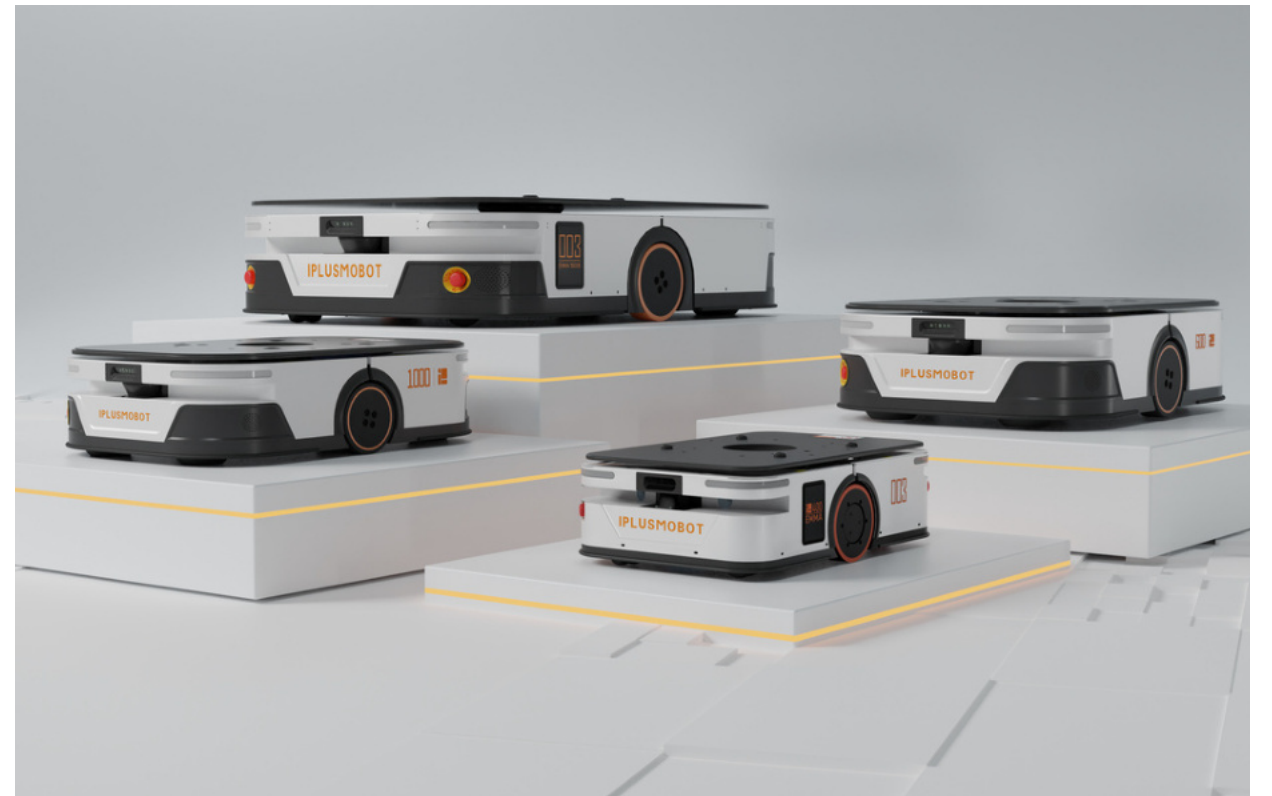


AUTOMATE YOUR FUTURE WITH NEXT MOBILE INNOVATION

INTELLIGENT MOBILE ROBOTS

LEADING LOGISTICS INNOVATION FOR SMART
MANUFACTURING





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 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



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				
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
±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

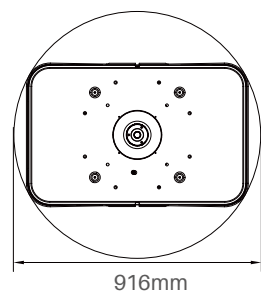
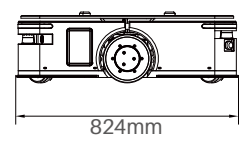
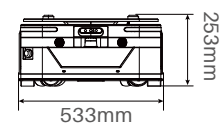
The series employs multiple safety sensors to ensure safety: a front safety laser, 360° anti-collision edge, optional 3D cameras to detect low-lying obstacles, and rear laser to ensure safety and improve efficiency in bidirectional operations.

