Robotnik

GUARDIAN

The mobile robot Guardian has high mobility and modularity. The Robotnik platform uses architecture ROS and it is suitable for research, security and inspection.

Product

Guardian is a mobile platform specially designed for applications in areas as security, inspection and research, due to its high mobility, that allows it to move in places difficult to access for other kind of platforms (stairs, slopes, rough terrain...). The robot is able to integrate serveral sensors (indoor/outdoor laser, cameras, stereovision heads, inertial measurement units, GPS ...) and actuators (WAM arm, modular arm, stereovision, pan-tilt units ...).

Guardian offers a wide space inside to incorporate multiple CPUs, which allows for greater on-board processing for vision, laser telemetry or RTK-DGPS.

The robot has a weight of 120Kg, so it can carry up to 100 Kg of additional equipment. It just requires a little control briefcase.

Applications

- Research and education.
- High mobility indoor / outdoor navigation.
- Search and disposal of improvised explosive devices (*IEDD*) or explosive ordenance devices (*EOD*).
- Remote surveillance.
- Remote measurement and mapping.

ROS.org

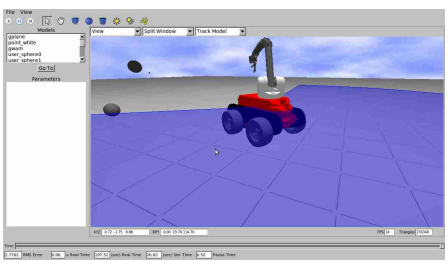
Technical Specifications

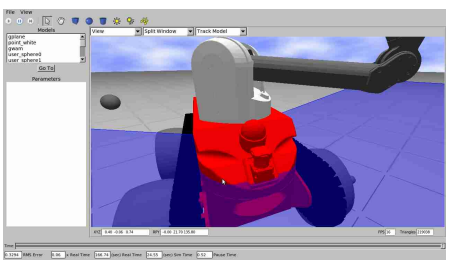
Mechanical

Dimensions	1.115x500x450 mm (only tracks) 1.115x740x450 mm (+ wheels)
Weight	120 Kg
Load capacity	100 Kg
Speed	3 m/s a. configuration
Enclousure class	IP54 / IP65, IP66 optional
Traction system	Belts combined with wheels
Traction motors	2 axis, skid configuration 2 x 1.000W
Batteries LiFePo4 Technology	24 VDC/60 Ah. - 24 VDC/100 Ah. 48 VDC/30 Ah. - 48 VDC/ 50 Ah.
Autonomy	3 h/ 10 h /6 h /10 h Normal operation
	-10º a +50º C

Control

Modular system	Highly scalable system: - Possibility of 1 or 2 robot arms. - Connection of different types of sensors. - Eth USB/RS-232 external ports.
Controller	- Embedded PC with Linux Real Time O.S., WiFi / WiMan / WiFi Mesh communication. - Multiple CPU options. - ROS architecture (www.ros.org).
Cameras	- Pan tilt. - Stereohead - 3D camera. - Multiple options of cameras PTZ.





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