



Toshiba Announces 24TB CMR and 28TB SMR Enterprise Hard Disk Drives

Mx11 family for hyperscalers and data centers delivers new levels of density and power efficiency

Düsseldorf, Germany, 10 September 2024 – Toshiba Electronics Europe GmbH (Toshiba) announces the Mx11 family of helium-sealed Enterprise Capacity HDDs. The Mx11 family includes the MG11 Series, which provides capacities of up to 24TB^[1] using conventional magnetic recording (CMR), and the MA11 Series, which offers up to 28TB capacities with shingled magnetic recording (SMR).

The new Mx11 family is designed to deliver new levels of density and power efficiency to customers tasked with controlling (or managing) operational costs while meeting the relentless demands of data growth. Built on a common

architecture, both products feature a 10-disk, helium-sealed, standard 3.5-inch^[2] 7,200rpm design that leverages Toshiba's innovative flux control microwave assisted magnetic recording (FC-MAMR™) technology. Engineered for higher performance and 24/7 reliability, the Mx11 family is designed with a 1GiB^[3] buffer, a workload^[4] rating of 550TB per year, an MTTF/MTBF^[5] of 2.5 million hours, and an AFR^[5] of 0.35%.

The MG11 CMR HDD Series enables cloud, data center, and enterprise storage customers to scale storage density within existing infrastructure rapidly. Built with a 1GiB buffer, the new 24TB HDD is faster^[6] than its predecessor, with an approximately 9% faster maximum sustained transfer speed of 295MiB/s^[7]. With a choice of 6Gbps SATA or 12Gbps SAS interfaces, the MG11 Series fits seamlessly into any data center to support data storage, online backup and archive, and video surveillance applications. In addition, for enhanced security^[8], the MG11 Series is available with sanitize instant erase (SIE) and self-encrypting drive (SED) options.

The MA11 Series achieves 2.8TB per disk using SMR technology. The host-managed SMR increases drive capacity by overlapping the physical tracks on the disk during write operations. Data centers with software that can optimize such a design will benefit from improved cost efficiencies through higher storage densities. The new MA11 Series is available in 28TB and 27TB capacities with a 6Gbps SATA interface and with SED options for enhanced security.

"Backed by 50 years of continuous HDD innovation, the Mx11 Series delivers new levels of capacity and total cost of ownership (TCO) efficiency, enabling customers to optimize operational costs while expanding their data center infrastructure," said Larry Martinez-Palomo, Vice President, Head of Storage Products Division, Toshiba.

Sample shipments of the MG11 Series will start this month, and the MA11 Series in the fourth calendar quarter of this year.

For more information on the new products, please visit:

MG11: <https://www.toshiba-storage.com/products/enterprise-capacity-hard-drive-mg-series/>

MA11: <https://toshiba.semicon-storage.com/eu/storage/product/data-center-enterprise.html>

For more information on Toshiba's full line of HDD storage products, please visit: [toshiba-storage.com](https://www.toshiba-storage.com) or [toshiba.semicon-storage.com](https://www.toshiba-semicon-storage.com).

[1] Definition of capacity: One terabyte (TB) = one trillion bytes, but the actual available storage capacity may vary, depending on the operating environment and formatting. 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.

[2] "3.5-inch" is the form factor of HDDs. It does not indicate the drive's physical size.

[3] A gibibyte (GiB) is 2^{30} , or 1,073,741,824 bytes.

[4] Workload is a measure of data throughput in a year. It is defined as the amount of data written, read or verified by commands from the host system.

[5] MTTF/MTBF (mean time to failure/mean time between failure) and AFR (annualized failure rate) is not a guarantee or estimate of the product life; rather it is a statistical value related to mean failure rates for a large number of products, which may not accurately reflect actual operation. AFR is defined as the annual operating hours divided by the mean time to failure. The actual product life of the product may vary.

[6] Comparison between the SATA interface 512e model "MG11ACA24TE" and the previous generation "MG10AFA22TE."

[7] A mebibyte (MiB) is 2^{20} , or 1,048,576 bytes. Read and write speeds may vary depending on the host device, read and write conditions, and file size.

[8] The HDDs with any optional security function may not be available in countries where such HDDs are prohibited or limited due to export control and local regulations.

* Information in this document, including product prices and specifications, content of services and contact information, is current and believed to be accurate as of the date of the announcement, but is subject to change without prior notice.

* FC-MAMR™ is a trademark of Toshiba Devices & Storage Corporation.

* Other company names, product names, and service names may be trademarks of their respective companies.

###

About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) offers European consumers and businesses a wide variety of hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical semiconductors as well as microcontrollers and application-specific standard products (ASSPs) amongst others.

In addition, TEE also offers Toshiba's SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications and Silicon Nitride (SiN) ceramic substrates used in power semiconductor modules, inverters and converters for their heat dissipation characteristics and strength.

TEE has its headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services.

Visit Toshiba's websites at www.toshiba-storage.com, www.toshiba.semicon-storage.com, www.scib.jp/en and www.toshiba-tmat.co.jp/en/ for further company and product information.

Contact details for publication:

Toshiba Electronics Europe GmbH, Hansaallee 181, D-40549 Düsseldorf, Germany

Tel: +49 (0) 211 5296 0 Fax: +49 (0) 211 5296 79197

Web: www.toshiba-storage.com www.toshiba.semicon-storage.com

E-mail: marcom@tee.toshiba.de

Contact details for editorial enquiries:

Julia Lepping, Toshiba Electronics Europe GmbH

E-mail: JLepping@tee.toshiba.de

Issued by:

Maria Scharnberg, Publitek

Tel: +49 (0)4181 968098-40

E-mail: maria.scharnberg@publitek.com

Web: www.publitek.com

September 2024

Ref. TSH150 EN_A