



ROSbot XL

ROSbot XL

Mobile Robot Platform for Indoor Applications



Features

For indoor applications

ROSbot XL is a flexible, ROS 2-native mobile robot platform designed for indoor applications and research. It boasts sturdy hardware and provides reference projects utilizing essential ROS 2 technologies, including Nav2, SLAM Toolbox, and ROS 2 Control.

Adaptable

ROSbot XL features a modular electronic design for easy integration with various components and offers three single board computer options: Raspberry Pi 4, Intel NUC, and NVIDIA Jetson Orin Nano.

ROS 2 powered

Open source Robot Operating System driver is available for ROSbot XL. Broad amount of detailed tutorials, manuals and software packages will help you get started even quicker.

QUICK ACCESS

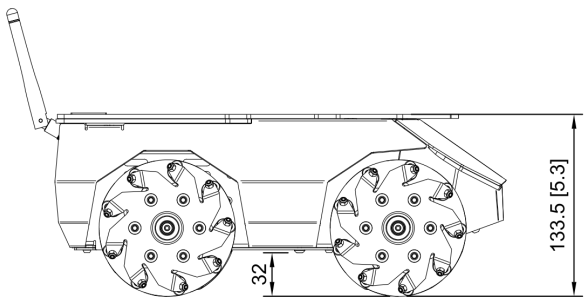
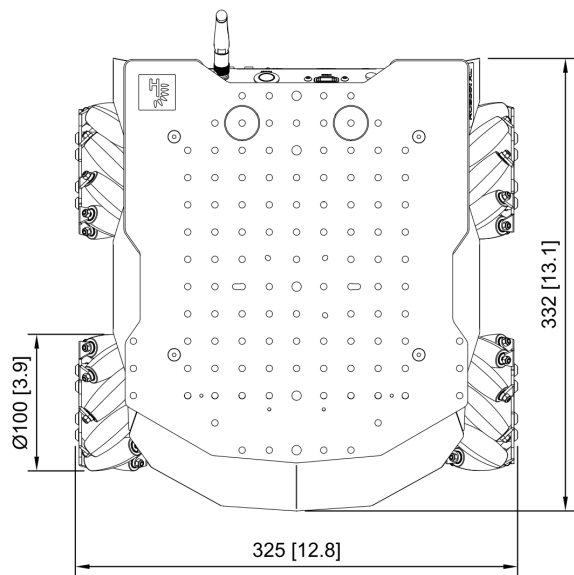
[!\[\]\(4f6bf54ae7e4144a72d78316053e412d_img.jpg\) Buy now](#)[!\[\]\(3342c215b2a8b663596a81468d5dc314_img.jpg\) Read the blog](#)[!\[\]\(56549452e01ca28bdf2500ced9653143_img.jpg\) Go through the manual](#)[!\[\]\(1f56542a42e2413e44a2b2023033aa2e_img.jpg\) Find available configurations](#)[!\[\]\(19d44b37fb4fa155bf9d60c77a3d3cb2_img.jpg\) Learn how to start](#)[!\[\]\(5a351309c3b87e4420622c1f0e57efc0_img.jpg\) Get familiar with ROS interface](#)




Specification


Component	Description
SBC	Default user computer: Raspberry Pi 4 (4GB RAM) . Can also be configured with NVIDIA Jetson Orin Nano (8GB RAM, 250GB SSD) or ASUS NUC (i3-1315U 16GB RAM 250GB SSD) .
Digital Board	Real-time controller based on STM32F407 microcontroller.
Power Board	USB-C Power Delivery input (12-20V) which supports simultaneous power delivery and battery charging.
DC motor	4 x Xinhe Motor XH-37D, 12VDC nominal, 10000rpm. Maximum mechanical power: 10W, no load speed at the output shaft: 200 rpm, stall torque at the output shaft: 21 kg*cm, stall current: 5.4A, gear ratio: 50
Encoder	4 x Magnetic, 64cpr, 16 poles
IMU sensor	Intelligent 9-axis absolute orientation sensor BNO055, more details
Li-Ion Batteries	11.1V 7800mAh 86Wh

Component	Description
Antenna	Connected directly to Wi-Fi module.
Speaker	Driven from Digital Board or from SBC (selectable source).



