

HighPoint's SSD7580B is the Industry's Fastest NVMe RAID Controller with True Hot-Swap & Hot-Plug Capability

HighPoint's SSD7580B Simplifies Service and Upgrade Workflows with True Hot-Swap & Hot-Plug Capability!

The SSD7580B is the industry's fastest single-card PCIe Gen4 NVMe RAID Solution. The dedicated PCIe 4.0 x16 host interface and 8 independent device channels are capable of supporting over 100TB of [hot-swappable](#) NVMe storage, at speeds up to 28,000MB/s!

The compact, half-height form factor can be easily installed into nearly any industry standard PC-based server, workstation and rackmount platform running Windows and Linux based operating systems.

Like other members of the SSD7500 series product family, the SSD7580B is well equipped to tackle an immense range of high-performance applications including AI training and analysis, high-speed data acquisition and security solutions, scientific modeling and imaging systems, 3D rendering and design, and HD media production and editing platforms.

In addition, a wide selection of flexible cabling options is available for the SSD7580B, which enable the controller to host both RAID, non-RAID, and mixed configurations of U.2 or M.2 NVMe SSDs, via SFF8639, SFF-8643 and SFF-8611 backplanes.

The Challenge: Field Serviceability

One of NVMe technologies biggest hurdles is field serviceability. Physically upgrading, maintaining or replacing NVMe media can be a tedious and time-consuming process.

Though considerably slower than NVMe media, and far less reliable due to the number of moving parts, SAS-based hard disk drive storage remains the solution of choice for many enterprise server applications. One major advantage `SAS hardware has had over NVMe storage is the ability to add or replace drives on the fly without having to reboot or power down the host platform. Even basic, entry level non-RAID SAS controllers feature some level of hot-plug capability.

Conversely, most NVMe controllers in today's marketplace offer no hot-swap or hot-plug features at all; in order to add replace an NVMe SSD, the host system has to be fully powered down. More recent solutions support Hot-Replacement; the ability to "add" drives for specific tasks. For example, an unused NVMe SSD that is already connected to the controller, but in standby mode, could be used to rebuild an array in some situations. However, a reboot is still required – unlike the vast majority of SAS/SATA based solutions, the host operating system will not recognize NVMe related hardware changes until the system has been restarted. That is, until now.

The Solution: HighPoint's SSD7580B Simplifies Field Service Workflows with True Hot-Swap & Hot-Plug Capability

SSD7580B controllers combine the flexible serviceability of SAS/SATA solutions with the performance and reliability of enterprise U.2 storage.

HighPoint SSD7580B is a real game changer. Armed with 8 independent device ports, a dedicated PCIe 4.0 x16 host connectivity and powered by our industry leading RAID technology, the SSD7580B is the fastest NVMe RAID controller in today's public marketplace.

And unlike the majority of NVMe storage solutions, the SSD7580B's [hot-plug and hot-swap](#) support works exactly like you expect it to; it effectively eliminates the need to power down or reboot a system in order to add or remove NVMe SSDs.

The SSD7580's true Hot-Plug and Hot-Swap capability enable customers to add or remove one or more drives on the fly, as necessity demands. This includes RAID and single-drive configurations. The controller will notify the system of any changes in real time – no reboot required!

Flexible Connectivity Architecture: The SSD7580B's Hot-Plug capability 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 PCIe Gen4 cabling

accessories capable of supporting hot-swappable storage configurations, including SFF-8643 NVMe and SFF-8611 Oculink backplanes. This allows the SSD7580B to support any industry standard U.2 or M.2 NVMe SSD. At just 2.27" tall and 6.5" long, the SD7580B's compact single-width form factor enables it to be installed into a wide range of industry standard Server, Rackmount and Workstation platforms.

Industry Proven PCIe Gen4 NVMe RAID Technology with Boot Capability

The SSD7580B NVMe RAID controllers is powered by our comprehensive PCIe Gen4 NVMe RAID stack, and is capable of supporting one or more RAID 0, 1 or 10 arrays, or mixed configurations of arrays and single disks. SSDs In addition, the SSD7580B can be configured to host bootable RAID arrays and single SSDs for Windows and Linux-based platforms.

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 SSDs to configure.

Robust Management & Monitoring Suite Simplifies Fieldwork and Maintenance workflows – from the initial setup through long-term maintenance

HighPoint believes that you should not need a professional IT background to configure, monitor and maintain NVMe and RAID storage configurations. The SSD7580B includes comprehensive suite of [graphical and command-line based management and monitoring tools](#) suitable for administrators of any experience level.

The **WebGUI** is a simple, intuitive graphical user interface designed to work with all modern Web Browsers. It is equipped with Wizard-like quick configuration menus as well as a suite of advanced tools for expert administrators.

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

The WebGUI's **SHI Feature** (Storage Health Inspector) allows administrators to instantly check the operating status of storage devices in real-time. SHI utilizes SMART technology to log and report the physical characteristics of each NVMe SSD, such as temperature, voltage and TBW (Total Bytes Written).

TBW tracking in particular, is essential for maintaining the long-term health of NVMe storage configurations. NVMe media have finite write capability; once the TBW threshold has been reached, the NVMe SSD should be replaced to avoid the risk of a write failure. SHI combined with native hot-swap capability enables administrators to replace NVMe media on the fly, without having to power down or reboot the host platform.

Online Array Roaming - The SSD7580B's [Online Array Roaming](#) capability simplifies upgrade and replacement procedures, as customers can migrate SSDs from one controller to another, without having to start from scratch or recover an array. The controller is also capable of recognizing arrays created with other SSD7000 and SSD7500 series controllers, even if the SSDs are moved to different ports.

Intelligent 1-Click Self-Diagnostic Solution: HighPoint's Web-based graphical management suite (WebGUI) now includes a host of automated diagnostic tools designed to streamline the troubleshooting process, even for novice administrators. Customers no longer have to manually assemble a collection of screenshots, logs and status reports when submitting support inquiries. 1-click enables the interface to gather all necessary hardware, software

and storage configuration data and compile it into a single file, which can be transmitted directly to our FAE Team via our Online Support Portal.

Pricing and Availability

The SSD7580B is set to launch towards the middle of March 2022, and will be available direct from the HighPoint Estore, and our official North American Distribution and Retail partners.

SSD7580B – 8-Port PCIe 4.0 M.2/U.2 Drive Controller: MSRP USD\$1199.00

Learn More

[SSD7580B NVMe Host RAID Controller](#)

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