CASUN Intelligent Robot GmbH

Suzhou CASUN Intelligent Robot Co., Ltd.

PRODUCT CATALOG

stock code . 834863

CASUN Intelligent Robot GmbH
Suzhou CASUN Intelligent Robot Co., Ltd.

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📞 400-700-6846   ☎ +86-512 52868698   ✉ vip@casun99.com   🌐 www.casun-agv.com

Intelligent logistics project solution | Intelligent control system | Mobile robot

casun
佳顺智能

CATALOGUE

5+
Compatible with 5-generation navigation mode Visual navigation + Cluster scheduling

5+
5+ series mobile robot It covers the whole scene of manufacturing and intelligent logistics

8+
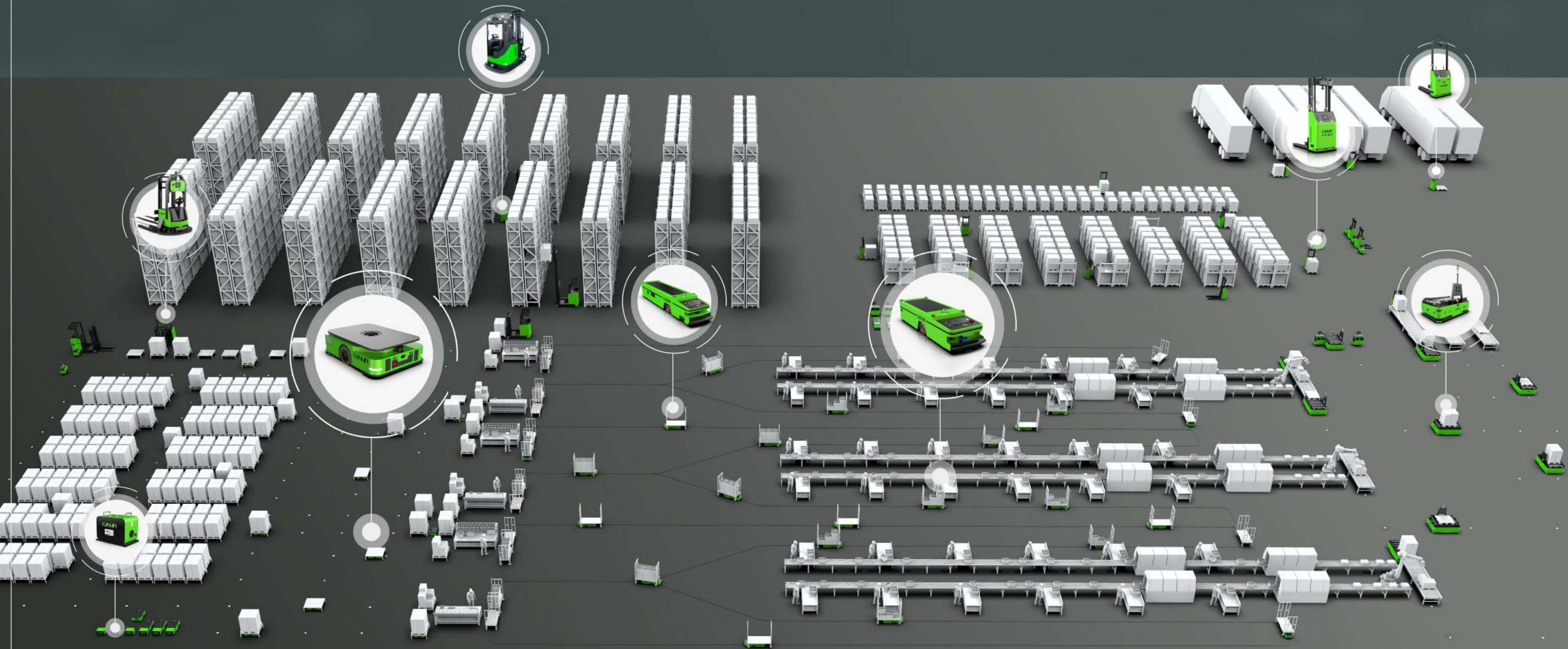Cover all kinds of application scenarios. 8 series, more than 50 models

16+
Founded in 2007
Focus in AGV industries for 16 years

50+
The business network covers the worldwide 28 subsidiaries, offices and 30+ global agents

2800+
More than 2800 system solutions have been completed and delivered

Core business

casun

Mobile robots

5-generation navigation, 8 series and more than 50 models

- **C1** — Latent traction series
- **C2** — Latent lift series
- **C3** — Unit load AGV with conveyor series
- **C5** — Automated forklift truck
- **CCM** — Mobile robot for new energy
- **CCS** — Charging Station Series

Intelligent control system

- **CRMS** — Mobile Robot Control System
- **CWMS** — Intelligent Warehouse Management System
- **CWCS** — Intelligent Warehouse Equipment Control System
- **CASS** — Intelligent Warehouse Sorting System
- **CDSS** — Digital simulation system

Solution

- New energy lithium battery
- New energy photovoltaic
- Automobile and parts
- Logistics and transportation
- Others
- Home appliances
- 3C & Semiconductor
- Flat panel display
- Food and beverage

UK

Germany

Russia

France

Czech Republic

Ukraine

Romania

Turkey

America

India

Korea

Japan

Xi'an

Shanghai

Chengdu

Suzhou

Mexico

Shenzhen

Vietnam

Thailand

Philippines

Malaysia

Singapore

South Africa

Brazil

Indonesia

Austrlia

Serving
The
Globe

5 R&D centers

Suzhou   Shenzhen   Shanghai   Chengdu   Xi'an

28 Service network
Headquarter：Suzhou, Shenzhen

Changshu, Wuxi, Nanjing, Changzhou, Hefei, Nantong, Shanghai, Ningbo, Guangzhou, Huizhou, Foshan, Dongguan, Zhuhai, Fuzhou, Wuhan, Zhengzhou, Changsha, Nanchang, Chengdu, Chongqing, Qingdao, Xi 'an, Beijing, Tianjin, Urumqi, Shenyang

30+ Global Agent

USA, Mexico, Brazil, Chile, UK, Ireland, Germany, France, Czech Republic, Ukraine, Romania, Turkey, Russia, South Africa, India, Vietnam, Thailand, Malaysia, Singapore, Indonesia, Philippines, South Korea, Japan, Australia, Taiwan, Hong Kong, China...

C1

— Latent Traction
Series Mobile Robots

Series Introduction

Latent traction series mobile robots can lurk under the material truck, use the traction rod to automatically lift, hook or drop the material vehicle. This series of products are divided into one-way, two-way and omni-directional according to the running direction, the navigation method is magnetic navigation, and the traction capacity is 500kg~1500kg. Latent traction series AGVs are widely used, compact in structure, flexible in operation, mature and stable, and suitable for various material vehicles.

Application Environment

-10℃ ~ 45℃; no dust, flammable, explosive and corrosive gases.

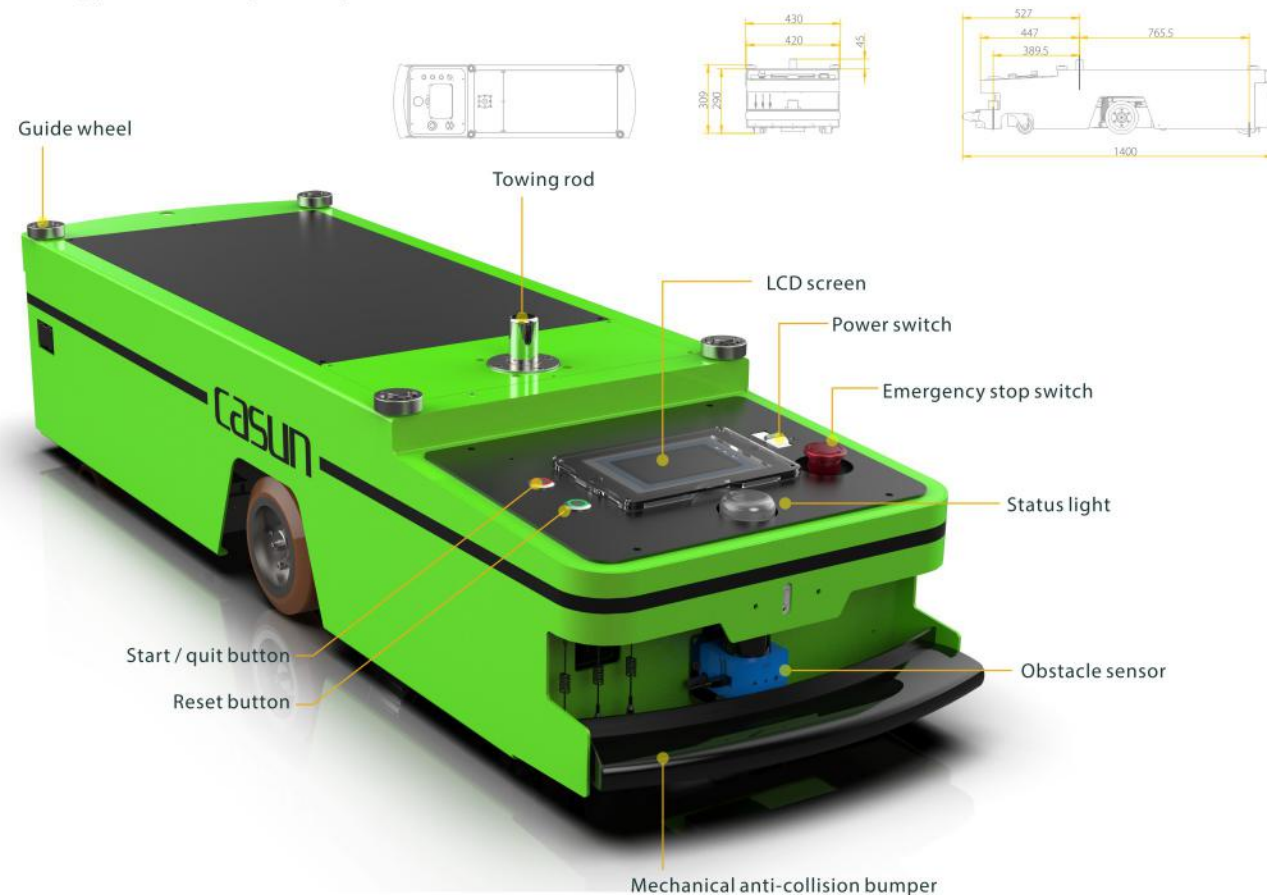| Model	C1-11B	C1-12	C1-14	C1-22	C1-24
Basic Parameters					
Dimension	L1400*W420*H290 mm	L1900*W420*H328 mm	L1965*W420*H328 mm	L1900*W420*H290 mm	L1900*W420*H290 mm
Max payload	500kg / 1000kg	1000kg / 1500kg	1500kg	1000kg / 1500kg	1000kg
Weight	180kg	220kg	220kg	280kg	362kg
Turning radius	650mm	1200mm	1500mm	1000mm	1000mm
Navigation Performance					
Navigation mode	Magnetic navigation	Magnetic navigation	SLAM	Magnetic navigation	SLAM
Navigation accuracy	±10mm	±10mm	±10mm	±10mm	±10mm
Stop accuracy	±10mm	±10mm	±5mm	±10mm	±10mm
Movement Performance					
Moving direction	Forward, turn left and right	Forward, turn left and right	Forward, turn left and right	Forward, backward, turn left and right	Forward, backward, turn left and right
Drive mode	Differential drive	Differential drive	Differential drive	Differential drive	Differential drive
Acceleration	$0.2m/s^2$	$0.2m/s^2$	$0.2m/s^2$	$0.2m/s^2$	$0.2m/s^2$
Max moving speed	45m/min	45m/min	45m/min	35m/min	35m/min
Max climbing capability	≤3°	≤3°	≤3°	≤3°	≤3°
Battery Performance					
Battery type	Lithium battery	Lithium battery	Lithium battery	Lithium battery	Lithium battery
Charging mode	Side charge/ Ground charge	Side charge/ Ground charge	Ground charging	Side charge/ Ground charge	Ground charging
Charging time	1H	1H	1H	1H	1H
Rated endurance	8H	8H	8H	8H	8H
Network					
Communi-cation	RF / WiFi / 5G	RF / WiFi / 5G	WiFi / 5G	RF / WiFi / 5G	WiFi / 5G
Protective Performance					
Safety warning	· Light warning · Voice broadcast	· Light warning · Voice broadcast	· Light warning · Voice broadcast	· Light warning · Voice broadcast	· Light warning · Voice broadcast
Safe sensing range	≤3m adjustable	≤3m adjustable	≤3m adjustable	≤3m adjustable	≤3m adjustable
Safety protection	Obstacle detection sensor ahead Mechanical anti-collision mechanism emergency stop switch	Obstacle detection sensor ahead Mechanical anti-collision mechanism emergency stop switch	Obstacle detection sensor ahead Mechanical anti-collision mechanism emergency stop switch	Front and rear obstacle detection sensor Mechanical anti-collision mechanism emergency stop switch	Front and rear obstacle detection sensor Mechanical anti-collision mechanism emergency stop switch

C1-11B

Automobile and Parts Industry · Flexible Production Line ▶

Product advantages

The product performance is stable, and there are a large number of mature application cases;

The car body is flexible and the turning radius is small;

High cost performance and short delivery period;

Flexible production to ensure smooth production lines;

Application industries and scenarios

application industry

Automobiles and parts, new energy lithium batteries, machinery manufacturing, electronics, electrical appliances and other diversified industries;

application scenarios

Transportation of production line materials, raw materials, parts and components, forming a flexible production line, etc.;

Product introduction

C1-11B one-way latent traction AGV is suitable for workshops with relatively fixed production processes. The working method is that the AGV automatically lurks to the bottom of the material truck after receiving system instructions, and automatically connects to the material vehicle through the AGV traction rod to realize material handling. End-to-end transfer. At present, it has been widely used in the two application scenarios of SPS material supply in automobile assembly workshop and PACK line in new energy lithium battery industry.

- Guide wheel
- Towing rod
- LCD screen
- Power switch
- Emergency stop switch
- Status light
- Start / quit button
- Reset button
- Obstacle sensor
- Mechanical anti-collision bumper

Project case - Automobile assembly workshop project

Solution

In the final assembly line and the instrument line, workers stand on the side of the line and operate on the special material truck pulled by the AGV. After completing the current process, they are released to the next station to realize streamlined operation. By replacing the original fixed production line, flexible production is realized, which is also conducive to later expansion and upgrading, and reduces the cost of later line body transformation; through the application of AGV in each link, the entire logistics link is connected in series to realize unmanned Smart delivery.

Economic benefits

Improve operating efficiency

Realize unmanned handling through AGV, saving warehouse logistics personnel;

Improved management efficiency

The AGV system is connected to the production management system, which can remind warehouse personnel to prepare materials in advance, avoid delays in production line, and significantly save personnel management costs;

Reduce errors

Through automatic material calling, point-to-point material handling is realized, and the error rate due to manual distribution is reduced.
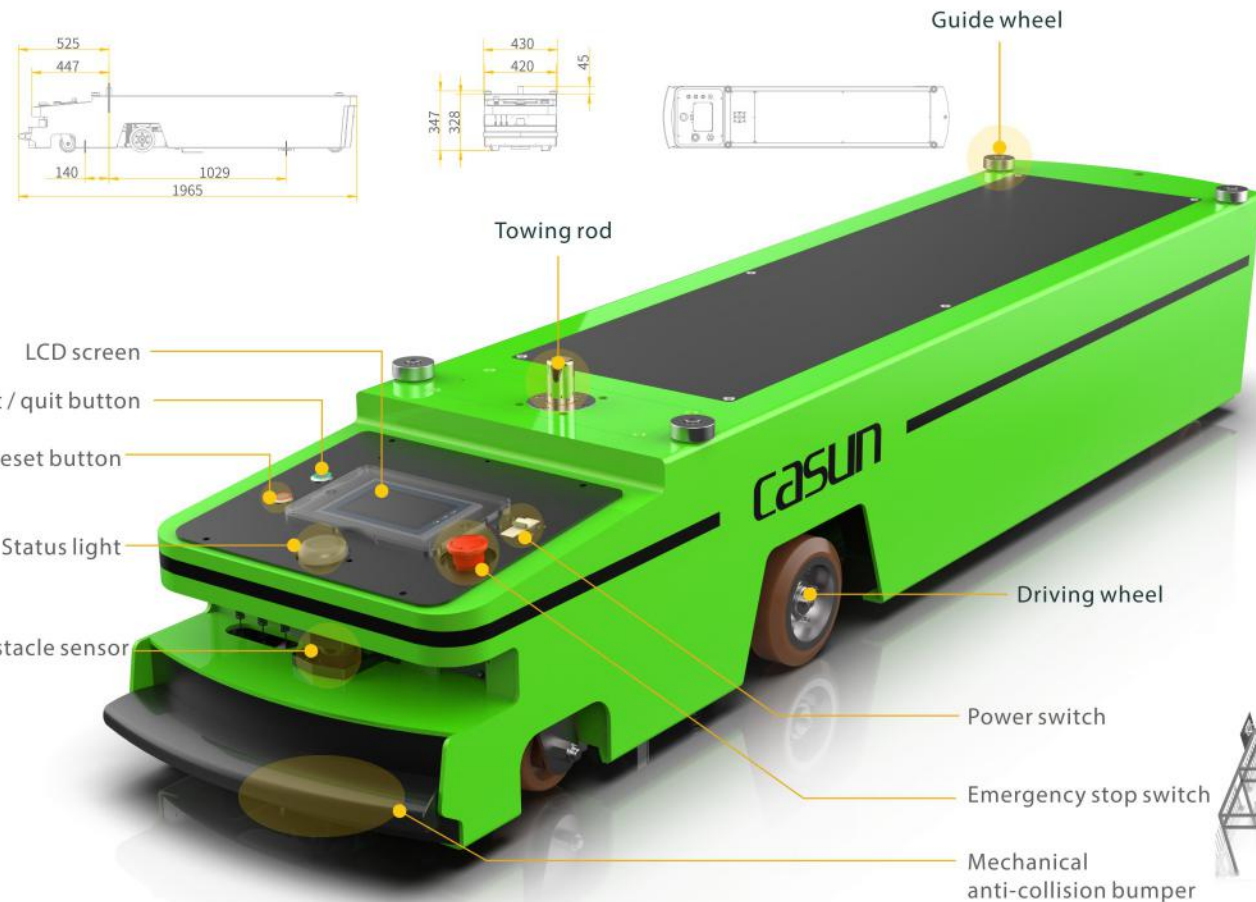
CASE

C1-12

New energy lithium battery industry PACK line ▶

◆ Product advantages

The product performance is stable, and there are a large number of mature application cases;

Short lead time and high cost performance;

Adapt to the lithium battery industry and the automobile industry;

Flexible production to ensure smooth production lines;

◆ Application industries and scenarios

application industry

Diversified industries such as new energy lithium batteries, automobiles and parts, machinery manufacturing, electronics, and electrical appliances.

application scenarios

End-to-end transportation of production line materials, raw materials and parts, forming a flexible production line, etc.

◆ Product introduction

C1-12 one-way latent traction type AGV is suitable for workshops with relatively fixed production processes. end-to-end transfer. A flow production line can also be composed of multiple AGVs to realize flexible production in the factory. At present, it is widely used in the PACK line scene of the new energy lithium battery industry.

Guide wheel

525
447
140   1029
1965

430
420
45
347
328

Towing rod

LCD screen

Start / quit button

Reset button

Status light

Obstacle sensor

CASUN

Driving wheel

Power switch

Emergency stop switch

Mechanical anti-collision bumper

### ◆ Project case - Lithium battery PACK line material transfer project

Solution

The factory's PACK line material transfer project mainly realizes the material transfer between battery packs from assembly to testing to packaging, and its operation process is a circular assembly line. Through the CRMS mobile robot control system, the system realizes autonomous material calling, intelligent handling, information collection, and intelligent storage, and seamlessly connects with the user's production management system.

Difficulties of the project: This project mainly solves the technical difficulties of docking various peripheral equipment systems, such as transmission equipment, robotic arms, etc.; secondly, it accurately realizes the priority logic judgment of AGV operation, according to the sequence of different stations , the CRMS system automatically selects and determines the most suitable transportation route.

Economic benefits

TQCM

Create a flexible production line and improve the flexibility of production scheduling.

Damage reduction

Reduce damage - improve yield rate and accuracy rate: Reduce material damage during handling, and the defective rate is reduced by 90%.

Precise location

The transportation accuracy rate is increased to 99%, which meets the peak demand of full production of the whole line.

Intelligent logistics

Realize the optimization of warehouse location, route and task allocation, and the informatization of the whole process.
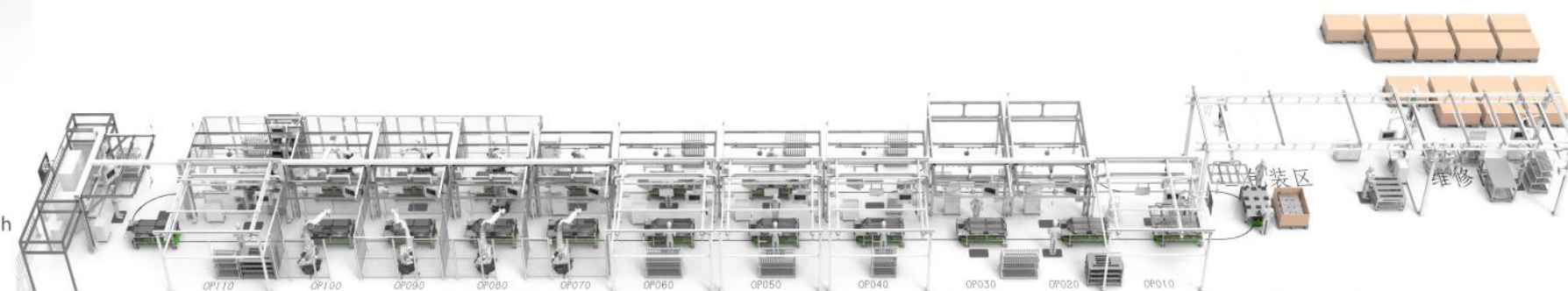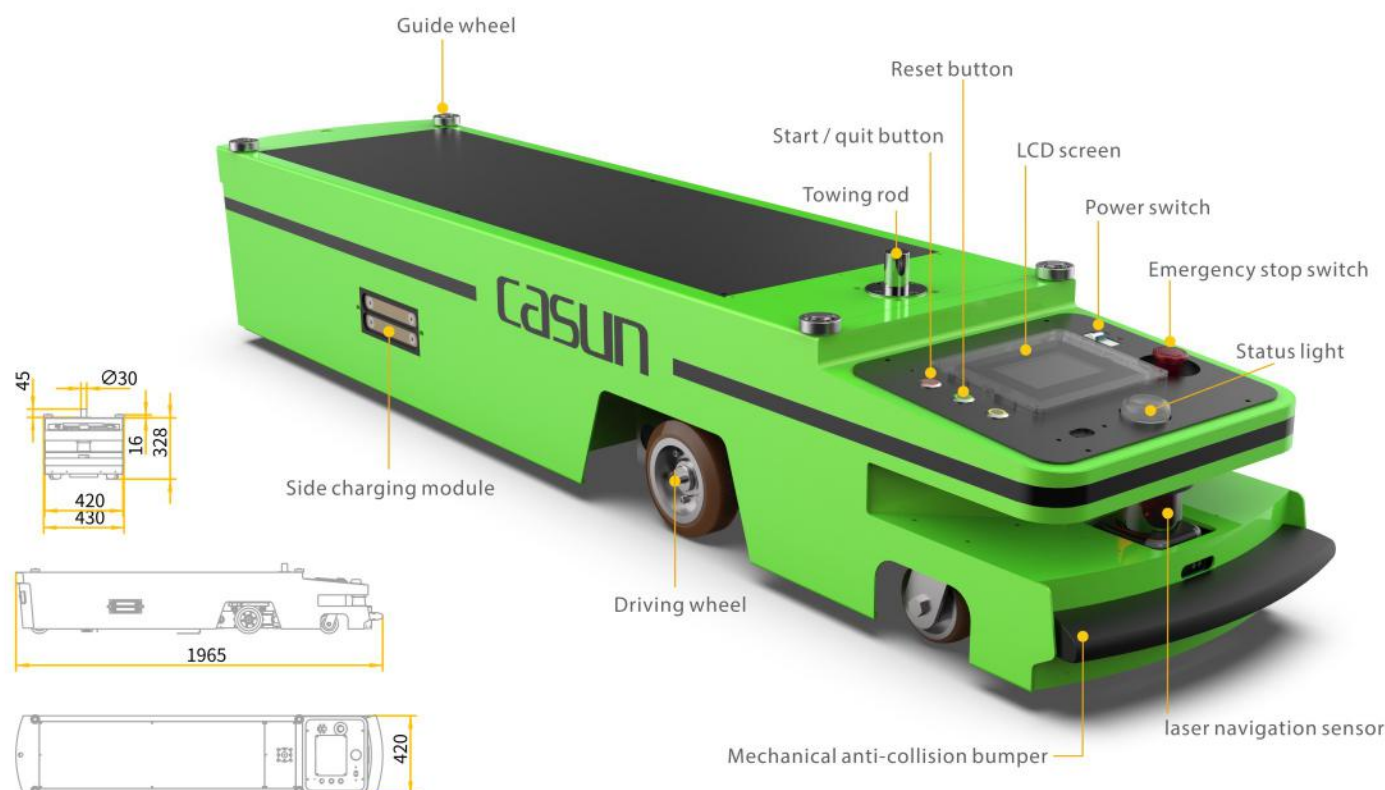
C1-14

◀ Automobile and Parts Industry·Assembly Workshop SPS

◇ Product advantages

△ Adopt advanced SLAM navigation technology;

⇌ Adapt to a variety of tooling trucks;

Auto High cost performance and short delivery period;

◇ Application industries and scenarios

application industry

Diversified industries such as automobiles, auto parts, machinery manufacturing, electronics, electrical appliances, and new energy;

application scenarios

Production line materials, raw materials, parts transportation, flexible production lines, etc.

