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@iplusbot.com

IPLUS MOBOT

Intelligent Mobile Robots

Leading Logistics Innovation
for Smart Manufacturing

www.iplusmobot.com

Product Features

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

A Further Step Towards Smart Manufacturing

Innovation in Factory Logistics with Mobile Robot

IPLUSMOBOT is one of the global leading companies in the autonomous mobile robot field, ranking the first of China industrial logistics natural navigation AMR market occupancy. IPLUSMOBOT was founded in 2016, the headquarter is in Hangzhou and its subcompanies have been established in Japan and Shenzhen(China). It provides logistics automation, digital and intelligentized products to manufacturing industry, helps enterprises increase the configuration and operation efficiency, as well as circulation resources. So far, IPLUSMOBOT has served over 1,000 customers from various industries such as Semiconductor, FPD, Electronics, Lithium Battery, Photovoltaic, Automobile, Aviation, House Appliance, Pharmaceutical, Energy, Food etc.

EMMA-L-Series

Indoor General-Purpose Autonomous Mobile Robot Platform

The EMMA-L series (Easy Mobile Mate) covers autonomous navigation robots in the 400kg(881.9lbs) to 1,500 kg(3,306.9lbs) range. Based on laser SLAM, it integrates various positioning and navigation methods and can be equipped with different types of carriers to meet application demands. We utilize industry-leading fleet management systems and programming tools to offer customers a comprehensive one-stop solution for intelligent manufacturing.

Navigate Mode
Laser SLAM + vision + IMU

Optional Lift(mm)
60mm | 2.4in

Docking Accuracy
±2mm/±0.2° | ±0.08in/±0.2°

Payload
400-1,500kg | 882-3,307lbs

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(0.08in), it meets the flexibility and accuracy requirements of various industrial logistics scenarios.

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.

Wide Payload Range

The EMMA-L series products have a rated load capacity covering 400kg (881.9lbs) to 1,500kg(3,306.9lbs), which can meet the general material handling payload requirements in factory workshops.

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.

Good Application Scalability

The carrying EMMA-L 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.




	EMMA400L	EMMA600L	EMMA1000L	EMMA1500L
Length*width*height	841*540*276 / 284mm 33.1*21.2*10.8 / 11.1in	945*650*300mm 37.2*25.9*11.8in	983*781*300mm 38.7*30.7*11.8in	983*781*300mm 38.7*30.7*11.8in
Weight	135kg | 297lbs 150kg | 330lbs	190kg | 419lbs	290kg | 639lbs	290kg | 639lbs
Payload	400kg | 882lbs	600kg | 1,323lbs	1,000kg | 2,205lbs	1,500kg | 3,307lbs
Rotation diameter	942mm | 37in	1,079mm | 42.5in	1,185mm | 46.7in	1,185mm | 46.7in
Driving mode	Two-wheel differential drive			
Navigation mode	Laser SLAM + Vision + IMU			
Performance parameters				
Positioning accuracy	±10mm/±1° | ±0.39in/±1°			
Docking accuracy	±2mm/±0.2° | ±0.08in/±0.2° (environmental labeling assistance required)			
Maximum speed (no load)	1.5m/s | 3.4mph			1.2m/s | 2.7mph
Ground slope	≤5% (3°)			
Max. gap tolerance	≤35mm | ≤1.38in			
Max. ground elevation difference	≤10mm | ≤0.39in			
Carrier support				
Standard carrier	Lifting/rotary lifting			
Lifting height	75mm | 3in	60mm | 2.4in		
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			

OMNI

Laser SLAM+Vision+IMU
Hybrid Navigation

≥1,000kg
≥2,205lbs
Payload
(Customized)

±2mm/0.2°
±0,08in/0.2°
Docking Accuracy

Chassis+carrier
Operating type

360°omni-direction
Drive mode

8h
Runtime

Basic Parameters	Customized dimension Omnidirectional	**Sensor**	Laser * 2 Bottom camera Top camera	**Battery**	Lithium-ion（Customized） Runtime 8h
Performance	Payload(Customized) Docking accuracy ±2mm/0.2° ±0.08in/0.2°		Position accuracy ±10mm/1° ±0.39in/1°		Laser fov 360°
Safety System	Laser obstacle avoidance Sound and light alarm		3D camera(Optional) Bumper		Emergency stop