Good Environmental Adaptability

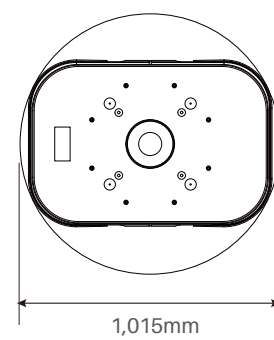
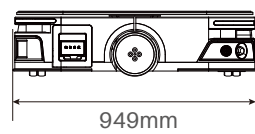
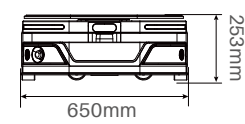
The EMMA L series products feature a proprietary chassis suspension design from IPLUSMOBOT, which allows for better ground adaptation, maintains vehicle stability, secures sufficient driving force, effectively reduces vehicle vibration, and provides good passability.

					
	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					
Position accuracy	±30mm				
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				

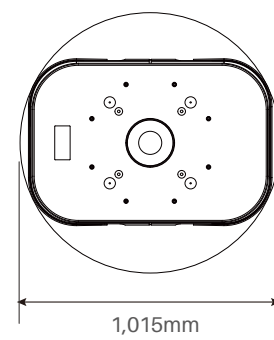
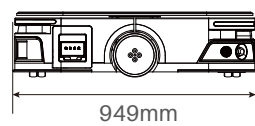
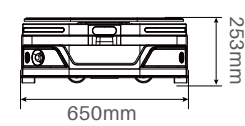
■ EMMA K Series



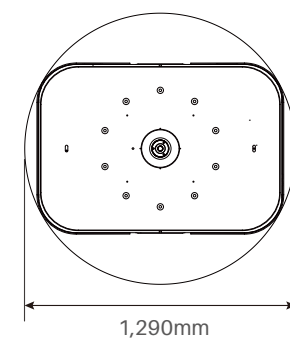
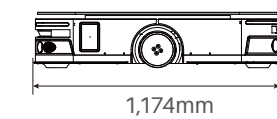
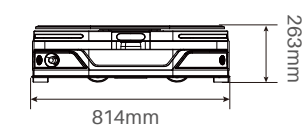
EMMA 400K



EMMA 600K

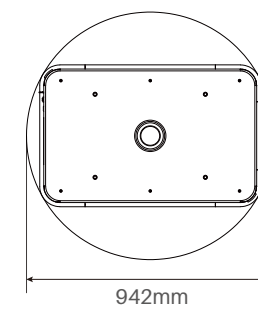
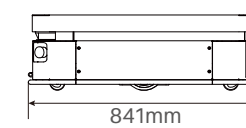
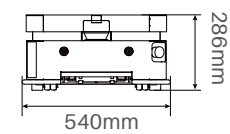


EMMA 1000K

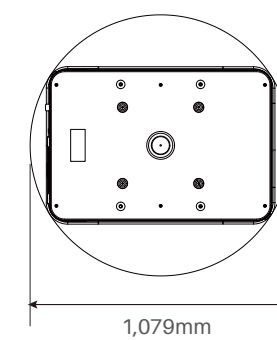
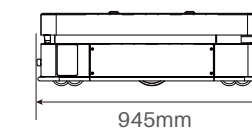
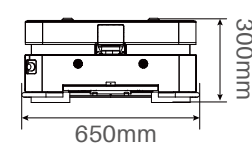


EMMA 1500K

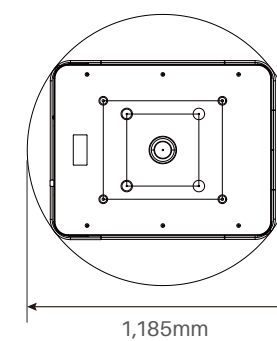
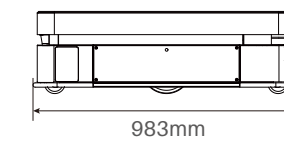
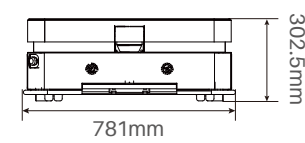
■ EMMA L Series



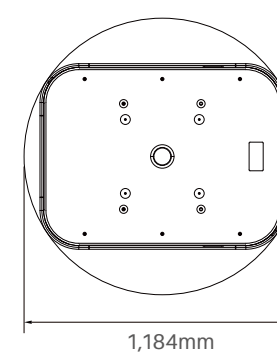
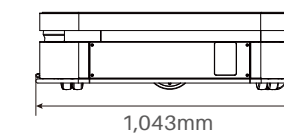
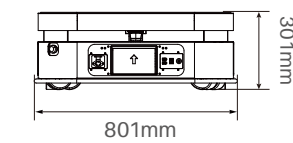
EMMA 400L



