



Toshiba Memory Expands NVMe SSD Portfolio Targeting Cloud Data Centers

New Power-Efficient XD5 Series Now Available in 2.5-inch Form Factor Supporting Capacity Options up to 3.84TB

Düsseldorf, Germany, 14th March 2019 – Toshiba Memory Europe GmbH announces the availability of its XD5 Series NVMe™ SSD platform in a 2.5-inch^[1], 7mm low-profile form factor that is optimized for low-latency and performance consistency in read-intensive workloads. Developed for both data center and cloud environments, the new 2.5-inch form factor XD5 Series is ideal for NoSQL databases, large-scale-out data mining and analysis, and streaming applications. The XD5 Series is also well-suited for Open Compute Project (OCP) applications and systems.

Built on 64-layer BiCS FLASH™ TLC (3-bit-per-cell) 3D flash memory, and featuring a PCIe® Gen3x4 interface, the new XD5 SSD 2.5-inch option delivers sequential read performance up to

2,700 megabytes per second (MB/s) and sequential write performance up to 895MB/s with low active power consumption of 7 watts^[2]. At one drive write per day^[3] (DWPD), the XD5 Series can write nearly 4 terabytes (TB) of random data daily for five years at a consistent performance rate. Random read/write performance is specified at 250,000/21,000 Input/Output Operations per Second^[2] (IOPS) respectively, making the XD5 Series a predictable and reliable solution for read-intensive or heavy transactional workloads.

The XD5 2.5-inch Series expands Toshiba Memory's broad data center SSD portfolio and complements the previously released M.2 22110 form factor which supports 1,920 gigabyte (GB) and 3,840GB capacities^[4]. The flash memory and controllers leveraged within the XD5 Series offer high reliability, data protection, end-to-end error detection and power-loss protection, and the product is backed by a five-year limited warranty.

"Expanding our already broad NVMe portfolio with the new XD5 shows Toshiba Memory's commitment enabling cloud data centers with a wide variety of solutions for every need including high reliability, low-power solutions and consistent application performance," explains Paul Rowan, Vice President SSD Business Unit, Toshiba Memory Europe GmbH.

Toshiba Memory's PCIe NVMe SSDs are designed for multiple enterprise and data center workload profiles and include the XD5 Series, the CD5 Series and the CM5 Series, which help customers address their demanding data environments and realize the most value from their flash storage. The key specifications for this portfolio include the following:

Toshiba Memory continues to lead the industry with flash innovations for the evolving data center landscape and is committed to long-term customer relationships. With significant investments in memory, SSD development and fab capacity, customers can depend on Toshiba Memory for leading-edge flash storage technologies.

The company will showcase its new XD5 2.5-inch SSDs, as well as its complete lineup of data center SSDs, at the upcoming OCP Global Summit, Booth #A1 in the San Jose Convention Center from March 14 – 15, 2019. XD5 2.5-inch drives are sampling to select customers and scheduled for availability in Q2 2019.

For more information about datacenter SSDs from Toshiba Memory, please visit <https://business.toshiba-memory.com/en-emea/product/storage-products/data-center-ssd.html>.

Notes:

NVMe is a trademark of NVM Express, Inc. PCIe is a registered trademark of PCI-SIG. All other trademarks or registered trademarks are the property of their respective companies.

^[1] 2.5-inch is the form factor of HDDs and SSDs and does not indicate the drive's physical size.

^[2] Read and write speed may vary depending on the host devices, read and write conditions, and file size.

^[3] One full Drive Write per Day (DWPD) means that the drive can be written and re-written to full capacity once a day, every day, for five years (or the stated product warranty period). Actual results may vary due to system configuration, usage and other factors.

^[4] Definition of capacity: Toshiba Memory 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 = 2³⁰ bytes = 1,073,741,824 bytes, 1TB = 2⁴⁰ 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.

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About Toshiba Memory Europe GmbH

We, Toshiba Memory Europe GmbH, are the European business of Toshiba Memory Corporation. Our company offers a broad product line of flash memory products, including SD Cards, USB flash drives, and embedded memory components, in addition to solid state drives (SSD). Our company maintains offices in Germany, France, Spain, Sweden and the United Kingdom. President is Masaru Takeuchi.

For more information on the full range of our memory and SSD products please visit:

<https://business.toshiba-memory.com/en-emea/top.html>

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