

SLAM Based Autonomous Mobile Robot



GTX 500



The 500 Kg Payload Industrial Robot Embodies Unparalleled Strength And Adaptability In Material Handling. With Robust Construction And Modular Design, It Seamlessly Integrates Into Diverse Industrial Applications. Powered By Potent Motors And Actuators, It Manages Heavy Loads With Precision And Reliability. Adaptable End Effectors Cater To A Broad Range Of Tasks, While Advanced Navigation Ensures Obstacle Avoidance For Smooth Movement. Safety Features, Including Collision Detection, Prioritize Workplace Security. Wi-Fi Connectivity Enables Seamless Communication Within Manufacturing Environments, Enhancing Operational Efficiency. Scalable And Flexible, It Effortlessly Adapts To Evolving Industrial Needs, Ensuring Optimized Productivity And Performance Across Sectors.

SLAM Capability
Dynamic Path Planning

Precise Localization
±5 Cm

Robust Construction
Designed For Industry Use

Obstacle Avoidance
15 Cm

No Need Of New Alteration
During Deployment

Carrying Capacity Options
500/1000/1500 Kg

Manufacturing: Streamlines material handling tasks on assembly lines, aiding in loading and unloading heavy components.

Warehousing: Optimizes inventory management by efficiently moving and organizing pallets and containers.

Aerospace: Supports manufacturing processes by transporting aircraft parts & materials within production facilities.

Automotive: Assists in vehicle assembly processes, handling large components and sub-assemblies.

E-commerce: Improves order fulfillment processes in e-commerce warehouses by automating picking, packing, and shipping tasks.

Logistics: Enhances distribution processes by automating order picking, packing, and sorting operations.

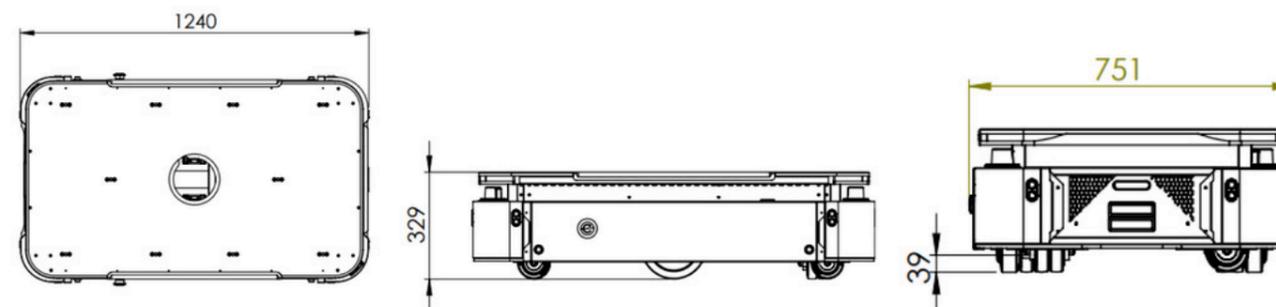
Pharmaceuticals: Enhances efficiency in pharmaceutical manufacturing by automating material handling and product packaging.

Food and Beverage: Facilitates packaging, palletizing, and sorting tasks in food processing plants and beverage distribution centers.

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TECHNICAL SPECIFICATION GTX 500



ROBOT DIMENSION & WEIGHT

LENGTH X BREADTH X HEIGHT (L X B X H)	1240 * 751 * 329 (mm)
SELF WEIGHT	170 Kg / 185Kg / 200Kg
GROUND CLEARANCE	39 MM
TURNING RADIUS	Zero degree in place
SUSPENSION	Passive traction rocker

PERFORMANCE & BATTERY

MAX. PAYLOAD	500 Kg / 1000Kg / 1500kg
MAX TURNING SPEED	45 / 30 Degree per second
MAX SPEED	1.2 / 1 meter per second
BATTERY TYPE	Lithium-Ion Battery
POSITIONING ACCURACY	*+/- 5CM
MIN.AISLE WIDTH	1100 mm

POWER SUPPLY

BATTERY TYPE / CAPACITY	LiFePO4 / 48Volt DC / 50Ah
RUNNING TIME	8 Hr
CHARGING TIME & TYPE	4 Hrs / Manual or Autonomous

CONTROL SYSTEM AND SENSOR

PROCESSOR	Intel chipset
OPERATING SYSTEM	UBUNTU
CONTROL MODES	Autonomous / manual / Guided
COMMUNICATION SENSORS	WIFI - 802.11 a/b/g/n/ac, 2.4 Ghz & 5 Ghz with antenna and Bluetooth 2X Lidar, 1X IMU, 2X Encoder, 2 X depth camera, optional ultrasonic sensors, optional bumper sensor
STANDARD LEADOUTS	USB, External Emergency Port, ON/Off and Reset switch

ACCESSORIES

MANUAL CHARGER	Default
AUTONOMOUS CHARGER DOCKER	Optional
LIFTING/ CONVEYOR/TOWING/ SHELF STRUCTURE SYSTEMS	Optional

NAVIGATION

AUTONOMOUS MODE	SLAM + Visual
OBSTACLE AVOIDANCE	Pause play mode / Avoidance mode
PATH PLANNING	Defined path or natural navigation

SAFETY

OBSTACLE AVOIDANCE	Laser scanner / Depth camera / ultrasonic sensor
EMERGENCY SAFETY	Bumper sensor / Emergency stop button

ENVIRONMENT

OPERATING TEMPERATURE	5 to 40 Deg celcius
HUMIDITY	95% Non condensing
ALLOWABLE SLOP	Near level (3%)
IP Rating	IP21