

AUTOMATE YOUR FUTURE WITH NEXT MOBILE INNOVATION

INTELLIGENT MOBILE ROBOTS

LEADING LOGISTICS INNOVATION FOR SMART
MANUFACTURING



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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.



Product Features

 End-to-end Autonomous Material Transporting

 Dynamic Transportation in Human-vehicle-mixed Environment

 Customization Ability

 Hybrid Navigation Technology

■ EMMA K Series



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

	Hybrid Navigation Laser SLAM + Vision + IMU
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	Payload(kg) 400-1,500kg
	Type Lifting/Lifting with rotating plate

	Lifting Stroke 60mm
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	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				
Position accuracy				±30mm
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 series (Easy Mobile Mate) consists of AMRs with payload from 400kg to 2,000kg. EMMA L series AMRs also provide a lifting device without rotating plate as an option. EMMA L series AMRs can easily add various sensors or mechanisms inside or on the top for customized applications. Each AMR in this family has an optional CE complied type.

Hybrid Navigation Laser SLAM + Vision + IMU	Lifting Stroke 60mm	Docking Accuracy $\pm 2\text{mm}/\pm 0.5^\circ$
Payload(kg) 400kg-2,000kg	Charge Time $\leq 1.5\text{h}$	Runtime $\geq 8\text{h}$

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 $\pm 2\text{mm}$, 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.

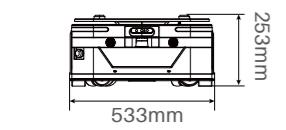
Good Environmental Adaptability

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.

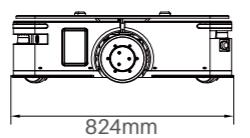


	EMMA 400L	EMMA 600L	EMMA 1000L	EMMA 1500L	EMMA 2000L				
Length*width*height	841*540*286 mm	945*650*300mm	983*781*302.5mm	983*781*302.5mm	1,043*801*301mm				
Weight	150kg	190kg	290kg	290kg	290kg				
Payload	400kg	600kg	1,000kg	1,500kg	2,000kg				
Pivoting diameter	942mm	1,079mm	1,185mm	1,185mm	1,184mm				
Driving mode	Differential drive								
Hybrid navigation	Laser SLAM + Vision + IMU								
Performance parameters									
Position accuracy	$\pm 30\text{mm}$								
Docking accuracy	$\pm 2\text{mm}/\pm 0.5^\circ$ (with QR code)								
Maximum speed (no load)	1.5m/s								
Ground slope	$\leq 5\%$ (3°)								
Max. gap tolerance	$\leq 35\text{mm}$								
Max. ground elevation difference	$\leq 10\text{mm}$								
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	$\geq 8\text{h}$								
Full charging time	$\leq 1.5\text{h}$								

