

# ■ 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

$\pm 2\text{mm}/\pm 0.2^\circ$  |  $\pm 0.08\text{in}/\pm 0.2^\circ$



### Payload

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



### 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  $\pm 2\text{mm}$ (0.08in), 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 (881.9lbs) to 1,500kg(3,306.9lbs), which can meet the general material handling payload requirements in factory workshops.

### 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.

### 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.



	EMMA400L	EMMA600L	EMMA1000L	EMMA1500L
Length*width*height	841*540*276/284mm	945*650*300mm	983*781*300mm	983*781*300mm
	33.1*21.2*10.8/11.1in	37.2*25.9*11.8in	38.7*30.7*11.8in	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			