



## SSD7184

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



### The Industry's Most Flexible 8-Port NVMe RAID HBA

#### Massive Storage Capacity & Performance

The SSD7184 is the industry's first 8-Channel Hybrid Internal/External PCIe 3.0 NVMe RAID controller. This unique port configuration allows the SSD7184 to support both internal and external storage configurations; ideal for compact platforms that require a built-in option for storage expansion or the flexibility of a removable/portable storage device. The 4x SFF-8643 connectors can support up to 4 internal U.2 drives, while the external SDD-8644 ports were designed for use with external NVMe storage enclosures, such as our SSD6500 series.

#### Performance Focused, Platform Independent NVMe RAID Solution

HighPoint NVMe RAID controllers are fully independent NVMe storage solutions. SSD7000 series PCIe Gen3 NVMe RAID HBAs do not require a hardware environment with Bifurcation support and can be easily integrated into any AMD or Intel computing platform with a dedicated PCIe 3.0 or 4.0 x16 slot. The SSD7184 leverages intelligent PCIe switch technology to allocate up to 4x dedicated lanes to each NVMe SSD to ensure maximum transfer speed and immediate response time.

#### Flexible 2.5" U.2 Form Factor

The U.2 ports provide customers with a great deal of flexibility when selecting an appropriate hardware platform and are compatible with a wide selection of 2.5" form-factor rackmount chassis. In addition, the industry standard SFF-8639 connector accepts cables of varying length, which allow the SSD7184 RAID HBA to be easily integrated into custom chassis designs. The external SFF-8644 connector was designed for use with HighPoint NVMe RAID enclosures

This design simplifies field upgrades and maintenance sessions, and is ideal for chassis that require removable drive trays for quick access to storage devices.

#### Versatile Cabling Options

The SSD7184's works with a variety of industry standard connectors – not just SFF-8639, which is employed directly by U.2 media. We offer a selection of cabling accessories capable of supporting a wide range of storage configurations, including SFF-8643 connections and SFF-8611 Oculink backplanes.

This allows the SSD7180 to support any industry standard U.2 or M.2 NVMe SSD. The SFF-8644 connector was designed for use with the RocketStor 6540 and 6444 series NVMe Enclosures.

#### Industry Proven NVMe RAID Technology

HighPoint 7000 Series NVMe RAID controllers will automatically recognize new NVMe SSDs' as single drives- no configuration necessary. In addition, our comprehensive NVMe RAID stack enables each controller to support multiple RAID 0, 1 or 10 arrays, or mixed configurations of arrays and single disks.

**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 SSD's.

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

#### Universal Software Suite Easily Manages & Monitors RAID Storage

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

#### Key Benefits


- Platform Independent PCIe 3.0 x16 NVMe RAID Solution for AMD & Intel Platforms
- Hybrid Internal/External NVMe RAID Solution
- 8x U.2 NVMe SSDs
- Over 120TB of storage capacity
- M.2 compatible (host platform must have compatible backplane)
- Versatile Cabling Solutions: SFF-8639, SFF-8643 & SFF-8611 (Oculink), & SFF-8644
- Comprehensive RAID Storage Solution: RAID 0, 1, 10 and single-disk
- Supports all major operating system platforms: Windows, macOS, Linux
- Flexible, Modular Cooling solution

**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	SSD7184
Product Image	
Bus Interface	PCI-Express 3.0 x16
Number of Channel / Port	Up to PCIe 3.0 x4 per port: 4x SFF-8643 Mini-SAS HD 4x SFF-8644 Mini-SAS HD
Number of Devices	8x U.2/U.3 or M.2
Data Transfer Rate	8GT/s
SSD Form Factor	2.5" U.2/U.3 (M.2 support depends upon system backplane)
Form Factor	Half-Height (Low-Profile)
Card Dimensions	6.55" (W) x 2.71"(H) x 0.83" (D)
Card Weight	0.95 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	<p><b>Mac Platforms:</b></p> <ul style="list-style-type: none"> <li>• Apple Mac Pro Systems: 2012 and later Mac Pro systems; 5.1, 7.1 (2019)</li> <li>• Intel &amp; Apple M1 Platform compatible</li> </ul> <p><b>PC Platforms:</b></p> <ul style="list-style-type: none"> <li>• Any PC Systems or Motherboard with an industry standard PCIe x16 physical Slot (Bifurcation is not required)</li> </ul>
Secure Boot(PC platforms)	Windows: Supports Secure Boot enable or disabled Linux: Supports Secure Boot disabled
Cooling System	Anodized aluminum heat sink with integrated cooling fan & thermal padding
Fan Control	Yes (Windows, Mac)

<b>NVMe Configuration</b>	
RAID Support	Single, RAID 0, 1, 10
TRIM RAID Support	Single, RAID 0, 1, 10
Data RAID(Non-Bootable)	Windows, Linux, Mac
<b>NVMe RAID Management</b>	
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)
<b>Advanced RAID features</b>	
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
<b>Operating Environment</b>	
Work Temp	+5°C ~ + 55°C
Storage Temp	-20°C ~ +80°C
Operating Voltage	PCI-e: 12V, 3.3V
Power	Typical: 7.13W
MTBF (Mean Time Before Failure)	920,585 Hours
Certification / Approval	CE, FCC, RoHS, REACH, WEEE
Kit Contents	1x SSD7184
	1x Quick Installation Guide
	1x Low-Profile bracket

### Versatile Cable Solutions

#### SSD7180 - 8x PCIe 3.0 8x SFF-8643 ports (low-profile)

The SSD7180 is the industry’s first 8-Channel dedicated PCIe 3.0 x16 U.2 NVMe RAID controller for macOS, Linux and Windows platforms.

The industry standard SFF-8643 connectors are compatible with a wide selection of 2.5” form-factor server chassis available in today’s marketplace and accept cables of varying length, which allow the SSD7180 RAID controller to be easily integrated into custom built hardware environments.



<p><b>8643-8643-0350 / 8643-8643-060</b></p> 	<p>SFF-8643 NVMe Host to SFF-8643 NVMe HD-Mini-SAS Device (U.2) cables</p> <p>Length: 13.78" (35cm) / 23.62" (60cm)</p>	<p><b>8644-8644-210 / 8644-8644-220</b></p> 	<p>External SFF-8644 to SFF-8644 cables</p> <p>Length: 39.37" / 6'6" (1M / 2M)</p>
<p><b>8643-8639-50</b></p> 	<p>SFF-8643 to SFF-8639 NVMe HD-Mini-SAS Device (U.2) cable, with Power Connector</p> <p>Length: 19" (50cm)</p>	<p><b>OLX4-8643-061</b></p> 	<p>SFF-8643 NVMe Host to Oculink backplane cable</p> <p>Length: 23.62" (60cm)</p>