■ EMMA K Series



EMMA 400K



EMMA 600K

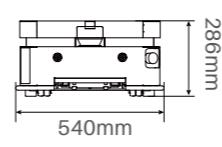


EMMA 1000K

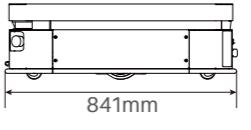


EMMA 1500K

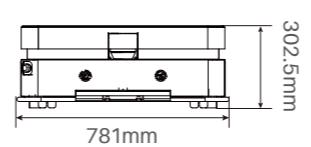
■ EMMA L Series



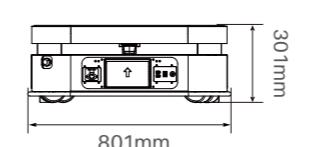
EMMA 400L



EMMA 600L



EMMA 1000L/EMMA 1500L



EMMA 2000L

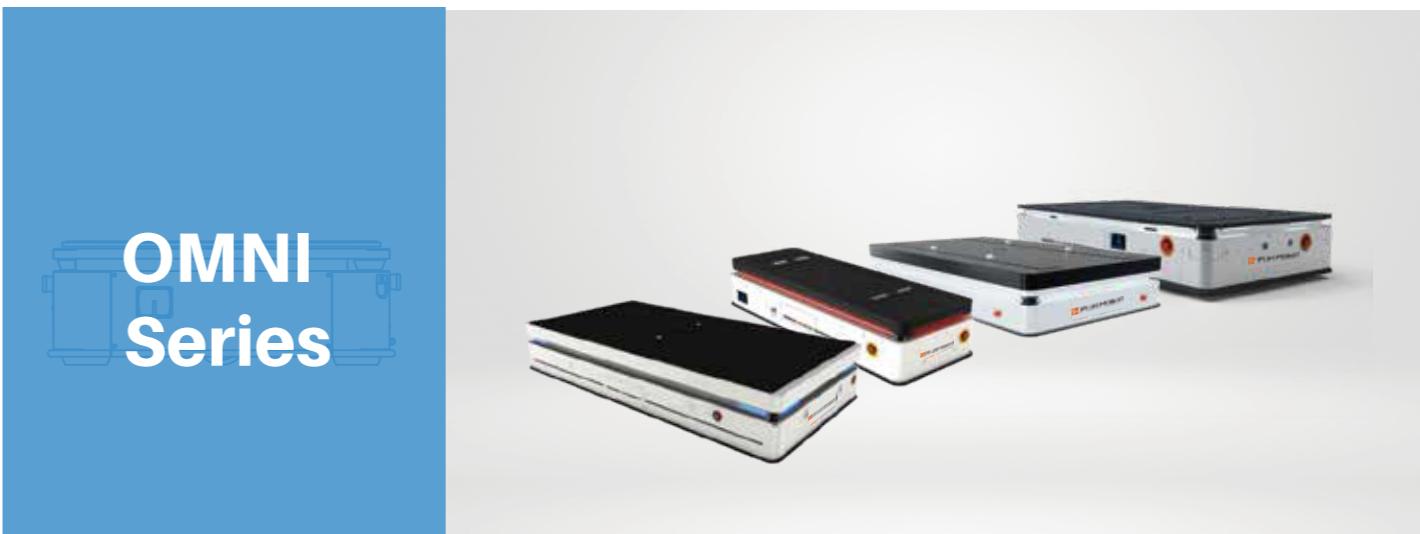
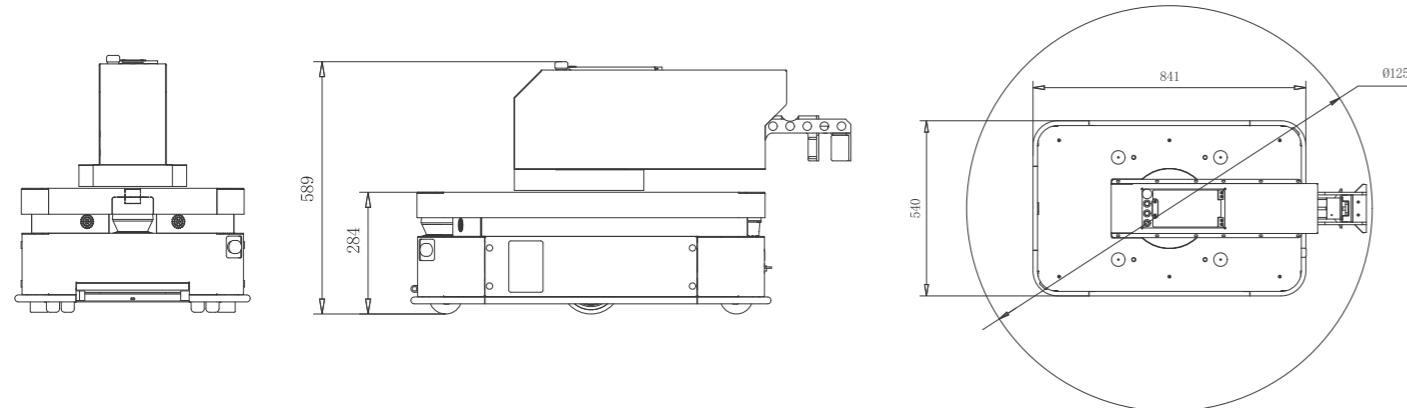