EMMA 600L



EMMA 1000L/EMMA 1500L

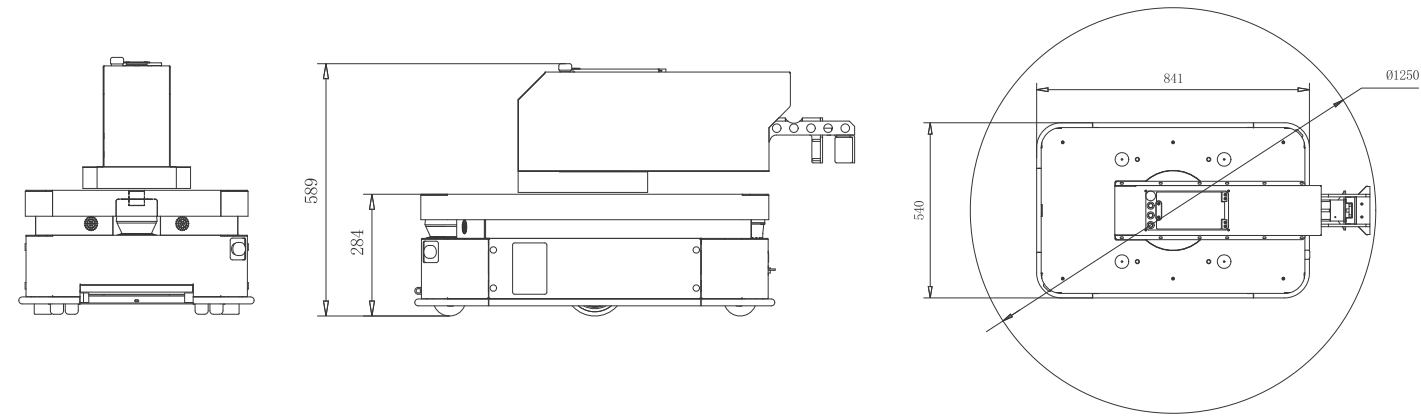


EMMA 2000L



					
Laser SLAM+Vision+IMU	≤800kg	±30mm	25mm	±110°	>8h
Hybrid Navigation	Payload	Position Accuracy	Ground Clearance	Rotation Range	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

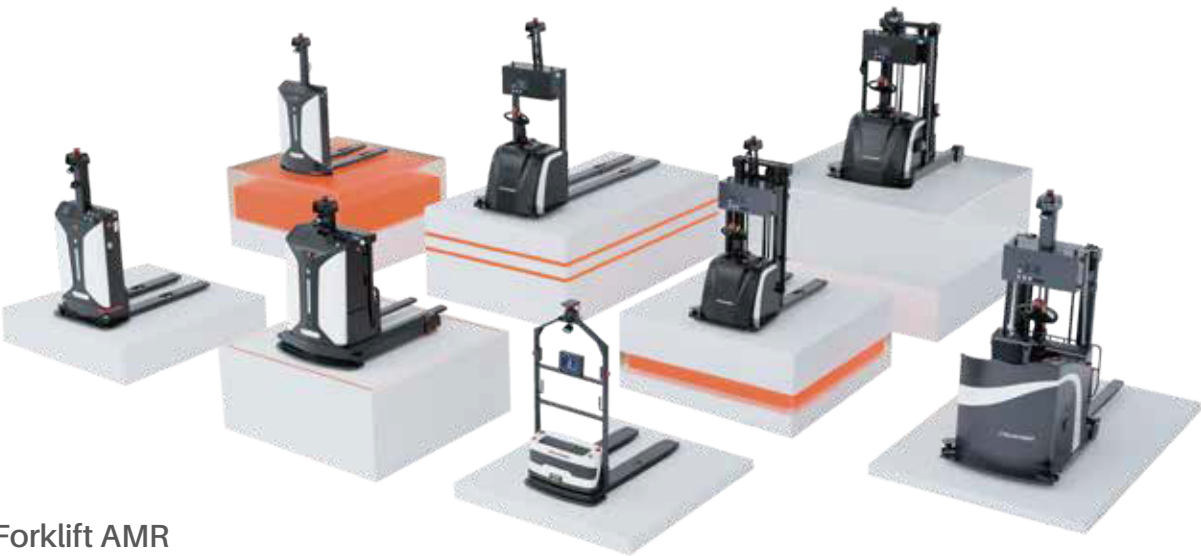
EMMA-T Drawing (EMMA 400L/Max load 300kg)



