

# A NEW ERA FOR SURVEILLANCE AND SECURITY

 **Robotnik**

**RB-WATCHER** ►



**robotnik.eu**



Surveillance and security tasks require precision and reliability in order to detect hazards and risks to critical assets at an early stage.

Our autonomous robotic platform provides a new, safe and efficient way to perform these duties, throughout different and challenging environments.

**Robotnik** presents the **RB-WATCHER** to enhance the site security, in an intelligent, continuous and reliable way, communicating data to a control centre in real time.



HUMAN-MACHINE  
INTERFACE



AUTONOMOUS



INTELLIGENT  
FUNCTIONS



FREE NAVIGATION



READY TO USE



PRECISION

**PRECISION  
SAFETY  
AUTONOMY**







### **Safety**

Gives security staff the possibility to intervene in dangerous situations without being physically present.



### **Easy to use / Easy control**

Quick, intuitive and simple setup for the end user.  
Remote and Real Time access.



### **Modular configuration**

Possibility of adapting the robot's sensorisation according to the application, thus being able to extend the tasks or environments it will perform in.



### **Error reduction**

Access to various sensors such as a thermographic camera, provide the security staff with data beyond human perception.



### **ROI - Return On Investment**

Increasing the surveillance capabilities of the existing security staff and helping to protect critical and valuable assets.



### **Efficiency**

The robot's advanced sensorisation makes it possible to detect anomalies that might be missed by humans.





## Ready for **SURVEILLANCE TASKS**

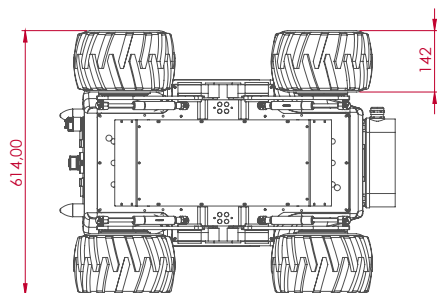
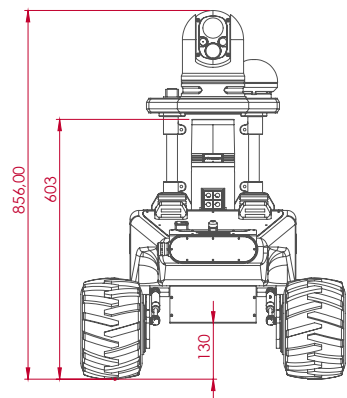
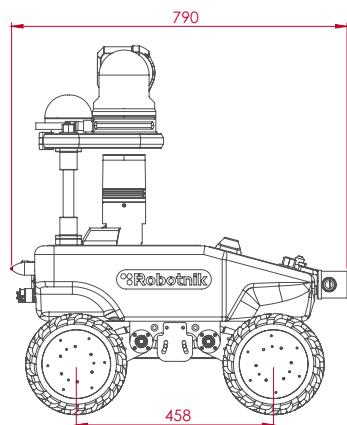
- Autonomous patrolling of the pre-defined area following a planned schedule.
- Real time monitoring of the cameras and sensors.
- Remote operation.
- Detection of different items: people, animals, bags or vehicles, among others.
- Fire detection.
- Optional video transmission of blurred faces for privacy purposes.
- Real-time alarm transmission through several communication channels.
- Collection and post-analysis of gathered data.

Mobile surveillance robots are an important driver of transformation in the private security sector.

They are capable of recognizing and interacting with the environment in an intelligent way, performing routine control tasks, surveillance and detection of environmental risks or monitoring different spaces and infrastructures.

These collaborative robots are a fundamental support for security workers as they minimise risks and optimise their work. In addition, they can considerably reduce the costs of surveillance tasks in the short to medium term.

Robotnik mobile surveillance robots integrate inspection, navigation, localisation and communication sensors, making them the ideal tool to offer more efficient and advanced surveillance and security services.



## TECHNICAL SPECIFICATIONS

### Dimensions

- 790 x 614 x 856 mm

### Weight

- 62 Kg

### Maximum speed

- Up to 2.5 m/s

### Target environment

- Outdoors and Indoors

### Autonomy

- Up to 5 hours continuous operation

### Traction motors

- 4 x Brushless servo motors 500W

### Operating ambient temperature

- Temperature range -10° to +45°C

### Ground clearance

- 130 mm

### Contact charging

- Up to 1000 W

### Battery

- LiFePO4 pack 15Ah@48V

### Chassis

- IP53

### Wheels

- Rubber wheels

### Platform

- SUMMIT-XL 48 V

## NAVIGATION SENSORS

### Front depth camera

- Depth up to 1280x720 (90 fps)
- RGB up to 1920x1080 (30 fps)

### Inertial Measurement Unit

- Magnetic Heading Accuracy: 2.0°
- Gyro In-Run Bias Stability: 5-7°/hr (typ.)
- Onboard Extended Kalman Filter: 400 Hz
- Rugged
- Pitch/Roll Accuracy: 0.5°
- Accel In-Run Bias Stability: < 0.04 mg
- IMU Data: 800 Hz

### RTK GPS

- Centimeter level precision (<1cm with NTRIP up to 35km)
- Converge time <10s

## LOCALIZATION

### Multiple localization technologies, suitable for every specific environment and application

- 3D SLAM
- 2D SLAM
- RTK GPS

### Static & Dynamic path planning with collision detection and avoidance

## INSPECTION SENSORS

### Bi-spectral Pan-Tilt-Zoom Camera

- Thermal: 640x480, -20°C ~ +550°C (± 2°C or ± 2% of reading), Zoom x4
- RGB: 1920x1080@30fps, Optical Zoom x30
- Pan Range 360° continuous
- Tilt Range -20° ~ 90°

### Microphone

- Sensitivity: -22 dB ±3 dBa
- Frequency: Within 20 Hz - 20 kHz
- Max SPL: 126 dB
- SNR: 82 dB A-weighted

## COMMUNICATIONS

### Router 4G

- 4G LTE CAT 6
- DUAL SIM
- WiFi & Bluetooth
- Gigabit Ethernet

### Optional Router 5G

- SA & NSA architectures
- Backward compatible with 4G (LTE CAT 20) and 3G network technologies

### Optional Smart Radio

- Low Latency Mobile Mesh
- Multiple Bands and Multiband
- Max Throughput: 80 Mbps
- Range: 10+ kilometres

# 20 YEARS LEADING MOBILE ROBOTICS

**Do you have a project in mind?**

**CONTACT ONE  
OF OUR EXPERTS**



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



## **Robotnik is a leading European company in mobile service robotics.**

Its activity is focused on the development and manufacture of autonomous mobile robots and manipulators for different applications in both industrial and academic fields: inspection, mobile manipulation, inventory, transport or logistics, among others.

Since the start of its activity in 2002, it has sold more than 5,000 robots in 50 countries around the world and has participated in more than 60 European R&D projects.

In January 2023, **Robotnik** became part of United Robotics Group (URG) headquartered in Bochum, Germany. United Robotics Group unites young service robotics companies into a unique ecosystem by bundling hardware and software expertise under one roof.

URG creates as the CobotX company the 3rd generation of robotics – robots for humans.