

SMART WAREHOUSE INTELLIGENCE MANUFACTURE



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PIONEER OF HIGH SPEED 3D WAREHOUSE AUTOMATION

HC ROBOTICS

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PIONEER OF HIGH SPEED 3D WAREHOUSE AUTOMATION

Founded in 2016, HC Robotics has remained steadfast in its commitment to innovating logistics automation equipment. The company focuses on two key areas—intelligent warehousing and 3D sorting—and has introduced a range of exceptional products to the market, such as "OmniFlow", "OmniSort", each offering distinct advantages in warehousing logistics.

HC Robotics' products are widely used in manufacturing, distribution, and terminal operations, known for their significant benefits in labor and space efficiency. These solutions can achieve over 70% savings in both labor and space, with rapid implementation and flexible relocation capabilities providing customers with automated warehousing solutions that deliver high returns on investment and remarkable flexibility.

The existing customers of HC Robotics range from Fortune 500 to small businesses, and include manufacturers, E-commerce, MRO suppliers, cold chain logistics, micro-fulfillment centers, etc. HC Robotics has established strategic cooperation with our partners in Japan, South Korea, United States, Europe, among others.

We are glad to provide highly reliable and cost-effective warehouse automation products and services for our customers all around the globe.

Application Industry



Precision Machining



Delivery



E-commerce



Apparel Industry



Retail



Medicine



Books



Cold Chain



Dyeing Industry



Auto Industry



MRO



Front-line Storage

Core Advantage



Outstanding R&D Ability



Complete Manufacturing System



Global Service Network



Flexible Solution



High QC System



Comprehensive After-Sales Service

Partnership



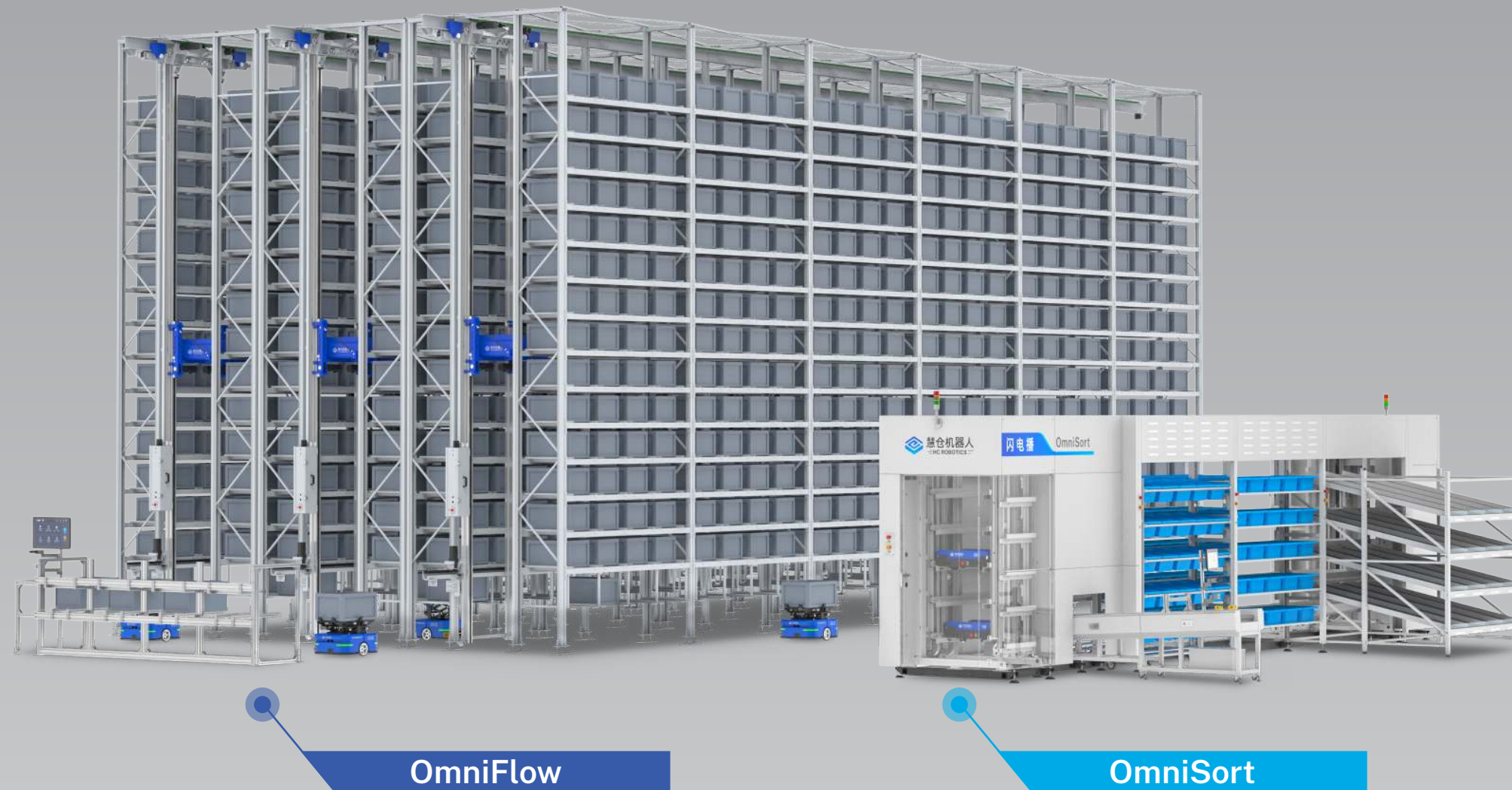
HC ROBOTICS

HC Products

HC ROBOTICS specializes in innovative intralogistics automation, featuring our core offerings of OmniFlow for tote storage and OmniSort for item sortation. Our systems are designed to boost productivity while reducing footprint and labor costs, addressing order fulfillment challenges with cost-effective and flexible automations.

Storage

Sorting



OmniFlow

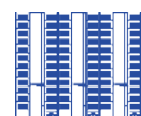
OmniSort



Rapid Deploy
Modular design
and future proof



Boosted Efficiency
Robot fleet working
in parallel



Superior Density
Cover 3m-9m vertical
3D storage space



Unparalleled Accuracy
Maximum accuracy for
operational excellence



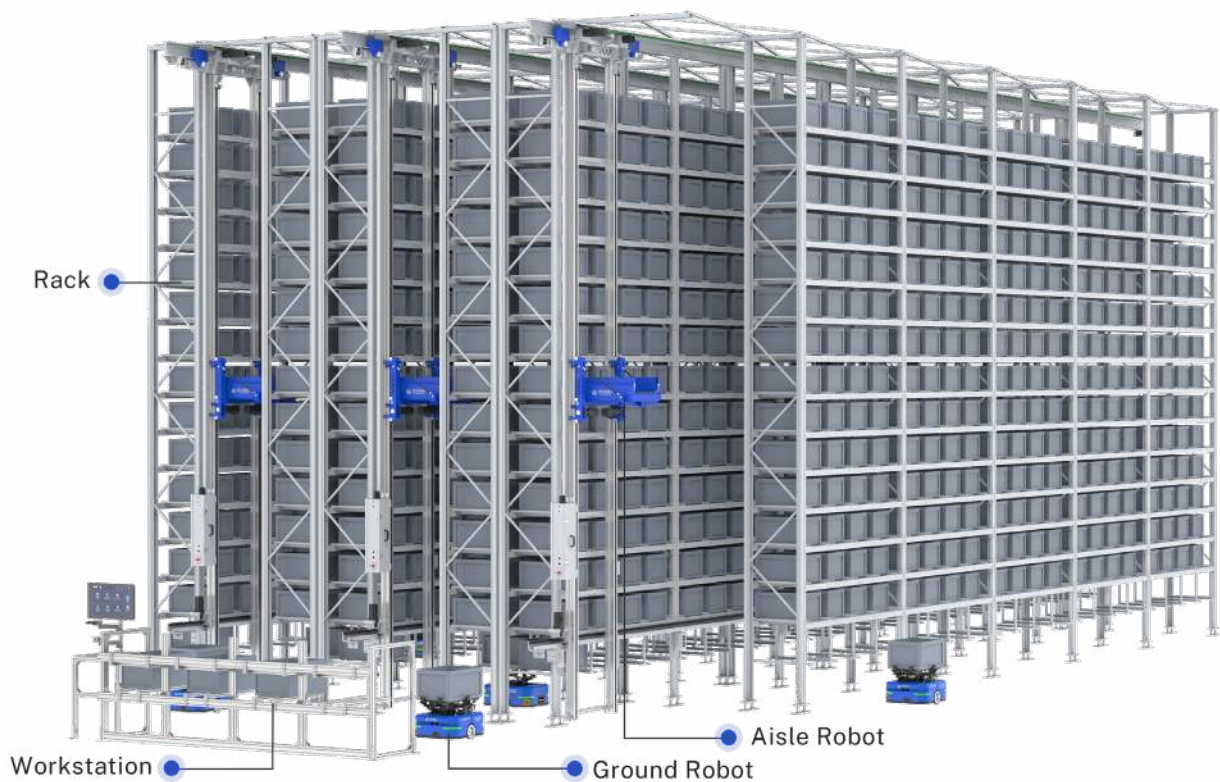
Flexible Planning
Apply to multiple
applications



