

Have You Met the Adaptec® SmartRAID 3258-32i/e RAID Adapter?

The amount of data created, stored, and consumed is now being captured in double-digit zettabytes (ZB). Fortunately, the removal of ecosystem barriers provides momentum for the rising popularity of NVMe™ Solid State Drives (SSDs). This provides the latest tri-mode storage adapters with non-disruptive ways to evolve existing data center infrastructure, adding capacity and performance without making major changes in system configurations.



RAID-Enabled Tri-Mode SAS/SATA/NVMe Server Storage Solution

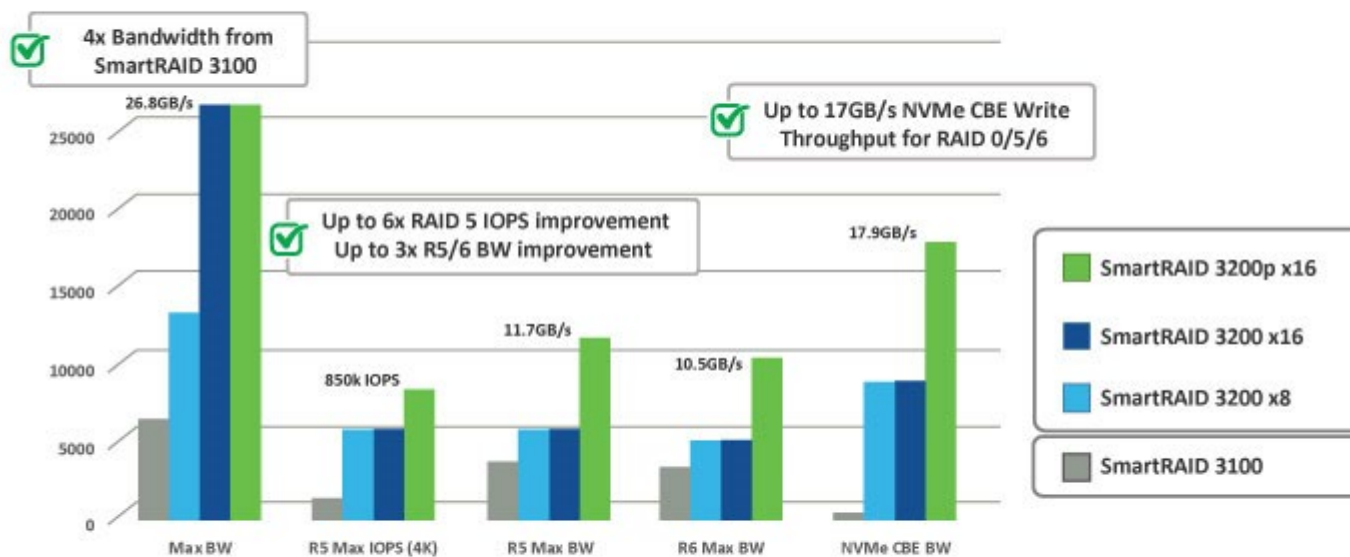
How many emails, tweets, Facebook, Instagram, LinkedIn or WhatsApp messages have you viewed today? How many minutes have you spent watching TikTok or YouTube videos or listening to podcasts? Multiply that by the world's population doing the same and you quickly realize how digital information has become entrenched in our everyday lives and how massively the creation and consumption of data is growing every year.

Data centers are asked to do more and more each day—retrieve content instantaneously, reliably perform various workloads and securely store data until it is needed—all without significant advancements in technology or upgrades in infrastructure...until recently.

With ecosystem advancements for NVMe in SSDs and our line of industry-first [PCIe Gen 4 24G SAS tri-mode Adaptec® SmartRAID adapters](#), data centers can deliver even more performance and connectivity options required by application demands. These adapters are built on our proven fifth-generation storage controller, the [SmartROC 3200](#). They are the most reliable, versatile and secure full-featured RAID-enabled tri-mode SAS/SATA/NVMe server storage performance solutions on the market specifically designed for next-generation architecture.

Adaptec tri-mode storage adapters support any combination of NVMe, SAS and SATA devices, offering the scalability and flexibility to upgrade current SAS/SATA data center deployments without major changes to other system configurations or downtime. The addition of NVMe offers huge storage performance gains and benefits by providing connectivity and data protection with higher bandwidth and

IOPS compared to the previous generations. There is also endless design flexibility with tri-mode adapters to enable 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, negotiating between the speeds and protocols to seamlessly work with any of the three types of storage devices.

