Telemetry Balkan doo Beograd

O2D R5

Robot Setup Manual

Prepared By: Sergei Loshchilov

v 0.4.0

Beograd, Serbia
2026-05-08

Version History

Version	Date	Authors	Description
0.1.0	2026-05-08	Sergei Loshchilov	Original Document Created
0.2.0	2026-05-08	Sergei Loshchilov	Added O2D R5 Scheme and O2D R5 Dock Scheme
0.3.0	2026-05-12	Sergei Loshchilov	Added Provisioning application details and the main provisioning steps
0.4.0	2026-05-18	Sergei Loshchilov	Added ORB Connect Application screenshots

Contents

Overview

Thank you for choosing the O2D R5 Robot!

This manual provides instructions for setting up and configuring the **assembled O2D R5 Robot** and its docking station. It covers the initial hardware setup, powering on the robot, connecting to the robot's Wi-Fi hotspot, provisioning the robot into a wireless network, and accessing the robot's web interface.

This document is intended only for users who have already received a fully assembled O2D R5 Robot.

If you need instructions for building the robot from individual mechanical, electrical, and electronic components, please refer to the **O2D R5 Robot Assembly Manual**.

Before operating the robot, carefully read the Safety Recommendations section of this document to ensure safe and proper usage of the system.

1. Safety Recommendations

Avoid Cliffs and Staircases

Do not operate the robot near staircases, ledges, balconies, or other elevated surfaces where it may fall or become damaged.

Keep Away from Children Under 6 Years Old

The robot is not intended for use by children under the age of 6. Adult supervision is recommended when the robot is operating near children.

Avoid Contact with Liquids

Keep the robot away from water, beverages, and other liquids. Exposure to liquids may cause electrical failure or permanent damage to internal components.

Avoid Prolonged Outdoor Usage

The O2D R5 Robot is designed primarily for indoor environments. Extended outdoor operation may expose the robot to dust, moisture, heat, and uneven terrain that can reduce performance or damage the system.

Charging Safety

Use only the supplied power adapter and docking station. Using incompatible power supplies may damage the robot or create safety hazards.

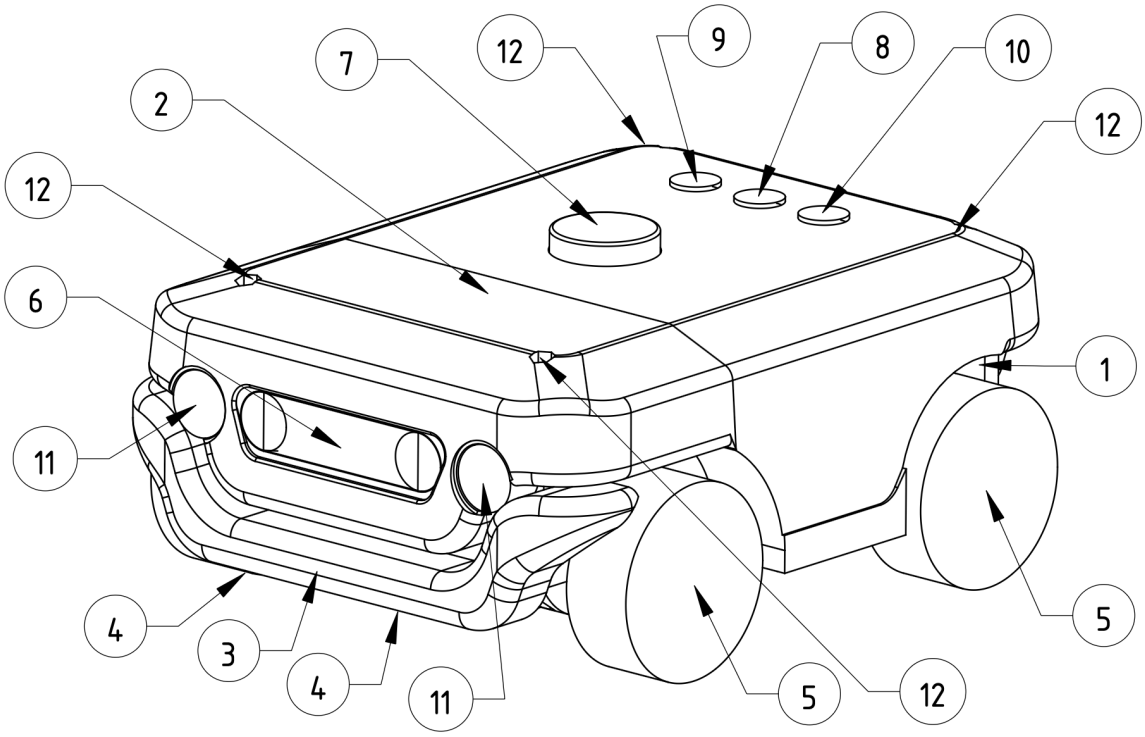
Ventilation

Do not cover the robot or dock station while charging or operating. Ensure adequate airflow around the system.

2. Package Content

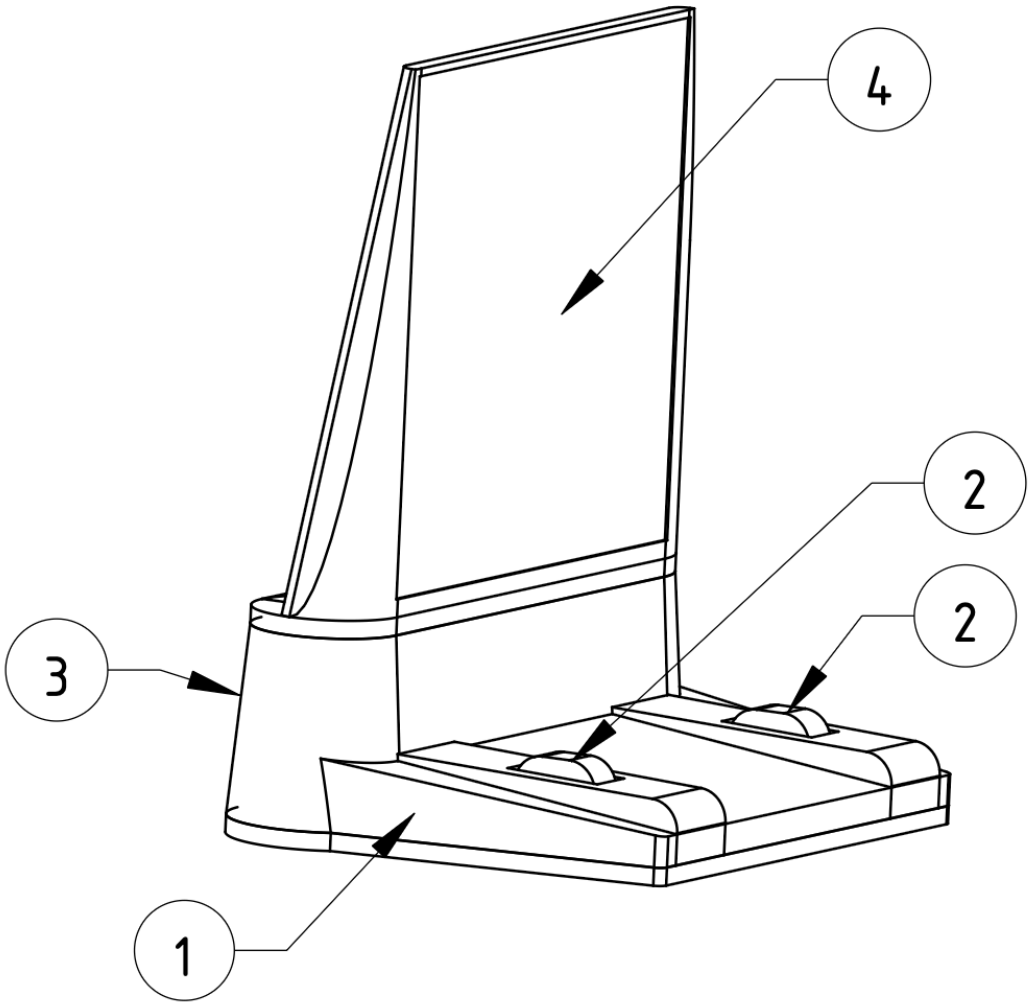
- O2D R5 Robot
- O2D R5 Dock Station
- 14.8V 3A AD/DC Power Adapter
- Setup Manual

