



Press Release

KIOXIA Introduces PCIe 5.0 NVMe EDSFF E1.S SSDs for Cloud and Hyperscale Environments

New KIOXIA XD8 Series Improves Performance, Offers Range of Capacities and Form Factor Options



Germany, Düsseldorf, 15 October 2024 – [KIOXIA Europe GmbH](#) today announced the availability of its new KIOXIA XD8 Series PCIe 5.0 Enterprise and Datacenter Standard Form Factor (EDSFF) E1.S SSDs. The new drives are the third generation of E1.S SSDs from KIOXIA and are compliant with PCIe 5.0 (32 GT/s x 4) and NVMe 2.0 specifications, and support the Open Compute Project (OCP) Datacenter NVMe SSD v2.5 specification^[1].

Designed for cloud and hyperscale environments, the KIOXIA XD8 Series meets the growing demand for higher performance, enhanced efficiency, and greater scalability in data centers. The new drives empower cloud providers and hyperscalers to optimize their infrastructure, delivering superior performance while maintaining operational efficiency.



“Microsoft Azure’s architects leading-edge data centers to deliver high levels of performance, quality of service and reliability to our customer,” said Pablo Ziperovich, GM, Azure Memory & Storage Center of Excellence (AMS CoE), Microsoft Corporation. “We leverage new technologies and standards for SSDs, like PCIe 5.0 and the E1.S form factor, and support the OCP Datacenter NVMe SSD specification V2.5 specification. These latest SSDs, like KIOXIA’s XD8 drives, provide the high density, lower power, high performance and serviceability that are required by Microsoft data centers.”

KIOXIA XD8 Series highlights include:

- Additional NVMe support includes NVM Express Management Interface (NVMe-MI) v1.2c
- Sequential read performance up to 12,500 gigabytes per second (a 73% improvement over the previous generation) ^{[2],[4]}
- Sequential write performance up to 5,800 megabytes per second (a 20% improvement) ^{[2],[4]}
- Random Read performance of 2,300 K Input Output Per Second (IOPS) (a 48% improvement) ^{[2],[3],[4]}
- Random write performance up to 250 K IOPS (a 25% improvement) ^{[2],[3],[4]}
- EDSFF E1.S with 9.5mm, 15mm and 25mm heat sink options
- KIOXIA designed SSD controller, BiCS FLASH 3D flash memory and firmware
- Non-SED and TCG Opal SSC SED options
- Full end-to-end data protection, power loss protection

“The KIOXIA XD8 Series is designed to provide outstanding performance and thermal management, meeting the requirements of contemporary cloud and hyperscale environments,” remarked Paul Rowan, VP & CMO of the Memory and SSD Business Units at KIOXIA Europe GmbH. “As a proactive participant in the development of the new EDSFF E1 and E3 form factors, KIOXIA is dedicated to working in concert with leading server and storage system developers to fully exploit the capabilities of flash memory, NVMe, and PCIe technologies. Our ongoing innovation in this field ensures that the industry is well-equipped to address both present and future challenges.”

Available in capacities of 1.92, 3.84 and 7.68 terabytes (TB), KIOXIA XD8 Series evaluation drives are now sampling to select customers.



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Notes:

- 1: Not all requirements
- 2: All performance improvements are comparisons to the previous generation KIOXIA E1.S XD7P Series SSD (7.68 TB capacity model).
- 3: IOPS: Input Output Per Second (Or the number of I/O operations per second)
- 4: Read and write speed may vary depending on various factors such as host devices, software (drivers, OS etc.), and read/write conditions.

Definition of capacity: KIOXIA Corporation defines 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 and 1TB = 2^{40} bytes = 1,099,511,627,776 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.

SED optional model supports TCG Opal SSC except for some features.
SED optional model is not available in all countries due to the local regulations.

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About KIOXIA Europe GmbH

KIOXIA Europe GmbH (formerly Toshiba Memory Europe GmbH) is the European-based subsidiary of KIOXIA Corporation, a leading worldwide supplier of flash memory and solid-state drives (SSDs). From the invention of NAND flash memory to today's renowned BiCS FLASH™ 3D flash memory KIOXIA continues to pioneer innovative memory solutions and services that enrich people's lives and expand society's horizons. The company's innovative BiCS FLASH™ 3D flash memory technology is shaping the future of storage in high-density applications, including advanced smartphones, PCs, SSDs, automotive and data centers.

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