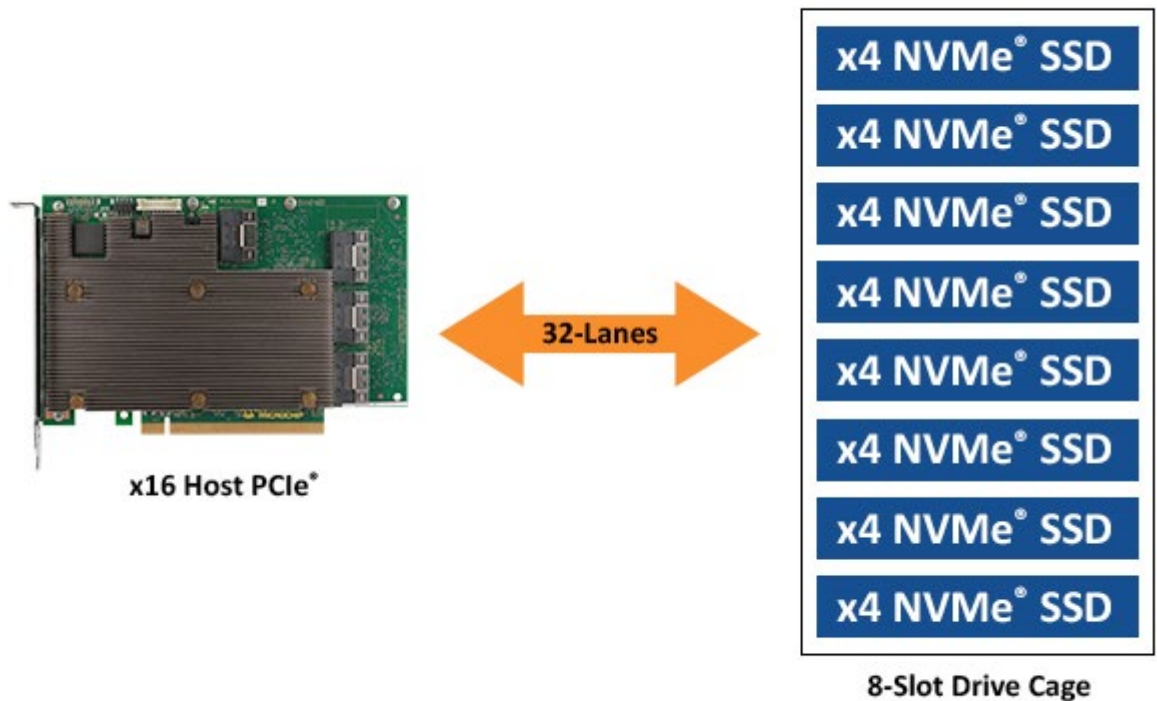


Unparalleled in the industry, our Adaptec SmartRAID Ultra 3258-32i/e RAID adapter provides superior performance and flexibility with a ×16 PCIe® Gen 4 host interface with 32 media-facing ports, the highest port density in the industry. This 32-port scale enables you to deploy just one Microchip adapter where other solutions require multiple adapters for the same connectivity. This adapter supports internal tri-mode connectivity and is specifically designed and ready to deploy for the most demanding NVMe and multi-port SAS SSD applications.