3. O2D R5 Scheme



1. O2D R5 Base
2. O2D R5 Cover
3. O2D R5 Bumper
4. Power Contacts
5. Wheels
6. Camera
7. Lidar
8. On/Off Switch
9. Functional Button 1
10. Functional Button 2
11. Power Indicators
12. Payload M4 Thread

4. O2D R5 Dock



1. Dock Station Base
2. Power Contacts
3. DC Power In
4. Aruco Marker Stand

5. ORB Connect. O2D R5 Provisioning Application

To simplify the robot Wireless Network Provisioning - please use the “ORB Connect” O2D provisioning application, available for multiple platforms.

iOS App

The iOS application is being released now. Please wait for the newest version of this manual to know the link.

Android App

The Android application is being released now. Please wait for the newest version of this manual to know the link.

Mac App

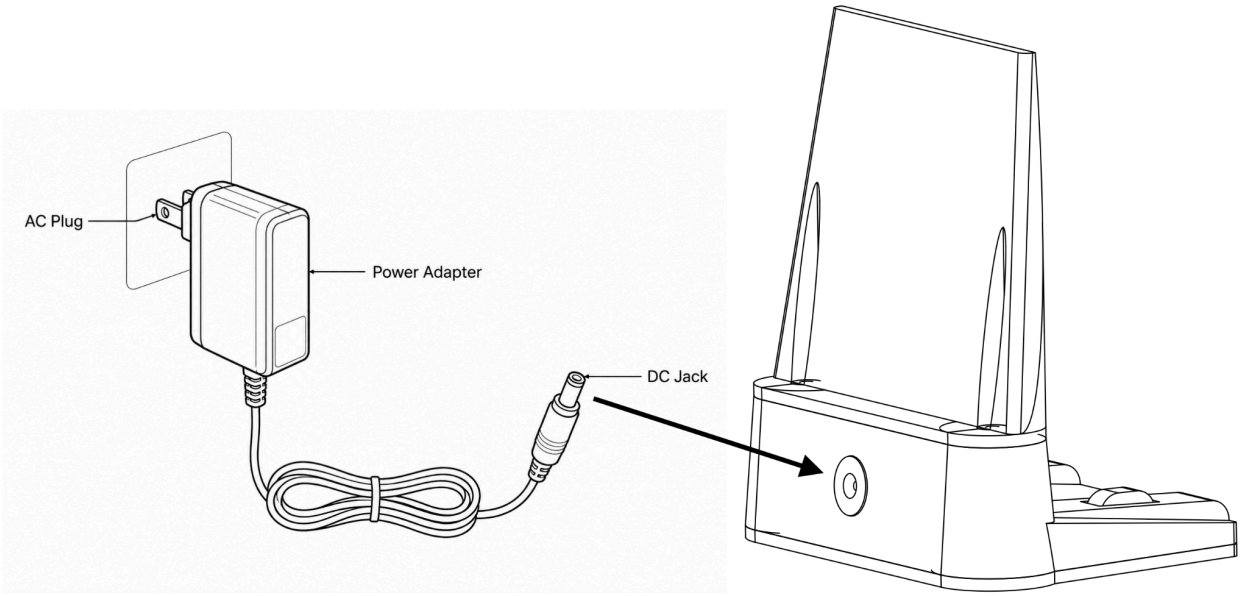
Download the Mac application by the following link:

Windows App

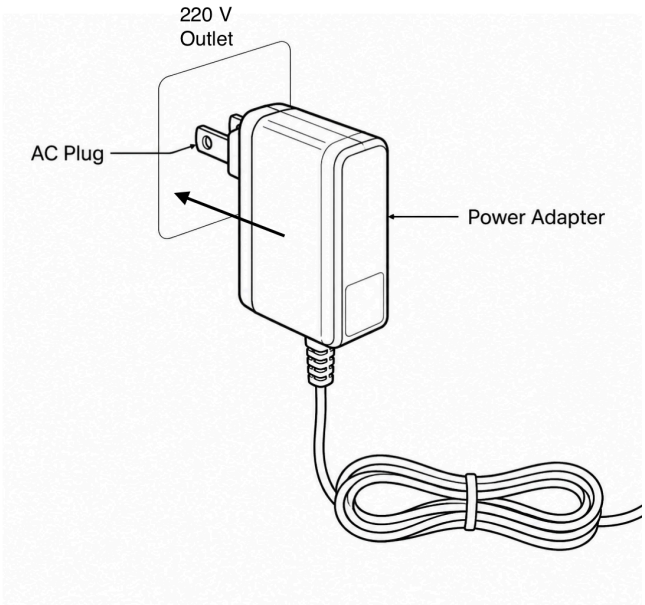
Download the Windows application by the following link:

6. Connecting the Dock Station

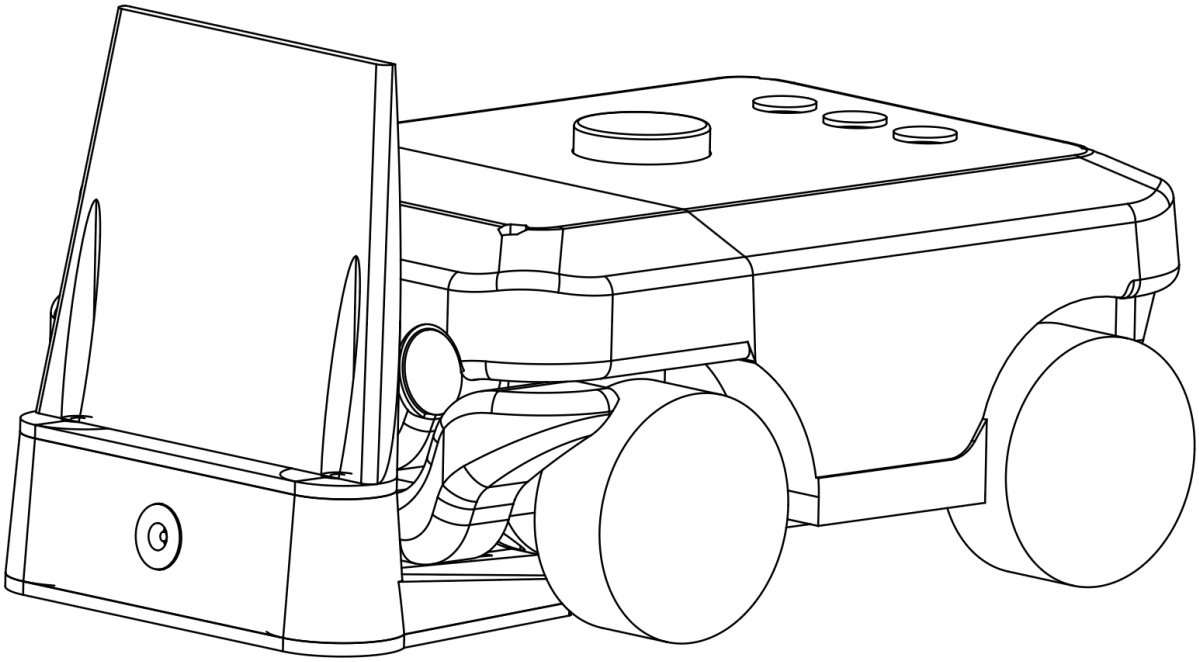
Connect the power adapter to O2D Dock Station



Insert the power adapter into the 220V outlet



Place O2D R5 Robot at the Dock Station



7. Turning On the Robot

Push the On/Off switch to power on the robot. Once activated, the LED power indicators should illuminate, and the LiDAR sensor should begin rotating.

8. Connecting to Robot’s Wireless Hotspot

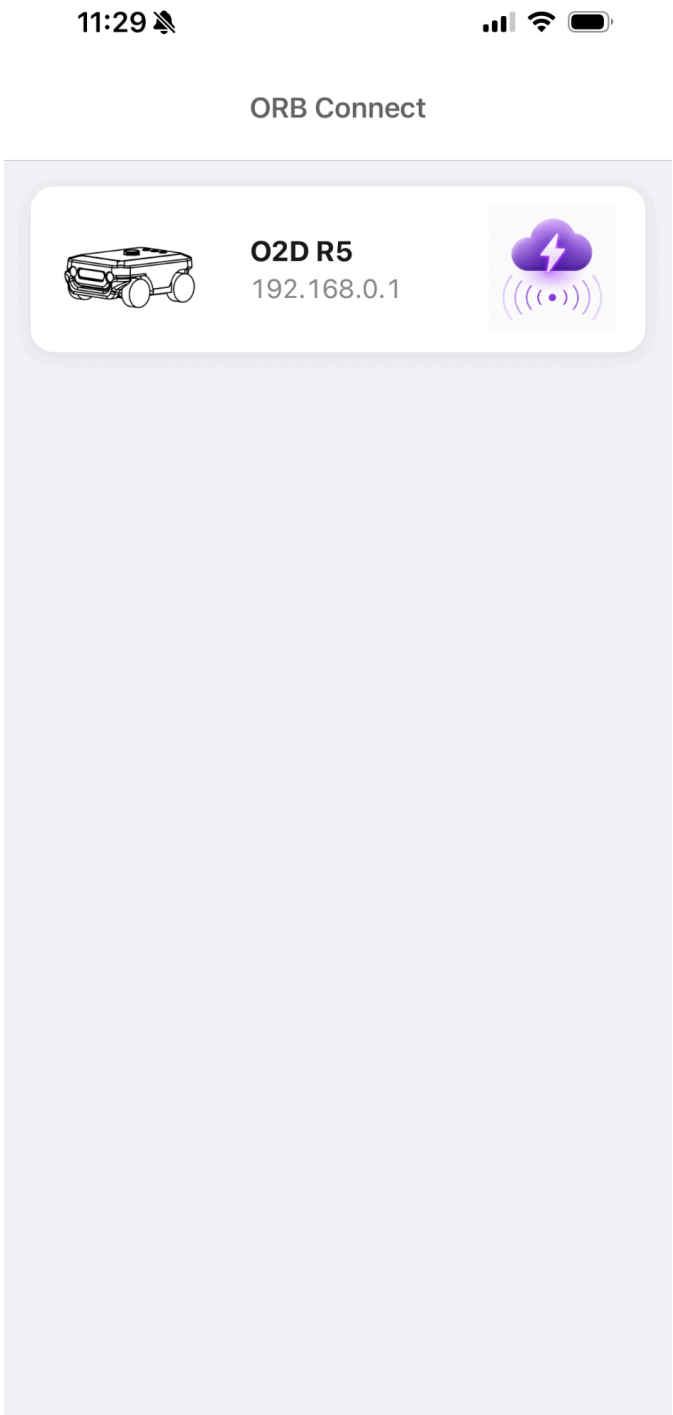
Open the network settings on your phone or computer and connect to the robot’s Wireless hotspot.
The hotspot name follows the format:

O2D-xx-Hotspot

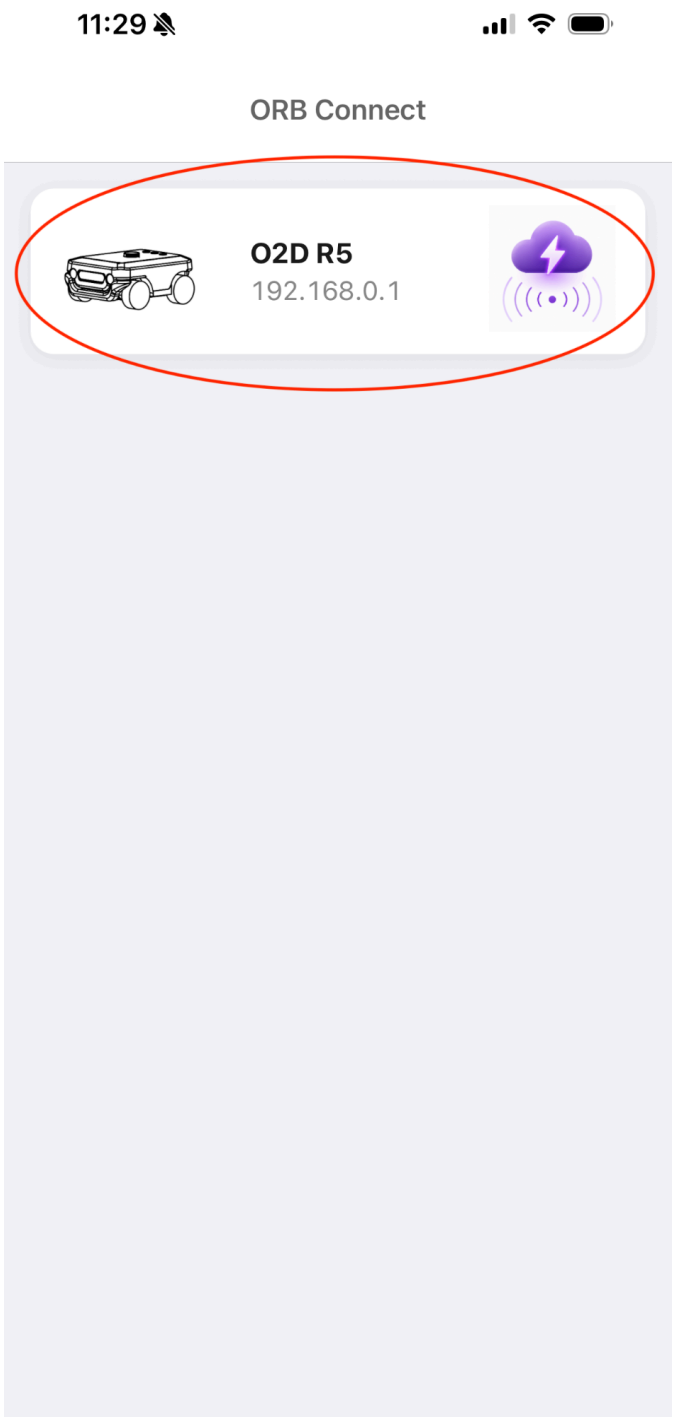
The hotspot does not require a password

9. Connecting the Robot to Wireless Network

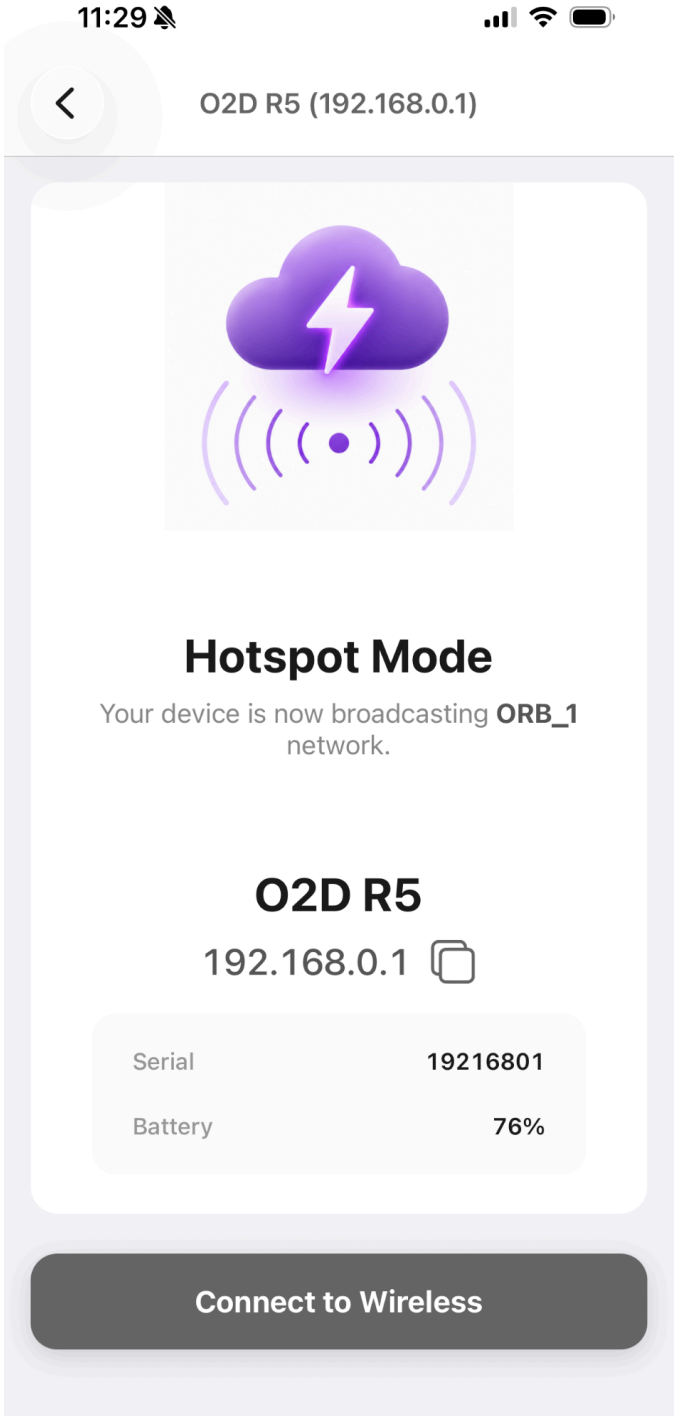
Open O2D Provisioning application



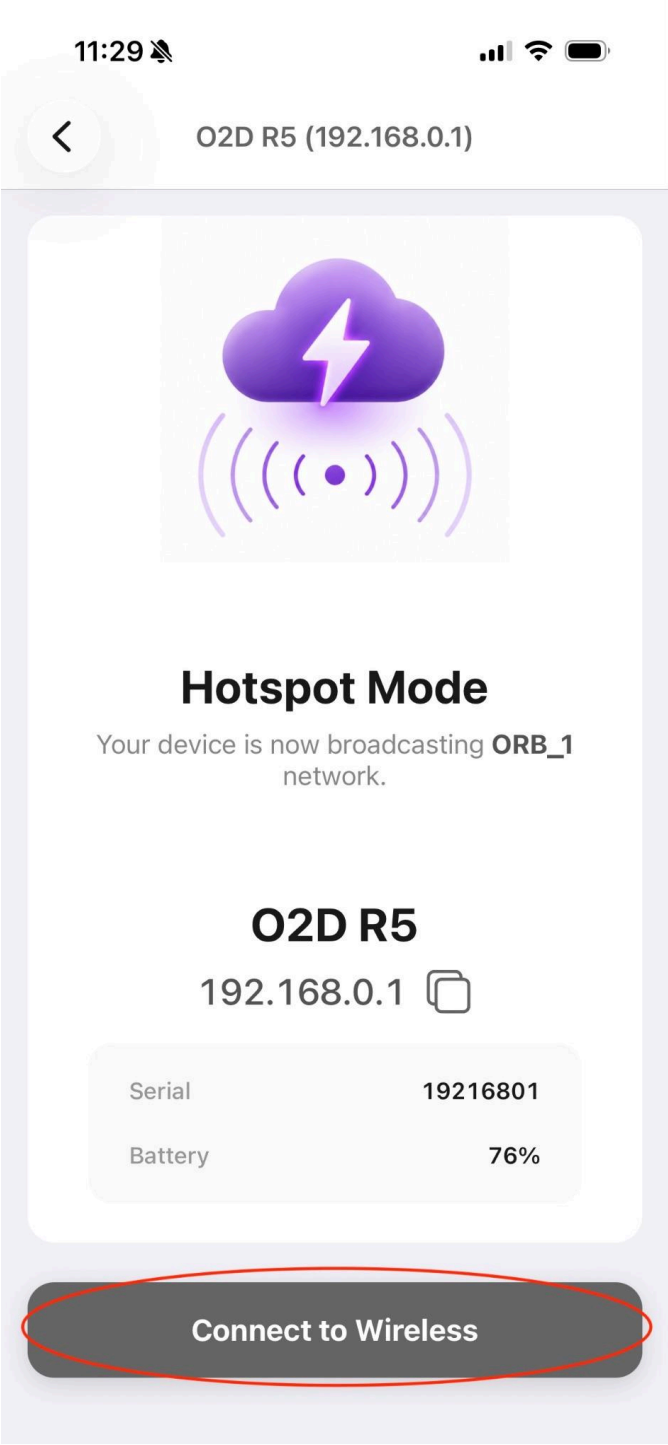
Choose the O2D Robot Instance from the list