📝 Product introduction

C1-14 one-way latent traction AGV is suitable for sites with relatively fixed environmental contours. The navigation mode is SLAM navigation. The working mode is that the AGV automatically lurks to the bottom of the material truck after receiving system instructions, and is automatically hung by the traction bar. Pick-up trucks realize end-to-end transfer. A flow production line can also be composed of multiple AGVs to realize flexible production in the factory. At present, it is mostly used in SPS of automobile assembly workshop.

Guide wheel
Reset button
Start / quit button
LCD screen
Towing rod
Power switch
Emergency stop switch
Status light
Side charging module
Driving wheel
Mechanical anti-collision bumper
laser navigation sensor

Ø30
45
16
328
420
430
1965
420

👑 Project case - SPS distribution of small pieces in the final assembly line

Solution

Small SPS distribution on the final assembly line, mainly including: interior trim line, final line, chassis line, door line, etc., mainly from the material distribution area, small SPS racks are delivered to the edge of the production line, and then through the upper and lower lines The mechanism is sent to the production line to realize the operation of the SPS material truck along with the production line. It mainly solves the problem of single-set distribution of small materials to the side of the car to run along the line, convenient and fast operation by personnel, space saving in wireless side warehouses, and errors in personnel assembly without errors and missing installations.

Economic benefits

Improve efficiency

Improve operating efficiency, realize unmanned handling through AGV, and save warehouse logistics personnel;

Space saving

Save storage space at the edge of the production line, and assist customers in realizing 5S management at the edge of the line;

Reduce errors

Through automatic material calling, point-to-point material handling is realized, and the error rate due to manual distribution is reduced;
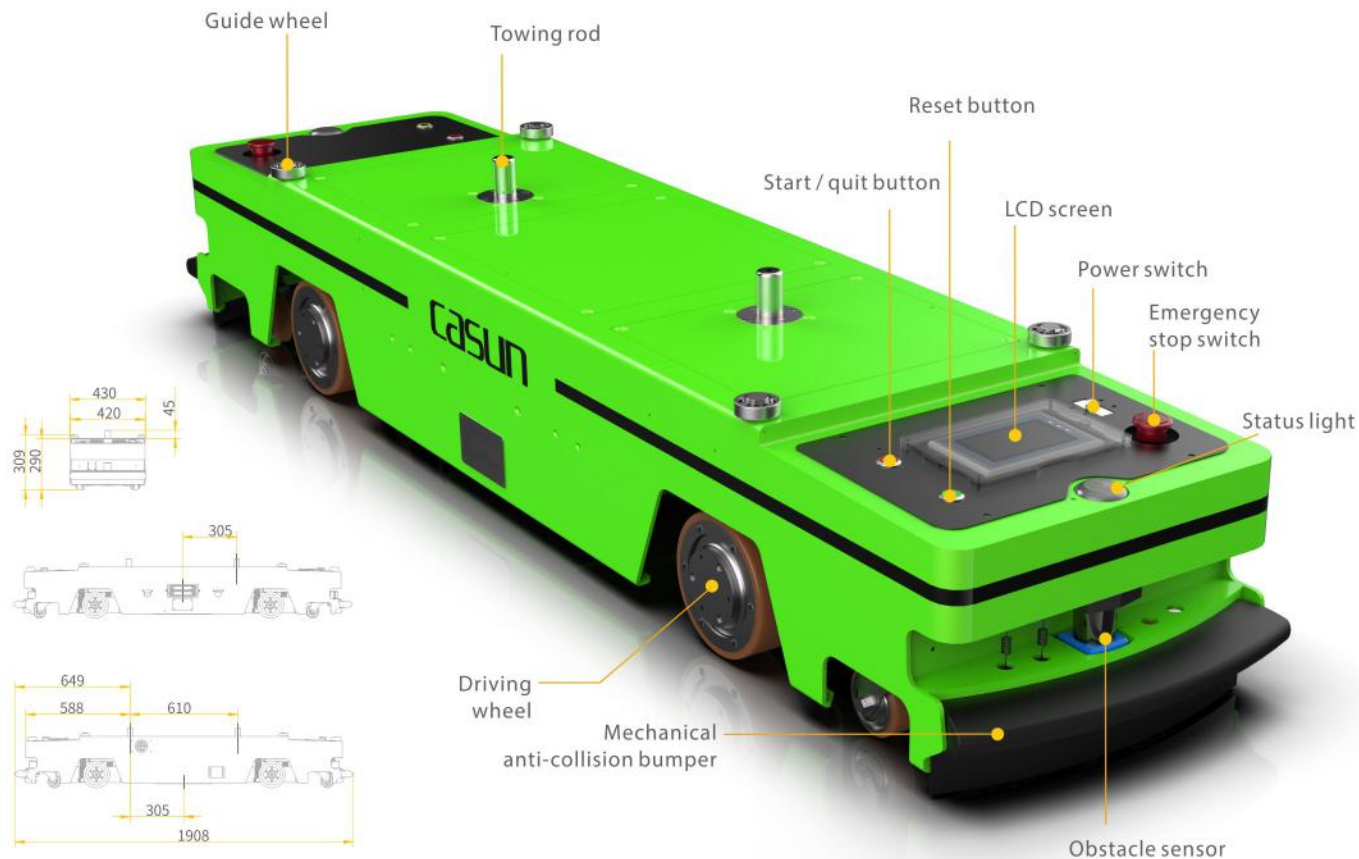
CASE

C1-22

Automobile and Parts Industry · General Assembly Line ▶

Product advantages

The product performance is stable, and there are a large number of mature application cases;

The car body is flexible and the turning radius is small;

High cost performance and short delivery period;

Flexible production to ensure smooth production lines;

Application industries and scenarios

application industry

Diversified industries such as new energy lithium batteries, automobiles and parts, machinery manufacturing, electronics, and electrical appliances.

application scenarios

Production line materials, raw materials, parts transportation, flexible production lines, etc.

Product introduction

C1-22 two-way latent traction AGV is suitable for workshops with relatively fixed production processes. The working method is that the AGV automatically lurks to the bottom of the material truck after receiving system instructions, and automatically mounts the material vehicle through the traction rod to realize end-to-end terminal transport. A flow production line can also be composed of multiple AGVs to realize flexible production in the factory. At present, it has been widely used in the automobile and parts industry, new energy lithium battery industry, etc.

Guide wheel
Towing rod
Reset button
Start / quit button
LCD screen
Power switch
Emergency stop switch
Status light
Driving wheel
Mechanical anti-collision bumper
Obstacle sensor

430
420
45
309
290
305
649
588
610
305
1908

Project case - Auto parts project

Solution

Through the two-way AGV, at the site with narrow passages, by switching directions, the exchange of empty and full material trucks can be realized, and the material transfer of raw materials such as exhaust pipes and seats can be realized through special material vehicles, reducing the Materials are piled up at the edge of the production line, rational use of warehouse space, placement of empty and full parts, and increase the number of placements.

Economic benefits

Improve efficiency

Improve operation efficiency, realize unmanned handling through AGV, and save warehouse logistics personnel;

Space saving

Saving storage space on the production line, assisting customers to realize 5S management on the line;

Automatic material call

Through automatic material call, point-to-point material handling can be realized, and the error rate due to manual distribution can be reduced.
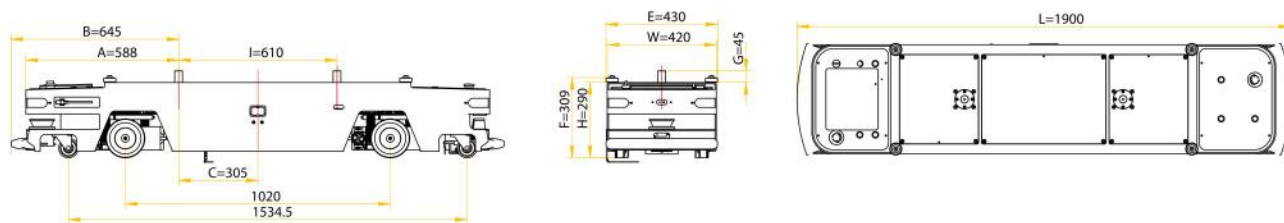
CASE

C1-24

New energy lithium battery industry PACK line ▶

Product advantages

△ Adopt advanced SLAM navigation technology;

⇌ Adapt to a variety of tooling trucks;

Auto High cost performance and short delivery period;

Application industries and scenarios

application industry

Diversified industries such as automobiles, auto parts, machinery manufacturing, electronics, electrical appliances, and new energy;

application scenarios

Production line materials, raw materials, parts transportation, flexible production lines, etc.
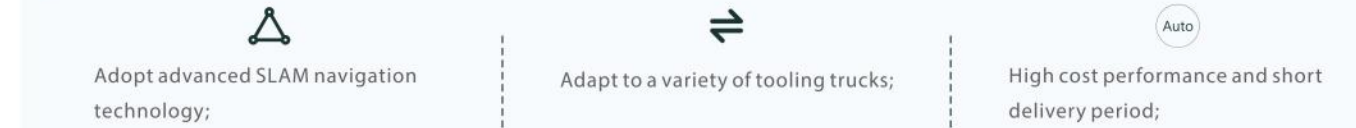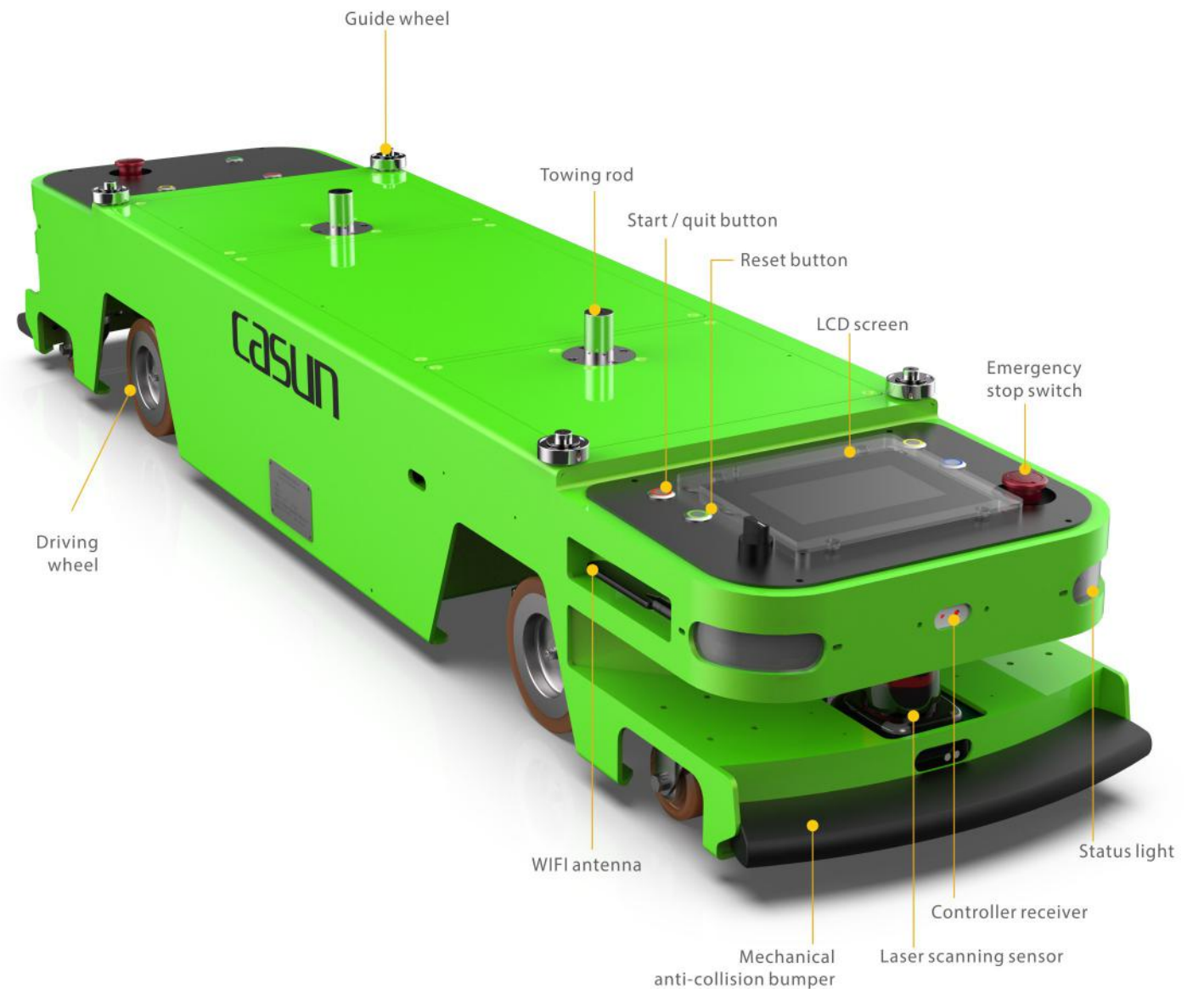
Product introduction

C1-24 bidirectional latent traction AGV adopts SLAM navigation or QR code navigation. The working mode is that the AGV automatically lurk to the bottom of the trolley after receiving the system instruction, and automatically hooks the trolley through the traction bar to achieve end-to-end transfer. It can also be composed of multiple AGVs to form a flow production line to achieve flexible production in the factory. At present, it has been widely used in new energy photovoltaic, automobile and parts industry, new energy lithium battery industry.

B=645
A=588
I=610
C=305
1020
1534.5

E=430
W=420
G=45
F=309
H=290

L=1900

Guide wheel

Towing rod

Start / quit button

Reset button

LCD screen

Emergency stop switch

Driving wheel

WIFI antenna

Mechanical anti-collision bumper

Laser scanning sensor

Controller receiver

Status light

Latent Lift Mobile Robot

C2

Series introduction

The latent lifting series mobile robot performs precise positioning according to dispatching instructions, and independently completes lifting, transportation, and unloading operations. It can choose material sorting system, lifting platform, relative rotation of the body and other configurations. The series of products are divided into one-way, two-way and omni-directional according to the running direction, and the navigation method can choose QR code navigation and SLAM navigation. The maximum load can reach 1500kg.

Application environment

-10℃ ~ 45℃; no dust, flammable, explosive and corrosive gases

Model		C2-22B	C2-23B	C2-26B	C2-36	C2-37
Basic Parameters	Dimension	L940*W650*H253 (mm)	L1180*W860*H300 (mm)	L1600*W860*H350 (mm)	1540*920*370(mm)	L2000*W1000*H840(mm)
	Max Load Capacity	1000kg	1500kg	1500kg	1500kg	1000kg / 1500kg / 2500kg
	Weight	150kg	400kg	400kg	410kg	630kg
	Rotation Diameter	1087mm	1180mm	1770mm	1740mm	2227mm
	Relative Rotation	Yes	Yes	NO	NO	NO
	Size of Lifting Platform	860*600mm	1050*735mm	1280*800mm	1276*796mm	1464*588(mm)
	Max Lifting Distance	60mm	50mm	60mm	60mm	248mm
Navigation Performance	Navigation Mode	QR / SLAM	QR / SLAM	QR	QR /SLAM	QR / SLAM
	Navigation Accuracy	±10mm / ±15mm	±10mm / ±15mm	±10mm	±10mm / ±15mm	±10mm / ±15mm
	Stop Accuracy	±5mm / ±10mm	±5mm / ±10mm	±10mm	±5mm / ±10mm	±5mm / ±10mm
	Stop Angle Accuracy	±1°	±1°	±1°	±1	±1°
Movement Performance	Moving Direction	Forward,Backward,Rotate	Forward,Backward,Rotate	Forward,Backward,Rotate	Forward, backward, sideways, rotating	Forward, backward, sideways, rotating
	Drive Mode	Two-wheel rudder drive	Two-wheel rudder drive	Two-wheel rudder drive	Two-wheel rudder drive	Steering wheel drive
	Accelerated Speed	0.5m/s²	0.35m/s²	0.35m/s²	0.5m//s²	0.5m/s²
	Max Moving Speed	2m/s	1.2m/s	1.0m/s	1m/s	60m/min
	Max Climbing Capacity	≤3°	≤3°	≤3°	≤3°	≤3°
Battery Performance	Battery	Lithium battery	Lithium battery	Lithium battery	Lithium iron phosphate battery	Lithium battery
	Charging Mode	Collision charging	Collision charging	Side charging	Side charging / ground charging	Side charging/ground charging
	Charging time	Charge time ≤1H after complete discharge	Charge time ≤1H after complete discharge	Charge time ≤1H after complete discharge	Charge time ≤1H after complete discharge	Charge time ≤1H after complete discharge
	Rated Duration	4H	6H	6H	4H	6H
Network	Communication	WiFi / 5G	WiFi / 5G	WiFi / 5G	WiFi / 5G	WiFi / 5G
Protective Performance	Security Alarm	- Light warning - Voice broadcast	- Light warning - Voice broadcast	- Light warning - Voice broadcast	- Light warning - Voice broadcast	- Light warning - Voice broadcast
	Security Sensing Range	≤3m adjustable	≤3m adjustable	≤3m adjustable	≤3m adjustable	≤3m adjustable
	Safety Protection	-Front obstacle detection sensor -Mechanical anti-collision mechanism -Emergency stop switch	-Front and rear obstacle detection sensors -Mechanical anti-collision mechanism -Emergency stop switch	-Front and rear obstacle detection sensors -Mechanical anti-collision mechanism -Emergency stop switch	-Diagonal obstacle sensor, -Mechanical anti-collision mechanism -emergency stop switch	-Front and rear diagonal obstacle detection sensors -Mechanical anti-collision mechanism -Emergency stop switch

C2-22B

Logistics and Circulation Industry Goods-to-Person Picking

Product advantages

The body height is smaller, suitable for lower space operation;

It can be used as a flexible production line to ensure smooth production;

Composite navigation can be used, and the docking accuracy is high;

With the function of relative rotation, the flexibility is higher;

Application industries and scenarios

application industry

Diversified industries such as photovoltaics, automobiles and parts, logistics and distribution, electronics, and electrical appliances.

application scenarios

Goods-to-person selection, production line raw materials, end-to-end transportation of parts and components, forming a flexible production line, etc.

Product introduction

C2-22B is a latent lifting AGV. It uses trackless navigation and can change the route according to on-site production changes. The model is small and compact, and the load can reach 1000KG after upgrading. The body and the lift plate can be rotated relative to each other. Working method: After the AGV receives the system command, the AGV lurks to the bottom of the material rack, lifts the material rack up, and carries out material transportation; it can also be composed of multiple AGVs to form a mobile production line to achieve flexible production. It has been widely used in automobiles and spare parts Parts industry, photovoltaic industry, 3C and semiconductor industries.

Emergency stop switch

Manual charging   Collision brush plate

650

129

253

940

600

860

Driving wheel

Lifting button

Start / quit button

Laser scan sensor

Turning light

Mechanical anti-collision bumper

Power switch

Reset button

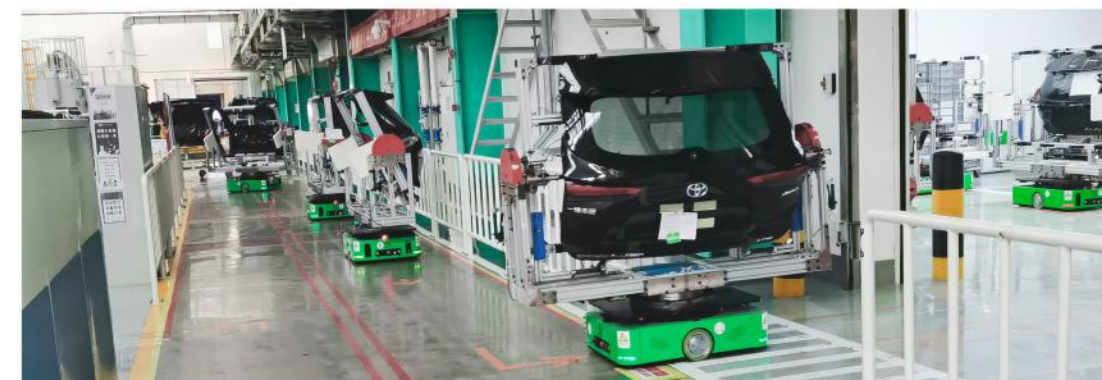## Project case - Automobile back door assembly workshop project

Solution

Through the two-way mobile robot, at the site with narrow passages, the exchange of empty and full material trucks can be realized by switching directions, and the material transfer of raw materials such as exhaust pipes and seats can be realized through special material trucks, reducing Reduce the accumulation of materials at the edge of the production line, rationally use the warehouse space, place empty and full materials, and increase the number of placements.

Economic benefits

Flexible production

Flexible production line, the rate of on-site change is increased, and the incompatibility of the production line caused by changes in production orders is reduced.

TQCM

Reduce the number of loading and unloading operators and reduce personnel fatigue.

