

Toshiba Successfully Demonstrates Nearline HDDs with Massive Capacity of Over 30 Terabytes

– Realized with two next-generation large capacity recording technologies: HAMR and MAMR –

TAIPEI – Taiwan, May 14, 2024 - Toshiba Electronic Components Taiwan Corporation (Toshiba) has successfully achieved storage capacities of over 30TB^[1] with two next-generation large capacity recording technologies for hard disk drives (HDDs): Heat Assisted Magnetic Recording (HAMR) and Microwave Assisted Magnetic Recording (MAMR). The demonstration drives represent a major milestone in the advance toward commercial products based on each of these emerging recording formats.



HAMR, one of the two technologies that are driving forward next-generation high-capacity data recording, boosts magnetic recording capabilities by locally heating the disk with near-field light. Toshiba achieved 32TB on 10 disks and adoption of Shingled Magnetic Recording (SMR) technology. Toshiba plans to start shipping test sample^[2] HDDs with HAMR technology in 2025.

The other technology is MAMR, which uses microwaves to enhance magnetic recording capabilities. Toshiba was the first^[3] to demonstrate its effectiveness and started mass production of first-generation drives in 2021. Toshiba achieved 31TB by stacking 11 disks, utilizing SMR technology, and improving signal processing.

These new achievements were made possible through years of close collaborative work with Resonac Corporation, a HDD media manufacturer, and TDK Corporation, a HDD head manufacturer. Toshiba and its working partners are committed to continue developing both HAMR and MAMR technologies in order to provide higher capacity HDDs to meet the growing storage demand of the cloud and datacenters.

A technical lecture detailing the demonstration will be presented at the IDEMA Symposium scheduled for May 16. For more details, visit the IDEMA website at

<https://www.idema.gr.jp/forumseminar/2024/5symposium.php>.

For more information on Toshiba's full line of HDD storage products, please visit:

<https://toshiba.semicon-storage.com/ap-en/product/storage-products.html>

To receive more about our storage solutions, please follow [@ToshibaStorage.Asia](https://www.instagram.com/ToshibaStorage.Asia) on Instagram.

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[1] Definition of capacity: One terabyte (TB) = one trillion bytes, but storage capacity actually available may vary, depending on 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] The test sample capacity aims for 28 to 30TB with Conventional Magnetic Recording (CMR) format.

[3] Toshiba research, as of December 24, 2021

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About Toshiba Electronic Components Taiwan Corporation (TET)

Toshiba Electronic Components Taiwan Corporation is responsible for the sales and marketing promotion and support of Toshiba hard disk drives and Toshiba External HDDs in Taiwan, China and Southeast Asian countries. TET is the best partner to Enterprise server, storage and notebook computers, and its mission is to offer the best service and products embodying the highest quality and most leading-edge technology. For more information, visit us at:

<http://toshiba.semicon-storage.com/ap-en/product/storage-products.html>

About Toshiba Electronics Asia (Singapore)

Toshiba Electronics Asia (Singapore) (“TEA”) is under Toshiba Electronic Devices & Storage Corporation, a subsidiary of Toshiba Corporation. TEA was founded in 1990, and is responsible for the sales, marketing and services for Toshiba’s wide range of storage solutions in Asia Pacific, which includes the Canvio Portable External Hard Drives and Internal Hard Drives. TEA is the best partner to consumers and enterprises, and its mission is to offer the best services and products that embody the highest quality and cutting-edge technology. To find out more about TEA, visit:

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