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Press Release

KIOXIA Announces First Enterprise NVMe SSD Built with 8th Generation BiCS FLASH TLC-Based Flash Memory Technology

KIOXIA CM9 Series PCIe 5.0 NVMe SSD Raises the Bar with CBA Chip Architecture

Germany, Düsseldorf, 15 May 2025 – KIOXIA Europe GmbH today announced the development and prototype demonstration of its new KIOXIA CM9 Series PCIe 5.0 NVMe SSDs. These next-generation drives are the first enterprise SSDs built with KIOXIA's 8th generation BiCS FLASH™ TLC – based 3D flash memory[1], which incorporates CMOS directly Bonded to Array (CBA) technology – an architectural innovation that delivers significant advances in power efficiency, performance and density, and sustainability, while doubling available capacity[2] per flash device.

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As the demands of modern computing intensify, applications such as AI, machine learning, and high-performance computing require a sophisticated solid state storage infrastructure – requiring not only enterprise-class performance but also higher power efficiency to ensure scalability and manageable operational costs. Addressing these requirements is central to the design of the KIOXIA CM9 Series, which is purpose-built to support next-generation data center workloads.

At the core of the CM9 Series is KIOXIA's 8th generation BiCS FLASH^{TM}, the company's most advanced 3D flash memory to date. This technology employs a CBA-based architecture that significantly increases the NAND interface speed, enhances density and power efficiency and lowers latency – directly benefitting SSD performance.

The KIOXIA CM9 Series SSDs deliver performance improvements of up to approximately 65% in random write, 55% in random read, and 95% in sequential write compared to the previous generation, the KIOXIA CM7 Series. In addition, performance-per-watt gains include approximately 55% better sequential read and 75% better sequential write efficiency.

Axel Stoermann, Vice President and CTO for Embedded Memory and SSD, KIOXIA Europe GmbH, emphasises: "Alongside processing power and energy efficiency, memory is fundamental to enable AI, machine learning, and high-performance computing applications. The CM9 Series powered by our BiCS FLASH^{TM} generation 8, is designed to address these storage demands, providing top-tier bit density, rapid data transfer, and outstanding power efficiency, all of which contribute to the superior performance of our SSDs."

KIOXIA CM9 Series SSD highlights include (preliminary and subject to change):
- PCI 5.0, NVMe 2.0, NVMe-MI 1.2c, and OCP Datacenter NVMe SSD 2.5 specification-compliant
- Dual-port support in 2.5-inch and E3.S form factors
- Read-intensive (1 DWPD) and mixed-use (3 DWPD) endurances
- Sequential performance (128 kibibytes (KiB)/QD32) – 14.8 GB/s read and 11 GB/s write
- Random performance (4KiB) – 3,400 KIOPS (QD512) and 800 KIOPS (QD32)

- 2.5-inch capacities up to 61.44 terabytes (TB) and E3.S capacities up to 30.72 TB

KIOXIA CM9 Series SSDs are now sampling to select customers and will be showcased at Dell Technologies World, taking place May 19 – 22 in Las Vegas.

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Notes:

1: As of May 15, 2025. Source: KIOXIA Corporation.

2: Compared to the previous generation.

*2.5-inch indicates the form factor name and not its physical size.

*Read and write speed may vary depending on various factors such as host devices, software (drivers, OS etc.), and read/write conditions.

*Performance is preliminary and subject to change without notice.

*Definition of capacity: KIOXIA Corporation defines a kilobyte (KB) as 1,000 bytes, a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2^{30} bytes = 1,073,741,824 bytes 1TB = 2^{40} bytes = 1,099,511,627,776 bytes and a kibibyte (KiB) as 1,024 bytes and, therefore, shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

*IOPS: Input Output Per Second (or the number of I/O operations per second)

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About KIOXIA
KIOXIA is a world leader in memory solutions, dedicated to the development, production and sale of flash memory and solid-state drives (SSDs). In April 2017, its predecessor Toshiba Memory was spun off from Toshiba Corporation, the company that invented NAND flash memory in 1987. KIOXIA is committed to uplifting the world with "memory" by offering products, services and systems that create choice for customers and memory-based value for society. KIOXIA's innovative 3D flash memory technology, BiCS

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FLASH™, is shaping the future of storage in high-density applications, including advanced smartphones, PCs, automotive systems, data centers and generative AI systems.
Visit our [KIOXIA website](#)

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