



LIBIAO ROBOT PRODUCT CATALOGUE

Global pioneer of intelligent sorting robot & Flexible
intelligent sorting solution provider



Zhejiang Libiao Robot Co., Ltd

☎ Tel: +86 571 85857719

✉ E-mail: sales@libiaorobot.com

🌐 Website: www.libiaorobot.com

🌐 LinkedIn: Libiao robotics

📍 Headquarters: No.96, Changda Road, Linping Dist, Hangzhou, China



LinkedIn



Starting from intelligent sorting robot, we are committed to build a fully automated logistics process

As the global innovator of intelligent sorting robot and flexible sorting solution provider, Zhejiang Libiao Robot Co., Ltd. (hereinafter referred to as "Libiao") creates the world's first portable, modular, automated unit sorting system. We seek to integrate logistics automation with R&D, production and sales of intelligent equipment.

The core team has 20 years of experience in automation technology accumulation, and started to develop intelligent sorting robots in 2014. Libiao has always specialized in the development and innovation of logistics automation technology, emphasizing original intelligent technology, independent system bottom layer and application development. All of its products are independently researched and developed, and the company has accumulated over 100 exclusive invention patents. With the sorting robot series as the core, and the automatic control system, automatic scanning and weighing system, intelligent charging system as supporting components, Libiao has gradually built up a rich product ecosystem for intelligent logistics applications.

At present, Libiao intelligent sorting system has various applications such as courier, supermarket, retail, clothing, medicine, catering, cold chain, publishing, factory manufacturing, There are over 50,000 sorting robots working all around the world including the United States, Japan, South Korea, Australia and Europe. The application has reached every corner of global market, including Walmart, Orbis, Mitsui & Co., Monarchfx, NORDSTROM, Target, K-mart, U.S. Post, China Post, Debon, JD, ZTO, STO, SLC, etc.

Libiao will remain committed to "making the world more efficient". Underlined with intelligent technology, we're working to expand our business beyond intelligent sorting robot and take the leading position in the new era of intelligent logistics.

3D-sorting system

Overview

With particular regard to the special needs of Electric Commercial Orders, Libiao Robot have developed a 3D-sorting system, which is more flexible and efficient. The system is easy to install and deploy, and can increase or decrease sorting robots as needed, small and medium-sized goods sorting or order picking in industries such as e-commerce, apparel supermarket, etc.

LIBIAO

Advantages

More flexible

- Expandable Module
- You can increase or decrease robots on need, and quickly improve efficiency in the peak season

More efficiency&ROI

- Unique algorithms maximize the sorting efficiency,
- Saving labor costs

Rapid development

- It takes 4-8 weeks normally and only takes 2-3 weeks at the fastest

More stability&accuracy

- The system sorting accuracy can reach 99.99%

More space utility

- Greatly reduce space area
- Effectively reduce space costs and improve space utilization rate for enterprises

Fast return

- Fast return on investment
- High return on investment

Automatic Charging Station

3D Seeding wall

· Customizable Goods Box

Sorting Robot

Single-finger platform

· It can adopt a customized platform
· Finger can be long/short

Automatic code scanning and reading

Loading station

· 1 -2 Loading Workers

Solution components

Table platform

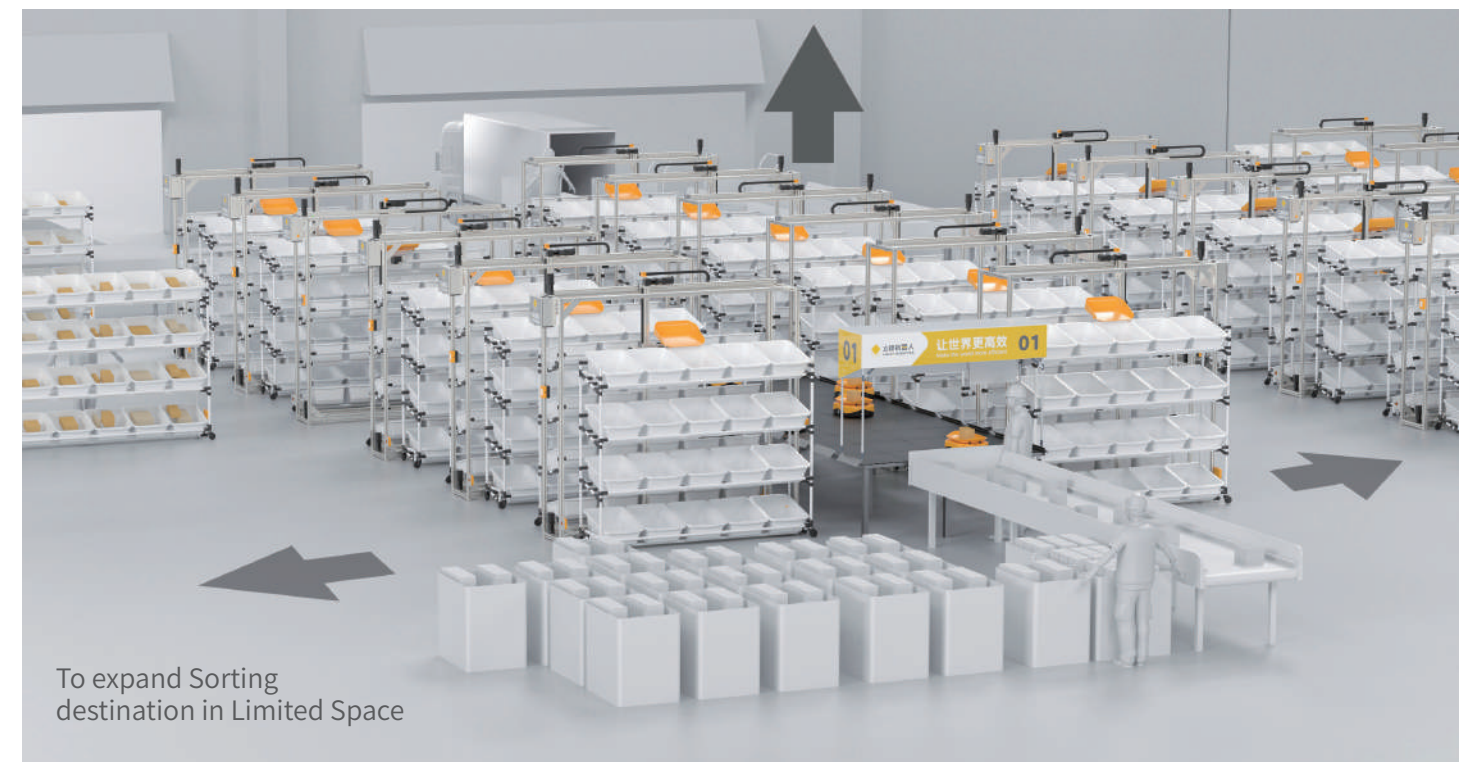
- 3D Seeding wall
- Sorting shelves and destination

