

JetRacer Pro AI Kit

Assembly Manual



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Waveshare Website

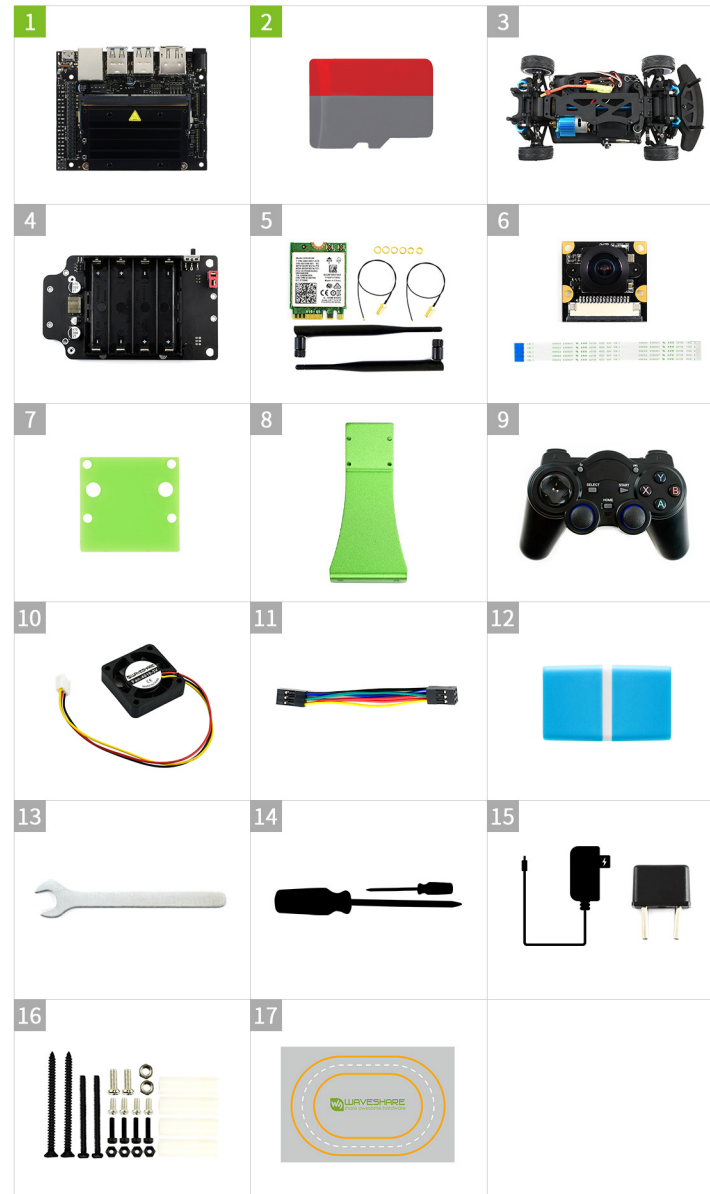


Waveshare WIKI

Waveshare Electronics

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Package Content



- Jetson Nano (B01) (Optional)
- Micro SD Card 64GB (Optional)
- On-road chassis
- JetRacer Pro expansion board
- Wireless-AC8265 with antennas
- IMX219-160 Camera
- Acrylic camera spacer
- Camera holders
- Wireless gamepad
- Cooling fan
- 6Pin cable
- Micro SD card reader
- Spanner
- Screwdriver × 2
- 8.4V battery charger + EU head
- Screws pack
- Track map

[Note] The components with (Optional) suffix are not included in Acce Kit. We do not provide 18650 batteries, you need to purchase them separately.

Screws/standoffs diagram

The screws of cooling fan are not listed here.

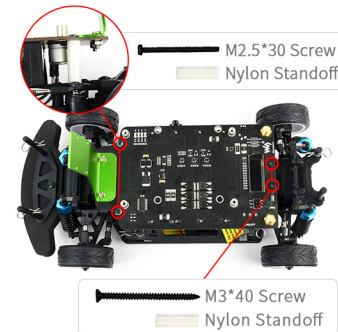
M3*8 Screw	M2.5*5 Screw	M2*8 Nylon Screw
M3 Nut	Nylon Standoff	M2 Nylon Nut
M3*40 Screw	M2.5*30 Screw	

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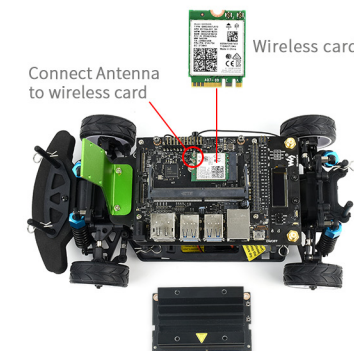
1. Set camera holder and antenna on JetRacer Pro Expansion board.



