

## SLAM Based Autonomous Forklift

### GT-XP 1000



Load Type

The GTXP 1000 Is An Indoor Robot Designed For Robust Material Handling Within Industrial Settings. With An Impressive Carrying Capacity Of Up To 1 Ton, It Efficiently Manages Heavy Loads, Enhancing Productivity In Various Manufacturing Environments. Specifically Engineered To Lift Pallets For Material Movement, It Streamlines Operations And Optimizes Workflow Efficiency. The GTXP 1000 Combines Strength And Precision, Ensuring Reliable Performance In Demanding Industrial Applications. Its Compact Design And Indoor Capabilities Make It Well-Suited For Navigating Confined Spaces And Crowded Production Floors. With The GTXP 1000, Industries Can Achieve Heightened Efficiency And Streamline Material Handling Processes With Ease.



**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**  
Handles Up To 1 Tons

**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.

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

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

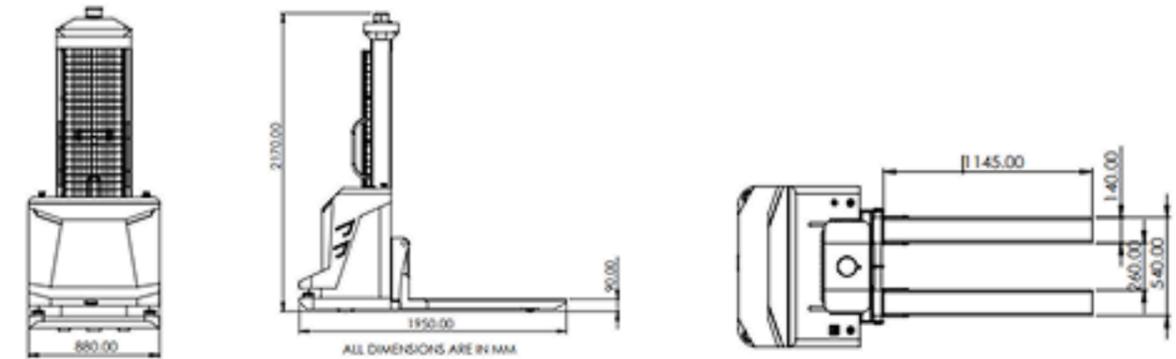
**Aerospace:** Supports manufacturing processes by transporting aircraft parts & materials within production facilities.

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

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

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

## TECHNICAL SPECIFICATION



### ROBOT DIMENSION & WEIGHT

LENGTH X BREADTH X HEIGHT (L X B X H)	1940 * 880 * 2170 (mm)
SELF WEIGHT	850 Kg
GROUND CLEARANCE	20 mm
TURNING RADIUS	1200 mm Radius
SUSPENSION	Passive

### PERFORMANCE & BATTERY

MAX. PAYLOAD	1000 kg
MAX SPEED	1 meter per second
MAX TURNING SPEED	30 degree per sec
POSITIONING ACCURACY	*+/- 5CM
MIN AISLE WIDTH	1300 mm

### POWER SUPPLY

BATTERY TYPE / CAPACITY	LiFePO4 / 48Volt DC / 60Ah
RUNNING TIME	6 Hr
CHARGING TIME & TYPE	3 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
STANDARD LEADOUTS	1X 3D Lidar, 2X2D Lidar 1X IMU, 2X Encoder, 2 X depth camera, optional ultrasonic sensors, optional bumper sensor
ACCESSORIES	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