

# CMB05

## Cantilever AMR for Roll Handling



Empowering the World with Billions of Robots

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## Introduction

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CMB05 is a cantilever AMR engineered for roll handling in manufacturing environments such as new energy and semiconductor production. Designed for automated loading and unloading of winding machines, it combines 3D SLAM navigation, vision-based precision positioning, and secondary alignment via the cantilever axis to achieve accurate machine docking. CMB05 supports a range of automated material handling tasks, including roll loading, empty core retrieval, and finished-roll unloading.

## Features

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### High-Precision Positioning

Combines 3D SLAM navigation, vision-based precision positioning, and secondary alignment via the cantilever axis to achieve docking accuracy of  $\pm 3$  mm.



### Flexible Loading & Unloading

The cantilever design enables automated pickup, placement, and transfer of roll materials for efficient winding machine loading and unloading.



### 500 kg Payload

With a rated payload of 500 kg, CMB05 is designed to handle rolls, cores, and other production materials.



### High-Speed Operation

With a maximum travel speed of 1.8 m/s, CMB05 delivers efficient material transport while maintaining precise machine docking.

CMB05

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Specifications

| CMB05                  |                                     |                                                                  |
|------------------------|-------------------------------------|------------------------------------------------------------------|
| Navigation             | Navigation Method                   | QR Code Navigation /<br>Laser Navigation(2D/3D SLAM)             |
| Communication          | Wireless WiFi                       | ●                                                                |
|                        | Optical Communication               | ○                                                                |
|                        | 5G                                  | ○                                                                |
| Basic Specifications   | Rated Load (kg)                     | 500                                                              |
|                        | Dimensions LxWxH(mm)                | 900x602x1275                                                     |
|                        | Weight (kg)                         | 430                                                              |
| Movement Features      | Driving Features                    | Forward, Reverse, Turning, 360° Rotation                         |
|                        | Driving Speed(m/s)                  | 1.8/1.3                                                          |
|                        | Positioning Precision(mm)           | ±10                                                              |
|                        | Lifting Speed (No Load / Full Load) | 60(mm/s)                                                         |
|                        | Cross-Groove Capability (mm)        | ≤30                                                              |
|                        | Climbing Capacity(mm)               | ≤3°                                                              |
|                        | Obstacle Clearing Capability(mm)    | ≤10                                                              |
|                        | Lifting Stroke (mm)                 | /                                                                |
| Safety Protection      | Path Deviation Protection           | ●                                                                |
|                        | Positioning Fault Protection        | ●                                                                |
|                        | Obstacle Detection LiDAR            | ●                                                                |
|                        | 3D Obstacle Detection & Avoidance   | ●                                                                |
|                        | Dynamic Obstacle Detouring          | ○                                                                |
|                        | Anti-Collision Strip                | ●                                                                |
|                        | Emergency Stop Button               | ●                                                                |
|                        | Sound & Light (Warning)             | ●                                                                |
| Battery Specifications | HMI                                 | ●                                                                |
|                        | Charging Mode                       | Auto/Manual                                                      |
|                        | Battery Type (Standard)             | Lithium Iron Phosphate                                           |
|                        | Rated Voltage (V)                   | 48                                                               |
|                        | Standard Capacity (Ah)              | 104                                                              |
|                        | Discharge Rate/Runtime(h)           | /                                                                |
| Detection              | Battery Life                        | ≥70% Capacity Retention After 2,000 Full Charge-Discharge Cycles |
|                        | Deviation Detection & Correction    | ○                                                                |
|                        | Barcode Recognition                 | ○                                                                |

● Standard   ○ Optional

The dimensions can be customized to satisfy project requirement

# Multiway Robotics

Multiway Robotics is committed to "Empowering the World with Billions of Robots" and takes "To create a new and efficient operating mode" as its mission, continuously driving the advancement of global productivity.

**Global Presence:** The headquarters is located in Shenzhen, China, with production facilities in Zhejiang Wuzhen. Multiway has also established subsidiaries in the United States, Germany, Japan, South Korea, and more, extending business, operations, and services to 40+ countries and regions worldwide.

**Our Expertise:** Focusing on advanced robotics and AI technology, Multiway Robotics is committed to delivering cutting-edge Smart Intralogistics Solution to our customers. Multiway offers a comprehensive, integrated innovation delivery platform and solutions, ranging from core sensors and algorithms to self-developed unmanned forklifts and upper-level control systems. Hardware products include a full range of unmanned forklifts and four-way shuttle, while software systems encompass WMS, RCS, WCS, on-site management systems, and various visual solutions.

**Software:** WMS, RCS, WCS, Multiway Horizons, Simulation

**Hardware:** AGV forklifts, AGV Tugger, AMR & Four-way Shuttle

After successfully delivering numerous benchmark projects in industries such as factories, warehousing, and logistics, Multiway has become a trusted and ongoing collaborative partner for many industry-leading customers.



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