





Deceler Vibrotek Controls Pvt. Ltd.

Head Office: No. 38, First Floor, Arul Mary Street, Soosaiya Nagar, Noombal, Chennai, Tamilnadu - 600077. Marketing Office: 3rd Floor, Office No. 309 A, Bramha Sky, Uzuri-A, MIDC, Pimpri, Pune, Maharashtra - 411018.

T. +91 94455 25883 | M. sales@deceler.in | W. www.deceler.in







Automate Your Future with Next Mobile Innovation

Mobile Robots





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



Туре

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 vehicleUs 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.

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.

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.









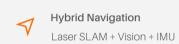


	EMMA 400K	EMMA 600K	EMMA 1000K	EMMA 1500K				
Length*width*height	824*533*253mm	949*650*253mm	949*650*253mm	1,174*814*263mm				
Weight	130kg	180kg	190kg	280kg				
Payload	400kg	600kg	1,000kg	1,500kg				
Pivoting diameter	916mm	1,015mm	1,015mm	1,290mm				
Driving mode	Differential drive							
Hybrid navigation	Laser SLAM + Vision + IMU							
Performance parameters								
Position accuracy	±30mm							
Docking accuracy	±2mm/±0.2° with QR code							
Maximum speed (no load)		1.2m/s						
Ground slope	≤5% 3°							
Max. gap tolerance	≤35mm							
Max. ground elevation difference	≤10mm							
Optional carrier device								
Туре	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							

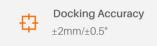
EMMA L Series



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.















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

Runtime

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 ± 2 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 Environmental Adaptability

efficiency in bidirectional operations.

Safety and Efficiency

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 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.







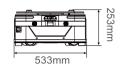


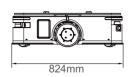


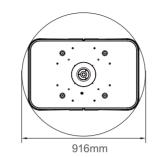


	0000 L	0000 L 000	00 00000	00000			
Length*width*height	841*540*286 mm	945*650*300mm	983*781*302.5mm	983*781*302.5mm	1,043*801*301mn		
Weight	150kg	190kg	290kg	290kg	290kg		
Payload	400kg	600kg	1,000kg	1,500kg	2,000kg		
Pivoting diameter	942mm	1,079mm	1,185mm	1,185mm	1,184mm		
Driving mode	Differential 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							
Туре	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						

