



Press Release

KIOXIA Honored by FMS With Lifetime Achievement Award for 3D NAND Flash Invention

Company's Development Team Recognized for Creation of Groundbreaking BiCS FLASH 3D Flash Memory Technology

Düsseldorf, Germany, 25 July 2024 – [KIOXIA](#), the inventor of NAND flash memory, is the recipient of the [FMS: the Future of Memory and Storage](#) Lifetime Achievement Award for 2024. The KIOXIA engineering team, consisting of Hideaki Aochi, Ryota Katsumata, Masaru Kito, Masaru Kido, and Hiroyasu Tanaka, will accept this prestigious award for its pioneering work in developing and commercializing 3D flash memory. This breakthrough technology has become fundamental to a wide range of computing applications – including advanced smartphones, PCs, SSDs, data centers, AI, and industrial.

KIOXIA presented the concept of BiCS FLASH™ 3D flash memory technology at the VLSI Symposium in 2007. After announcing the prototype, KIOXIA continued development to optimize the technology for mass production, eventually introducing the world's first 256 gigabit (Gb), 48-layer 3D flash memory in 2015.

"KIOXIA's innovation in 3D flash memory has revolutionized data storage, transforming it from a mere advancement of existing technologies into a groundbreaking solution that meets the demands of modern computing," said Chuck Sobey, FMS General Chair. "We are delighted to showcase this important contribution and look forward to seeing what the future holds."



With a 3D stacked structure that boosts capacity and performance, BiCS FLASH™ 3D flash memory has been a transformational force in the storage industry. The technology has enabled higher density storage solutions while maintaining reliability and efficiency, significantly enhancing the capabilities of data centers, consumer electronics, and mobile devices – and setting a new standard for flash memory technology. By leveraging vertical stacking, KIOXIA's BiCS FLASH™ technology addressed the limitations of planar NAND flash, paving the way for future developments in memory storage solutions - and reinforcing KIOXIA Corporation as an industry leader.

"KIOXIA's technical innovation in 3D flash memory cannot be overstated," said Atsushi Inoue, vice president and technology executive for KIOXIA Corporation's Memory Division. "Our technology has created a new paradigm in the industry, enabling flash memory to vastly increase storage density per cell, die and package. I am excited to see our achievements recognized and look forward to witnessing their continued influence in the years to come."

"My fellow KIOXIA engineers are an inspiration not only for their technological accomplishments but also for their commitment to advancing the field through continuous innovation and support for the technologists around them," said Ryota Katsumata, senior fellow of the Advanced Memory Development Center for KIOXIA Corporation. "Our contributions have not only made a reverberating impact, but have also fostered a spirit of innovation and collaboration within the community. It is wonderful to see this leadership and vision be acknowledged."

This 3D flash memory technology has also been recognized with the Imperial Invention Prize from the 2020 National Commendation for Invention in Japan and received the 2023 Award for Science and Technology from The Commendation for Science and Technology by Japan's Ministry of Education, Culture, Sports, Science and Technology and the 2021 IEEE Andrew S. Grove Award.

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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 NAND flash memory to today's breakthrough BiCS FLASH™, KIOXIA continues to pioneer innovative memory solutions and services that enrich people's lives and expand society's horizons. The company's innovative BiCS FLASH™ 3D flash memory technology is shaping the future of storage in high-density applications, including advanced smartphones, PCs, SSDs, automotive and data centers.

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