KIOXIA

Press Release

KIOXIA AiSAQ and Memory-Centric AI Innovations Enable AI-Based Automatic Image Recognition for Logistics Processes

Germany, Düsseldorf, 02 December 2025 – KIOXIA Europe today announced the development of an AI-driven image recognition technology that automatically identifies products moving through logistics workflows in collaboration with Tsubakimoto Chain Co. (Tsubakimoto Chain) and EAGLYS Inc. (EAGLYS). This system supports advanced automation and efficiency in logistics, enabling organisations to respond quickly to changing market needs while managing costs and maintaining service quality. KIOXIA AiSAQ™[1] and Memory-Centric AI[2] technologies are central to this effort, addressing the need for scalable AI adoption as product types continue to expand and diversify. The jointly developed technology will be demonstrated during the 2025 International Robot Exhibition.

With the continued rise of e-commerce transactions, logistics networks are seeing greater volumes and a wider range of products moving through them. At the same time, ongoing labour shortages are driving the need for greater operational efficiency through AI. Traditional image recognition AI systems rely on deep learning models that require parameter tuning and retraining whenever new or seasonal products are introduced. This process is time-consuming and increases both power usage and operational costs, especially when dealing with large product catalogues.

The KIOXIA AiSAQ software, combined with KIOXIA's Memory-Centric AI technology, addresses these challenges by storing extensive new product data - including images, labels, and feature information - in high-capacity storage. This allows new product information to be added quickly without retraining the base model.

To mitigate longer search times and increased memory requirements as data volume increases, the technology indexes memory-stored data and moves the indexed data into SSD storage, enabling faster and more efficient retrieval.

“At KIOXIA, our aim is not only to provide the best memory options for the applications' needs, but also to provide support & accessibility by open-sourcing our technology, to help developers and system architects fine-tune performance and capacity in innovative new ways,” said Axel Störmann, Vice President and Chief Technology Officer for Memory and SSD products, KIOXIA Europe GmbH. "Utilizing SSD-based ANNS, we are reducing the reliance on costly DRAM while matching the performance needs of leading in-memory solutions – enhancing the performance range of large-scale RAG applications significantly."

The technology collaboration between KIOXIA and EAGLYS will be showcased at the 2025 International Robot Exhibition, held on 3 to 6 December at Tokyo Big Sight (Tsubakimoto Chain Booth E6-23). The exhibition is a premier global venue for highlighting the latest automation advances in manufacturing and logistics. At the booth, visitors will see the jointly developed image recognition system in action. As products move along a conveyor, the system captures their image data and rapidly classifies them by referencing stored features and labels. The demonstration shows how logistics sites can manage a wide and continually changing range of products with greater accuracy and efficiency.

Please follow the link to download KIOXIA AiSAQ open-source software:

https://github.com/kioxia-jp/aisaq-diskann

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Notes:

[1]: KIOXIA AiSAQ™ Technology Designed to Reduce DRAM Requirements in Generative AI Systems Released as Open Source Software
https://www.kioxia.com/en-jp/business/news/2025/20250128-1.html

[2]: Development of Image Classification System Deploying Memory-Centric AI with High-capacity Storage https://www.kioxia.com/en-jp/rd/technology/topics/topics-39.html

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.

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