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Microsemi Expands Storage Adapter Solutions to Include Integrated On-board Cache Protection and Support for maxCrypto® Secure Encryption

New Adaptec SmartRAID Products Deliver New Level of Solution Integration and Enhanced Data-at-Rest Security for Enterprise Storage

ALISO VIEJO, Calif., July 26, 2018 /PRNewswire/ -- **Microsemi Corporation**, a wholly owned subsidiary of Microchip Technology Inc. (Nasdaq: MCHP), today announced two additions to its recently announced lineup of [Adaptec Smart Storage 12Gbps SAS/SATA adapters](#): the SmartRAID 3162-8i and SmartRAID 3162-8i /e. The SmartRAID 3162-8i offers an industry-leading level of integration by offering an integrated super capacitor directly on the adapter to support write cache data protection. The SmartRAID 3162-8i /e introduces the industry's first general market 12 Gbps SAS/SATA redundant array of independent disk (RAID) adapter with maxCrypto™, a line rate controller-based encryption (CBE) solution offering superior security and flexibility compared to disk-based encryption solutions.

"Flexibility, ease-of-use and security continue to be top priorities for our customers. Our new SmartRAID 3162-8i ensures enterprise-level data availability in a highly integrated standard adapter form factor, providing all the required cache protection hardware directly on-board," said Andrew Dieckmann, vice president of marketing for Microsemi's data center solutions. "Our turnkey maxCrypto encryption solution provides superior flexibility and security compared to the most common alternative solution, self-encrypting drives (SEDs), all within the easy-to-use Adaptec management tool suite."

About the SmartRAID 3162-8i
With the SmartRAID 3162-8i data centers can now deploy a generally available RAID adapter with a complete cache backup solution entirely within one low profile MD2 PCI Express (PCIe) Gen 3 server slot.

RAID caching is frequently used in enterprise storage to improve input/output (I/O) performance by writing data to a controller's cache before it is written to disk. However, in the case of a power loss, the write cache may be lost. Microsemi's Zero Maintenance Cache Protection (ZMCP) leverages a super capacitor (versus a battery) to power critical components long enough to transfer cached data to NAND flash. When power is restored, the data is restored to the cache as well and normal operation resumes. The use of a super capacitor versus a lithium ion battery eliminates hardware maintenance associated with battery-based adapter cache backup solutions.

The SmartRAID 3162-8i introduces Microsemi's sixth generation of ZMCP. This new generation of ZMCP integrates the cache backup circuitry, NAND flash memory and the field-replaceable super capacitor all onto the adapter itself, with no need to tether an external super capacitor to the adapter. This ultimately saves space in the server, a critical ingredient to deploying high-density data centers. Numerous studies have been conducted on high density data centers, with some showing as much as 50 percent savings in capital expenditures and 20 percent in operating expenditures versus less dense data center rack deployments.

About the SmartRAID 3162-8i /e
Encryption for data-at-rest is a requirement for multiple markets, with government legislation in place mandating data security and privacy. Microsemi's SmartRAID 3162-8i /e with the maxCrypto CBE solution enables data center customers to select 256-bit XTS - Advanced Encryption Standard (AES) encryption for any logical volume managed by the SmartRAID 3162-8i /e at full line rate performance. Microsemi's maxCrypto CBE solution achieves provides a higher level of security and improved deployment flexibility compared to the most common alternative solution, self-encrypting drives (SEDs).

The SmartRAID 3162-8i and SmartRAID 3162-8i /e are optimized for enterprise storage applications which require the highest level of data availability in an optimized footprint. Features include:

- Eight lanes of PCIe Gen 3 connectivity to the host
- Eight internal ports of connectivity to 12 Gbps SAS or 6 Gbps SATA drives, either direct or through an SAS expander, via SFF-8643 miniSAS high-definition connectors
- 2 GB of DDR4 2100 MHz
- Up to 1.45 million RAID0 4 KB random read input/output operations per second (IOPs)
- Hardware RAID support for levels 0/1/5/6/10/50/60/1 ADM/10 ADM
- maxCache 4.0 with up to ~2 TB solid state drive (SSD) cache
- Integration with the Microsemi Adaptec tool chain, including maxView Storage Manager graphical user interface (GUI), ARCCONF, uEFI BIOS configuration utilities and the maxView Event Monitor

Microsemi's unified Smart Storage Stack, SmartRAID and SmartHBA, HBA product families and the SXP family of SAS expanders provide a complete server solution for storage management and connectivity.

Availability
Microsemi's Unified Smart Storage Stack, as well as the fourth generation SmartRAID 3100, SmartHBA 2100 and HBA 1100 series board level product families, are available in volume production quantities now. For more information, visit www.microsemi.com/smartstorage or contact sales.support@microsemi.com.

About Microsemi's Product Portfolio for Data Center
Microsemi is a premier supplier of innovative semiconductor, board, system, software and services for enterprise and hyperscale data centers, enabling high performance, secure, low power and reliable infrastructure for scalable deployments. Microsemi technologies drive innovation in applications including storage systems, server storage, NVMe solutions, Ethernet switching, rack scale architecture, data center interconnect, board management, network timing and power subsystems. Building on a track record of technology leadership, Microsemi's data center infrastructure portfolio is transforming networks that connect, store and move big data, while lowering the total cost of ownership of deploying next generation services.

The portfolio includes high performance NVMe storage controllers, NVRAM drives, SAS/SATA host bus adapters and RAID controllers enabling high capacity storage architectures, high density PCIe switching and firmware for rack scale architectures, PCIe re-drivers, and Ethernet PHYs for intra-rack connectivity. Microsemi's product portfolio also includes clock and power management, IEEE1588 ICs and NTP servers for synchronization across the data center, as well as field programmable gate arrays (FPGAs) and system-on-chip (SoC) FPGAs to perform secure system management of servers and storage. For more information, visit http://www.microsemi.com/applications/data-center.

About Microsemi
Microsemi Corporation, a wholly owned subsidiary of Microchip Technology, Inc. (Nasdaq: MCHP), offers a comprehensive portfolio of semiconductor and system solutions for aerospace & defense, communications, data center and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; enterprise storage and communication solutions, security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, California. Learn more at www.microsemi.com.

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