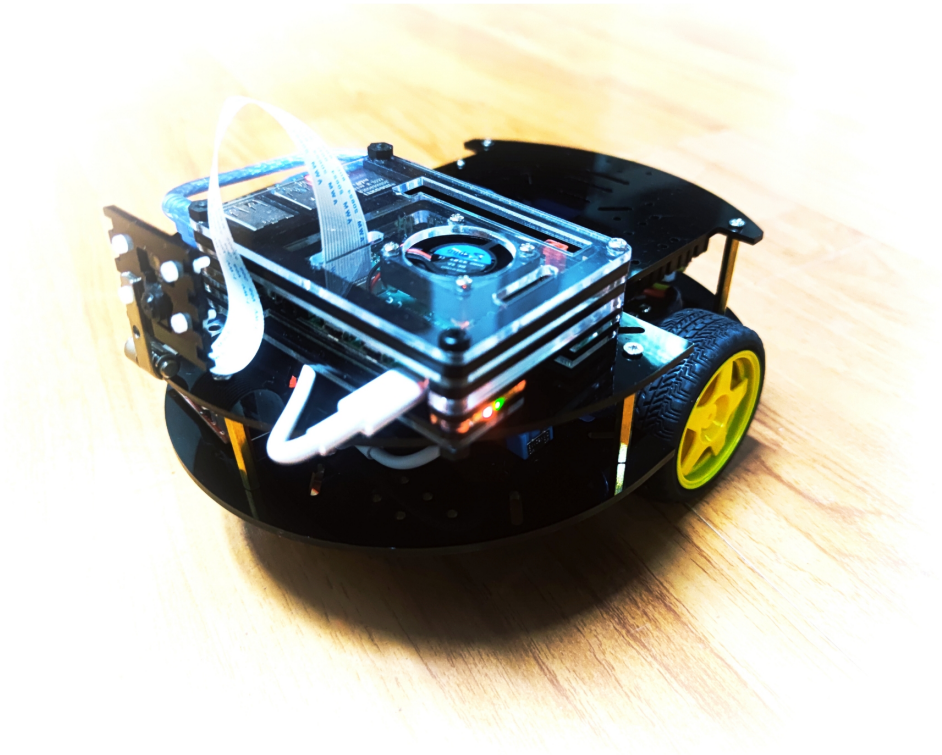
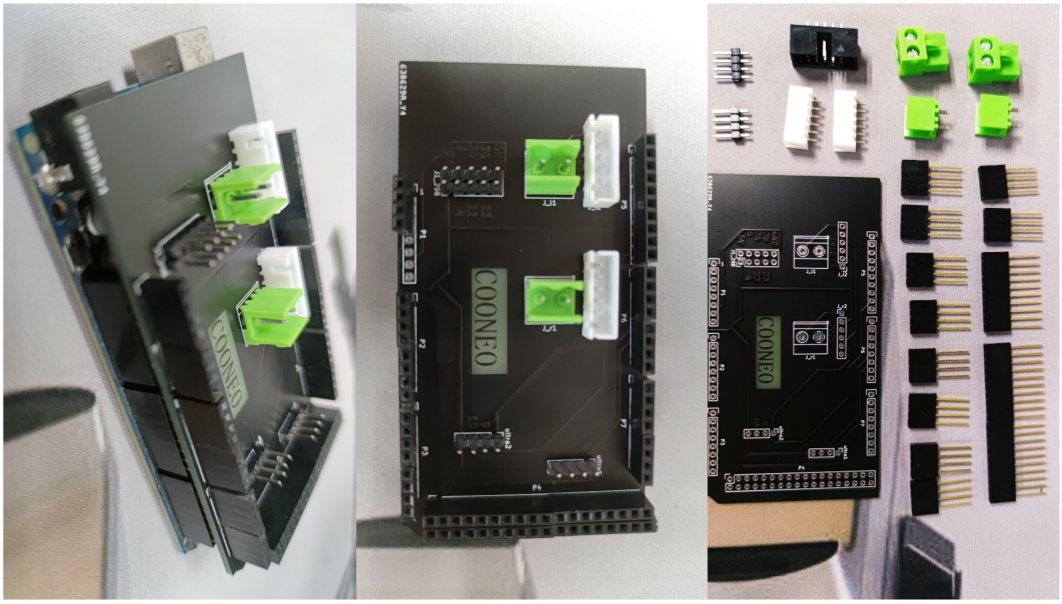
# Arduino_Raspberry_ROS_Car Tutorials



