



Robotnik

RB-1 BASE

RB-1 BASE is a mobile platform designed for indoor applications. The robot can carry 50 kg and integrate different sensors.

Product

The mobile robotic platform is designed for general applications. The mobile robot can carry different loads or materials and can integrate other components or platforms such as a robotic arm or a torso.

The mobile platform can integrate a wide number of range finders with operation distances from 5 to 30-60 meters. RGBD sensors (Asus Xtion, Kinect One, etc.) can be mounted on the top of the platform for the detection of obstacles. The standard platform incorporates an RGBD sensor.

The robot is able to detect obstacles in two different ways, by RGBD sensor installed and by the laser sensor that is used for navigation and positioning. In both cases, the robot can either stop or find an alternative route to avoid the obstacle and reach the next waypoint.

The software includes a control system, a tracking system (laser-based), a navigation system and a user interface HMI (basic).

The location and navigation components are standard packages that are configured to suit the application. The software for the low-level control system is supplied with the platform.

The control architecture is open-source and modular, based on ROS (<http://www.ros.org>).

ROS framework defines a well organized robot software architecture and includes hundreds of user contributed packages and sets of packages called metapackages, that implement functionalities as localization and mapping, planning, manipulation, perception, etc.

This characteristic simplifies the software development cycle and allows easy integration and reutilization of software components whether they are device drivers or state of the art algorithms in vision, SLAM, point cloud processing, planning, swarming, etc.

Applications

- Logistics
- Remote monitoring
- Research & Development
- General purposes

Options

- Automatic recharging station
- Lifting unit



Technical Specifications

Mechanical

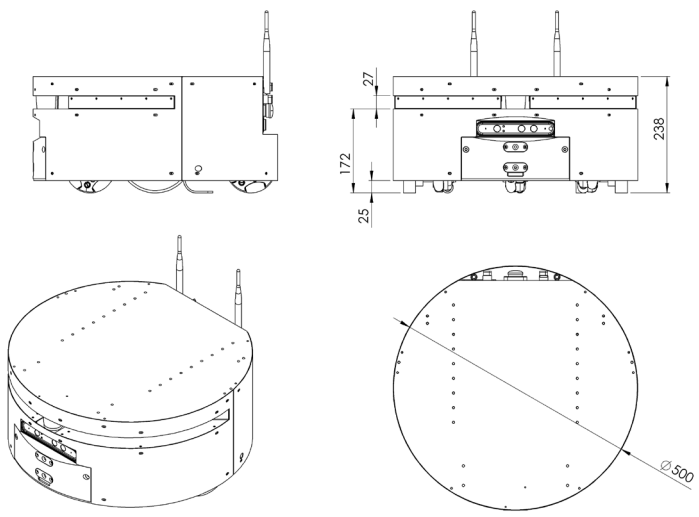
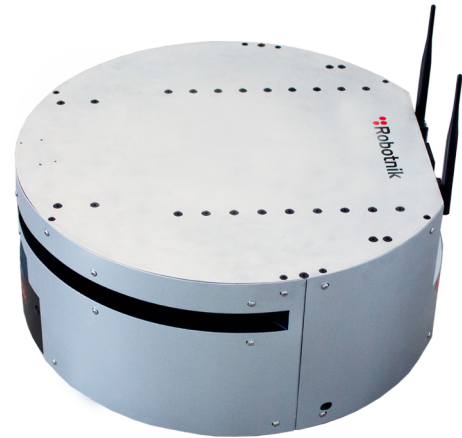
Dimensions	500 x 500 x 238 mm
Weight	30 Kg
Load capacity	50 Kg
Speed	1.5 m/s
Autonomy	10 h. (continuous motion)
Batteries	LiFePO4 30Ah@24VDC
Traction system	Differential drive
Traction motors	2 x 250W servo motors

PC

Processor	4th generation Intel i7
RAM	8 Gb
Hard Drive	120 Gb

Control

Controller	Open architecture ROS Embedded PC with Linux
Communication	WiFi 802.11n
Connectivity	2x USB, 2x Ethernet and 1x HDMI



ROS.org

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