Sorting system

- Sorting robot
- Computer controlled
- Network system
- Scanner
- 3D Inclined plate sorting robot

Conveyor system

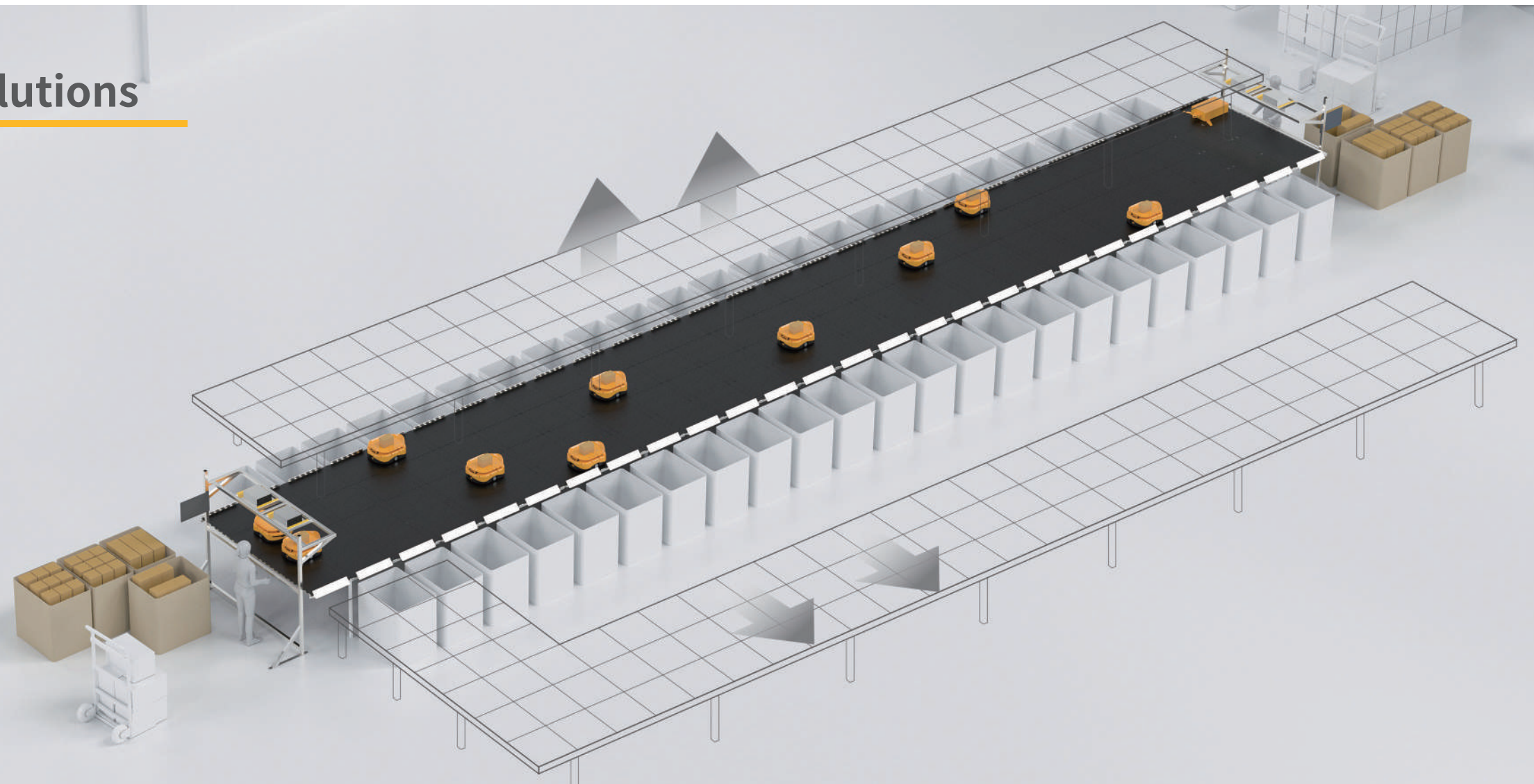
- All kinds of belt conveyor



Terminal Sorting System Solutions

Overview

The terminal sorting system is a flexible solution specifically for express terminal outlets. The system can increase or decrease the number of platform robots and adjust the number of sorting grids as needed. It is suitable for express terminal outlets in districts (counties), streets and towns, and is a targeted solution to the problem of cost reduction and efficiency increase of the terminal outlets.



Advantages

More flexible

- Modular design easy for simple expansion and reconfiguration

More efficiency

- Sort 1500-4000 parcels per hour
- 99.99% Sorting Accuracy

Rapid deployment

- modular design
- Install in one or two weeks

Low cost

- Low start-up cost
- High investment flexibility

Low space occupation

- Small footprint of the system
- Adapts various destination location

Labor saving

- Automatic sorting system
- Reduce about 60% labor

Induction area

- Manual discharge
- Automatic code scanning

Charging station**Sorting robot****Finger-type platform**

- The number and length of fingers can be set according to requirements
- It can be set as single layer, double layer or multiple layers

Sorting destination

- Goods box
- Order box

Solution components**Table platform**

- Patched together with table or rack on hand
- Customized platform with galvanized steel

Sorting system

- Sorting robot
- Computer controlled
- Network system
- Scanner
- Available space check (optional)