## chapter 1: Construction A ROS Car

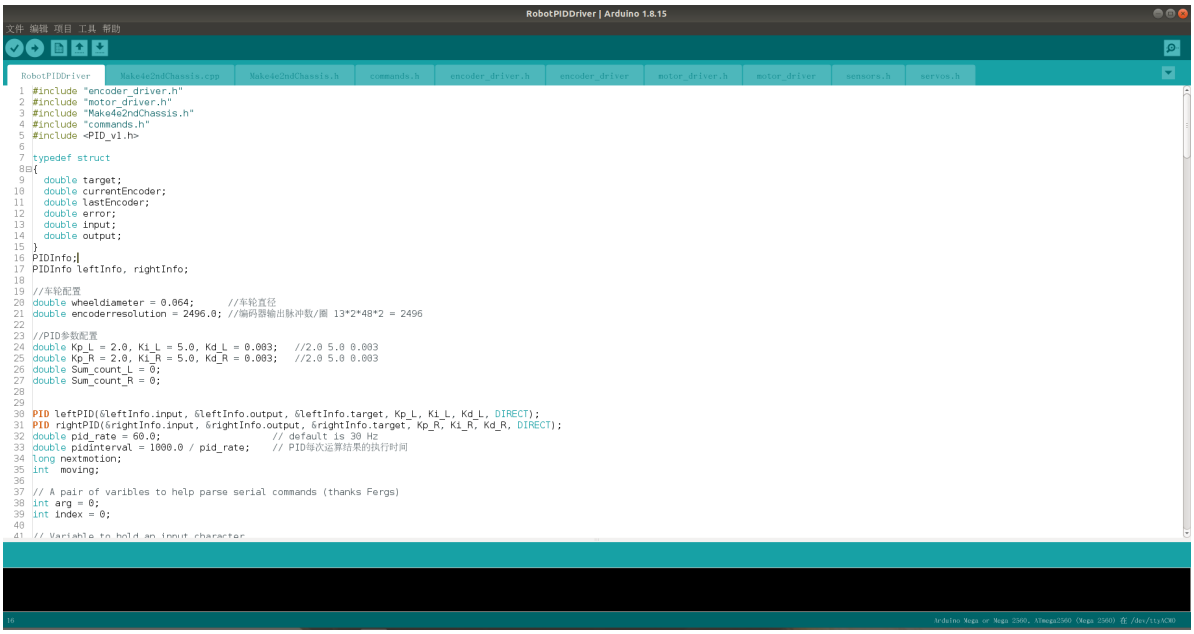



Download codes from Git:

```
git clone https://github.com/COONEO/Arduino_Raspberry_ROS_Car.git
```

## Step One: Download programs for Arduino Mega 2560

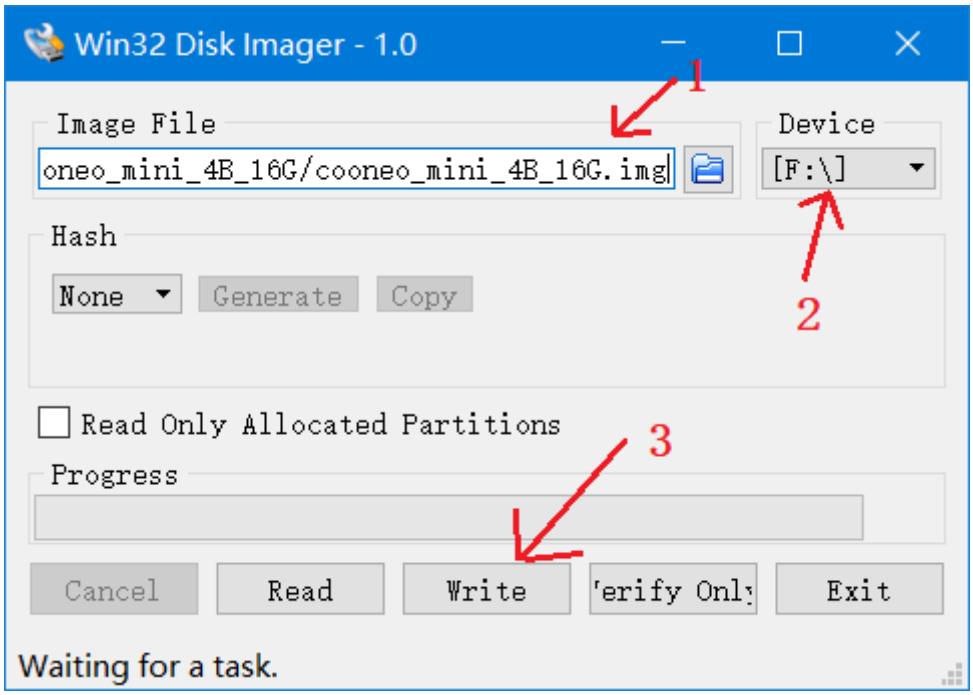
Install Arduino IDE in your computer and add library where in Arduino_mega_2560_code/relative_library folder.than,download the code into your Arduino_mega_2560 board.



