Provider of light and small-scale

Industrial Handling Robots

SLAM (Simultaneous Localization And Mapping)

www.szaiten.com/en

AiTEN Provider of light and small-scale industrial handling robots

www.szaiten.com/en （Aiten·china）

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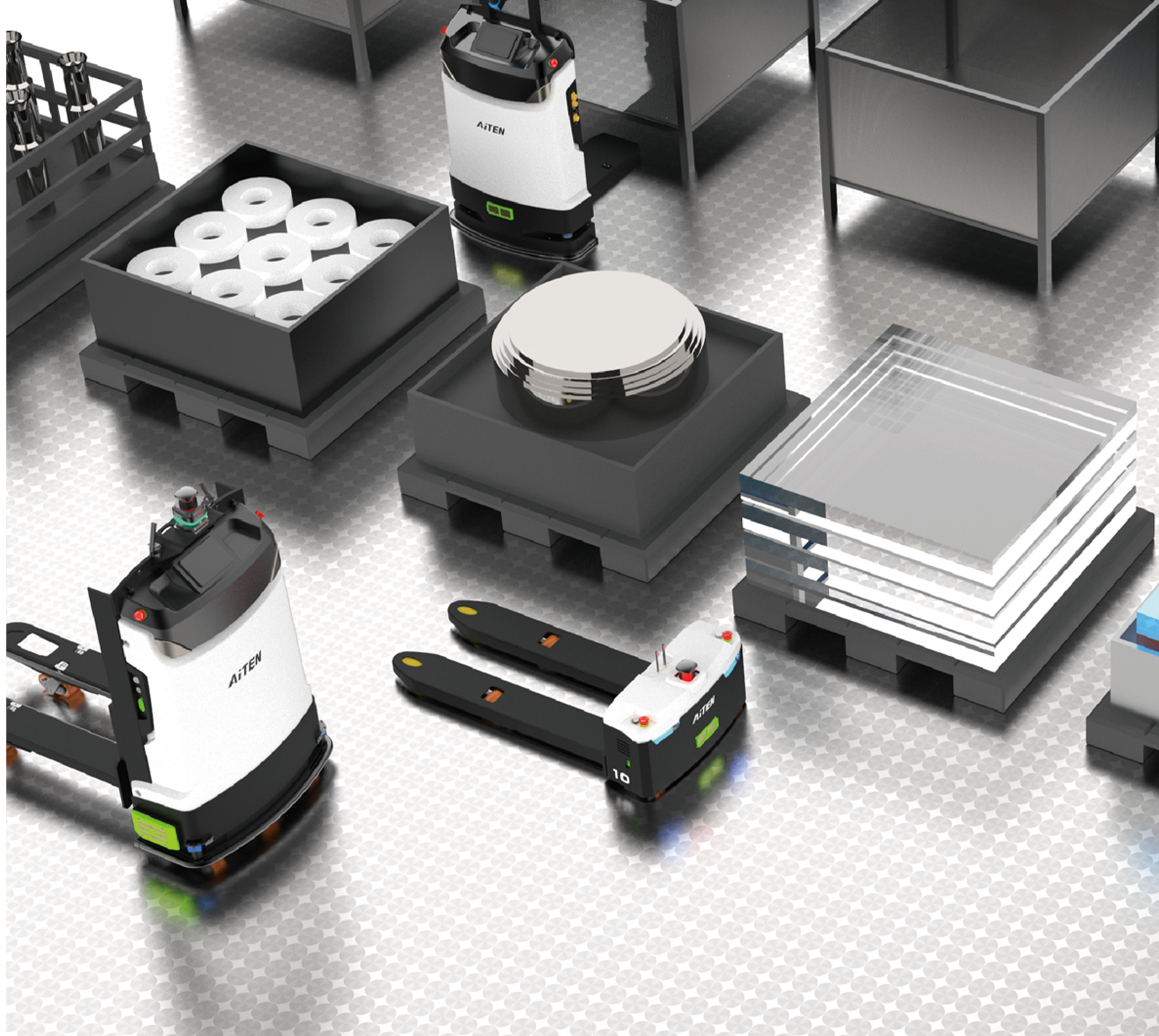
About Aiten Robots

Provider of light and small-scale industrial handling robots

About AiTEN

Suzhou AiTEN Intelligent Technology Co., Ltd., was founded in 2017 in the City of Suzhou, Jiangsu Province, by a group of engineers with 15 years' experience in the forklift industry. The Company is dedicated in designing and manufacturing of autonomous mobile robot(AMR) for intralogistics industry. Based on its commitment to innovation and customer-oriented spirit, AiTEN has become one of the few manufacturers that own a complete product line covering all functions needed by intralogistics automation.