Conveyor system

- All kinds of belt conveyor

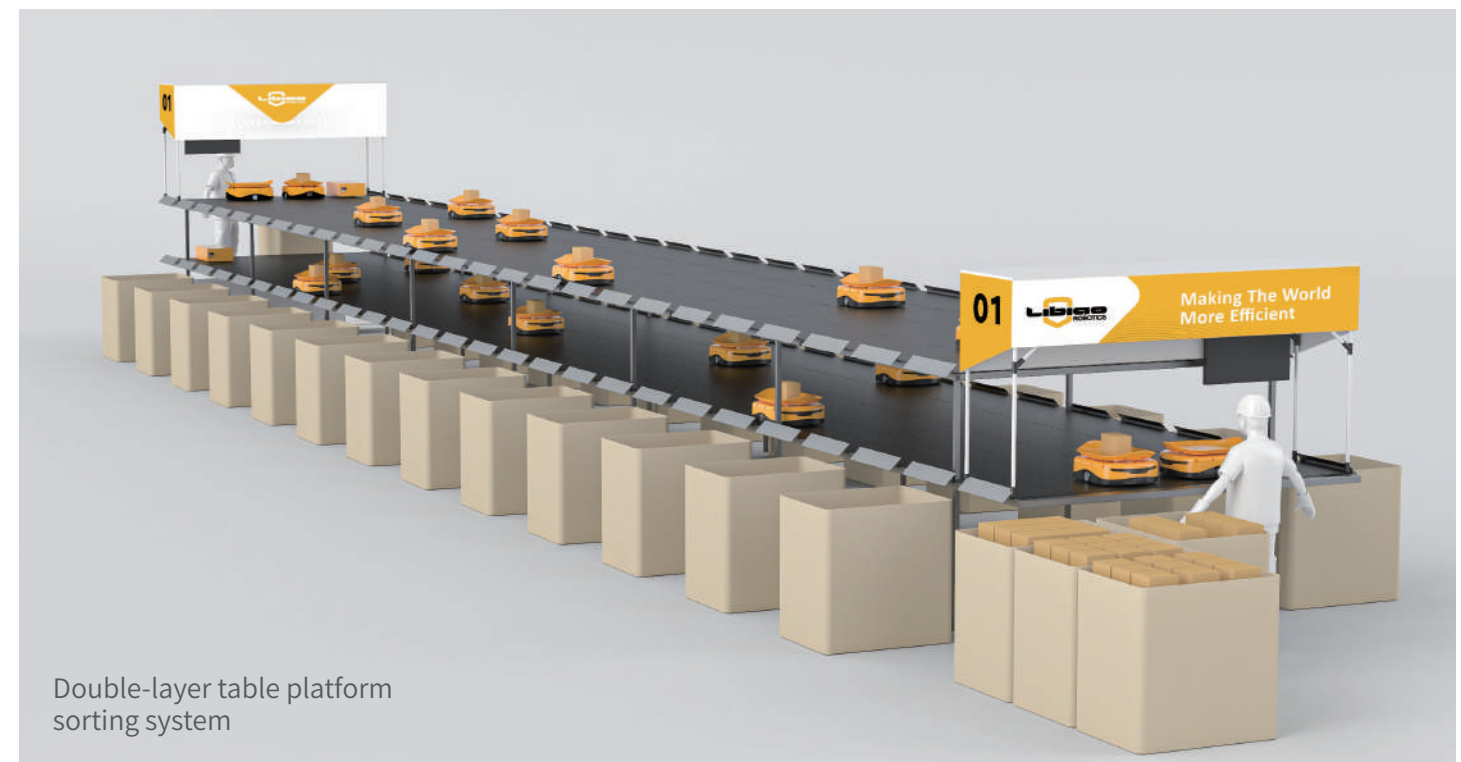
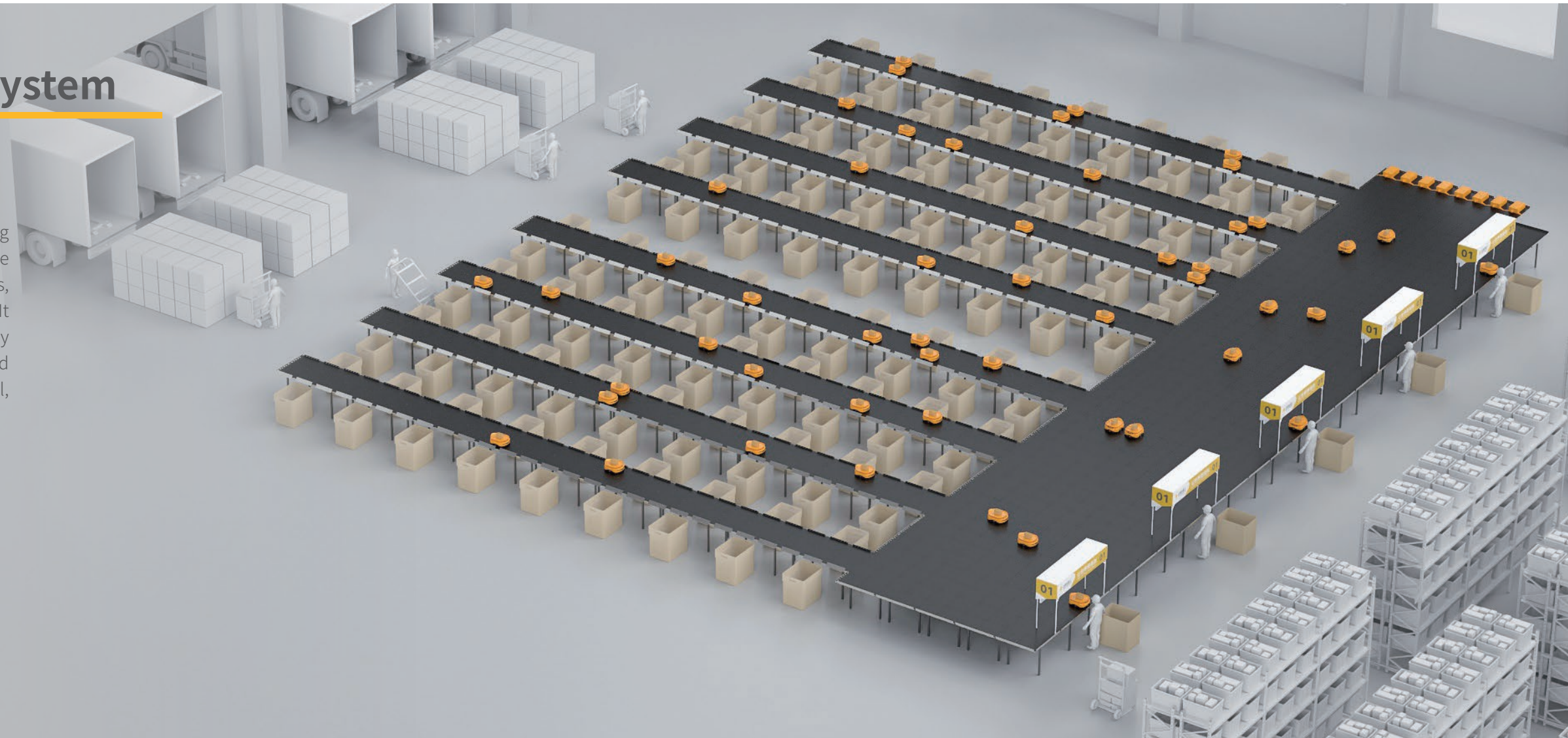


