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## **UNDERRIDE ROBOT** WITH LOW-PROFILE DESIGN

A low-profile transport robot designed for spaceconstrained environments, capable of operating under loads with minimal ground clearance.

#### **UNDERRIDE PLATFORM DESIGN**

The FP12 is a low-profile underride platform robot designed to operate beneath loads with limited ground clearance.

With a total height of just 200 mm, it can easily enter and lift standard racks or carriers, enabling efficient automation of intralogistics processes in space-constrained environments.

#### **HIGH PAYLOAD CAPACITY**

Capable of transporting loads up to 1000 kg, the FP12 is engineered for demanding industrial applications.

Its durable construction ensures consistent performance under full load, offering a reliable and versatile solution across a wide range of intralogistics environments.

Equipped with SLAM technology, the FP12 enables real-time mapping and accurate localization. This supports efficient route planning, dynamic obstacle avoidance, and adaptability to changing environments, ensuring reliable operation in dynamic and complex intralogistics settings.

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**ADVANCED SLAM** 

NAVIGATION

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### **COMPREHENSIVE SAFETY SYSTEM**

FP12 is equipped with a safety package, including two SICK Micro and two Nano safety scanners, four emergency stop buttons, 360° laser coverage, and blue spot warning lights. Its onboard IMU module ensures stability and precise motion control even in complex environments, making it safe for operation alongside people and machinery.

#### **GENERAL SPECIFICATIONS**

- Payload capacity: 1000 kg
- Dimensions (L x W x H): 1612 x 830 x 200 [mm]
- Lifting height: 20 mm
- Weight: 333 kg
- Maximum speed: 1.8 m/s
- Drive type: differential
- Drive power: 2 x 0.7 kW
- Positioning accuracy (+/-): 1.0 cm

#### **POWER SYSTEM**

- Battery type: Lithium-ion (Li-ion)
- Battery capacity: 120 Ah
- Battery voltage: 48 V

#### SAFETY FEATURES

- Laser scanner field of view: 360°
- Safety scanners:
- Sick Micro Scanners: 2 units
- Sick Nano Scanners: 2 units
- Emergency push buttons: 4 units
- Blue spot lamp: 2 units
- IMU module: 1 unit

#### **NAVIGATION SYSTEMS**

- SLAM Technology: yes
- Odometry: yes
- IMU (Inertial Measurement Unit): yes

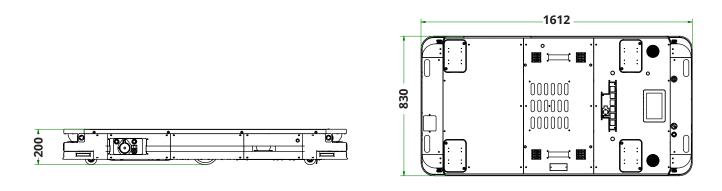
#### **ENVIRONMENTAL CONDITIONS**

- Operating temperature: 15°C 40°C
- Relative humidity: >70%

# TERRAIN CAPABILITIES

- Maximum longitudinal inclination: 2.0°
- Maximum lateral inclination: 5.0°
- Positioning accuracy (+/-): 1.0 cm

## **DIMENSIONS** [MM]



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