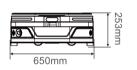
EMMA K Series

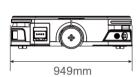


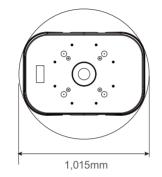




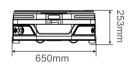
EMMA 400K

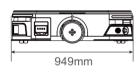


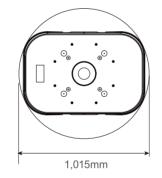




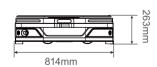
EMMA 600K

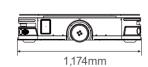


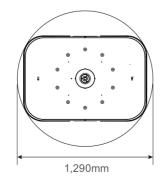




EMMA 1000K

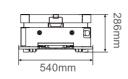


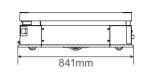


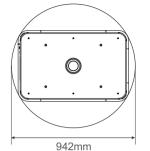


EMMA 1500K

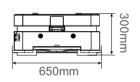
EMMA L Series

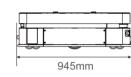


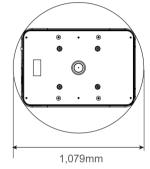




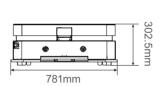
EMMA 400L

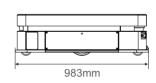


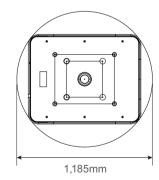




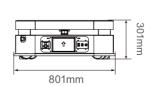
EMMA 600L

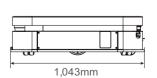


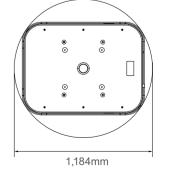




EMMA 1000L/EMMA 1500L







EMMA 2000L













Laser SLAM+Vision+IMU

Hybrid Navigation

<u></u>4800kg

±30mm Payload

Position Accuracy

 \square mm Gro delece

±110° Rotatio□Ra□e

>Run□me

Basic Parameters Basi platfor EMM 400L/ EMMA ... L/EMMA ... 0L/

EMMA 500L

Gro delece5mm

Environment

Max□ga□35□ Temper □u □ □ -40 °C

Max□s□□5%

Battery

L = um-ion = 8v = 1.5Ah Charg □tim □ 1.5H Runtim =>8

Performance

Diffe□□ial□rive Payload [⊥]800kg

Positio□accuracy

±10 🗆 🗆 🗆

Safety

3 □ camer □ □x E□Stops

□x Lida□

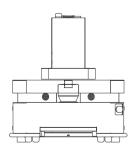
B□per

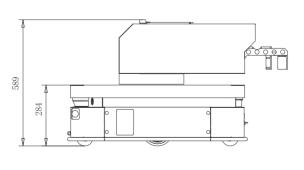
Tugging Device

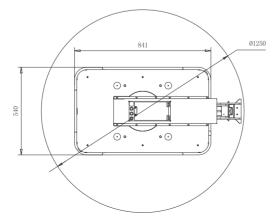
R □atin □rang □±110° Automatical ockin Trol□y detection

So d nd it l m

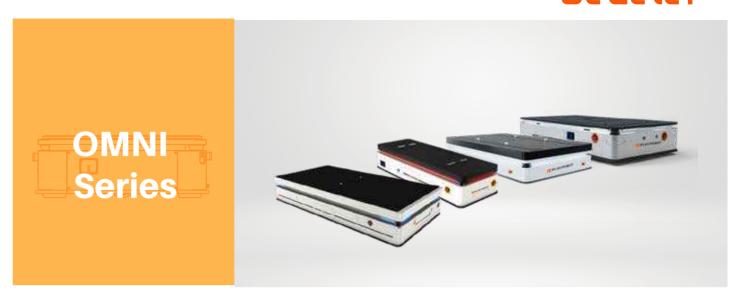
EMMA-T Drawing (EMMA 400L/Max load 300kg)







deceler













±2□/±0.5° Docking □ c □ ra □



Lif ng ok mm)



 $Run \square m \square h)$

<360°S

360°om □-d □ection Dreeo





SLAM+V□ion+□U Hybr□□av□at□n





±2□/±0.5° Docking⊡c⊡ra







360°

360°om□-d□ection Dr e o





L□er SLAM+V□ion+□U Hybr□□av□at□n





±2□/±0.5° Docking c ra



L tin Stroke(



 $Run \square m \square h$)



360°om □-d □ection Dr e o





SLAM+V□ion+□U Hybr□□av□at□n



5,□0 Payl□d (□)



L□tin□Stroke(□



+8h Run□m□h)



±2□/±0.5° Docking □ c □ ra □

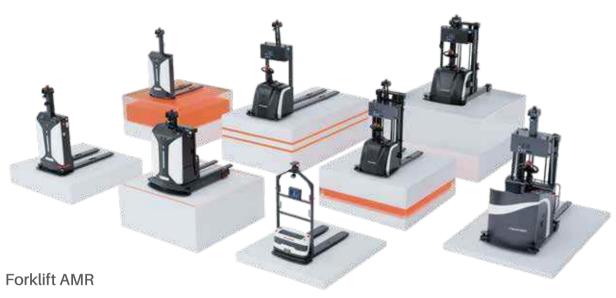


360°om□-d□ection



- FOLA

Forklift AMR



FOLA (Forklift Of Lithe Automation) autonomous forklift AMR adopts the worldUs 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 forkliftssuch as Pallet Jack, Pallet Stacker, Reach Truck, Counterbalance typeit 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.

