R&D

Aiming to be one of the leading AMR system integrators,AiTEN has created a strong R&D team led by scientists from Singapore Science and Technology Research Bureau, UCD postdoctoral students in the United states, senior professors from Zhejiang University and experts with solid academic background in supply chain.

Global Vision

Playing an active role in the industry automation worldwide has always been AiTEN's vision. The fast-growing brand awareness and high praise from international big names in different sectors in China further motivated the Company to go to international market. By the end of 2022, AiTEN had successfully served clients from 16 countries by giving not only robots with good quality and competitive price, but also the high standard service to improve the customer experience.

reddot winner

AMRs in the market
2100+

customers
500+

Honors
70+

CE

ISO
ISO3691-4

Software-AITEN RCS

Robot Control System

## Global Kanban

Intelligent logistics scheduling platform

The interface style can be customized according to customer's demand

- Instant collection and storage of equipment information like task performance and status of battery for real time

- inquiry Simultaneous multi-user login and programming in different control terminals

- Fast failure detection followed by automatic task storage and recovery

Smart Traffic Management

Routes optimization achieved by paths monitoring, task prediction and real time adjustment of trafic control strategy in peak hours based
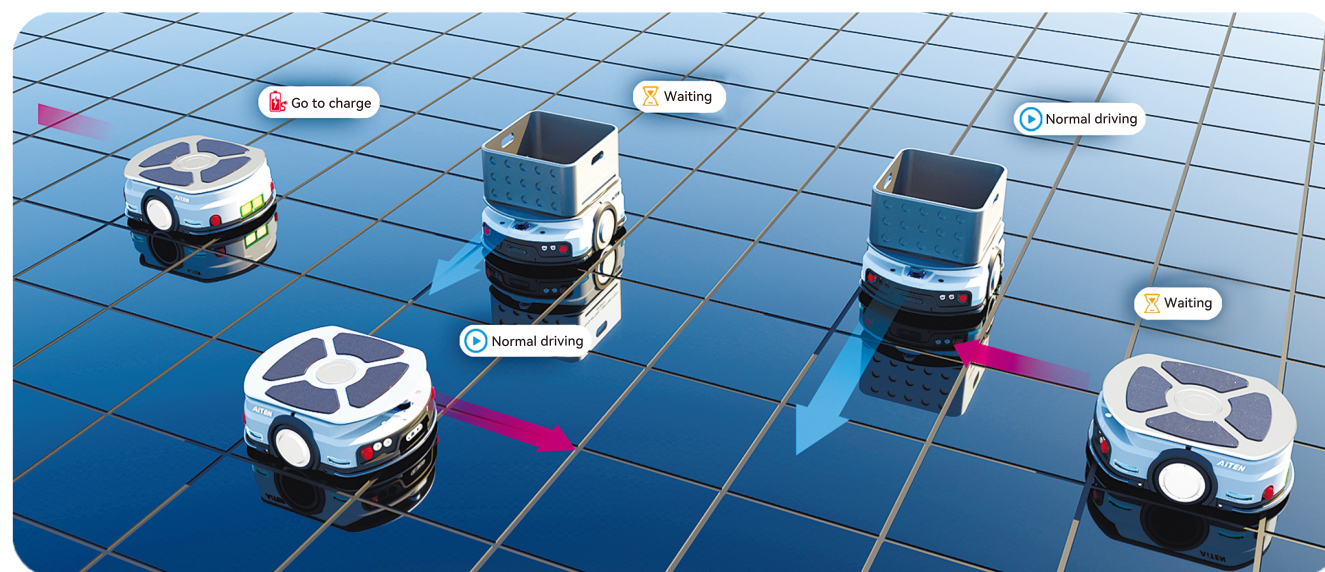
Intelligent Task Assignment

The first-come-first-served or task reprioritization tactics are evaluated based on the principle of resource optimization by analyzing historica data. Actions like automatic standby or task pre-response will follow accordingly.