Strong reliability

Production can still be carried out if a single equipment fails, and the risk of the entire line stopping due to equipment failure at the station is improved.
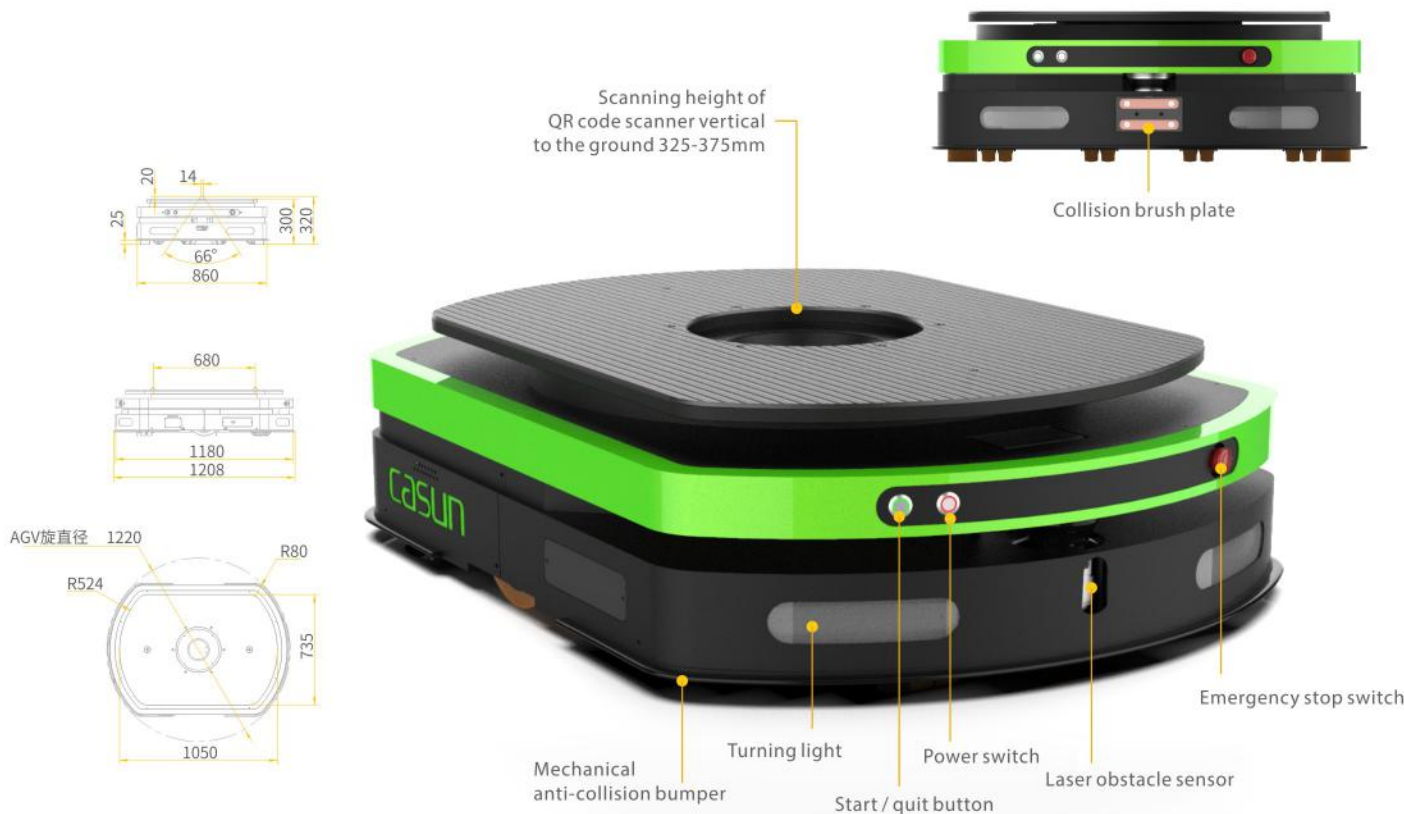
CASE

C2-23B

◀ Photovoltaic industry·Sorting of cell raw materials

◆ Product advantages

△ The product performance is stable, and there are a large number of mature application cases;

◇ The car body is flexible and the turning radius is small;

⏱ High delivery timeliness and high cost performance;

⬈ Flexible production to ensure smooth production lines;

⬚ Application industries and scenarios

✿ application industry

New energy photovoltaics, automobiles and parts, logistics and distribution, electronics and electrical, medical and other industries.

♺ application scenarios

Production line materials, raw materials, parts transportation, goods-to-person selection, flexible production lines, etc.

📝 Product introduction

C2-23B performs precise positioning according to dispatching tasks, and independently completes a series of operations of lifting, transportation, and unloading. It can choose material sorting system, platform, and body relative rotation configuration, etc. This series is divided into one-way, two-way and omni-directional according to the running direction of the mobile robot. The navigation method can choose QR code navigation and SLAM navigation, and the load capacity can reach 1500kg. At present, it has been widely used in many industries such as new energy photovoltaics, automobiles and parts, logistics and distribution, food and beverage, 3C and semiconductors, and household appliances.

Scanning height of QR code scanner vertical to the ground 325-375mm

Collision brush plate

Emergency stop switch

Mechanical anti-collision bumper

Turning light

Power switch

Start / quit button

Laser obstacle sensor

👑 Project case - Cargo sorting project in a finished tobacco warehouse workshop

Solution

This project is mainly used in the storage and sorting process of finished products in the tobacco industry. It mainly uses mobile robots to realize automatic handling and manipulator docking to realize automatic storage and sorting work; through the use of mobile robots, a certain tobacco logistics greatly It reduces the number of personnel and labor intensity, and replaces manual labor for tedious and repetitive warehousing and warehousing actions.

In addition, the mobile robot is automatically docked with various process production equipment, which connects the production process links in series and realizes factory automation.

Economic benefits

📈 Improve efficiency

Flexible production line, the rate of on-site change is increased, and the incompatibility of the production line caused by changes in production orders is reduced.

📦 Increase capacity

Seamlessly connect with WMS system, realize optimization of storage location, route, and task allocation, rationally plan warehouse layout, maximize use of space, and increase warehouse location by 20%.

⊕ Intelligent Scheduling

The storage information data of the warehouse location, inbound and outbound tasks, and on-site inbound and outbound equipment (mechanical arms, stacking machines, manual warehousing operation terminals, etc.) are managed by the customer's WMS system to monitor the status of factory materials in real time.

Ⓢ Cost saving

Reduce the number of operations by personnel, reduce the intensity of manual labor, reduce the rate of operational errors, improve the flexible process, and save a lot of labor costs.
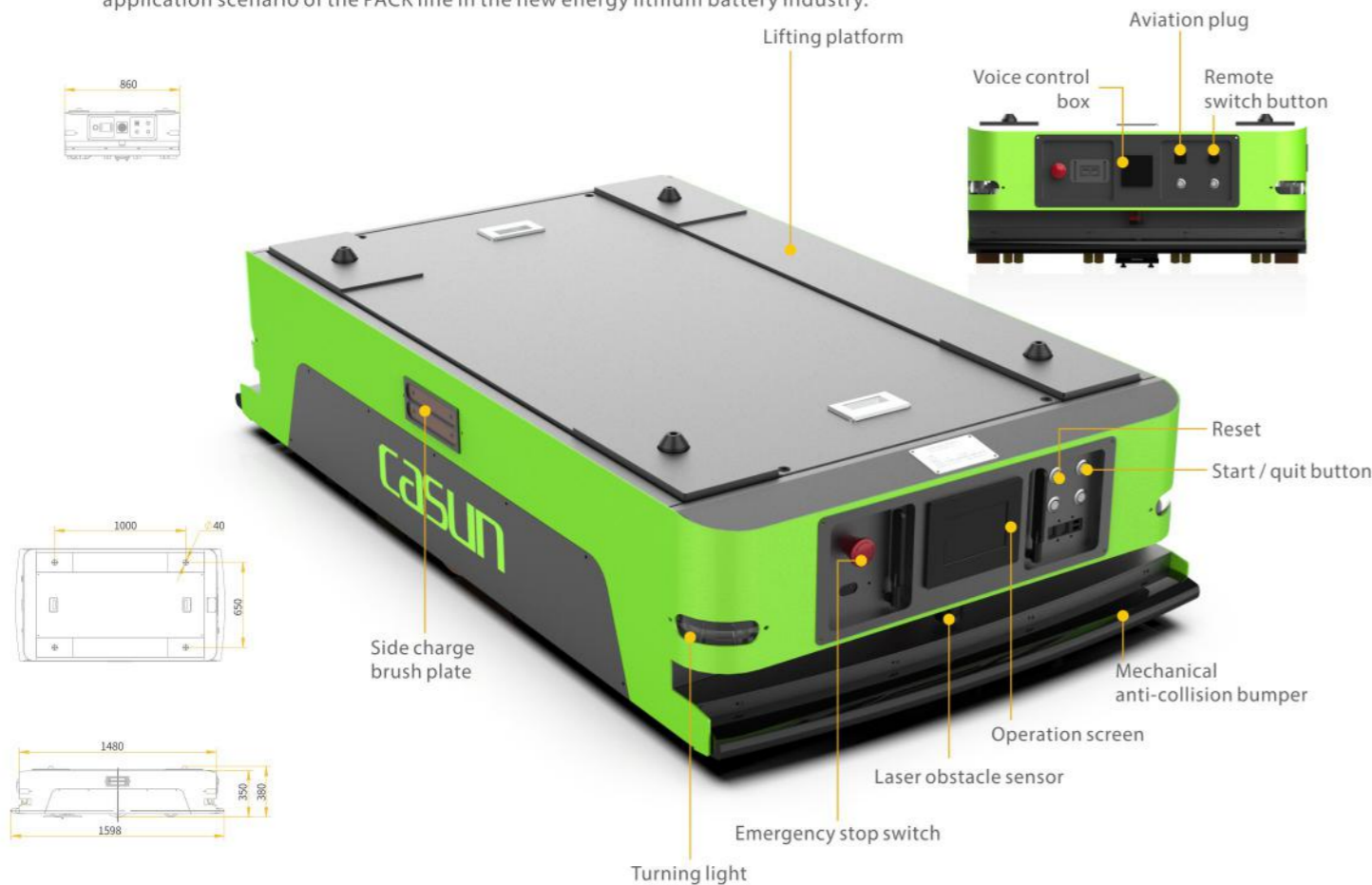

CASE

C2-26B

New energy lithium battery industry PACK line

Product advantages

The product performance is stable, and there are a large number of mature application cases;

Adapt to the lithium battery industry, tailor-made;

Flexible production to ensure smooth production lines;

Application industries and scenarios

application industry

Diversified industries such as new energy lithium batteries, automobiles, auto parts, and machinery manufacturing.

application scenarios

End-to-end transportation of production line materials, raw materials and parts, forming a flexible production line, etc.

Product introduction

C2-26B two-way latent lifting mobile robot is suitable for workshops with relatively fixed production processes. The working method is: the mobile robot automatically lurks to the bottom of the material truck after receiving system instructions, and docks with the material vehicle through the lifting platform. Realize end-to-end transfer. A mobile production line can also be composed of multiple mobile robots to achieve flexible production in the factory. At present, the most widely used is the application scenario of the PACK line in the new energy lithium battery industry.

Lifting platform

Aviation plug

Voice control box

Remote switch button

860

1000 40
650
1480
350 380
1598

Reset

Start / quit button

Side charge brush plate

Mechanical anti-collision bumper

Operation screen

Laser obstacle sensor

Emergency stop switch

Turning light

Project case - Lithium battery PACK line project

Solution

The factory PACK line transfer project mainly realizes the material transfer between battery packs from assembly to testing to packaging, and its operation process is a circular assembly line. Through the CRMS mobile robot control system, autonomous ordering of materials, intelligent handling, information collection, and intelligent storage are realized, and it is seamlessly connected with the user's production management system.

Difficulties of the project: This project mainly solves the technical difficulties in the docking of various peripheral equipment systems, such as transmission equipment, robotic arms, etc.; secondly, it accurately realizes the priority logic judgment of the operation of the mobile robot, according to the sequence of different stations In order, the CRMS system automatically selects and determines the most suitable transportation route.

Economic benefits

Reduce costs

Reduce the investment cost of fixed equipment: create a flexible production line and improve the flexibility of production scheduling.

High reliability

Improve yield rate and accuracy rate: reduce material damage during handling, and reduce defect rate by 90%.

Precise positioning

Improve the positioning accuracy of transportation: the transportation accuracy rate is increased to 99%, which can meet the peak demand of full production of the whole line.

Intelligent logistics

Realize intelligent logistics in the field: realize the optimization of warehouse location, route and task allocation, and informatization of the whole process.
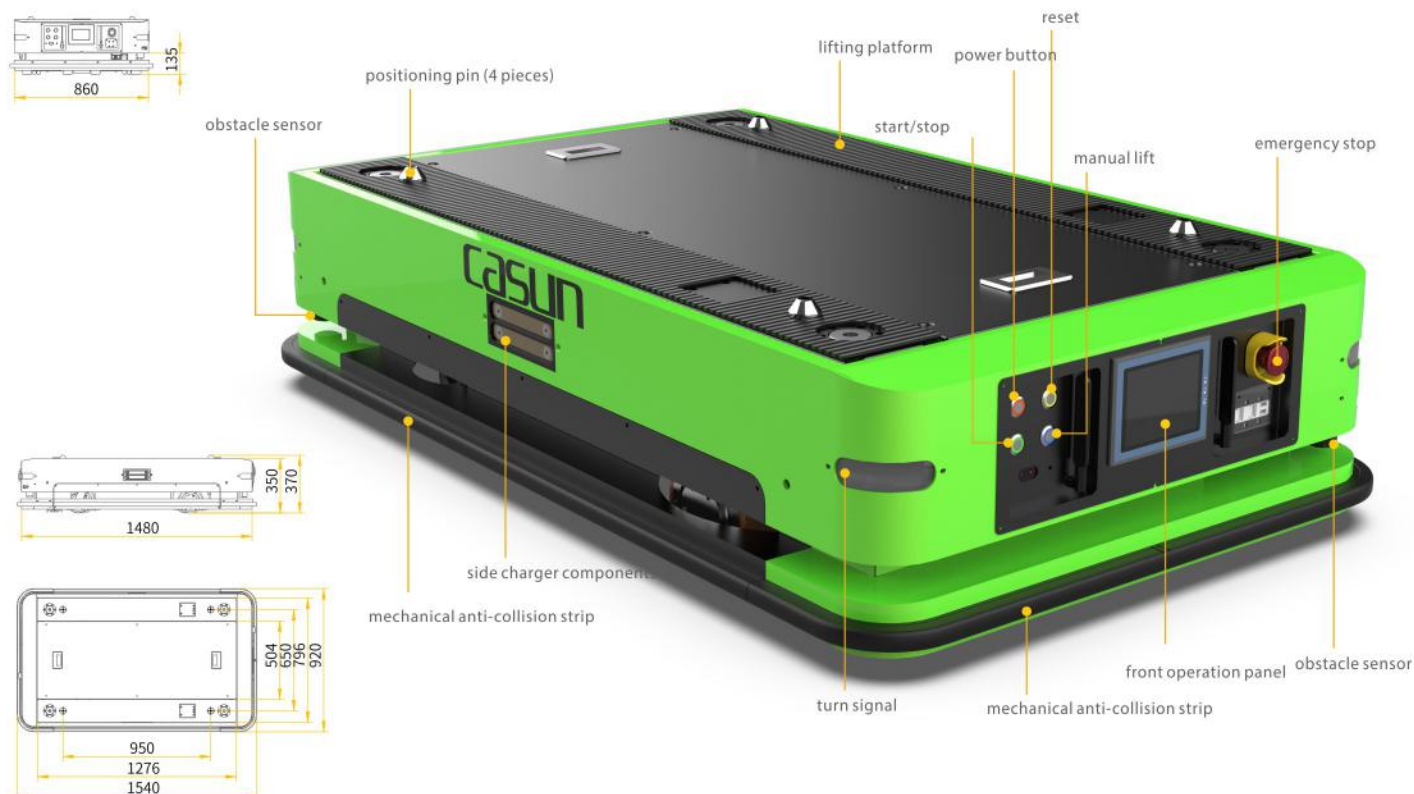
液晶电视

C2-36

New energy lithium battery industry PACK line ▶

Product advantages

△ The product performance is stable, and there are a large number of mature application cases;

▥ Omni-directional operation, 360-degree safety protection;

▤ Flexible production, which can be adapted to battery packs of various specifications.

Application industries and scenarios

application industry

New energy lithium batteries, automobiles, auto parts, machinery manufacturing and other diversified industries;

application scenarios

PACK line, raw materials of production line, end-to-end transportation of parts and components, forming a flexible production line, etc.

Product introduction

C2-36 is a latent lifting AGV, equipped with omnidirectional drive, using QR code navigation, and the load can reach 1500KG. The model is compact and the lifting stroke is 60mm. Working method: After the AGV receives the system command, the AGV lurks to the bottom of the material rack, lifts the material rack, and carries out material transportation; it can also be composed of multiple AGVs to form a mobile production line to achieve flexible production. It has been widely used in new energy lithium batteries. , automobile and parts industry, photovoltaic industry, 3C and semiconductor industry.

positioning pin (4 pieces)
obstacle sensor
reset
lifting platform
power button
start/stop
manual lift
emergency stop
side charger component
mechanical anti-collision strip
turn signal
front operation panel
obstacle sensor
mechanical anti-collision strip

135
860
350
370
1480
504
550
796
920
950
1276
1540

Project case -Lithium battery PACK line project

Solution

It mainly realizes the product transfer between battery packs from assembly to testing to packaging, and its operation process is a circular flexible production line. Through the system, autonomous ordering of materials, intelligent handling, information collection, and intelligent storage are realized, and it is seamlessly connected with the user's production management system.

(2) Difficulties of the project: This project mainly solves the function of the AGV carrying the PACK material car to realize the lateral movement, reduces the space of the PACK material car running channel, and at the same time ensures that the orientation of the PACK material car is consistent with the site; secondly, it solves the problem Explain the technical difficulties of docking various peripheral equipment systems: such as MES docking of manual stations, test equipment, manipulators, safety grating docking of automatic stations, etc.

Economic benefits

Cost reduction

Reduce the investment cost of fixed equipment: create a flexible production line and improve the flexibility of production scheduling.

High reliability

Improve the health rate and accuracy rate, reduce material damage during the handling process, and reduce the unhealthy rate by 90%

Precise positioning

Improve the positioning accuracy of transportation, and the transportation accuracy rate is increased to 99%, which meets the peak demand of full production of the whole line;

Intelligent logistics

Realize intelligent on-site logistics: Realize optimization of warehouse locations, routes, and task allocation, and informatization of the entire process.
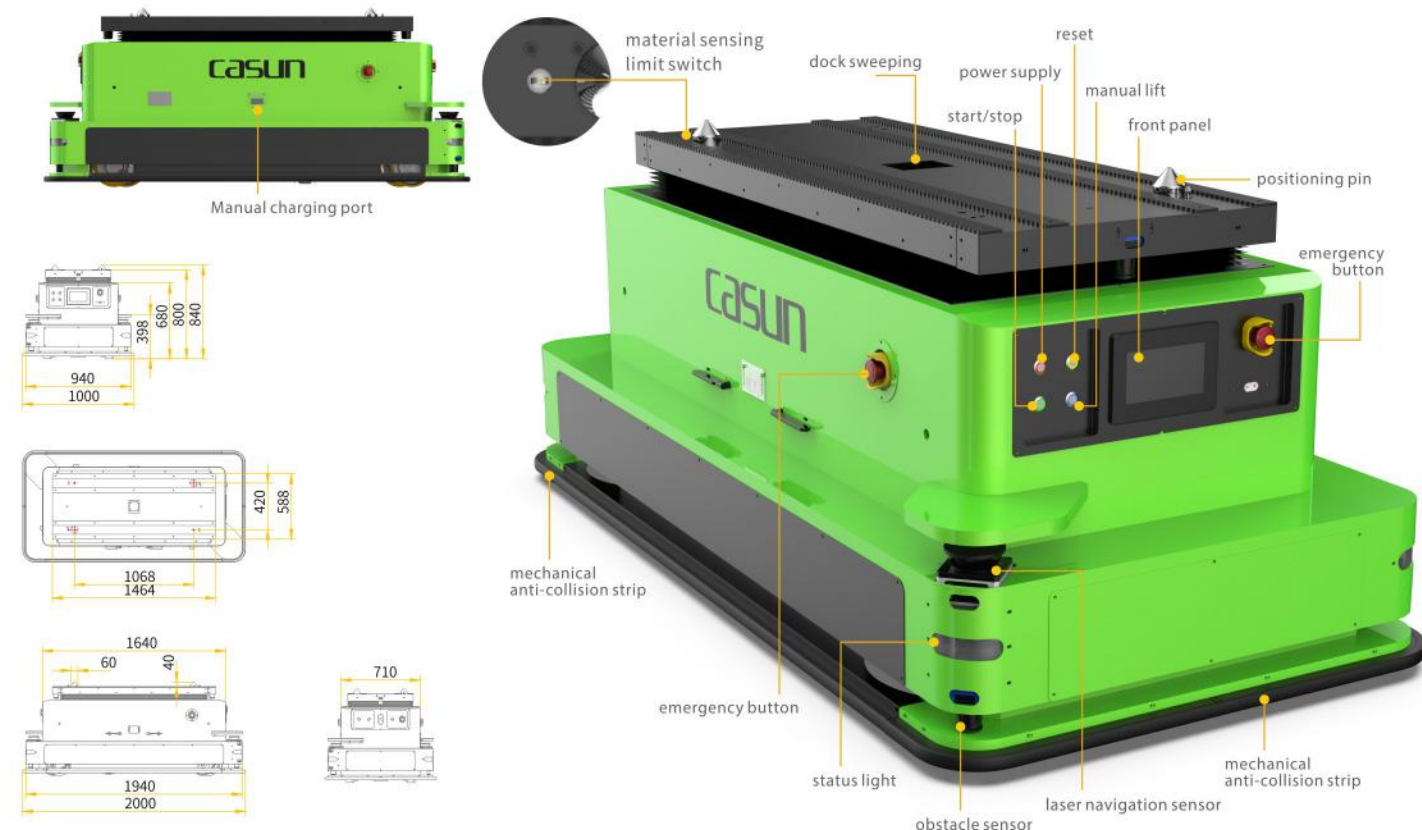
CASE

C2-37

New Energy Lithium Industry PACK line test transfer ▶

测试一　　　测试二　　　测试三

Product advantages

The lifting stroke can reach 248mm, which can be applied to various heights of work stations.

Omni-directional operation, 360-degree safety protection.

Flexible production, which can be adapted to battery packs of various specifications.

Application industries and scenarios

application industry

New energy lithium batteries, automobiles, auto parts, machinery manufacturing and other diversified industries;

application scenarios

PACK line, raw materials of production line, end-to-end transportation of parts and components, forming a flexible production line, etc.

Product introduction

performs precise positioning according to the scheduling task, and independently completes a series of operations of lifting, transporting and unloading. The navigation method is SLAM navigation, the load capacity is compatible with 1T, the lifting height is up to 248mm, and it can be applied to various height positions; it can detect low obstacles, and can perform two safety protections while lifting, which has a price competitive advantage.