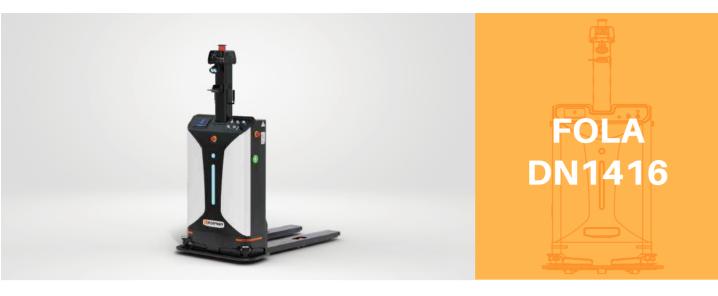




FOLA BN2001 FOLA BN1501T FOLA DN1416 FOLA DN2030 FOLA QN1416 FOLA QN2030 FOLA PN1530 FOLA SN300 FOLA SN600 FOLA BN3001 1,124*428*1,062mm (standard) 1,124*428*1,840mm (high version) □435*600*785mm □st□d□d) □435*600*□760mm □h□h□□s□n) 1,608*982*2,036mm 1,832*884*2,025mm 2,181*1162*2,240mm 1,705*980*2,036mm 2,313*1,163*2,236mm 2 34*1,200*2 36mm 2, 3*1, 2 2, 385 mm 2,827*1,166*2,619mm 185kg 585kg 535kg 950kg 680kg 1,400kg 1,890 2,□0kg 2,365kg 240kg 2,000kg 1,500kg 3,000kg 1,400kg 2,000kg 400kg 1,500kg 300kg 600 600mm 600mm 600mm 600mm 600mm 500 500mm 205mm 180mm 205mm 1,600mm 3,000mm 3,□0mm 3,000mm 300 60 Lase SLA Visio IMU □□□□vi□□□e Forward□riv□g R....y ±10mm/±1° ±10mm 000000R000 <u></u>42h/|48h <u></u>42h/|48h <u></u>42h/|48h <u></u>42h/|46h [⊥]1.5h/|8h [⊥]1.5h/|8h <u></u>42h/|48h <u></u>42h/|6h <u></u>42h/+6h [⊥]2h/|6h Lase_obstacl_avoidanc__3_camera(Optional__Soun_an_ligh_alar_+Bumpe__Emergency stop $\Box f \Box y \Box \Box \Box$

Application Scenarios













1,600





Laser SLAM+Vision+IMU

Hybrid Navigation

1,400 Payload(kg)

±10mm/±1°

Repeat Position Lifting Stroke(mm)

2,130

Aisle Width(mm)

Runtime (h)

Accuracy

Basic Parameters

Weight 680kg Dimensions (I*w*h) 1,705*985*2,036mm Touch screen 7"

Battery Lithium-ion 24v 180Ah Runtime >8h Charge time 2h

Safety System

camera(Optional) + Sound and light alarm +Bumper + Emergency stop

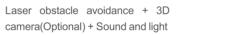
Performance Rated payload 1,400 kg

Lifting stroke 1,600mm Load center 600mm Aisle width 2,130mm

Repeat position accuracy ±10mm/±1° Max. Site area≯00,000 m²

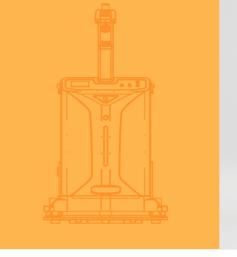
Max. drop of the passable gap: 10mm Max. width of the passable gap: 30mm

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%













Laser SLAM+Vision+IMU

Hybrid Navigation



1,400

Payload(kg)

1,600





±10mm/±1°

Repeat Position

Lifting Stroke(mm)

2,410 Aisle Width(mm)

Runtime

Accuracy

Basic Parameters

Weight 1,890kg Dimensions (I*w*h) 2, 4*1,200*2, 6mm

Touc scree 7

Battery Lithium-ion 24v 210Ah Runtime >6h

Charge time 2h

System

Laser obstacle avoidance + 3D camera(Optional) + Sound and light alarm +Bumper + Emergency stop

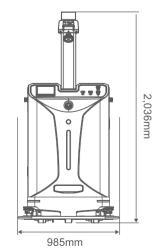
Performance Rated payload 1,400 kg

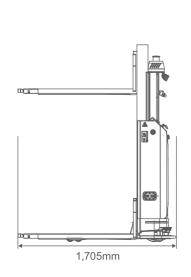
Lifting stroke 1,600mm Load center 500mm Aisle width 2,410mm

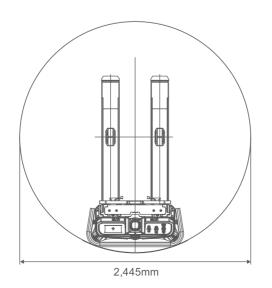
Repeat position accuracy ±10mm/±1° Max. Site area> 100,000m²

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) 1.35m/s Full load max. Gradability 3% No-load max. Gradability 5%

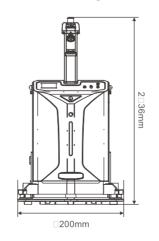
FOLA DN1416 Drawing

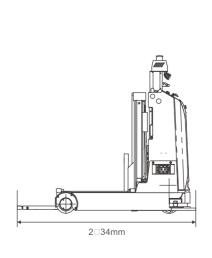


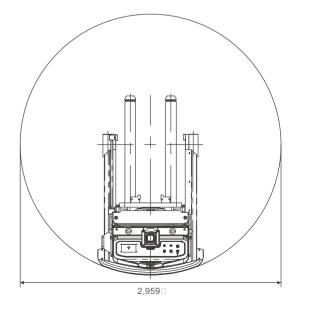




FOLA QN1416 Drawing











Laser SLAM+Vision+IMU

Hybrid Navigation



Payload(kg)







