

AI Autonomous Serving Robot



Developed by Rainbow Robotics

AI Autonomous Serving Robot

Rainbow Robotics serving robot uses core components developed in Korea as well as self-developed software to deliver high positioning precision and stable driving performance compared to other companies. In addition, interactive UI is mounted to enable easy setting and operation even by beginners.

- **10.1inch Touch Display**

Interactive UI is mounted for easy setting & operation

- **3D Camera & 2D LiDAR Sensor**

Autonomous driving is possible by using two 3D cameras and 2D LiDAR sensor mounted on the robot

- **Ambient Light**

Robot status such as move, stop, and obstacle detection can be checked intuitively through colors



Specification



Basic Specifications

Model Name	RBM-SRV
Size	510 x 510 x 1250 mm
Loading Capacity	Max. 30 kg (Approx. 10 kg per tray)
Tray Size	510 x 380 mm
Display	10.1 inch / (1280 x 800)
Weight	Approx. 50 kg
Number of tray	2 EA + 1 EA (Expandable)
Sensor	2D LiDAR x 1 / 3D Camera x 2
Network	Wi-Fi

Battery

Battery Capacity	15,000 mAh (48V)
Continuous Driving Time	12 hours
Battery Charging Time	3hours 30 min
Charging Type	Enclosed Wired AC Adaptor

Driving

Driving Mode	Serving Mode / Return Mode
Driving Width (Min.)	700 mm
Driving Speed	Max. 1.0 m/s (Adjustable)
Safety function	EMO Switch

Other

Sound Volume Control	Separate control of background music & guidance voice
Charging Recognition	Recognition of charging adaptor connection
Tray Position Adjustment	Adjustable
Tray Attach/Detach	Ready-made trays used

※ Specifications may be partially changed for purposes of performance improvement.

Main Functions & Features

High positioning precision

By using Grid-Free SLAM, it offers higher positioning precision compared to other companies



Self-Developed Software Used

Interactive UI is mounted for easy setting & operation



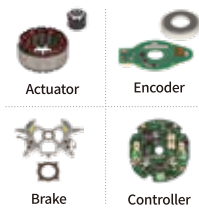
AI Autonomous Driving

Internalization of AI autonomous driving technology



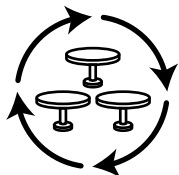
Internalization of Core Components

Reasonable price by with independently developed core components



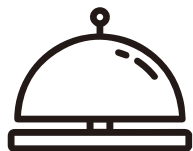
Serving Point Management

The service location and group can be designated for intuitive, convenient management



Linkage with Staff Calling Bells

Linked with calling bells for convenience in collecting the dishes



10.1 inch Display

Large display for better delivery of information and efficient advertising effect



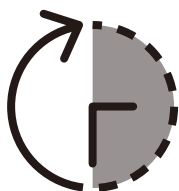
Operated as a Cart

When desired, it's possible to pull and move around like a cart



Short Setting Time

Quick setting within 30min is possible based on 90m²



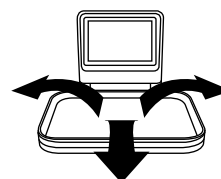
Long Operation Time

Once fully charged, it can operate for 12 hours



3-Sided Tray Open Structure

With the horizontal arrangement opened on 3 sides, attachment/detachment is convenient, and working speed is increased



Tray Customizing Possible

The tray position can be adjusted depending on the work, and trays can be added up to 5 trays max



Interactive UI & Mode

Anyone can operate it easily thanks to the interactive UI. Basic serving mode and collecting mode are also mounted, and video and image can be added for use as advertising as well.

Interactive UI

User Mode



Start Screen for moving to the standby location



Robot position confirmation screen



Saving screen(Charge/Standby/Return/Serving Location)



Serving Start Screen

Driving Mode



Safe speed zone setting screen



Serving Robot Setting Screen

Mode

Serving Mode

Serving to the designated location is easy



Return Mode

Open tray for more convenient return



Advertise Mode

The wide 10.1-inch display makes it easy to promote



Application

Rainbow Robotics serving robots are used in various food service sites and office spaces such as restaurant, cafe, bakery, cafeteria, etc. In addition, the robot can be used to provide customer service in shopping marts, hospitals, hotels, and golf clubs.

Use cases



Cafe



Bakery



Cafeteria



Cafeteria



Grill Restaurant



Asian Restaurant



Korean Restaurant



Office

Application fields



Cafe



Restaurant



Internet Cafe



Shopping Mall



Hospital



Hotel

FAQ

Q1 What is required for installing the serving robot in the store?

A1 Depending on the situation, the Wi-Fi environment must be set up.

When operating multiple serving robots, the **Wi-Fi environment must be set up** for communication between the robots. In addition, Wi-Fi connection is required for remote service and updates.

Q2 Are there conditions that make operation impossible?

A2 Depending on the installation environment, it may be difficult to operate the serving robot.

It is difficult to operate the serving robot **in narrow places in the moving route of the robot**. It may also be difficult to operate the robot **when the floor is severely damaged, or when the floor is uneven**.

Q3 What should I do when the serving robot is broken?

A3 You can contact the place where you purchased the robot.

Please contact the specialized robot company where you purchased the robot, or the specialized robot care company **for maintenance**.

Q4 What is the installation process?

A4 A professional engineer from a special installation company will visit your location to perform the installation.

Listen to the purpose of using the serving robot → Explanation on the serving plan → Environment mapping → Serving location setting → Other setting application → Test operation is applied in order to perform the installation.

Q5 Is it possible to exchange the tray?

A5 Yes, it's possible.

The tray uses a standard ready-made product sold in the market. **A tray measuring 510 X380 mm** must be purchased separately, or you may also inquire with the place where you purchased the serving robot.

Q6 How is the maintenance of the serving robot performed?

A6 Maintenance is performed by the specialized robot care company.

The specialized robot company where you purchased the robot **operates the maintenance plan independently**, or a specialized robot care company **is consigned for the maintenance**.

Recruiting Serving Robot Distributor

We're looking for new partners to grow and succeed together. To the distributor's continued success, we are providing all possible support. Realize higher returns with Rainbow Serving Robot.

For any other questions regarding the serving robot, please send your inquiry through QR code or send an e-mail to sales@rainbow-robotics.com.



Scan QR code for Inquiry



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