Multiple Workspace Management

Comprehensive fleet manager can handle a number of equipment and robot operations in different workspaces

Peripheral Devices

Stable communications with calling device, charging facility.automatic door, elevator and roller conveyor, etc

Customizable User Interface

Location management | Material management | Device connection |
Rule list | Task list | Code-scanning | User Management | Role
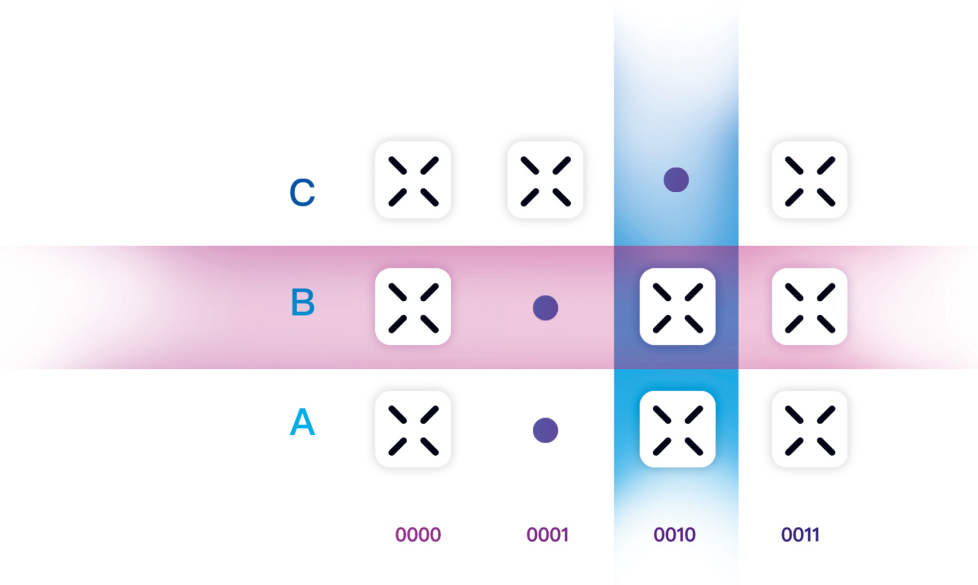management | Setting | User login

Multiple Inbound /Outbound Principles

First in first out | First in last out | Random positioning

Overall Monitoring

Plating a connection role between the upper MES and the lower robot
system, the location system keeps an accurate record of the material
flow and assigns task to robot system in accordance to the warehouse
location conditions

C			
B			
A			
0000	0001	0010	0011

Function Module

| Material container identification | Pallet identification | QR code identification | Precise positioning | Safety | Speed control | Lifting control | Emergency alert |

Solution

ERP
SAP	MES	WMS	WCS

Intelligent scheduling · Intelligent traffic control · Dynamic path planning · Global monitoring · Equipment management

⇩ Robot on-board system ⇧

Intelligent obstacleavoidance · Intelligent charging · Autonomous orderreceiving · Touch interaction · Parameter management

⇩ Controller ⇧

Motion controller · Data converter

reddot winner

Handling Robot

Narrow aisle operation   Automatic charging   Safe distance 5m   Positioning accuracy ±10mm

Purpose: Handling and stacking of material.
Features: SLAM laser navigation, laser anti-collision, lithium battery power, automatic charging, position detection, etc.

Delivery Robot

Narrow aisle operation   Automatic charging   Laser anti -collision   Positioning accuracy ±10mm

Purpose: Moving of light materials.
Features: SLAM laser navigation, laser anti -collision, lithium battery power, automatic charging, position detection, etc.

Storage Robot

Automatic charging   Safe distance 5m   Positioning accuracy ± 10mm

Purpose: Handling material in large storage centers
Features: SLAM laser navigation, laser anti-collision, ithium battery power, automatic charging, position detection, etc.