OMNI 1.5T	 Laser SLAM+Vision+IMU Hybrid Navigation	 ±2mm/±0.5° Docking Accuracy	 ≥8 Runtime(h)
	 1,500 Payload(kg)	 80 Lifting Stroke(mm)	 360°omni-direction Drive Mode
OMNI 2.5T	 Laser SLAM+Vision+IMU Hybrid Navigation	 ±2mm/±0.5° Docking Accuracy	 ≥8 Runtime(h)
	 2,500 Payload (kg)	 100 Lifting Stroke(mm)	 360°omni-direction Drive Mode
OMNI 3.5T	 Laser SLAM+Vision+IMU Hybrid Navigation	 ±2mm/±0.5° Docking Accuracy	 ≥8 Runtime(h)
	 3,500 Payload(kg)	 60 Lifting Stroke(mm)	 360°omni-direction Drive Mode
OMNI 5T	 Laser SLAM+Vision+IMU Hybrid Navigation	 100 Lifting Stroke(mm)	 ±2mm/±0.5° Docking Accuracy
	 5,000 Payload (kg)	 ≥8h Runtime(h)	 360°omni-direction Drive Mode

FOLA

Forklift AMR



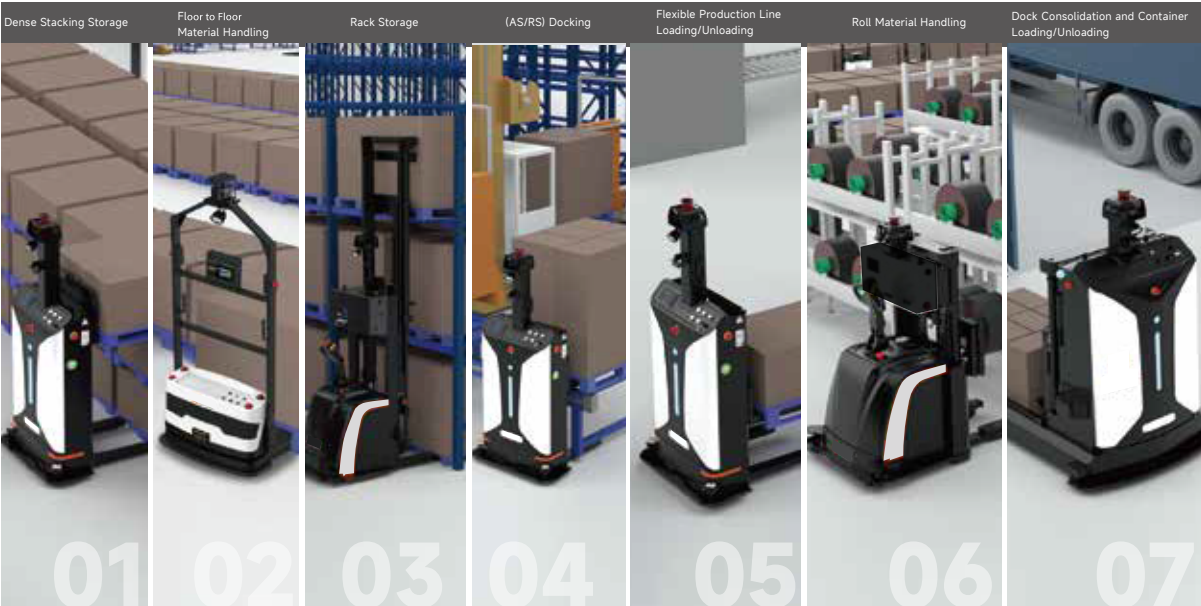
Forklift AMR

FOLA (Forklift Of Lithe 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	±10mm/±1°									
Pallet identification accuracy	±10mm									
Charging time/Runtime	≤2h/≥8h	≤2h/≥6h	≤2h/≥8h	≤2h/≥8h	≤2h/≥8h	≤2h/≥6h	≤2h/≥6h	≤2h/≥6h	≤1.5h/≥8h	≤1.5h/≥8h
Safety system	Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop									