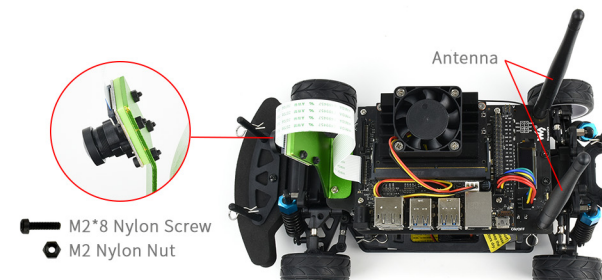
3. Fix JetRacer Pro Expansion board on chassis.



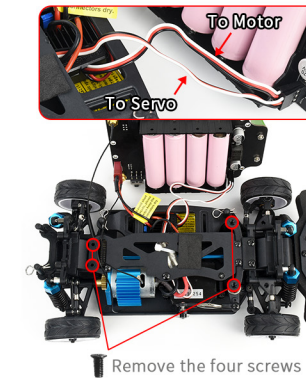
5. Remove the Jetson Nano board, connect the wireless card and connect the antenna.



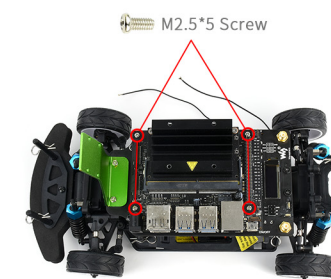
7. Mount camera on its holder by nylon screws. Note that the Acrylic board should be put between camera and the metal holder to avoid shorting. Finally, assemble the antenna.



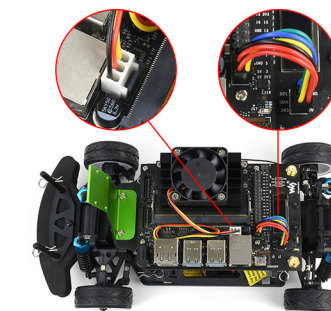
2. Connect the cables of motor, servo and the DEH to the expansion board according to the picture below.



4. Put the Jetson Nano Developer Kit and fix it.



6. Replace Jetson Nano. Assemble cooling fan by its own screws. Connect the wires to the fan interface. Connect the Jetson Nano Developer Kit to JetRacer Expansion board by 6PIN wires.



User Guide

1. Install Image

Go to the Wiki page of JetRacer Pro, download the image from the link provided. Unzip it and write the .img file to TF card by DiskImager software.

2. Update codes

To display voltage/current and drive the JetRacer Pro normally, you need to download and install our codes, please refer to Waveshare WIKI.

3. Use the Gamepad

You should connect the Adapter to host PC. The Gamepad has three modes, it is in MODE 1 by default, you can press the HOME button to switch it to MODE 2 and long-press it for 7s to switch it to MODE 3. We recommend you to use MODE 2 or MODE 3.

4. Test motors

When testing motors and gear servo by codes, you can adjust the value of throttle and gear for smoothly moving.

FAQ

1. What batteries does JetRacer Pro AI Kit use?

3.7V, 18650 battery × 4 (two in parallel, two in series)

2. How to charge batteries?

The 8.4V power adapter provided is used to charge batteries on board, you can connect it to the 8.4V port of expansion board to charge batteries when working. We still recommend you charge batteries at freetime for longer battery lifetime. At the first time you assemble the batteries, please charge them on board for a while to make them work.

3. It seems that the Gamepad doesn't work?

Please check if you turn on the power switch first. Before you use it, we recommend you long-press HOME button for about 7s to set the Gamepad to XBOX mode. XBOX mode is the exact working mode used by NVIDIA example.



DO NOT reverse batteries poles to avoid damaging product