Multiway Robotics

Leading Intelligent Intralogistics Solution Provider



www.mw-r.com

Multiway Robotics (Shenzhen) Co., Ltd.

Overview

60%
R&D personnel

250+
Patents and copyrights

20+
Scenarios

4 series **10** robotics



Philosophy

We believe that strong R&D and constant innovative capabilities are fundamentals of sustainable growth of the company, furthermore, are the sources of long-term service and insistant empowerment of our customers.

Awards & Certificates

National High-Tech Enterprise

CE Certification

ISO 9001 Certified

2022 German Reddot Product Design Award

The 11th LT China Logistics Innovation Product Award in 2022

Selected as the Most Noteworthy AGV Company in the World in 2022

2021 GaogGong Golden Globe Award for Innovative Technology

2021 Capek Innovation Brand Award

2021 NetEase Supernova List

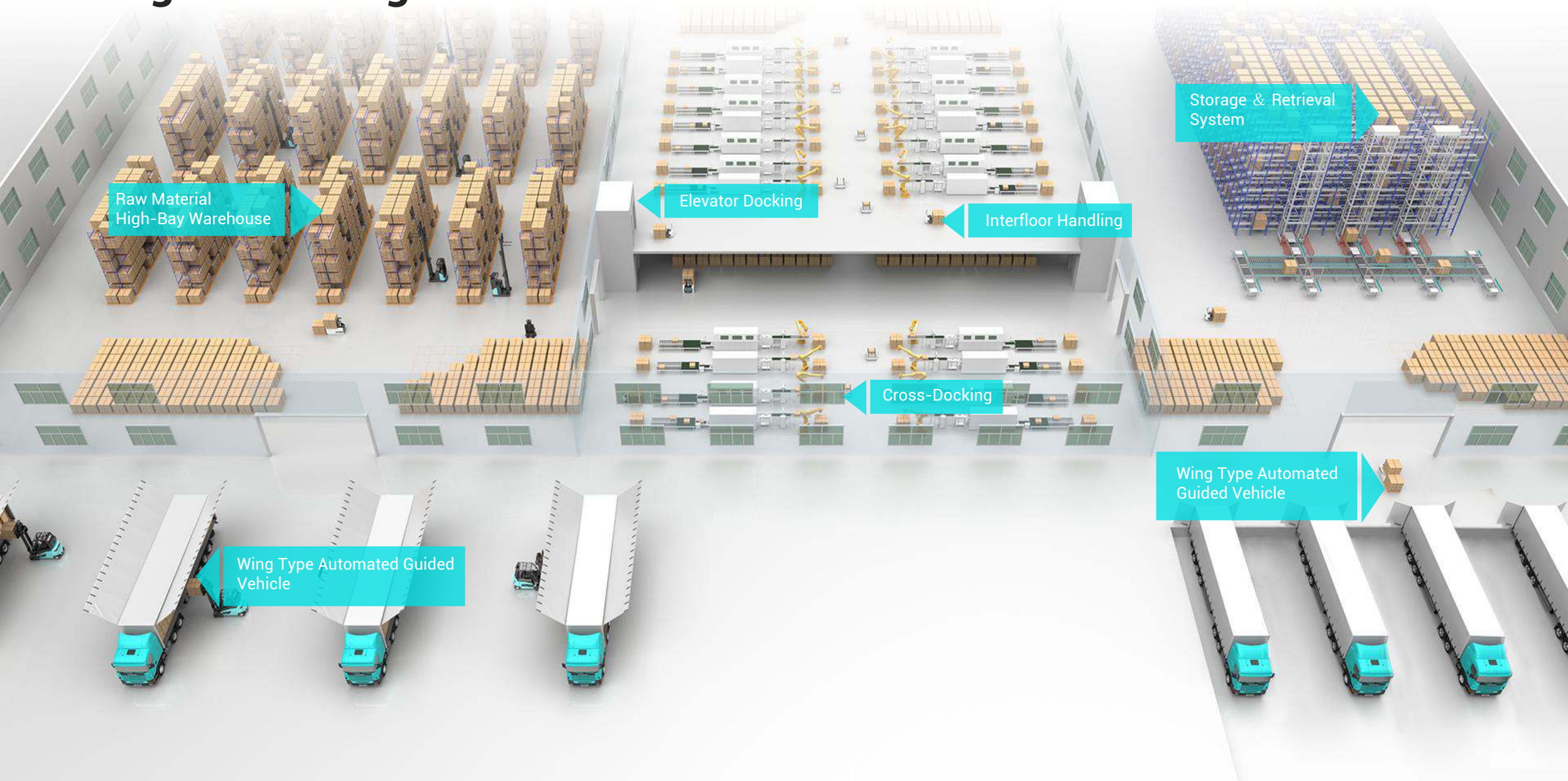
2021 Tianyancha Digital China High-tech High-Growth Emerging Enterprises Top 50

