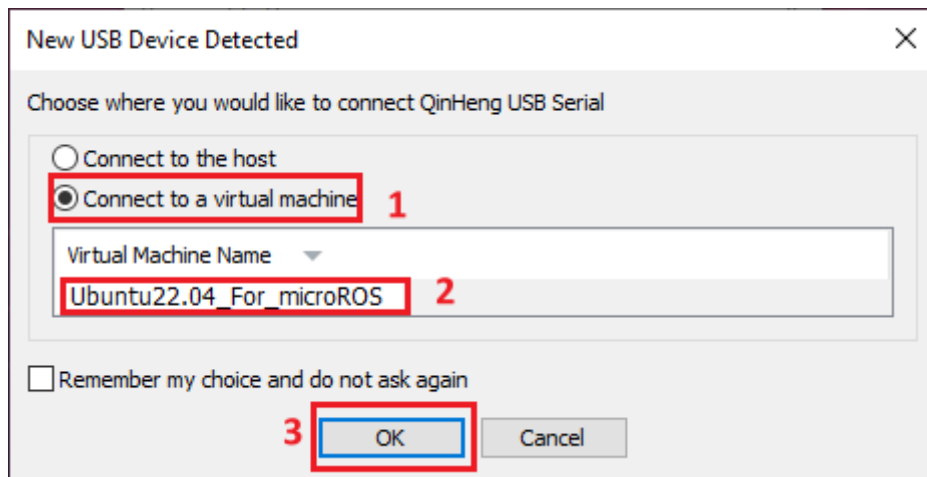


Control board configuration parameters

1. The control board has been burned with factory firmware. If other routine firmware has been burned, please re-burn the factory firmware, then power on the board and turn on the power switch.
2. Copy the configuration script (config_robot.py) file included in the product information to the virtual machine/computer.

The configuration file is stored in the [Program Source Code Summary] -> [Factory-Firmware] directory in the information.

3. If the virtual machine/computer has an external USB serial port device, please temporarily remove the USB external serial port device of the virtual machine/computer, and then use a type-C data cable to connect the serial port of the virtual machine/computer and the control board. At this time, the system pops up a window and asks you to select the connection to the virtual machine.



4. Edit the config_robot.py file, scroll to the bottom of the file, update the parameters of the set_wifi_config function according to your home WiFi network name and password, and update the parameters of the set_udp_config function according to the IP address of the virtual machine/computer. The virtual machine/computer version needs to set the car type to CAR_TYPE_COMPUTER. The parameter robot.set_lidar_id(4) indicates setting the radar model. Other parameters remain default or modify as needed. Save the configuration file.

```
if __name__ == '__main__':
    robot = MicroROS_Robot(port='/dev/ttyUSB0', debug=False)
    print("Rebooting Device, Please wait.")
    robot.reboot_device()
    robot.set_wifi_config("Yahboom2", "yah890729")
    robot.set_udp_config([192, 168, 2, 102], 8090)
    robot.set_car_type(robot.CAR_TYPE_COMPUTER)
    #robot.set_car_type(robot.CAR_TYPE_RPI5)
    robot.set_ros_domain_id(15)
    robot.set_lidar_id(1)      #Configure radar    #配置雷达
    #1: Indicates X3Pro radar    #1: 表示X3Pro雷达
    #2: indicates 4ros radar    #2: 表示4ros雷达
    #3: indicates tminiplus radar    #3: 表示tminiplus雷达
    #4: indicates silan c1 radar    #4: 表示思岚c1雷达
    #5: indicates ms200 radar    #5: 表示ms200雷达
    robot.set_ros_serial_baudrate(921600)
```

```
robot.set_ros_namespace("")
robot.set_pwm_servo_offset(1, 0)
robot.set_pwm_servo_offset(2, 0)
robot.set_motor_pid_parm(1, 0.2, 0.2)
robot.set_imu_yaw_pid_parm(1, 0, 0.2)
```

5. After configuring the parameters, run the following command in the configuration state to configure the robot. At this time, check whether the returned data is consistent with your settings. If it is consistent, it means the setting is successful.

```
python3 config_robot.py
```

```
yahboom@yahboom-VM:~$ python3 config_robot.py
Rebooting Device, Please wait.
version: 2.1.0
ssid: Yahboom2
passwd: yahboom890729
ip_addr: 192.168.2.96
ip_port: 8090
car_type: CAR_TYPE_COMPUTER
lidar_id: 1
domain_id: 15
ros_serial_baudrate: 921600
ros_namespace:
servo_offset: 0, 0
motor pid parm: 1.00, 0.20, 0.20
imu yaw pid parm: 1.00, 0.00, 0.20
Please reboot the device to take effect, if you change some device config.
yahboom@yahboom-VM:~$
```

6. Press the robot's reset button to reload the configuration. At this time, the oled will display the warning level and radar model selection to be selected. At this time, you can switch the warning level and radar model by turning left and right and holding the pistol. Switch to the desired position and press the button to confirm. At this time, you can remove the type-C data cable connecting the robot to the virtual machine/computer.