 SSD's to act as individual drives

(single/JBOD), and setup each to act as a separate boot volume. In addition, customers can configure two types of bootable RAID arrays; RAID 0 for maximum performance, or RAID 1 for security.

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. 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.

Maximizing Your NVMe RAID Performance

HighPoint understands that determining the ideal PCIe configuration to maximize NVMe storage performance isn't always easy. We are dedicated to the customer experience – our goal is to make NVMe storage expansion as quick, painless and intuitive as possible for users of any experience level. Our continuous R&D enables us to identify the ideal PCIe configuration for a wide range of motherboard platforms to ensure customers are able to optimize their NVMe SSD storage configurations, regardless of application.

NVMe RAID Management with Integrated TRIM & S.M.A.R.T. Monitoring with TBW Tracking

NVMe Manager features TRIM support, and S.M.A.R.T. 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. S.M.A.R.T monitoring allows you to check a variety of physical attributes of each NVMe M.2

Key Benefits

- Dedicated PCIe 3.0 x16 bus bandwidth
- 3x M.2 NVMe ports
- 4x SFF-8643 ports support up to 16 SAS/SATA hard drives
- Over 8X faster than NVMe storage locked behind Intel DMI 3.0
 - NVMe Bootable JBOD and RAID Support
- Real-world NVMe RAID performance: over 8,000MB/s
- Real-world SAS/SATA RAID performance: over 5,000MB/s (SSD) / 3,000MB/s (HDD)
- Supports Windows & Linux Systems

Suggested Applications

- Rackmount Servers
- Rendering Systems

SSD, including temperature readings, voltage and TBW.



Integrated 16-Drive SAS/SATA RAID Storage Solution

In addition to the three 2280 M.2 NVMe ports, each SSD7110 RAID Controller features four SFF-8643 connectors, each of which can support up to four SAS/SATA Enterprise or RAID class hard drives, and up to 160TB of storage capacity. The SSD7110's unconventional hybrid combination of high-speed M.2 support with truly massive storage expansion capability is well suited to a variety of storage applications. Integrated SAS/SATA RAID technology allows the SSD7110 to support RAID 0, 1, 5, 6, 10, 50 & JBOD RAID configurations, in addition to non-RAID single disk mode.

Feature Specifications	
Bus Interface	PCI-Express 3.0 x16
Number of Channel / Port	3* 2280 M.2 NVMe ports (Dedicated PCIe 3.0 x4 per port)
Data Transfer Rates:	8GT per lane / 8Gbps per lane
Number of Devices	<ul style="list-style-type: none"> • 3x M.2 NVMe SSD • 16x SAS/SATA Drive
Form Factor	Full Height
Product Dimensions	5.97" x 2.68" x 0.06"
Product Weight	0.77 lbs.
Operating System Support	Windows 10 64-bit, Linux Kernel 3.3 or later
Cooling Fan	Aluminum casing with single 50mmx50mm cooling fan
NVMe Configurations	
RAID Mode Support	Single, RAID 0, 1, 5* (Mac support available in July 2018)
TRIM RAID Support	Windows: Single, RAID0, 1 Linux: Single, RAID0, 1
Storage Mode - NVMe	Bootable & Data RAID
NVMe RAID Management	
RAID Management Suites	Browser-Based management tool
	CLI (Command Line Interface- scriptable configuration tool)
	API package
SMTP Email Alert Notification	Yes
Storage Health Inspector	Yes
NVMe SMART status	Yes
Global Hot Spare Disk support	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	
Working Temp:	+5°C ~+ 55°C
Storage Temp:	-20°C ~ +80°C
Operating Voltage	PCI-e: 12V, 3.3V
Power	Typical: 8W
MTBF (Mean Time Before Failure)	920,585 Hours
Certification / Approval	FCC, CE, ROHS & REACH
SAS Configuration	
SAS Port	16 internal SAS 12Gb/SATA 6Gb Ports (4* SFF-8643 Connector)
RAID Level Support	0, 1, 5, 6, 1/0**, 50 and JBOD / Non-RAID Mode
SAS Enclosure Management Interface	SGPIO

*RAID 5 does not support TRIM

Advanced SAS RAID Features	
Storage Health Inspector (SHI)	Yes
Redundant RAID Configurations	Yes
Multiple RAID Partitions supported	Up to 4
Storage Configurations	Direct Attached
Online Array Roaming	Yes
Online RAID Level Migration (ORLM)	Yes
Online Capacity Expansion (OCE)	Yes
RAID Quick Initialization for fast array setup	Yes
Drive hot-plug support	Yes
Global Hot Spare Disk support	Yes
Automatic and configurable RAID Rebuilding Priority	Yes
Auto resume incomplete Rebuilding after power on or reboot system	Yes
Disk Format compatible:	512, 512e, 4Kn
Larger than 2 TB Drive and RAID Array support	Yes
Spin down Massive Arrays of Idle Disks support	Yes
Native Command Queuing	Yes
SAS TCQ	Yes
Disk media scan and repair	Yes
Device Error Recovery support	Yes
Automatic remap and fix drive bad block for RAID array	Redundant RAID Levels (RAID 1, 5, 6, 1/0, 50)
Staggered Drive Spin Up	Yes (Spin up 4 disk every 2s)
Write Back and Write Through	Yes

Packaging	
Retail Box Dimensions	13.38" L x 7.68" H x 2.76"
Retail Box Weight	1.29 lbs.
Kit Contents	1x SSD7110 RAID Controller 1x Quick Installation Guide
Optional Accessories	
	8643-4SAS-1M - 1M SFF-8643 SAS to 4x SFF-8482 SAS cable The 8643-4SAS-1M cable is designed for use with the SSD7110, RocketRAID 3740A and RocketRAID 840A RAID controllers, and has been tested with a wide range of enterprise and Pro-NAS class SAS hard drives up to 14TB in capacity.
	8643-4SATA-1M - 1M SFF-8643 SAS to 4x SATA cable The 8643-4SATA-1M cable is designed for use with the SSD7110, RocketRAID 3740A, RocketRAD 2840A and RocketRAID 840A RAID controllers, and has been tested with a wide range of cost-effective SATA hard drives up to 14TB in capacity.

HighPoint Headquarters
 Phone 1-408-942-5800
 Fax 1-408-942-5801
 E-mail sales@highpoint-tech.com
 Website www.highpoint-tech.com
 Address 41650 Christy St. Fremont
 CA, 94538

HighPoint Taiwan
 Phone + 886-2-2218-3435
 Fax + 886-2-2218-3436
 E-mail sales@highpoint-tech.com
 Website www.highpoint-tech.com
 Address 5F., No.3, Swei Lane, Jhongjheng
 Rd., Sindian District, New Taipei City
 23148, Taiwan (R.O.C.)

HighPoint China
 Phone + 86-10-6213-0920
 Fax + 86-10-6897-5074
 E-mail sales@highpoint-tech.com
 Website www.highpoint-tech.cn
 Address 4th Floor Kehaifulin Building,
 NO. 12 Zhong Guan Cun South
 Rd, Aidian District Beijing
 China 100081

