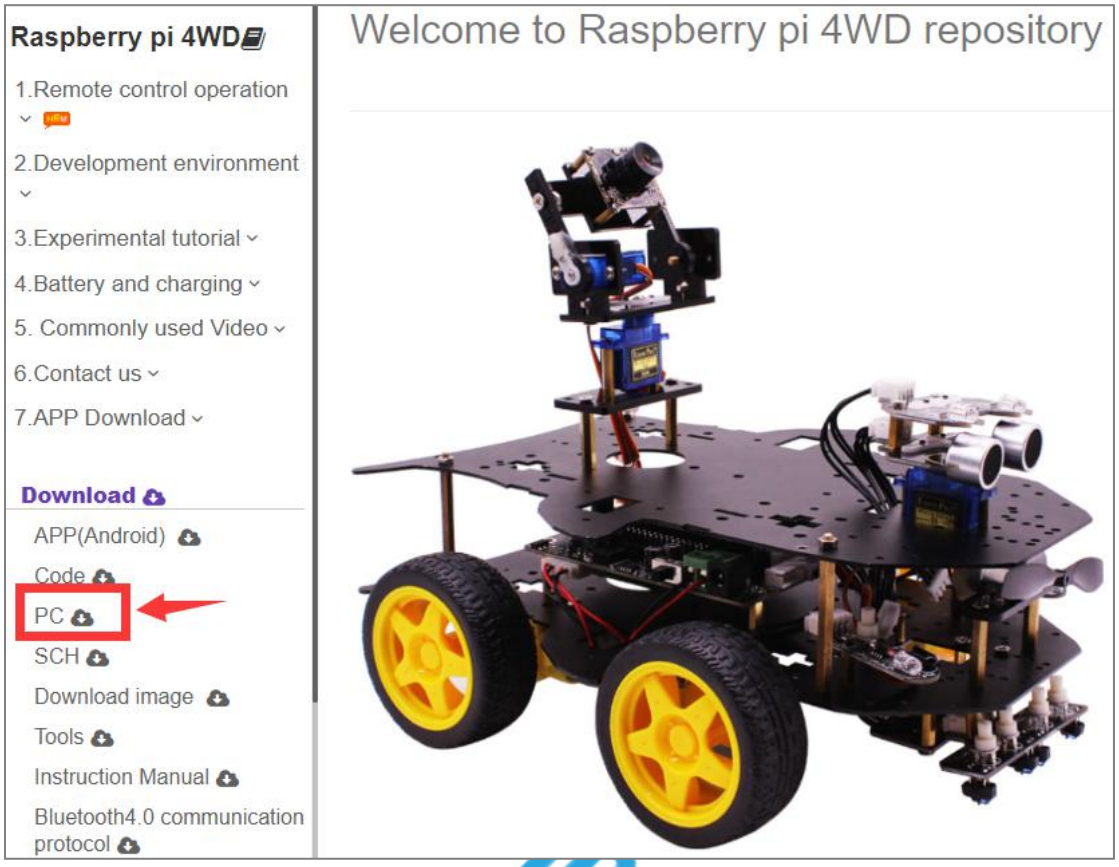
12.Raspberry Pi platform ------- TCP_control

Download Yahboom_PC software.



About the code

A. For .c code

(1) We need to compile this file in the Raspberry Pi system. (Note: we need to add -lwiringPi to the library file.)

We need to input: gcc TCP_Control.c -o TCP_Control -lwiringPi -lpthread

(2)We need to run the compiled executable file in the Raspberry Pi system.We need to input: ./TCP_Control

As shown in the figure below.

```
pi@yahboom4wd:~/SmartCar $ gcc TCP_Control.c -o TCP_Control -lwiringPi -lpthread
TCP_Control.c: In function 'do_client_recv':
TCP_Control.c:1060:2: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimpli
cit-function-declaration]
  close(sockfd);
  ^~~~~
  pclose
TCP_Control.c: In function 'servo_control':
TCP_Control.c:1099:7: warning: implicit declaration of function 'sleep' [-Wimplicit-function-declaration
]
       sleep(1);
       ^~~~~
pi@yahboom4wd:~/SmartCar $ ./TCP_Control
```

(3)We can input: ctrl+c to stop this process, which mean is send a signal to the linux kernel to terminate the current process, but the state of the relevant pin is uncertain at this time, we also need to run a script to initialize all pins.

(Note:The initpin.sh script file is included in the SmartCar/python directory.)

You need to input: chmod 777 initpin.sh

./initpin.sh

```
pi@yahboom4wd:~/SmartCar $ sudo chmod 777 initpin.sh
pi@yahboom4wd:~/SmartCar $ ./initpin.sh
```

B. For python code

(1) We need to input following command to run python code.

python TCP_Control.py

```
pi@yahboom4wd:~/python $ python TCP_Control.py
```

(2) We can input: ctrl+c to stop this process, which mean is send a signal to the linux kernel to terminate the current process, but the state of the relevant pin is uncertain at this time, we also need to run a script to initialize all pins.