	Laser SLAM+Vision+IMU Hybrid Navigation		Payload		Position Accuracy		25mm		±110°		>8h
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Basic Parameters	Basic platform EMMA 400L/ EMMA 600L/EMMA 1000L/ EMMA 1500L Ground clearance 25mm	Environment	Max. slope 5% Max. gap 35mm Temperature 0-40°C	Battery	Lithium-ion 48v 31.5Ah Charge time 1.5H Runtime >8H
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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
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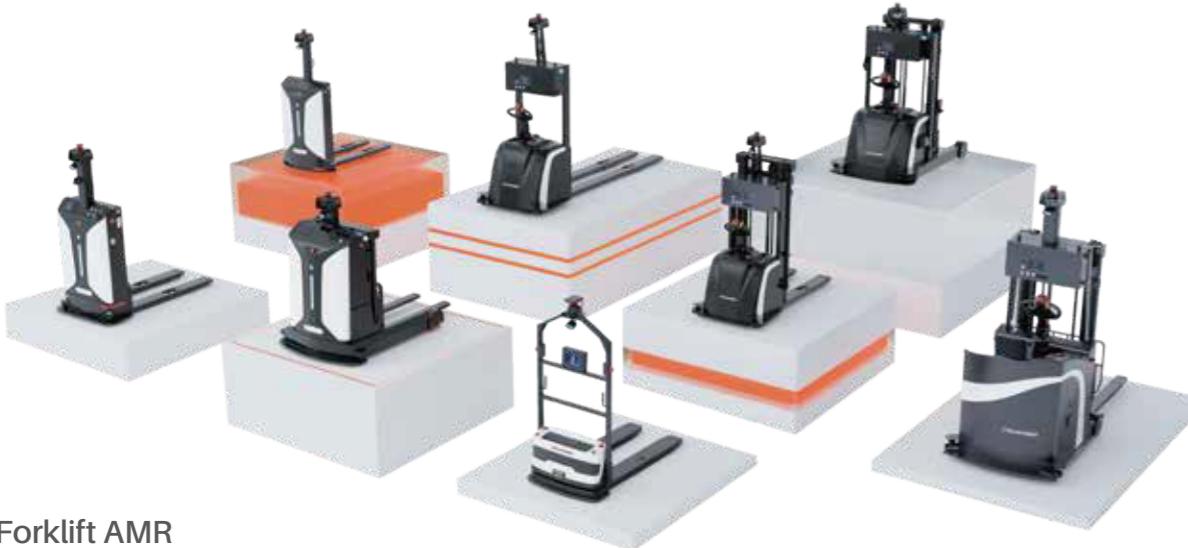
EMMA-T Drawing (EMMA 400L/Max load 300kg)



	OMNI 1.5T		Laser SLAM+Vision+IMU Hybrid Navigation		1,500 Payload(kg)		±2mm/±0.5°		≥8 Runtime(h)
	OMNI 2.5T		Laser SLAM+Vision+IMU Hybrid Navigation		2,500 Payload (kg)		±2mm/±0.5°		≥8 Runtime(h)
	OMNI 3.5T		Laser SLAM+Vision+IMU Hybrid Navigation		3,500 Payload(kg)		±2mm/±0.5°		≥8 Runtime(h)
	OMNI 5T		Laser SLAM+Vision+IMU Hybrid Navigation		5,000 Payload (kg)		±2mm/±0.5°		≥8 Runtime(h)

- FOLA

Forklift AMR



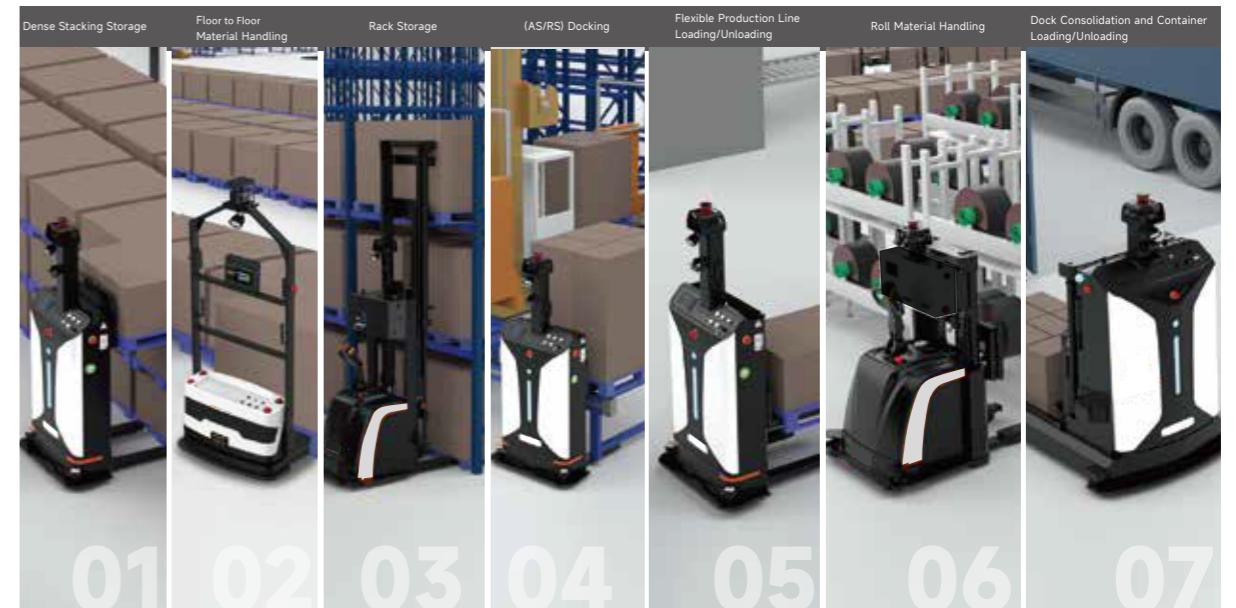
Forklift AMR

FOLA (Forklift Of Lite Automation) autonomous forklift AMR adopts the world's leading multi-sensor fusion SLAM natural navigation technology, enabling autonomous navigation and real-time precise positioning in large-scale indoor. By integrating various types of forklifts—such as Pallet Jack, Pallet Stacker, Reach Truck, Counterbalance type—it facilitates automated pallet picking and unloading, autonomously completing tasks. These forklifts are widely used for handling palletized materials in manufacturing environments and logistics warehouses, significantly aiding users in advancing the intelligent transformation of factory logistics.



