KIOXIA

Press Release

KIOXIA and Linus Media Group Set World Record for Pi Calculation

New GUINNESS WORLD RECORDS Title for Most Accurate Value of Pi - 300 Trillion Digits Calculated Using KIOXIA NVMe SSDs

Germany, Düsseldorf, 19th May 2025 – KIOXIA Europe GmbH today announced that KIOXIA has collaborated with Linus Media Group, creator of Linus Tech Tips and other influential technology-focused YouTube channels, to set a new **GUINNESS WORLD RECORDS™** title for the ***Most Accurate Value of Pi*.** A groundbreaking 300 trillion digits were calculated and officially verified and confirmed by Guinness World Records[1].

The record-smashing computation was enabled by a high-performance storage cluster comprising 2.2 petabytes (PB)[2] of 30.72 terabyte (TB) CM Series and 15.36 TB CD Series PCIe NVMe-based solid-state drives (SSDs) from KIOXIA.

These SSDs were configured in a network-attached storage environment connected to a dual-CPU compute server and ran for nearly seven and a half months.

“We knew breaking the Pi record with distributed network storage was going to be difficult - no one had really done it before due to the performance challenges associated with remote storage," said Jake Tivy, Writer & Host, Linus Media Group. "Fortunately for us, the reliability and performance of KIOXIA's NVMe SSDs enabled us to run continuous, intensive compute operations at speeds up to 100+ GB/s for nearly seven months straight, without a single SSD failure."

"Attaining a Guinness World Records title for the most accurate value of Pi is a tremendous achievement, emphasising the courage of taking on a challenge on the power of great cooperation and teamwork," said Axel Stoermann, Vice President and CTO for Embedded Memory and SSD at KIOXIA Europe GmbH. "KIOXIA America's successful collaboration with Linus Media Group enabled the demonstration of the robust capabilities of our NVMe SSDs under the most demanding of workloads. We will continue to advance the capabilities of our flash memory and SSD technology to support supercomputing applications."

Pi (π) represents the mathematical constant expressing the ratio of a circle’s circumference to its diameter. Its decimal representation extends infinitely without repeating. While the community recognises records of 100 trillion and even 202 trillion digits have also been performed, this new record surpasses those by nearly 50% and significantly surpasses the previous official GUINNESS WORLD RECORDS benchmark of 62 trillion digits by a factor of nearly five.

The record-setting achievement was documented in a feature video released by the Linus Tech Tips YouTube channel, giving viewers a behind-the-scenes look at the project and revealing the final digit of the record-setting calculation: spoiler alert…the 300 trillionth digit of Pi is 5.

To watch the full video, visit: https://youtu.be/BD-AJwqzWsU

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Notes:

1: As of April 2, 2025: https://www.guinnessworldrecords.com/

2: 1 petabyte = 1 billion megabytes.

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 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.

About KIOXIA

KIOXIA is a world leader in memory solutions, dedicated to the development, production and sale of flash memory and solid-state drives (SSDs). In April 2017, its predecessor Toshiba Memory was spun off from Toshiba Corporation, the company that invented NAND flash memory in 1987. KIOXIA is committed to uplifting the world with “memory” by offering products, services and systems that create choice for customers and memory-based value for society. KIOXIA's innovative 3D flash memory technology, BiCS FLASH™, is shaping the future of storage in high-density applications, including advanced smartphones, PCs, automotive systems, data centers and generative AI systems.

Visit our KIOXIA website

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