Excellent ROI
Improve capital
utilization

OMNIFLOW

A large-scale high-speed 3D storage system flexibly customized according to the height and area of the warehouse. It is suitable for application scenarios such as splitting, picking and full-box caching of large-scale logistics storage centers, storage of semi-finished products and finished products in intelligent manufacturing plants. It is also suitable for application scenarios such as front warehouses in the new retail era.



Highlight

Input/Output

500

DC / h

Rack Height

9

Meters

Storage

10000+

Totes

Accuracy

99.99

%

Features



Robot Fleet: Based on different kinds of robots, the division of labor is clear, each performs its own duties and each has a simple structure, low cost, high stability and high efficiency.



Low operating cost: Low power consumption and simple user interaction; Modularization design to save cost and reduce down time.



Convenient Installation: Convenient installation and deployment, small ground reconstruction needed, standard installation process for racks, simple guide rail structure, no need for high installation accuracy to ensure smooth travelling of robots.



Ultra High Space Utilization: 3-9 meters high dense storage by directly using standard racks in various buildings such as factories and warehouses.



Goods to Person: Tote handling is more accurate and efficient, and eliminates the need for complex work stations and other peripheral equipments. The handling logic is more flexible.



Unlimited Flexibility: The number of storage locations and robots can be flexibly increased or decreased according to business growth, with maximum flexibility.

OmniFlow Parameter



OmniFlow

Rack Parameter	Dimension	Length: Customized Width: 2.5 m + Height: ≤ 9 m		
	Robot Qty	Customization		
	Type	Single or Double		
	Workstation	Configurable		
	Storage Space	Configurable		
Robot Parameter	Robot Type	 M400 SD	Robot Type	 A400
	Dimension	800mm×850mm×360mm	Dimension	
	Load	30 kg	Load	30kg
	Load Dimension	600mm×400mm	Load Dimension	600mm×400mm
	Communication Mode	Wireless	Communication Mode	Wireless
	Positioning Mode	Encoder + Barcode Scanner	Navigate Mode	Inertial + QR Code
	Tote Inspection	Sensor	Obstacle Avoidance Mode	LiDAR
	Power Mode	Contact Rails	Power Mode	Lithium Battery
	Drive Mode	Servo Motor	Drive Mode	Servo Motor
	Material Handling	Push-pull	Material Handling	Lifting

OMNISORT

A flexible high-speed intelligent 3D sorting system. It is suitable for application scenarios such as forward / reverse logistics and production line ingredients.