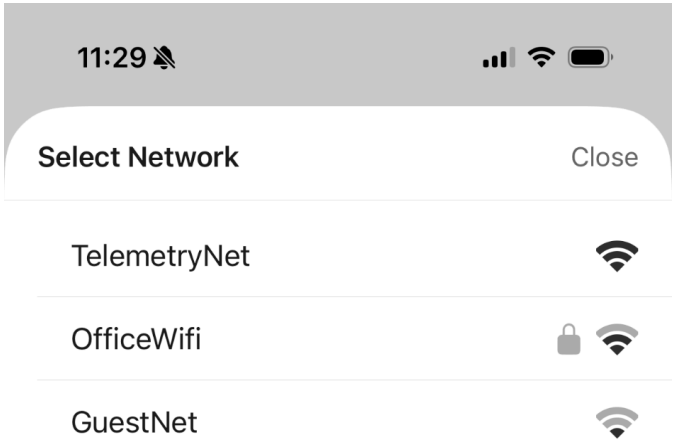
The Robot Details Screen Will Open



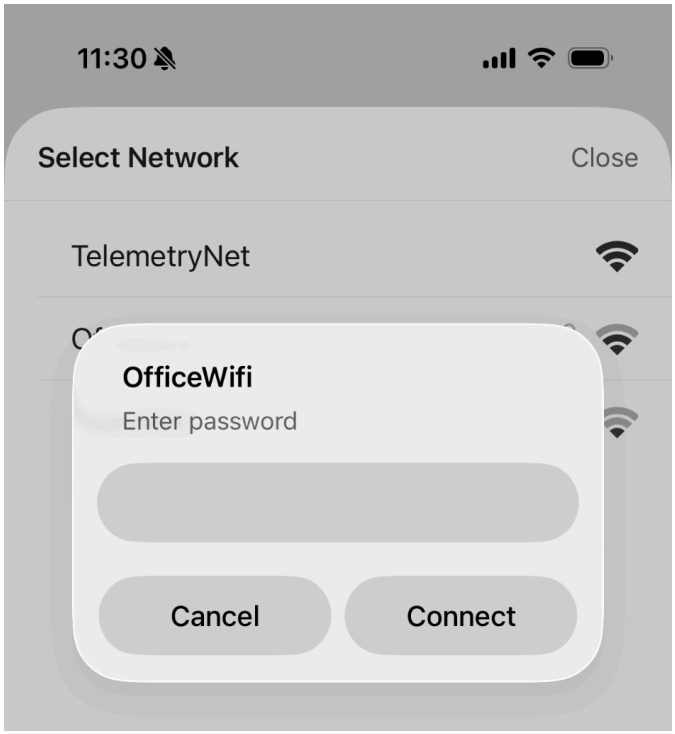
Press the Connect to Wireless button



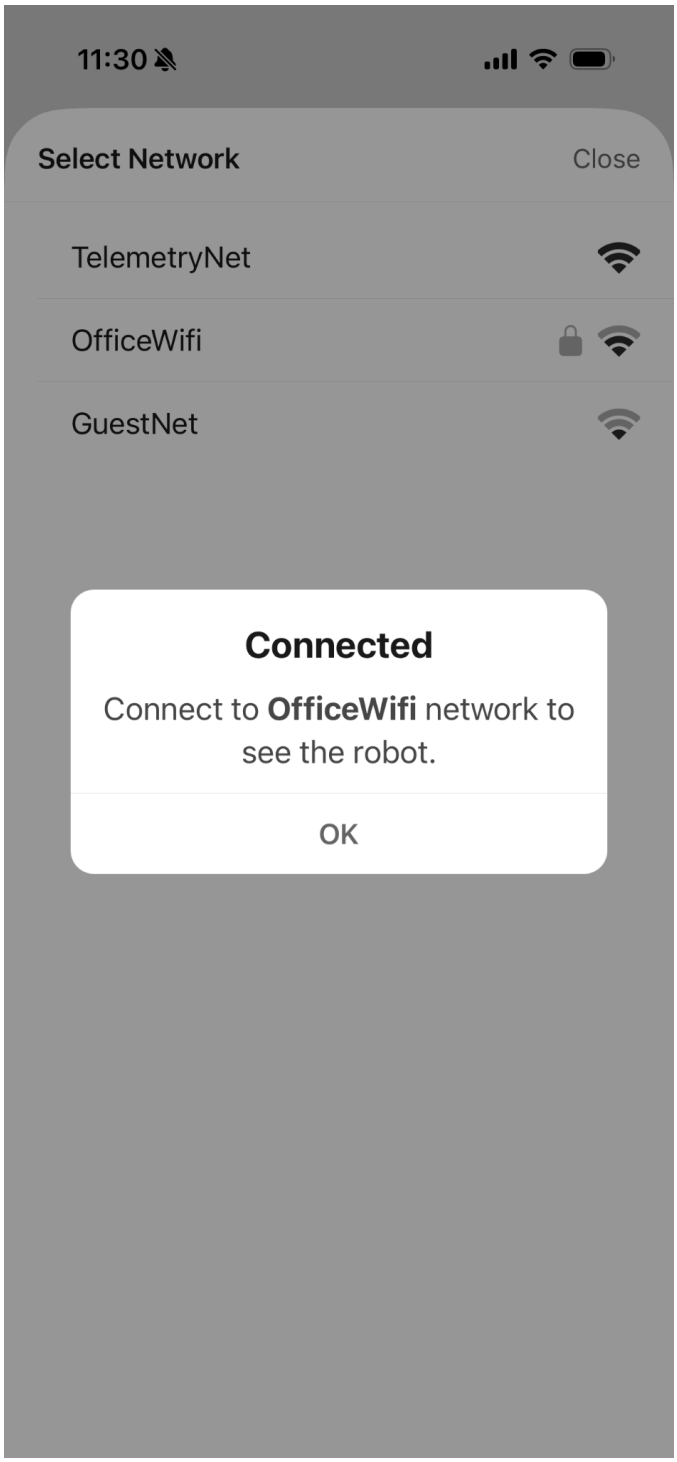
Choose the available wireless network



Insert the password for the selected network



Press Connect

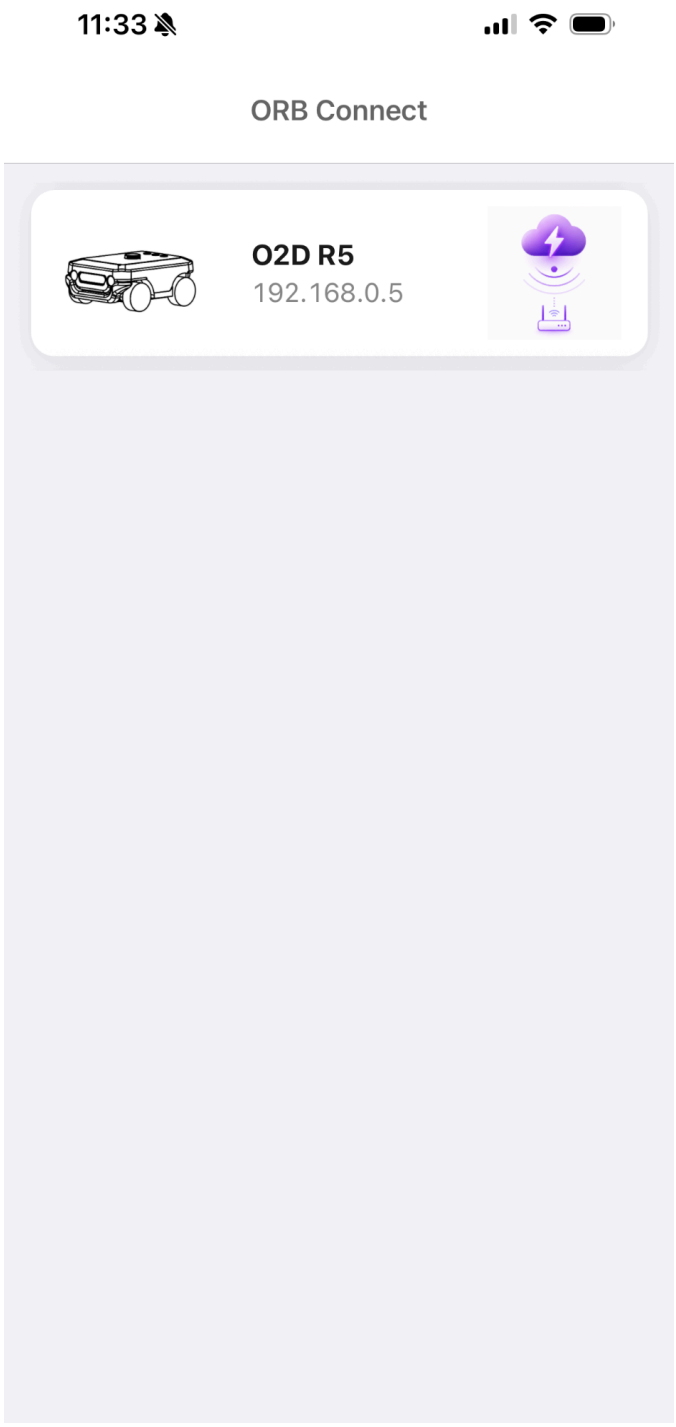