## Step Two: FLASH OS and LAUNCH ROS NODE

1.flash Ubuntu OS into your Pi 4B board (By Win32DiskImager.exe)

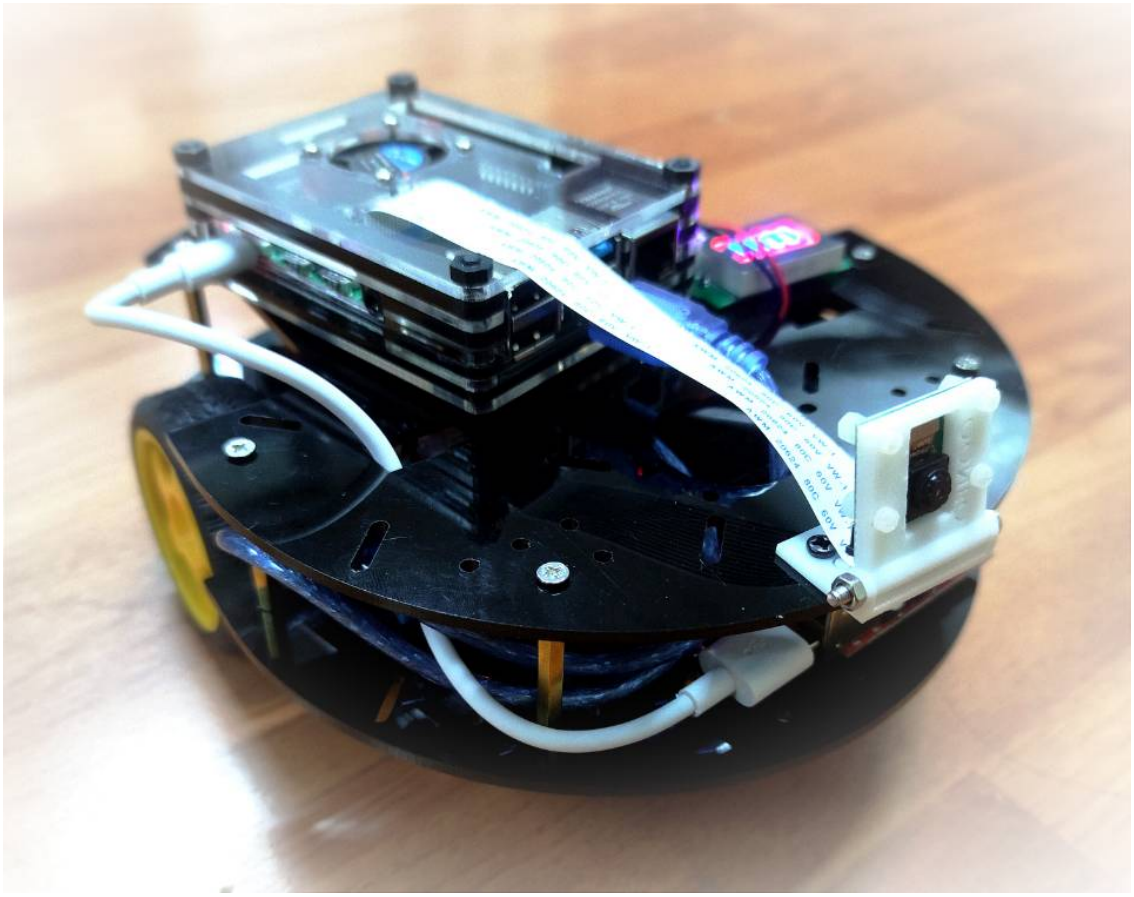
The OS img can be finding in our **Wechat Official Account COONEO.** Process like this:




2. launch ROS node in Raspberry Pi

```
#connect Raspberry Pi and Arduino
sudo chmod 0777 /dev/ttyACM0

#open a Terminal &&  download codes
git clone https://github.com/COONEO/Arduino_Raspberry_ROS_Car.git

# copy ROS node in your home folder
cp -r Arduino_Raspberry_ROS_car/Raspberry_Pi_ROS_Node/catkin_ws ~/

# change *.py file's permission
sudo chmod 0777
Arduino_Raspberry_ROS_car/Raspberry_Pi_ROS_Node/catkin_ws/src/ros_arduino_bridge/ros_ard
uino_python/src/ros_arduino_python/*

cd catkin_ws
catkin_make
source devel/setup.bash
roslaunch ros_arduino_python arduino.launch
```

In the end,you can publish Topic "cmd_vel" msg to control ROS car runnning。



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For more details,you can search "COONEO" in your WeChat.