	FOLA BN2001	FOLA BN1501T	FOLA BN3001	FOLA DN1416	FOLA DN2030	FOLA QN1416	FOLA QN2030	FOLA PN1530	FOLA SN300	FOLA SN600
Dimensions(l*w*h)	1,608*982*2,036mm	1,832*884*2,025mm	2,181*1162*2,240mm	1,705*980*2,036mm	2,313*1,163*2,236mm	2,034*1,200*2,036mm	2,833*1,250*2,385mm	2,827*1,166*2,619mm	1,124*428*1,062mm (standard) 1,124*428*1,840mm (high version)	1,435*600*785mm (standard) 1,435*600*1,760mm (high version)
Weight	585kg	535kg	950kg	680kg	1,400kg	1,890kg	2,450kg	2,365kg	185kg	240kg
Payload	2,000kg	1,500kg	3,000kg	1,400kg	2,000kg	1,400kg	2,000kg	1,500kg	300kg	600kg
Gravity center distance	600mm	600mm	600mm	600mm	600mm	500mm	500mm	500mm	/	/
Lift stroke	205mm	180mm	205mm	1,600mm	3,000mm	1,600mm	3,000mm	3,000mm	300mm	60mm
Hybrid navigation	Laser SLAM + Vision + IMU									
Main driving mode	Forward driving									
Maximum speed (full load/no load)	1.35 / 1.5m/s								1.2 / 1.5m/s	1.2 / 1.5m/s
Repeat position accuracy	$\pm 10\text{mm}/\pm 1^\circ$									
Pallet identification accuracy	$\pm 10\text{mm}$									
Charging time/Runtime	$\leq 2\text{h}/\geq 8\text{h}$	$\leq 2\text{h}/\geq 6\text{h}$	$\leq 2\text{h}/\geq 8\text{h}$	$\leq 2\text{h}/\geq 8\text{h}$	$\leq 2\text{h}/\geq 6\text{h}$	$\leq 2\text{h}/\geq 6\text{h}$	$\leq 2\text{h}/\geq 6\text{h}$	$\leq 2\text{h}/\geq 6\text{h}$	$\leq 1.5\text{h}/\geq 8\text{h}$	$\leq 1.5\text{h}/\geq 8\text{h}$
Safety system	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm + Bumper + Emergency stop									

Application Scenarios



01 02 03 04 05 06 07



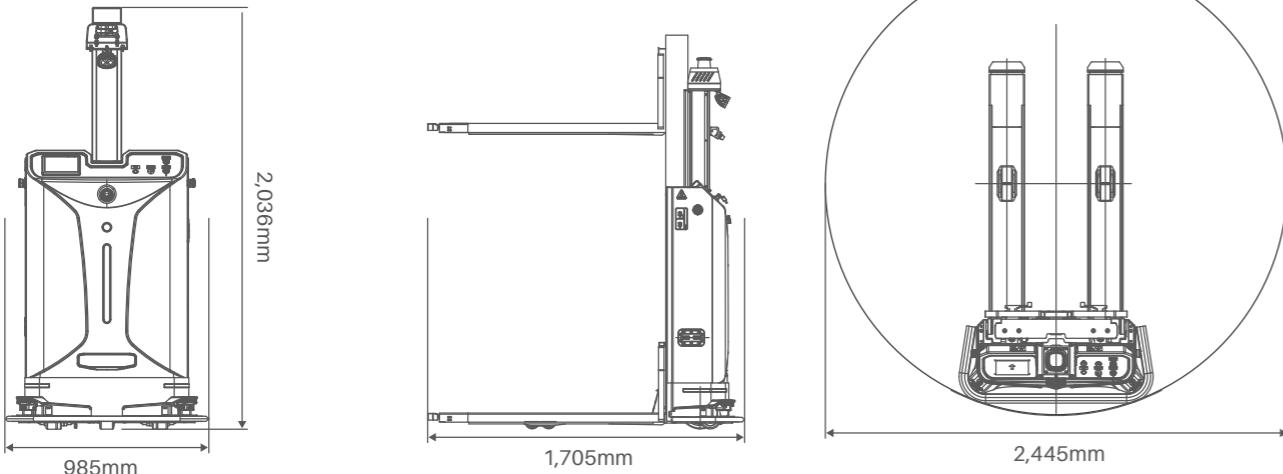
**FOLA
DN1416**

Laser SLAM+Vision+IMU Hybrid Navigation	1,400 Payload(kg)	$\pm 10\text{mm}/\pm 1^\circ$ Repeat Position Accuracy	1,600 Lifting Stroke(mm)	2,130 Aisle Width(mm)	8 Runtime (h)