2021 China Top 100 New Entrepreneurship Enterprises

2021 New City Power List

2021 Smart Logistics Emerging Brand Enterprise Award by Logistics and Technology Magazine

Intelligent Intralogistics Solutions



New Concept

Industry Pioneer, Unique Patent

2 Pallets in One Trip

Handling Efficiency Doubled

Interface with Multiple Devices, Scene Flexible Customization



Payload

Version 1：800Kg*2

Version 2：1000Kg*2

Version 3：1200Kg*2

Version 4：1500Kg*2



α1

Laser SLAM Navigation	1000mm Lifting Capacity	≤30mm Ditch-crossing Capability
Wi-Fi/5G Communication	1000mm Lifting Capacity	2m/s Max Speed
±5mm Positioning Accuracy	2000kg Weight	6~8h Operation Time

Fulfill various practical scenarios



Narrow Aisle Transportation



Lifter Docking



Ground Storage Transportation



Industrial Robots Collaboration

New Concept



New Bee

Small in Size, Huge in Power

Light weighted, reduced ground-bearing requirement, inter-floor transportation, steady operation

Suitable to extremely narrow aisles, increased the warehouse space utilization

Fast, flexible, modulated quick deployment

Laser SLAM Navigation	1500kg Payload	1350mm Turning Radius
Wi-Fi/5G Communication	120mm Lifting Capacity	1.5m/s Max Speed
±5mm Positioning Accuracy	240kg Weight	Auto charging Charging Strategy

New Concept

Large Storage - Adapt to Extremely Narrow Aisles

Low Cost - Great Savings in Operating Costs

Navigation	Laser SLAM	Slope	≤3°（5%）
Communication	Wi-Fi/5G	Ditch Crossing	≤30mm
Speed	0-3m/s	Charging Method	Manual/Auto
Accuracy	±5mm	Operation Time	6-8h

Payload：1000~2000Kg
Lifting：210mm



Pallet Truck AGV
MW-ST Series

Payload：1400Kg
Lifting：3500mm



Lightweight Pallet Stacker AGV
MW-SL Series

Payload：1500~2000Kg
Lifting：3000mm



Lightweight Counterbalance Lifting AGV
MW-SE Series

Payload：2000Kg
Lifting：4500mm



Lateral Pallet Truck
MW-O Series

Smart Forklifts

Full Range of Unmanned Forklifts, Meet the Needs of Various Scenarios

Heavy Load Capacity - Meet 0-5 Ton Load Requirements

High Lifting Capacity - Maximum Lifting Height Reaches 10m

Various Types - Meet the Needs of Any Scenarios







Payload：2000Kg
Lifting：210mm



Pallet Truck AGV
MW-T Series

Payload：1400~2000Kg
Lifting：5400mm



Automated Stacker AGV
MW-L Series

Payload：2500~5000Kg
Lifting：6600mm



Heavy-Duty Counterbalanced Forklift
MW-E Series

Payload：1400~2000Kg
Lifting：11500mm



Reach Truck AGV
MW-R Series

Payload：1500Kg
Lifting：10000mm



Counterbalanced Forklift
MW-K Series

Unmanned Vehicles



Payload：100~1000Kg



SLAM Double Differential AMR

MW-C Series

Payload：1000~5000Kg



SLAM Omnidirectional Steering Wheels AMR

MW-D Series

0~6 tons traction

Connect various carriers

Automatic hook and unhook

Indoor and outdoor



Payload：5000Kg



Indoor Tractor AGV

MW-ISP50

Payload：6000Kg



Outdoor Tractor AGV

MW-OSP60

Intelligent Four-way Shuttle

- Change Direction in Situ
- Multi-shuttle Scheduling
- Intelligent Dynamic Management
- Route Planning
- Drop Detection
- Overload Detection
- Temperature Detection
- Modular Configuration
- Safety System
- Standard Port Interface
- Free Combination of Storage Space
- Automatic Charging

