

Automate Your Future with Next Mobile Innovation



IPLUSMOBOT

1st Floor, building 8, Jinsheng Science and Technology Park, No.611,
Dongguan Road, Hangzhou, China

T. +86-15618431381 | E. overseas@iplusmobot.com







Intelligent Mobile Robots

Automate Your Future
with Next Mobile Innovation



Product Features

-  End-to-end Autonomous Material Transporting
-  Dynamic Transportation in Human-vehicle-mixed Environment
-  Customization Ability
-  Hybrid Navigation Technology

A Further Step Towards Smart Manufacturing


IPLUSMOBOT is a global leading company in intelligent mobile robots, founded in 2016, with its headquarters in Hangzhou, China. It provides automatic and intelligent robotics, as well as other logistics products and solutions to the manufacturing industry. We are committed to helping enterprises increase production efficiency and safety, and to improving working conditions.




■ EMMA-K-Series




EMMA-K family (Easy Mobile Mate) consists of AMRs with payload from 400kg to 1,500kg. Based on IPLUSMOBOT latest hardware platform, all EMMA-K AMRs are made by casting chassis, resulting in light mass, compact size and accurate navigation. EMMA-K AMRs also provide lifting device with or without rotating plate as an option.




Hybrid Navigation
Laser SLAM + Vision + IMU




Payload(kg)
400-1,500kg




Type
Lifting/ Lifting
with rotating plate



Lifting Stroke
60mm



Docking Accuracy
±2mm/±0.2°



Runtime /Charge Time
8h/1.5h

Product Highlights

Flexible Intelligence

Based on the control and navigation solutions provided by IPLUSMOBOT, the EMMA-K series offers positioning and navigation that primarily utilize laser SLAM, complemented by IMU, QR codes, reflector boards, and among other methods. With positioning precision reaching up to ±2mm, it meets the flexibility and accuracy requirements of various industrial logistics scenarios.

Easy Maintenance and Excellent Scalability

The internal modular design allows for quicker battery replacement, significantly improving the vehicle's maintainability and flexibility and reducing maintenance costs. An abundance of interface configurations facilitates users to quickly integrate new applications, lower deployment costs, and enhance operational efficiency.

User-Friendly Human-Machine Interaction

Designed with a touch screen interface that is intuitive and easy to use, featuring real-time visualization of mapping and graphical programming that are straightforward to understand and operate. This reduces the complexity of application debugging, enhances the user experience, and allows for quick mastery and convenient operation.

Safety and Efficiency

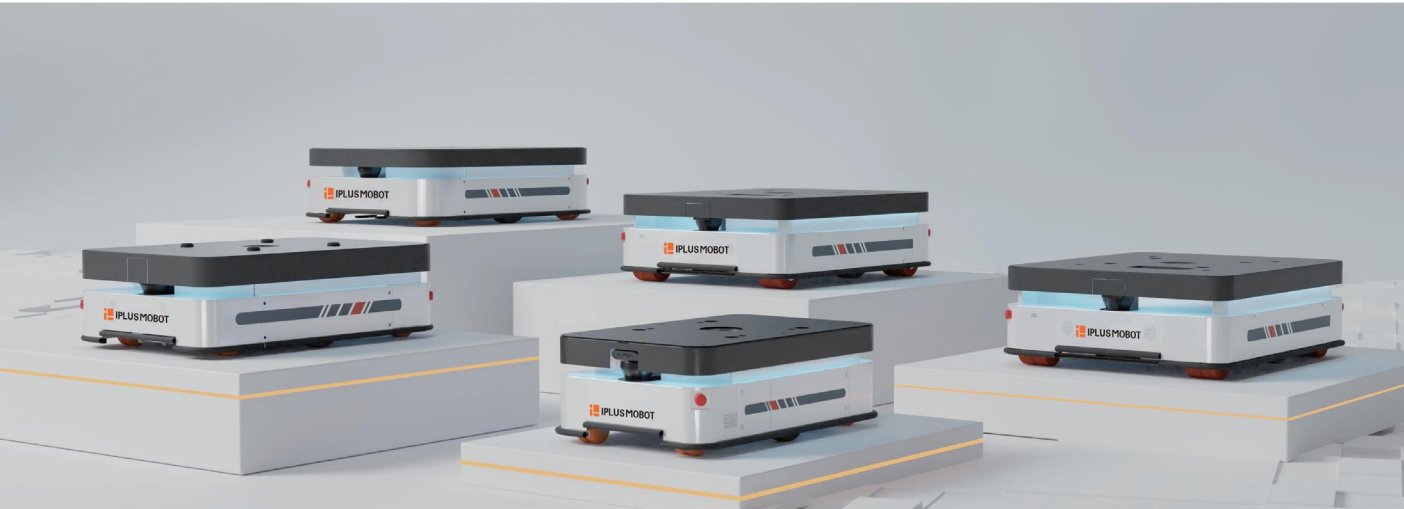
The series employs multiple safety sensors to ensure safety: a front safety laser, 360° anti-collision edge, optional 3D cameras to detect low-lying obstacles, and rear laser to ensure safety and improve efficiency in bidirectional operations.

A Rich of Functional Choices


Various body configurations are available, including lift-type and rotating-lift-type vehicles. Support for WIFI and 5G communication options is offered, providing the most cost-effective configurations for a variety of usage scenarios.

	EMMA 400K	EMMA 600K	EMMA 1000K	EMMA 1500K
Length*width*height	824*533*253mm	949*650*253mm	949*650*253mm	1,174*814*263mm
Weight	130kg	180kg	190kg	280kg
Payload	400kg	600kg	1,000kg	1,500kg
Pivoting diameter	916mm	1,015mm	1,015mm	1,290mm
Driving mode	Differential drive			
Hybrid Navigation	Laser SLAM + Vision + IMU			
Performance parameters				
Positioning accuracy	±10mm / ±1°			
Docking accuracy	±2mm / ±0.2° (with QR code)			
Maximum speed (no load)	1.5m/s			1.2m/s
Ground slope	≤5% (3°)			
Max. gap tolerance	≤35mm			
Max. ground elevation difference	≤10mm			
Optional carrier device				
Type	Lifting/ Lifting with rotating plate			
Lifting stroke	60mm			
Sensor configuration				
Standard laser sensor	Front & Rear laser			
Standard camera configuration	Dual cameras (top + bottom)			
Optional accessories	3D camera			
Charge & battery				
Battery type	Lithium iron phosphate battery			
Run time per full charge	≥8h			
Full charging time	≤1.5h			


■ EMMA-L-Series




EMMA-L family (Easy Mobile Mate) consists of AMRs with payload from 400kg to 2,000kg. EMMA-L AMRs also provide a lifting device without rotating plate as an option. EMMA-L AMRs can easily add various sensors or mechanisms inside or on the top for customized applications. Each AMR in this family has an optiona! CE complied type.