Basic Parameters	Weight 680kg Dimensions (l*w*h) 1,705*985*2,036mm Touch screen 7"	Battery	Lithium-ion 24v 180Ah Runtime >8h Charge time 2h	Safety System	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop
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Performance	Rated payload 1,400 kg Lifting stroke 1,600mm Load center 600mm Aisle width 2,130mm	Repeat position accuracy $\pm 10\text{mm}/\pm 1^\circ$ Max. Site area>100,000m ² 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) 1.35m/s Full load slope-climbing ability 3% No-load slope-climbing ability 5%
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FOLA DN1416 Drawing



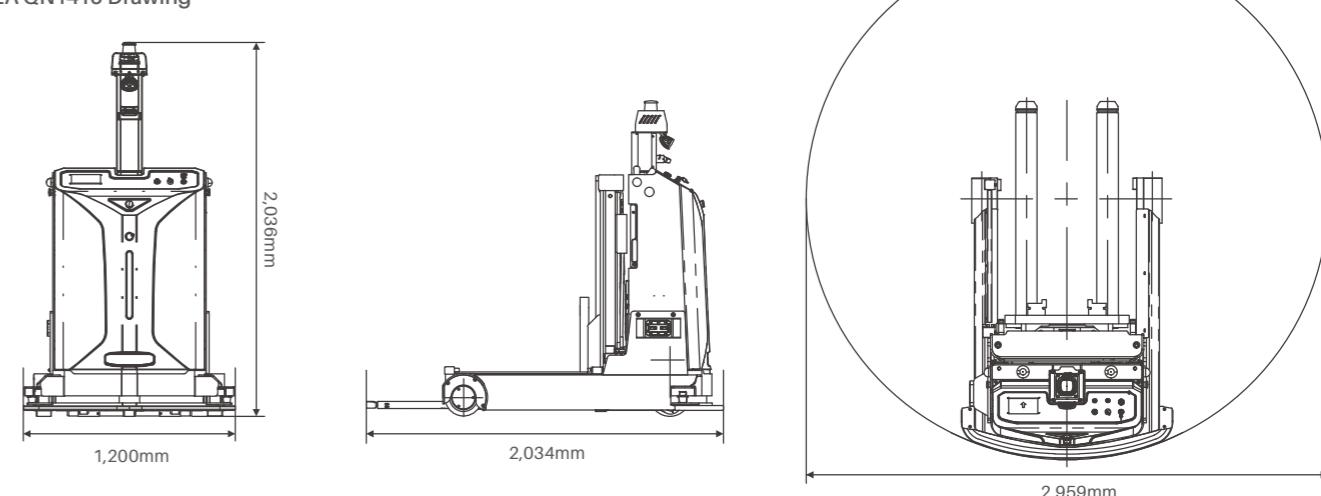
**FOLA
QN1416**

Laser SLAM+Vision+IMU Hybrid Navigation	1,400 Payload(kg)	$\pm 10\text{mm}/\pm 1^\circ$ Repeat Position Accuracy	1,600 Lifting Stroke(mm)	2,410 Aisle Width(mm)	6 Runtime (h)

Basic Parameters	Weight 1,890kg Dimensions (l*w*h) 2,034*1,200*2,036mm Touch screen 7"	Battery	Lithium-ion 24v 210Ah Runtime >6h Charge time 2h	Safety System	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop
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Performance	Rated payload 1,400 kg Lifting stroke 1,600mm Load center 500mm Aisle width 2,410mm	Repeat position accuracy $\pm 10\text{mm}/\pm 1^\circ$ Max. Site area> 100,000m ² 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) 1.35m/s Full load max. Gradability 3% No-load max. Gradability 5%
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FOLA QN1416 Drawing





Laser SLAM+Vision+IMU Hybrid Navigation	300 Payload(kg)	± 30 Position Accuracy(mm)	300 Lifting Stroke(mm)	1,801 Pivoting Diameter(mm)	8 Runtime (h)

