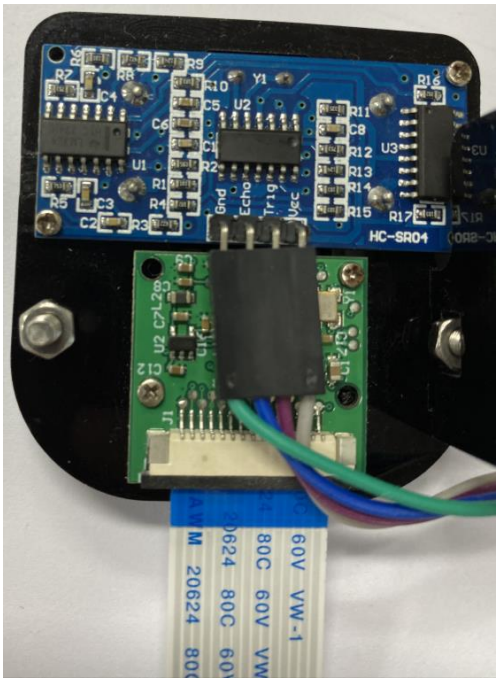
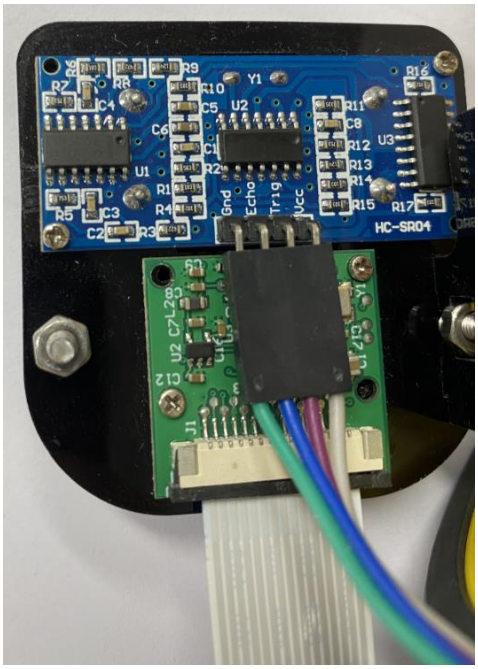
Camera

Next let us connect the camera to smart car board. First **turn off S1** (Power Switch), **shut down Raspberry Pi** and disconnect power cable. If the data cable is used to power the Raspberry Pi, disconnect the data cable and install the CSI camera to the Raspberry Pi camera interface when the Raspberry Pi is powered off. (**The CSI camera must be connected or disconnected under no power and when Raspberry Pi is shut down, or the camera may be burned.)**

Camera for Pi3/4

Step 1





The Blue side of cable should be toward to Servo.

Connect one end of cable to camera. Please note the front and back of the cable.

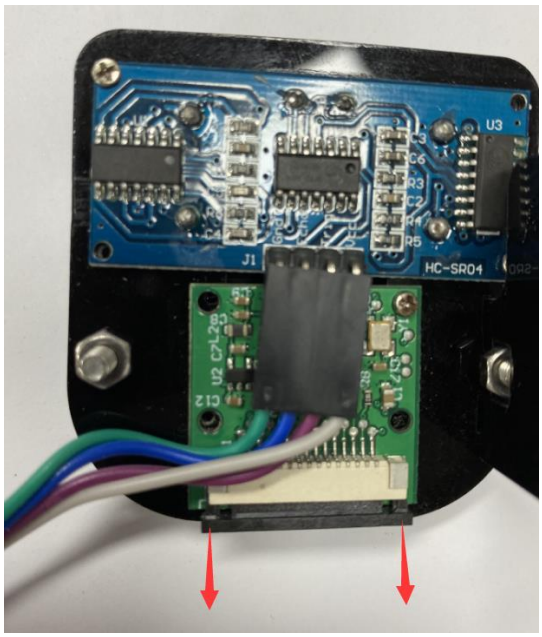
Step 2

The Blue side of cable should be toward to RPi USB port.

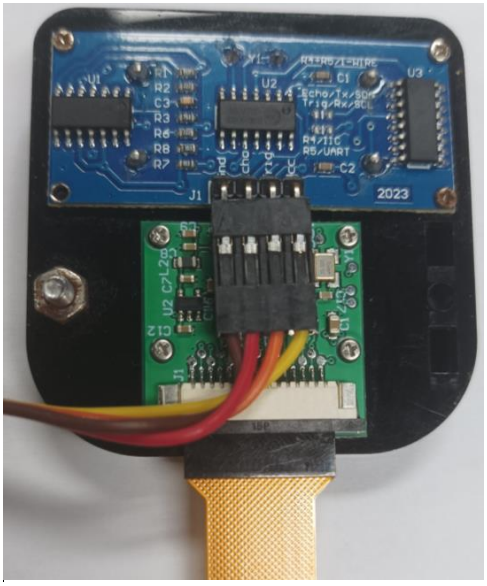
Connect another end of cable to Raspberry Pi. Please note the front and back of the cable.

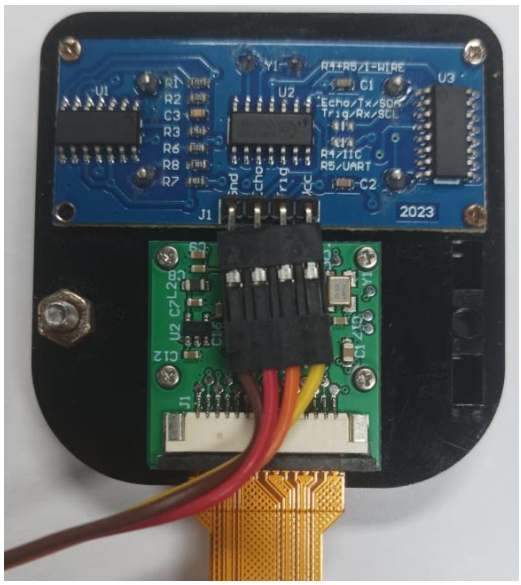
Camera for Pi5

Step 1



Step 2





Connect one end of cable to camera. Please note the front and back of the cable.

Step 3

Step 4

Connect another end of cable to Raspberry Pi. Please note the front and back of the cable.

There are two ways to drive the camera.

First method, use the system's default camera detection function.

1. Open the config.txt file.

```
sudo nano /boot/firmware/config.txt
```

2. Enable the automatic camera detection function.

```
camera_auto_detect=1
```

Second method, manually configure the camera.

1. Disable the automatic camera detection function.

```
camera_auto_detect=0
```

2. Add the following instruction at the very bottom.

If you are a Raspberry PI 5, add the following command.

```
dtoverlay = ov5647,cam0
```

If you are not a Raspberry PI 5, add the following command.

```
dtoverlay = ov5647
```

3. Save the file and exit, then restart the Raspberry PI.

Run program

1. execute the cd command:

```
cd ~/Freenove_4WD_Smart_Car_Kit_for_Raspberry_Pi/Code/Server
```

2. Execute the following command:

```
python camera.py
```

Then please open and check the generated image.jpg under /Freenove_4WD_Smart_Car_Kit_for_Raspberry_Pi/Code/Server.