Dimensions in mm [inch]

Basic params	
max speed	0.8 m/s
weight	5.4 kg
operating temperature	-20°C to 50°C
charging temperature	0°C to 45°C
run time (typical case)	2 - 6 h
minimum ground clearance	32 mm

Traction	
maximum carrying capacity	10 kg
nominal shaft torque	0.75 Nm
maximum shaft torque	2 Nm
nominal total traction force	17 N

Traction	
maximum total traction force	69 N

Configuration Packages

1 / 5

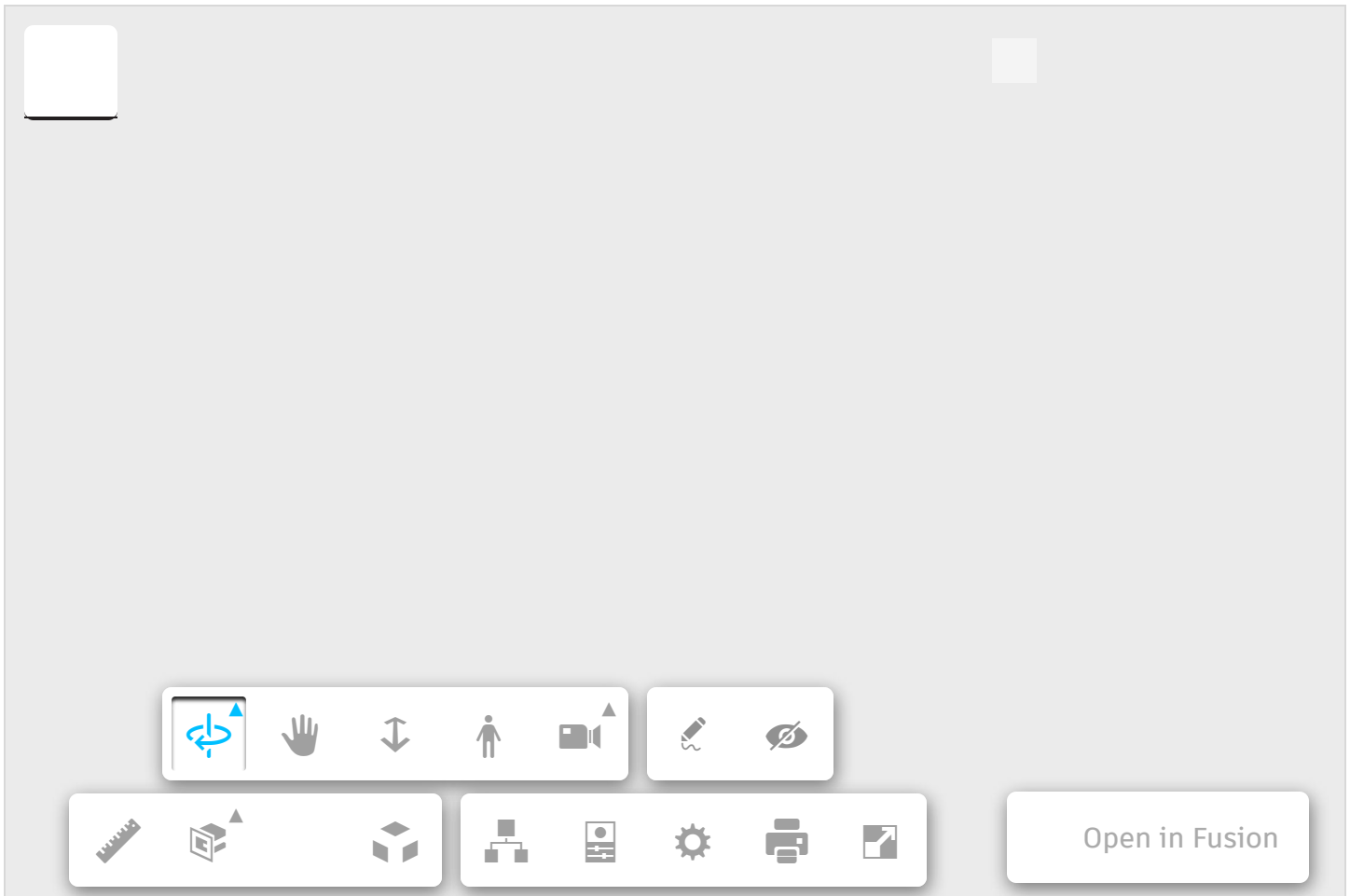
basic
package



! INFO

You can find more information about each of the packages [here](#)

3D Model



Default Package Content

Each ROSbot XL configuration package contains:

- ROSbot XL mobile platform
- A USB-C charger (65W)
- Two sets of wheels (4x regular and 4x mecanum).

Request a Quote

To request a quote for your project, contact us at sales@husarion.com. Our solutions are ready to be adapted to your needs.