10. Discovering the Robot in Wireless Network

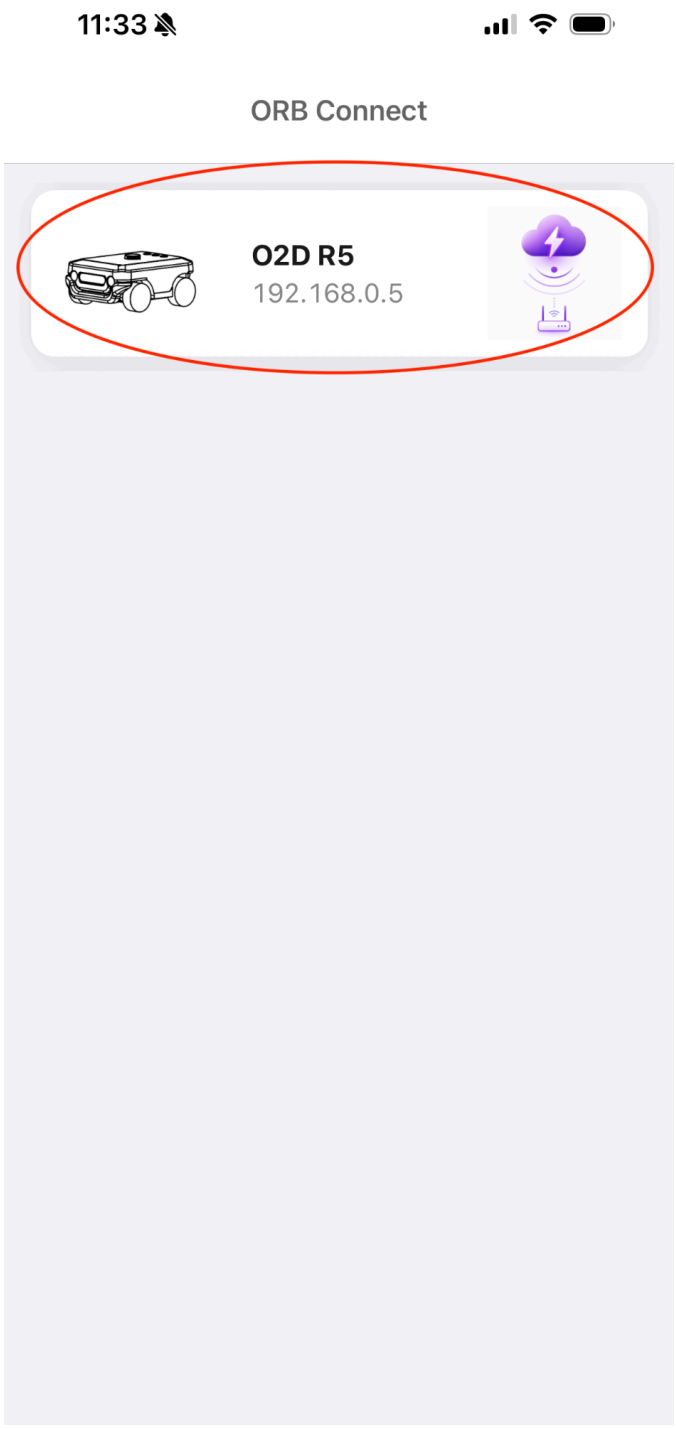
Join the same network the robot was just provisioned into

Once the robot is connected to the Wireless network - please navigate to your device network settings and connect to the same Wireless network as your O2D robot instance.

