



Silicon Motion Announces SM8388, the Industry's Leading Power-Efficient PCIe Gen5 8-Channel Enterprise SSD Controller, Delivering 14.4GB/s Performance at Under 5W Power for Nearline SSDs

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Company Will Showcase its New AI/Enterprise Storage Solutions with AIC at Super Computing 2025

TAIPEI and MILPITAS, Calif., Nov. 14, 2025 /PRNewswire/ -- Silicon Motion Technology Corporation (NasdaqGS: SIMO), a global leader in designing and marketing NAND flash controllers for solid-state storage devices, today announced its SM8388, the industry's leading power-efficient 8-channel PCIe Gen5 enterprise SSD controller, designed for high performance, low power, lower cost, and high-capacity QLC enterprise SSDs — enabling Nearline SSDs. It sets a new benchmark by combining ultra-high performance and QLC NAND support with enterprise-grade security features and exceptional energy efficiency, addressing the growing demand for scalable, high-capacity warm data storage in AI and cloud environments.



"The SM8388 extends our proven MonTitan SSD development platform that was first introduced with our successful high-performance, 16-channel PCIe Gen5 SM8366 controller," said Alex Chou, Senior Vice President of Enterprise Storage & Display Interface Solution Business at Silicon Motion. "Building on the same robust architecture that has been adopted by leading enterprise SSD makers, the SM8388 is purpose-built for Nearline SSDs that serve AI-driven databases and data-centric infrastructures, combining exceptional throughput with industry-leading power efficiency."

Featuring an 8-channel architecture supporting up to 3200MT/s per channel, the SM8388 delivers up to 14.4GB/s sequential read throughput and up to 3.5 million IOPS random read performance and supports SSD capacities of up to 128TB. Fully compliant with NVMe 2.6, the SM8388 supports multiple AI data center form factors, including EDSFF (E1.S/E3.S) and U.2/U.3, enabling flexible configurations for high-density Nearline deployments. The SM8388 also incorporates enterprise-grade security features, including attestation, secure boot, key wrapping, AES-256 encryption, TCG Opal and a hardware root of trust, ensuring data integrity and protection across AI and cloud storage environments.

With a typical active power consumption under 5W, the SM8388 achieves outstanding power efficiency without compromising performance. Its unique hardware-based channel speed accelerator, based on Separate Command Address (SCA), maximizes channel-level parallelism to fully unleash the performance potential of PCIe Gen5, delivering superior read performance and responsiveness. These attributes make the SM8388 particularly effective for AI-driven nearline storage, where high read throughput is critical for managing warm data and its unparalleled power efficiency delivers lower operating cost and total cost of ownership.

The MonTitan™ enterprise SSD development platform provides a highly scalable, customizable foundation for building PCIe Gen5 and future-generation SSD solutions. It combines Silicon Motion's advanced controller architecture, firmware stack, and reference design to accelerate time-to-market for partners developing enterprise and data center SSDs. Leveraging MonTitan's proven ecosystem and robust validation framework, the SM8388 enables seamless adoption of next-generation NAND technologies — including QLC — while delivering optimal performance and power efficiency for AI and Nearline storage applications.

"AIC is pleased to collaborate with Silicon Motion on next-generation AI server platforms designed for high-performance, power-efficient storage," said Michael Liang, President and CEO of AIC Inc. "By integrating SSDs powered by Silicon Motion's MonTitan development platform into our AI server systems, we enable highly efficient, high-capacity storage that meets the evolving demands of AI data centers — from training to inference and warm data management."

Silicon Motion will showcase its latest AI-optimized enterprise SSD controller solutions in collaboration with AIC at Super Computing 2025 (booth#305), highlighting exceptional performance and power efficiency for AI data infrastructure. The company's comprehensive portfolio of

enterprise SSD controllers includes the SM8366, SM8308, and SM8388 for data storage applications, and the SM8008 and SM8004 for boot drives.

For further details, kindly visit www.siliconmotion.com.

About Silicon Motion

Silicon Motion Technology Corporation (NasdaqGS: SIMO) is the global leader in supplying NAND flash controllers for solid-state storage devices. The company ships more SSD controllers than any other supplier worldwide for servers, PCs, and other client devices, and is also the leading merchant provider of eMMC and UFS embedded storage controllers used in smartphones, IoT products, and automotive applications.

Silicon Motion also delivers customized, high-performance solutions for hyperscale data centers, industrial systems, and automotive SSDs. Its controllers are designed to power the world's most advanced AI, cloud, and enterprise storage platforms, combining high performance, low power, and proven reliability.

Our customers include most of the world's NAND flash vendors, data center and enterprise storage solution providers, storage device module makers, and leading OEMs, all of whom rely on Silicon Motion's proven controller technologies to enable innovative, high-quality storage solutions. For further information, please visit www.siliconmotion.com

About AIC

AIC is a global leader in server and storage solutions. With nearly 30 years of expertise in high-density storage servers, storage server barebones, and high-performance computers, AIC has expanded into AI storage and AI edge appliances, achieving significant market recognition for our branded products. For more information, visit www.aicipc.com or contact sales@aicipc.com.

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