Table platform sorting system

Overview

Libiao has developed a highly flexible table platform sorting system tailored for operations such as order picking. The system is flexible so you can add or reduce table platforms, robots, and adjust the number of sorting grids as needed. It is designed for batch order picking, stock replenishment (by store), and return processing (by SKU sorting), and suited for forward sorting and reverse sorting in courier, retail, supermarket, and clothing industries.



Advantages

More flexible

- The modular system makes for high expansibility, rapid deployment and phased deployment
- The system is flexible so that you can add or remove robots as needed

Stable and accurate

- The fault tolerant system ensures smooth operation of entire system despite failure in one robot
- The sorting system is stable with an accuracy of more than 99.99% as long as the input is right

Intelligent and efficient

- Computer controlled operations, automatic code scanning, intelligent identification, fast transfer, and precise delivery
- System chooses optimal sorting paths from multiple options to improve the efficiency of robot sorting

High ROI

- Start up at lower cost, with the option to gradually invest more as the project grows
- Project cycle is short and return on investment is high. The payback period is generally less than 2 years with the return rate is estimated to be more than doubled

Wide application and easy deployment

- The system is suitable for various industries and multiple scenarios
- Not limited by space, can be deployed on the ground, desk top, and in the air
- In the best case scenario, it only takes 2-3 weeks to set up

More intuitive with visual management

- Robot operation is monitored in real time
- Robot condition is displayed on the screen for efficient maintenance

Charging station

Sorting robot

Induction area

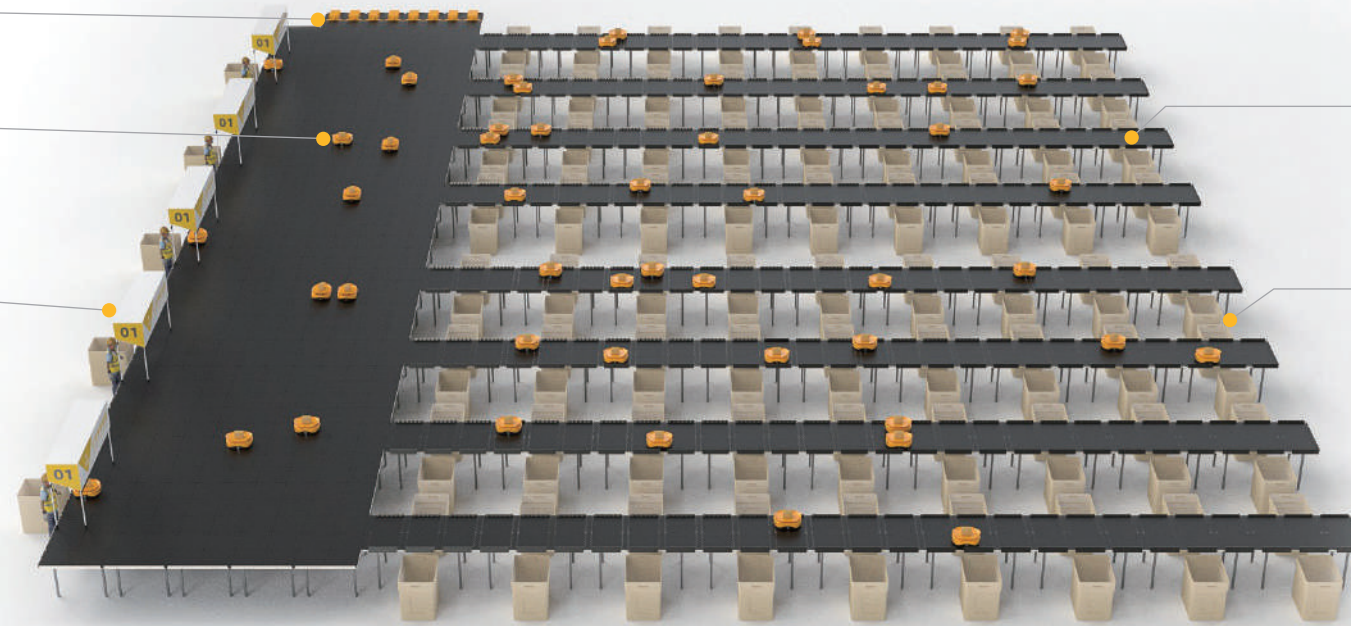
- Manual discharge
- Automatic code scanning

Finger-type platform

- The number and length of fingers can be set according to requirements
- It can be set as single layer, double layer or multiple layers

