RBCAR

RBCAR is an autonomous urban robot for defined environments. It is perfect for both research and transport of people and goods.

Product

The mobile platform RBCAR has RWD Ackerman kinematics. The traction is controlled by an AC motor with incremental encoder and the direction through a power steering system with absolute encoder.

Thanks to its mechanical structure and the rear drawer, this mobile platform can carry heavy loads. With the configuration of suitable sensors, the robot can navigate autonomously, teleoperated with a joystick or a steering wheel, as an electric vehicle.

It has front and rear drum brakes that allow the robot to stop immediately. Optionally, by remote emergency button.

The robot can mount any standard accessory from the company (Hokuyo laser, laser Sick, DGPS kits, etc.) and any sensor required by the customer. It also has internal connectivity (USB, RS232, GPIO) and external (USB, RJ45, making 12 VDC) to quickly connect the components.

RBCAR uses an open architecture and modular control ROS. The ROS framework defines a well structured architecture and includes hundreds of user packages and bundles called stacks that implement a large number of components and a large number of algorithms such as location, GIS mapping, planning, manipulation, perception, etc.

This feature simplifies the software development cycle and allows easy integration and reuse of software components are device drivers or the most advanced vision algorithms, SLAM, planning, swarming, etc

Applications

- Research
- Transport of goods
- Transport of people

Technical Specifications

Mechanical

Dimensions	2660 x 1230 x 1720 mm
Weight with batteries	690 Kg
Transport box	790 x 1100 mm
Payload	2 people, 150 Kg on the box
Speed	32 km/h
Enclosure class	Galvanized
Motor	3,3 kW AC 48V
Autonomy	70 km
Brakes	Hydraulics
Battery status	Yes
Chassis	ABS thermoformed
Max. climbing angle	25%

Control

Controller	Open architecture ROS
Communication	Embedded PC with Linux
	WiFi 802.11n
Connectivity	Remote

::: ROS.org