



Robotnik

SUMMIT XL

SUMMIT XL is perfect for research environments in both indoor and outdoors.

Product

The Summit XL has skid-steering kinematics based on 4 high power motorwheels. Each wheel integrates a hub brushless motor with gearbox and encoder (optional). The odometry is computed with the use of the four encoders and a high precision angular sensor mounted inside the chassis.

The strong mechanical structure allows to carry high loads. There are several suspension shocks possibilities. They can also be mounted at several positions to modify the robot clearance.

The robot base can navigate autonomously or teleoperated by means of a PTZ camera that transmits video in real time.

The common sensor options include a Hokuyo laser scanner and a range of RTK-DGPS kits. It also has internal (USB; RS232 and GPIO) and external connectivity (USB, RJ45 and power supply 12 VDC) to easily add custom components.

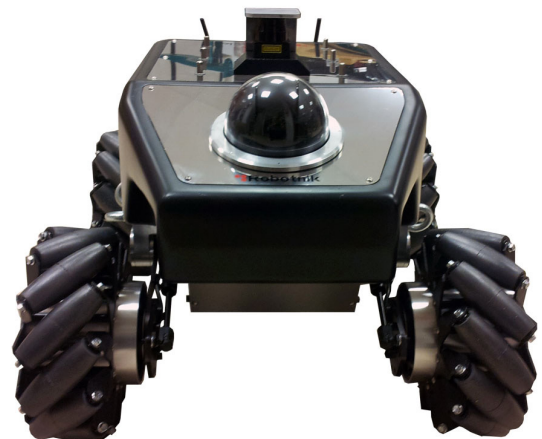
The control architecture is open-source and modular, based on ROS (<http://www.ros.org>).

ROS framework defines a well organized robot software architecture and includes hundreds of user contributed packages and sets of packages called stacks, 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, grasping, planning, swarming, etc.

Applications

- Research
- Surveillance
- Military
- Remote monitoring
- Access to hazardous areas



Technical specifications

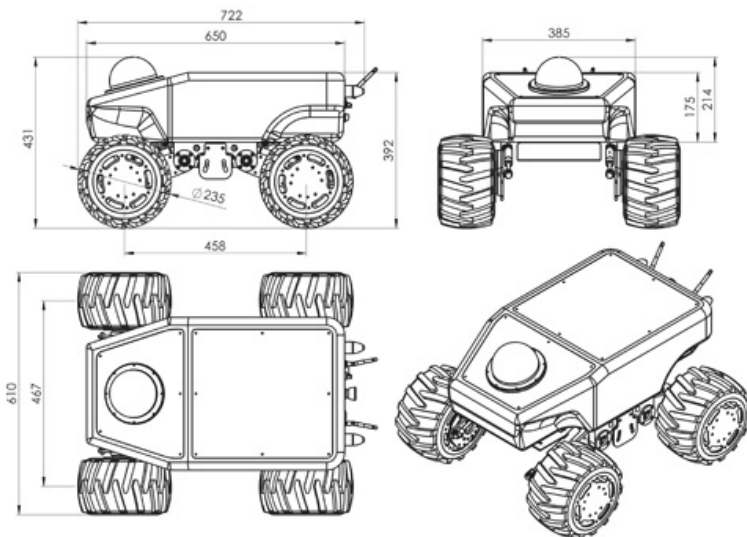
Mechanical

Dimensions	722 x 610 x 392 mm
Weight	45 Kg
Payload	20 Kg
Speed	3 m/s
Enclosure class	IP54 / IP65
Traction system	4 wheels
Autonomy	5 h. continuous motion 20 h. standard laboratory use
Batteries	8x3.3V LiFePO4
Traction motors	4x 250 W brushless servomotors
Temperature range	0° a +50°C
Max. climbing angle	40°



Control

Controller	Open architecture ROS Embedded PC with Linux (Intel BayTrail J1900 or similar)
Communication	WiFi 802.11n
Connectivity	Internal: USB, RS232, GPIO External: USB RJ45 and 12 VDC



ROS.org

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