Highlight

Sort Efficiency

1500+

Pieces / Hour

Deployment Time

≤7

Days

Accuracy

99.99

%

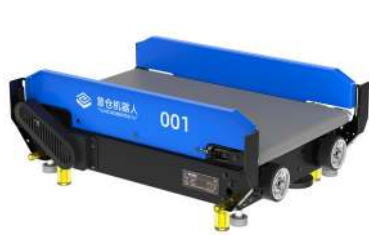
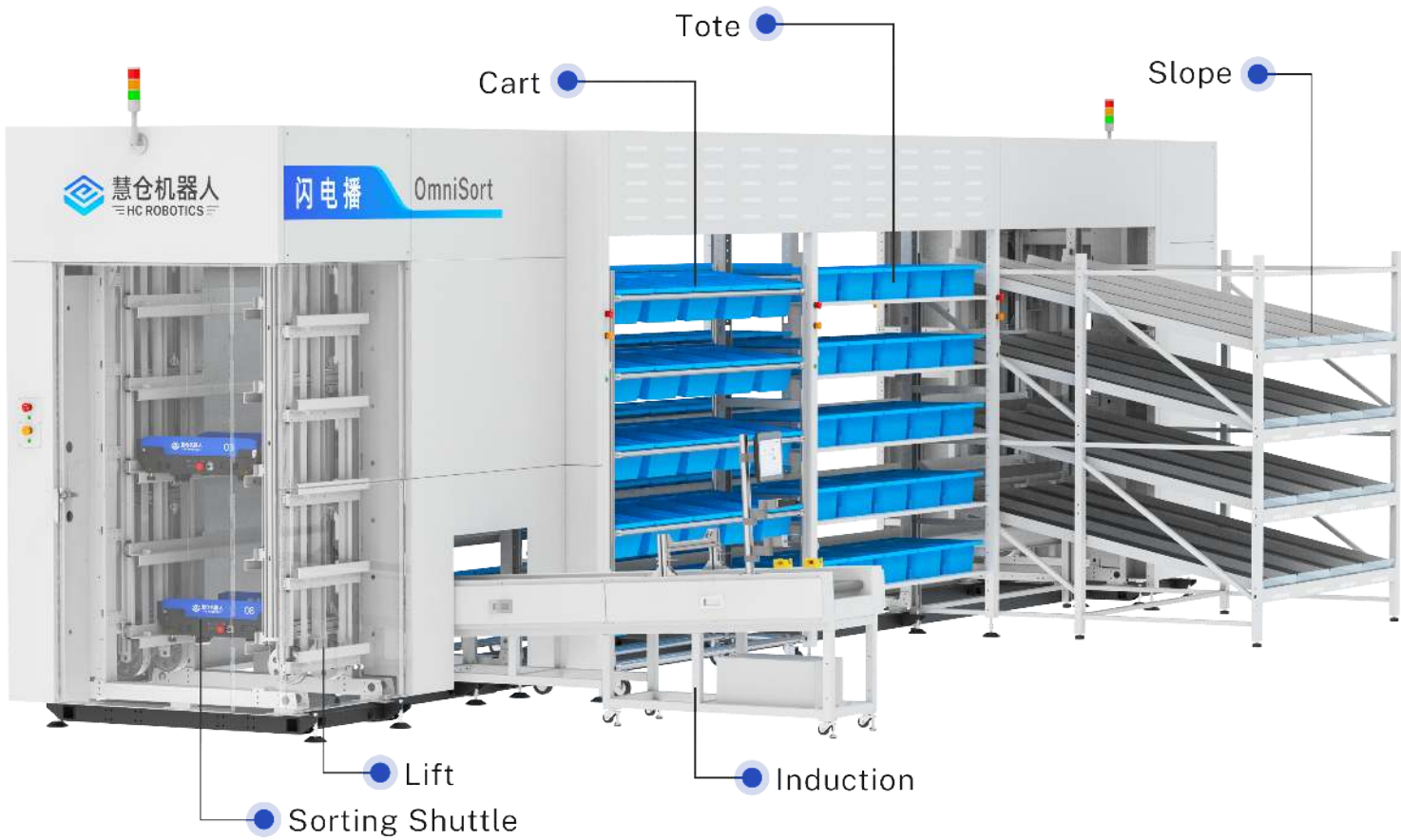
Payback Period