1500kg
Payload

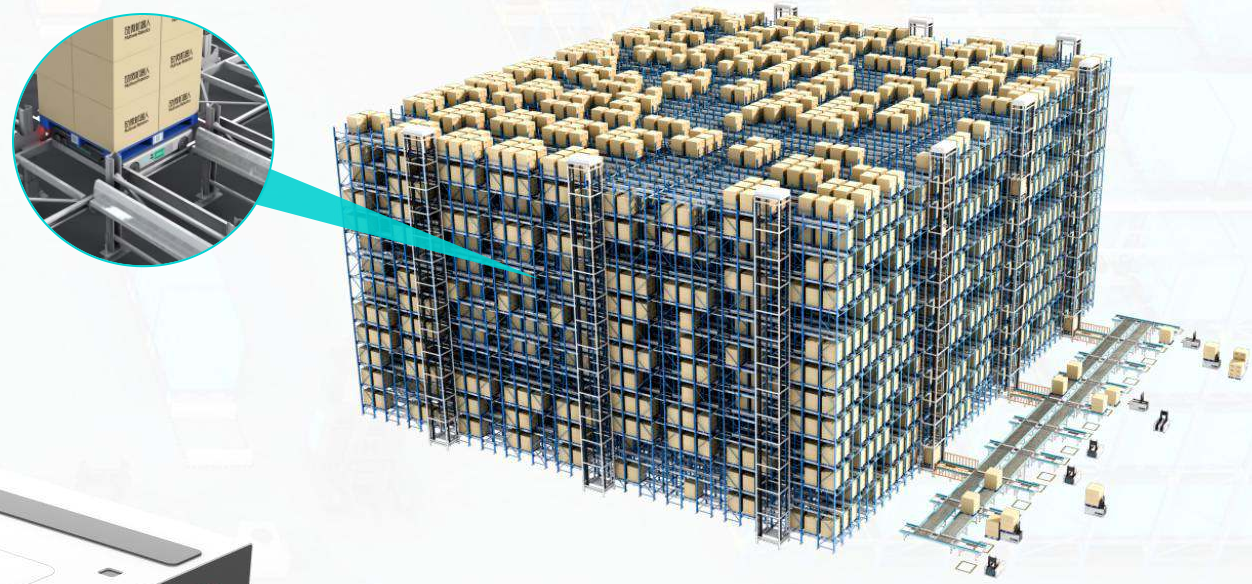
2m/s
Speed

≤2mm
Positioning Accuracy

6~8h
Operation Time

The World's Thinnest **120mm**





Intelligent Intralogistics Solutions for Stock in/out and Transp

*Customization Support

Application	AGV
Loading and Unloading Truck	Counterbalance
Ground Transportation	Pallet Truck
Production Line Docking	Stacker
Inbound and Outbound	Stacker
Loop Transportation	Tractor
High-Bay Warehouse	Shuttle



Platform Structure

Standardized Products & Platform System

Multiway Cloud

Visual Management System

- Multiway Dispatch System - MW RCS
- Multiway Warehouse Management System - MW WMS
- Multiway Equipment Control System - MW WCS

Flexible Vision System

- Pallet Posture Recognition
- Automatic Load and Unload
- Storage Detection
- On-site V2X
- Cage Stacking
- Dimensions Measurement
- High-position Storage
- Visual Inventory Check

Module-independent on-board System








Laser Radar | **Positioning System** | **Security System** | **Control System** | **Vision System** | **Core Sensor**

Platform Empowerment

Complete Product Line

- Pallet Truck Series
- Stacker Series
- Counter Balanced Forklift Series
- Reach Lift Truck Series
- Tractor Series
- AMR Series

Innovative & Unique Products

- Nwe Bee
- α1
- Intelligent Four-way Shuttle
- More Products ...

