



Press Release

KIOXIA Introduces New PCIe 5.0 SSDs for Enterprise and Data Center Infrastructures

New KIOXIA CD8P Series Data Center NVMe Drives Optimized for Performance, Latency and Quality of Service in E3.S and 2.5-inch (U.2) Form Factors



Düsseldorf, Germany, 8 August 2023 – [KIOXIA Europe GmbH](#), a world leader in memory solutions, today announced the addition of the KIOXIA CD8P Series to its line-up of data center class solid state drives (SSDs). The KIOXIA CD8P Series is well-suited to general-purpose server and cloud environments that can take advantage of PCIe 5.0 (32GT/s x4) performance. Data center applications can generate complex mixed workloads spread across large-scale virtualized systems in 24x7 operational data centers. The new drives are available in capacities up to 30.72 terabytes (TB)^[1] and in both Enterprise and Data center Standard Form Factor (EDSFF) E3.S and 2.5-inch (U.2) form factors.



Optimized for performance, latency, reduced power and thermal requirements for data center environments where power and cooling efficiency is critical, the KIOXIA CD8P Series provides the predictability and consistency needed for a seamless user experience.

The KIOXIA CD8P Series realizes approximately a 60% to 80% increase in sequential read performance when compared to previous-generation PCIe 4.0 SSDs, including

- Random read^[2] performance up to 2,000K IOPS^[3] and random write^[2] performance up to 400K IOPS
- Low and consistent 99.999th percentile latency of under 250us in standard random read workloads^[4], and under 1.8ms in standard OLTP-style mixed workloads^[5]
- Single-port design, optimized for data center class workloads

The new data center drives are based on the KIOXIA BiCS FLASH™ generation 5, 3D flash memory triple-level cell (TLC) technology, and utilize an in-house developed controller. KIOXIA CD8P Series SSDs are compliant with PCIe 5.0 and NVMe 2.0 specifications as well as the NVMe Express Management Interface (NVMe-MI) v1.1d, and support Open Compute Project (OCP) data center NVMe SSD specifications (not all requirements).

Additional features and benefits include:

- Full data reliability with end-to-end data protection, power loss protection and flash die failure recovery
- Security options: Non-SED, SIE and SED (TCG Opal and Ruby SSCs)^[6]

“The new CD8P continues the success of the KIOXIA CD-Series and provides along with superior performance numbers an excellent Quality of Service (QoS) for business critical data center applications,” says Frederik Haak, Senior Manager SSD product marketing, KIOXIA Europe GmbH. “The exceptional reliability of 2.5M hours and the high power efficiency in combination with a competitive price structure, offers data centers and enterprises an optimized total cost of ownership scenario for PCIe Gen5 SSDs.”

KIOXIA CD8P Series drives are now sampling to select customers.

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Notes

[1] E3.S form factor products will be available in capacities from 1.6TB to 15.36TB.

2.5-inch form factor products will be available in capacities from 1.6TB to 30.72TB.

[2] Condition: 4KiB block size, 4KiB aligned, 100% random

[3] IOPS: Input Output Per Second (or the number of I/O operations per second).

[4] Condition: 4KiB block size, 4KiB aligned, QD = 32, 100% random, 100% read for 3,200 GB to 7,680 GB capacity

[5] Condition: 4KiB block size, 4KiB aligned, QD = 32, 100% random, 70% read for 3,200 GB capacity and larger

[6] Availability of security/encryption options may vary by region.

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 1 GB = 2^{30} bytes = 1,073,741,824 bytes and 1 TB = 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.

Read and write speed may vary depending on the host device, read and write conditions, and file size.

SIE: Sanitize Instant Erase optional model supports Crypto Erase, which is a standardized feature defined by the technical committees (T10) of INCITS (the InterNational Committee for Information Technology Standards).

SED: Self-Encrypting Drive optional model supports TCG Opal and Ruby SSCs. Some features of TCG Opal SSC are not supported .

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Information in this document, including product prices and specifications, content of services and contact information, is correct on the date of the announcement but is subject to change without prior notice.

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 breakthrough 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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Contact details for publication:

KIOXIA Europe GmbH, Hansaallee 181, 40549 Düsseldorf, Germany

Tel: +49 (0)211 368 77-0

E-mail: KIE-support@kioxia.com

Contact details for editorial enquiries:

Lena Hoffmann, KIOXIA Europe GmbH

Tel: +49 (0) 211 36877 382

E-mail: lena1.hoffmann@kioxia.com

Issued by:

Birgit Schöniger, Publitek

Tel: +49 (0)4181 968098-13

E-mail: birgit.schoeniger@publitek.com

Web: www.publitek.com

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