Manual charging port

material sensing limit switch
dock sweeping
power supply
start/stop
reset
manual lift
front panel
positioning pin
emergency button

398　650
800
840
940
1000

420　588
1068
1464

1640
60　40
1940
2000

710

mechanical anti-collision strip

emergency button

status light

obstacle sensor

laser navigation sensor

mechanical anti-collision strip

Project case - Lithium battery PACK line project

Solution

It mainly realizes the material transferring between battery packs from assembly to testing to packaging, and its operation process is a circular assembly line. Through the CRMS mobile robot control system, the system realizes autonomous material calling, intelligent handling, information collection, and intelligent storage, and seamlessly connects with the user's production management system. The project uses AGV as a flexible distribution unit, which effectively solves the transportation problem compatible with hundreds of products of different models and specifications.

Difficulties of the project: This project mainly solves the function of the AGV carrying the PACK trolley to realize the lateral movement, reduces the space of the PACK material car running channel, and at the same time ensures that the orientation of the PACK trolley is consistent with the site; secondly, it solves the problem explained the technical difficulties of docking various peripheral equipment systems: such as MES docking of manual stations, test equipment, manipulators, safety grating docking of automatic stations, etc

Economic benefits

TQCM
Create a flexible production line and improve the flexibility of production scheduling

Reduce damage
Improve yield rate and accuracy rate: reduce material damage during handling, and reduce defect rate by 90%

Intelligent logistics
Realize the intelligentization of onsite logistics, realize the optimization of warehouse location, route and task allocation, and informatization of the whole process;

Digitalization &visualization
Accurately collect data such as material efficiency, frequency, utilization rate, etc., and analyze them to improve the process and increase efficiency.

CASE

C3 — Load and transferring mobile robot

Series introduction

The mobile robot of the piggyback transfer series can autonomously navigate to the docking body according to the scheduling task, and realize the fully automatic transfer of materials. This series is divided into single station and multi-station according to the number of product stations. The navigation method can choose QR code navigation, laser positioning navigation, and SLAM navigation. This series of mobile robots are widely used, compact in structure, flexible in operation and high in automation.
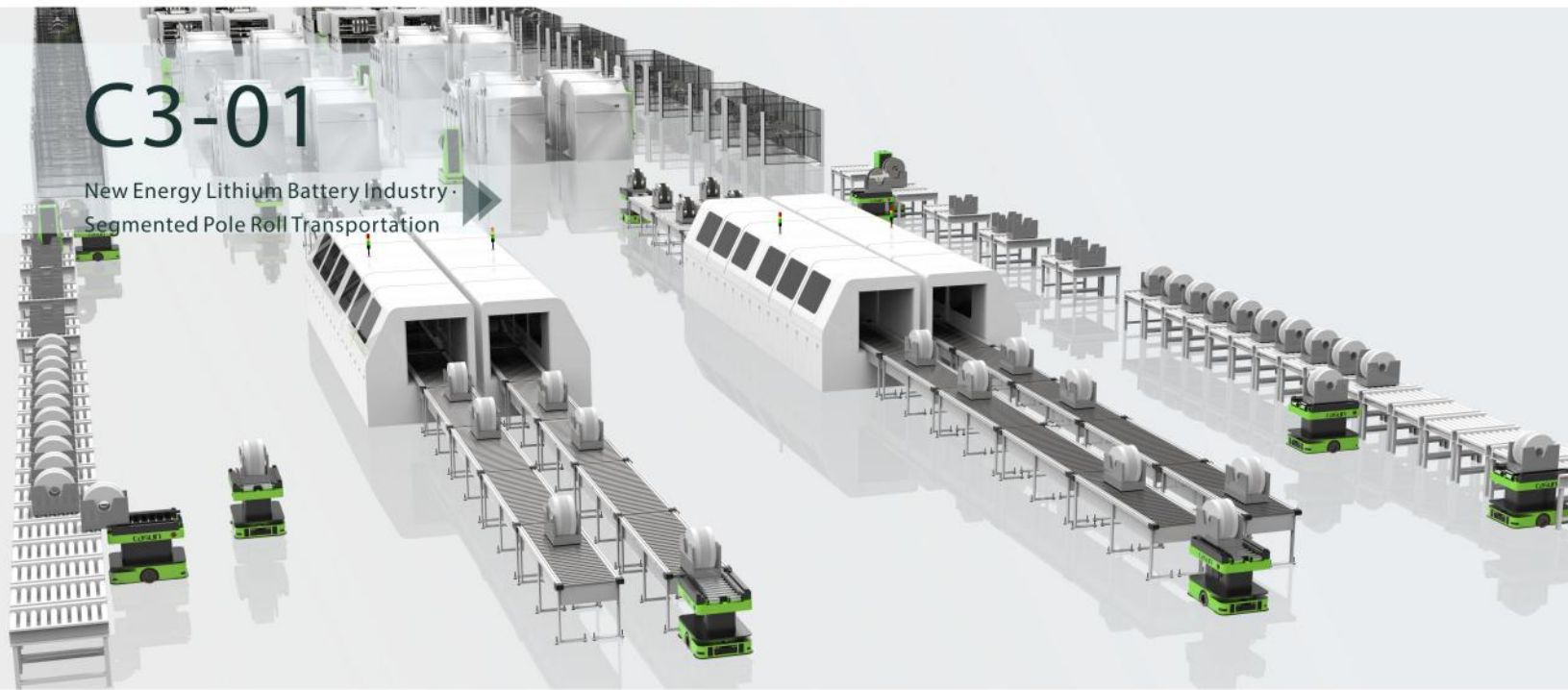
Application environment

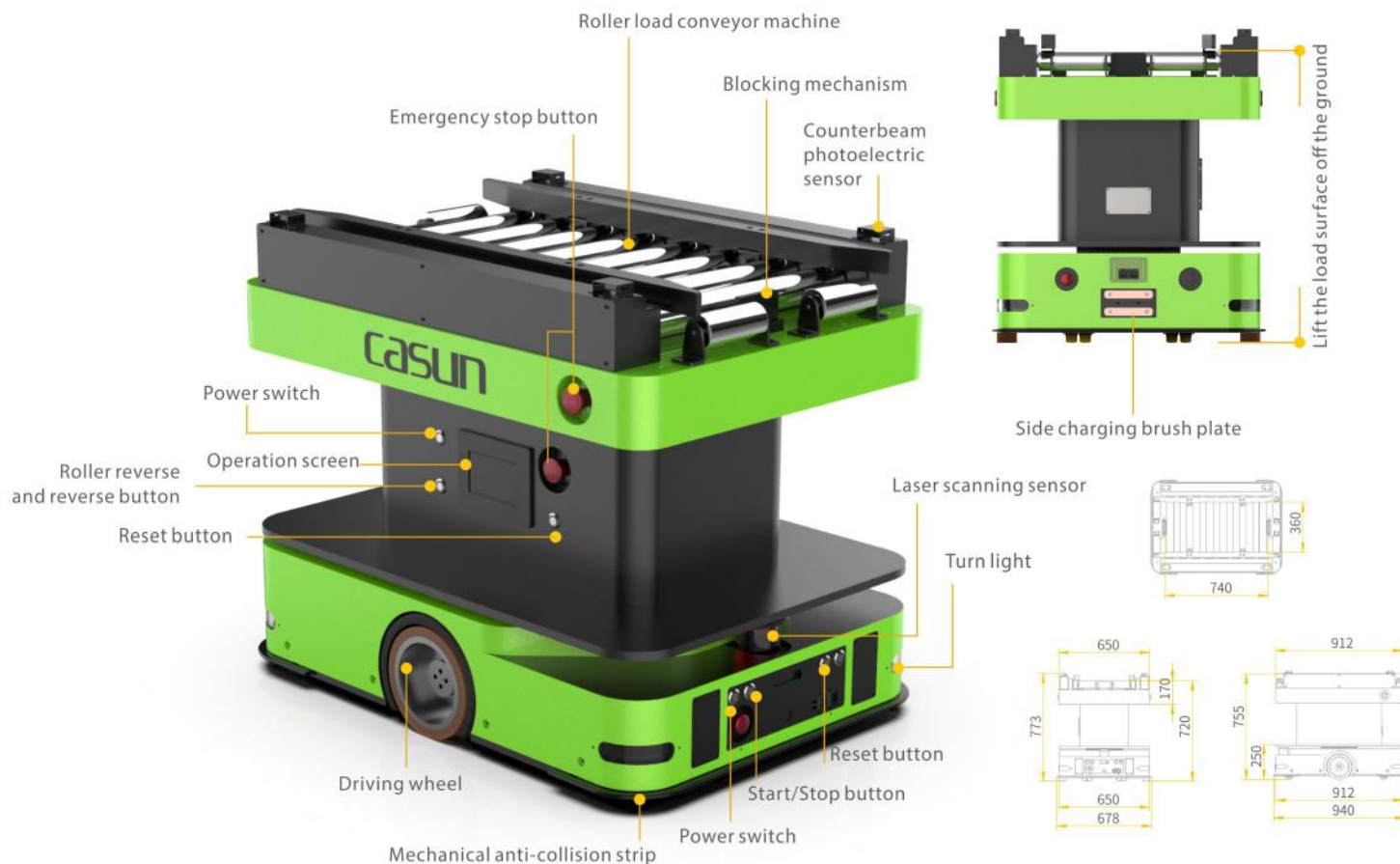-10℃ ~ 45℃; no dust, flammable, explosive and corrosive gases.

	Model	C3-01	C3-04	C3-05
Basic Parameters	Dimension	L940*W680*H755 (mm)	L1550*W950*H2150 (mm)	L1550*W950*H1500 (mm)
	Max loading capacity	100kg	300kg	300kg
	Vehicle weight	300kg	350kg	300kg
	Rotation diameter	1250mm	1725mm	1725mm
	Docking height	820mm	the lower layer is 450mm the upper layer is 1300mm	the lower layer is 450mm the upper layer is 1000mm
	Material supporting size	700*450mm	/	/
	Docking direction	Forward,Backward	backward	backward
	Material transfer mode	Roller	belt	belt
Navigation Performance	Navigation mode	QR/SLAM	SLAM	SLAM
	navigation accuracy	±10mm / ±15mm	±10mm	±10mm
	Stop accuracy	±5mm / ±10mm	±5mm	±5mm
	Stop Angle accuracy	±1°	±1°	±1°
Movement Performance	Traveling direction	Forward,Backward,Rotate	Forward, backward, rotate	Forward, backward, rotate
	Drive mode	Two-wheel differential drive	Two-wheel differential drive	Two-wheel differential drive
	Acceleration	0.5m/s^2	0.3m/s^2	0.3m/s^2
	Max running speed	1.5m/s	1.2m/s	1.2m/s
	Maximum climbing capacity	≤3°	≤3°	≤3°
Battery Performance	Battery type	Lithium battery	Lithium battery	Lithium battery
	Charging mode	Side charging	Side charging	Side charging
	Charging time	Charge time after full discharge: side charge ≤1H	Charge time after full discharge: side charge ≤1H	Charge time after full discharge: side charge ≤1H
	Rated endurance	4H	8H	8H
Network	Communciation mode	WiFi / 5G	WiFi / 5G	WiFi / 5G
Protective Performance	Safety warning	- Light warning - Voice broadcast	- Light warning - Voice broadcast	- Light warning - Voice broadcast
	Safe sensing range	≤3m adjustable	≤3m adjustable	≤3m adjustable
	Safety protection	-Front obstacle detection sensor -Mechanical anti-collision mechanism -Emergency stop switch	-Front and rear diagonal obstacle detection sensor 360° laser obstacle avoidance -Mechanical Anti-collision Structure; -Emergency Stop Switch	-Front and rear diagonal obstacle detection sensor 360° laser obstacle avoidance -Mechanical Anti-collision Structure; -Emergency Stop Switch

C3-01

New Energy Lithium Battery Industry - Segmented Pole Roll Transportation

Product advantages

Adopt the most advanced SLAM navigation technology;

It adopts double-layer drum design, matching with the double-layer drum line of the injection molding machine, and automatically completes the empty and full exchange;

The car body is flexible and the turning radius is small; it cooperates with the injection molding machine to realize the unmanned operation of the process;

Application industries and scenarios

application industry

New energy lithium battery, injection molding industry, 3C and semiconductor, LCD panel and other industries.

application scenarios

The process scene where the material of the material box type is docked by the roller

Product introduction

C3-01 is a roller-carrying mobile robot, which can use QR code navigation, laser positioning navigation, and SLAM navigation technology. Load capacity **is** 100kg. Double-layer workstations can realize fast interaction between empty and full materials. It can be widely used in new energy lithium battery, new energy photovoltaic, injection molding industry, 3C and semiconductor, flat panel display and other industries.

Roller load conveyor machine

Blocking mechanism

Emergency stop button

Counterbeam photoelectric sensor

Lift the load surface off the ground

Power switch

Operation screen

Roller reverse and reverse button

Reset button

Side charging brush plate

Laser scanning sensor

Turn light

Driving wheel

Start/Stop button

Power switch

Reset button

Mechanical anti-collision strip

360

740

650

170

773

720

650

678

755

912

250

912

940

Project case - 3C injection molding workshop project

Solution

19 injection molding machines transfer the injection molded parts between 4 assembly machines; through the CRMS mobile robot control system, autonomous ordering, intelligent handling, information collection, and intelligent storage are realized, and there is no connection with the user's production management system. Seam docking, unmanned operation throughout the process.

Difficulties of the project: This project mainly solves the technical difficulties in the docking of various peripheral equipment systems, such as transmission equipment, robotic arms, etc.; secondly, it accurately realizes the priority logic judgment of the operation of the mobile robot, according to the sequence of different stations In order, the CRMS system automatically selects and determines the most suitable transportation route.

Economic benefits

Realize unmanned

Build a black lamp factory, dock with injection molding machine robots and conveyor lines, and realize unmanned chemical factories.

Data interaction and sharing

Interaction with Party A's equipment and systems: CRMS system can be seamlessly connected with on-site automation equipment systems and customer systems to realize data transmission.

Intelligent logistics

Warehouse location storage information data, inbound and outbound tasks, and onsite inbound and outbound equipment (mechanical arms, stacking machines, manual warehousing operation terminals, etc.) are managed by the customer's WMS system to monitor the status of factory materials in real time.
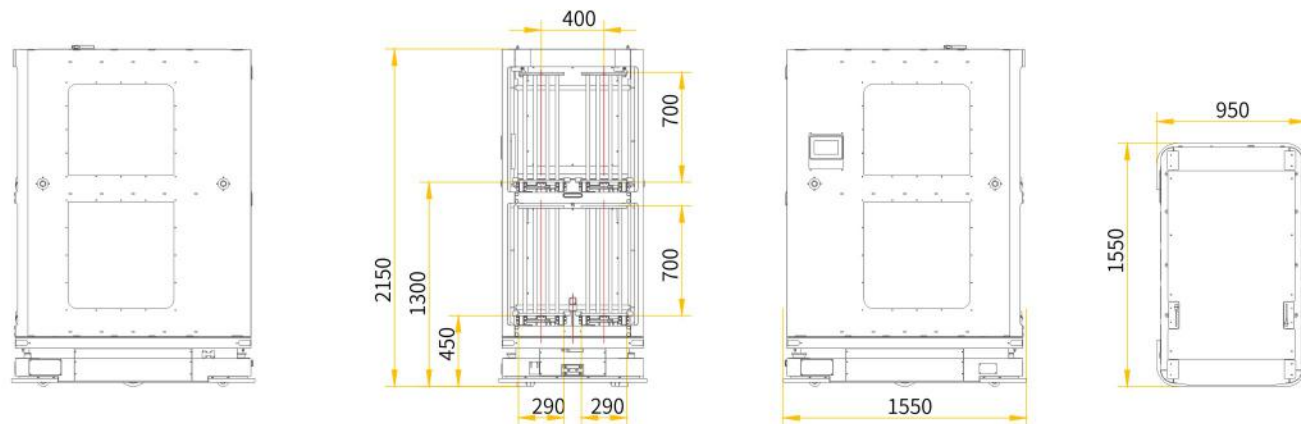
CASE

C3-04

The basket automatic loading and unloading ▶

Product advantages

Using advanced SLAM+ visual navigation technology;

Double-layer and double-track transmission, which can improve production efficiency;

Auto

Adopt type structure, 360°obstacle avoidance, and ensure production safety

Application industries and scenarios

application industry

Photovoltaic industry, 3C and semiconductor, LCD panel and other industries.

application scenarios

Process scenario of automatic loading and unloading and box type materials docking through the conveyor line

Product introduction

C3-04, mainly used in photovoltaic industry cell production workshop, the basket automatic loading and unloading.The navigation mode is SLAM navigation, the load capacity is 300kg, and the maximum speed is 1.2m/s.The working mode is that after receiving the system instruction, the AGV can automatically dock and transport the basket. The AGV basket structure designing has reserved the configuration space of wet basket operation, and can be designed and developed according to the technical requirements of wet basket (acid, alkali and pollution prevention).

400
700
700
2150
1300
450
290 290
1550
950
1550

viewing window
antennae

Operating interface component

Emergency stop button

Voice announcer

Front operating panel

Synchronous belt conveyor line

Synchronous belt conveyor line

Laser scanning sensor

Mechanical anti-collision strip

Obstacle sensor

status lamp

Manual charging port

Automatic charging port

C3-05

BIN box automatic loading and unloading

Product advantages
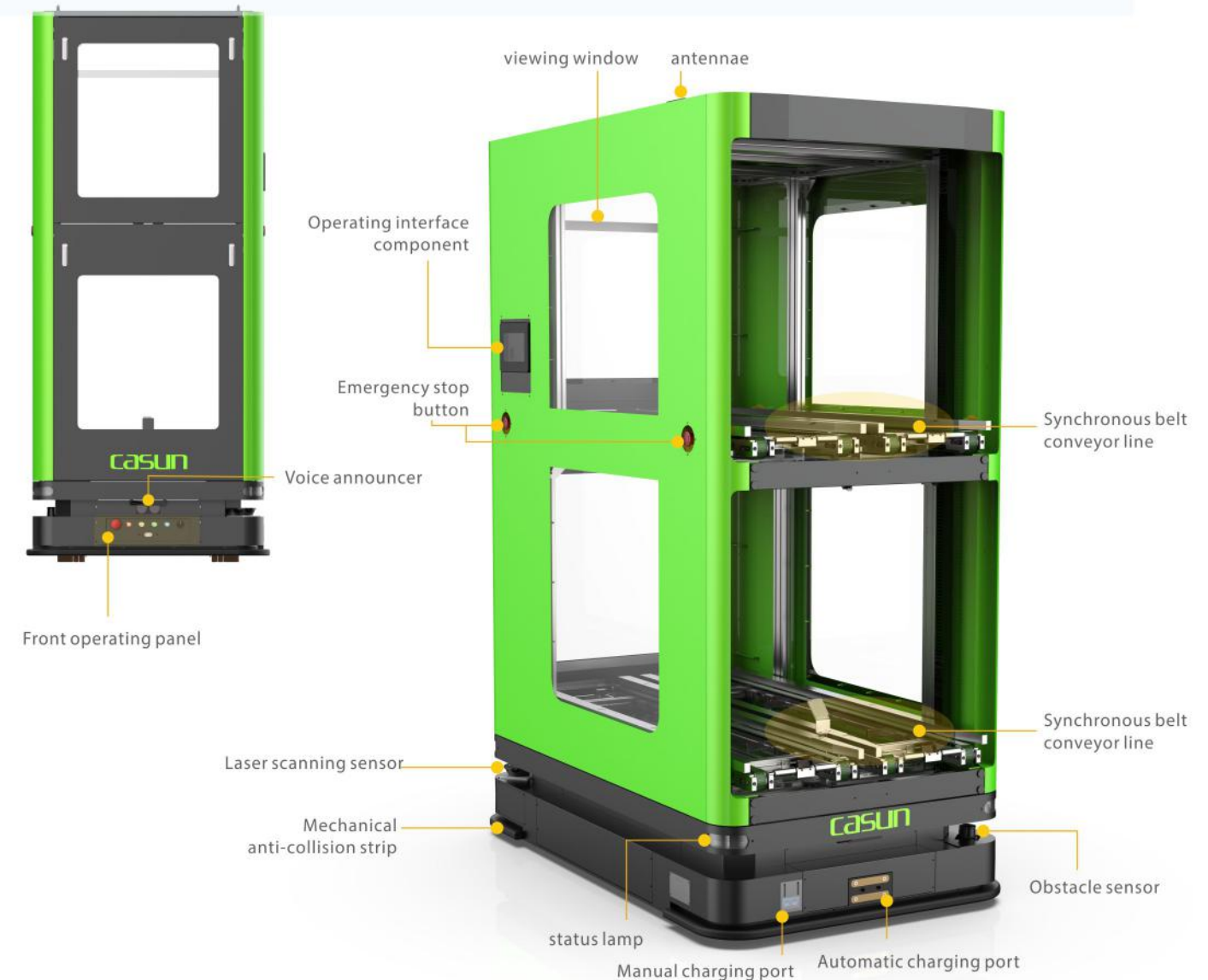
Using advanced SLAM+ visual navigation technology;

Double-layer and double-track transmission, which improve production efficiency;

Adopt type structure, 360°obstacle avoidance, and ensure production safety

Application industries and scenarios

application industry

Photovoltaic industry, 3C and semiconductor, LCD panel and other industries.

application scenarios

BIN box automatic loading and unloading process scenarios. Bin type Materials are docking through transport cables

Product introduction

C3-05, is mainly used for photovoltaic industry cell production workshop, BIN box automatic loading and unloading.The navigation mode is SLAM+ visual navigation, the loading capacity is 300kg, and the maximum speed is 1.2m/s.After receiving the system instruction, the AGV automatically interconnects and transports the BIN box.