■ Application Scenarios



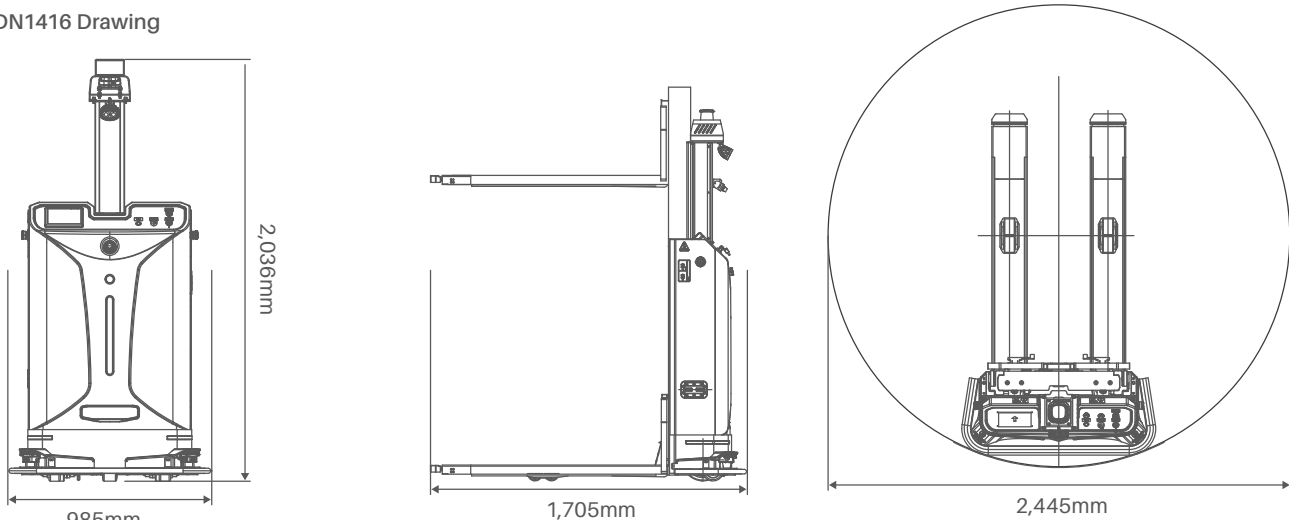


					
Laser SLAM+Vision+IMU	1,400	±10mm/±1°	1,600	2,130	8
Hybrid Navigation	Payload(kg)	Repeat Position Accuracy	Lifting Stroke(mm)	Aisle Width(mm)	Runtime (h)

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	Repeat position 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%

FOLA DN1416 Drawing

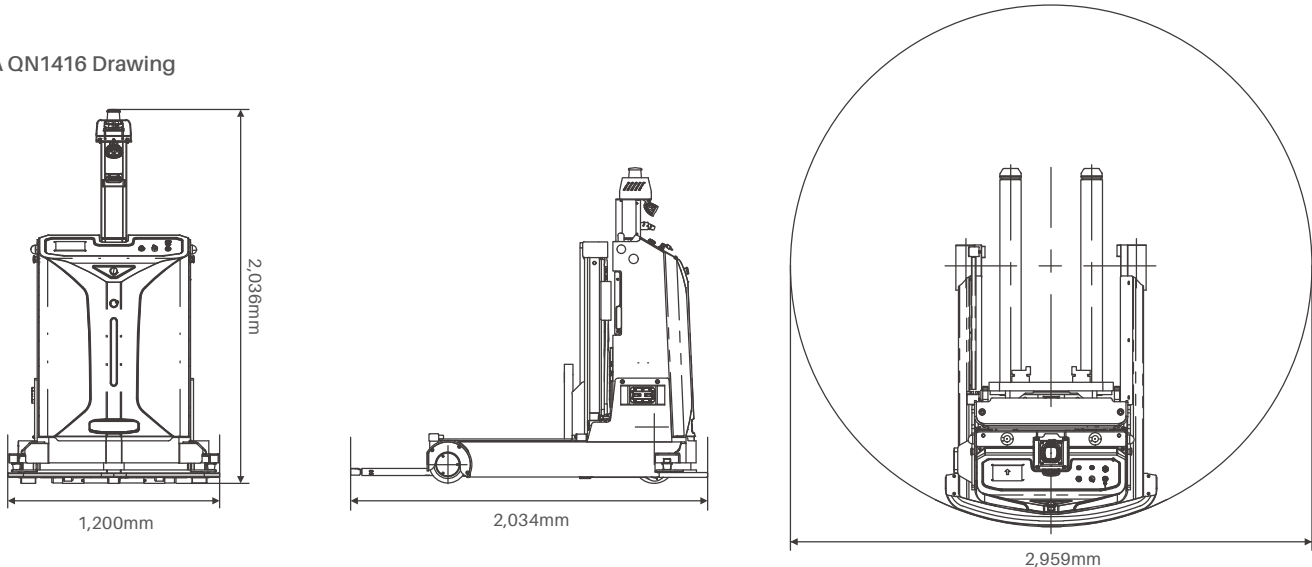


					
Laser SLAM+Vision+IMU	1,400	±10mm/±1°	1,600	2,410	6
Hybrid Navigation	Payload(kg)	Repeat Position Accuracy	Lifting Stroke(mm)	Aisle Width(mm)	Runtime (h)

