Microsemi
Power Matters.™

Microsemi Adaptec® Series 8E RAID Adapters
Lower Data Center Costs and Deliver Performance Demands

Liquid Web powers the content, commerce, and potential of SMB entrepreneurs, designers, developers, and digital agencies. This $100 million web hosting and cloud services provider was founded in 1997 and is known for its high-performing services and exceptional customer support. Liquid Web provides reliable, highly-available, secure, and hassle-free hosting backed with a human touch. With over 30,000 customers spanning 150 countries, the company has assembled a world-class team, global data centers, and an expert group of solution engineers available at any time by telephone, email, and livechat. As an industry leader in customer service, Liquid Web is one of only eleven companies to spend ten consecutive years as one of INC Magazine's 5000 Fastest Growing Companies.

This web host offers a broad portfolio designed so that customers can choose a hosting solution that is hands-on, hands-off, or a hybrid of the two. The company owns and manages its own data centers that provides a diverse range of offerings spanning from bare metal servers and fully managed hosting, to Managed WordPress, and beyond. The company's constantly evolving service offerings have consistently grown and adapted to meet the ever-changing needs of its web-reliant, professional customers.

Data Centers Rely on Storage Optimized for the Most Demanding Workloads

Liquid Web's dedication to providing the best hosting environment available has been a catalyst for its growing customer base as well as the corresponding explosion in the amount of data transmitted, cached, stored, analyzed, and archived on its network. Its users are accessing data more frequently and from more devices than ever before. Properly managing the complexities of this increased demand while providing the highest quality of service is instrumental to Liquid Web's success.

To maintain performance and reliability for its customers, Liquid Web relies on storage solutions that are optimized to meet current needs but also flexible enough to help future-proof its data centers in anticipation of ever-increasing customer demands.

Data centers, like those engineered by Liquid Web, must satisfy that demand in the most cost-efficient manner possible, with an emphasis on reducing the cost-performance ratio, which includes hardware-related capital expenses (CapEx) as well as operating expenses (OpEx). The days of simply adding more servers to accommodate more traffic are over. Adding complexity to the situation is the desire to keep the infrastructure footprint to a minimum, thus minimizing the associated costs that come from powering and cooling larger spaces.

Server vendors are enabling data centers to do more with less on the strength of smaller and denser server chassis sizes that allow for more storage I/O capability while maintaining the same footprint (or smaller). Similarly, storage vendors have developed small form-factor solutions—such as 2.5-inch drives and low-profile storage adapters—that fit into the smaller chassis while providing the high performance that data centers require.

Liquid Web's three wholly owned and operated data centers comprise more than 32,000 servers—a number that continues to grow. By deploying a standardized server platform, the company can use off-the-shelf components, resulting in cost savings without compromising performance or reliability.

Executive Summary

Challenge
Liquid Web's data center capacity quickly outgrew the capabilities of its previous storage solution to provide the connectivity and cost-performance ratio that are at the core of its operational requirements.

Solution
Series 8E SAS/SATA 12 Gbps PCIe Gen3 RAID adapters, featuring eight and four internal ports in a low-profile MD2 form factor, that deliver hardware RAID at the right cost-performance ratio.

Result
Liquid Web has lowered its cost-performance ratio without compromising performance.

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"Our servers need to achieve the best performance with the highest possible reliability. Microsemi Adaptec products have helped us do this while maintaining value that we can, in turn, give back to our customers."

—Mike Jung, Liquid Web Product Manager

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Upgrading Network Performance with Series 8E RAID Adapters

With a growing customer base and increased traffic, Liquid Web's data center capacity quickly outgrew the capabilities of its previous storage solution, hampering connectivity and increasing the company's cost-performance ratio. It became clear to Liquid Web that the RAID adapters installed throughout its data centers were throttling storage performance.

The Series 8E SAS/SATA 12 Gbps PCIe Gen3 RAID adapters deliver the robustness of hardware RAID in a cost-effective solution that offers performance acceleration through built-in cache. The 8805E, with eight internal SAS/SATA ports, is ideal for applications that require more bandwidth. Both models fit the requirements of industrial PC workstations or entry-level servers. The 8405E and the 8805E support a maximum of four and eight devices, respectively.

The Series 8E offers seamless compatibility with existing storage architectures, application software, and operating systems, allowing Liquid Web to install the adapter into its existing infrastructure without disrupting operations. By implementing the Series 8E within its three data centers, the web host has been able to lower its cost-performance ratio by supporting more customers per server with no drop-off in performance.

"We were looking for a higher performance solution at a lower cost," said Mr. Jung. "The Series 8E has delivered just that for us, which is value that we can, in turn, give back to our customers."

Utilizing Microsemi's Series 8E RAID adapters allowed Liquid Web to increase the capacity of its data center and satisfy customer demands.

Related Information

- Series 8E RAID Adapter product page: https://www.microsemi.com/products/storage/raid-adapters/series8e
- Series 8E product brief: https://www.microsemi.com/products/storage/raid-adapters/series8e#resources
- Series 8E compatibility report: https://www.microsemi.com/products/storage/compatibility

For more information and specifications, please call, email, or visit our website.

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