Safety

System



300

Lifting Stroke(mm) Pivoting Diameter(mm) Runtime (h)

Accuracy(mm)



Runtime 8h Charge time 1.5h

Battery Lithium iron phosphate battery

Laser obstacle avoidance + 3D camera+ Front bumper+Fork bumper

Basic

Parameters

Performance Rated payload 300kg Lift stroke 300mm Pivoting diameter 1,801mm

Weight 185kg

Dimensions (I*w*h)

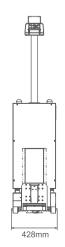
Touch screen 7"

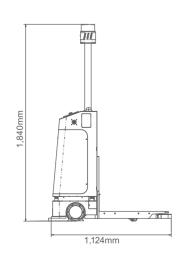
1,124*428 *1,062mm (standard)

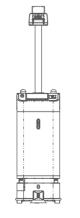
1,124*428 *1,840mm (high version)

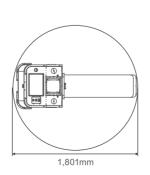
Position accuracy ±30mm Maximum speed (no load) 1.5m/s Maximum speed (full load) 1.2m/s

FOLA SN300 Drawing





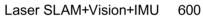












Hybrid Navigation Payload(kg)



±30 Position 60

Lifting Stroke(mm)

9

1,540 Pivoting Diameter(mm)

Runtime (h)

Accuracy(mm)

Basic **Parameters**

Weight 240kg Dimensions(I*w*h)

1,435*6 00*785mm (standard) 1,435*600 *1,760mm (high version)

Touch screen 7"

Battery Lithium iron phosphate battery Runtime +8h Charge time 1.5h

Safety

Laser obstacle avoidance + 3D camera+ Front bumper+Fork

bumper

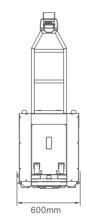
Performance Rated payload 600kg

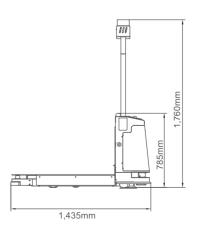
Lift stroke 60mm

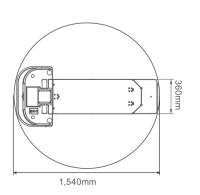
Pivoting diameter 1,540mm

Position accuracy ±30mm Maximum speed (no load) 1.5m/s Maximum speed (full load) 1.2m/s

FOLA SN600 Drawing







Customized





Laser SLAM+Vision+IMU Hybrid Navigation



360°omni-direction Drive Mode



Execution Precision



⊥0.5 Machine Vibration(g)



Runtime(H)



1,300mm Arm Range





Laser SLAM+Vision+IMU Hybrid Navigation

1,500 Payload(kg)



±5mm Docking Accuracy



280mm Lifting Stroke(mm)



2,410 Aisle Width(mm)



<70db





SLAM+V□ion+□U Hybr□□av□at□n



20,000 100 sets Feet daily task cycles



±2mm/0.2° Loading and unloading Repeatability



Class 5 **Dust Free**



2.5/8 Charge/Runtime(H)



1.5m/s Max Speed





SLAM+V□ion+□U Hybr□□av□at□n



Payl□d(kg)



±2mm/0.5° Docking Accuracy



200-1,100 Lifting Stroke(mm)



≤3/\10 Charge/Runtime(H)



(803/806/808/809) Rack/trol □y Size





□□aser SLAM+V□ion+□U Hybr□□av□at□n



Material □el □ery □c □ra □



Nu e o sola cell cassettes 🗆 🗆 urnov 🗆



Charge/Run □m □h)



