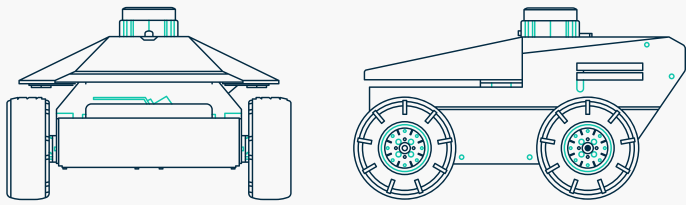# BINARIAL®

# COMPY

EDUCATION

## The first contact with
## autonomous robots

# Discover our educational robot. Compy®

**Compy®** is the ideal companion for students to quickly and easily learn about **autonomous mobile robots** and develop projects in vision, positioning, and artificial intelligence.

Our **personalized programming and configuration interface system** provides quick access to all functions, while the robot allows for lower-level programming and control through **ROS**.

At BINARIAL, we provide **technological tools** that contribute to the development of **digital skills (DC)** and **mathematical skills** in **science**, **technology**, and **engineering (STEM)**.

## Applications and their usage

### SURFACE MAPPING

Our robot allows for manual navigation through a workspace / movement area, recording and generating a map of the facility. This map can be used for subsequent route programming or simply to have a graphical representation of the facility or office layout.

### AUTONOMOUS NAVIGATION

Thanks to its LIDAR scanner, the robot can autonomously navigate through programmed routes, avoiding obstacles encountered along the way. With its navigation technology, it avoids any obstacle in its path by recalculating a new route in real-time.

### EVENT MANAGEMENT

The Compy® mobile robot offers the ability to generate different types of events, either by pressing a button or reading a presence sensor. This allows us to create a communication interface with the robot in a simple way, giving us a general idea of how this robot would work in a final application in the industry.

## Measurements and specifications

### HARDWARE / SOFTWARE ····

| | |
|---|---|
| Comunication | Ethernet, USB 3.0, RS232 |
| Sensoring | PC Onboard with computional power GPU*, RPLidar S2L, Giroscope, IMU, Intel Realsense. |
| | *Up to 40 TOPS able to run AI applications.* |
| Encoders | 1 x each wheel |
| Web control | Entel-webUI v.2.5 |
| Feedback | Encoders / IMU |
| Control modes | Cinematic control Independet wheel speed |
| Lidar | RPLidar S2L |
| Depth camera | Intel Realsense D435 |

### FEATURES ····

| | |
|---|---|
| Dimensions | 441 x 380 x 254 mm |
| Weight | 6 kg |
| Load Capacity | 25 Kg |
| Maximum Speed | 1,8 m/s |
| Obstacle Detection | 50 cm |
| Operational Time | 5-8 h (máx. load) 12-14 h (mín. load) |
| Power | 2000 W peak 800 W continuous |
| Battery | 12 V 9000 mAh |