Frequently Questions

1. Why do robots need to be configured with parameters?

Answer: Since each user's WiFi environment and IP address are different, parameters need to be configured according to the actual situation.

2. What should I do if I cannot read and write the robot configuration parameters when running the python3 config_robot.py command?

Answer: Please press the reset button of the robot. It will be in the configuration state within 5 seconds after powering on (the MCU indicator light flashes every 300 milliseconds). At this time, you can run the configuration file to read and write the configuration normally.

3. What is the function of the type-C port on the control board?

Answer: The type-C interface marked with Serial is mainly used for communication, configuration, and firmware burning.

5. What is the reason for the robot buzzer to keep "beeping"?

Answer: When the battery is low, the robot will make a "beeping" sound (every 100 milliseconds). At this time, the robot cannot be controlled. Please save the code, shut down, and then charge the robot.

6. What does the robot MCU status indicator represent?

A: The baseboard MCU enters the **configuration state** after booting up. After about 5 seconds, it automatically enters the **connection agent state**. After successfully connecting to the agent, it starts to initialize ROS related topics. If the **agent error** occurs, the agent task is automatically terminated. If the agent initialization is completed, it enters the **normal state**.

LED light indication function	**LED light phenomenon**
Configuration state	LED light flashes (flashes once every 300 milliseconds)
Connection agent state	LED light flashes slowly (flashes once every 1 second)
Normal state	LED light double flashes (flashes twice every 3 seconds)
Low voltage state	LED light flashes quickly (flashes once every 100 milliseconds)

7. How to avoid interference when there are multiple robots in the same LAN?

A: Interference can be avoided by setting different ROS_DOMAIN_IDs. The setting range of ROS_DOMAIN_ID is: 0~101. Please modify the set_ros_domain_id(20) parameter in the config_robot.py file and write the configuration to the microROS control board. Then add a line "export ROS_DOMAIN_ID=20 " to the .bashrc file in the virtual machine/computer user directory, save and restart the terminal.

8. The map will float when cartographer is building a map

Answer: You need to turn slowly when turning, or build a map in a place with many feature points.