≤2

Years

Features

- Intelligent 3D sorting system
- Systematic design that fully matches customers' customized requirements
- Comprehensive interfaces that deeply match customers' systems
- Support complex order sorting, wave sorting and line sorting



Sorting Shuttle S



Sorting Shuttle M

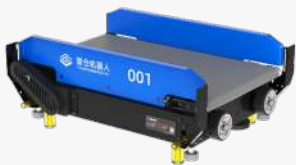


Sorting Shuttle L

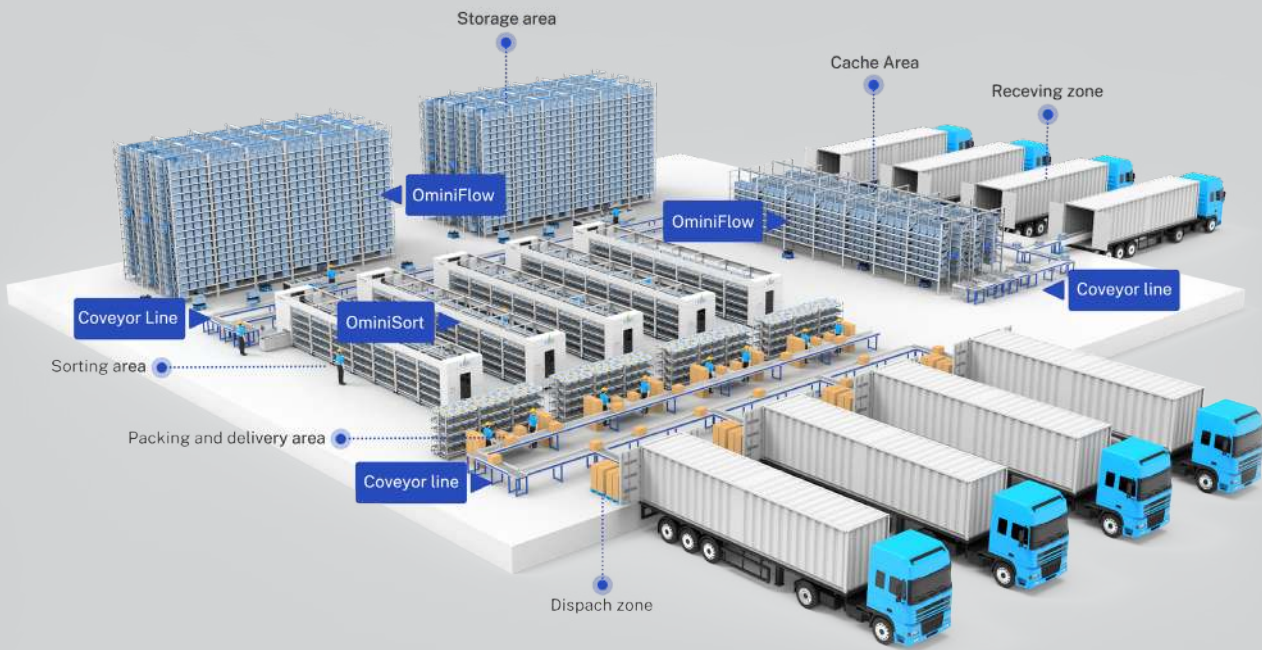
OmniSort Parameter



OmniSort

Rack Parameter	Dimension	40m×5m×3.5m (Length 8-40m, Width 3-5m, Height 2-3.5m configurable)		
	Robot Qty	Customization		
	Type	Tote / Cart / Slope		
	Induction	Configurable		
	Sorting Efficiency	1500+ pcs / hour		
	Destination	Customization		
	Scanning	Manual Scanning/Automatic Scanning		
Robot Parameter	Robot Type			
		Sorting Shuttle S	Sorting Shuttle M	Sorting Shuttle L
	Dimension	620mm×490mm×260mm	670mm×570mm×260mm	960mm×660mm×310mm
	Load	5 kg	5 kg	8 kg
	Load Dimension	400mm×320mm×(5-300)mm	500mm×410mm×(5-300)mm	750mm×500mm×(10-300)mm
	Communication Mode	Wireless	Wireless	Wireless
	Navigate Mode	Encoder + Sensor	Encoder + Sensor	Encoder + Sensor
	Obstacle Avoidance Mode	Sensor	Sensor	Sensor
	Power Mode	Contact Rails	Contact Rails	Contact Rails
	Drive Mode	Servo Motor	Servo Motor	Servo Motor
	Material Handling	Roller Belt	Roller Belt	Roller Belt