Hybrid Navigation
Laser SLAM + Vision + IMU




Lifting Stroke
60mm




Docking Accuracy
±2mm/±0.5°



Payload(kg)
400kg-2,000kg



Charge Time
≤1.5h



Runtime
≥8h

Product Highlights

Flexible Intelligence

Based on the control and navigation solutions provided by IPLUSMOBOT, the EMMA-L series offers positioning and navigation that primarily utilize laser SLAM, complemented by IMU, QR codes, reflector boards, and among other methods. With positioning precision reaching up to ±2mm, it meets the flexibility and accuracy requirements of various industrial logistics scenarios.

Wide Payload Range

The EMMA-L series products have a rated load capacity covering 400kg to 2,000kg, which can meet the general material handling payload requirements in factory workshops.

Good Application Scalability

The carrying EMMA-L series products offer a rich array of interfaces, including 4 DI channels, 4 DO channels, support for Modbus-RTU/Modbus-TCP communication, as well as a 48VDC power supply interface, making them suitable for carrying various types of carriers.

Safety and Efficiency

The series employs multiple safety sensors to ensure safety: a front safety laser, 360° anti-collision edge, optional 3D cameras to detect low-lying obstacles, and rear laser to ensure safety and improve efficiency in bidirectional operations.

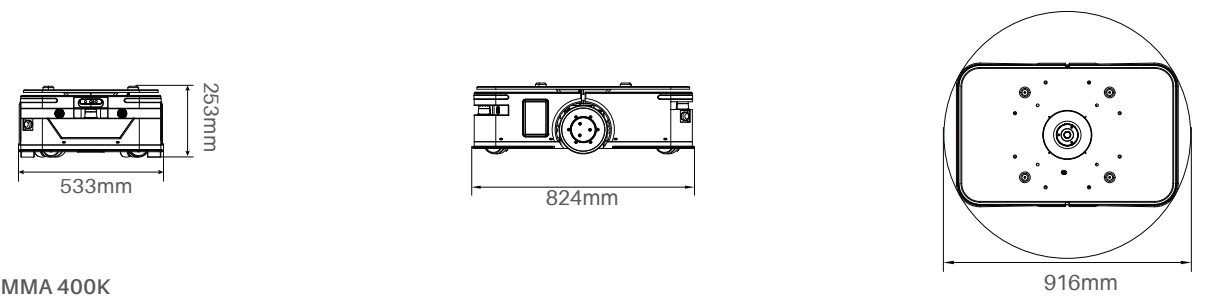
Good Environmental Adaptability

The EMMA-L series products feature a proprietary chassis suspension design from IPLUSMOBOT, which allows for better ground adaptation, maintains vehicle stability, secures sufficient driving force, effectively reduces vehicle vibration, and provides good passability.

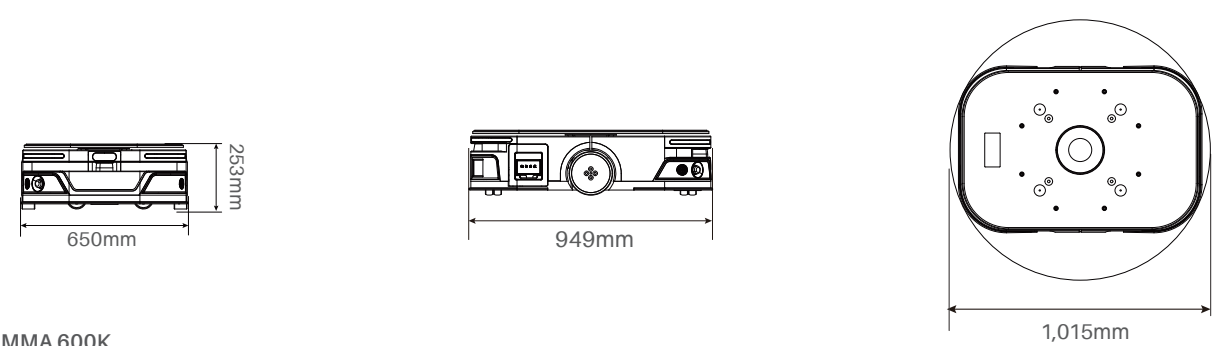


	EMMA 400L	EMMA 600L	EMMA 1000L	EMMA 1500L	EMMA 2000L
Length*width*height	841*540*286 mm	945*650*300mm	983*781*302.5mm	983*781*302.5mm	1,043*801*301mm
Weight	150kg	190kg	290kg	290kg	290kg
Payload	400kg	600kg	1,000kg	1,500kg	2,000kg
Pivoting diameter	942mm	1,079mm	1,185mm	1,185mm	1,184mm
Driving mode	Differential drive				
Hybrid Navigation	Laser SLAM + Vision + IMU				
Performance parameters					
Positioning accuracy	±10mm / ±1°				
Docking accuracy	±2mm/±0.5° (with QR code)				
Maximum speed (no load)	1.5m/s			1.2m/s	
Ground slope	≤5% (3°)				
Max. gap tolerance	≤35mm				
Max. ground elevation difference		≤10mm			
Optional carrier device					
Type	Lifting				
Lifting stroke	75mm	60mm			
Sensor configuration					
Standard laser sensor	Front & Rear laser				
Standard camera configuration	Dual cameras (top + bottom)				
Optional accessories	3D camera				
Charge & battery					
Battery type	Lithium iron phosphate battery				
Run time per full charge	≥8h				
Full charging time	≤1.5h				

