

Press Information

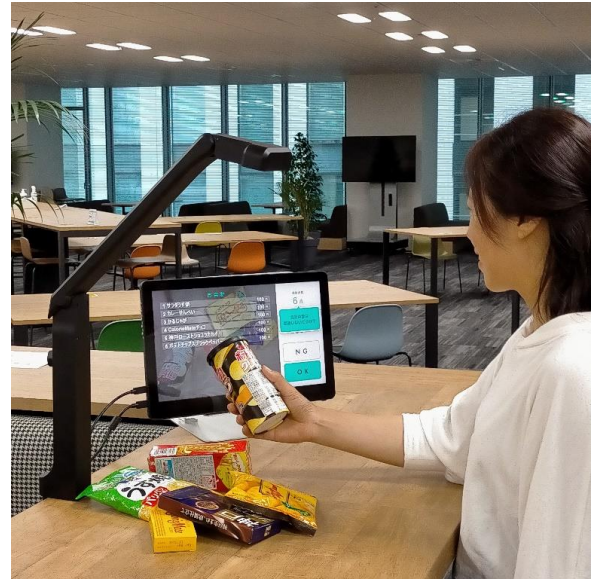
Kyocera Develops “Smart Checkout System” Equipped with Kyocera’s AI object recognition technology

Kyoto/London, June 29th, 2021. Kyocera announced the development of an Artificial Intelligence (AI)-based Smart checkout system. This low-cost object-recognition checkout system offers significant productivity gains for retail commerce while reducing physical contact that can transmit viral infections.

Kyocera’s AI object-recognition technology instantly recognizes multiple purchase items with a single camera, even when items overlap in the checkout space. Also, Kyocera’s AI architecture and extensive database of different product types reduces the machine learning time required when a store introduces a new product.

Development Background

Self-checkout and automated AI payment systems are becoming more common at retail and convenience stores, especially in Japan, where automation represents a key solution to the growing labor shortage. Additionally, these systems offer a potential means of preventing COVID-19 and other transmissible infections by reducing physical contact. However, conventional barcode-based systems are viewed as too time-consuming by many customers, and automated AI-based systems using multiple cameras require large-scale capital investment.



Kyocera's Smart checkout system overcomes both obstacles: it can instantly recognize multiple overlapping products, making checkout more efficient while reducing physical contact; and, it can operate with a single camera, PC, and display, making deployment easier and more affordable.

Technology Highlights

Using proprietary technology developed by Kyocera's Research and Development Division, Kyocera's Smart checkout System offers three main features:

1. Low cost, easy deployment

The entire system requires just one camera, PC, and display at each checkout counter, reducing capital investment and making this new technology affordable.

2. High-precision object recognition

Kyocera's proprietary AI learning technology can accurately recognize multiple products even if they overlap or are in customers' hands.

3. Recognition technology reduces learning time for newly offered products

Utilizing Kyocera's proprietary AI architecture, the system can register and recognize more than 6,000 different types of products. Adding products to the database requires the system only to learn the latest product, whereas other AI -based checkout systems available on the market would need to re-learn all products, leading to a reduction in learning time.



The system recognizes multiple overlapping items at checkout



For more information on Kyocera: www.kyocera.co.uk

About Kyocera

Headquartered in Kyoto, Japan, KYOCERA Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the KYOCERA Group, which is comprised of 297 subsidiaries (as of March 31, 2021), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the most experienced producers of smart energy systems worldwide, with more than 40 years of know-how in the industry. The company is ranked #549 on Forbes magazine's 2020 "Global 2000" listing of the world's largest publicly traded companies.

With a global workforce of over 75,500 employees, Kyocera posted sales revenue of approximately €11,74 billion in fiscal year 2020/2021. The products marketed by the company in Europe include printers, digital copying systems, semiconductor-, fine ceramic-, automotive- and electronic components as well as printing devices and ceramic kitchen products. The KYOCERA Group has two independent companies in the United Kingdom: KYOCERA Fineceramics Ltd. and KYOCERA Document Solutions Ltd.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (approximately €763,000* per prize category).

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Contact

KYOCERA Fineceramics Ltd.

Daniela Faust

Manager Corporate Communications

Prospect House, Archipelago,

Lyon Way, Frimley, Surrey.

GU16 7ER United Kingdom

Tel: [+44 1276 693450](tel:+441276693450)

Fax: +44 1276 693460

Mobile: +49 175 72 75 70 6

E-mail: daniela.faust@kyocera.de

www.kyocera.co.uk