FOLA QN1416

Laser SLAM+Vision+IMU
Hybrid Navigation

1,400kg
3,086lbs
Payload

±10mm/±1°
±0.39in/±1°
Docking Accuracy

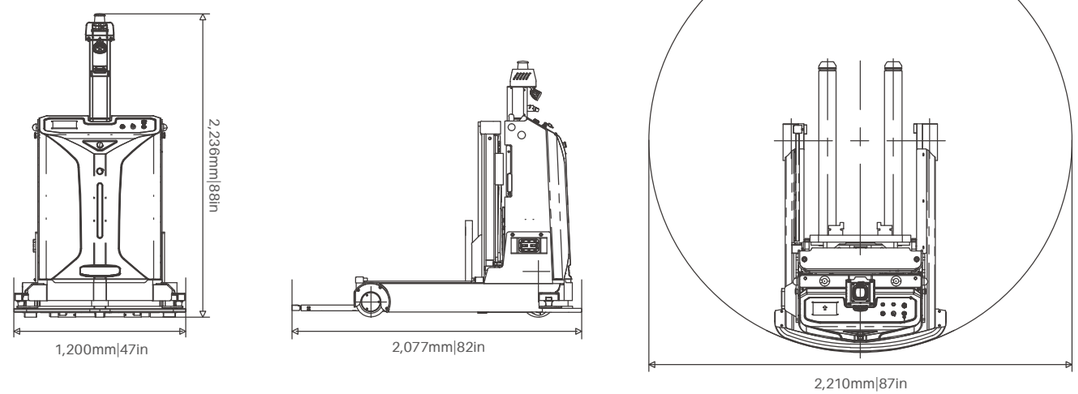
1,600mm
63in
Lift Height

2,410mm
95in
Aisle Width

6h
Runtime

Basic Parameters	Weight 1,890kg	4,167lbs Dimension (l*w*h) 2,077*1,200*2,236mm 81.8*47.2*88in Touch screen 7"	**Battery**	Lithium-ion Runtime >6h Charge time 2h	**Safety System**	Laser obstacle avoidance + sound & light alarm + safety edge + deep visual obstacle + emergency stop
Performance	Rated payload 1,400 kg | 3,086lbs Lift height 1,600mm | 63in Load center 500mm | 19.7in Aisle width 2,410mm | 95in		Docking accuracy ±10mm/±1° | ±0.39in/±1° Max. Site area> 100,000m² Max. drop of the passable gap: 10mm | 0.39in Max. width of the passable gap: 30mm | 1.18in		No-load speed 1.5m/s | 3.4mph Full load speed 1.35m/s | 3mph Full load max. Gradability 3% No-load max. Gradability 5%	