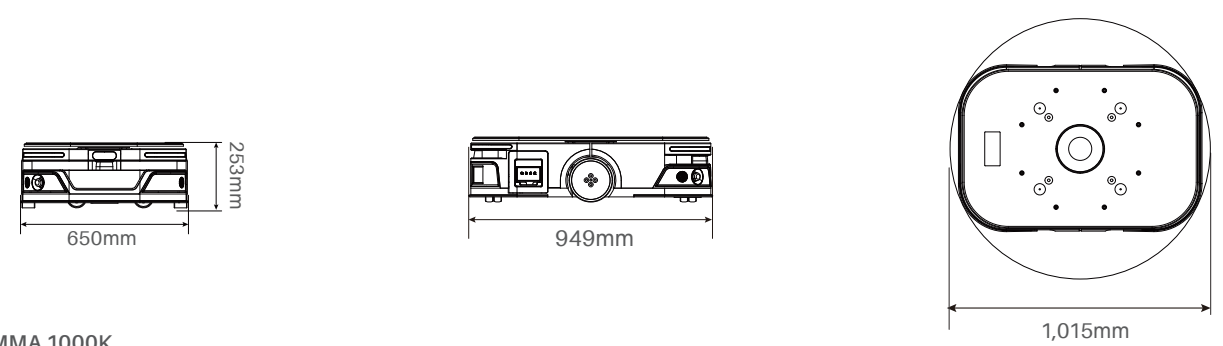
■ EMMA-K-Series



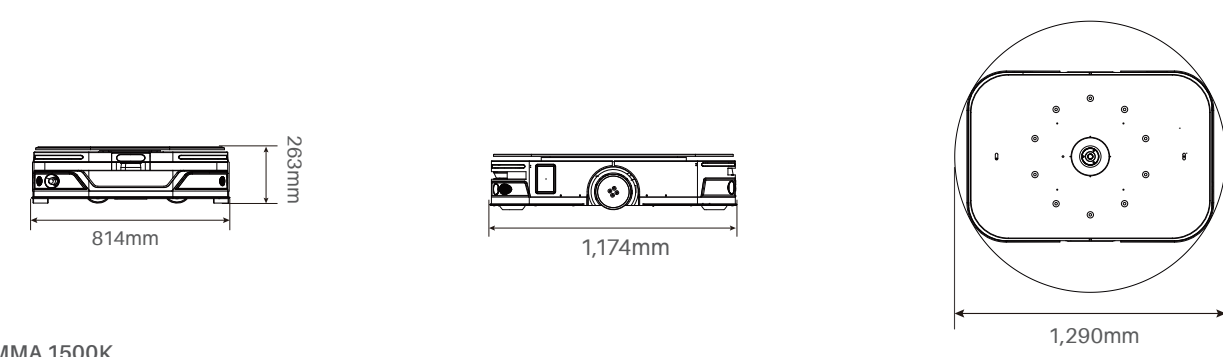
EMMA 400K



EMMA 600K

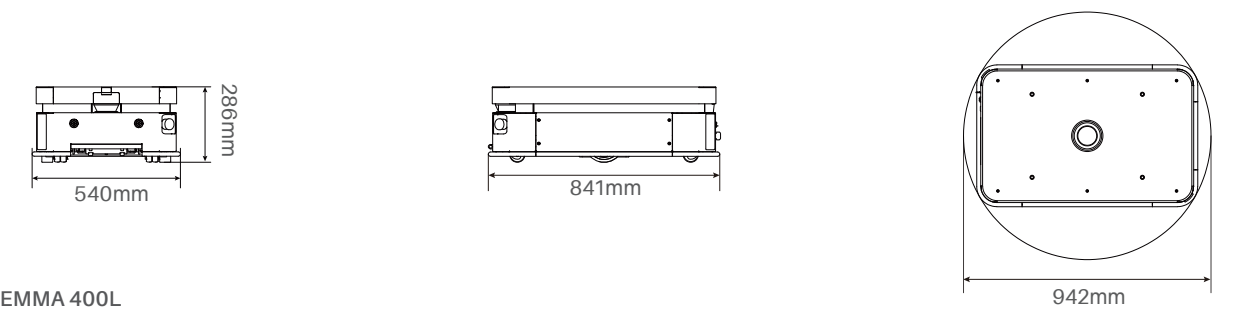


EMMA 1000K

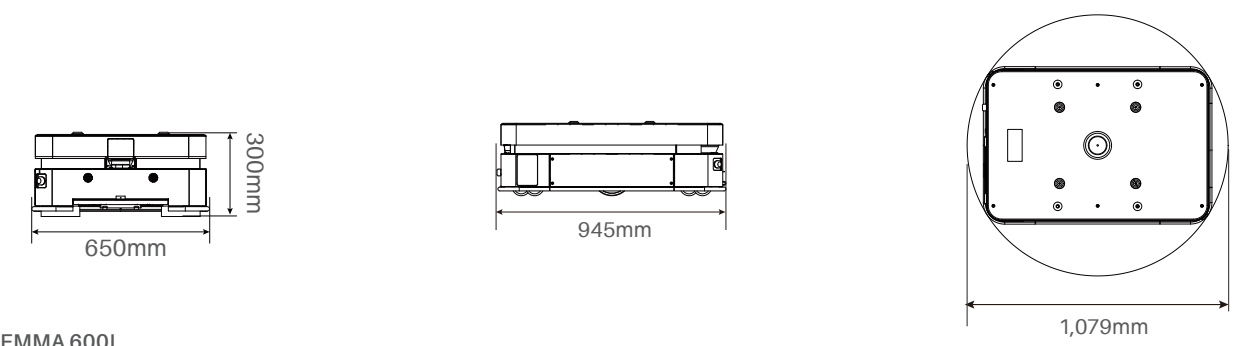


EMMA 1500K

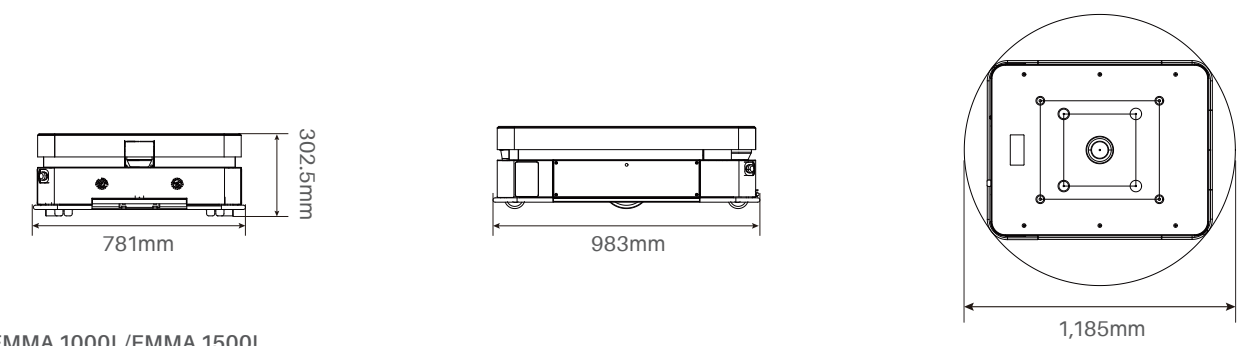
■ EMMA-L-Series



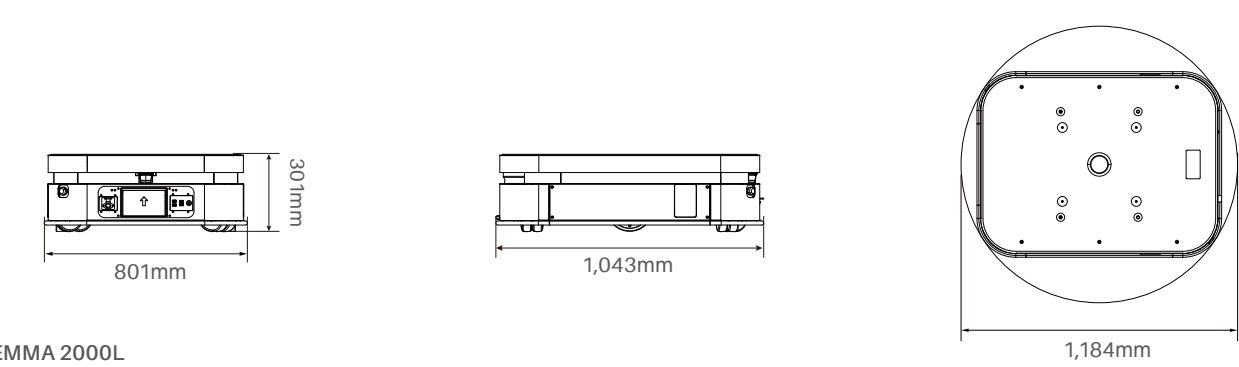
EMMA 400L



EMMA 600L




EMMA 1000L/EMMA 1500L




EMMA 2000L







Laser SLAM+Vision+IMU
Hybrid Navigation




≤800kg
Payload (kg)




±10mm/±1°
Position Accuracy



25mm
Ground Clearance



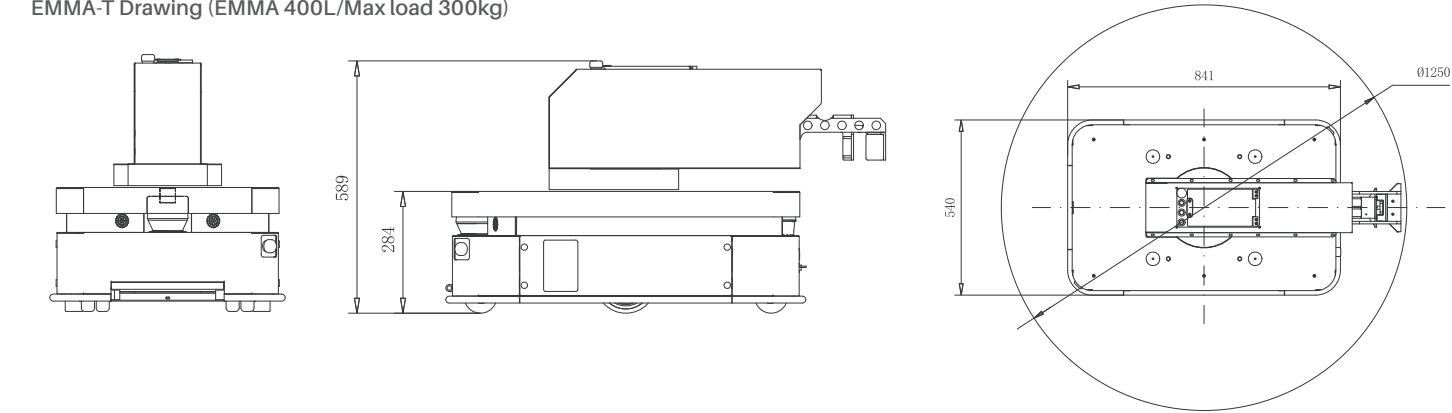
±110°
Rotation Range




>8h
Runtime


Basic Parameters	Basic platform EMMA 400L/ EMMA 600L/EMMA 1000L/ EMMA 1500L Ground clearance 25mm	Environment	Max. slop 5% Max. gap 35mm Temperature 0-40℃	Battery	Lithium-ion 48v 31.5Ah Charge time 1.5H Runtime >8H
Performance	Differential Drive Payload ≤800kg Position accuracy ±10mm	Safety	2 x Lidar 3D camera 3 x E- Stops Bumper Sound and light alarm	Tugging Device	Rotating range ±110° Automatically docking Trolley detection