Basic Parameters	Weight 185kg Dimensions (l*w*h) 1,124*428*1,062mm (standard) 1,124*428*1,840mm (high version) Touch screen 7"	Battery	Lithium iron phosphate battery Runtime≥8h Charge time≤1.5h	Safety System	Laser obstacle avoidance + 3D camera+ Front bumper+Fork bumper
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Performance	Rated payload 300kg Lift stroke 300mm Pivoting diameter 1,801mm	Position accuracy ± 30 mm Maximum speed (no load) 1.5m/s Maximum speed (full load) 1.2m/s
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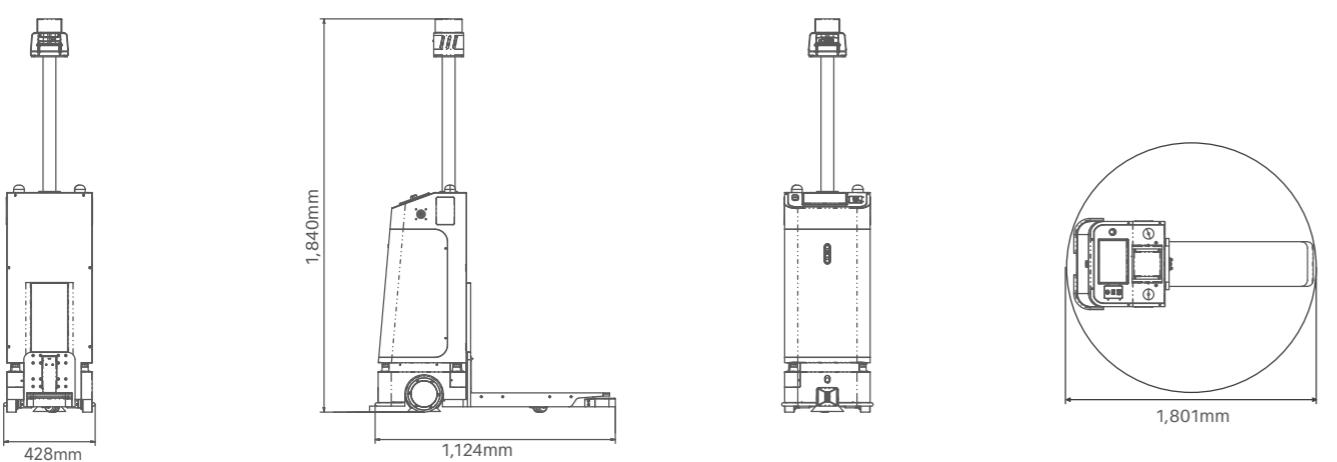


Laser SLAM+Vision+IMU Hybrid Navigation	600 Payload(kg)	± 30 Position Accuracy(mm)	60 Lifting Stroke(mm)	1,540 Pivoting Diameter(mm)	6 Runtime (h)

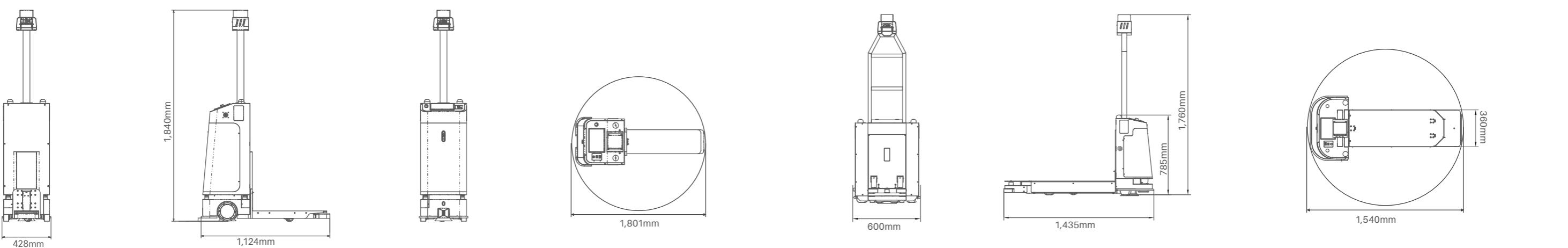
Basic Parameters	Weight 240kg Dimensions(l*w*h) 1,435*600*785mm (standard) 1,435*600*1,760mm (high version) Touch screen 7"	Battery	Lithium iron phosphate battery Runtime≥8h Charge time≤1.5h	Safety System	Laser obstacle avoidance + 3D camera+ Front bumper+Fork bumper
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Performance	Rated payload 600kg Lift stroke 60mm Pivoting diameter 1,540mm	Position accuracy ± 30 mm Maximum speed (no load) 1.5m/s Maximum speed (full load) 1.2m/s
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FOLA SN300 Drawing