Intelligent Warehousing Solution



Warehouse automation with boosted efficiency

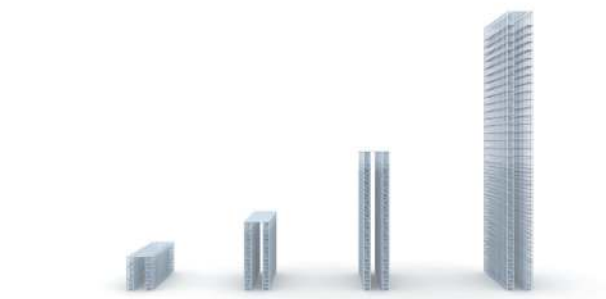
The smart warehousing solutions cover OmniFlow, CycloneStore storage / picking system and OmniSort sorting system, which change the model from "person to goods" to " goods to person". The storage space is changed from plane to 3D, which greatly saves personnel, improves space utilization, improves operation efficiency, reduces error rate, achieves cost reduction and efficiency improvement.

Highly efficient goods to person Improve working efficiency accuracy could be 99.99%	Improve storage density Improve 100%-300% storage density	Improve sorting efficiency Sorting efficiency 1500 pieces / hour	Visible HMI Apply tablet / PC achieve data visualization
Multi-service mode support Support 2B/2C/return various service	Rapid deployment achieve 30-day deployment and go online in one week	Modular design Easy extension, easy upgrade, easy move	High ROI Optimize the SOP, improve efficiency

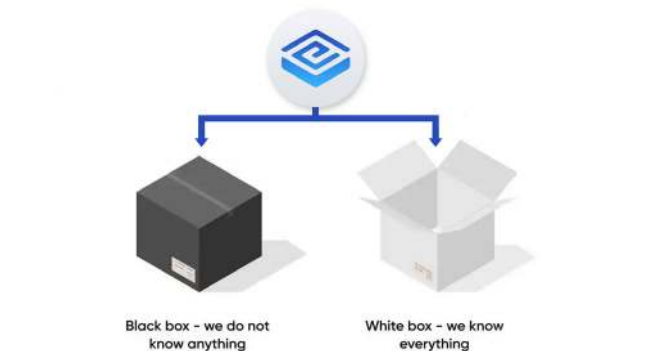
Solution Features



Rich in integration experience: Over 250+ sets of equipment have been integrated with various integrators



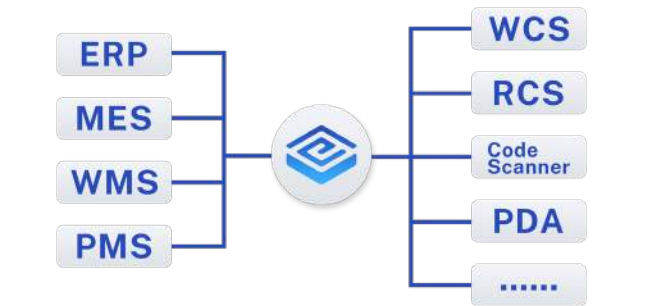
Standard solutions: Adopt the design of standardized modules, with only a few adjustments made for different projects



Support for white-box and black-box modes: The control system supports white-box or black-box mode, fulfilling various control requirements



Standard equipment configuration: The "OmniFlow" and "OmniSort" are configured with standard equipment interface modes, which facilitates docking with upstream and downstream systems



Standard software interfaces: The system has standard and highly compatible software interfaces



Customization: Corresponding adjustments can be made according to customers' needs to meet the requirements of integrators and customers



Cold chain food sorting

OmniSort

OmniSort

Shoes and garments sorting

Project Introduction

This project mainly undertakes the tasks of sorting and dispatching frozen foods. Multiple sets of HC Robotics' OmniSort equipment have been adopted in this project. These devices can not only greatly improve the accuracy and efficiency of order sorting, but also significantly reduce the reliance on manpower. Meanwhile, through optimizing the space utilization rate of the warehouse, the occupied area of the project site has also been reduced.