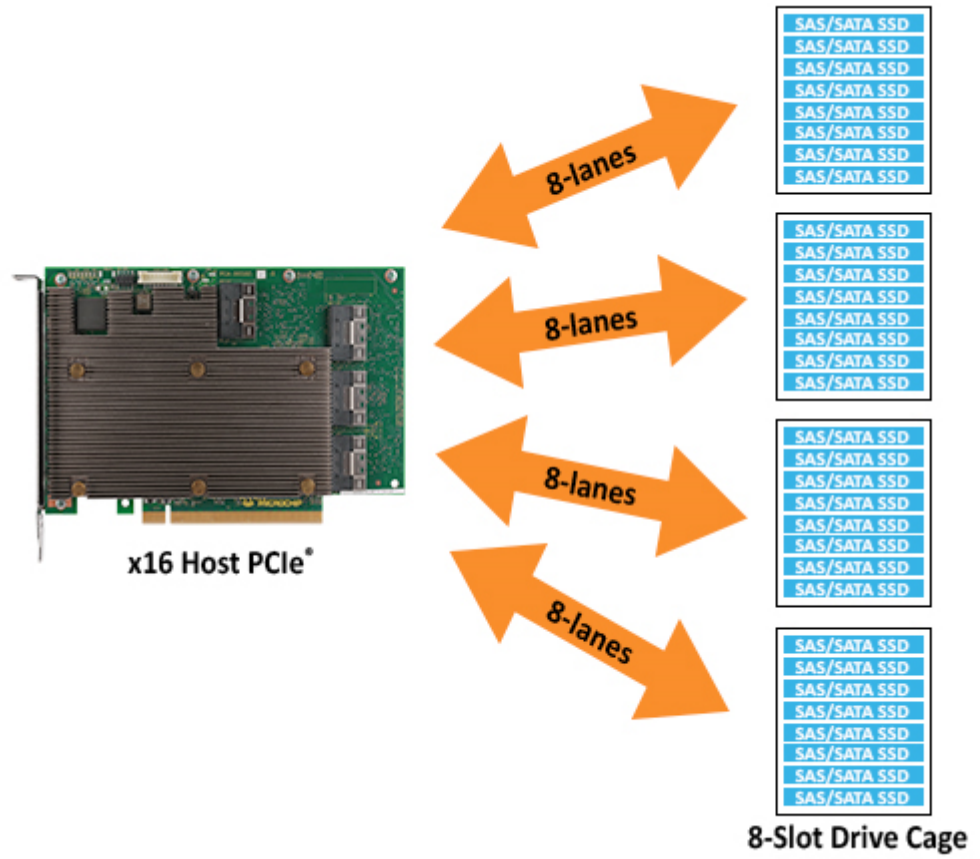
The SmartRAID Ultra 3258-32i RAID Adapter Offers:

- The industry's only PCIe Gen 4 RAID adapter with 32 ports
- The same connectivity as two 16-port cards, reducing the need for extra hardware and cabling and lowering the cost

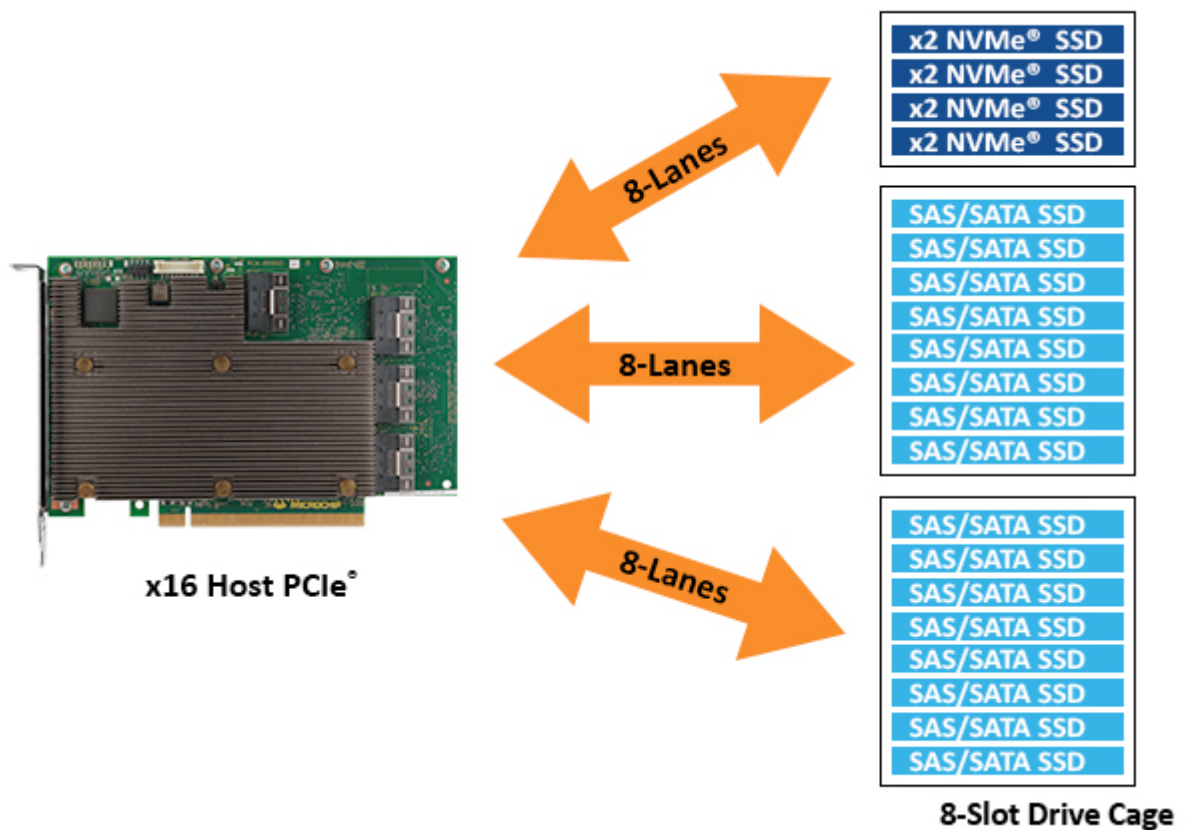
- ×16 PCIe Gen 4 host interface that doubles bandwidth to host
- Leading storage performance with 3.5M Random Read IOPs/144b DDR4 option to enable 850k RAID5 IOPS and 29.6 GB/s bandwidth
- A superior power consumption-to-performance ratio that makes it an excellent choice for any SAS/SATA/HDD/SSD system
- Excellent thermal concept and design which allows for similar usage models of 12G SAS/SATA adapters
- An optimal solution for high bandwidth NVMe and high fanout SAS/SATA uses with a single adapter
- Single adapter support for high-density NVMe and SAS/SATA storage applications to reduce client cost
 - Up to 32 SATA or SAS devices directly to the adapter
 - Up to eight ×4 NVMe devices directly to the adapter