Multiway Dispatch System - MW RCS

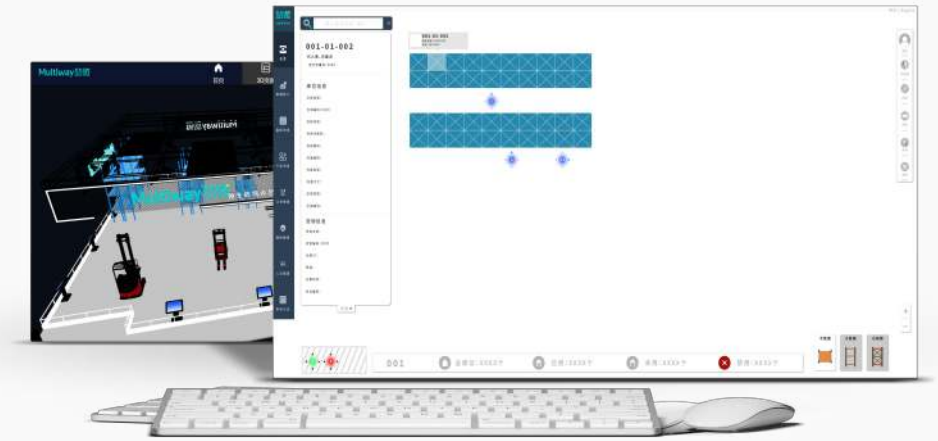
Multiway Dispatching System MW RCS - RCS dispatching system supports hundreds of different kinds of AGVs running at the same time and generates the most optimized route. It achieves overall optimal navigation route planning and complete tasks in the shortest time and guaranteed to operate at maximum efficiency.



- Route Planning
- Task Sequencing
- Traffic Control
- AGV Control
- Data Analysis
- Device Monitoring
- Battery Management

Multiway Warehouse Management System - MW WMS

Multiway Warehouse Manage System can realize inventory data management, operation management, storage location management, warehouse equipment health monitoring and intelligent report management, create a warehouse management system with transparent process and information, break the black box status of inventory assets, and grasp inventory and cost occupancy in real time.