Sorting destination

- Goods box
- Order box



Solution components

Table platform

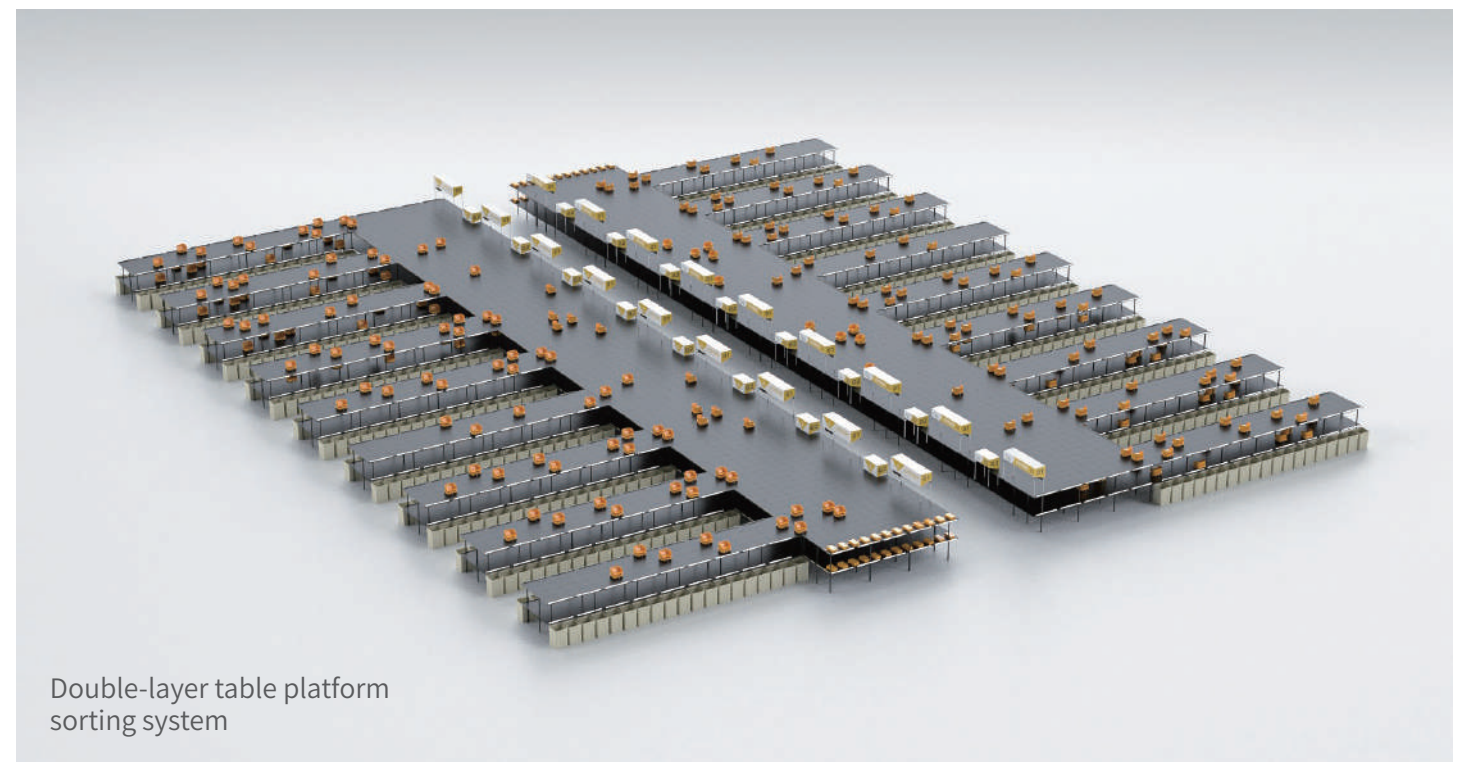
- Patched together with table or rack on hand
- Customized platform with galvanized steel

Sorting system

- Sorting robot
- Computer controlled
- Network system
- Scanner
- Available space check (optional)

Conveyor system

- All kinds of belt conveyor



AirRob Tote Handling System

Overview

AirRob is an efficient automated tote handling solution, achieving both high-density tote storage and high-efficiency tote handling.

AirRob separates the functions of tote storage and handling into two parts: AirRob units and the floorbots. Each addresses the problems of tote storage and transportation, increasing operational throughput. By deploying AirRob units on the racks, the system maximizes the use of rack height while narrowing the aisles, allowing for denser tote storage. Floorbots handle the transportation of totes, achieving high-efficiency tote-to-person delivery. Additionally, AirRob can be deployed on existing racks without special requirements for the environment and ground flatness. The deployment process is quick and simple.



Advantages

High Storage Density

- Twin directional picking, works for racks in front and back.
- Aisle width as narrow as 0.85m, creates more space for more racks.
- Gap between totes 10~30mm, creates spaces for more totes.

Low Requirement For Deployment

- No special treatment for floor, regular fatness enables Floorbot to move.
- AirRob can operate from -20°C to 50 °C

High Efficiency

- One single AirRob can pick and store 150 totes per hour
- One workstation achieves 600 inbound and 600 outbound totes per hour

Eco-Friendly

- Power requirement of each aisle can be lower than a microwave oven
- 4 minutes charging enables Floorbot to run for 3 hours

High Flexibility

- More than 1 AirRobs can be deployed on one aisle, entire system can easily expand by adding more racks.
- AirRob can have totes over to floorbot at any place under the rack
- System able to handle more than 20,000 totes per hour, achieves flexible applications

Rack

- Compatible With Normal Racks

Working Station

- Climb/Lift Functionality Supported
- Two Workers Model with Single U route.
- Single Worker Model with Double U route