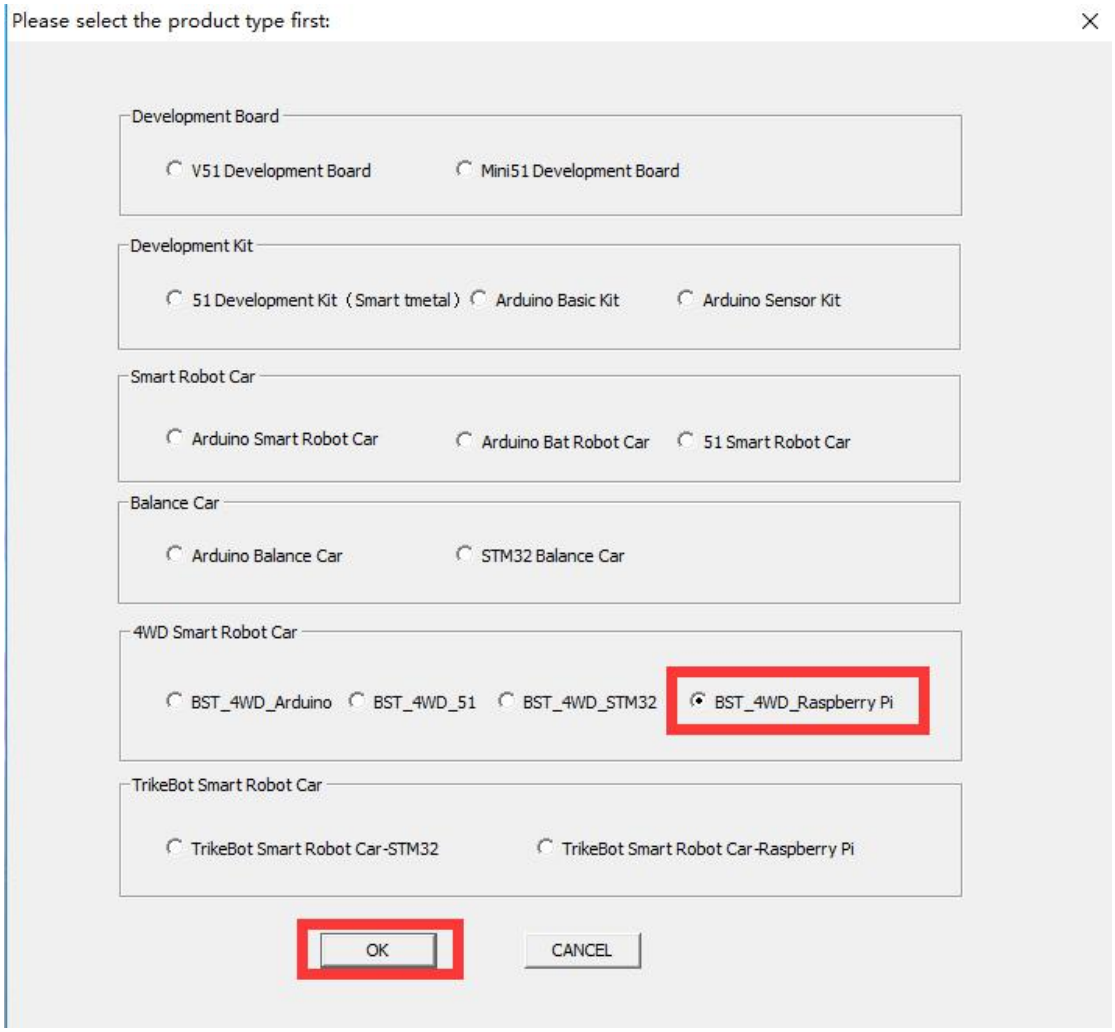
(3) You need to input: sudo chmod 777 initpin.sh

