

# Latent AMR

## ALR-W1000 Series

### Heavy-Duty Performance for Demanding Industrial Logistics

The ALR-W1000-2L2T is a high-capacity latent lifting AMR engineered for intensive industrial material handling. With a 1000 kg rated payload, it delivers stable, precision-controlled pallet transport across large-scale warehouses, manufacturing facilities, and distribution environments.

Designed for sustained heavy-load operation, the ALR-W1000 combines robust chassis architecture, reliable SLAM-based navigation, and advanced safety systems to enable safe, repeatable, and high-confidence automation in demanding logistics workflows.



#### Heavy-Load Transport Optimization

Engineered specifically for high-weight pallet workflows, ensuring stable, repeatable material movement under sustained industrial duty cycles.

#### Advanced Safety Protection

360° laser scanning combined with rear obstacle detection ensures reliable human-robot interaction across dynamic factory floors.

#### Balanced Heavy-Duty Chassis Design

Rigid platform architecture maintains load stability and directional control during high-weight transport operations.

## Applications



### Heavy Pallet Transport

Automated movement of high-weight pallets between storage zones, production areas, and dispatch docks.



### Distribution Center Automation

Reliable pallet transfer across high-volume warehouse layouts.



### Manufacturing Bulk Material Flow

Transport of heavy raw materials and semi-finished goods across production lines.



### Multi-Shift Industrial Operations

Designed for structured heavy-duty operations across extended production cycles.

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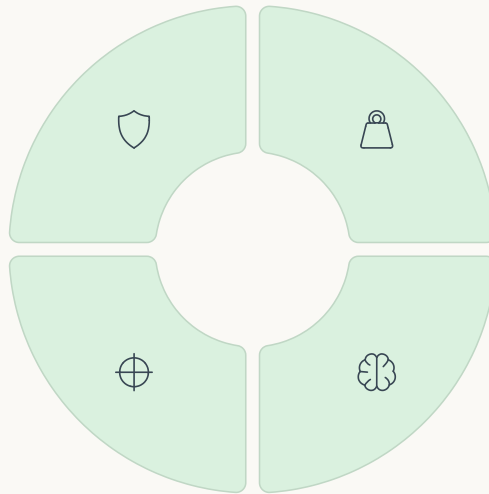
# Features & Technical Specifications

## Reinforced Industrial Chassis

Engineered for stable transport of 1000 kg loads with optimized weight distribution and structural rigidity..

## Precision Positioning

±10 mm stopping accuracy and ±1° angle control ensure reliable pallet docking even under maximum load.



## High-Capacity Lifting System

Motor-driven latent lifting mechanism ensures controlled 60 mm pallet engagement under full load.

## Intelligent Hybrid Navigation

Laser SLAM, QR code, and texture-based positioning enable flexible deployment across structured and semi-structured facilities.

## Technical Parameters

<b>Product Model</b>	ALR-W1000
<b>Navigation Method</b>	Laser SLAM / QR Code / Texture Hybrid
<b>Dimensions (L×W×H)</b>	950 × 650 × 300 mm   Ground Clearance: 20 mm
<b>Rotation Diameter</b>	1000 mm
<b>Lifting System</b>	Motor-Driven latent lifting   Lift Distance: 60 mm
<b>Lifting plate size</b>	900 × 560 mm
<b>Load Capacity</b>	1000 kg rated   Machine Weight: 170 kg
<b>Drive Mode</b>	Two-wheel differential
<b>Safety Features</b>	360° laser scanner, marker lights, collision detection, sound and light alarms
<b>Motion Performance</b>	Max Speed: 1.5 m/s   Acceleration: 1.0 m/s <sup>2</sup> Climbing: 3° (5%)   Obstacle Crossing Height: 10 mm
<b>Moving Direction</b>	Forward and backward + Rotate in place
<b>Stop Position Accuracy</b>	±10 mm   ±1° Angle Accuracy
<b>Battery Performance</b>	Manual/Automatic + Manual Battery Replacement 8h runtime   2h fast charge   8000 Charge Cycles

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