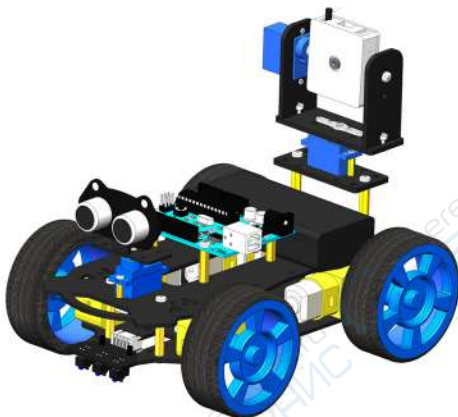


## Roboduino smart robot car

### manual



- ①Please carefully read this operation before use
- ②Our company will reserve the right of interpretation this manual
- ③For product appearance, please refer to the actual product
- ④Please keep properly the operation manual after you read

#### Precautions

1. Please follow the instructions and product installation tutorial to install.
2. Please pay attention to hardware safety during installation and learning, avoid supplying power to the product before assembly is completed, and avoid short circuit on the circuit board. Please touch the circuit board after ensuring that your hands are dry and static-free.
3. Do not place this product and accessories in a high temperature environment and keep the product away from fire.
4. Do not put the accessories contained in this product in the mouth. Please avoid dropping, squeezing or impacting the product.
5. In the actual operation process, if you encounter problems, check the tutorial several times, and compare the self-wiring and programming to match the tutorial. If you still can't solve your problem, please send a detailed description of the problem and the physical map to our technical support team for help.

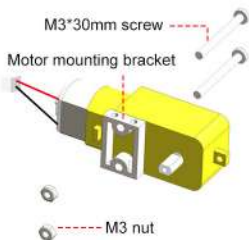
Tutorial link: [www.yahboom.net/study/Roboduino](http://www.yahboom.net/study/Roboduino)

# Packing list

	UNO controller *1		AR expansion board*1
	Top acrylic board*1		Lower acrylic board*1
	Tyre*4		TT motor pack*4
	Servo pack*1		Li-po battery*2
	Battery charger*1		Tracking module*1
	Ultrasonic module*1		Cable*1
	Battery box*1		Magic sticker*1
	5pin cable*1		4pin cable*1
	Screwdriver*1		Remote controller*1
	CD*1		Copper pillar pack
	Camera pack		Screw pack

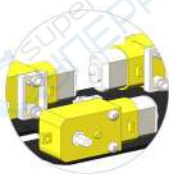
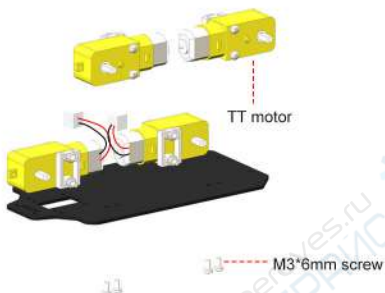
# Assemble steps

