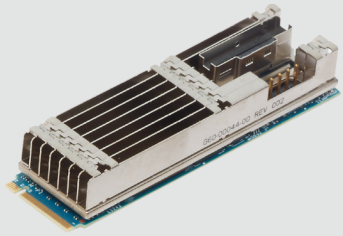


Product Brief



Key Features

- M.2 2280 form factor
- x4 PCIe Gen 4.0 host interface
 - Supports x4, x2, x1 PCIe lanes at a transfer rate up to 16.0GT/s per lane, full duplex
 - Lane and polarity reversal
- Tri-Mode storage interface
 - 12Gb/s SAS
 - 6Gb/s SATA
 - Gen 4.0 NVMe
- Hardware secure boot
- Universal Backplane Management (UBM) ready
- RAID levels 0, 00, 1, 10
- SFF-9402 compliant connector

MegaRAID™ 9524-8i PCIe Gen 4.0 Adapter

PCIe 4.0 x4, 8-Port SAS/SATA/NVMe M.2 Form Factor Adapter

Overview

The MegaRAID™ 9524-8i adapter provides a reliable storage-solution-based I/O controller. Using the **SAS3808N Tri-Mode IOC**, the 9524-8i adapter is optimized for protected boot and motherboard SATA applications. By taking advantage of the unified Broadcom® tool suite, users familiar with the Broadcom standard RAID and HBA controllers can easily integrate the 9524-8i adapter into their existing management application suite.

Leveraging the MegaRAID iMR entry RAID firmware, the 9524-8i supports JBOD mode and RAID 0, 00, 1, 10 without requiring the Reserved Memory Region Reporting (RMRR) structure. In other words, upon startup the 9524-8i does not claim host memory for the RAID functions and other background operations. Due to security concerns, platform limitations on using RMRR are always increasing, so the 9524-8i instead uses the SAS3808N on-chip memory to carry out the RAID and other necessary operations. Using the on-chip memory allows for easier integration into system architectures that do not have a memory reservation capability to support a traditional iMR solution.

The 9524-8i is a x4 PCIe Gen 4 adapter in the M.2 form factor. Designed to fit into any motherboard M.2 slot supporting M.2 2280 drives, it enables up to eight SAS/SATA drives or two NVMe drives. Using the same SFF-TA-8644 (SlimSAS) storage connector and pinout as other SAS39xx/SAS38xx generation cards, customers can leverage their current cabling infrastructure for this adapter.

Tri-Mode SerDes Technology

The Broadcom Tri-Mode SerDes technology enables the operation of NVMe, SAS, or SATA storage devices in a single drive bay. A single adapter can operate in all three modes concurrently servicing NVMe, SAS, or SATA drives. The adapter negotiates between speeds and protocols to seamlessly work with any of the three types of storage devices.

Hardware Secure Boot

The onboard controller incorporates advanced security through hardware secure boot. The hardware secure boot feature permits only authenticated firmware to execute on the adapter. The internal boot ROM on the controller establishes an initial root of trust (RoT). Hardware secure boot authenticates and builds a chain of trust (CoT) with succeeding firmware images using the RoT. This CoT means that only authorized firmware is executed on the adapter. Broadcom provides the signed firmware images, which make the use of hardware secure boot transparent to customers and also provide confidence in the security of the solution.

Broadcom Storage

Broadcom enables high-performance storage connectivity and flexible system designs that support various combinations of SAS, SATA, and NVMe devices. Broadcom offers the industry’s broadest portfolio of storage solutions, backed by decades of experience and trusted by the world’s leading server and storage suppliers. Broadcom provides the building blocks for storage solutions that help customers understand, prioritize, store, and protect critical data.

MegaRAID 9524-8i Adapter

Feature	9524-8i	
Connectors	One SFF-TA-8654	
Host Interface	x4 PCIe Gen 4.0	
Storage Interface	6Gb/s SATA, 12Gb/s SAS, Gen 4.0 NVMe (x1, x2, x4) See the <i>HBA and MegaRAID Adapter Compatibility Reports</i> for the latest drive interoperability information at techdocs.broadcom.com/us/en/storage-and-ethernet-connectivity/adapter.html .	
RAID Levels	0, 00, 1, 10	
Drives per Controller	Eight SAS/SATA or two NVMe	
RAID Features	<ul style="list-style-type: none">• Online capacity expansion (OCE)• Auto resume after loss of system power during array rebuild or OCE• Fast initialization for quick array setup• Consistency check for background data integrity• SSD support with SSD Guard™ technology	<ul style="list-style-type: none">• Patrol read for media scanning and repairing• DDF-compliant Configuration on Disk (COD)• S.M.A.R.T. support• Shield state drive diagnostic technology• MegaRAID SafeStore™ software for SED key management
Management Utilities	<ul style="list-style-type: none">• LSI Storage Authority (LSA)• StorCLI (command-line interface)• HII (UEFI Human Interface Infrastructure)	
OS Support	Microsoft Windows, VMware® vSphere/ESXi, Red Hat Enterprise Linux, SuSE Linux, Ubuntu Linux, Citrix XenServer, CentOS Linux, Debian Linux, Oracle Enterprise Linux, Fedora, FreeBSD. See www.broadcom.com/support/download-search for details on versions.	
Dimensions	M.2 2280 (22 mm x 80 mm) Top Maximum: 13.3 mm Bottom Maximum: 1.5 mm	
Operating Conditions	Operating: 0°C to 55°C, 5% to 90% non-condensing Storage: -40°C to 70°C, 10% to 90% non-condensing	
Typical Power	6.0W	
Airflow Requirements	150 LFM @ 55°C	
Operating Voltage	3.3V	
MTBF (Calculated)	>5,000,000 hours at 40°C	
Hardware Warranty	3 years	

Ordering Information	9524-8i
Single Pack	05-50170-00