EMMA-T Drawing (EMMA 400L/Max load 300kg)







OMNI 1.5T




Laser
SLAM+Vision+IMU
Hybrid Navigation




1,500
Payload(kg)




±2mm/±0.5°
Docking Accuracy



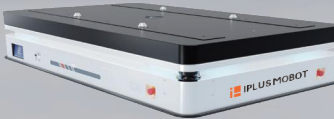
80
Lifting Stroke(mm)




≥8
Runtime(h)




360°
360°omni-direction
Drive Mode




OMNI 2.5T




Laser
SLAM+Vision+IMU
Hybrid Navigation




2,500
Payload (kg)




±2mm/±0.5°
Docking Accuracy




100
Lifting Stroke(mm)




≥8
Runtime(h)




360°
360°omni-direction
Drive Mode




OMNI 3.5T




Laser
SLAM+Vision+IMU
Hybrid Navigation




3,500
Payload(kg)




±2mm/±0.5°
Docking accuracy




60
Lifting Stroke(mm)




≥8
Runtime(h)




360°
360°omni-direction
Drive Mode




OMNI 5T




Laser
SLAM+Vision+IMU
Hybrid Navigation




5,000
Payload (kg)




100
Lifting Stroke(mm)



±2mm/±0.5°
Docking Accuracy









≥8h
Runtime(h)



360°
360°omni-direction
Drive Mode







渲染图修改



					
Laser SLAM+Vision+IMU	1,400	±10mm/1°	1,600	2,130	8
Hybrid Navigation	Payload(kg)	Docking Accuracy	Lifting Stroke (mm)	Aisle Width(mm)	Runtime (H)