One adapter delivers maximum performance to eight ×4 NVMe SSDs in single standard drive cage.



One Adapter delivers maximum fanout for 32 SAS/SATA devices across four standard drive cages



One adapter delivers maximum performance for a mix of NVMe and SAS/SATA SSDs.

Ready to Use

All our SmartRAID 3200 adapters are conveniently managed by the same Adaptec maxView™ tools for major storage management, allowing remote and local management through standard desktops and mobile browsers. And now, we have expanded our management capabilities to include new industry-standard Platform Level Data Model (PLDM)/Redfish® Device Enablement (RDE) management tools. These tools accelerate time to market by simplifying storage management, maximizing software reuse and delivering generational compatibility and ecosystem interoperability for faster time to market.

Because our SmartRAID adapters are already qualified with multiple ecosystem partners, they have been rigorously tested and deployed in multiple environments with a wide range of devices and technology, recording excellent results in multiple Universal Backplane Management (UBM) and the Intel® Virtual Pin Port (VPP) intelligent backplane configurations.

Take a look at our [interoperability and compatibility matrixes](#) for NVMe SSDs, SAS/SATA SSDs/HDDs and System Components (including backplanes, chassis' and motherboards).

We Didn't Forget About Security

Our Trusted Platform support delivers a new level of compute and supply chain security based on a hardware root of trust that is aligned with the Open Compute Security Project. We've expanded the maxCrypto™ Controller-Based Encryption (CBE) solution to now support NVMe media and also deploy Self-Encrypting Drive (SED) support management.

What Does This All Mean?

Our [SmartRAID 3258-32i/e tri-mode adapter](#) makes an impact on real-world applications with higher random read/write IOPs and throughput that lowers server response time for:

- Online Analysis Processing (OLAP) applications such as data mining, analytics and business intelligence
- Cloud applications such as big data and object storage
- Video streaming applications such as live streaming and video on demand
- Artificial Intelligence (AI) applications such as image, voice, language, text recognition and deep learning
- Video capture applications used for surveillance and medical imaging

Our dedicated support and design team wants you to get top performance out of your data center to improve productivity and give you an edge over slower-moving competitors. Learn more about our [PCIe Gen 4 tri-mode RAID adapters and Host Bus Adapters \(HBAs\)](#) or contact us directly for [design support](#).

[Read what our partners say.](#)