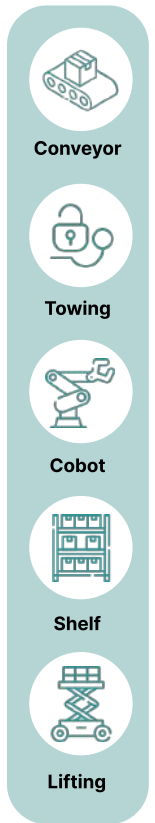


# SLAM Based Autonomous Mobile Robot


GT **100/250/400**



A 100/250/400kg Payload Industrial Robot For Material Management, Adaptable To Any Application Layer, Features Robust Construction And Modular Design. It Accommodates Heavy Loads Using Powerful Motors And Actuators (If Lifting Operation Is Required). The Robot Supports Various End Effectors, Facilitating Diverse Tasks. Equipped With A Sophisticated Control System. It Can Be Used For Seamless Integration With External Devices And Systems If Needed. Safety Measures Include Obstacle Avoidance And Emergency Stop Functionalities. Connectivity With Wi-Fi Enable Seamless Communication With Manufacturing Environments. Designed For Scalability And Flexibility, It Effortlessly Integrates Into Evolving Industrial Setups, Enhancing Efficiency And Adaptability 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**  
100/250/400 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.

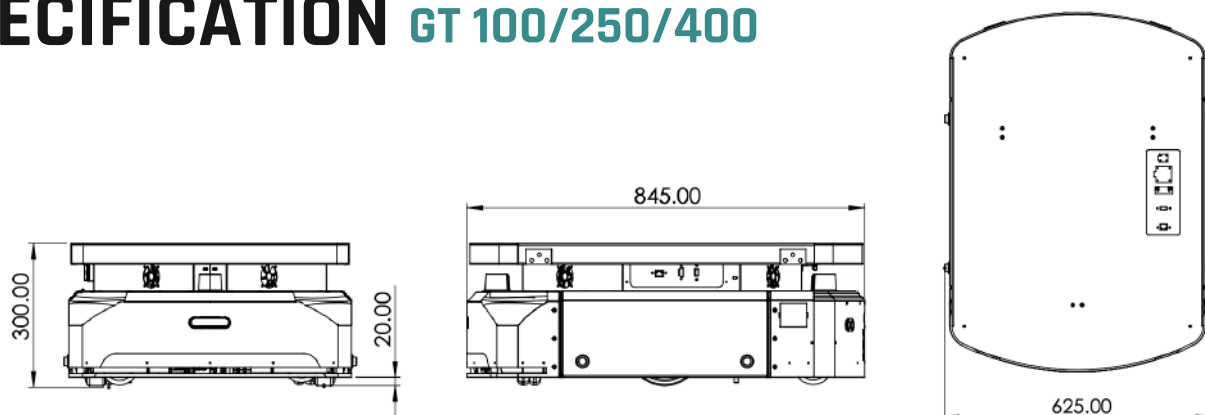
**Logistics:** Enhances distribution processes by automating order picking, packing, and sorting operations.

**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.

# TECHNICAL SPECIFICATION

## GT 100/250/400



### ROBOT DIMENSION & WEIGHT

LENGTH X BREADTH X HEIGHT (L X B X H)	845 * 625 * 300 (mm)
SELF WEIGHT	80 kg / 120 kg / 140kg
GROUND CLEARANCE	20 mm
TURNING RADIUS	Zero degree In-place rotation
SUSPENSION	Passive traction rocker

### PERFORMANCE & BATTERY

MAX. PAYLOAD	100 Kg / 250 Kg / 400KG
MAX SPEED	1.2 / 1 meter per second
MAX TURNING SPEED	45 Degree per second
POSITIONING ACCURACY	*+/-5 cm
MIN.AISLE WIDTH	950 mm

### POWER SUPPLY

BATTERY TYPE / CAPACITY	LiFePO4 / 48Volt DC /35 Ah  40Ah   40 Ah
RUNNING TIME	8 HRS
CHARGING TIME & TYPE	4 Hrs / Manual or Autonomous

### CONTROL SYSTEM AND SENSOR

PROCESSOR	Intel chipset
OPERATING SYSTEM	UBUNTU
CONTROL MODES	Autonomous / manual / Guided
COMMUNICATION	WIFI - 802.11 a/b/g/n/ac, 2.4 Ghz & 5 Ghz with antenna and Bluetooth
SENSORS	1X Lidar, 1X IMU, 2X Encoder, 1 X depth camera, optional ultrasonic sensors, optional bumper sensor
STANDARD LEAD OUTS	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
AMBIENT TEMPERATURE	Near level (3%)
IP RATING	IP 21