MP10

Industry Handling Robot

| SLAM | Anti-collision radar | Automatic charging | Floor to floor handing |

reddot winner

	MP10S	MP10+
Maximum payload(kg)	1000	1000
Load center (mm)	600	600
Lifting height (mm)	155/175	250
Width over forks (mm)	570/680	570/680
Turning radius (mm)	990	990
Right angle running	1935	1935
Minimum ground clearance (mm)	20	20
Vehicle dimension: L/W/H (mm)	1480/740/500	1465/790/550
Fork dimensions: L/W/H(mm)	1150/186/60	1150/186/60
Max.gradeability (empty/load) (%)	4/1	4/1
Speed (empty/load) (m/s)	0.7/0.6	0.7/0.6
Navigation mode	SLAM	SLAM
Positioning accurary	±10mm	±10mm
Safe distance	5m	5m
Power configuration	48V/30Ah	48V/30Ah
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

APE

Industry Handling Robot

| SLAM | Anti-collision radar | Floor to floor handing | Off-line control |

	APE15
Maximum payload(kg)	1500
Load center (mm)	600
Lifting height (mm)	210
Width over forks (mm)	570
Turning radius (mm)	1290
Right angle running aisle width	2005
Minimum ground clearance (mm)	20
Vehicle dimension: L/W/H (mm)	1515/790/1860
Fork dimensions: L/W/H(mm)	1150/180/70
Max,gradeability (empty/load) (%)	5/3
Speed (empty/load) (m/s)	1.5/1.0
Navigation mode	SLAM
Positioning accurary	±20mm
Safe distance	5m
Power configuration	24V/60Ah
Communication mode	WiFi 2.4G/5.8G

AM

Industry Handling Robot

SLAM Anti-collision radar Automatic charging Pallet stacking
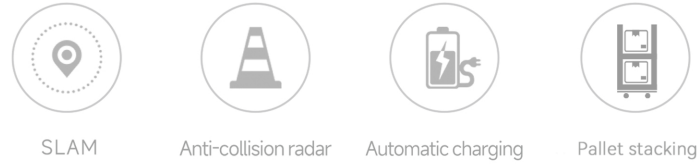
	AM10	AM15	AM20
Maximum payload(kg)	1000	1500	2000
Load center (mm)	600	600	600
Lifting height (mm)	800	1600	1600
Width over forks (mm)	570/680	570/680	570/680
Turning radius (mm)	1030	1160	1160
Right angle running aisle width	1955	1985	1985
Minimum ground clearance (mm)	25	30	30
Vehicle dimension: L/W/H (mm)	1500/785/1670	1635/990/1590	1635/990/1590
Fork dimensions: L/W/H(mm)	1150/170/60	1150/180/70	1150/180/70
Max.gradeability（empty/load）(%)	3/1	10/5	10/5
Speed (empty/load) (m/s)	1.2/1.0	1.5/1.0	1.5/1.0
Navigation mode	SLAM	SLAM	SLAM
Positioning accurary	±10mm	±10mm	±10mm
Safe distance	5m	5m	5m
Power configuration	48V/30Ah	24V/100Ah	24V/150Ah
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

AL

Industry Handling Robot

SLAM Anti-collision radar Automatic charging Dolly cart handling
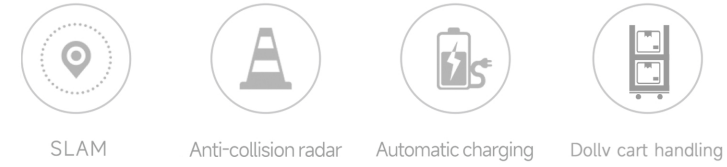
	AL02
Maximum payload(kg)	200
Load center (mm)	350
Lifting height (mm)	1600
Width over forks (mm)	280
Turning radius (mm)	805
right angle running aisle width	1280
Minimum ground clearance (mm)	25
Vehicle dimension: L/W/H (mm)	1050/790/1670
Fork dimensions: L/W/H(mm)	700/280/60
Max.gradeability（empty/load）(%)	3/1
Speed (empty/load) (m/s)	1.2/1.0
Navigation mode	SLAM
Positioning accurary	±10mm
Safe distance	5m
Power configuration	48V/50Ah
Communication mode	WiFi 2.4G/5.8G