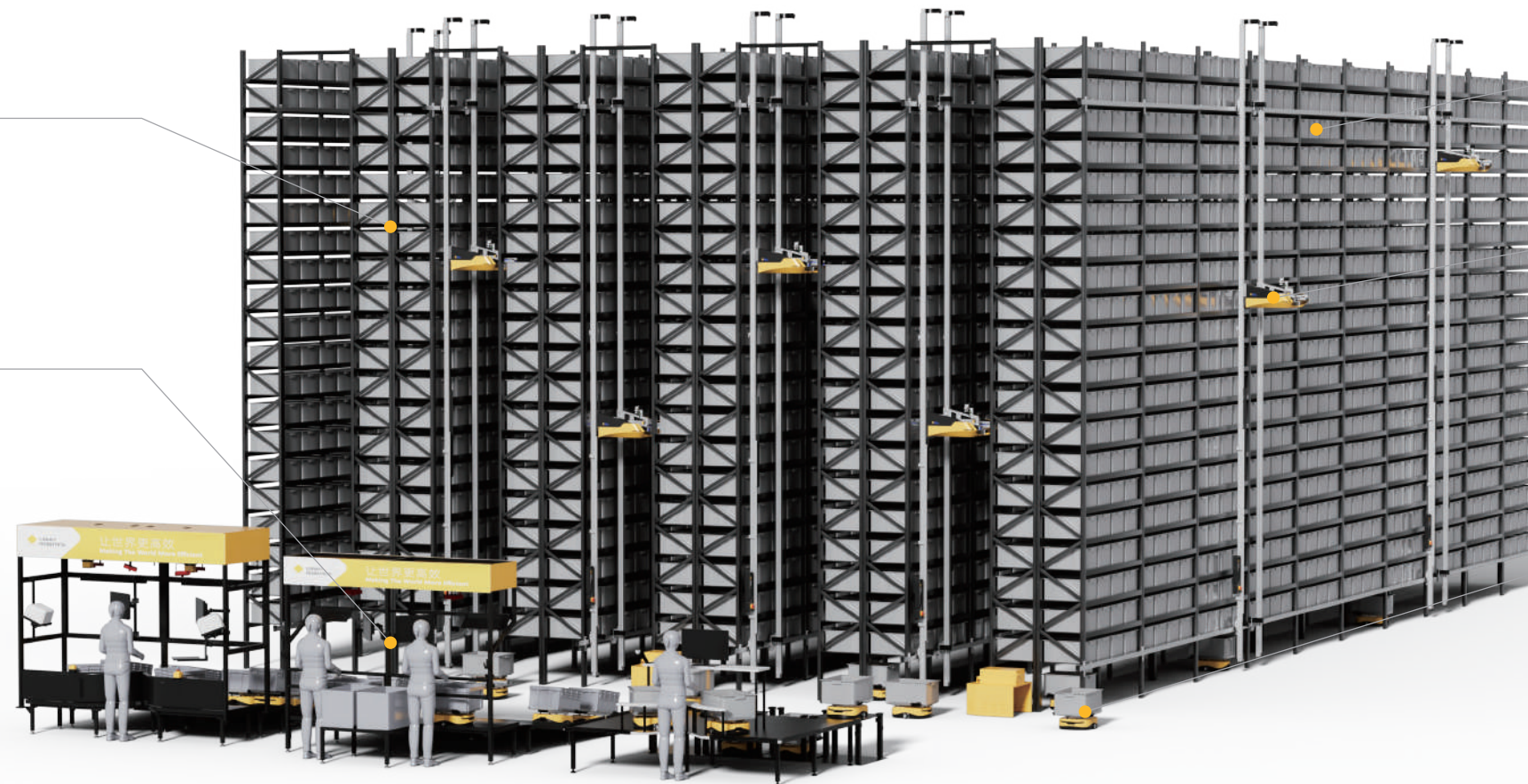
Tote

AirRob

- Maximum Weight Handled: 25KG
- Multiple Airrobs On The Same Aisle

Floorbot

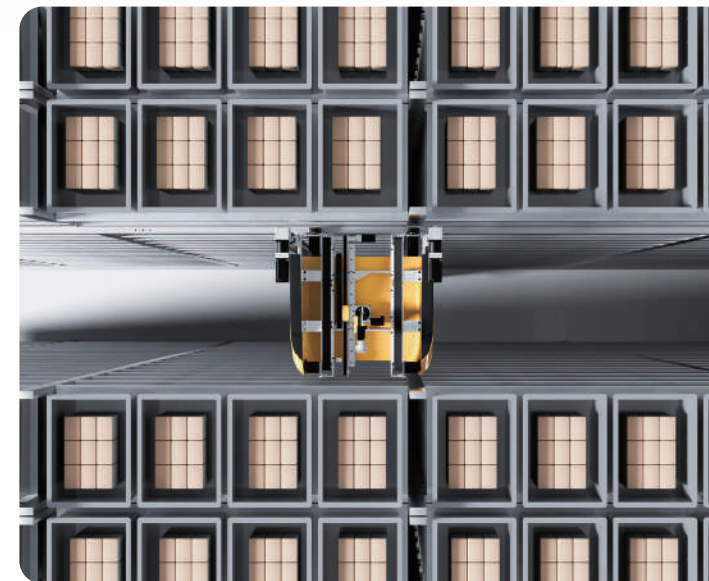
- Compatible With Normal Floor
- On-Site Self-Navigation



Aisle width needs only 850 mm



One AirRob can achieve 120 single cycles per hour



Gap between totes can be 10-30 mm



Working Station can handle 600 inbound and 600 outbound totes per hour

Flexible intelligent sorting solution for different industries and scenarios



Applicable industries



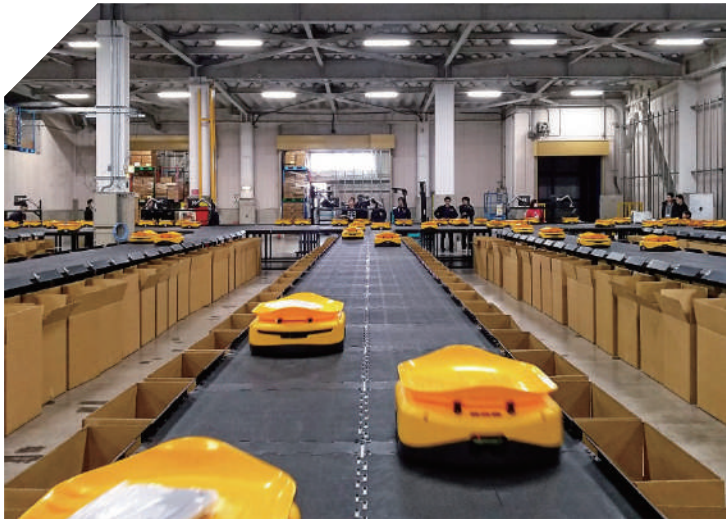
UNIQLO E-COMMERCE SORTING CENTER	
SYSTEM	3D-SORTING SYSTEM
INDUSTRY	CLOTHING
COMPLETION DATE	2021
FLOOR AREA	1800m ²
NUMBER OF DESTINATIONS	6000-7200
NUMBER OF ROBOTS	240 SETS
CAPACITY	18,000 PARCELS PER HOUR



NANJING POSTAL PARCEL CENTER	
SYSTEM	STEEL PLATFORM SYSTEM
INDUSTRY	COURIER
COMPLETION DATE	2019
FLOOR AREA	1400m ²
NUMBER OF DESTINATIONS	254
NUMBER OF ROBOTS	360 SETS
CAPACITY	15,000 PARCELS PER HOUR



US WALMART PROJECT	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	SUPERMARKET
COMPLETION DATE	2019
FLOOR AREA	380m ²
NUMBER OF DESTINATIONS	230
NUMBER OF ROBOTS	94SETS
CAPACITY	2500 PARCELS PER HOUR