./initpin.sh

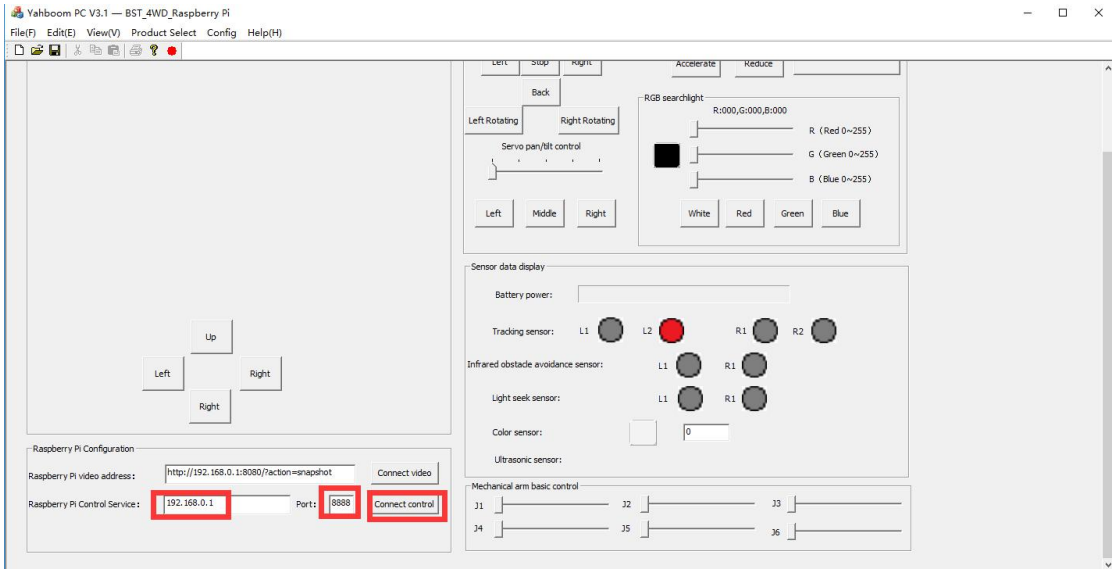
```
pi@yahboom4wd:~/SmartCar $ sudo chmod 777 initpin.sh
pi@yahboom4wd:~/SmartCar $ ./initpin.sh
```

About using Yahboom_PC software

1)We need to open the host computer software to choose BST_4WD_Raspberry Pi.

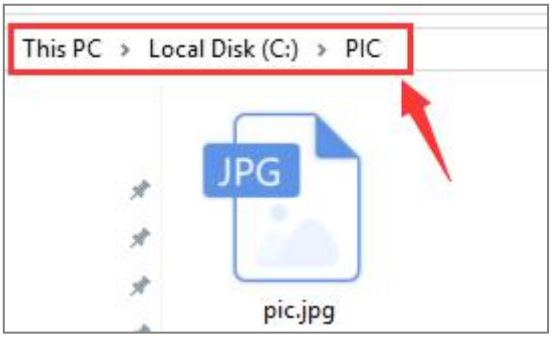


2) Click **[Connect Video]** to see the video picture captured by the camera.



3) Click **[Connect Video]** again to close the video picture captured by the camera.

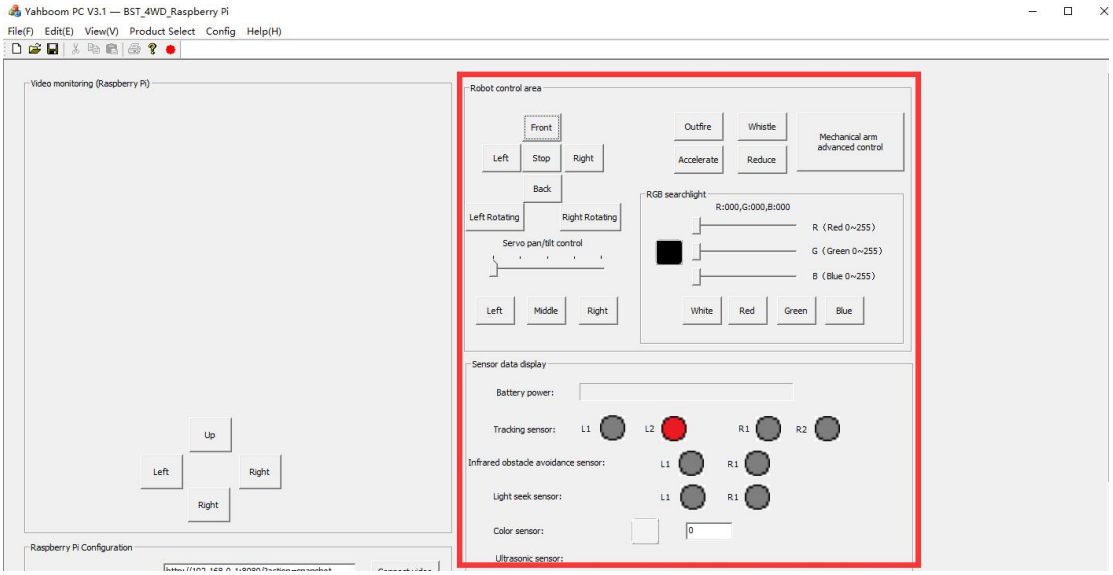
If the you cannot see the video, you needs to manually create a **PIC folder** in the **C** drive, and then create a new one **Pic.jpg file** in the folder. As shown below.



Then, you must open this file read and write permissions.

4)Click **[Connect control]** to enter remote control car mode.

5) You can control the car in the area on the right.



6) Click **[Connect control]** again to launch remote control car mode.

At the same time, the Raspberry Pi system will have the following tips.