Basic Parameters	Weight 1,890kg	Battery	Lithium-ion 24v 210Ah	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	Repeat position 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 QN1416 Drawing

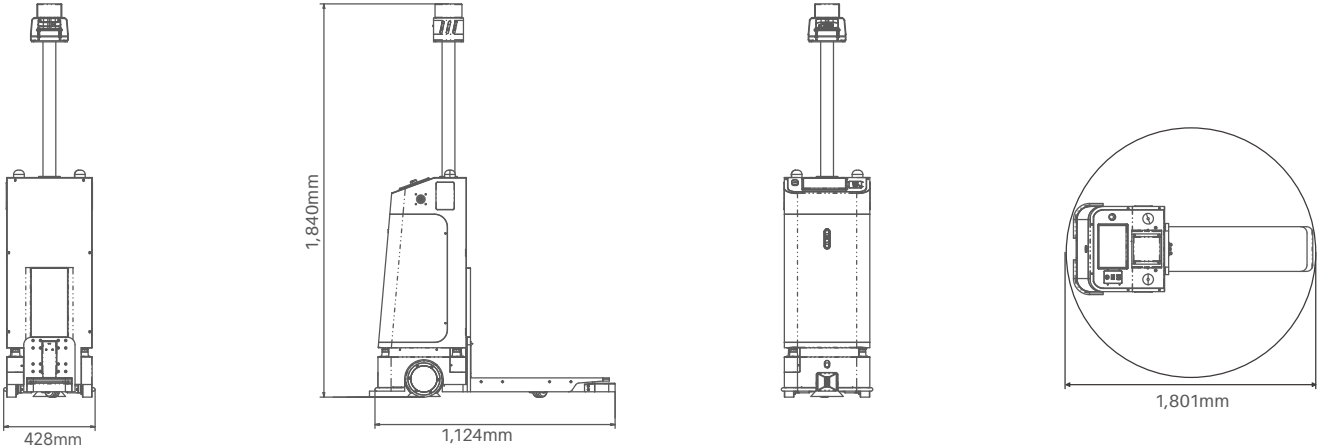




					
Laser SLAM+Vision+IMU	300	±30	300	1,801	8
Hybrid Navigation	Payload(kg)	Position Accuracy(mm)	Lifting Stroke(mm)	Pivoting Diameter(mm)	Runtime (h)