FAMOUS JAPANESE CLOTHING MANUFACTURER (UNIQLO)	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	CLOTHING
COMPLETION DATE	2019
FLOOR AREA	630m ²
NUMBER OF DESTINATIONS	100-1000
NUMBER OF ROBOTS	90 SETS
CAPACITY	4,500 PARCELS PER HOUR



JAPANESE ORBIS PROJECT	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	COSMETICS
COMPLETION DATE	2019
FLOOR AREA	1860m ²
NUMBER OF ROBOTS	330 SETS
CAPACITY	15,000 PARCELS PER HOUR



GUANGZHOU NANSHA LIBRARY	
SYSTEM	TABLE PLATFORM SORTING SYSTEM
INDUSTRY	BOOKS
COMPLETION DATE	2020
NUMBER OF ROBOTS	18 SETS
CAPACITY	1,200 BOOKS PER HOUR

Applicable industries



ONE DOMESTIC LARGE CLOTHING ENTERPRISE	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	CLOTHING
COMPLETION DATE	2022
FLOOR AREA	2000m²
NUMBER OF DESTINATIONS	680
NUMBER OF ROBOTS	880 SETS
CAPACITY	40,000 PARCELS PER HOUR



ONE DOMESTIC LARGE FRESH FOOD AND BEVERAGE ENTERPRISE	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	CATERING
COMPLETION DATE	2017
FLOOR AREA	300m²
NUMBER OF DESTINATIONS	142
NUMBER OF ROBOTS	21 SETS



ONE DOMESTIC FRESH DISTRIBUTION COLD STORAGE SORTING PROJECT	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	COLD-CHAIN
COMPLETION DATE	2021
FLOOR AREA	1000m²
NUMBER OF DESTINATIONS	420
NUMBER OF ROBOTS	70SETS
CAPACITY	2200 PARCELS PER HOUR



AN CERTAIN INTERNATIONAL FAMOUS JEWELRY GROUP	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	JEWELRY
COMPLETION DATE	2021
FLOOR AREA	80m²
NUMBER OF DESTINATIONS	14
NUMBER OF ROBOTS	7 SETS



ONE DOMESTIC LARGE CLOTHING ENTERPRISE	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	CLOTHING
COMPLETION DATE	2021
FLOOR AREA	600m²
NUMBER OF DESTINATIONS	400
NUMBER OF ROBOTS	80 SETS
CAPACITY	4,500 PARCELS PER HOUR



GREECE POSTAL PARCEL CENTER	
SYSTEM	T-SHORT TABLE PLATFORM SORTING SYSTEM
INDUSTRY	COURIER
COMPLETION DATE	2021
FLOOR AREA	600m²
NUMBER OF DESTINATIONS	192
NUMBER OF ROBOTS	120 SETS
CAPACITY	6,000 PARCELS PER HOUR

Robot Series Products



JTRobotII-1, standard model sorting robot
Dimensions (L*W*H) (mm) 480*380*230



JTRobotII-2, standard model sorting robot
Dimensions (L*W*H) (mm) 480*380*200



LBCRB20, cross belt sorting robot
Dimensions (L*W*H) (mm) 480*380*200



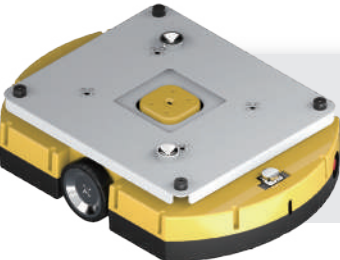
LBMini, inclined plate sorting robot
Dimensions (L*W*H) (mm) 240*210*131