## 01 Installation of motor mounting bracket



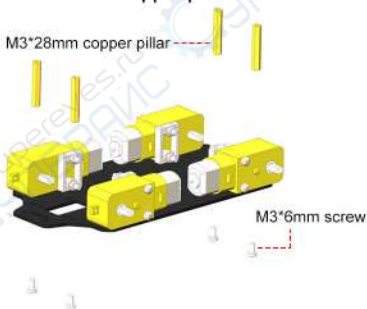
Design Sketch

## 02 Installation of motor



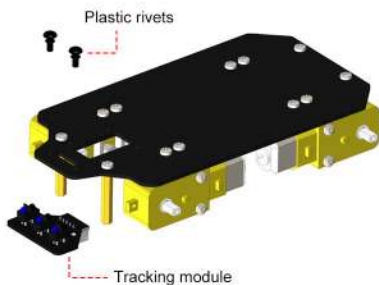
Design Sketch

## 03 Installation of copper pillar



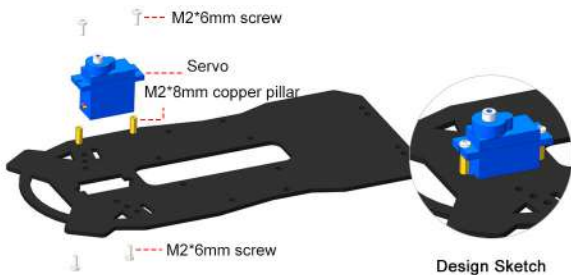
Design Sketch

## 04 Installation of tracking module

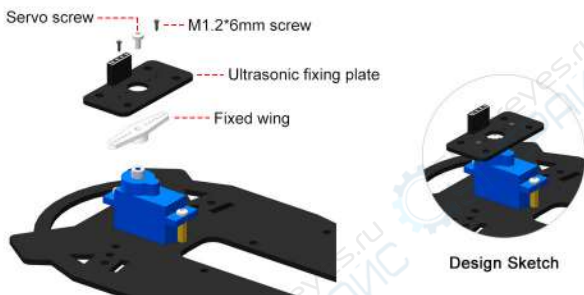


Design Sketch

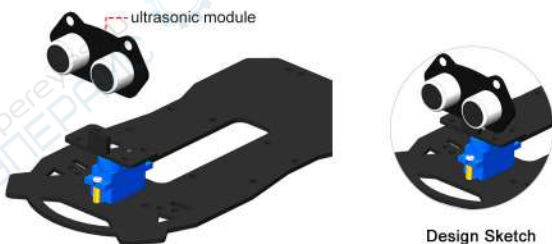
## 05 Installation of servo



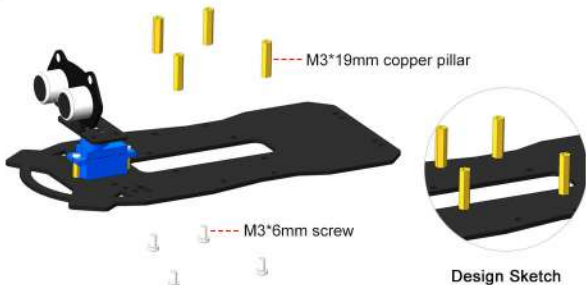
## 06 Installation of ultrasonic fixing plate



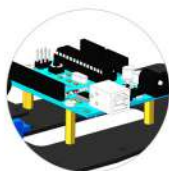
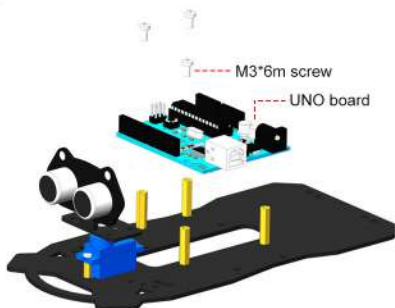
## 07 Installation of ultrasonic module



## 08 Installation of copper pillar

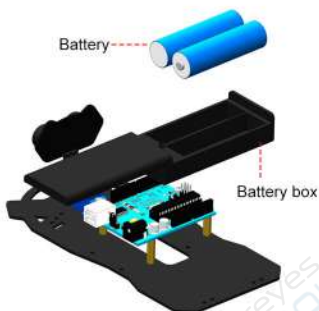


## 09 Installation of Uno board



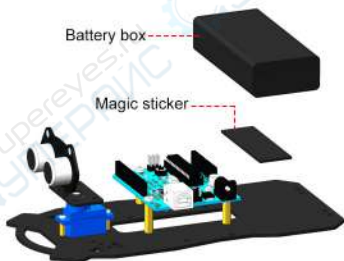
Design Sketch

## 10 Installation of battery



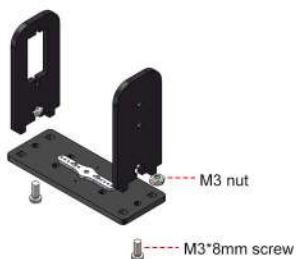
Design Sketch

## 11 Installation of battery box



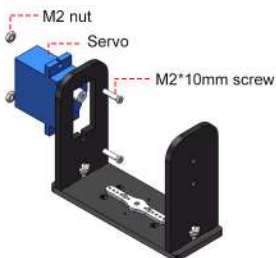
Design Sketch

## 12 Installation of camera bracket



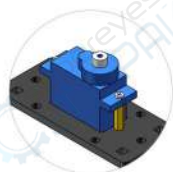
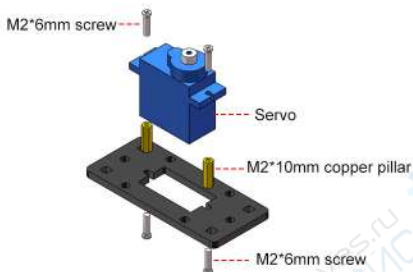
Design Sketch

