microROS control board configuration

1. The Micro ROS control board has been programmed with factory firmware before leaving the factory. If the firmware of other routines has been burned, please re-burn the factory firmware before supplying power to the board and turning on the power switch.
2. Copy the configuration script (config_robot.py) file included in the product information to the virtual machine/computer.
3. If the virtual machine/computer has an external USB serial port device, please temporarily remove the USB external serial port device from the virtual machine/computer, and then use a type-C data cable to connect the serial port of the virtual machine/computer and the microROS control board. At this time, the system pops up a window, please choose to connect to the virtual machine.
4. Edit the config_robot.py file, drag it to the bottom of the file, update the parameters of the set_wifi_config function according to your own 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 robot type. is CAR_TYPE_COMPUTER. Keep other parameters as default or modify them as needed. Save the configuration file.

```
robot.set_wifi_config("ssid123", "passwd123")
robot.set_udp_config([192, 168, 2, 116], 8090)
robot.set_car_type(robot.CAR_TYPE_COMPUTER)
# robot.set_car_type(robot.CAR_TYPE_RPI5)
robot.set_ros_domain_id(20)
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. First, briefly press the reset button on the microROS control board. It will be in the configuration state within 5 seconds of booting (the MCU indicator light flashes once every 300 milliseconds). Then run the following command to configure the robot. At this time, check whether the returned data is consistent with your own settings. If it is consistent, the setting is successful.

python3 config_robot.py

```
ssid: ssid123
passwd: passwd123
ip_addr: 192.168.2.116
ip_port: 8090
car_type: CAR_TYPE_COMPUTER
domain_id: 20
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.
```

6. Press the reset button of the robot to reload the configuration. At this point, the type-C data cable connecting the robot to the virtual machine/computer can be removed.