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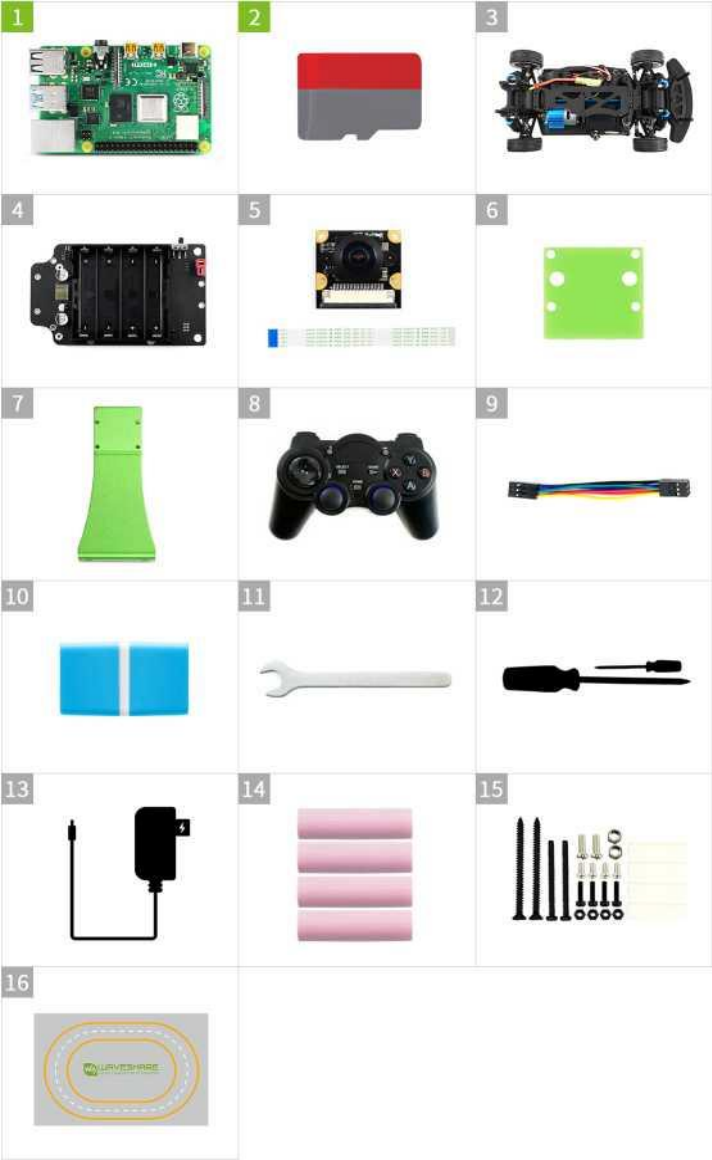
# PiRacer Pro Al Kit

## Assembly Manual

## Contact Us

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| Consultation Time ||
| 9:00-12:00　　14:00-18:00 | （Weekday） |
| 9:00-12:00　　14:00-17:00 | （Saturday） |

**Support:** Please get the after-sales contact information on Waveshare official website. Please provide product model and purchase information when inquiring about products.

Waveshare Chinese Website　　Waveshare Chinese Wiki　　Waveshare English Website　　Waveshare English Wiki

## Package Content

1. **Raspberry Pi （4GB）* 1** （Options）
2. **Micro SD card 64GB x 1** （Options）
3. **On-road chassis x 1**
4. **PiRacer Pro expansion board  x 1**
5. **IMX219-160 camera x 1**
6. **Acrylic camera spacer x 1**
7. **Camera holder x 1**
8. **Wireless Gamepad x 1**
9. **6Pin Dupont Line x 1**
10. **Micro SD card reader x 1**
11. **Spanner x 1**
12. **Screwdriver x 2**
13. **8.4V battery charger x 1**
14. **Screws pack x 1**
15. **Track Map x 1**

【Remarks】There are different packages for you, and the components on the above with the suffix (Options) are only included in the complete package.

### Screw Pack Comparison Table:

Does not include the screws that come with the fan.

| | | |
|---|---|---|
| M3 *8 | M2.5*5 | M2 *8 |
| M3 Nut | Nylon Insulation Column | M2 Nylon Nut |
| M3*40 || M2.5*30 |

## How to Assemble?

1. Fix the camera holder and antenna on the PiRacer Pro expansion board.

M3 Screws *8
M3 Nut

2. Connect the motor, servo and ESC power cable to the corresponding interface, and pay attention to the connection as shown in the figure below, otherwise the car cannot run.

Connect the wire to the motor
Connect the wire to the servo

3. Fix the PiRacer Pro expansion board on the chassis of the car.

Unscrew these four screws

M2.5 Screws *30
Nylon Insulation Column

4. Fix the Raspberry Pi on the expansion board with M2.5.

M3 Screws *40
Nylon Insulation Column

5. Install the Raspberry Pi and connect it to  the expansion board with a 6PIN cable.

M2.5*5

6. Insert the camera onto the camera holder with nylon screws. Note that an acrylic plate needs to be padded between them to avoid short circuit, and then connect to the Raspberry Pi with a cable. The installation is complete.

M2 *8
M2  Nylon Nut

## How to Use?

### 1. Install Image

Download the PiRacer Pro image from Wiki, extract the .img file, and then use the programming software, such as Diskimager, to program it to the TF card.

### 2. Update the Program

In order to use the voltage and current display function and drive motor normally, please update the relevant program provided by Wiki. For specific operations, please refer to the PiRacer Pro Al Kit on Wiki.

### 3. Control the Wireless Gamepad

Connect the handle receiver to the computer host. The handle has three modes and the default is mode 1. You can short press the HOME button to switch to mode 2, or press the HOME button for more than 7 seconds to switch mode 3. When used with the program , it is recommended to use Mode 2 or Mode 3.

### 4. Test the Motor

When testing the motor, you can adjust the deflection angle of the accelerator and servo by yourself to make the car run more stably.

## FAQ

### 1. What battery does PiRacer Pro come with?

It comes with 3.7V, 2600mAh 18650 lithium battery X4 （Two in parallel and two in series).

### 2. How to charge the battery?

We provide an 8.4V battery charger. Please plug into the 8.4V circular port on the expansion board to charge, and pay attention to the battery that can not be reversed. Before charging, please make sure that the car is assembled correctly. When you install the battery for the first time, you need to charge it.

### 3. How to judge the charging status?

The delivered battery charger has an indicator. The red light indicates that the battery is charging, and the green light indicates that the battery is fully charged or the power supply is not connected.

### 4. What to do when the wireless gamepad is not working properly?

After the wireless controller is powered on, it is recommended that you press and hold the HOME button for 7 seconds to switch the controller to XBOX mode, which is convenient for working with Raspberry Pi demos.

⚠ Reverse the battery will damage the device!