### 13 Installation of camera servo



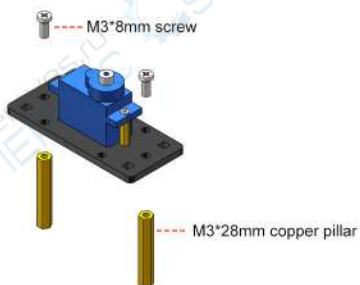
Design Sketch

### 14 Installation of servo



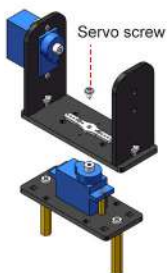
Design Sketch

### 15 Installation of copper pillar



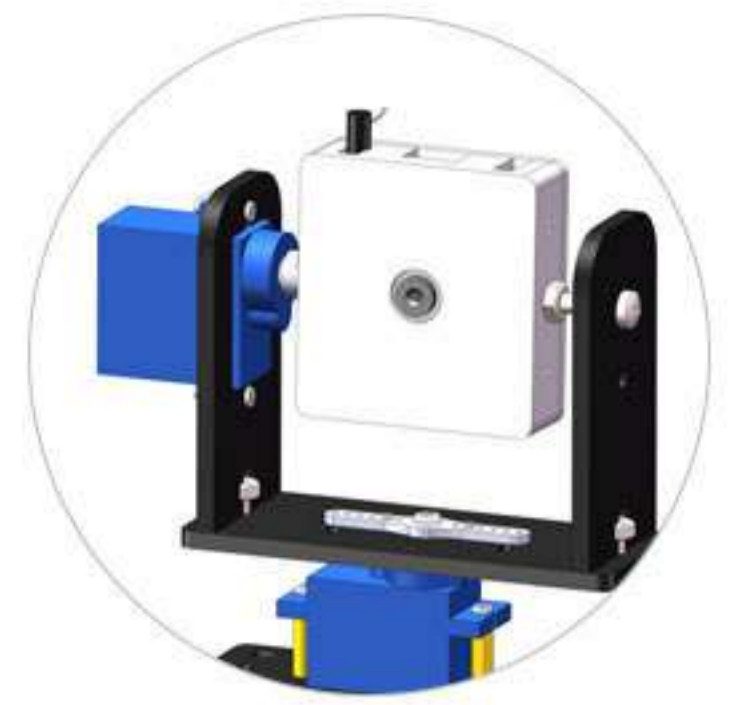
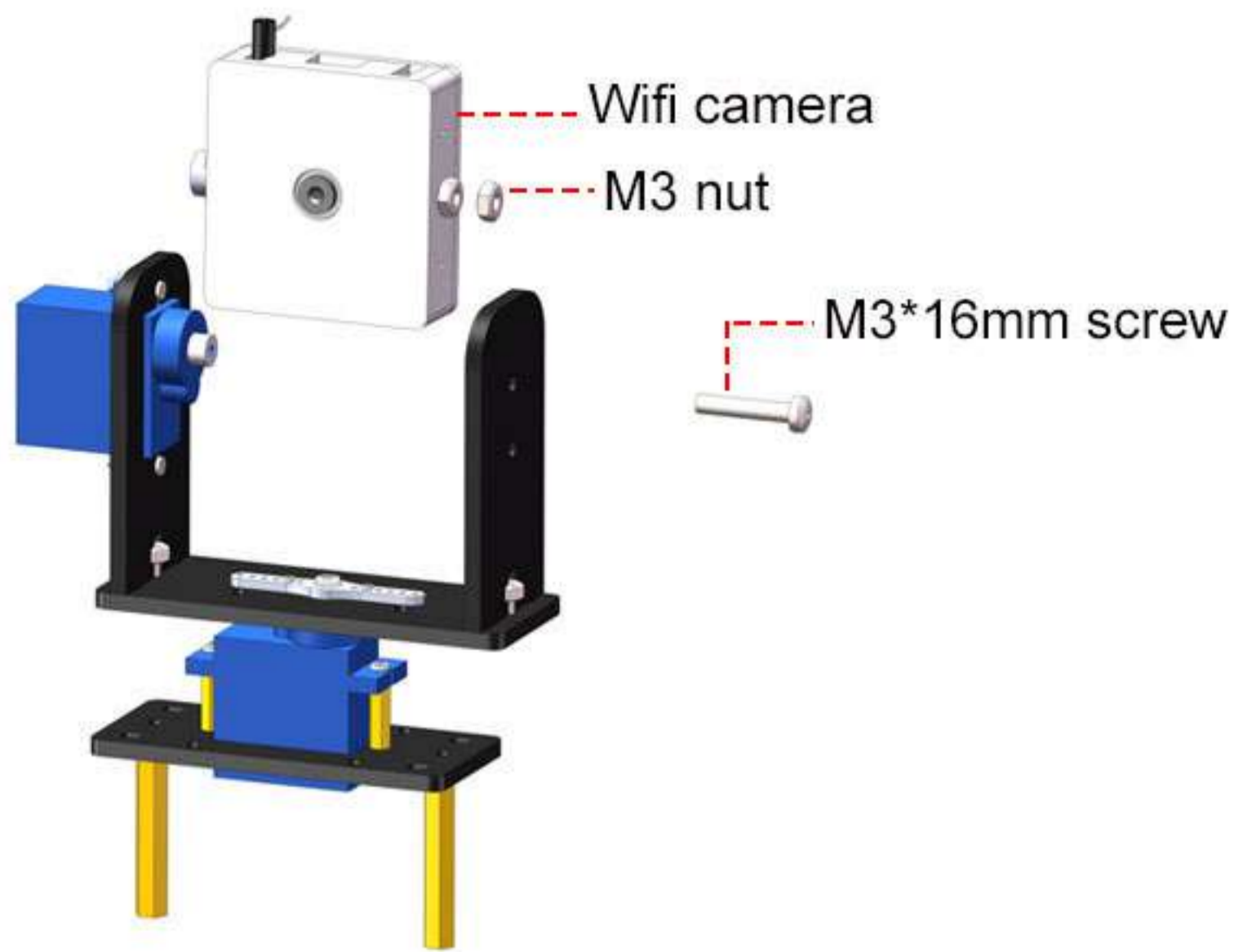
Design Sketch