FOLA SN600 Drawing



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



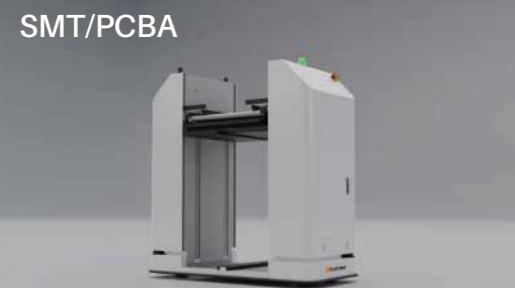
	Laser SLAM+Vision+IMU Hybrid Navigation		±5mm Docking Accuracy		2,410 Aisle Width(mm)
	1,500 Payload(kg)		280mm Lifting Stroke(mm)		<70db Noise

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

LUNA Series



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		

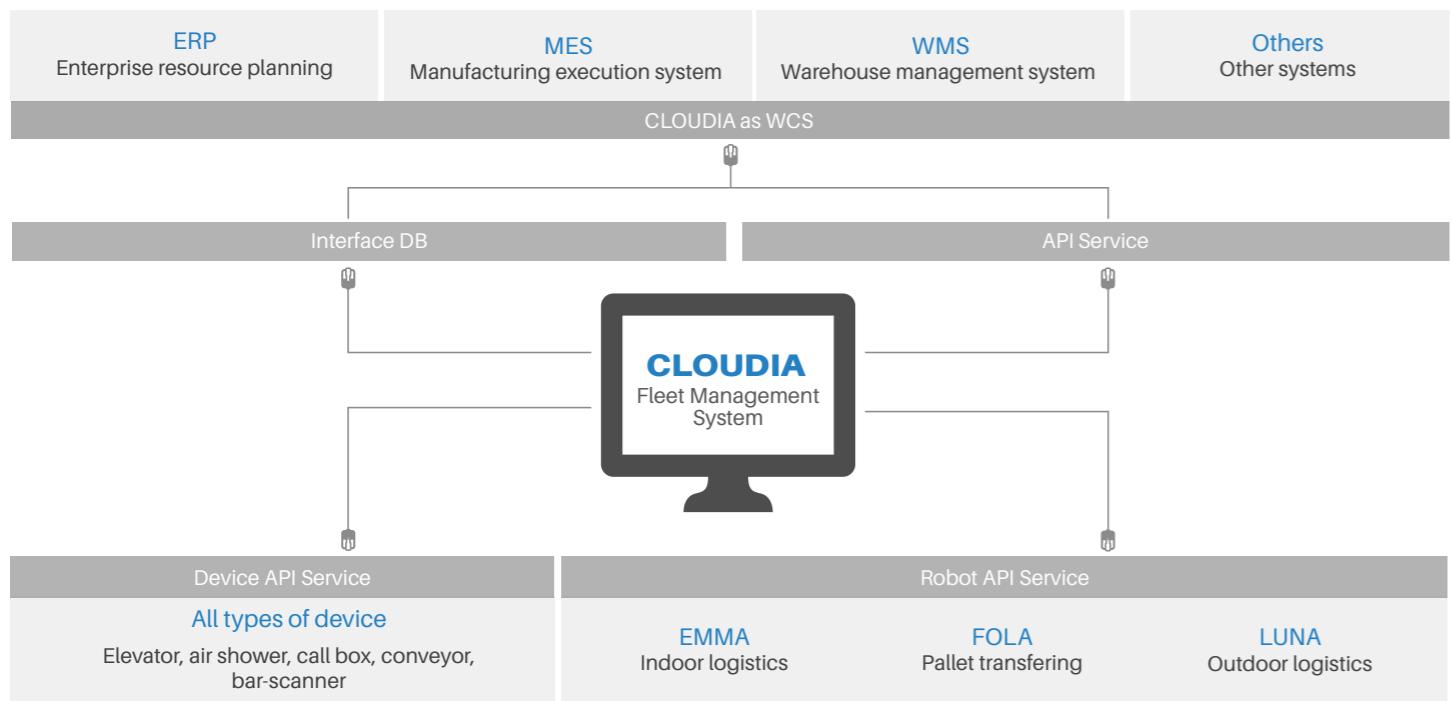
LUNA 30T



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

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

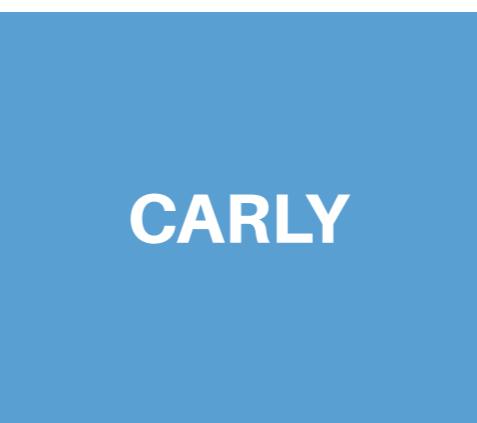
The algorithm of task scheduling and traffic control is powerful, and the dispatch task of large-scale fleet of thousands of units can be easily accomplished.

