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Microchip Introduces New 8-Channel Flashtec® PCIe® Gen 4 Enterprise NVMe™ SSD Controller

The Flashtec NVMe 3108 controller enables power and form-factor optimized enterprise NVMe SSDs with Flashtec's trademark rich feature set and flexibility

CHANDLER, Ariz., Aug. 04, 2020 (GLOBE NEWSWIRE) -- As data centers support more Artificial Intelligence (AI) and Machine Learning (ML) workloads, there is a need for cloud scale infrastructure that provides more bandwidth to storage and more storage density per rack. The trend is therefore to adopt PCIe® Gen 4-capable NVM Express™ (NVMe™) Solid State Drives (SSDs) in smaller form factors such as M.2 and the newer SNIA Enterprise and Data Center SSD Form Factor (EDSFF) E1.S form factors. These SSDs require controllers with optimized footprints and power while driving the NAND flash to its maximum potential and maintaining a rich feature set and the reliability demanded by this enterprise class of NVMe SSD. Microchip Technology Inc. **(Nasdaq: MCHP)** today announced its newest member of the Flashtec® family, the **Flashtec NVMe 3108 PCIe Gen 4 enterprise NVMe SSD controller.** The 8-channel Flashtec NVMe 3108 complements the 16-channel Flashtec NVMe 3016 and provides a full suite of PCIe Gen 4 NVMe SSD solutions to support a comprehensive set of data center storage requirements.

Microchip's new Flashtec NVMe 3108 PCIe Gen 4 NVMe SSD controller enables a variety of compact SSD form factors with efficient power and very compelling performance and reliability metrics while delivering industry leading security features. The Flashtec NVMe 3108 boasts greater than one million IOs per second (IOPS) for random workloads and greater than 6 Gigabytes per second (GB/s) of sequential bandwidth. The solution provides end-to-end enterprise class data integrity with high reliability and critical security features including secure boot with Hardware Root of Trust to ensure that data center operators can provide the highest level of available data security. The eight programmable flash channel controllers are coupled with exceptionally strong error correction engines that provide future-proof support for next generation high layer count Triple Level Cell (TLC) and Quad Level Cell (QLC) NAND technologies.

"The PCIe Gen 4 storage ecosystem is poised for rapid adoption by data center operators worldwide and we're very excited to announce the availability of our new Flashtec NVMe 3108 to enable new products in this space," said Andrew Dieckmann, associate vice president of Microchip's Data Center Solutions business unit. "The Flashtec NVMe 3108 delivers enterprise performance and enterprise reliability in a compact package with low power, enabling Flashtec based SSD solutions to be optimized for lower capacity points and smaller form-factors with compelling power and performance attributes."

The Flashtec NVMe 3108's flexibility is its programmable multi-core Arm subsystem. Combined with a number of hardware acceleration engines this enables users to optimize their own SSD solutions for a wide variety of applications including single root IO virtualization (SR-IOV)-capable SSDs, Zoned Namespace SSDs, Key Value SSDs and Open Channel SSDs while maintaining targeted performance. Furthermore, the Flashtec NVMe 3108 supports dual port modes of operation providing high availability solutions for external storage system applications.

"As Memblaze looks forward to PCIe Gen 4 infrastructure we continue our focus on performance, energy efficiency and reliability as we evolve the PBlaze family to new higher layer count NAND across our product portfolio," said Taile Zhang, senior vice president of Product and R&D, Memblaze Technologies. "Microchip's innovative Flashtec NVMe 3108 NVMe SSD controller enables a performant, reliable, secure and flexible solution for cost and power sensitive mainstream applications with rapid time-to-market due to firmware portability with the high performance NVMe 3016 NVMe SSD controller."

The Flashtec NVMe 3108 is part of Microchip's full end-to-end suite of storage infrastructure and endpoint solutions for PCIe Gen 4, which includes the Flashtec NVMe 3016 16-channel NVMe SSD controller, the Switchtec™ family of PCIe Gen 4 Switches and Fabric Solutions and the SmartRAID and SmartHBA PCIe Gen 4 tri-mode storage solutions.

Beyond storage, Microchip provides data center infrastructure builders with total system solutions including memory, timing and synchronization systems, stand-alone secure boot, secure firmware and authentication, wireless products, touch-enabled displays to configure and monitor data center equipment, and predictive fan controls.

Development Tools
Microchip's Flashtec NVMe 3108 offers several options for software and hardware support. A complete software development kit includes Microchip's reference firmware with optional hardened firmware modules, simulation tools, debug tools including Microchip's Chiplink diagnostic tools, evaluation boards and reference designs, global support and a full suite of collateral.

Availability
Microchip's Flashtec NVMe 3108 is available for sampling to qualified customers. Contact your Microchip salesperson for ordering details. Complete information is at **https://www.microchip.com/design-centers/storage/flashtec-nvme-controllers**

Resources
High-res image available through Flickr or editorial contact (feel free to publish):

- Application image: **https://www.flickr.com/photos/microchiptechnology/50171585142/**
- Block diagram: **https://www.flickr.com/photos/microchiptechnology/50171588477/**

About Microchip Technology
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