AP

Industry Handling Robot

| | SLAM | Anti-collision radar | Automatic charging | Floor to floor handing |

	AP20	AP30
Maximum payload(kg)	2000	3000
Load center (mm)	600	600
Lifting height (mm)	205	205
Width over forks (mm)	570	570/680
Turning radius (mm)	1425	1950
Right angle running aisle width	2200	2680
Minimum ground clearance (mm)	30	30
Vehicle dimension: L/W/H (mm)	1675/875/1630	2175/1000/1630
Fork dimensions: L/W/H(mm)	1150/185/70	1150/200/75
Max.gradeability (empty/load) (%)	10/5	10/5
Speed (empty/load) (m/s)	1.5/1.0	1.5/1.0
Navigation mode	SLAM	SLAM
Positioning accurary	±10mm	±10mm
Safe distance	5m	5m
Power configuration	24V/200Ah	24V/300Ah
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

AT

Industry Handling Robot

| | SLAM | Anti-collision radar | Automatic charging | Heavy Load Pulling |

	AT50	AT20/30
Maximum payload(kg)	5000	2000/3000
Vehicle dimension: L/W/H (mm)	1845/ 997 /1850	1200/830/1800
Minimum ground clearance (mm)	50	30
Speed (empty/loaded) (m/s)	1.5/1.0	1.5/1.0
Turning radius (mm)	1400	895
Minimum channel width (mm) safe distance a/2=50	1800	1320
Max. gradeability (empty/load) (%)	10/5	10/5
Power configuration	24V/200Ah	24V/100Ah
Charging time	0.5C	0.5C
Endurance time	6-8h	6-8h
Positioning accurary	±10mm	±10mm
Safe distance	5m	5m
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

AS

Industry Storage Robot

SLAM Anti-collision radar Automatic charging High rack storage

	AS15/20	AS30
Maximum payload(kg)	1500/2000	3000
Load center (mm)	600	600
Lifting height (mm)	1600/3000	1600/3000
Width over forks (mm)	570/680	570/680
Turning radius (mm)	1740	1950
Right angle running aisle width	2490	2680
Minimum ground clearance (mm)	30	30
Vehicle dimension: L/W/H (mm)	2100/950/2350	2175/1300/2350
Fork dimensions: L/W/H(mm)	1150/190/70	1150/200/120
Max.gradeability (empty/load) (%)	10/5	10/5
Speed (empty/load) (m/s)	1.5/1.0	1.5/1.0
Navigation mode	SLAM	SLAM
Positioning accurary	±10mm	±10mm
Safe distance	5m	5m
Charging time	0.5C	0.5C
Power configuration	24V/200Ah	24V/300Ah
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

ASK

Industry Storage Robot

SLAM Anti-collision radar Automatic charging High rack storage

	ASK15/20	ASK30
Maximum payload(kg)	1500/2000	3000
Load center (mm)	600	600
Lifting height (mm)	4000/5300	4000/5300
Width over forks (mm)	240-1200	240-1200
Turning radius (mm)	1525	2200
Right angle running aisle width	2860	3450
Minimum ground clearance (mm)	30	30
Vehicle dimension: L/W/H (mm)	2100/1400/2850(3450)	2525/1750/2850(3450)
Fork dimensions: L/W/H(mm)	1150/120/45	1150/125/50
Max.gradeability (empty/load) (%)	10/5	10/5
Speed (empty/load) (m/s)	1.5/1.0	1.5/1.0
Navigation mode	SLAM	SLAM
Positioning accurary	±10mm	±10mm
Safe distance	5m	5m
Charging time	0.5C	0.5C
Power configuration	24V/300Ah	48V/400Ah
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

