



Future-Proof Your Data Center with Maximum-Performance Storage Solutions

Get every last bit of performance out of your data center and build customer loyalty, improve productivity and give you an edge over slower-moving competitors.

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Whether you're waiting in traffic, waiting for an elevator or waiting for an app to load, every second can feel like an eternity. The value of business information decreases rapidly the longer it takes to retrieve, process and utilize. This puts enormous pressure on data center operators to provide the highest levels of service.

While data centers can and do suffer outages from time to time, sluggish performance is much more common. After all, emerging business-critical technologies and growing user demands are stretching data center bandwidth requirements to the limits, and there's no hint of that changing in the future.

When it comes to disrupting business operations, poor network performance can be as damaging as an outage.

Lost Revenue and Productivity

The slower your site, the more at-risk your company is for losing customer trust and confidence. According to a 2020 Retail Systems Research survey:

- 92 percent of shoppers report being frustrated by slow online shopping sites
- 90 percent say they have abandoned a website because it was too slow
- 57 percent said, when frustrated by a slow site, they leave and buy from a similar retailer
- A whopping 21 percent say they will never come back to the slow site

The same model holds when the "customer" is your internal staff. Slow access to internal email systems or inventory, manufacturing, finance, business operations or CRM databases will invariably lead to frustrated users and productivity loss.

Clearly, squeezing every last bit of performance out of your data center can build customer loyalty, improve productivity and give you an edge over slower-moving competitors.

The Need for Speed in the Data Center

A data center's ability to deliver the necessary customer experience for the increasing number of users using an increasingly wide range of applications depends upon many factors, but one of them is storage performance – notably how well your storage system can serve data to end-users.

Adding more hard disk drive (HDD) arrays to your storage can improve performance, but the most promising advancement is the growing adoption of flash-based solid state drives (SSDs) which have dramatically increased IOPS performance. Flash technology is increasingly used to augment primary storage now that it is available with a wide range of interfaces, including SAS/SATA, at a wide range of capacity points, and tailored to serve a wide range of demanding workloads. A key roadblock to unlocking SSD's full potential is selecting the storage adapter.

More than ever, choosing the right storage adapter to address, move and manipulate never ending streams of data is a critical element in meeting your data center's current performance needs, and planning for increasing demands from new apps and new users that will be added as your business grows.

Microchip: A Storage Leader

For over 30 years, we have built storage products with our customers' needs in mind, evolving from our origins on the desktop into one of the most trusted data center partners in the world. Our HBA and RAID adapters set the standard in storage solutions that protect data, boost system performance, improve energy-efficiency and reduce capital and operating expenses in today's most demanding storage environments.

We work closely with the data center industry and ecosystem vendors to ensure we deliver best-in-class technology and tools to maximize interoperability and integration with your other storage components, and optimal performance and availability of your data center.

SmartRAID 3100 RAID Adapters

Microchip's **12 Gbps SmartRAID 3100 adapters** are full-featured, high-performance enterprise RAID adapters. When coupled with 12 Gbps SSDs, they deliver maximum read/write bandwidth and Input/Output Operations per Second (IOPS) for the most performance-hungry transactional and database applications. The onboard DRAM-based read and write cache accelerates RAID and spinning media.

SmartHBA 2100 Host Bus Adapters

Microchip's **SmartHBA 2100 and HBA 1100 host bus adapters** provide the highest levels of storage performance and scalability for next-generation data centers. These adapters can aggregate the performance of devices to the limits of the PCIe® Gen 3 host bus at 6.6 Gbps and achieve up to 1.7M IOPS and 60 percent higher IOPS performance with SATA devices without additional overhead or latency.

The HBA 1100-24i, with 24 internal ports, delivers the lowest latency and highest performance when connected to SSDs, with no need for expanders in most rack server applications.

Meet Your Data Center's Performance Demands

Few things can negatively impact your business, like poor performance from your data center. Consumer-facing companies with sluggish websites risk the loss of customers and revenue. Companies with slow internal IT systems face the prospect of diminished employee productivity. Meeting your customers' growing needs starts with choosing the right storage adapters.

Adaptec® HBA and RAID adapters deliver maximum bandwidth and I/O connectivity to meet your data center's performance demands today and into the future.

Marc Anthony, Mar 12, 2021



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