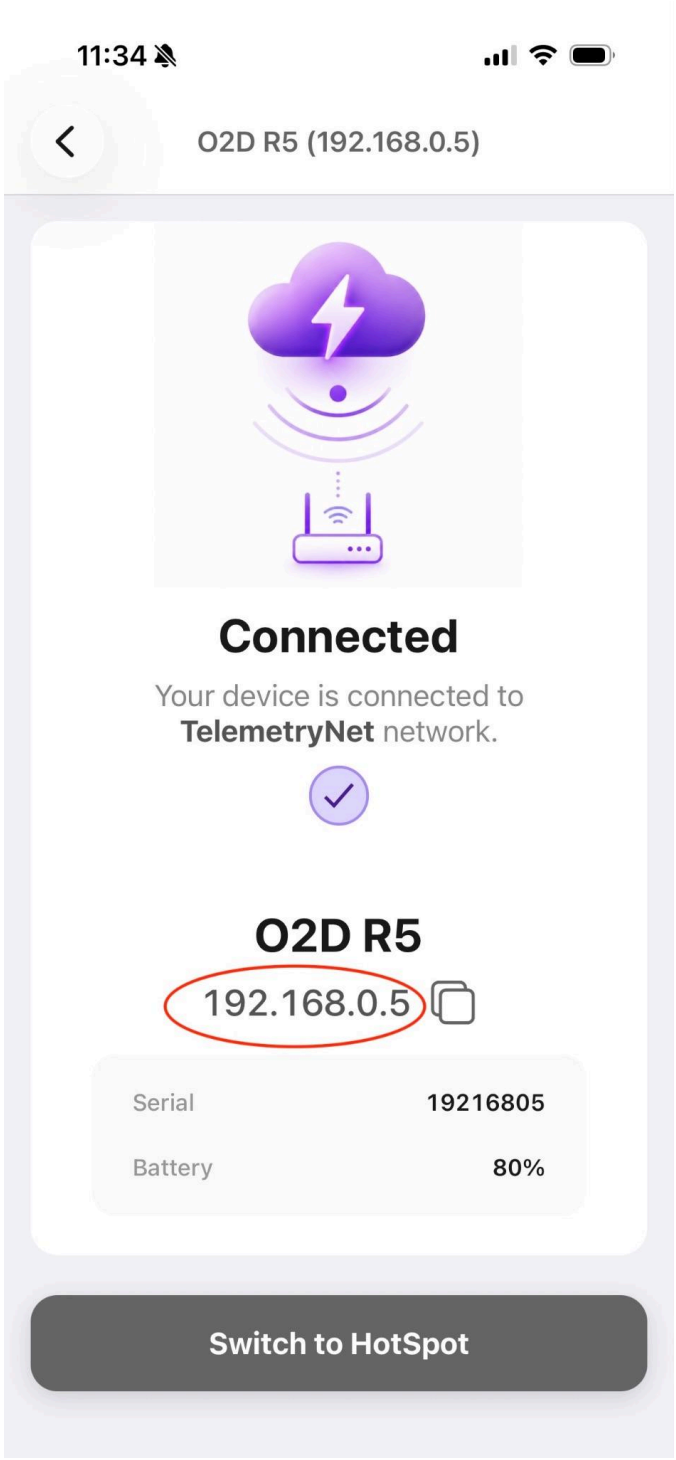
Open O2D Provisioning Application



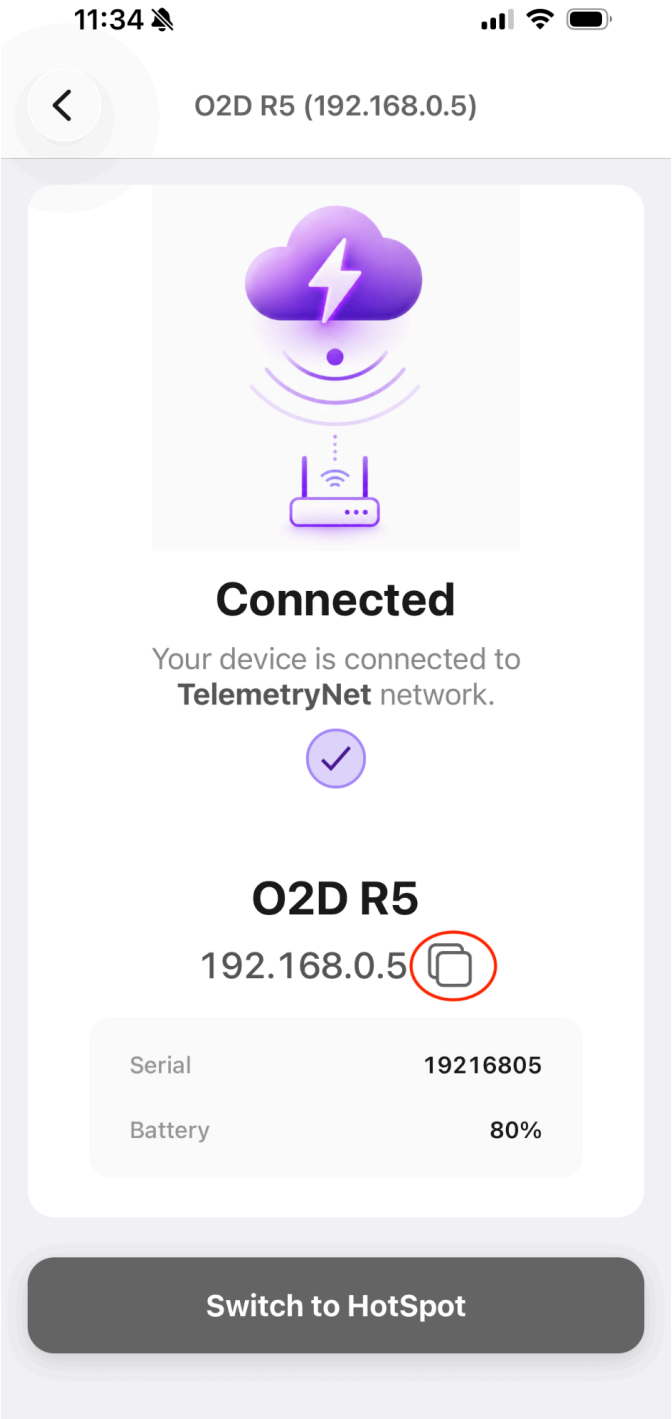
Choose the O2D Robot Instance from the list