FOLA QN1416 Drawing



FOLA DN1416

Laser SLAM+Vision+IMU
Hybrid Navigation

1,400kg
3,086lbs
Payload

±10mm/1°
±0.39in/1°
Docking Accuracy

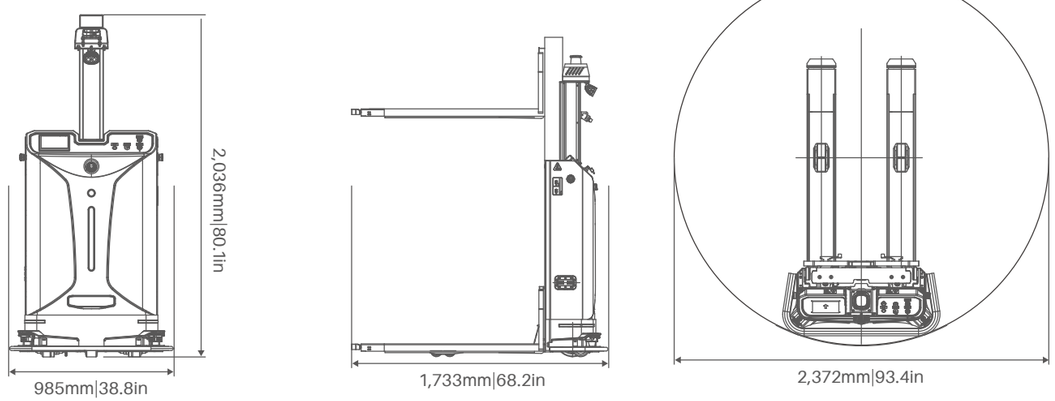
1,600mm
63in
Lift Height

2,120mm
83.5in
Aisle Width

8h
Runtime

Basic Parameters	Weight 680kg | 1,499lbs Dimensions (l*w*h)1,733*985*2,036mm 68*38.8*80in Touch screen 7”	**Battery**	Lithium-ion Runtime >8h Charge time 2h	**Safety System**	Laser obstacle avoidance + sound & light alarm + safety edge + deep visual obstacle + emergency stop
Performance	Rated payload 1,400 kg | 3,086lbs Lift height 1,600mm | 63in Load center 600mm | 23.6in Aisle width 2,120mm | 83.5in		Docking accuracy ±10mm / ±1° | ±0.39in / ±1° Max. Site area> 100,000m² Max. drop of the passable gap: 10mm | 0.39in Max. width of the passable gap: 30mm | 1.18in		No-load speed 1.5m/s|3.4mph Full load speed1.35m/s|3mph Full load slope-climbing ability 3% No-load slope-climbing ability 5%

FOLA DN1416 Drawing



FOLA BN2001

Laser SLAM+Vision+IMU
Hybrid Navigation

2,000kg
4,409lbs
Payload

±10mm/1°
±0,39in/1°
Docking Accuracy

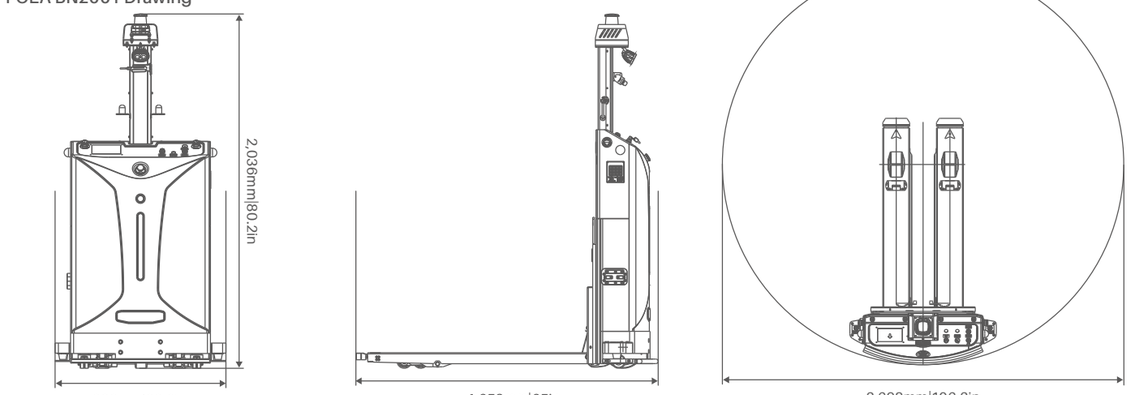
120mm
4.7in
Lift Height

2,100mm
82.7in
Aisle Width

8h
Runtime

Basic Parameters	Weight 585kg | 1,290lbs Dimensions (l*w*h)1,652*982*2,036mm 65*38.7*80.2in Touch screen 7”	**Battery**	Lithium-ion 24v 180Ah Runtime>8h Charge time 2h	**Safety System**	Laser obstacle avoidance + sound & light alarm + safety edge + deep visual obstacle + emergency stop
Performance	Rated payload 2,000 kg | 4,409lbs Lift height 120mm | 4.7in Load center 600mm | 23.6in Aisle width 2,100mm | 82.7in		Docking accuracy ±10mm/±1° | ±0.39in/±1° Max. Site area> 100,000m² Max. drop of the passable gap: 10mm | 0.39in Max. width of the passable gap: 30mm | 1.18in		No-load speed 1.5m/s | 3,4mph Full load speed 1.3m/s | 2.9mph Full load max. Gradability3% No-load max. Gradability 5%

FOLA BN2001 Drawing



MORA 300

Laser+QR code
+Reflector
Hybrid Navigation

12kg
26lbs
CollaborativeRobots Payload
(Customized)

≤0.5g
Machine
Vibration

≤1,340mm
≤52.8in
Rotation
Radius

±1mm
±0.04in
Position Accuracy

≥8h
Runtime

Basic Parameters	Dimension (l*w*h) 1,200×692×1,130mm 47.2*27.2*44.5in Bidirectional weight 260kg | 573lbs	Battery	Lithium-ion 48v 70Ah Charge time 2h Runtime ≥8h	Safety System	Standard dual lasers; front/rear 3D cameras; bumper; lasers for vertical protection; single-point laser (optional); hole detection; sound and light alarm.
Performance	Manipulator rated load 12kg | 26lbs (Customized) Machine vibration ≤0.5g | ≤0,01lbs Repeat position accuracy ±1mm | ±0.04in		Noise ≤75db Ground flatness 10mm/m² 0.3in/m²		Max. slope 5% Max. drop of the passable gap: 10mm | 0.39in Max. width of the passable gap: 35mm | 1.38in
Communication	IEEE 802.11 a/g/b/n/ac/ax 2.4/5GHz,5G optional				