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

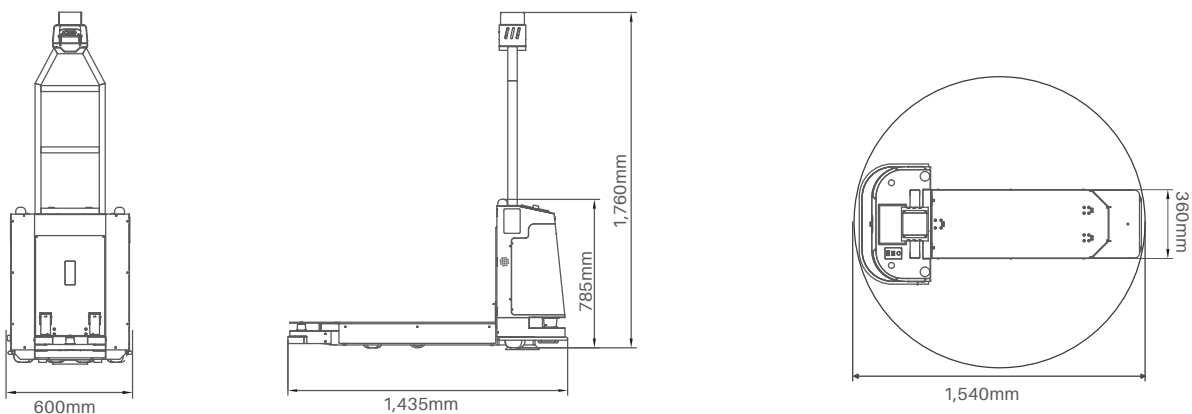
FOLA SN300 Drawing



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

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

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



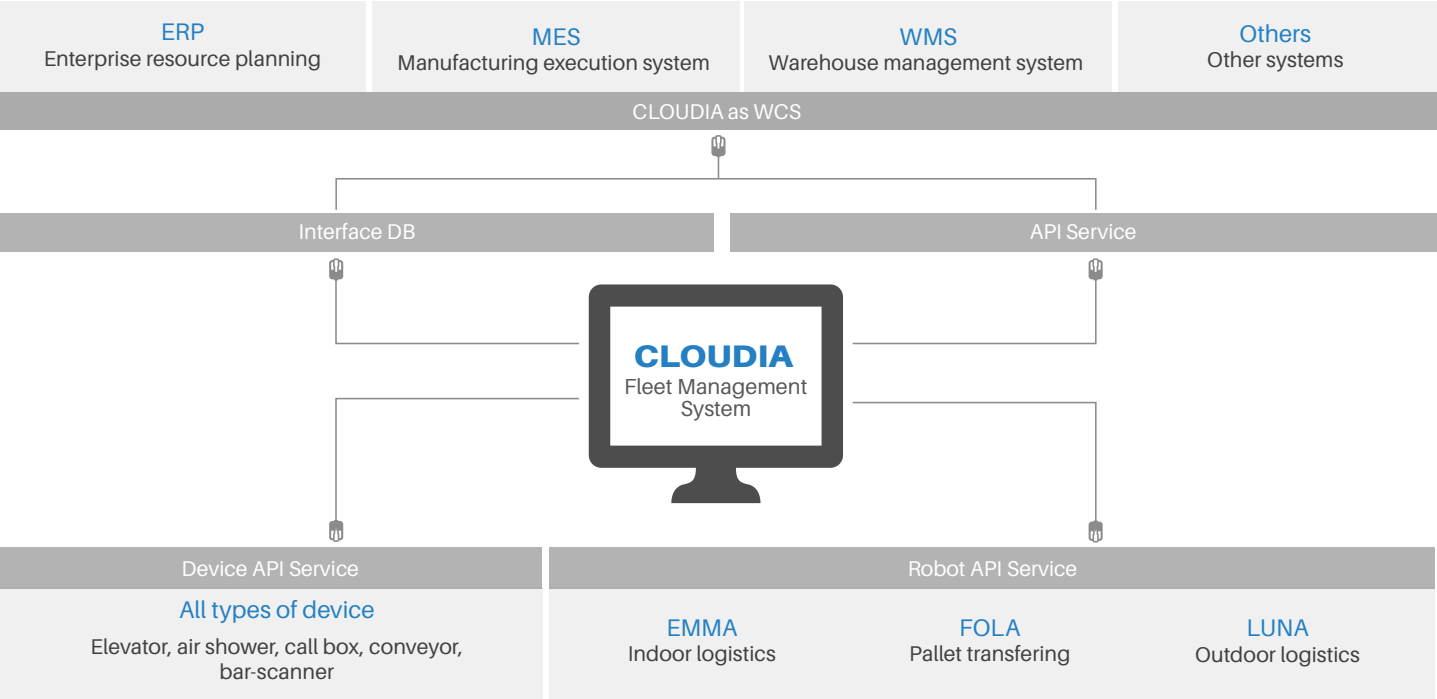
1,000,000m²
Max. Site area

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

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.