1000（上层对接高度）
450（下层对接高度）
1500（车体总高）
400（中心距）
1550（车体总长）
950（车体总宽）

Operating interface component

Voice announcer

Viewing window   Antennae

Status lamp

Front operating panel

Synchronous belt conveyor line

Synchronous belt conveyor line

Laser scanning sensor

Obstacle sensor

Mechanical anti-collision strip

Automatic charging port

Manual charging port

C5 — Intelligent forklift mobile robot
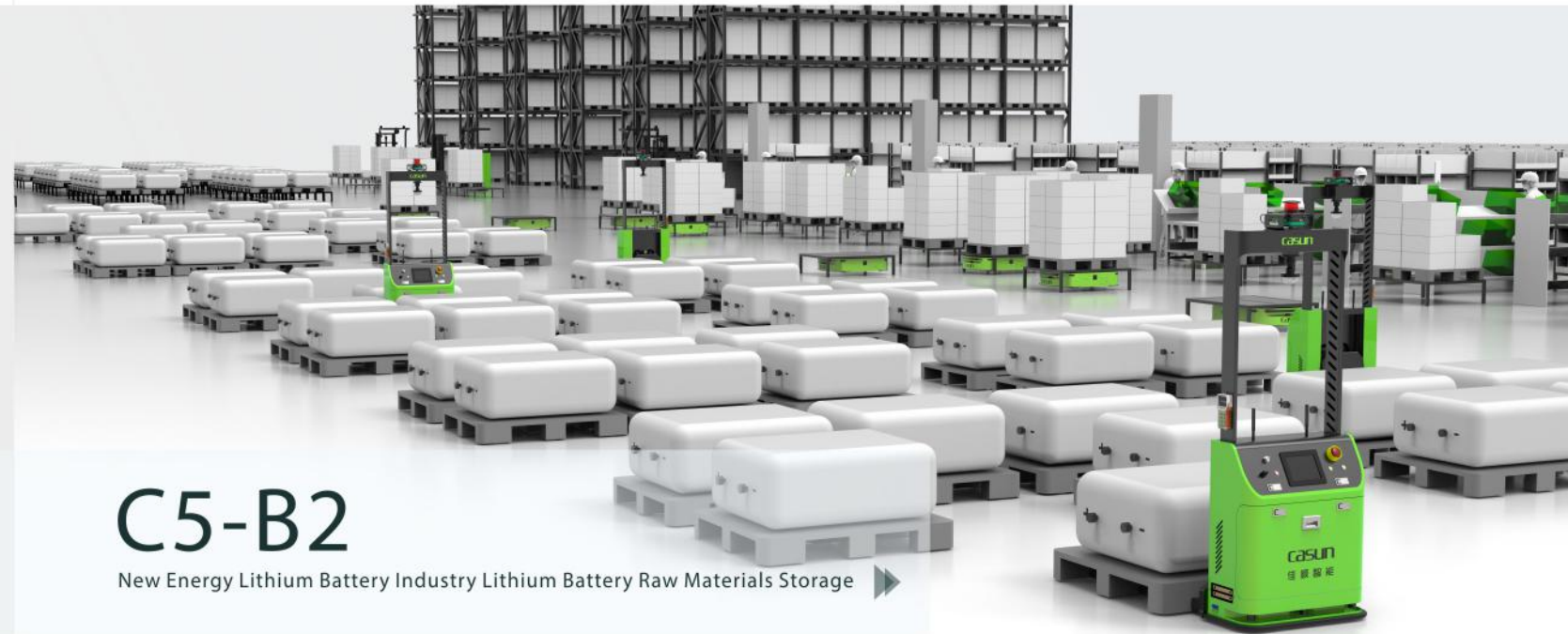
Series introduction

Intelligent forklift series mobile robots are divided into handling type and stacking type. The navigation method of the intelligent forklift series adopts laser positioning and navigation. This series of products has a high degree of intelligence and is widely used in many industries such as new energy lithium batteries, automobiles and parts, flat panel displays, food and beverage, 3C and semiconductors, household appliances, home textiles, etc. And new scenarios such as warehouse entry and exit, loading and unloading, and material transfer in logistics and circulation.

Application environment

-10℃ ~ 45℃; no dust, flammable, explosive and corrosive gases.

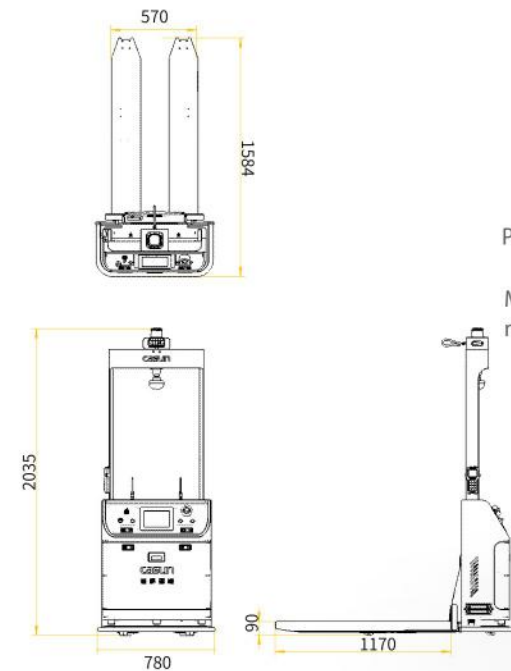|	Model	C5-B2 Handling Type	C5-B6 Handling Type	C5-D1 Stacking Type
Basic parameter	Dimension	L1585*W780*H2035 (mm)	L1120*W600*H788 (mm)	L1653*W856*H2295 (mm)
	Fork size	1170*188*55 (mm)	/	1150*188*55 (mm)
	Fork outside distance	570/680mm	/	570 / 680mm
	Max load capacity	1000kg	500kg	1000kg
	Truck weight (battery included)	400kg	392kg	600kg
	Turning raduis	1350mm	1500mm	1350mm
	Lifting height	120mm	120mm	1600mm
Applicable carrier	Pallet type	Two-way Entry	/	Two-way Entry
	Pallet size	1200*1000mm / 1100*1100mm	/	1200*1000mm / 1100*1100mm
Navigation performance	Navigate mode	Laser	Laser	Laser
	Navigation accuracy	±10mm	±10mm	±10mm
	Stop accuracy	±10mm	±10mm	±10mm
	Stop accuracy	±1°	±1°	±1°
Movement performance	Travelling direction	Forward,Backward,Rotate	Forward,Backward,Rotate	Forward,Backward,Rotate
	Drive mode	Single Steering Wheel Drive	Two-wheel differential drive	Single Steering Wheel Drive
	Acceleration	0.35 m/s²	0.5m/s²	0.35 m/s²
	Single wheel drive	1.2 m/s	1m/s	1.2 m/s
	Maximum climbing capacity	3° / 2°	≤3°	≤3°
Battery performance	Battery type	Lithium Battery	Lithium Battery	Lithium Battery
	Charging mode	Side Charging	Side Charging	Side Charging
	Charging time	≤1H After Full Discharge	1H	≤1H After Full Discharge
	Rated endurance	6H	8H	6H
Network	Communciation mode	WiFi / 5G	WiFi / 5G	WiFi / 5G
Protective performance	Safety warning	Light Warning;Voice Broadcast	Light Warning;Voice Broadcast	Light Warning;Voice Broadcast
	Safe sensing range	Adjustable when ≤3m	Adjustable when ≤3m	Adjustable when ≤3m
	Safety protection	-Front/Rear Obstacle Detection Sensors -Mechanical Anti-collision Structure -Emergency Stop Switch	-Front/Rear Obstacle Detection Sensors -Mechanical Anti-collision Structure -Emergency Stop Switch	-Front/Rear Obstacle Detection Sensors -Mechanical Anti-collision Structure -Emergency Stop Switch
	Fork protection	Mechanical Collision+Photoelectric Sensors	Mechanical Collision+Photoelectric Sensors	Mechanical Collision+Photoelectric Sensors

C5-B2

New Energy Lithium Battery Industry Lithium Battery Raw Materials Storage ▶

Product introduction

suitable for workshops with limited factory area and multiple production processes. The working method is that the AGV automatically picks up the bottom of the pallet after receiving the system command, and realizes end-to-end transfer by lifting and connecting the pallet. This model adopts laser navigation and positioning, and has been widely used in automobiles and parts, new energy lithium batteries, food and beverage, household appliances and other industries.

570
1584

2035
780
96
1170

Laser navigation sensor

Status Light

Emergency stop button

Operation screen

Power button

Manual/automatic switch

Start/Stop button

Reset button

Obstacle sensor

Mechanical anti-collision strip

Product advantages

The car body is small and exquisite, and can be carried in narrow passages;

When the turning radius is limited, it can turn 90 degrees and turn around 180 degrees in situ;

The minimum right-angle stacking channel width is 2m

Application industries and scenarios

application industry

Diversified industries such as new energy lithium batteries, automobiles and parts, machinery manufacturing, electronics, electrical appliances, and new energy.

application scenarios

Production line raw materials, parts transportation, etc.

Project case - Automobile air pipe production workshop and finished product warehousing project

Solution

Project features: Break through the barriers of information transmission, by connecting to the customer's ERP system, reading the feedback information of the line scanning code, according to the type of material, the intelligent dispatching robot will send the goods to the inspection free station and dock with the outdoor mobile robot, seamless relay. Or send it to the GP12 waiting area for manual sorting, and integrate the indoor and outdoor material transportation into one, realizing the unmanned transportation of materials across the factory from the production line to the outdoor warehouse.

Project features: Break through the barriers of information transmission, by connecting to the customer's ERP system, reading the feedback information of the line scanning code, according to the type of material, the intelligent dispatching robot will send the goods to the inspection free station and dock with the outdoor mobile robot, seamless relay. Or send it to the GP12 waiting area for manual sorting, and integrate the indoor and outdoor material transportation into one, realizing the unmanned transportation of materials across the factory from the production line to the outdoor warehouse.

Economic benefits

Improve efficiency

Improve the efficiency and accuracy of lineside transportation, so that materials can be accurately delivered to the corresponding buffer area.

High reliability

Improve the yield rate and accuracy rate: reduce material damage during handling, and increase the accuracy rate to 99%

Cross-factory transportation

The efficiency of cross-factory transshipment is improved, and the indoor arrival information can be transmitted to the outdoor mobile robot for connection at the first time, without waiting time wasted.
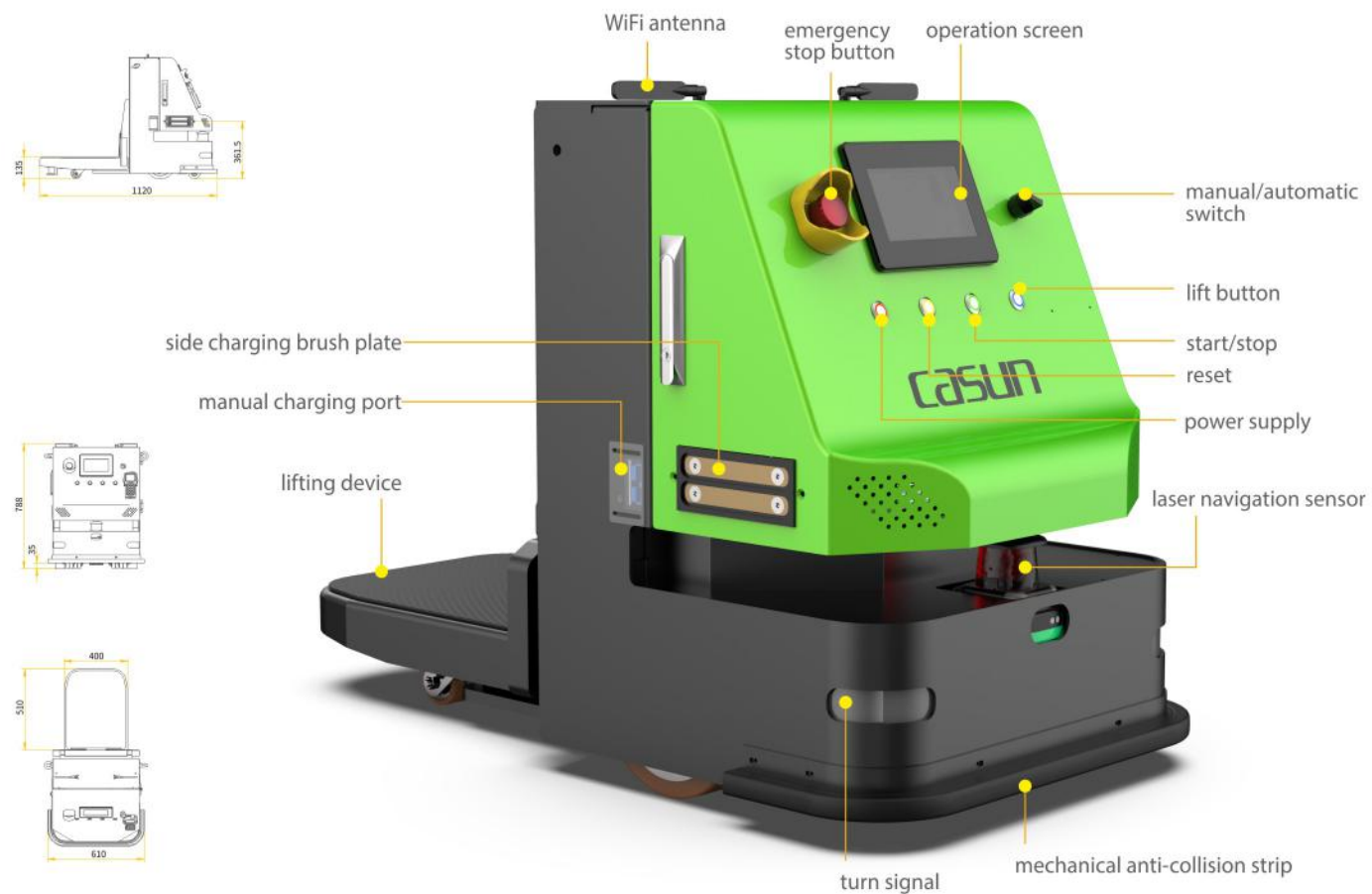
C5-B6
◀ Automobile and parts industry·Material transfer

Product advantages

The car body is flexible and can rotate 360°

The appearance is compact and can be applied in scenarios with small logistics channels

High delivery time and high cost performance

Application industries and scenarios

application industry

Auto parts industry, 3C and semiconductor industry

application scenarios

Applicable to the handling scene of small trucks

Product introduction

C5-B6 carries out precise positioning according to dispatching tasks, and independently completes a series of operations of lifting, transportation, and unloading. The navigation method is SLAM navigation + two-dimensional code assisted positioning, with a load capacity of 500Kg and a lifting stroke of 120mm. Available In new energy lithium batteries, automobiles and parts, flat panel display, food and beverage, 3C and semiconductor industries.

WiFi antenna
emergency stop button
operation screen
manual/automatic switch
lift button
start/stop
reset
power supply
laser navigation sensor
side charging brush plate
manual charging port
lifting device
turn signal
mechanical anti-collision strip

Project case - Auto parts project

Solution

This project uses C5-B6 intelligent forklift trucks to realize the distribution of raw materials from the warehouse of raw materials to the manual station of the production line, and the material distribution of small racks. Area, to meet the on-site narrow roadway transportation; realize the scene operation of material transportation. Realize intelligent planning of the optimal path: Relying on the AI algorithm, the AGV can independently judge the priority of the transportation task and formulate the optimal path.

Economic benefits

TQCM
Cost reduction and efficiency increasereplace manual handling and logistics distribution, reduce labor input and improve production efficiency;

Scene optimization
It can realize the problem of small rack handling, and it can realize rack handling in the environment with small space area;

Accurate positioning
Improve the positioning accuracy of transportation: the transportation accuracy rate is increased to 99%, which meets the peak demand of full production of the whole line;

Intelligent logistics
Realize the intelligentization of logistics in the factory: realize the interaction of multisystem docking information and the informatization of the whole process.

CASE
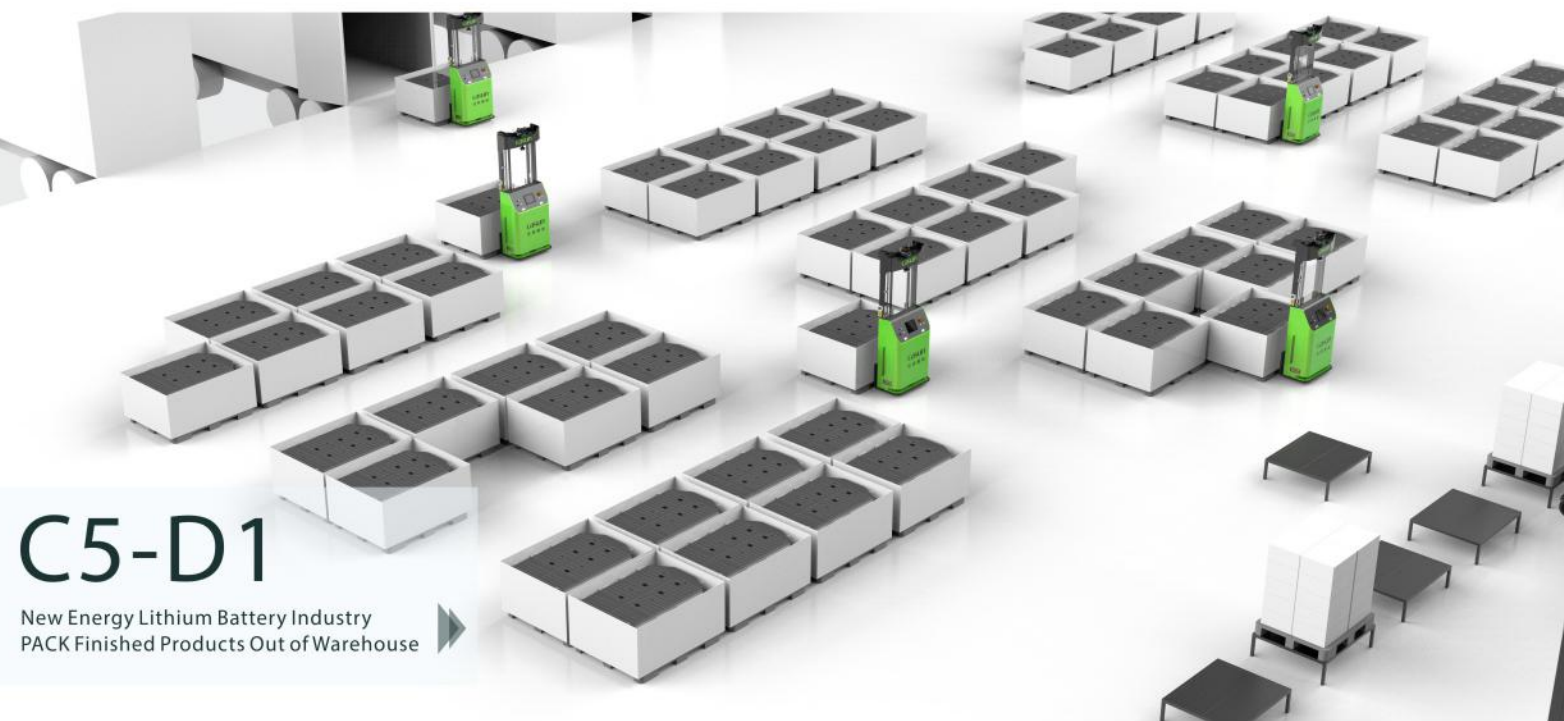
C5-D1

New Energy Lithium Battery Industry
PACK Finished Products Out of Warehouse

Product advantages

Stable product performance and high navigation accuracy;

The body design is compact, and the turning radius is only 1350mm, which is suitable for logistics handling in narrow lanes of various industries;

Flexible production to ensure smooth production lines;

Flexible production to ensure smooth production lines;

Application industries and scenarios

New energy lithium battery, 3C electronics, food, military industry, traditional manufacturing and other diversified enterprises.

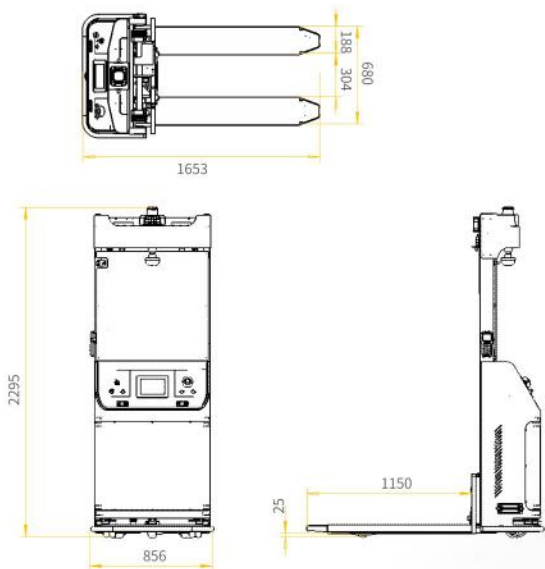Production line pallet material raw materials, parts end - storage ground/low shelf - multi-specification Chuan-shaped pallet handling on the side of the production line.

Product introduction

: C5-D1 mini stacking laser forklift has a load capacity of 1000KG, a running speed of up to 1.2m/s, and a lifting height of 1.6m; the extreme dimensions L1653*W856*H2295mm make it capable of The ability to operate in extremely narrow lanes requires a minimum width of 900mm for logistics channels (1200mm for ordinary forklifts), which greatly improves space utilization. At present, it has been widely used in diversified enterprises such as new energy lithium batteries, logistics and circulation, 3C and semiconductors, food and beverage, and traditional manufacturing.

188
304
690
1653

2295
1150
25
856

Laser navigation sensor

Status Light

Power button

Manual/ automatic switch

Emergency stop button

Operation screen

Obstacle sensor

casun
佳顺智能

Mechanical anti-collision strip

Project case - A lithium battery module product inbound and outbound transportation project

Solution

This project uses a C5-D1 intelligent forklift to automatically transport battery module products into and out of the warehouse. It can lift up to 1.6m and meet the on-site narrow roadway transportation.

Economic benefits

Reduce costs

reduce equipment and manpower input costs;

High reliability

improve the timeliness of material transportation, and the transportation accuracy rate is increased to 99%, which can meet the peak demand of full production of the whole line;

High safety

improves the safety of product transportation and ensures the product yield;

Logistics intelligence

realizes the intelligentization and automation of the entire production process, monitoring and tracking of the whole process from product offline - storage - delivery, production data statistics, and report generation.

CAse

— Mobile robot for new energy
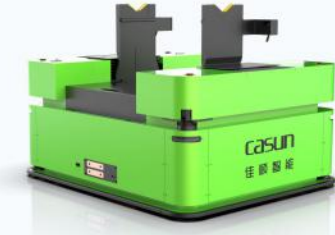
CCM

Series introduction

The CCM series is a mobile robot customized for the industry. It is a new model customized and developed according to the actual needs of the new energy lithium battery project, with flexible applications. At present, special-purpose robots for new energy include: double-fork lifting mobile robots, single-fork lifting mobile robots and single-cantilever mobile robots, which are mainly used to complete the handling and loading and unloading of pole coils, which can meet the high-precision docking of the lithium battery industry. MES system docking, multiple safety protection, production requirements for strict environmental cleanliness.

Application environment
-10°C ~ 45°C; no dust, flammable, explosive and corrosive gases.

| 产品型号		CCM-51 Double fork lifting AGV	CCM-52 Single fork lifting AGV
Basic Parameters	Dimensions	L1800*W1800*H1800(mm)	L1800*W1500*H1200mm
	Maximum Load	1800kg	1800kg
	Rotation Diameter	2435mm	2220mm
	Docking Height	1800±50mm	1300~1800mm
Navigation Performance	Navigation Method	Laser Slam/QR code	Laser Slam/QR code
	Navigation Accuracy	±10mm	±10mm
	Stop Accuracy	±5mm	±3mm
	Docking Accuracy	±1mm	±2mm
Athletic Performance	Moving Direction	Forward,Backward,Turn,Rotate,Transverse Moving	Forward,Backward,Turn,Rotate,Transverse Moving
	Drive Mode	teering Wheel Drive	teering Wheel Drive
	Maximum Moving Speed	1.0 m/s	1.0 m/s
Battery Performance	Battery Type	Lithium Battery	Lithium Battery
	Charging Method	Side Charging	Side Charging
	Charging Time	≤1.5H After Full Discharge	≤1H After Full Discharge
	Rated Endurance	6H	6H
Network Performance	Communication Method	WiFi / 5G	WiFi / 5G
Protection Performance	Safety Alert	Light Warning;Voice Broadcast	Light Warning;Voice Broadcast
	Safety Sensing Range	Adjustable when ≤3m	Adjustable when ≤3m
	Security	5 Obstacle Detection Sensors; Mechanical Anti-collision Structure; Emergency Stop Switch	4 Obstacle Detection Sensors; Mechanical Anti-collision Structure; Emergency Stop Switch

CCM-51

New Energy Lithium Battery Industry
Coil material transport in cell workshop

Product advantages

(A) The navigation mode is optional: SLAM navigation or QR code navigation;

⇄ Automatic docking with the line equipment to realize the process of unmanned operation;

Double fork design is adopted to complete the empty and full exchange, improve work efficiency and reduce the waiting time of equipment downtime;

High precision control, the docking accuracy with the equipment is ±1mm.

