:::Robotnik

SUMMIT

The **SUMMIT** is a medium-sized and all terrain robot with extreme performance. It is suitable for research and as a test bed for the development of indoor and outdoor applications.

Product

The SUMMIT is a small-sized robot that offers high mobility and low cost. It is suitable for both indoor and outdoor applications and can easily overcome obstacles such as curbs and steps.

The mechanical system is equivalent to a 4x4 remote control car and uses a high quality aluminium chassis. Each wheel has a drive motor mounted on each axis with an independent damping system and pendulum counterweight on each wheel to improve its stability.

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 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 functionality as localization and mapping, planning, manipulation, perception, etc.

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

Applications

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

:::ROS.org

Technical Specifications

Mechanical

Dimensions	570 x 345 x 320 mm
Weight	12.9 Kg
Load capacity	5 Kg
Speed	3 m/s
Enclousure class	IP54 (until IP65)
Traction system	4 wheels
Autonomy	240 minutes
Batteries	4x3.3V LiFePO4
Traction motors	2 brushless motors
Temperature range	0º a +50ºC
Max. climbing angle	45º
Kinematics	Dual or single axis
	Ackerman steering
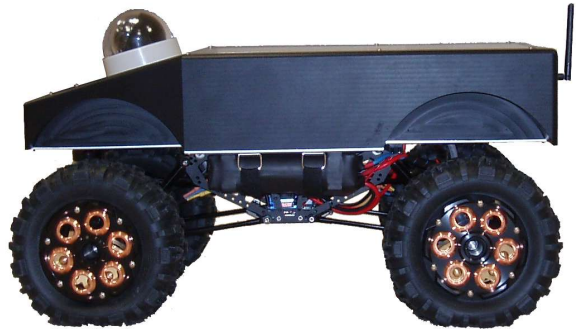
Control

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