



To the Press and Whom it May Concern,

August 19th, 2018  
ZMP Inc.

# **Announced Delivery Robot CarriRo® Delivery model! Challenge to the last one mile of logistics Japan's first implementation of service demonstration experiments by home delivery robots**

ZMP Corporation (Bunkyo-ku, Tokyo, President: Hisashi Taniguchi, hereinafter ZMP) today announced the pre-mass model of the delivery-oriented robot CarriRo® Delivery. Fully remodeled design, size, user interface etc for real service. Robot main body improves adaptability to driving environment by making it smaller than previous model. According to the store's needs, it can be replaced with lockers of various box size and number. By enriching "facial expression" as a point of contact with users, we have evolved communication means with surroundings. On the IT side, users' applications that can be settled from ordering products, can release key by QR code reading, shop apps that support order management at shops, product loading to each locker, We have a remote monitoring system that can manage position / status and remote control in case of emergency.

In addition, we will begin demonstration experiment of delivery service by home delivery robot in Japan using this model, with cooperation of Lawson Corporation and Keio University SFC Research Institute. The user performs orders to receipts using a dedicated application, and service verification close to actual operation that CarriRo Delivery delivers in autonomous driving. This demonstration experiment has been adopted by the Ministry of Economy, Trade and Industry as "AI system joint development support project". Through this demonstration experiment, we will proceed with identifying issues in actual operation and grasping user needs, and will further accelerate development for practical application.

## **【Basic specifications and functions of new model】**

### Basic Specification

Size	Width 65cm,Length 95cm,Height 96cm
Locker	1 Box,4 Box,8 BoxType (Customizable)
Loading capacity	50 kg
Speed	Maximum Speed 6 km
Steps	5cm
Ability to Climb	8°
Driving Time	Approximately 12 hrs



■ Replacement locker



1 box



4 box



8 box

■ Other basic functions

- Autonomous mobile traveling outdoors
- Read the QR code of the smartphone order screen and release the key of the locker
- Packaged home delivery robot and shopping application · store application

**【Outline of Delivery Service Field Experiment】**

Description: "Development and demonstration of safe and secure home delivery robot system using AI"

Implemented as National Institute for New Energy and Industrial Technology Development (NEDO) "AI System Collaborative Development Support Project"

Cooperation: Lawson Corporation, Keio University SFC Institute

Period: July 5, 2018 - February 20, 2018

Place: Keio University Shonan Fujisawa Campus

**【About delivery robot "CarriRo Delivery"】**

Our company aims to eliminate the problem of the last one mile of logistics by applying the autonomous moving technology cultivated through the development of automobile driving technology of automobiles and aiming to help everyday shopping, "CarriRo Delivery". We have developed and carried out demonstration experiments on the technical side since last year. CarriRo Delivery carries a home delivery box, which autonomously runs at a maximum speed of 6 km while recognizing the surrounding environment 360 degrees with a camera or laser sensor, and delivers the baggage to the destination. It also has a system that enables remote monitoring and remote control.

<http://www.zmp.co.jp/products/carriro-delivery>

**【Contacts】** < For press related inquiries >

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RoboCar® 1/10



RoboCar® MV2



RoboCar® MiniVan



CarriRo®



CarriRo® Delivery

**【ZMP Inc.】**

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"Robot of Everything" Under the mission of autonomous driving, creating a safe, enjoyable and convenient lifestyle for all kinds of people. ① ADAS (Advanced Driving Support), Autonomous Driving development platform RoboCar® series as well as Sensor system ② RoboTest®, Support for development such as Autonomous Driving for mobile body manufacturers (automobiles, commercial vehicles, construction machinery, agricultural machinery, distribution conveyance equipment, outdoor work machines, etc) ③ We are developing and selling logistic support robot CarriRo® Auto Taxi. Also, we are conducting demonstration experiments on technologies and services on public roads toward realization of Auto Taxi® in 2020. We began demonstration experiments on Home delivery robot, CarriRo® Delivery aiming for Japan's first pedestrian walk from 2017. ZMP will continue to provide products and services that impress the world.