Application industries and scenarios

New energy lithium industry; Coil material transport in cell workshop

Product introduction

CCM-51 is a double-fork lifting AGV. Its working mode is: one pair of forks are placed with a full roll of material, and the other pair of forks are placed with an empty reel. The two states are operated alternately at the same interface to realize automatic loading and unloading of materials.

At present, the most widely used in the new energy lithium industry cell production workshop of the front section of the process, for foil and uncut pole roll handling.

Material Specification
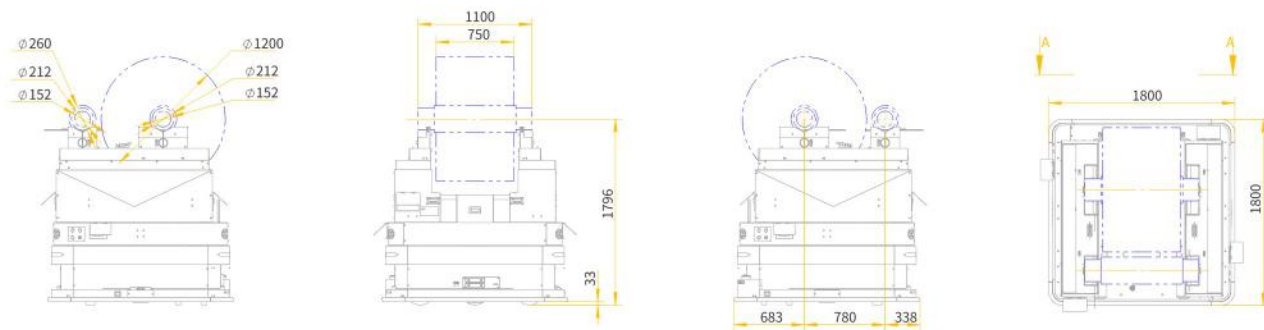
Drum	Drum inner diameter	Drum outer diameter	Drum length	Drum diameter	Weight
Empty drum	152mm	212mm	1100mm	/	/
Full drum	152mm	212mm	1100mm	≤1200mm	≤1800KG

Laser distance sensor

Laser sensor

Slow reflected photoelectricity

Mirror reflected photoelectricity

Display screen

Force control instrument

Emergency stop button (one in each corner)

Obstacle sensor

Mechanical anti-collision strip

Automatic charging port

Laser scanner

Operation panel

Touch screen

Obstacle sensor (4 in total)

CCM-52

New Energy Lithium Battery Industry
Coil material transport in cell workshop

Product advantages

(A) The navigation mode is optional: SLAM navigation or QR code navigation;

Automatic docking with the line equipment to realize the process of unmanned operation;

High precision control, the docking accuracy with the equipment is ±2mm.

Application industries and scenarios

New energy lithium industry; Coil material transport in cell workshop

Product introduction

CCM-52 is a single-fork lifting AGV. Its working mode is as follows: the AGV carries a full roll of material or an empty reel for automatic docking with the connection port to realize automatic loading and unloading of materials.

At present, the most widely used in the new energy lithium industry cell production workshop of the front section of the process, for foil and uncut pole roll handling.

Material Specification

Drum	Drum inner diameter	Drum outer diameter	Drum length	Drum diameter	Weight
Suitable coiling	152mm	200mm	1100mm	≤1200mm	≤1800KG

Mirror reflected photoelectricity

Laser diffuse reflection photoelectric

Touch screen

Operation panel

Emergency Push Button (4 units)

Mirror reflected photoelectricity

Obstacle sensing device

Manual charging port

Automatic charging port

Laser scanner

Bumper strip

CCS Charging Station Series

📋 系列介绍

CCS charging station series, composed of charger, control unit, display unit, telescopic electrode, etc., with voltage and current over voltage overload protection mechanism, charging speed, high safety performance. This series is divided into: side charge, ground charge, impact charge, wireless charge,

Charging mode	side charge
Model	CCS-11
Dimension	L600xW380xH1000(mm)

Voltage	Power
24V	1500W—5000W
48V	1500W—5000W

Charging mode	ground charge
Model	CCS-21
Dimension	L600xW380xH1000(mm)

Voltage	Power
24V	1500W—5000W
48V	1500W—5000W

Charging mode	side charge
Model	CCS-12
Dimension	L669*W488*H1018 (mm)

Voltage	Power
24V	4000W—6000W
48V	2500W—6000W

Charging mode	impact charge
Model	CCS-31
Dimension	L490*W385*H355 (mm)

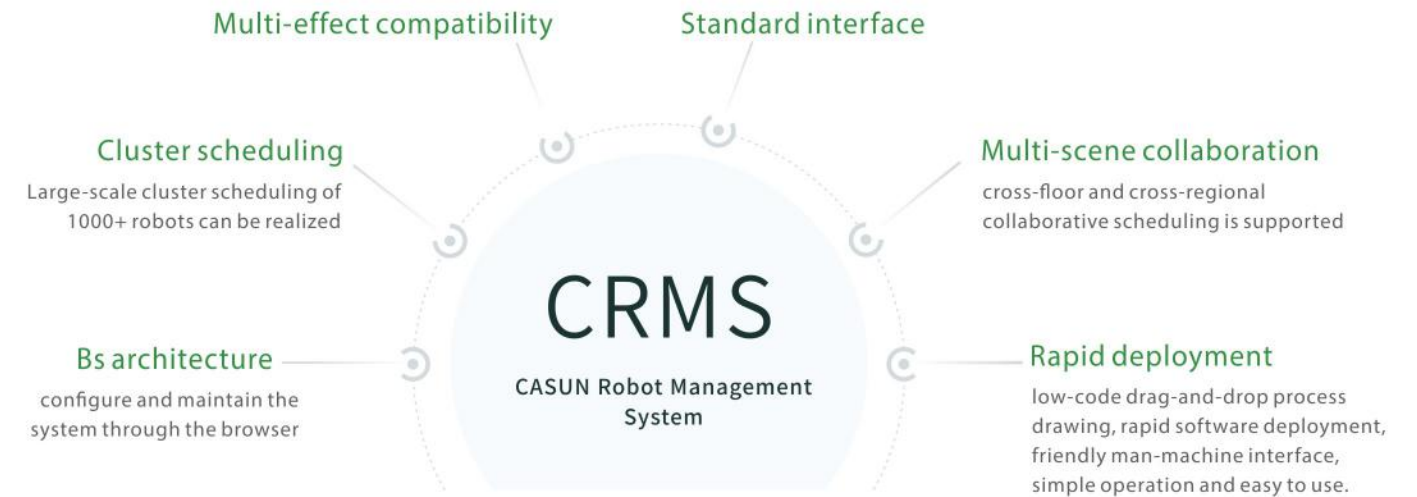| Voltage	Power
24V	1500W—5000W
48V	1500W—5000W

CASUN
Mobile Robot Control System

System Introduction

The mobile robot control system mainly deals with the task assignment, path planning, traffic control and state monitoring of robot cluster, and completes data collection through the sensing module carried by mobile robot, so as to analyze and make decisions on production efficiency. At the same time, it provides open standard API, which is easy for customers' business systems to develop and call, and provides a solid guarantee for customers to introduce large-scale mobile robots in intelligent warehousing and intelligent factory scenarios.
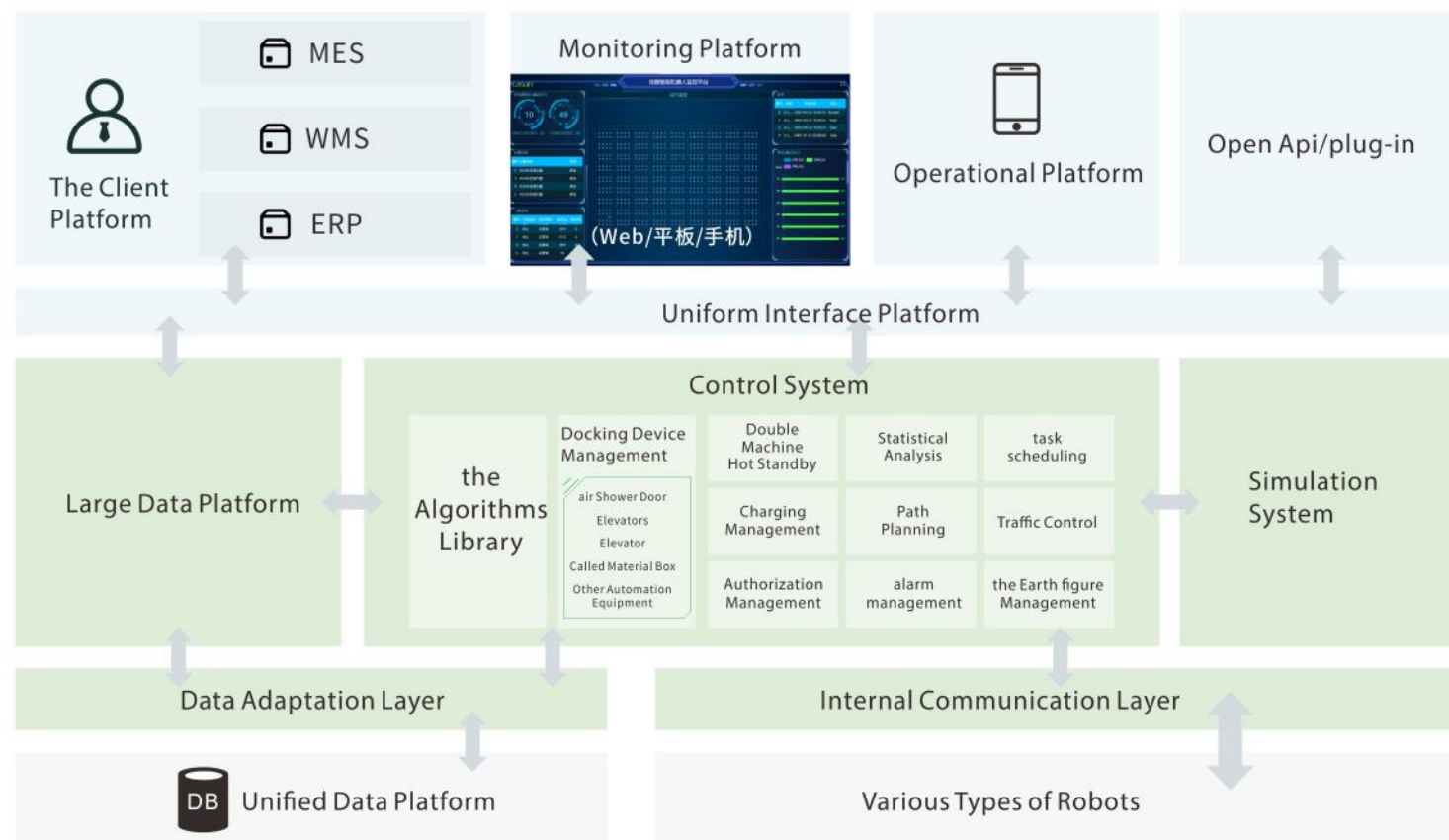
System Feature

Multi-effect compatibility
support the coexistence of combined traffic control with other AGV manufacturers and multiple navigation modes

Standard interface
Provide standard interface for customized development and support docking with elevators, elevators and other customer automation equipment

Cluster scheduling
Large-scale cluster scheduling of 1000+ robots can be realized

Multi-scene collaboration
cross-floor and cross-regional collaborative scheduling is supported

CRMS
CASUN Robot Management System

Bs architecture
configure and maintain the system through the browser

Rapid deployment
low-code drag-and-drop process drawing, rapid software deployment, friendly man-machine interface, simple operation and easy to use.

System Structure

- The Client Platform
  - MES
  - WMS
  - ERP
- Monitoring Platform (Web/平板/手机)
- Operational Platform
- Open Api/plug-in

Uniform Interface Platform

- Large Data Platform
- the Algorithms Library
- Control System
  - Docking Device Management
    - air Shower Door
    - Elevators
    - Elevator
    - Called Material Box
    - Other Automation Equipment
  - Double Machine Hot Standby
  - Statistical Analysis
  - task scheduling
  - Charging Management
  - Path Planning
  - Traffic Control
  - Authorization Management
  - alarm management
  - the Earth figure Management
- Simulation System

- Data Adaptation Layer
- Internal Communication Layer

- DB Unified Data Platform
- Various Types of Robots

System Interface

Elevator Configuration Interface

Remote Monitoring Platform

Map Editing Interface

Intelligent Warehouse ManagementSystem

System Introduction

Intelligent warehouse location management system has the characteristics of flexibility and expansion. Through the effective integration of warehousing functions and mobile robot logistics and transportation links, it provides the overall solution of warehousing management based on intelligent logistics.
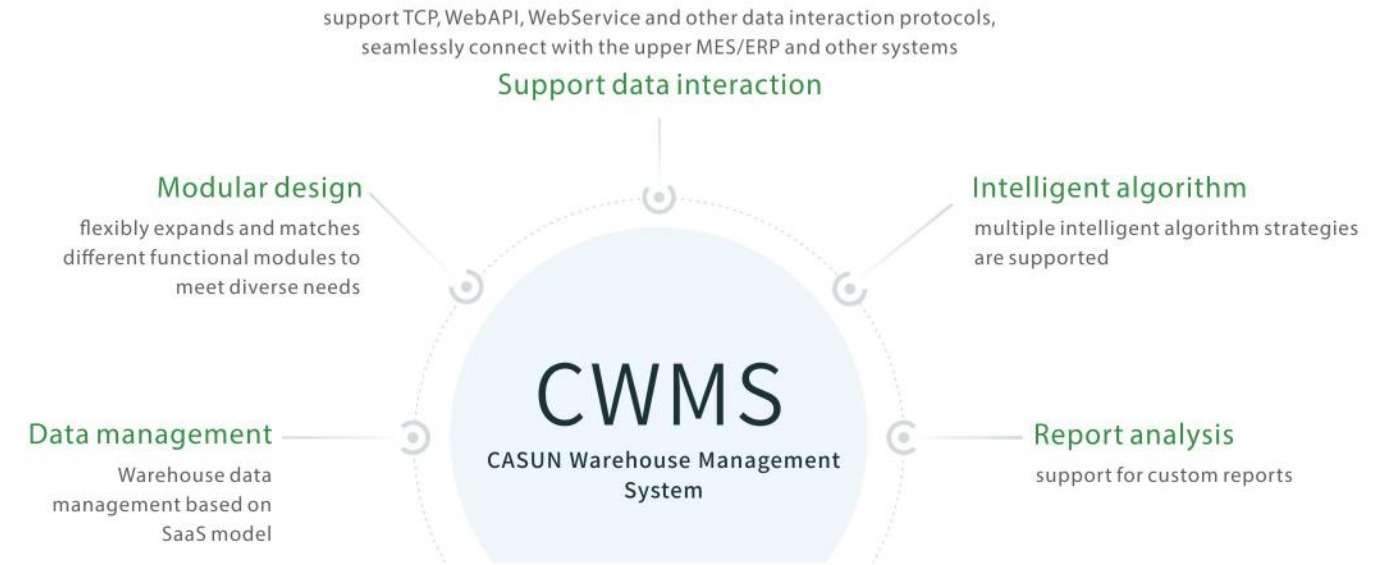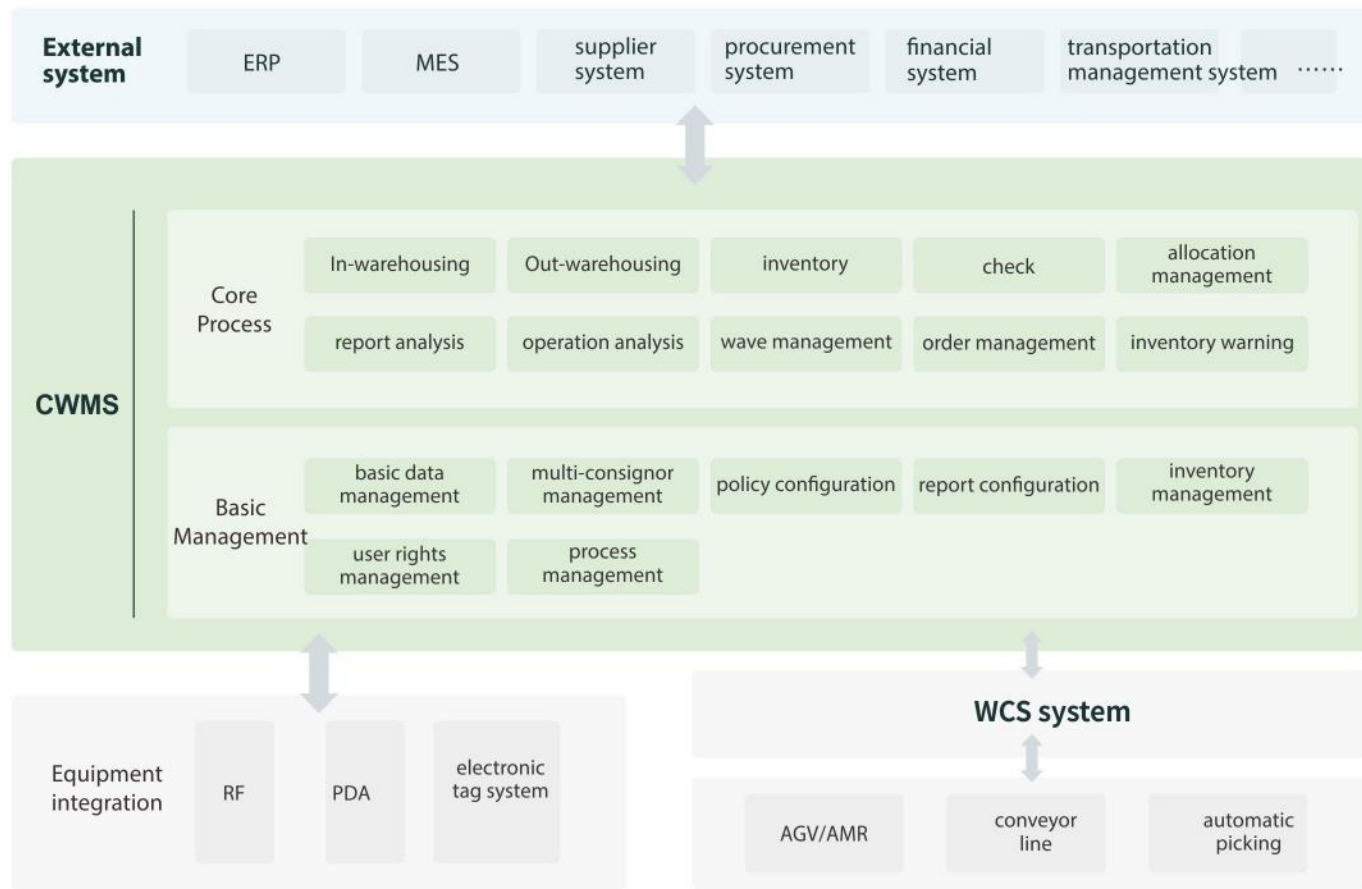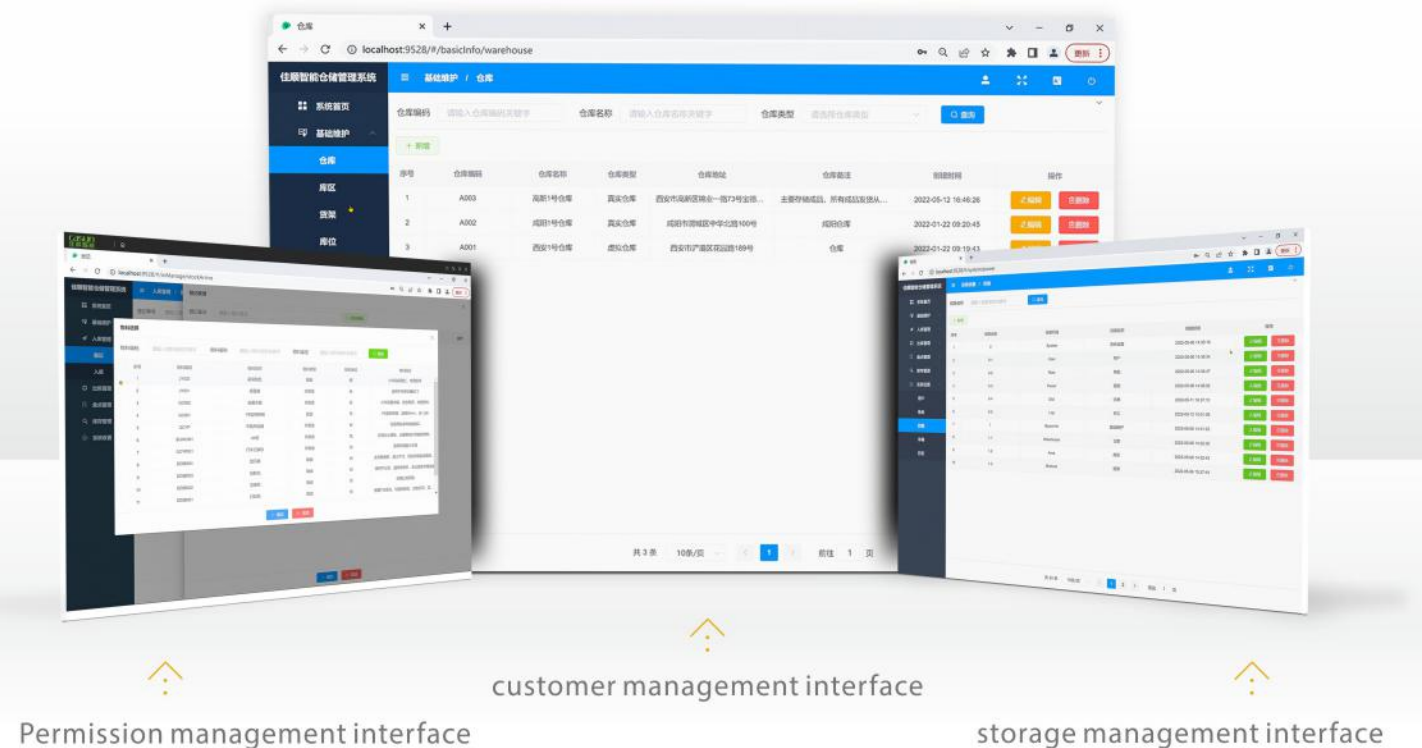
System Feature

support TCP, WebAPI, WebService and other data interaction protocols, seamlessly connect with the upper MES/ERP and other systems

Support data interaction

Modular design
flexibly expands and matches different functional modules to meet diverse needs

Intelligent algorithm
multiple intelligent algorithm strategies are supported

CWMS
CASUN Warehouse Management System

Data management
Warehouse data management based on SaaS model

Report analysis
support for custom reports

System Structure

External system	ERP	MES	supplier system	procurement system	financial system	transportation management system	······

CWMS

Core Process

In-warehousing	Out-warehousing	inventory	check	allocation management
report analysis	operation analysis	wave management	order management	inventory warning

Basic Management

basic data management	multi-consignor management	policy configuration	report configuration	inventory management
user rights management	process management			