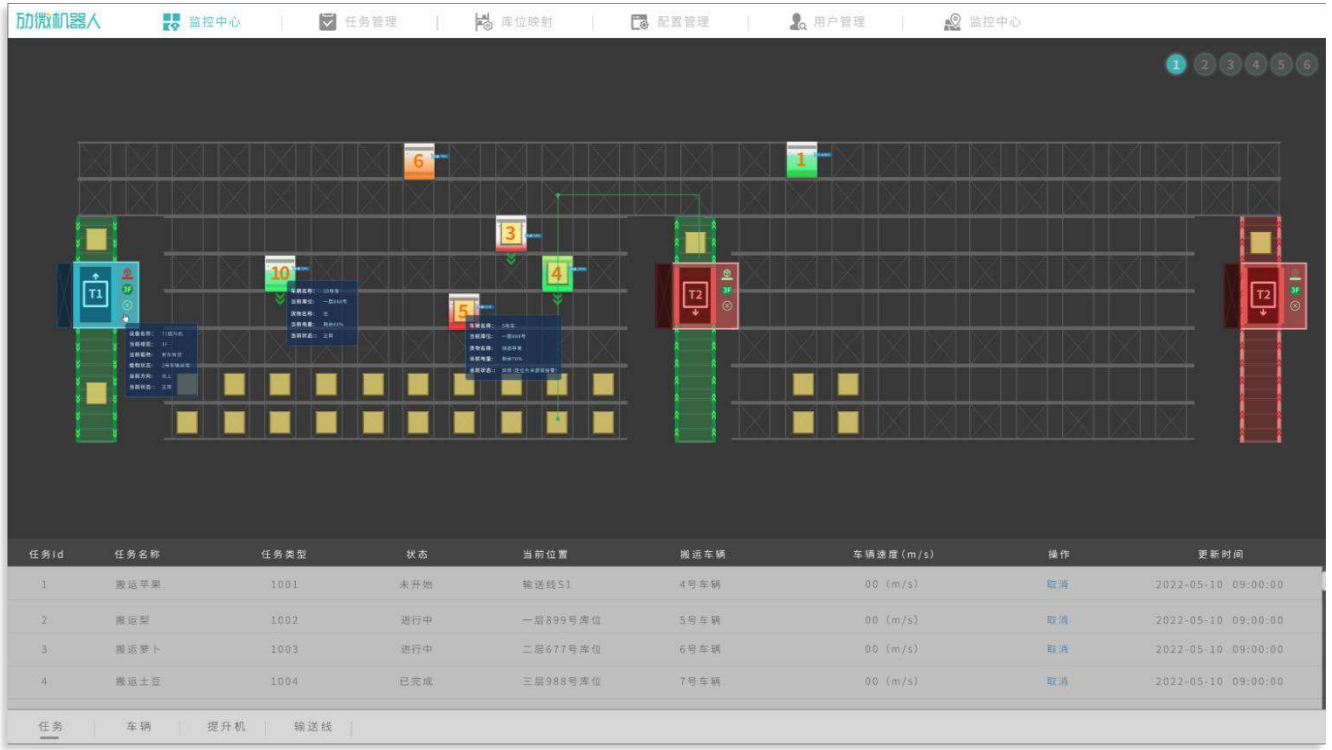
Customizable WMS Interface Modules

MW WMS Module General Functions

Basic Functions	Single pallet storage management	Pallet inbound and outbound management
	PDA Generated Task Query	Standard System Port
Material Management	SKU Management	Inventory Transfer Query
	Inbound cargo inquiry	Outbound cargo inquiry
Policy Configuration	Inventory priority configuration	Task process configuration
	Inbound and outbound selection strategy	Picking tasks issued
Visualization	Inventory overview 2D map	
	3d digital twin model	

Multiway Equipment Control System - MW WCS

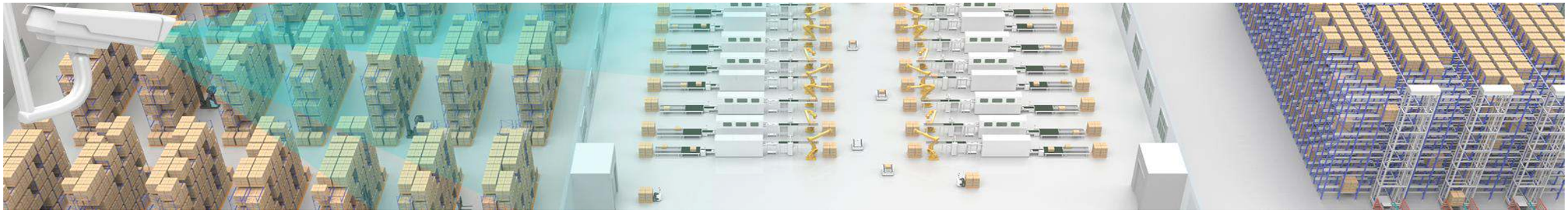
Multiway Warehouse Control System MW WCS provides a uniform interface to a broad range of material handling equipment including AGV, AMR, automatic doors, conveyors, elevators and etc. Connect the system console and data center to manage the equipment and information flow for the entire site.



Basic Functions	**Basic Information Configuration**	
	Basic Function Configuration	Device Information Configuration
		Cooperative Control of Multi-Vehicle Systems
		Task Manager Configuration
	Location Mapping Configuration	
	Signal Monitoring Management	System Signal Monitoring
		Equipment Signal Monitoring
		Device Log Management
	Point-to-point Task	
	Standard Port Interface	MW-WebApi
		MW-WebService
		MW-WebSocket
		MW-Modbus TCP
Function Expansion	**Multipoint-to-multipoint Task**	
	Picking Task	
	Statistics	Signal Statistics
		Vehicle Handling Statistics
		Data Export

Vision System

Multiway provides flexible vision solutions that enable intelligent manufacturing and intelligent logistics through machine vision and artificial intelligence technology. Our system allows management visualization with dynamic business monitoring of the entire production line and edge-computing data processing platform. It makes the factory's working environment safer and greatly improves production efficiency.