Real-time

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

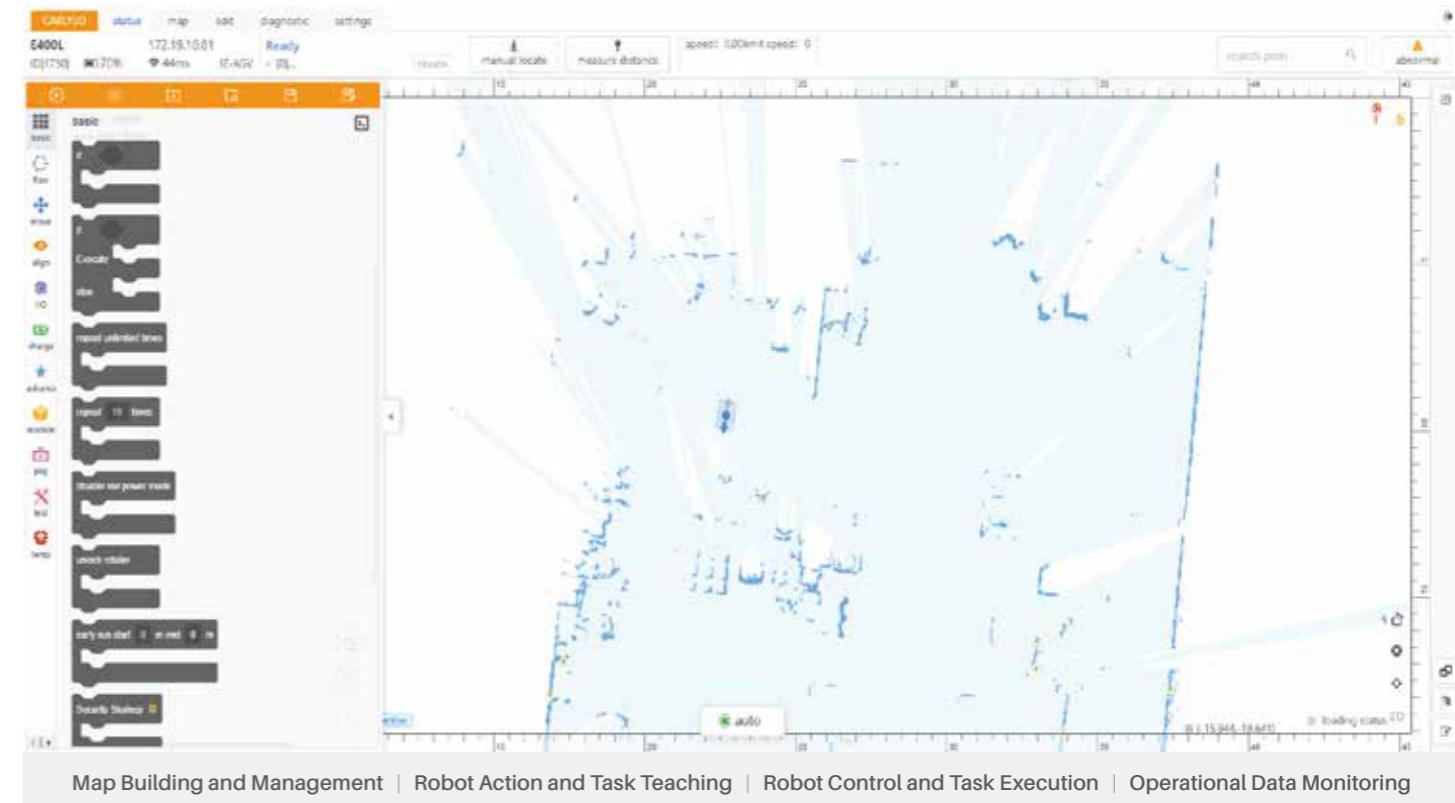
Closed loop

Seamless integration with WMS/MES/ERP system



CARLY (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



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

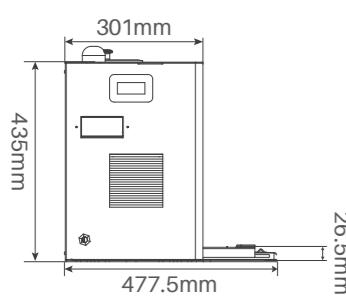
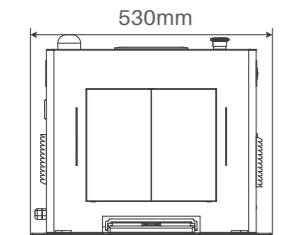
100% graphical interface operation, intuitive and easy to use, with modular programming to teach the robot

Operation data visualization

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



EMMA L Series



EMMA K Series

FOLA Series