Equipment integration	RF	PDA	electronic tag system

WCS system

AGV/AMR	conveyor line	automatic picking

System Interface

Permission management interface

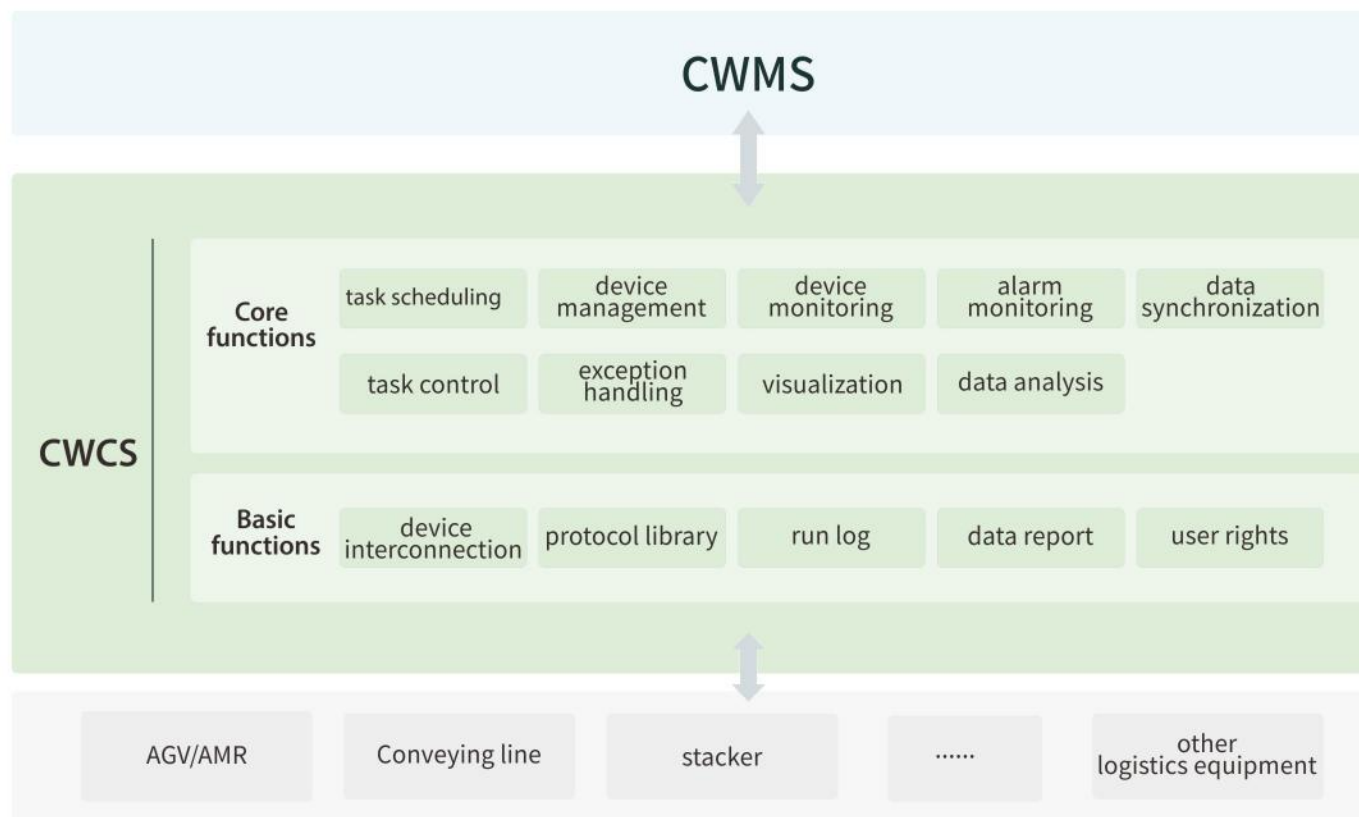customer management interface

storage management interface

Intelligent Warehouse Equipment Control System

System Introduction

Intelligent storage equipment control system is a management control system connecting WMS and intelligent hardware (AGV, conveyor, RFID equipment, etc.). The tasks of the upper layer are decomposed into dispatching instructions and sent to each automatic equipment. Meanwhile, the warehouse operating environment and equipment running status are monitored, and equipment abnormalities are timely warned. Finally, the unified monitoring and scheduling of various automatic equipment in storage is realized, and the automation efficiency is improved.
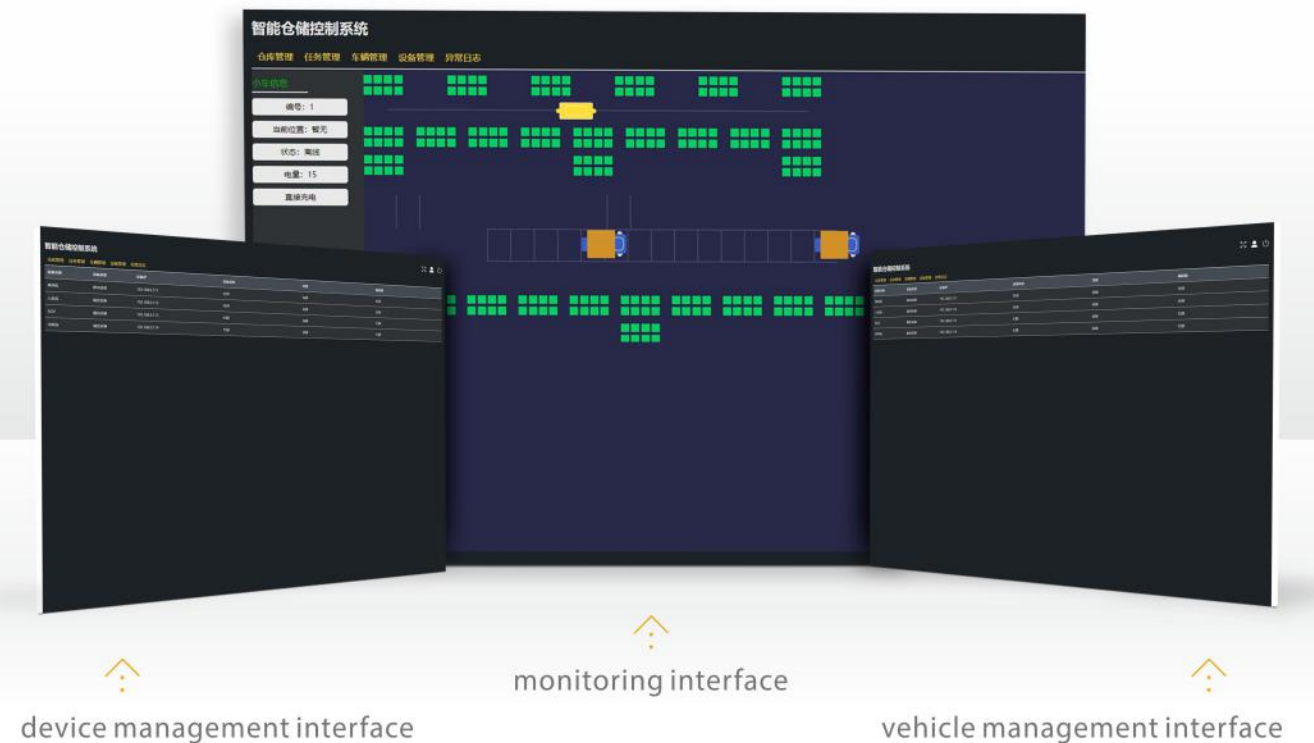
System Feature

Support mainstream industrial agreements

Real-time monitoring
Complete statistics and detailed report output

CWCS
CASUN Warehouse Control System

Modular design
Modular design and easy to expand

Secondary development
Provide a complete SDK for customers' secondary development

System Structure

CWMS

CWCS

Core functions

task scheduling	device management	device monitoring	alarm monitoring	data synchronization
task control	exception handling	visualization	data analysis	

Basic functions

device interconnection	protocol library	run log	data report	user rights

AGV/AMR	Conveying line	stacker	......	other logistics equipment

System Interface

device management interface

monitoring interface

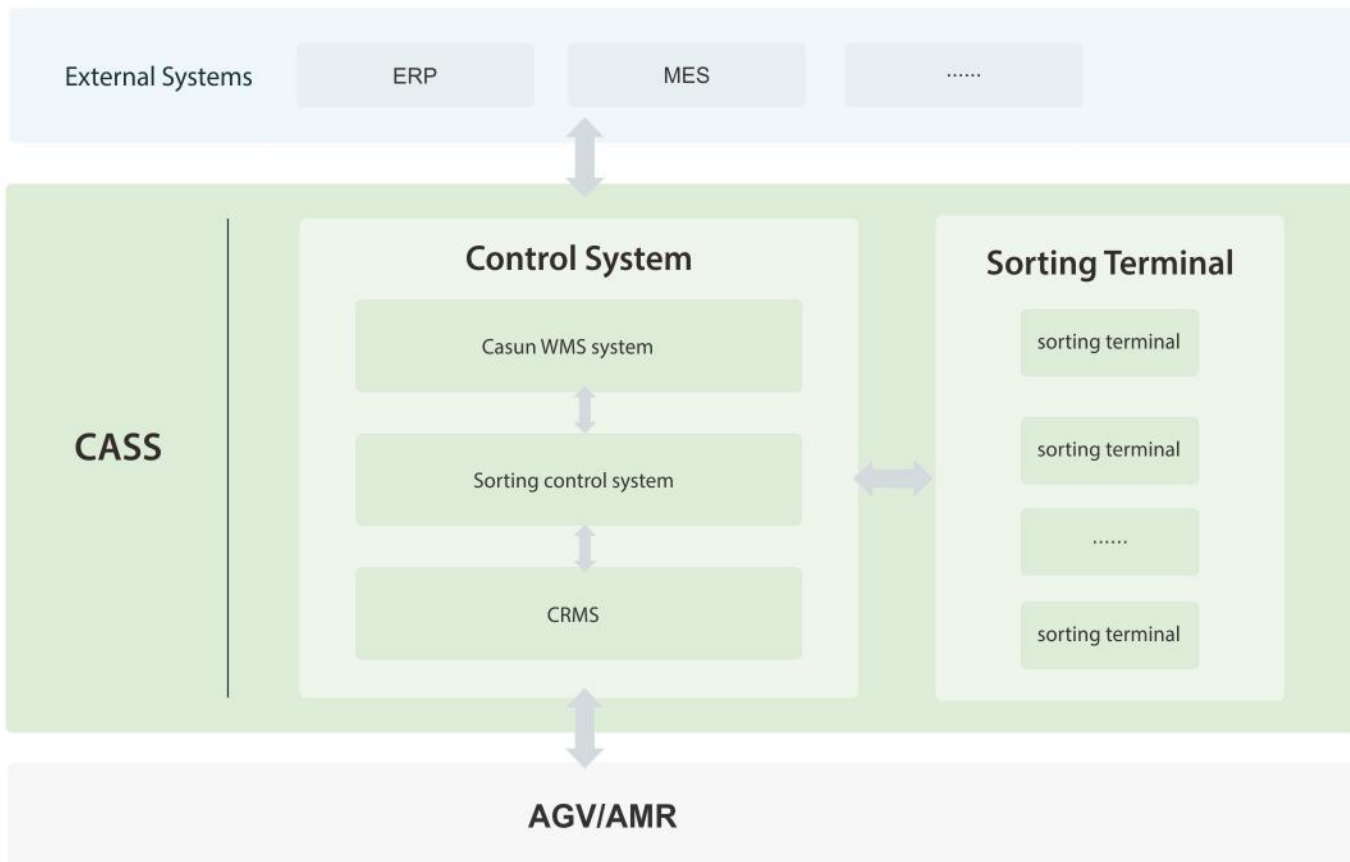vehicle management interface

CASUN
Intelligent Warehouse Sorting System

System Introduction

Intelligent warehouse sorting system is a comprehensive solution system for intelligent logistics sorting scenarios. The system combines the AGV control function of management, WCS, WMS basic function, at the same time in intelligent sorting scene have special sorting control system of AGV data through WCS system and WMS data after fusion depth, the prediction of the task and sequence of sorting and evaluation and reasonable dispatching sorting task, implement efficient sorting. It is especially suitable for express e-commerce, warehousing and distribution centers or transport centers in logistics and circulation industry

System Feature

Dynamic prediction
dynamic prediction of sorting tasks

Friendly interactive
an interactive and friendly operation terminal

CASS
CASUN Automatic Sorting System

Intelligent scheduling
multiple scheduling algorithms support different sorting scenarios

Store-site heat management
store-site heat statistics and management

System Structure

External Systems | ERP | MES | ......

CASS

Control System
- Casun WMS system
- Sorting control system
- CRMS

Sorting Terminal
- sorting terminal
- sorting terminal
- ......
- sorting terminal

AGV/AMR

System Interface

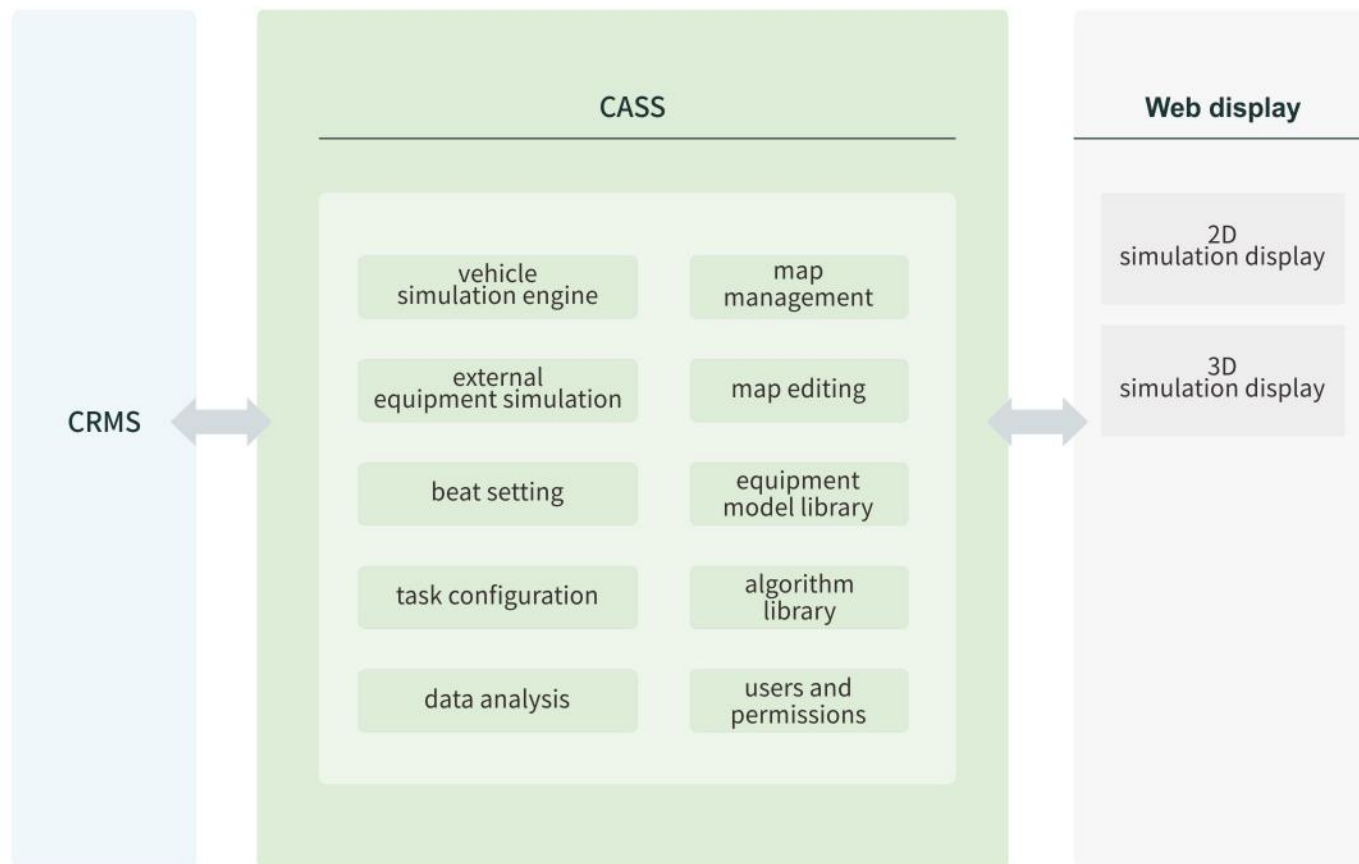function selection interface

monitoring interface

login interface

CASUN
Digital Simulation System

System Introduction

Casun's digital simulation system can achieve 1:1 simulation of robots. It can not only realize synchronous simulation of robots in real scenes through digital twin technology, but also complete validity verification of the scheme and assist project decision-making through simulation tools of the system in the scheme design stage

System Feature

Multi-scene application
fine-grained simulation control parameters can adapt to the simulation requirements of various scenarios

Support 2D and 3D simulation

CDSS
CASUN Digital Simulation System

Rich simulation configuration tools

Real-time data transmission
efficient and timely data collection, transmission and analysis, and decision support for the status and expectation of production and operation

System Structure

CRMS

CASS

vehicle simulation engine	map management
external equipment simulation	map editing
beat setting	equipment model library
task configuration	algorithm library
data analysis	users and permissions

Web display

2D simulation display

3D simulation display

System Interface

simulation effect display setting

monitoring interface

mobile robot configuration

NEW ENERGY LITHIUM BATTERY

Requirement points

Industry Overview

With the rapid growth of the output of new energy electric vehicles, China's lithium battery industry continues to maintain a rapid growth trend, and the industry innovation is accelerating. At the same time, lithium battery manufacturing process from automation to intelligent high-speed transformation. Industrial mobile robot AGV/AMR has been introduced on a large scale to replace the traditional process in the front, middle and rear stages of the process, improve the flexibility and efficiency of the production line, stabilize the quality and delivery time, and form a data closed loop for process tracking.

Industry trends

01
New energy vehicles, low carbon environmental protection requirements and energy crisis push up the development progress of lithium electric industry

02
The policies for Industry investment and financing are loose, and leading enterprises lead the expansion and expansion strategy

03
The popularization of the concept of de-artificialization in logistics operation links and the strong demand for flexible manufacturing

04
The mature application of mobile robots in the early, middle and late stages promotes the development of industry standardization

Partenr

CATL 宁德时代 | BYD | CALB | SVOLT 蜂巢能源 | 国轩高科 GOTION HIGH-TECH | ARASIS 孚能科技 | BAK

Transfer and dock the foil

Pole roll after cutting

Segmented coil transportation

Smart logistics solution

Solution advantage

Improve space utilization rate
the space is small, and the introduction of AGV/AMR flexible line can replace the traditional large conveying line

Flexibility
AGV/AMR can complete route and process changes by changing procedures.

High fault tolerance
AGV/AMR has the function of mixed-line transportation

Fast fault recovery
When AGV/AMR fails, they can be restored manually or automatically.

Economic benefits

Reduce manpower input **20%**

Improve production turnover efficiency **20%**

Investment recovery cycle **1.5-2** Years

Solution composition

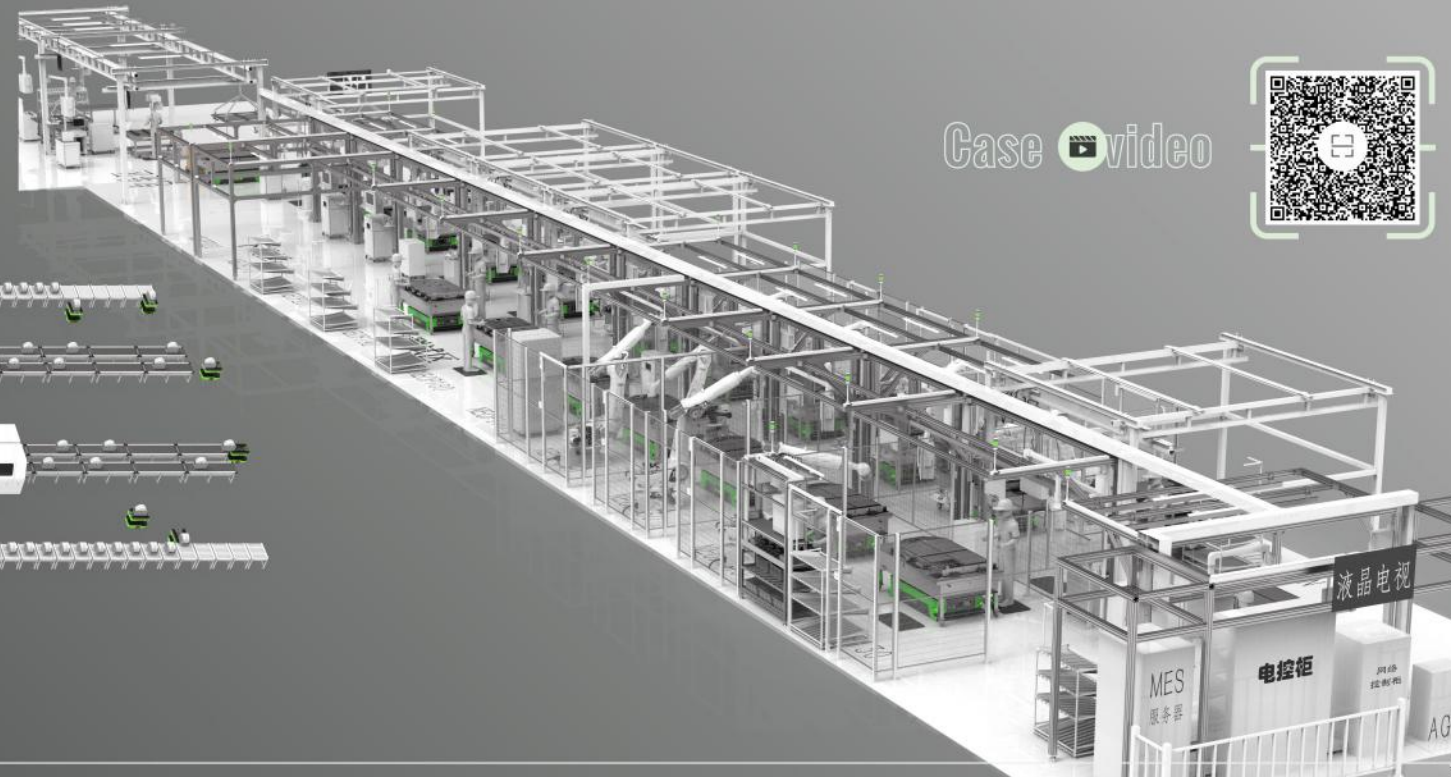System CRMS+CDSS + C1 + C3 + C5 + CCM + CCS

battery assembly & testing

Pack output

Pack storage

Case video

NEW ENERGY PHOTOVOLTAIC

Requirement points

Industry Overview

With the global fossil energy (oil, coal) increasingly close to exhaustion, climate warming ecological environment, countries around the world on the use of clean energy and carbon emission standards under strict requirements, photovoltaic power generation will become an important channel of energy output. In recent years, the application and development of photovoltaic energy storage technology is advocated vigorously by our country, and the industrial scale is expanded constantly. No matter in core technology, product manufacturing, equipment, or in market development, installation and service, it has a certain industrial chain with independent intellectual property rights, some of which have reached the international leading level. As an essential link in intelligent logistics, mobile robots are widely used in the photovoltaic industry, which greatly reduces the labor cost of logistics transportation and promotes the development of intelligent logistics.

Industry trends

01

The mobile robot can realize the intelligent transportation of the photovoltaic industry's materials automatically on/off the line and in the middle of the transfer, and realize the unmanned automatic transportation;

02

Intelligent transportation also has systematic management, data traceability, improve management level;

03

By means of multi-system connection and integration, it can solve the problems of accuracy and efficiency of material transportation in each production line.

Smart logistics solution

Solution advantage

enhance productivity
Automatic transfer of multiple production processes, efficient completion of transportation tasks.

intelligentize
Improve the degree of intelligence, realize intelligent logistics.