Enhance automation and advanced intralogistics solutions

Business Process Integration

Shorten lead times and increase value

Make it safer and more efficient

Safe and Efficient Operation

Data can be detected, traced, and analyzed

Reduce costs and improve smart manufacturing

Assistant Management

Agile Information Technology Infrastructure

Products of Vision System

Empowerment and Flexibility



Pallet Posture Recognition

Supports offset pallets within ±45° and ±80 cm



Automatic Load and Unload

Compatible multiple models (wing door, flat door, tailgate)
Compatible with multiple sizes of cargo (automatic allocation)



Cage Stacking

Cage deformation detection
Stack Safety Detection
Palletizing at different heights
Cargo Excursion Detection
≥ 6 layers of precise stacking



High-position Storage

Unloading Space Detection
High-Precision Pick and Place

Management and Operation



Storage Detection

Status Detection: Detect objects such as vehicles, cargos, people, etc. in complex scenes
Status Recognition: Alarm when the deviation of the goods in the warehouse exceeds the preset value



Visual Inventory Check

Cargo Image Detection
Calculation of the quantity of full pallets



Dimensions Measurement

Barcode Identification
Text Recognition
Color Recognition
Quantity Calculation
Size Measurement
Overload Detection
Outline Detection

Safety Monitoring



On-site V2X

Intrusion Detection
Path Interference Detection
Track Detection



Environmental Safety Monitoring

Smoking Detection
Phone Call Detection
Fire & Smoking Detection



Operation Safety Inspection

Face Recognition
Personnel Leaving Detection
Personnel Slipping Detection
Special Clothing Detection

Cases Studies

















Food
Auto
New Energy
Pharmacy
Machining
Construction Material
Printing and Packaging
Cold Chain
Home
Military
Clothing

Food Industry Solutions

Production Lines Interface + High-Precision Palletizing

Background

A modern agricultural enterprise integrating ecology, leisure, sightseeing and touri sm. The existing mountain area is more than 3000 acres, and the farmland area is more than 100 acres

The first all-category ecological agriculture demonstration base in China

Customer's Pain Points

Work Efficiency: Relying on pure manual work, the picking and placing of material is slow, and it is easy to make mistakes when picking and placing

Security Risks: Manually driven forklifts often crash the door frame, and the maintenance cost is high

Docking Accuracy: Manual stacking of wooden boxes requires high precision, manual work is labor-intensive

Inventory Management: Fresh-keeping cache warehouse and inventory information cannot be effectively controlled

Cargo Damage Impact: Difficult to supervise the standardization of manual operations, and the damage to fresh fruit remains high

Benefits

- Efficiency Improvement
- Comprehensive Safety Protection
- Precise Docking
- Visual Management

Solution

Counterbalanced Forklift AGV+Warehouse Management System+Warehouse Control System+Dispatching System+Automatic Charging







Food Industry Solutions

Intensive pickup + posture recognition

Background

One of the early domestic enterprises specializing in the production of packaged drink ing water, well-known enterprises in China's packaged drinking water industry, 18 pro duction bases nationwide

Product SKU includes: 350ml, 400ml, 555ml, 1.18L, 1.555L, 2.08L, 4.5L, 6L, 18.9L, etc

Customer's Pain Points

Collaborative Interface: According to the demand of the production line, the materials are ordered from time to time, and the efficiency of manual collaboration is low

Operational Cost: Two shifts, repetitive ineffective procedures costs rising yearly

Work Efficiency: No storage location information management on site, and the efficiency of picking up and finding cargos is slow

Benefits

- Efficiency Improvement
- Comprehensive Safety Protection
- Precise Docking
- Visual Management

Solution

Pallet Truck AGV+Warehouse Management System+Warehouse Control System+Dispatching System+Automatic Charging







Logistics Industry Solution

Dense Storage + Multi-vehicle Collaboration

Background

Committed to bringing innovative and high-quality imported brand toys to Chinese consumers

The products supplied and sold are more than 30 domestic and international well-known brands with more than 300 SKU

Customer's Pain Points

Ineffective Operator Movement: Large warehouse area, long ineffective walking distance

Labor intensity: The handling process involved is wide, and the manual handling workload is large