### 16 Installation of camera bracket



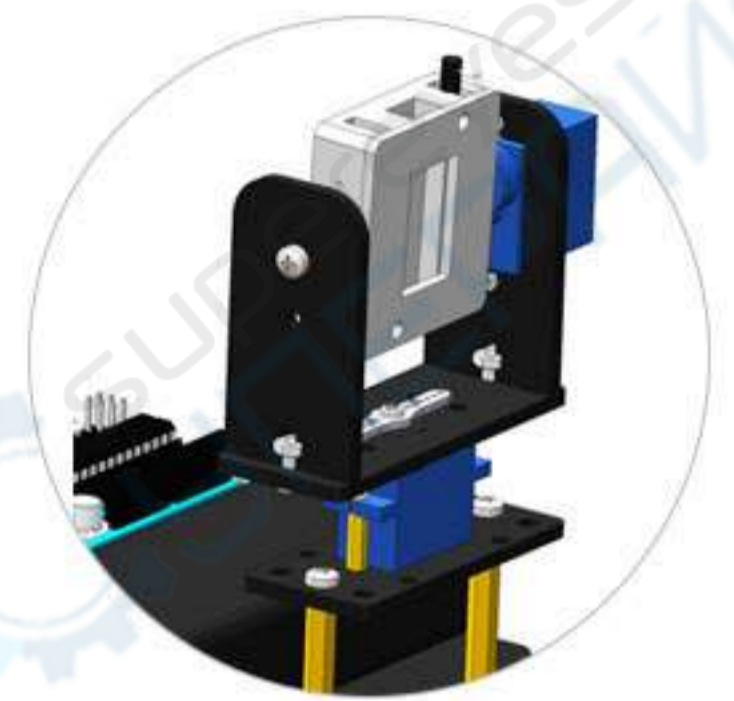
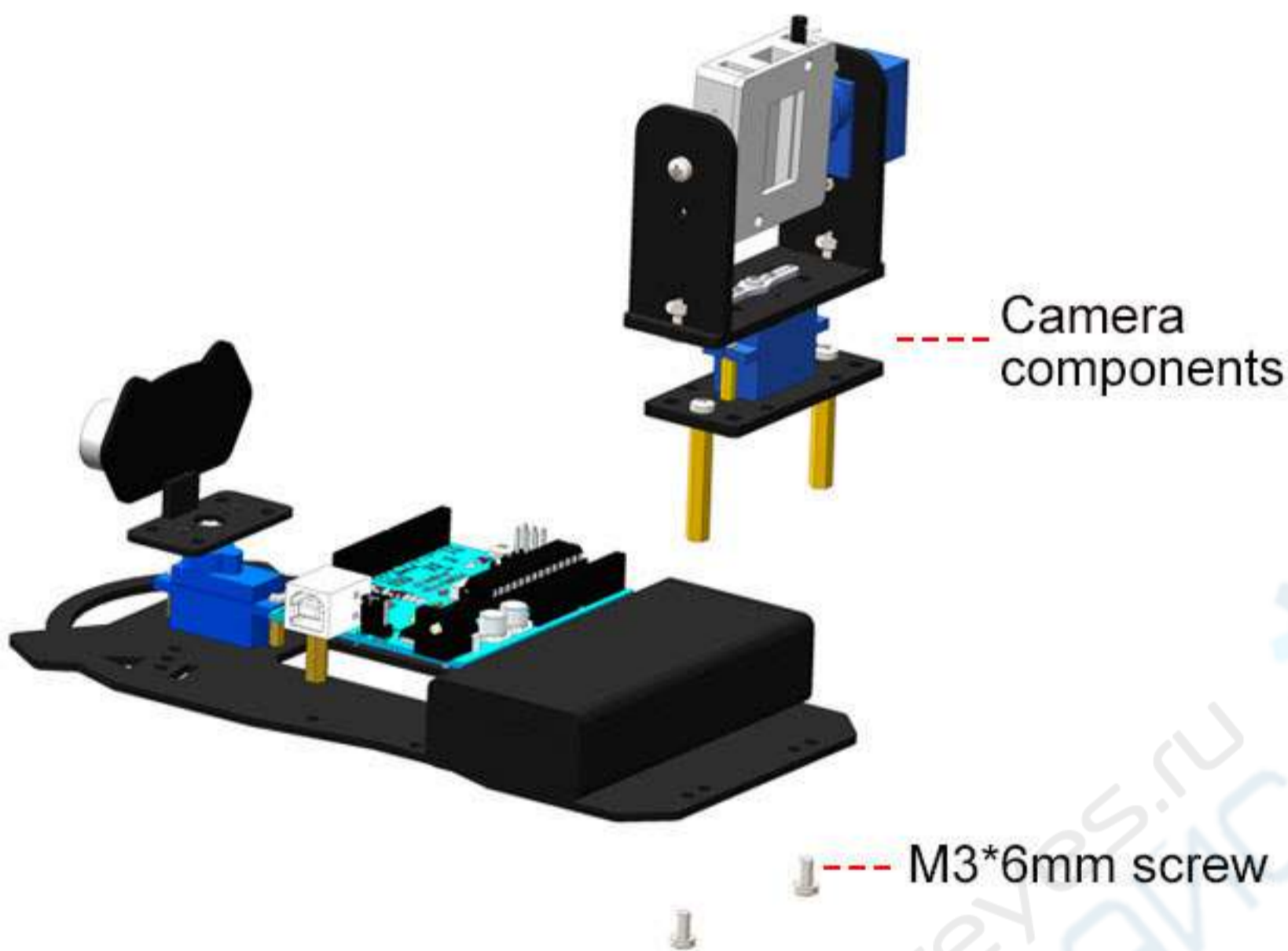
Design Sketch

