



Robotnik

# SUMMIT XL HL

**SUMMIT XL HL** is a robust mobile platform which allows mounting mecanum wheels and conventional wheels: omnidirectional configuration and skid-steering configuration.

## Product

Summit XL HL is a platform with high mobility and high load capacity. The robot has 2 possible kinematic configurations. The omnidirectional configuration mounts mecanum wheels on an independent suspension system. The mecanum wheels can be easily replaced by conventional wheels (rim mount), thus allowing easy switch between the indoor omnidirectional configuration and the skid-steering configuration.

The odometry is computed using the wheel speeds and a high precision angular sensor mounted inside the chassis.

The strong mechanical structure allows to carry heavy loads (up to 65Kg). There are several suspension shocks possibilities. They can also be mounted at several positions to modify the robot clearance.

The robot has skid-steering kinematics based on 4 high power motorwheels. Each wheel integrates a hub brushless motor with gearbox.

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

The control architecture is open-source and modular, based in ROS. 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

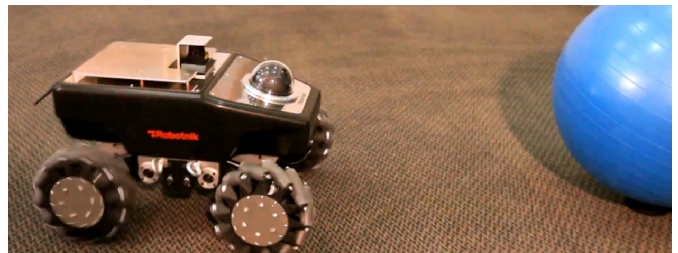
- Research and education
- Surveillance
- Military
- Remote monitoring
- Access to hazardous areas



## Technical Specifications

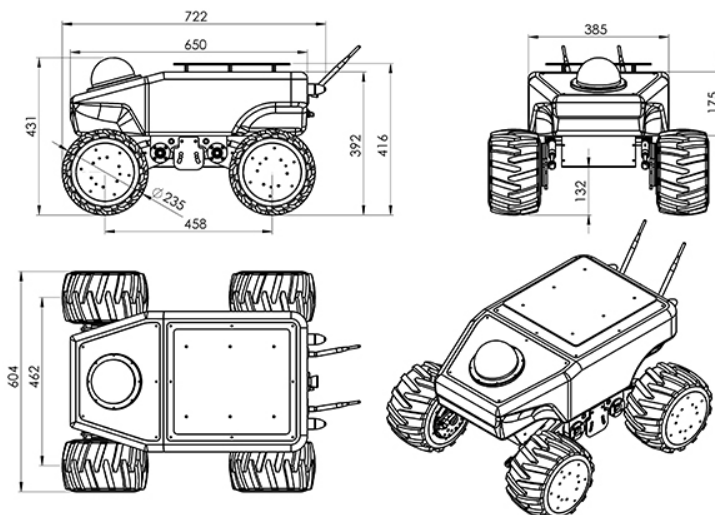
### Mechanical

Dimensions	731 x 578 x 440 mm
Weight	65 Kg
Load capacity	65 Kg
Speed	3 m/s
Enclosure class	IP54 / IP65
Traction system	4 wheels
Autonomy	10 h. continuous motion 40 h. standard lab use
Batteries	16x3.3V LiFePO4
Traction motors	4x500 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 and GPIO External: USB, RJ45, 12 VDC and battery



ROS.org

C/ Ciudad de Barcelona, 3-A, 46988  
P.I Fuente del Jarro, Paterna, Valencia (Spain)  
Phone. +34 96 147 54 00

[www.robotnik.eu](http://www.robotnik.eu)