LBTRAY30, inclined plate sorting robot
Dimensions (L*W*H) (mm) 660*480*220



LBCRB30, conveyor sorting robot
Dimensions (L*W*H) (mm) 660*480*216

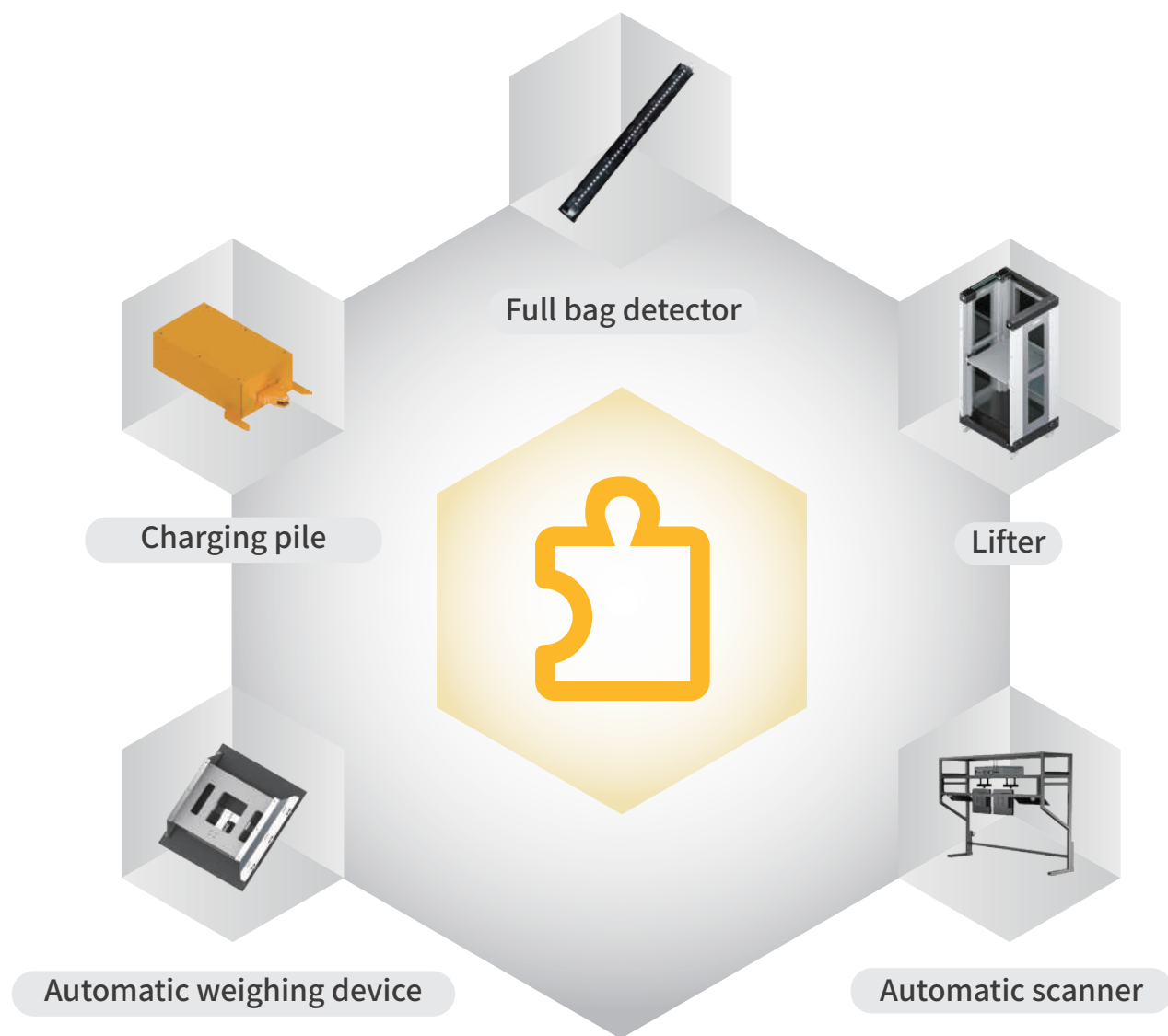


T-sort plus with lift
Dimensions (L*W*H) (mm) 660*480*180



T-sort with lift
Dimensions (L*W*H) (mm) 480*405*176

Supporting facilities



Software system & Network system



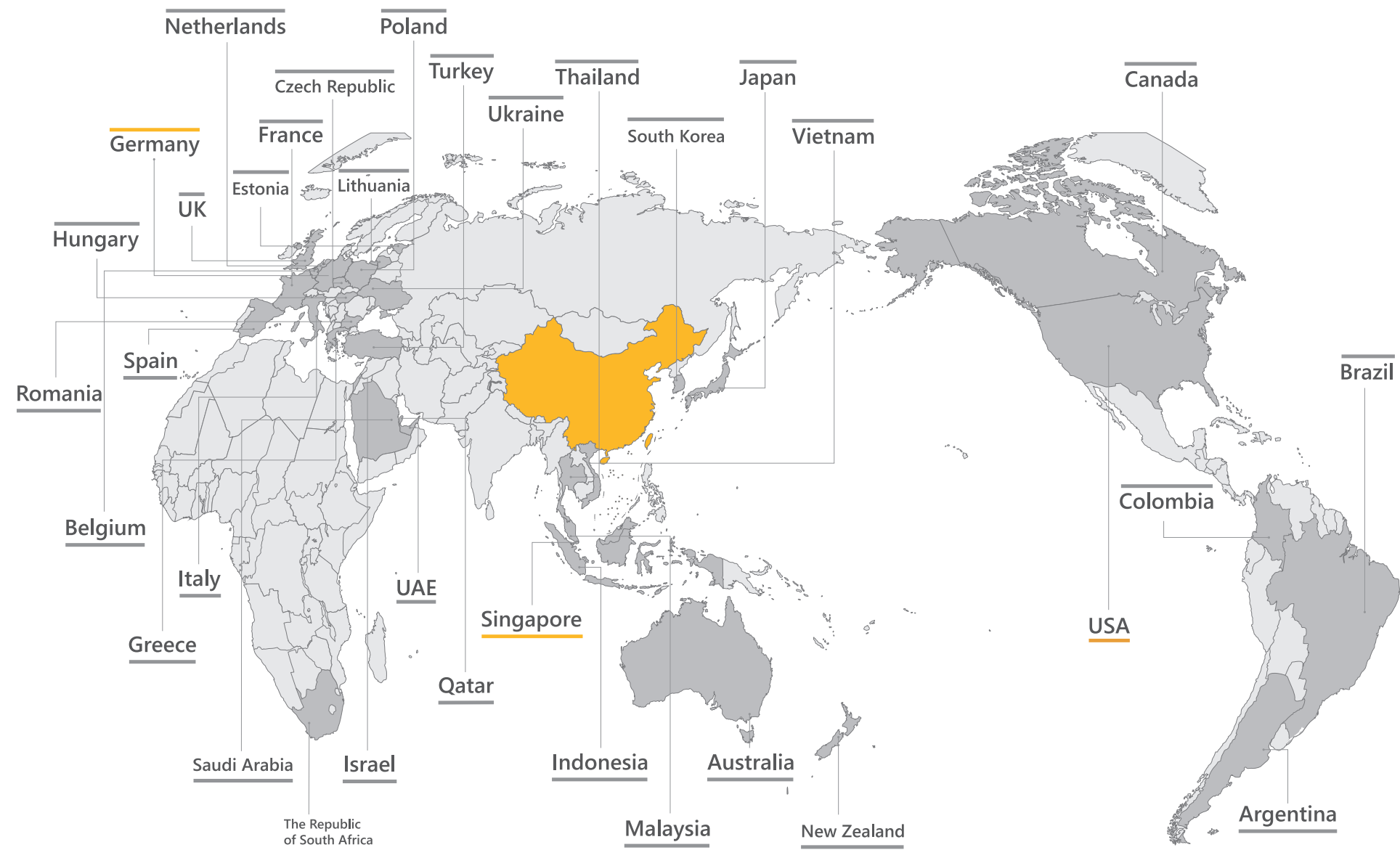
ROBOT CONTROL SYSTEM (RCS)

- **Integrated intelligent system:** The system integrates all modules such as human-computer interaction interface, path planning, robot communication, code scanner communication, external data communication, charging, and lift for intelligent operation and maintenance.
- **Efficient robot dispatching operation:** The system calculates the optimal path for hundreds of robots to work in synergy for higher stability and efficiency.
- **Greatly improved productivity:** The proprietary dispatch system, combined with the self-developed wireless communication system, has greatly improved productivity compared to traditional WI-FI communication.



SELF-DEVELOPED AP + AC WIRELESS COMMUNICATION SYSTEM

- **Stable communication and connection:** The system has high stability and strong anti-interference ability. It provides an effective solution to poor connection due to limited channel resources and signal interference.
- **Improved communication quality:** Improved wireless communication signal quality, communication success rate, communication speed, anti-interference ability, and data accuracy.
- **Customized system:** System maintenance is made easy with features such as remote network monitoring, upgrade, and maintenance.



Customers



Partners