AE

Industry Storage Robot

SLAM Anti-collision radar Automatic charging High rack storage

	AE10/15	AE20/25	AE30/35
Maximum payload(kg)	1000/1500	2000/2500	3000/3500
Load center (mm)	600	600	600
Lifting height (mm)	1600/3000	1600/3000/4500	1600/3000/4500
Width over forks (mm)	200-1040	240-1040	250-1040
Turning radius (mm)	1200	1700	2210
Right angle running aisle width	2800	3370	3830
Minimum ground clearance (mm)	45	45	45
Vehicle dimension: L/W/H (mm)	2480/1050/2030	3120/1390/2690	3420/1560/2790
Fork dimensions: L/W/H(mm)	1150/110/40	1150/120/45	1150/125/50
Max.gradeability (empty/load) (%)	5/3	10/5	10/5
Speed (empty/load) (m/s)	1.5/1.0	1.5/1.0	1.5/1.0
Navigation mode	SLAM	SLAM	SLAM
Positioning accurary	±10mm	±10mm	±10mm
Safe distance	5m	5m	5m
Charging time	0.5C	0.5C	0.5C
Power configuration	24V/200Ah	48V/300Ah	48V/500Ah
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

AR

Industry Storage Robot

SLAM Anti-collision radar Automatic charging Retractable mast

	AR05
Maximum payload(kg)	500
Load center (mm)	425
Lifting height (mm)	1200
Width over forks (mm)	425
Turning radius (mm)	920
Right angle running aisle width	1600
Minimum ground clearance (mm)	30
Vehicle dimension: L/W/H (mm)	1405/950/1920
Fork dimensions: L/W/H(mm)	40/120/650
Maxgradeability (empty/load) (%)	3/1
Speed (empty/load) (m/s)	1.5/1.0
Navigation mode	SLAM
Positioning accurary	±10mm
Safe distance	5m
Charging time	1.5C
Power configuration	24V/100Ah
Communication mode	WiFi 2.4G/5.8G
Distance forward	450mm

TT

Industry Delivery Robot

SLAM Anti-collision radar Automatic charging Off-line control

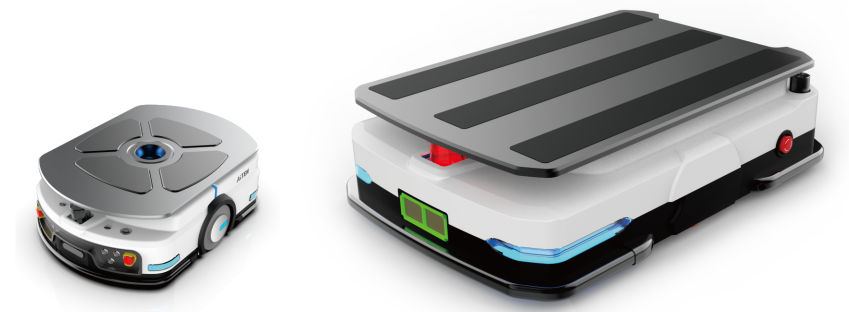|	TT15	TT30	TT60
Maximum payload(kg)	150	300	600
Vehicle dimension: L/W/H (mm)	640/510/225	750/540/230	930/660/250
Minimum ground clearance (mm)	25	25	30
Speed (empty/load) (m/s)	2.0/1.5	2.0/1.5	1.6/1.3
Max.gradeability(empty/load)(%)	5/3	5/3	5/3
Turningradius (mm)	320	375	465
Minimum channel width (mm)	840	950	1230
Power configuration	48V/15Ah	48V/20Ah	48V/30Ah
Charging time	≤2H	≤2H	≤2H
Run time	8H	8H	8H
Navigation mode	SLAM	SLAM	SLAM
Positioning accurary	±10mm	±10mm	±10mm
Safe distance	5m	5m	5m
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

TP

Industry Delivery Robot

SLAM Anti-collision radar Automatic charging Floor to floor handing

	TP30	TP60
Maximum payload(kg)	300	600
Vehicle dimension: L/W/H (mm)	750/540/250	930/660/250
Lifting height (mm)	60	60
Minimum ground clearance (mm)	25	30
Speed (empty/load) (m/s)	2.0/1.5	1.6/1.3
Max.gradeability(empty/load)(%)	5/3	5/3
Turningradius (mm)	375	465
Minimum channel width (mm)	950	1230
Power configuration	48V/20AH	48V/30AH
Charging time	0.5C	0.5C
Run time	8H	8H
Navigation mode	SLAM	SLAM
Positioning accurary	±10mm	±10mm
Safe distance	5m	5m
Communication mode	WiFi 2.4G/5.8G	WiFi 2.4G/5.8G

Sales and Services

All for simplicity !

7*24 hour response   Remote support   Product training