Project Introduction

The project improves the efficiency of order sorting, reduce the error rate and enhance the warehouse automation, the client introduced the "OmniSort" from HC Robotics to provide automated sorting for store replenishment, online store orders and reverse logistics. The "OmniSort" of HC Robotics has effectively improved the level of warehouse automation and enhanced the service quality for the owner.

Project Highlight

- Sorting efficiency 1500 pieces/hour
- Sorting accuracy 99.99%
- Use carton boxes as destinations, after finished it can be packed and ship directly
- Save 50% of labor and space



Project Highlight

- Slope type destination
- Enhanced barcode recognition configuration
- Support B2B, B2C and return goods sorting
- Multiple Induction conveyor





Book sorting

HC OmniSort

HC OmniSort

Food sorting

Project Introduction

This project integrates RFID products and application technologies for sorting books. Cooperating with upstream automated material delivery, it enables efficient order distribution and automatic binding and unbinding of bins, reducing redundant manual operations, optimizing order fulfillment timelines, and enhancing the company's image.

Project Introduction

This project primarily involved sorting bulk goods for delivery to a certain brand's coffee shops. HC Robotics customized the system and developed new goods handling hardware to optimize coffee's bulk goods sorting process, increasing sorting efficiency to 3,000 order lines per hour and helping Rongqing Logistics enhance its warehousing operations and service quality.

Project Highlight

- Connect with upstream automatic material
- Automatic binding and unbinding of material boxes
- Special design of the grid material box reduces the damage rate of books and goods
- Improve order fulfillment time

Project Highlight

- Manual warehouse becomes automated warehouse
- Reduce sorting error rate
- Improve brand satisfaction
- Reduce store complaints





E-commerce sorting of shoes and apparel

OmniSort

Sorting of 3C electronic products

OmniSort

Project Introduction

This project adopts multiple HC Robotics “OmniSort” devices to form a sorting matrix, which is used for order fulfillment in the e-commerce distribution center. In combination with the order picking strategy, it has achieved efficient order sorting, reduced the dependence on personnel, improved the accuracy of order fulfillment, and enhanced the operational quality.

Project Introduction

This project is used for sorting small 3C electronic products. In traditional manual sorting, not only is the efficiency low, but also the accuracy cannot be guaranteed. What's more, the outer packaging of the products is prone to damage. Besides, due to the excessive staff turnover, the labor cost has increased. After the "OmniSort" of HC Robotics was put into use, these shortcomings have been greatly improved.

Project Highlight

- Use multiple OmniSort devices to fulfill orders
- Support simultaneous sorting for multiple batches
- The operation mode is to directly pack the goods after batch sorting, and the process is simple
- The efficiency of order fulfillment has been improved



Project Highlight

- Extreme efficiency, precise sorting
- Safe logistics, quality assurance
- Significant cost reduction and space optimization
- Flexible and lightweight, quick to deploy



SERVICE PROCESSES



Planning & Design

Demand survey, data analysis, system design, and simulation.



System Integration

Detailed design, system interface, and construction.



Design & Manufacturing

Software, electronic system, equipment design, and manufacturing.



Installation & Commissioning

Equipment installation and commissioning, project management.



UAT

User training, system ramp-up, and acceptance.



After-sales Service

Regular visits, system maintenance, spare parts supply.

AFTER-SALES SERVICES

In order to support customers to use and maintain HC system and equipment conveniently, our company has established a professional after-sales service team. Our team includes senior engineers in mechanical, electronic control, software, and other related fields. All the after-sales service team members have received professional training for different equipment and accumulated rich theoretical and practical experience in equipment maintenance, and emergency repair.

24/7 Hotline

Remote online technical support

Spare parts emergency supply

Localization support

Technical exchange training

Regularly visit and maintain

Global Footprint