Reduce labor intensity of personnel
Automatic delivery of heavy materials to work stations.

Economic benefits

Reduce manpower input **30%**

Improve production turnover efficiency **20%**

Investment recovery cycle **1.5-2** Years

Solution composition

System CRMS+CDSS + C2 + C3 + C5 + CCS

FoldingA of incoming battery material

Battery fleece technology

Battery etching technology

Automatic transfer in process shop

Battery coating technology

Battery laser technology

Partenr

TONGWEI GROUP

YONGXIANG CO.,LTD.

Printing

Laser

PECVD

Lncoming

Diffuse

PERC

Etching

Texturing

Oxidation

Case video

AUTOMOBILE & AUTO PARTS
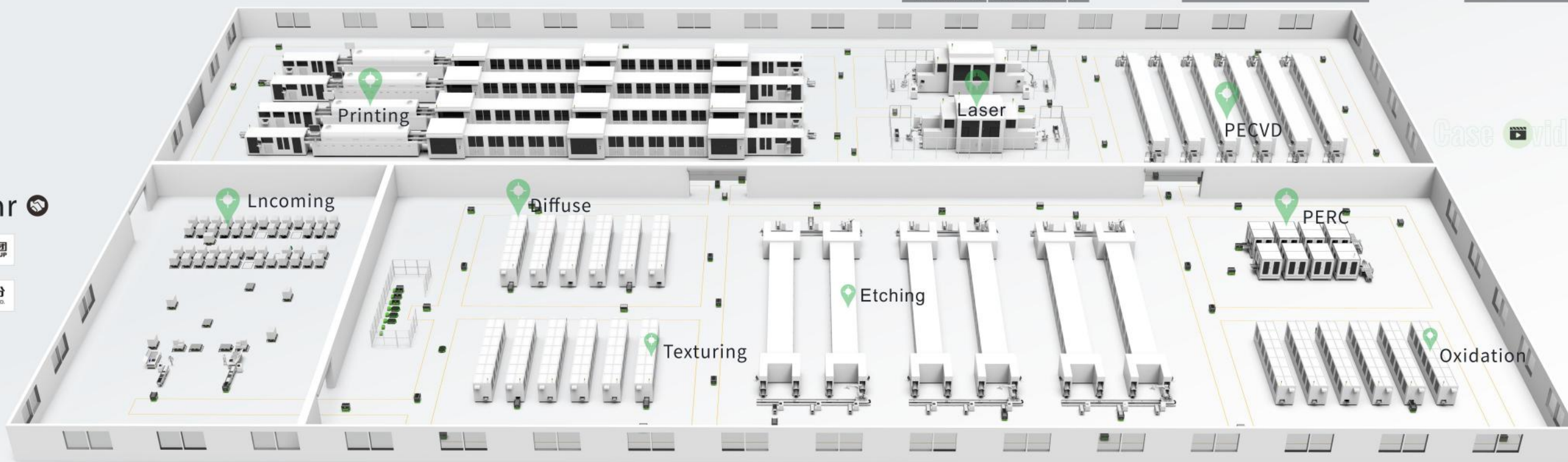
Requirement points

Industry Overview

Under the background of electric and intelligent automobile, domestic automobile manufacturers have begun to carry out transformation and upgrading of flexibility, agility, intelligence and information technology. As a standard configuration to achieve flexible manufacturing and flexible assembly, mobile robots play an important role in the automobile and parts industry, helping the industry logistics upgrade from automation to intellectualization.

Industry trends

01
The production process of automobile industry is fixed, with high degree of standardization and automation, and intelligent transformation is convenient

02
The automotive industry has more than 10 years of experience in the use of mobile robots, and AGV/AMR has become a standard equipment

03
The overall production capacity of the automobile industry is high, and the demand for industrial mobile robots is large

04
Improve the automation and flexibility of entire automobile manufactures and improve per capita efficiency

Smart logistics solution

Solution advantage

Improve production efficiency
automatically and efficiently fulfill capacity requirements

Improve the degree of automation
realize intelligent logistics and flexible manufacturing to meet the needs of personalized customization.

Reduce labor intensity
automatically send heavy materials to work stations

Economic benefits

20%
Optimize and reduce stock preparation and replenishment employees by more than

100%
The accuracy rate of outbound shipments can be improved to

100%
Timely rate for supply of parts to the production line can reach to

20%
Reduce the area of warehouse management by more than

Solution composition

System

CRMS+CDSS+CASS + C1 + C2 + CCM + CCS
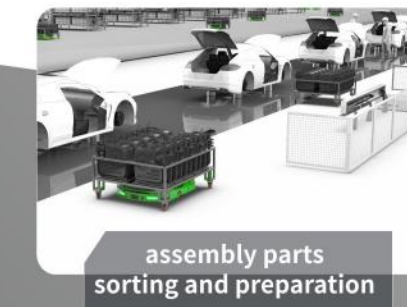
SPS trolley automatically on-line

SPS aggregation and distribution area to take material

SPS empty box return

assembly parts batch distribution
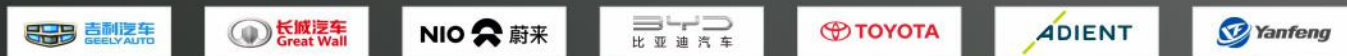
assembly parts sorting and preparation

empty trolley return

Partenr

GEELY AUTO | Great Wall | NIO 蔚来 | BYD 比亚迪汽车 | TOYOTA | ADIENT | Yanfeng
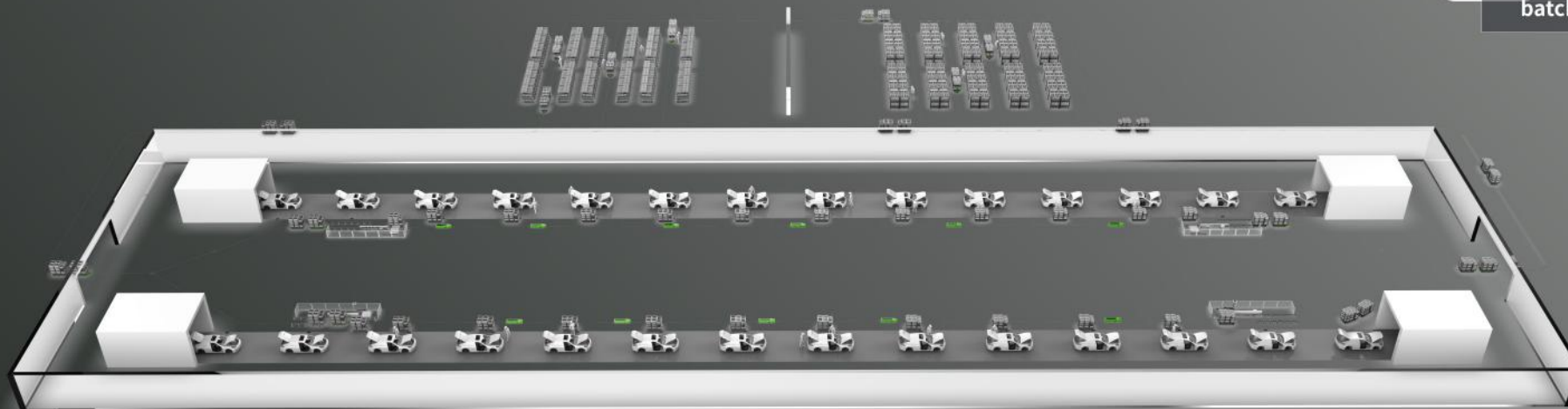
Case video

FLAT PANEL DISPLAY INDUSTRY

Requirement points

Industry Overview

The increasing consumer market stimulates the domestic flat panel display industry to develop towards the direction of large screen size and diversified functions. The panel design is diverse, the process is complex, the cross-line production switch is frequent, and the flexible production of enterprises requires the production line data information flow to be higher and higher. AGV/AMR gives the answer to intelligent production and transportation, enabling flat panel display enterprises to provide intelligent logistics comprehensive solutions

Industry trends

01 Panel sizes are different. Micro LED and Mini LED have become the mainstream trend.

02 Different needs of vehicle, wearable, home appliances and industrial applications are the trend of personalized customization.

03 The process of different products is different, and cross-line production is frequently switched. Flexible production has become the general trend.

04 The types of raw materials are increasingly complex, and the requirements for fine management of warehousing and logistics are increasingly high.

05 Increasing labor costs make management more difficult

Smart logistics solution

Solution advantage

Real-time data monitoring the status of material information can be reported in real time to ensure the integrity of the data chain and form a closed data loop.

Flexible process connection cutting machine quickly, making production scheduling more flexible, to meet the diversified production mode.

Reduce labor cost reduce material damage in the handling process, thus achieving cost reduction and efficiency increase

Economic benefits

Reduce the operating costs by **26%**

The damage rate of defective materials in the handling process is reduced by **90%**

Solution composition

System CRMS+CDSS+CASS + C3 + C5 + CCM + CCS

Transshipment of semi-finished products across floors

The POL offline to transport to the warehouse

Polarizer ATL transport

Polarizer ABL transport

Polarizer DAL online

Partenr

BOE 京东方   TCL   华星光电 CSOT   TIANMA   INNOLUX

Case video

3C AND SEMICONDUCTOR INDUSTRY

Requirement points

Industry Overview

With the development of "individual media", the extension of online services, and the trend of personalized and private consumption have continuously upgraded the demand for 3C products in China. Manufacturers in all aspects of the 3C field have an urgent demand for automatic transformation, and flexible assembly lines and intelligent three-dimensional warehouses have entered a stage of rapid development. The huge annual output value and volume of 3C electronics industry provide a huge market capacity for mobile robots; The contradiction between a large number of labor needs and recruitment difficulties promotes the intelligent upgrading of the whole industry.

Industry trends

01
3C electronics needs flexible logistics system to realize material transfer between multiple processes, while AGV/AMR can be adjusted timely with the change of production process flow.

02
The low cost and high efficiency of mobile robots can relieve the recruitment pressure caused by the increasing shortage of human resources.

03
Real-time collection and reporting of production process data to solve the problems of precision and efficiency of material transportation in each production line.

Smart logistics solution

Solution advantage

Flexible transportation	High work efficiency	High safety dependence
AGV/AMR can complete route and process changes by changing procedures	24H uninterrupted work all day to meet the demand of production capacity	AGV/AMR carrier implements whole-process control with low error rate

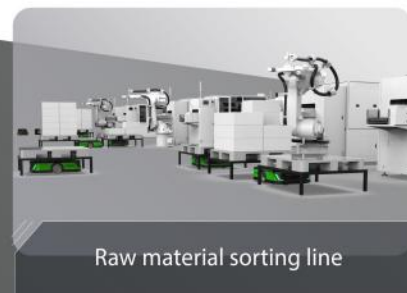**Economic benefits**

Save labor force of factory logistics by **40%**

Improve the efficiency of picking and distribution in warehouse, and increase the efficiency of picking by **30%**

Solution composition

System
CRMS+CDSS+CWMS + C2 + C3 + C5 + C6 + CCS

Cross-floor raw material distribution

Raw material sorting line
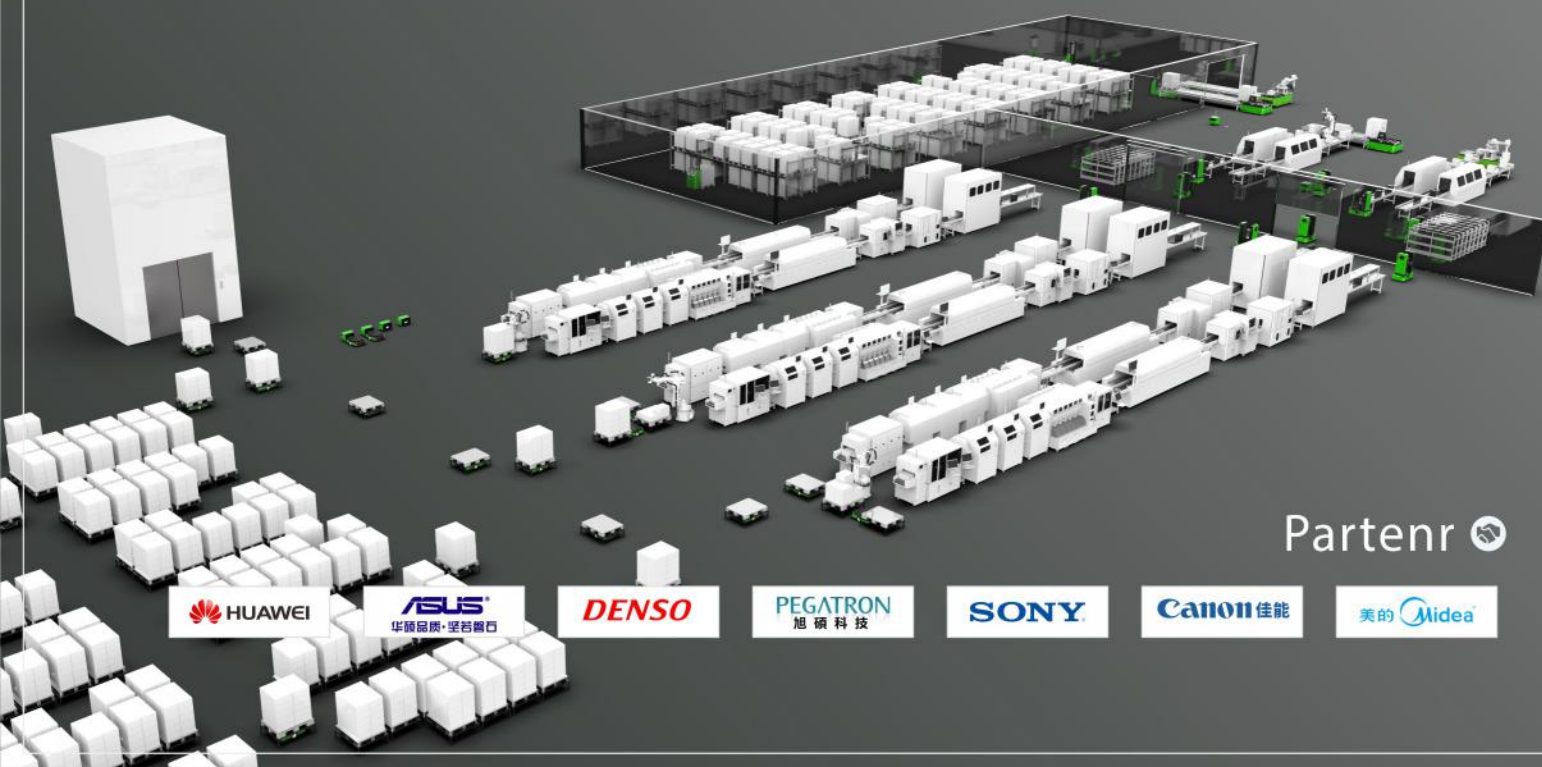
Borderline semi-finished product distribution/caching

Grab the finished product automatically offline

Finished product off line

finished product storage

Partenr

HUAWEI   ASUS 华硕品质·坚若磐石   DENSO   PEGATRON 旭硕科技   SONY   Canon 佳能   美的 Midea

Case ▶ video

LOGISTICS AND CIRCULATION INDUSTRY

Requirement points

Industry Overview

In recent years, with the support of national policies, logistics, cold chain fresh distribution and e-commerce logistics are developing rapidly towards intelligent logistics, and the industry is placing more emphasis on operational efficiency and benefit. As an essential part of intelligent logistics, mobile robots are widely used in the logistics industry, which greatly reduces the labor cost of the logistics circulation industry and promotes the development of intelligent logistics.

Industry trends

01 Logistics robots provide intelligent and unmanned transportation from products to materials, such as automatic on-line, automatic offline, and intermediate transfer, and solve the problem of low efficiency in transportation and sorting of materials

02 To meet the industry demand for cost reduction and efficiency increase, fully intelligent management can improve the management level and effectively avoid a series of factors such as inefficient personnel management

03 Large volume of business requires data tracking: product data management and material information traceability

04 The industry has high requirements for storage capacity. Mobile robots can meet the requirements of narrow tunnels and high shelves for compact storage layout, saving space costs.

Smart logistics solution

Solution advantage

High work efficiency
24 hours without shutdown, can intelligently realize loading and unloading materials, independent transportation and intelligent sorting; Multiple scheduling algorithms support different sorting scenarios

Improve management efficiency
realize fully intelligent material flow, dynamic prediction, storage location heat statistics and management
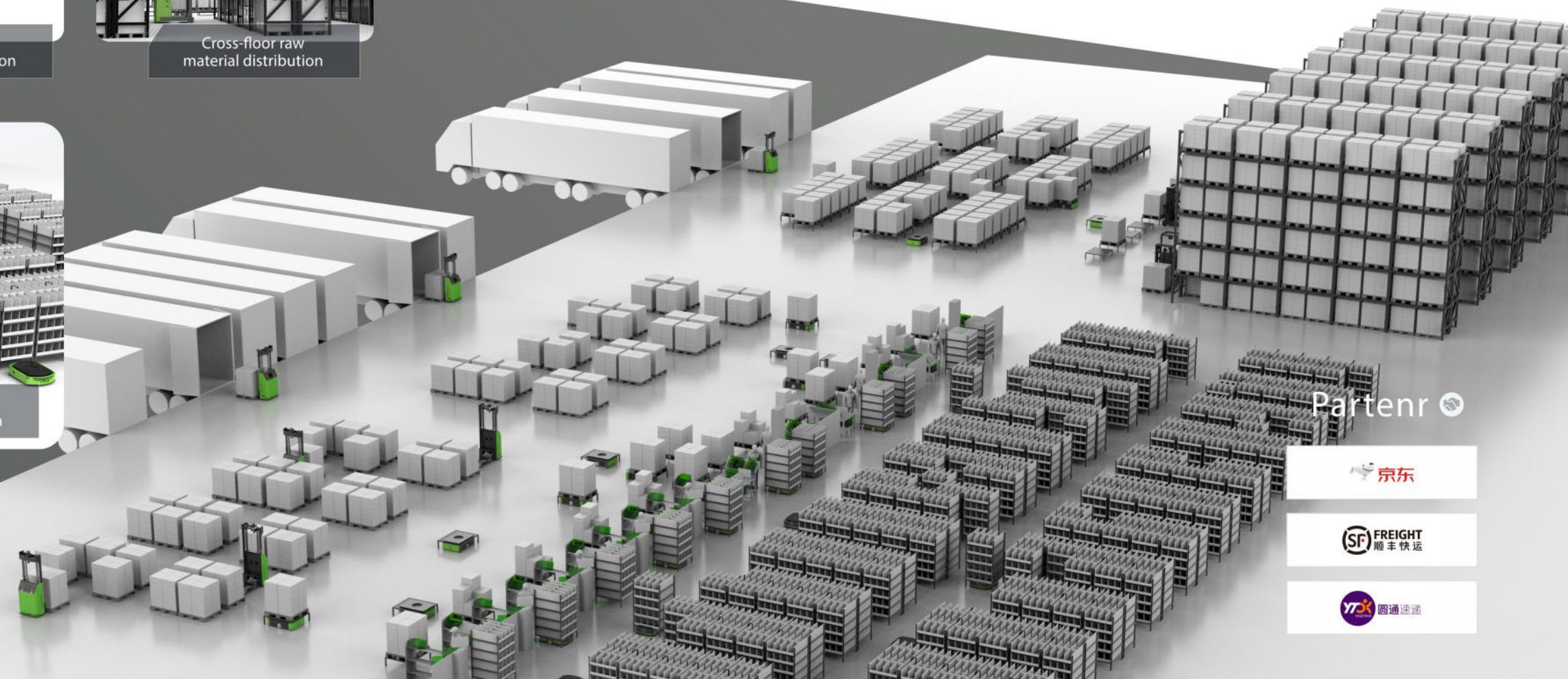
High reliability
the whole process is recorded, tracked and retrieved to reduce the frequency of misoperation

Economic benefits

Increase space utilization rate by **40%**

Increase the overall inspection and checking capacity by **30%**
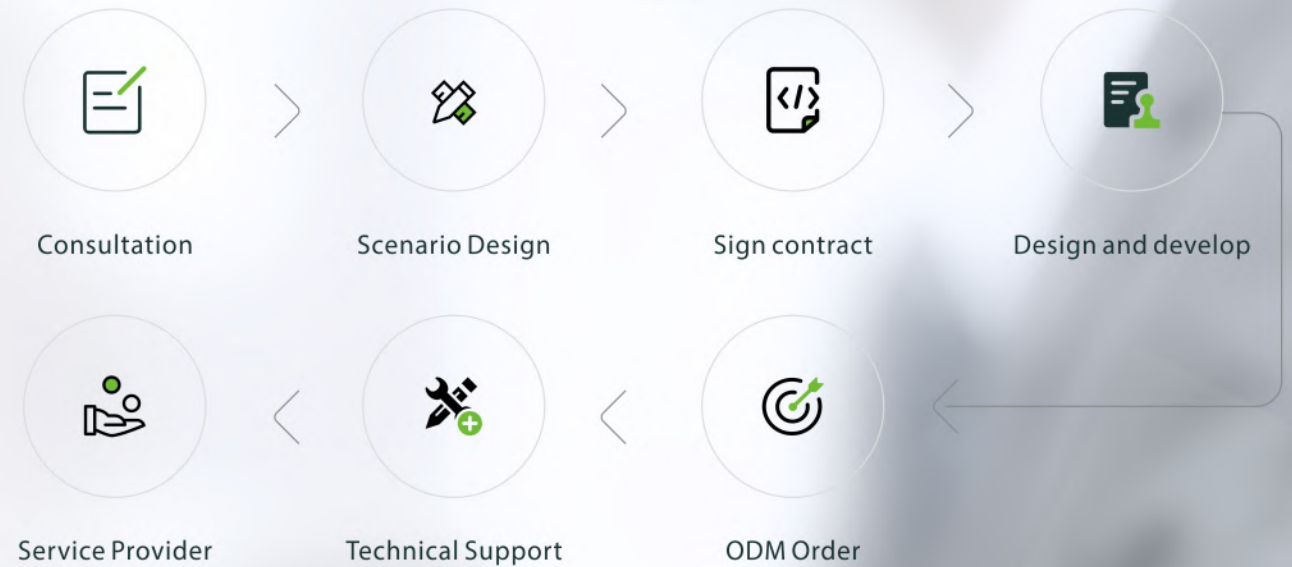
Solution composition

System
CRMS+CDSS+CWMS + C2 + C3 + C5 + C6 + CCS

Cross-floor raw material distribution

Cross-floor raw material distribution

Cross-floor raw material distribution

Case ▶video

Partenr

京东

SF FREIGHT 顺丰快运

YTX 圆通速递

SERVICE CONCEPT

SPECIALTY

EFFICIENT

HIGH QUALITY

SERVICE PROCESS

Consultation → Scenario Design → Sign contract → Design and develop

Service Provider ← Technical Support ← ODM Order

SERVICE ITEM

Pre-sale

Product consulting
General/custom product function and selection recommendation

Product planning
Site investigation, scheme design, process planning.

System design
Control system design and development

Sale

Product customization
Production and development of customized products

System development
Software development deployment

Installation
Software and hardware Deployment

After sales

Training
Product/system maintenance training

Operating services
Mobile robot management and maintenance

Maintenance service
After-sales support, regular inspection, 7*24 hours customer service consultation

FOLLOW US

website

WeChat

other

Download

Service

Official Account

Tiktok

video account

Toutiao