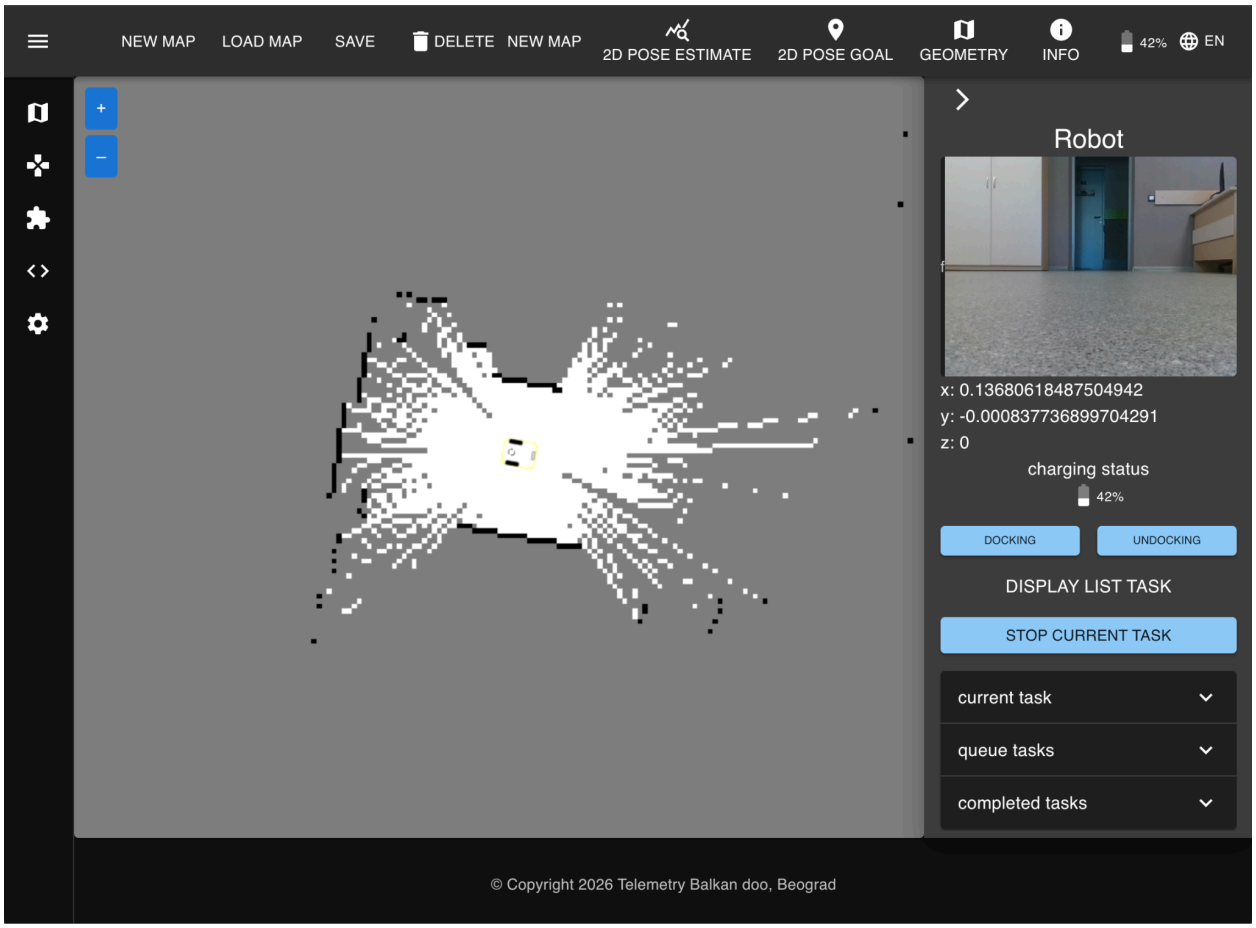
See IP address in Robot Details Screen



Click Open In Browser Button to get to robot's control Web Interface



Open Robot Interface In Browser by Inserting its IP address



11. Limitation of Liability

While the O2D R5 Robot platform has been designed, assembled, and tested by Telemetry Balkan doo Beograd to the best of our knowledge and capabilities, the system is intended primarily as an experimental, research, educational, and development platform.

The robot contains moving mechanical parts, electrical components, autonomous navigation features, wireless communication systems, and software-controlled behaviors that may operate unpredictably under certain environmental conditions, configurations, hardware modifications, software updates, or user-developed extensions.

The user is solely responsible for the safe operation, supervision, configuration, and maintenance of the robot system.

Telemetry Balkan doo Beograd shall not be held liable for any direct, indirect, incidental, consequential, or special damages arising from:

- improper use of the robot,
- operation outside recommended environments,
- unauthorized modifications,
- software misconfiguration,
- failure of sensors or communication systems,
- collisions, falls, or navigation errors,
- battery or charging-related incidents,
- damage to property,
- data loss,
- personal injury,
- or any other consequences resulting from the use or inability to use the platform.

The O2D R5 Robot should not be left operating unattended for extended periods of time unless appropriate safety precautions and environmental protections have been implemented by the user to minimize the possible consequences of malfunction, collision, overheating, charging failure, or unexpected behavior.

Users are strongly encouraged to:

- supervise the robot during operation,
- operate the system in controlled indoor environments,
- keep the operational area free from hazards,
- regularly inspect the robot and dock station for wear or damage,
- and implement emergency stop or power disconnection procedures where appropriate.

Telemetry Balkan doo Beograd provides the platform “as is” without warranties of uninterrupted operation, fault-free behavior, or fitness for a particular purpose.

12. Conclusion

Your O2D R5 Robot should now be successfully powered on, connected to the docking station, and provisioned into your wireless network.

Using the ORB Connect application, you can discover the robot on your local network and access the robot’s web interface for further configuration, operation, and monitoring.

The next recommended step is to continue with the **O2D R5 Robot User’s Guide**, which explains the robot’s operational features, control interface, navigation capabilities, charging behavior, maintenance procedures, and everyday usage workflows.

For safe and reliable operation, always:

- Use the robot in appropriate indoor environments
- Keep the dock station connected to stable power

- Avoid exposure to liquids, excessive dust, and extreme temperatures
- Regularly inspect the robot and dock for physical damage or contamination

For additional documentation, software updates, troubleshooting information, and technical support, please refer to the latest O2D R5 documentation package provided by Telemetry Balkan doo Beograd.