May 15, 2025

Kawasaki Heavy Industries, Ltd.
KAWAJU GIFU ENGINEERING CO., LTD.
Remote Robotics, Inc.

Kawasaki Develops Automated Depalletizing System for Air Cargo—New Robotic Technology for Addressing Workforce Shortage in Air Cargo Logistics Industry

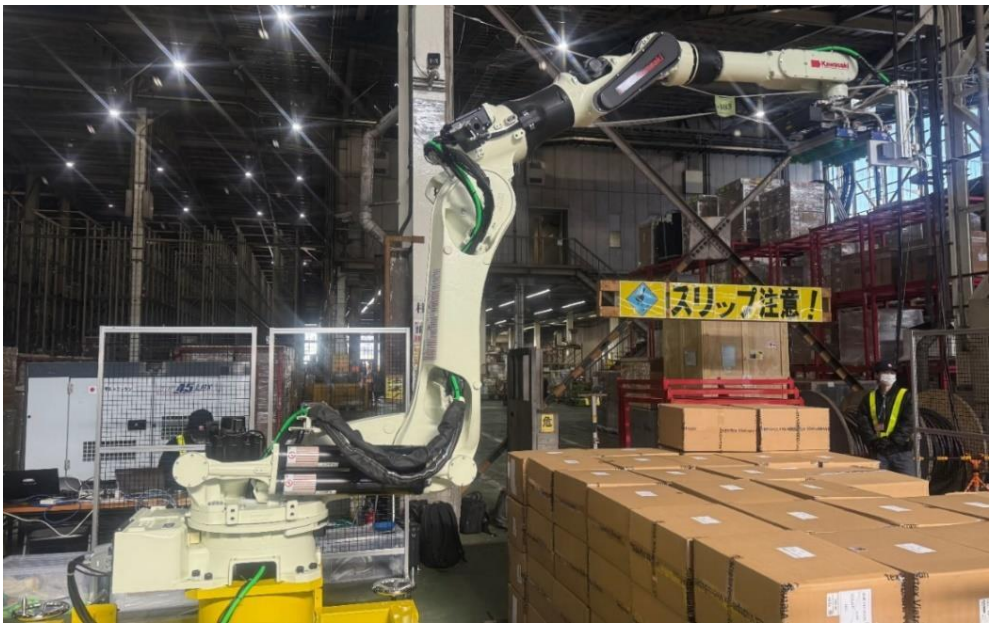
Tokyo, May 15, 2025 — Kawasaki Heavy Industries, Ltd., KAWAJU GIFU ENGINEERING CO., Ltd. (KGE), and Remote Robotics, Inc. announced today that they have developed an automated depalletizing system for unloading goods from air cargo pallets, utilizing a proprietary 8-axis robot system, unique control logic, and remote-control technologies. In February 2025, the three companies successfully completed a series of pilot tests for unloading goods from air cargo pallets at Narita International Airport, conducted in conjunction with Japan Airlines Co., Ltd. and JAL Cargo Service Co., Ltd.

A scene from a pilot test for depalletizing goods from air cargo pallets

The air cargo logistics sector has a growing need for automation, due to the expansion of e-commerce and the rapidly accelerating shrinkage of the workforce in recent years. Depalletizing goods from air cargo pallets has been particularly difficult to automate because these pallets are larger than those used for domestic land transport, making it difficult for standard 6-axis systems typically found in industrial robot arms to handle, due to their limited working range. Expectation had thus been growing that robotics technology would be adapted to unloading procedures, to accommodate the wider working range that air cargo pallets require.

The pilot test in February verified that automated depalletizing is possible using a long-armed, 8-axis robot whose technology had been developed by combining the automation and robotics technologies Kawasaki uses in producing aviation products with KGE's aircraft engineering prowess. For the test, an automated depalletizing system was set up in a cargo shed at JAL Cargo Building at Narita International Airport, an 8-axis robot located goods stacked on a pallet using its 3D vision AI camera, and it completed the entire depalletization.

Another test was conducted to see how depalletizing could be carried out if the automated system failed to locate goods on its own. It was confirmed that, under such circumstances, an operator could remotely command the robot to capture images of the stacked goods on the pallet and specify the position of the item which should be gripped by the robot arm, using the cloud-based "Remolink" service provided by Remote Robotics.
The test ensured that by utilizing the 8-axis robot, proprietary control logic, and remote-control technology, automation of air cargo depalletization is possible. Encouraged by these results, we will continue to develop more systems that meet the needs of onsite operators, thereby contributing to the further development of air cargo logistics.



Another scene from the pilot test for depalletizing goods from air cargo pallets

Overview of the companies

Kawasaki Heavy Industries, Ltd.: https://www.khi.co.jp/en/
Kawasaki Heavy Industries is a multinational conglomerate providing innovative technologies and products in diverse fields, including aerospace, rolling stock, marine vessels, industrial robots, and motorcycles. Kawasaki now also offers, through a newly-launched business of its Aerospace Systems Company, manpower-saving solutions using its proprietary robotic systems.

KAWAJU GIFU ENGINEERING CO., LTD. (KGE): https://www.khi.co.jp/corp/kge/ (In Japanese)
KGE is an affiliate of Kawasaki Heavy Industries, Ltd., offering engineering services mainly for the aerospace industry.
Note: The technologies and related operations described in this press release, which were previously conducted by KGE, have been legally succeeded and transferred to Kawasaki Heavy Industries Aerospace Production Technology, Ltd. (KAPT), which was established on July 23, 2025. https://www.khi.co.jp/corp/kapt/ (In Japanese)

Remote Robotics, Inc.: https://www.remoterobotics.net/en/
Launched as a joint venture of Kawasaki Heavy Industries, Ltd. and Sony Group Corporation on December 1, 2021, Remote Robotics connects companies that are facing workforce shortages or are concerned about the safety of robot operations with workers — within the company or outside — who are seeking more flexible working situations. It offers "Remolink"—an innovative cloud-based service that enables robot operators to control robots remotely and also provides more flexible work styles.