## 17 Installation of camera



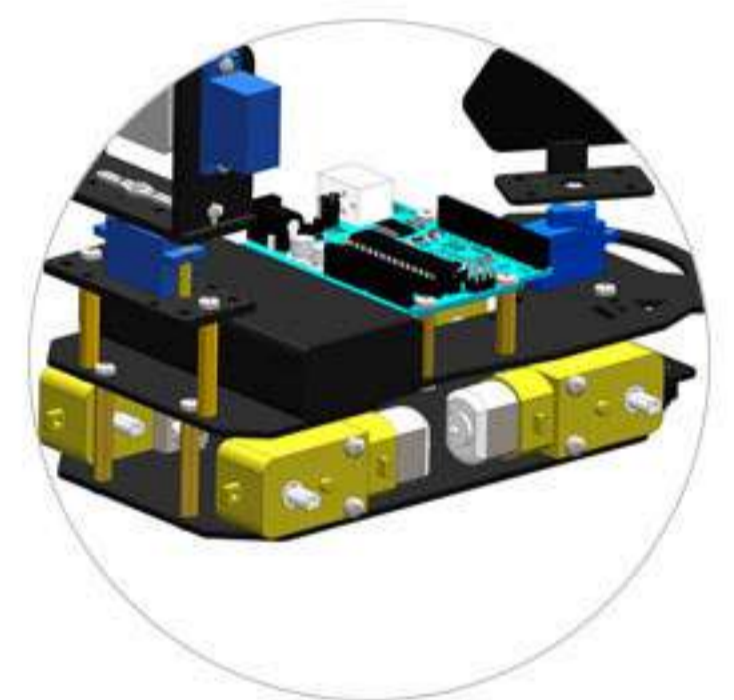
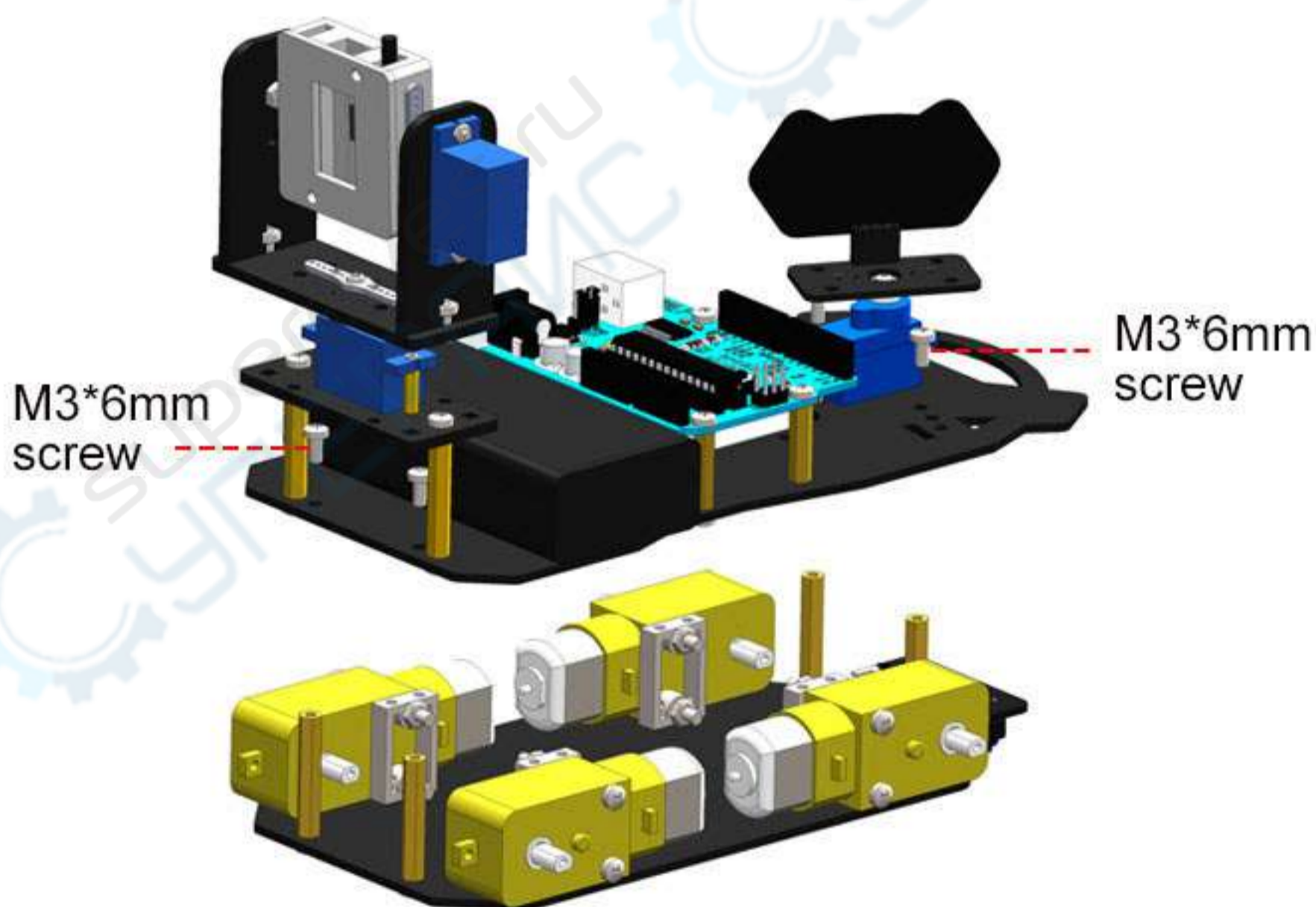
Design Sketch