Accurate
Built-in vision system
Repeat position accuracy of ±1mm(±0.04in)

Interconnection
Seamless connection of robot fleets with WMS and MES; digital interconnection of multiple software, devices, and facilities

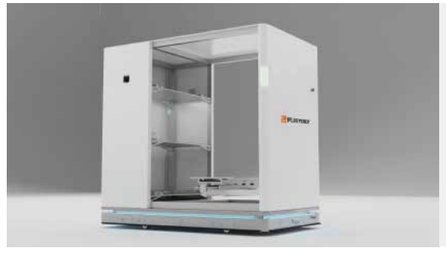
Safe
Dual laser obstacle avoidance, 360° anti-collision mechanism, no need for guardrail, stop in case of external force

User friendly
Visual programming/scratch programming, access from phone and tablet, ease of use

Quick integration
Modular system for fast integration of various applications

Flexible
Smart autonomous navigation, laser detection distance of 30m(98.4ft), quick stop and obstacle avoidance, adaptation to mixed human-machine operations

Customized



2D Laser+vision+inertia
Hybrid Navigation

±5mm/1° | ±0.2in/1°
Repeatability

3/≥6h
Charge/Runtime

1,000kg | 2,204lbs
Payload

500-2,020mm | 19.7-79.5in
Optional Lift

360°
Omni directional
Bottom

Laser+vision+inertia
Hybrid Navigation

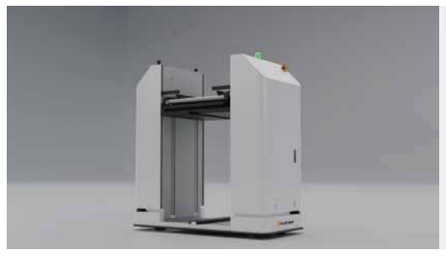
±2mm/0.2° | ±0.08in/0.2°
Loading and unloading
Repeatability