Basic Parameters	Weight 680kg	Battery	Lithium-ion 24v 180Ah	Safety System	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop
	Dimensions (l*w*h)1,705*985*2,036mm				
	Touch screen 7"				

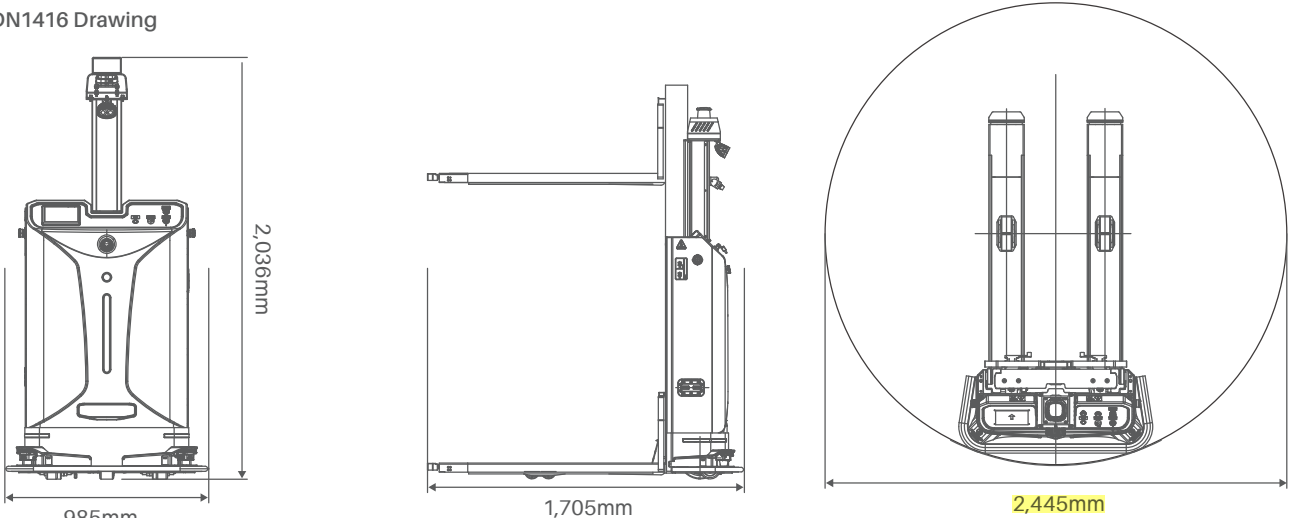
Performance	Rated payload 1,400 kg	Docking accuracy ±10mm/1°	Maximum speed (no load) 1.5m/s
	Lifting stroke 1,600mm		
	Load center 600mm		
	Aisle width 2,130mm		
		Max. Site area>100,000m²	Maximum speed (full load) 1.35m/s
		Max. drop of the passable gap: 10mm	Full load slope-climbing ability 3%
		Max. width of the passable gap: 30mm	No-load slope-climbing ability 5%

					
Laser SLAM+Vision+IMU	1,400	±10mm/±1°	1,600	2,410	6
Hybrid Navigation	Payload(kg)	Docking Accuracy	Lifting Stroke (mm)	Aisle Width(mm)	Runtime (H)

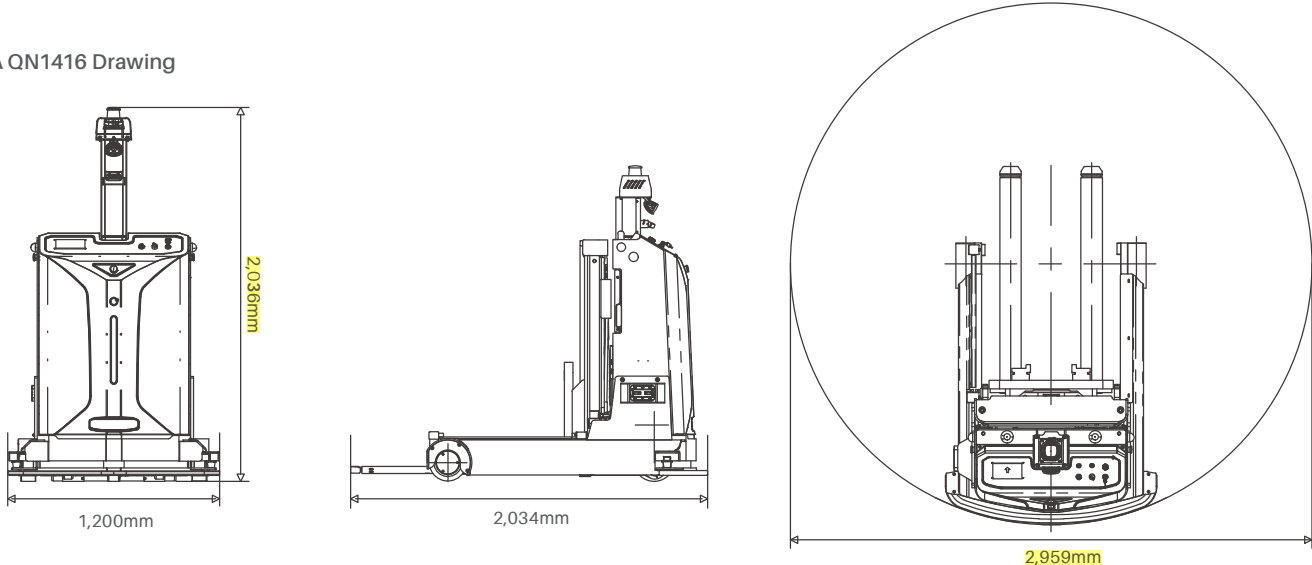
Basic Parameters	Weight 1,890kg	Battery	Lithium-ion	Safety System	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop
	Dimensions (l*w*h) 2,034*1,200*2,036mm				
	Touch screen 7"				

Performance	Rated payload 1,400 kg	Docking accuracy ±10mm/±1°	Maximum speed (no load) 1.5m /s
	Lifting stroke 1,600mm		
	Load center 500mm		
	Aisle width 2,410mm		
		Max. Site area> 100,000m²	Maximum speed (full load) 1.35m/s
		Max. drop of the passable gap: 10mm	Full load max. Gradability 3%
		Max. width of the passable gap: 30mm	No-load max. Gradability 5%