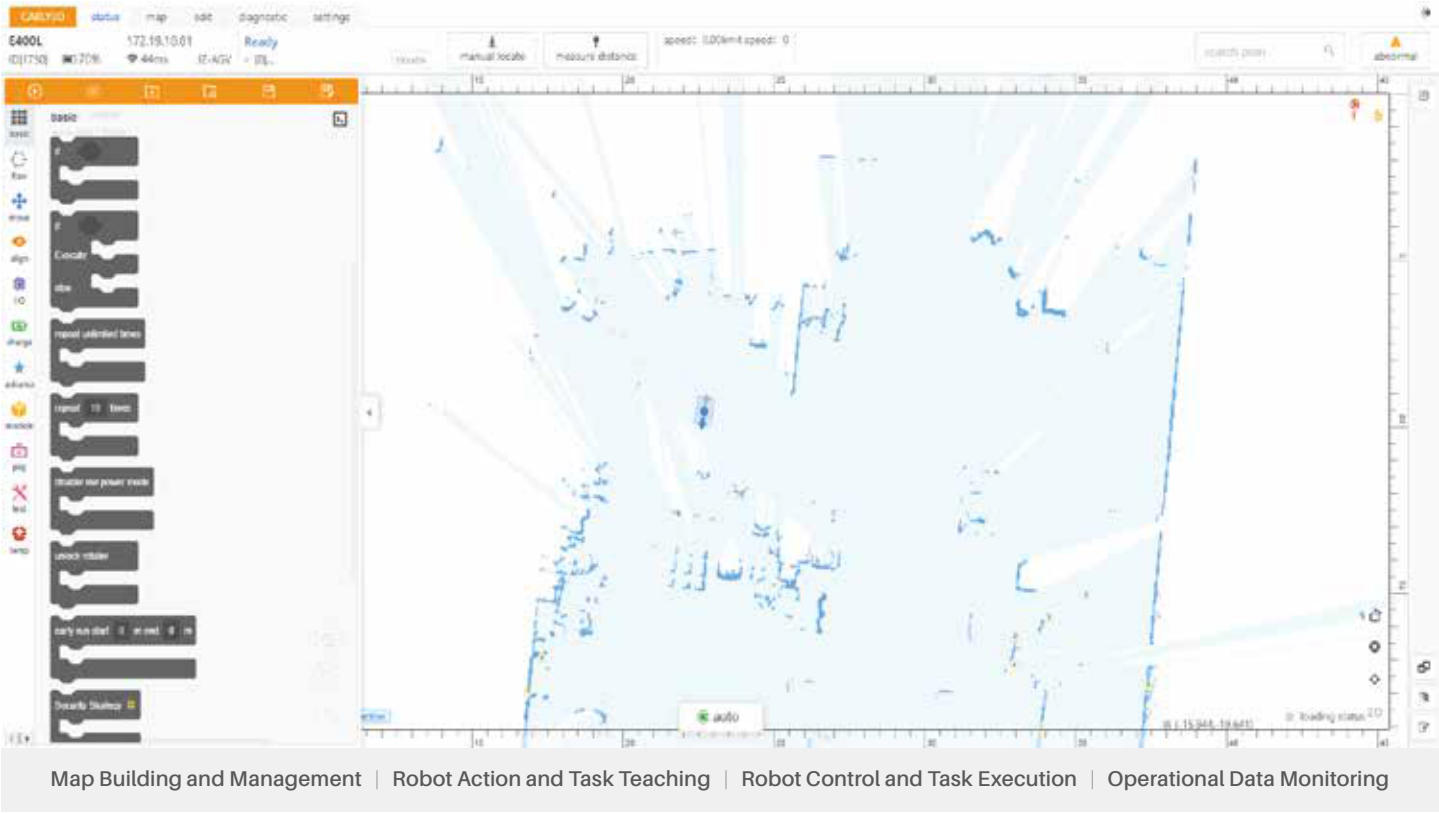
Real-time

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

Easy to use

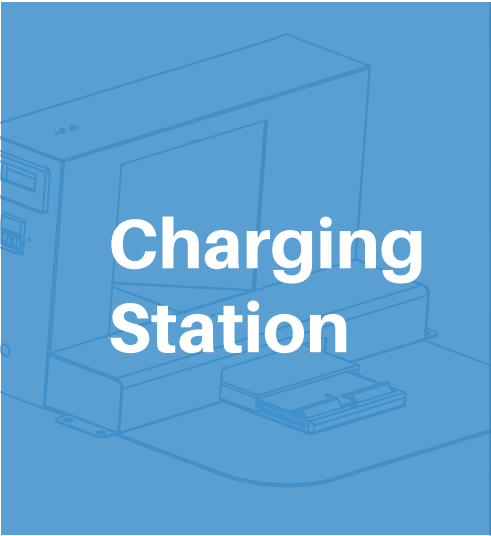
100% graphical interface operation, intuitive and easy to use, with modular programming to teach the robot

Stable and safe

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

Operation data visualization

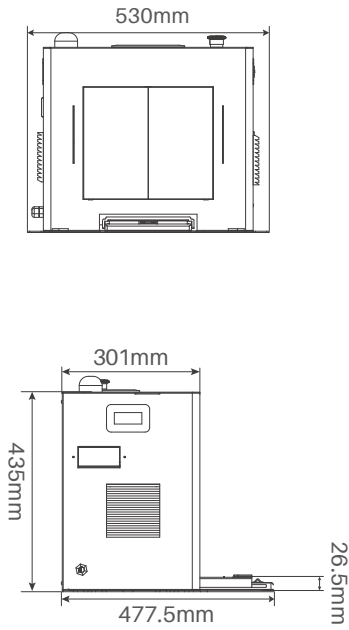
Real-time visualization of robot operation data. Support historical data visual review.



EMMA L Series

EMMA K Series

FOLA Series



500.5mm

530mm

495mm

300mm
475mm