2.5/8h
Charge/Runtime

≥20,000
100 sets fleet daily task cycles

Class 5
Dust free

1.5m/s | 3.4in/s
Max speed



2D Laser+vision+inertia
Hybrid Navigation

±2mm/0.5° | ±0,08in/0.5°
Docking accuracy

≤3 / ≥10h
Charge/Runtime

100kg | 220lbs
Payload

200-1,100mm | 7.9-43.3in
Optional Lift

M-XL
Rack/trolley size

3D Laser+GNSS+vision+inertia
Hybrid Navigation

1.5cm|0.59in horizontally
1.5cm|0.59in vertically
Dedicated docking accuracy

2.5cm|1in horizontally
2.5cm|1in vertically
Parking accuracy

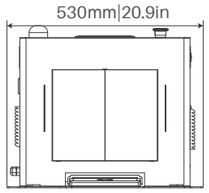
1,000,000m²
Max. Site area

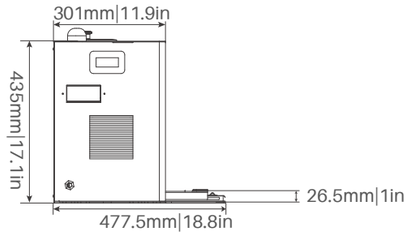
10km/h|6.2mph
speed

100t|220,462lbs
Payload

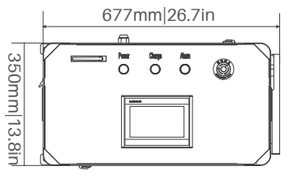
Charging Station

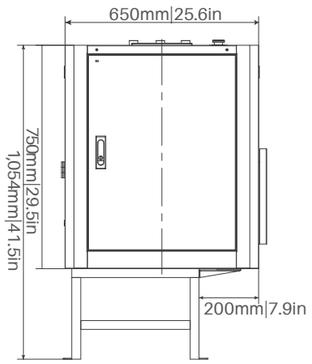
EMMA Charging Station Drawing





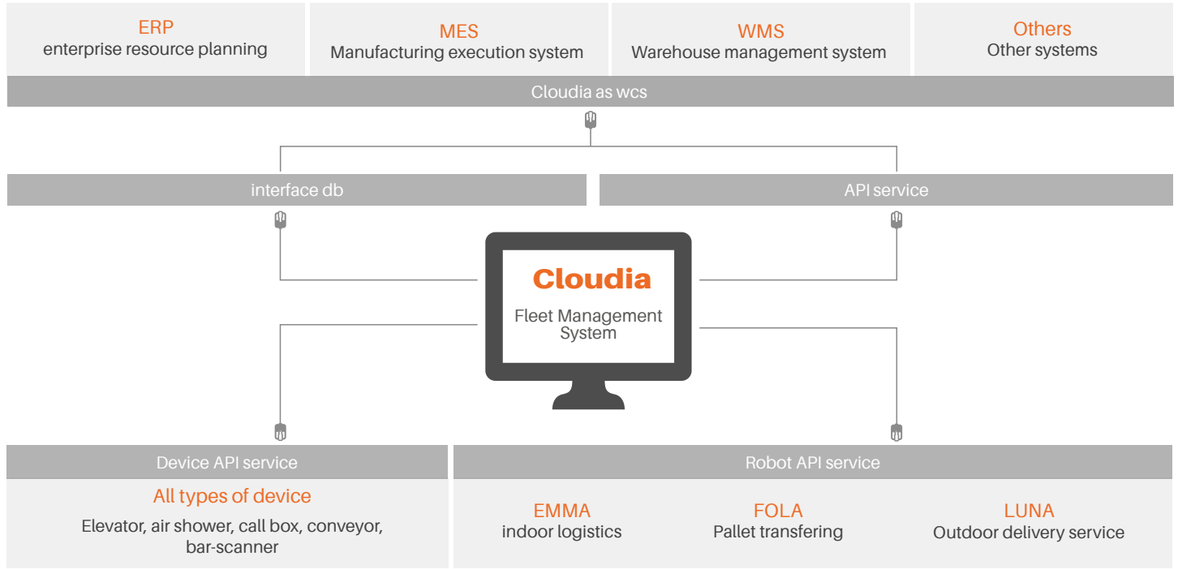
FOLA Charging Station Drawing





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



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

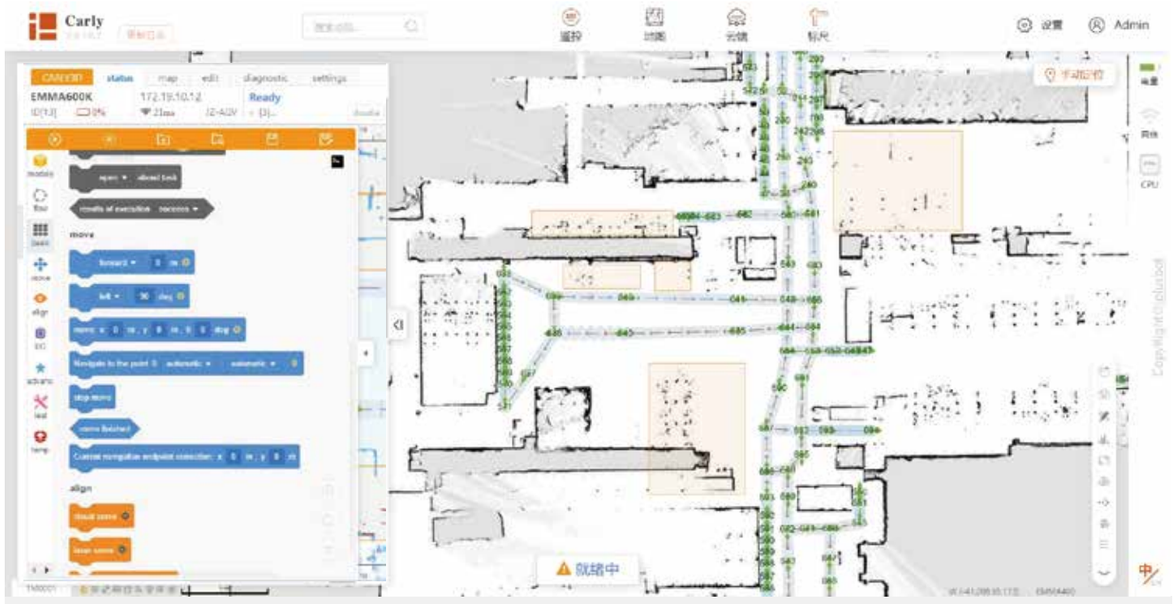
Closed loop

Seamless integration with WMS/MES/ERP system

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



Map Building and Management | Robot Action and Task Teaching | Robot Control and Task Execution | Operational Data Monitoring

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.

NOTE