FOLA DN1416 Drawing



FOLA QN1416 Drawing



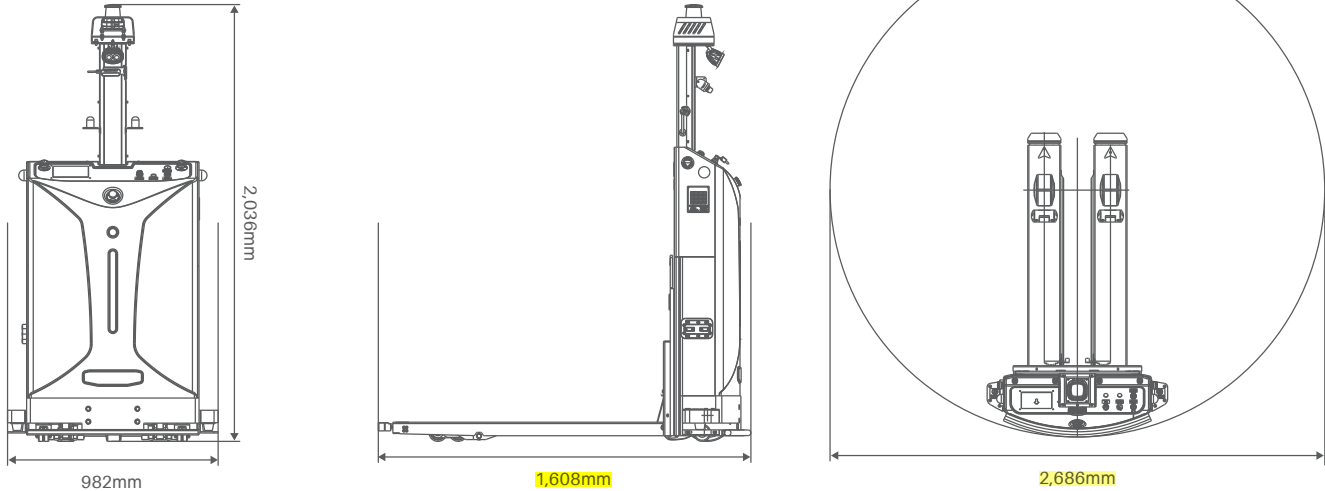
















					
Laser SLAM+Vision+IMU Hybrid Navigation	2,000 Payload(kg)	±10mm/1° Docking Accuracy	205 Lifting Stroke (mm)	2,100 Aisle Width(mm)	8 Runtime(H)

Basic Parameters	Weight 585kg	Battery	Lithium-ion Runtime>8h Charge time 2h	Safety System	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop
	Dimensions (l*w*h)1,608*982*2,036mm				
	Touch screen 7"				

Performance	Rated payload 2,000 kg	Docking accuracy ±10mm/1° Max. Site area> 100,000m² Max. drop of the passable gap: 10mm Max. width of the passable gap: 30mm	Maximum speed (no load) 1.5m/s Maximum speed (full load) 1.3m/s Full load max. Gradability3% No-load max. Gradability 5%
	Lifting stroke 205mm		
	Load center 600mm		
	Aisle width 2,100mm		


FOLA BN2001 Drawing




LUNA 5T			
	3D Laser SLAM+GPS+IMU Hybrid Navigation	±20mm/1° Docking Accuracy	≥6 Runtime(H)
			
	5T Payload	1,000,000m² Max. Site area	
LUNA 20T			
	3D Laser SLAM+GPS+IMU Hybrid Navigation	±30mm/1° Docking Accuracy	≥6 Runtime(H)
			
	20T Payload	1,000,000m² Max. Site area	
LUNA 30T			
	3D Laser SLAM+GPS+IMU Hybrid Navigation	±30mm/1° Docking Accuracy	≥6 Runtime(H)
			
	30T Payload	1,000,000m² Max. Site area	

Customized


MORA 12-UF




Laser SLAM+Vision+IMU
Hybrid Navigation




±1mm
Execution Precision




≥8
Runtime(H)



360°omni-direction
Drive Mode



≤0.5
Machine Vibration(g)



1,300mm
Arm Range

LDT



Laser
SLAM+Vision+IMU
Hybrid Navigation



±5mm
Docking Accuracy



2,410
Aisle Width(mm)



1,500
Payload(kg)




280mm
Lifting Stroke(mm)




<70db
Noise


FPD




Laser
SLAM+Vision+IMU
Hybrid Navigation




±2mm/0.2°
Loading and unloading
Repeatability




2.5/8
Charge/Runtime(H)



≥20,000
100 sets fleet daily task cycles




Class 5
Dust Free




1.5m/s
Max Speed


SMT/PCBA




2D Laser
SLAM+Vision+IMU
Hybrid Navigation




±2mm/0.5°
Docking Accuracy




≤3/≥10
Charge/Runtime(H)



100
Payload(kg)




200-1,100
Lifting Stroke(mm)