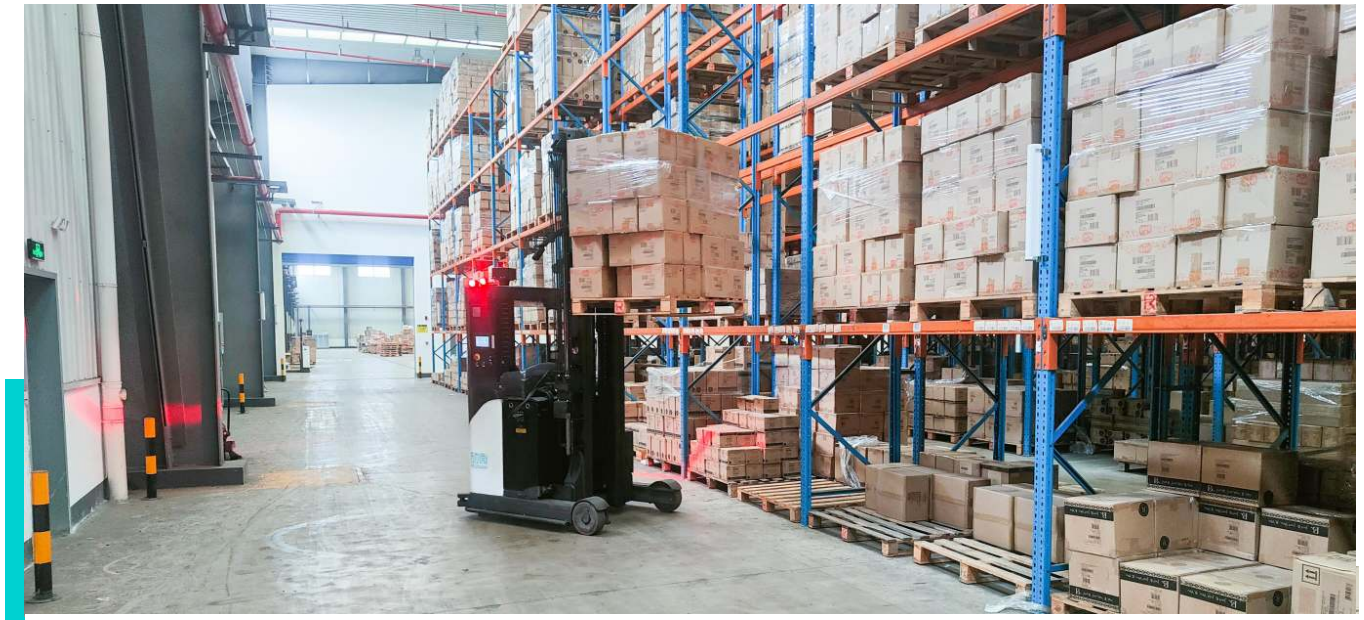
Future Plan: Realize fully automated, efficient and intelligent warehouse management

Benefits

- Efficiency Improvement
- Comprehensive Safety Protection
- Precise Docking
- Visual Management

Solution

Reach Truck Forklift AGV+Slim Pallet Truck AGV+Warehouse Management System+Warehouse Control System+Dispatching System+Automatic Charging







Metallurgical Industry Solution

Hopper Shaped Cargo Transportation

Background

Customer Profile: A well-known metallurgical enterprise in China, with an annual pr oduction capacity of titanium concentrate, an annual output of vanadium products and millions of tons of titanium dioxide, is the world's major supplier of vanadium products

Customer's Pain Points

Physical Challenges: Metal dust is generated in the air, and the working environment of personnel is harsh

Operational Cost: difficult to recruit, repetitive manual operations, and high labor costs

Cargo Damage: It is difficult to supervise the standardization of manual operations, and the cargo damage is more serious

Future planning: Committed to realizing intelligent manufacturing of fully automated flexible production lines and logistics upgrades

