



**Robotnik**

**XL-MICO**

XL-MICO is a mobile manipulator formed by the SUMMIT XL and the KINOVA MICO<sup>2</sup> arm.

### Product

The mobile manipulator XL-MICO arises from the union among two excellent products: Summit XL robot and MICO<sup>2</sup> arm.

The robot SUMMIT XL has differential kinematics (skid-steering) or omnidirectional based on 4 high performance motors. Each wheel integrates a brushless motor and encoder (optional). Odometry is calculated using the four encoders and high precision angle sensor mounted inside the chassis. It also has potential powerful dampers can be assembled in several positions to change the clearance between the chassis and the floor of the robot.

MICO<sup>2</sup> arm is designed in carbon fiber and has a gripper with 2 or 3 fingers. Its power consumption is relatively low and allows the mobile manipulator greatly increase their autonomy.

Manipulator XL-MICO is designed for harsh, hazardous or research environments.

XL-MICO uses the ROS open architecture (<http://www.ros.org>). The ROS framework defines a well organized robot software architecture and includes hundreds of user-contributed packages and sets of packages that implement functionalities such localization and mapping, planning, manipulation, perception, etc.

### Applications

- Research
- Inspection
- Medicine
- Logistics
- Remote monitoring
- Access to harsh environments



## Technical specifications

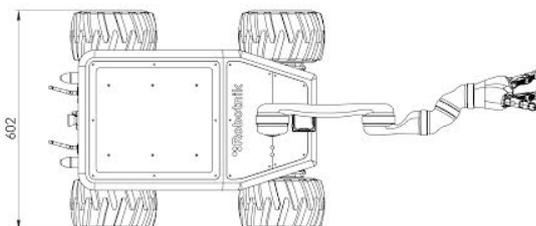
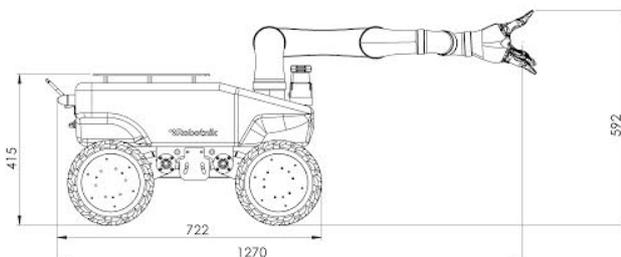
### Mechanical

Dimensions	602 x 592 x 1270 mm (Arm spread out)
Weight	50 Kg
Speed	3 m/s
Enclosure class	IP 54
Autonomy	5-10 hours
Batteries	8x3.3V LiFePO4
Traction motors	4x250W brushless servomotors

Arm load capacity	
- 6 DOF MICO <sup>2</sup> arm	2,1 Kg (Half range) 1,5 Kg (Complete Range)
- 4 DOF MICO <sup>2</sup> arm	5,2 Kg (Half range) 2,7 Kg (Complete Range)

### 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 and power supply 12 VDC



ROS.org

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