M-XL
(803/806/808/809)
Rack/trolley Size

PV




2D Laser
SLAM+Vision+IMU
Hybrid Navigation




12
Number of solar cell
cassettes per turnover




±5mm/0.2°
Loading and Unloading
Operation Accuracy



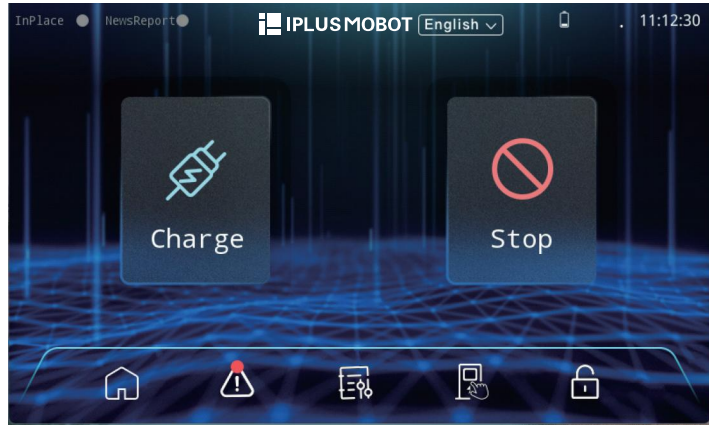
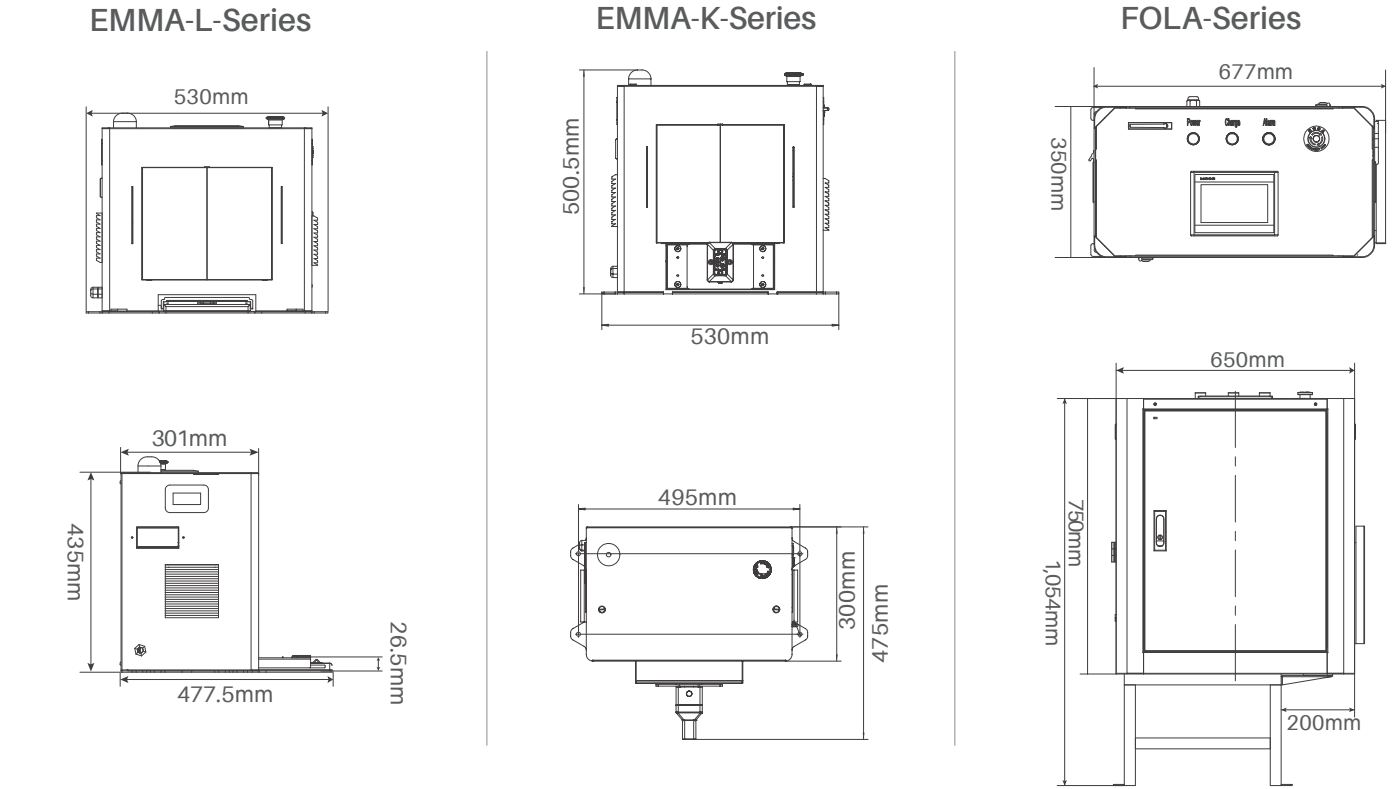
99.99%
Material Delivery Accuracy



2.5/8
Charge/Runtime(h)