Benefits

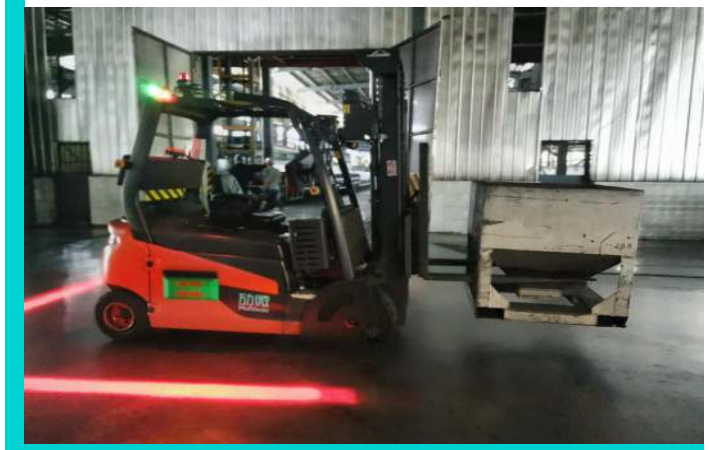
- Efficiency Improvement
- Comprehensive Safety Protection
- Precise Docking
- Visual Management

Solution

Counterbalanced Forklift AGV+Warehouse Management System+Dispatching System+Robotics Arms Interface+Automatic Charging









Our Customers

Food



Pharmaceutical



Automobile



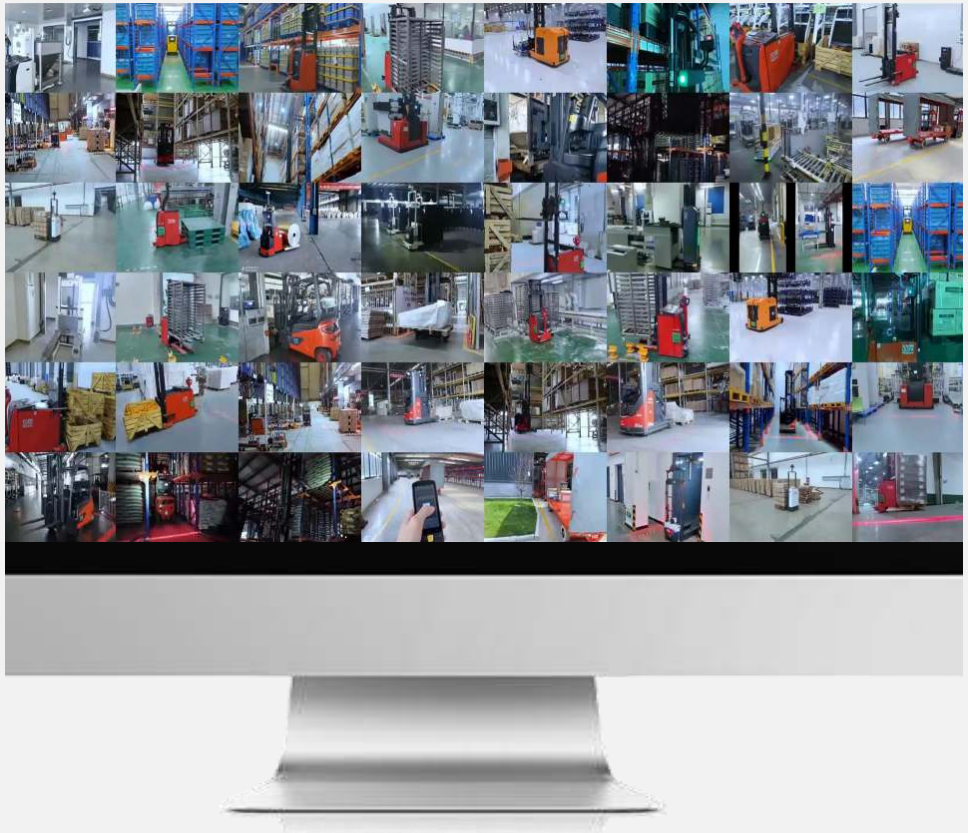
New Energy/Aerospace



Others



Success Stories



Video Link:

https://v.qq.com/x/page/m3338faa0j2.html

Full Support and After-sales Service

On-site Implementation

Resident Engineer

One-on-One Delivery

Quick Response

Worldwide Coverage

Nearby Response Support

24x7 Customer Service

24H Service Hotline

Process System Support

Weekly Based Delivery

Standardized Delivery Process

Remote Upgrade

Iterating Platform

Remote Upgrade

Professional Training

Classroom and Hands-on Training

Program Management Impovement

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