

UMP10S

Narrow aisle handling robots



Pay Load
1000KG

Lifting Height
156MM

Turning Radius
1035MM

M Series Handling Robots

The MP10S boasts exceptional positioning performance, featuring an innovative dual-wheel differential structure that enables picking and placing goods in 2-meter-wide aisles, making it suitable for light-duty handling scenarios such as line-side transportation and 3C electronics. With high positioning accuracy, it supports 2D/3D SLAM and reflector/column feature navigation, achieving precision up to $\pm 10\text{mm}$. It also incorporates multiple positioning algorithms, supporting pallet recognition and the identification of material cages/racks for picking and placing. In terms of safety, the MP10S offers 360° planar safety stop and forward 3D obstacle avoidance, capable of detecting low-hanging or suspended obstacles. It is equipped with fork-tip collision detection, emergency stop switches, and protective bumpers, complying with CE certification to ensure safe and reliable operation.

AiTEN

AiTEN Robotics

T: 400-106-0508
E: marketing@aiten.com
W: www.aitenrobot.com



Linkedin



Website

Motion Performance

The MP10S can reach a maximum operating speed of 1.5 m/s when fully loaded. It is capable of overcoming obstacles with a step height of 5 mm, crossing gaps of up to 15 mm, and climbing slopes with a gradient of 5°. It can also interface with external devices such as elevators, automatic doors, and conveyor lines. The system is compatible with various material handling solutions, including pallets, material frames, cage carts, and racks.

Endurance

Supports both manual and automatic charging. Equipped with lithium iron phosphate batteries, it ensures high safety and can withstand up to 2000 charge-discharge cycles. The battery supports fast charging, providing an endurance of 6-8 hours under rated conditions, with a charging time of less than 1 hour.

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Communication

Supports dual-band high-power Wi-Fi 6, doubling signal coverage. Expandable industrial-grade Ethernet supports 802.11b/g/n/ac/ax.

AI Recognition

Features AI perception for recognizing multi-specification and multi-color pallets, racks, and material cages. It enables multi-angle, high-precision, and adaptive recognition to ensure stable picking and placing of goods.

Human-Machine Interaction

Includes a human-machine interaction display screen that shows real-time equipment operating status.

Quality Assurance

Each AMR undergoes rigorous testing (such as load testing and durability testing) and full-process inspection before leaving the factory. It is ensured to meet the standard of 48 hours of fault-free operation before shipment.

Technical Data

Characteristics	1	Product Model			UMP10S
	2	Drive Type			Electric
	3	Driving Mode			Autonomous
	4	Positioning Method			Laser
	5	Pay Load	Q	kg	1000
	6	Load Center	C	mm	600
	7	Wheelbase	Y	mm	830
Wheels	1	Tire			Polyurethane Wheels
	2	Drive Wheel Size		mm	Φ80
	3	Load Wheel Size		mm	Φ60
	4	Track (Drive Side)	b11	mm	390
	5	Track (Balancing Wheel Side)	b10	mm	575
Basic Dimensions	1	Total Height	h1	mm	1855
	2	Vehicle Top Cover Ground Clearance	h2	mm	485
	3	Lifting Height	h3	mm	156
	4	Fork Height (Lowest Position)	h5	mm	86
	5	LiDAR Scanning Surface Ground Clearance	h6	mm	1820
	6	Obstacle Avoidance Scanning Surface Ground Clearance	h7	mm	145
	7	Vehicle Body Total Length	L1	mm	1520
	8	Vehicle Body Total Width	b1	mm	950
	9	Fork Dimensions	s/e/l	mm	186X60X1150

Performance	10	Fork Outer Width	b3	mm	560
	11	Minimum Ground Clearance	m	mm	20
	12	Distance from LiDAR to Drive Wheel Center	L2	mm	800
	13	Distance from Fork Guard Plate to Drive Wheel Center	X	mm	645
	14	Right-angle Stacking Aisle Width Pallet Size: 800×1200 (1200 along forks) a = 200	Ast	mm	1920
	15	Turning Radius	Wa	mm	1035
Motor	1	Travel Speed (Unloaded/Loaded)		m/s	0.7/0.6
	2	Lifting Speed (Unloaded/Loaded)		mm/s	60/50
	3	Lowering Speed (Unloaded/Loaded)		mm/s	50/60
	4	Maximum Gradeability (Unloaded/Loaded)		%	45748
	5	Braking Method			Electromagnetic Brake
Others	1	Drive Motor Power		kw	0.6+0.6
	2	Lifting Motor Power		kw	0.8
	3	Lithium Battery Voltage/Capacity		V/Ah	48/25Ah
	1	Operating Weight (Including Battery)		kg	200±10
	2	Steering Type			差速
	3	Charging Method			自动充电
	4	Vehicle Noise Level		dB(A)	<70