



Press Release

KIOXIA Announces 2nd Generation 24G SAS SSD, with a Focus on Performance and Security

PM7 Series Leverages Latest BiCS FLASH™ Technology and Security Module Validated by the FIPS 140-2 Cryptographic Module Validation Program



Düsseldorf, Germany, 8 December 2022 – [KIOXIA Europe GmbH](https://www.kioxia.com/europe) today announced that its PM7 Series of enterprise SAS SSDs is now available for customer evaluation. KIOXIA was the first^[1] to bring 24G SAS to server and storage applications, and the new PM7 Series' 2nd generation of 24G SAS SSDs now furthers the company's position as a SAS market leader. Targeted at enterprise applications— including high-performance computing, artificial intelligence, caching layer, and financial trading and analysis – the new drives bring improved performance, reliability and security to enterprise servers and storage. With an emphasis on security, the PM7 Series utilizes a security module which is validated by the FIPS 140-2 Cryptographic Module Validation Program, and currently under the test for FIPS 140-3 validation².

Designed for modern IT infrastructures, 24G SAS (SAS-4) doubles effective bandwidth over 12Gb/s SAS (SAS-3). Featuring KIOXIA's 5th generation BiCS FLASH3D TLC flash memory, the PM7 Series delivers sequential read performance of up to 4.2 Gigabytes (GB) per second (GB/s), 720K random read IOPS and up to 355K random write IOPS. The new KIOXIA drives are available in capacities up to 30.72 terabytes (TB), making them the industry's highest capacity^[3] 2.5-inch^[4] SAS SSD.

"SAS has proven itself as the tried and trusted storage technology for the enterprise storage market," commented Don Jeanette, vice president of SSD research for Trend Focus. "As SAS continues strong shipments in 2022, KIOXIA's 24G SAS SSD leadership will help them to maintain their market share in enterprise servers and storage."

The PM7 Series builds upon KIOXIA's history of high performance and reliability over seven generations of SAS drives, nearly doubling the performance of the KIOXIA 12Gb/s SAS SSDs and realizing up to 20% performance gains over its previous generation 24G SAS SSD.

Additional features include:

- Dual-port for high availability.
- Flash Die Failure Protection – a KIOXIA feature that allows for transparent disabling of a failing flash chip, while maintaining optimized reliability at the SSD level.
- Endurances for a wide range of workloads; read-intensive (1 DWPD^[5]) and mixed-use (3 DWPD).
- Security options available; sanitize instant erase (SIE⁶), TCG Enterprise self-encrypting drive (SED⁷) and SED with an additional security option that utilizes a security module validated by the FIPS 140-2 Cryptographic Module Validation Program. FIPS 140-3 validation for the security module is also in process and is expected to be completed in 2022.

"As active members of the T10 and SCSI Trade Association industry groups that head up and define SAS development efforts, KIOXIA is proud to be leading the transition to 24G SAS," said Paul Rowan, Vice President SSD Marketing and Engineering, KIOXIA Europe GmbH. "We have a wide SSD portfolio for the data center segment, the addition to the PM7 Series is more proof

of our commitment to drive innovation and development of the widely deployed and trusted SAS interface.”

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Notes:

- 1: Source: KIOXIA Corporation, as of June 16, 2020. Based on a KIOXIA market survey of publicly available information.
- 2: FIPS: Federal Information Processing Standards.
- 3: Based on a KIOXIA market survey of publicly available information, as of March 1, 2022. 1DWPD models will be available in capacities of 1.92TB to 30.72TB, while the 3DWPD models will be available in 1.6TB to 12.8TB.
- 4: "2.5-inch" indicates the form factor of the SSD. It does not indicate the drive's physical size.
- 5: DWPD: Drive Write(s) Per Day. One full drive write per day means the drive can be written and re-written to full capacity once a day every day under the specified workload for the specified lifetime. Actual results may vary due to system configuration, usage and other factors.
- 6: SIE: Sanitize Instant Erase option supports Crypto Erase, which is a standardized feature defined by the technical committees (T10) of INCITS (the International Committee for Information Technology Standards).
- 7: SED: Self-Encrypting Drive option supports TCG Enterprise SSC.

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

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

*All other company names, product names and service names may be trademarks of their respective companies. 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} bits = 1,073,741,824 bits, 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.

Sample drives are for evaluation. The specifications of sample drives may differ from production drive models.

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 flash memory to today's breakthrough BiCS FLASH, KIOXIA continues to pioneer cutting-edge memory solutions and services that enrich people's lives and expand society's horizons. The company's innovative 3D flash memory technology, BiCS FLASH, 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