±5mm/0.2° Loadin an Un adin Opeltionlcclacy



0 □.5m/s Run ng peed

deceler





LUNA 20T

LUNA 30T



□ aser L □ + □ S+I □ Hybr□□av□at□n



5T Payl□d



±20mm□° Docking □ c □ ra □



1,□0,□0m ²



|6

 $Run \square m \square H)$

□ aser L □+ □S+I □ Hybr avat n



2 Payl□d



1, □0, □0m ²



Max□Sit□area





±30mm □° Docking □ c □ ra □



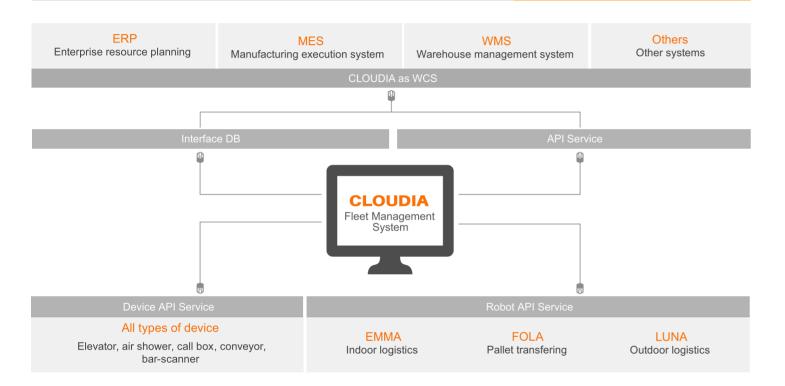
1,□0,□0m ² Max□Sit□area



|6 $Run \square m \square H)$

The powerful and elegant Feet control software CLOUDIA will help multiple robots work in a more ef || cient 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 equip - ment 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 ef || ciencies.□

CLOUDIA



Main Functions

Real-time status visualization

Multiple-AMR transportation trackingnd 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 managent, smart and reliable traf || c control, ef || cient material delivery, remote anomaly alert, software permission management

Logistics management digitization

Whole-logistics-process digitization , high transportation of ciency, of cient material delivery, remote anomaly alert, software permission management

Product Advantages

High-performance

The algorithm of task scheduling and $\operatorname{traf} \| c$ control is powerful, and the dispatch task of large-scale Feet of thousands of units can be easily accomplished.

Real-time

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

Closed loop

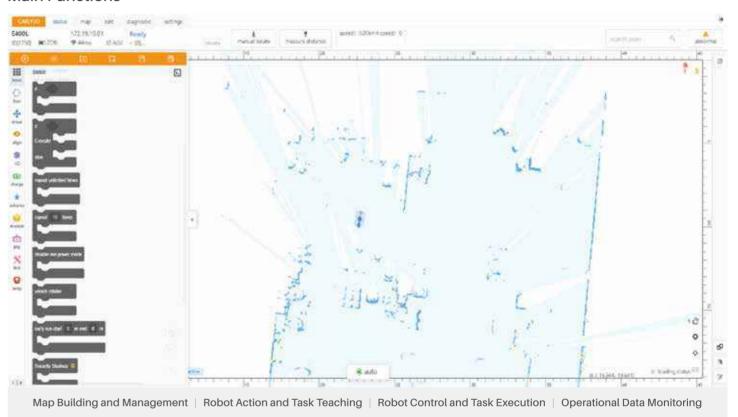
Seamless integration withWMS/MES/ ERP system



CLY

CARL (Customizabl Act an Robo busines Logi fo d loym to probo contro an operate techin softwar launce by L MOBOT Us calt horobo the brows cest directly an elect an current status of the speci ed robot in real time. CARLY supports various integrate stand-alon operate stand control mabuildin mage telin editing teching lodit telin operation into fee carly als include sophisticate bekes systems.

Main Functions



Product Features

Intelligent Algorithm

 $\label{lem:built-i} Built-i \square state-of-the-ar \square lase \square SLA \square visio \square \square IM \square fusio \square position in \square \\ \square gor \square hm$

Stable and safe

Ado utomati plu manua multip ecurity strategy Co or to CE certi cation standards and perfectly adapt to human-robot collaborat or cares.

Easy to use

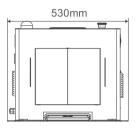
100 □graphica □interfac □operation □intuitiv □an □easy t □use □wit □ mo □la □progra □in □t □teac □th □rob □

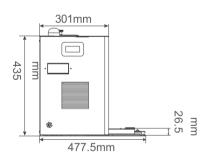
Operation data visualization

Real-tim visualizatio o rob peratio data Suppor historica data visual evi .

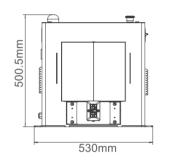


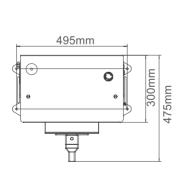
EMMA L Series



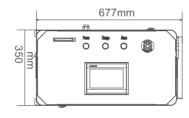


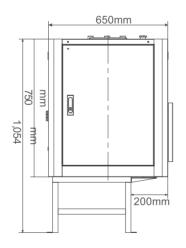
EMMA K Series





FOLA Series









■ They Trust Us



Note