0-1.5m/s
Running Speed

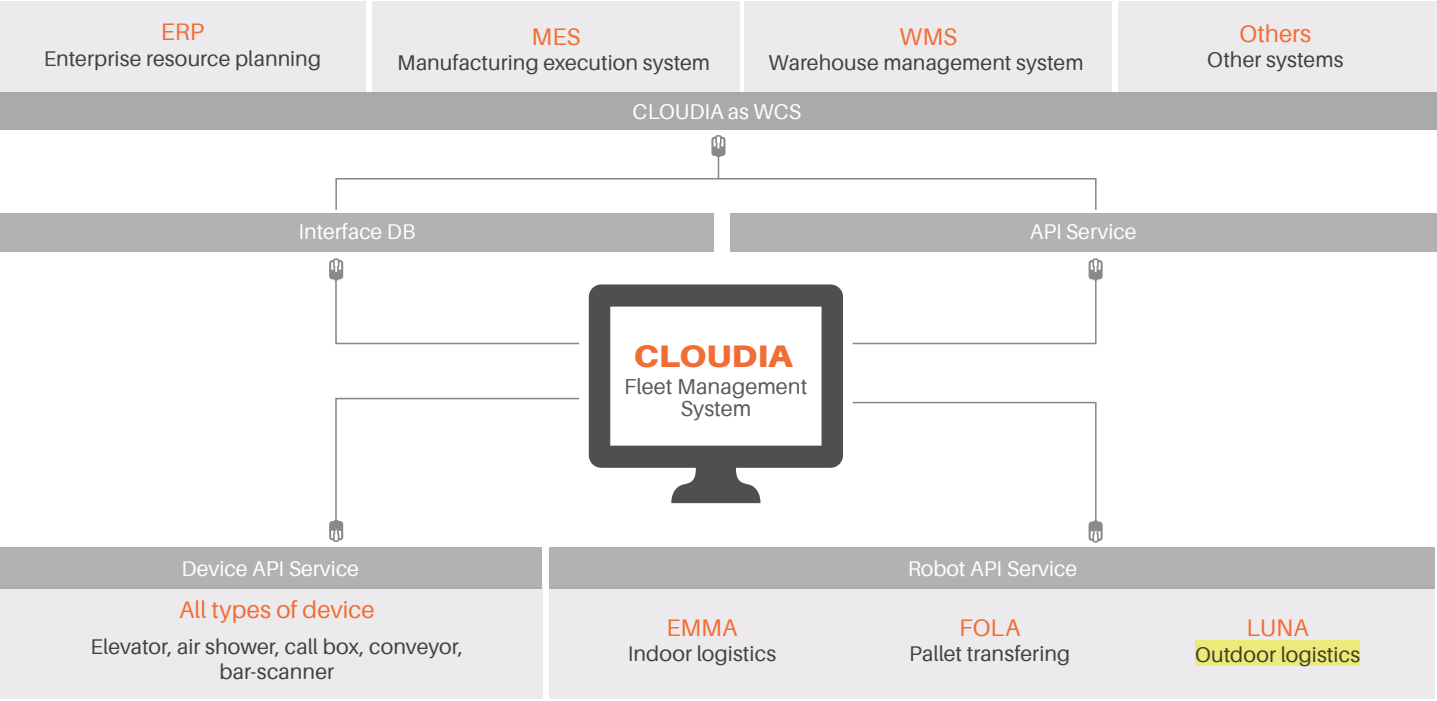


The powerful and elegant fleet control software CLOUDIA will help multiple robots work in a more efficient and collaborative way. With the advanced scheduling and planning algorithms, the system will assign different tasks to the right destination at the right time, minimize the idle time for each equipment of the warehouse/factory and save the overall logistics cost. Cloudia can also easily integrate with an existing Warehouse Management System(WMS), Manufacturing Execution System (MES) or Enterprise Resource Planning (ERP) for further automation so that all the tasks and movements can be organized as a whole to gain further efficiencies.

CLOUDIA

CARLY

CARLY (Customizable Action and Robot business Logic for deployment) is a robot control and operation teaching software launched by IPLUSMOBOT. Users can enter the robot IP in the browser to access directly and check the current status of the specified robot in real time. CARLY supports various integrated stand-alone operations such as instant control, map building management, line editing, action programming and debugging, history replay, and encyclopedia teaching. In addition to the operating interface, carly also includes a sophisticated backend system to ensure the robot runs intelligently and securely at all times.



Main Functions

Real-time status visualization

Multiple-AMR transportation tracking and real-time status display, real-time task status display,real-time display of external devices, real-time display of system status and statistical reports

Smart management of operation and maintenance

Convenient multiple maps management, smart and reliable traffic control, efficient material delivery, remote anomaly alert, software permission management

Logistics management digitization

Whole-logistics-process digitization, high transportation efficiency, efficient material delivery, remote anomaly alert, software permission management

Product Advantages

High-performance

The algorithm of task scheduling and traffic control is powerful, and the dispatch task of large-scale fleet of thousands of units can be easily accomplished.

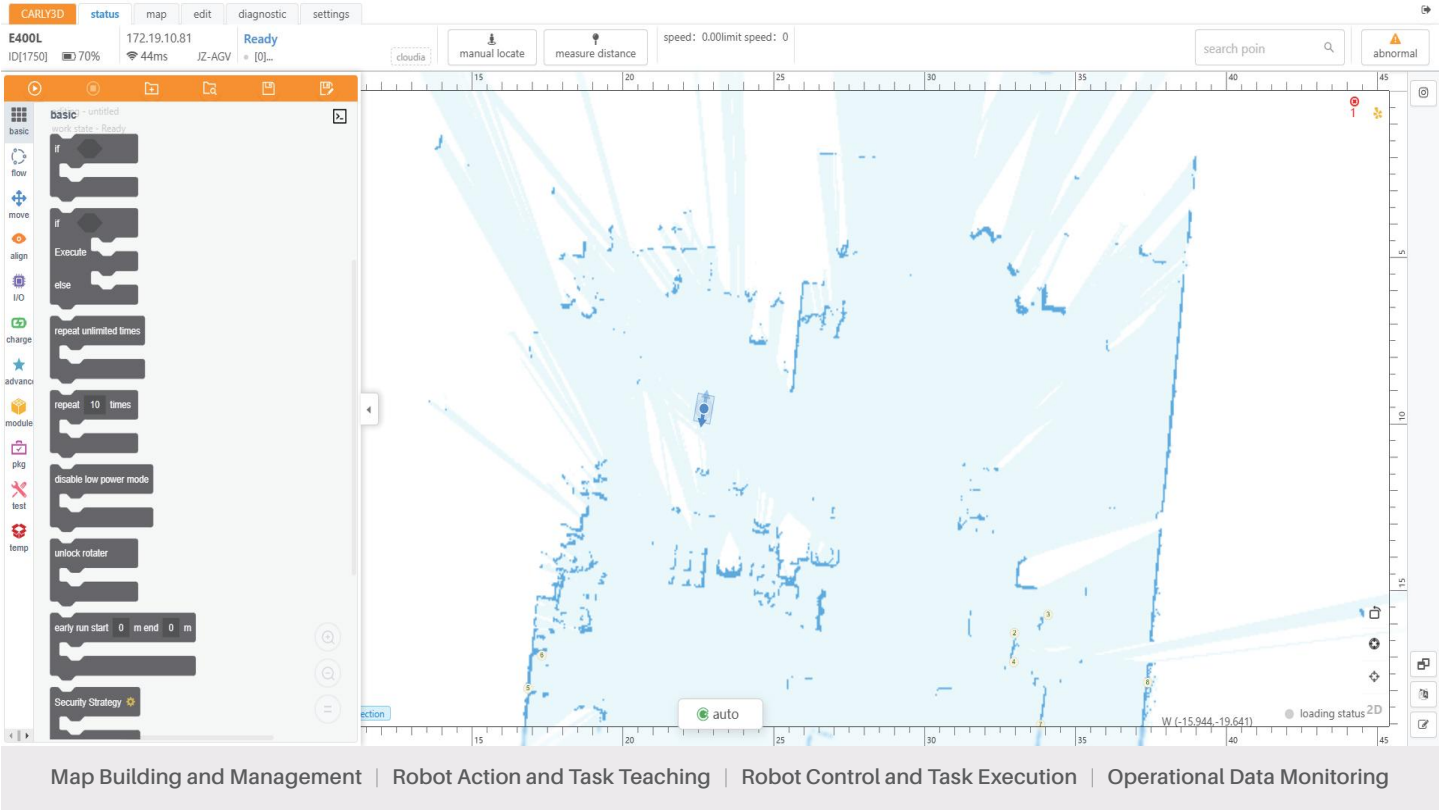
Real-time

Real-time display of task status and real-time summary of data

Closed loop

Seamless integration with WMS/MES/ERP system

Main Functions



Product Features

Intelligent Algorithm

Built-in state-of-the-art laser SLAM + vision + IMU fusion positioning algorithm

Stable and safe

Adopt automatic plus manual multiple security strategy. Conform to CE certification standards and perfectly adapt to human-robot collaboration scenarios.

Easy to use

100% graphical interface operation, intuitive and easy to use, with modular programming to teach the robot

Operation data visualization

Real-time visualization of robot operation data. Support historical data visual review.