Robotnik

SUMMIT XL OMNI

The **SUMMIT XL OMNI** allows mounting Mecanum wheels and conventional wheels: omnidirectional configuration and skid-steering configuration.

Product

The Summit XL Omni has two 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, enabling an increased mobility and manoeuvrability and unmatched speed and agility.

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 common sensor options include a Hokuyo laser scanner and a range of RTK-DGPS kits. It also has internal (USB, RS232, GPIO and RJ45) and external connectivity (USB, 12 and 24VDC) to add custom components easily.

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

www.robotnik.eu

Technical Specifications

Mechanical

Dimensions	709 x 571 x 401mm
Weight	65 Kg
Load capacity	65 Kg
Speed	3 m/s
Enclousure class	IP53/ IP65 option
Traction system	4 wheels
Autonomy	180 minutes
Batteries	16x3.3V LiFePO4
Traction motors	4x500 W brushless servomotors
Temperature range	0º a +50ºC
Max. climbing angle	45º
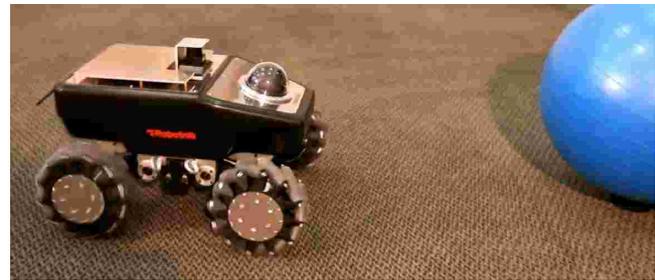
Control

Controller	Open architecture ROS
	Embedded PC with Linux Real Time
Comunications	WiFi 802.11n
Connectivity	Internal: USB, RS232, GPIO y RJ45
	External: USB and power supply 12 VDC

:::ROS.org

C/ Berní y Catalá, 53 bajo izq.
46019 VALENCIA (SPAIN)
Phone: +34 96 338 38 35
www.robotnik.eu