## 18 Installation of camera components



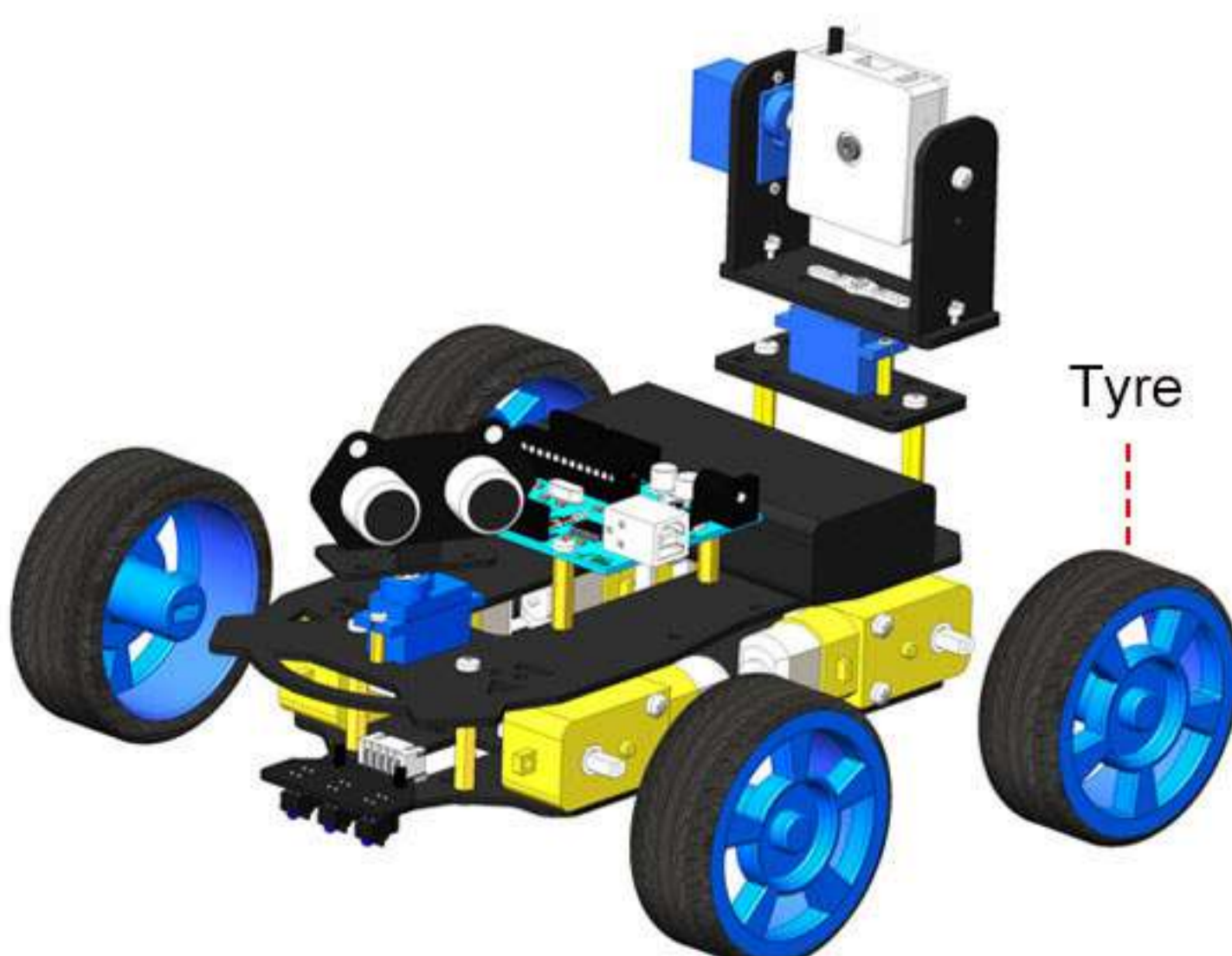
Design Sketch

## 19 Installation of upper and lower board



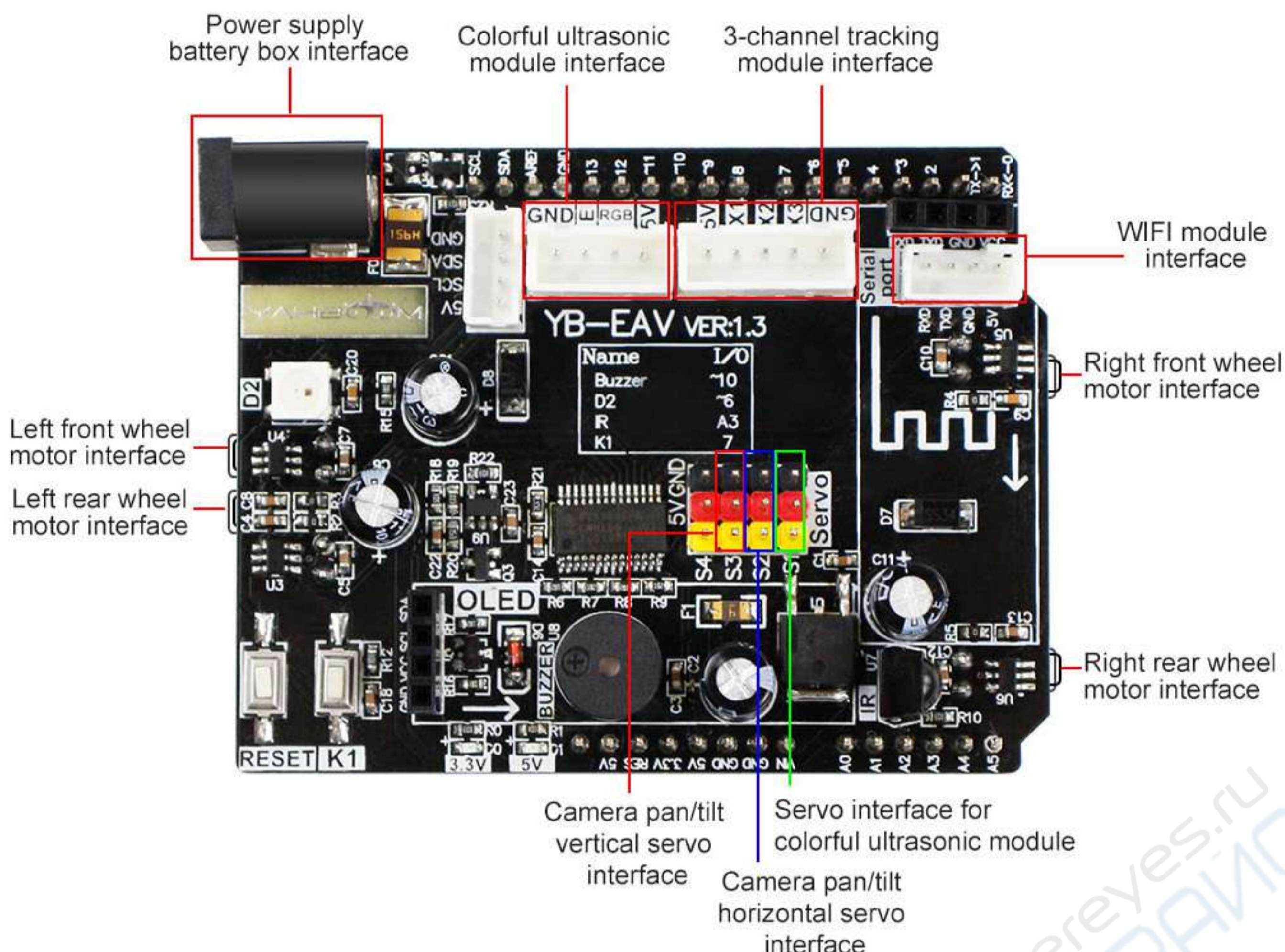
Design Sketch

## 20 Installation of tyre



Design Sketch

# Expansion board instructions



## Get started

1. Enter the Yahboom official website learning area.  
Website: <https://www.yahboom.net/study/Roboduino>
2. In order to avoid insufficient power supply, please charge the battery of the car according to the method in the learning area **[Battery and charging]** before starting the remote control, and ensure that the charging is completed.
3. Scan the QR code on the last page of the manual, download the APK we provide, and install it on your phone.  
Note: If you get any prompts for permission on your phone during installation, select "Agree".
4. Click **[Download]**---**[Code]** in the learning area to download the program we provided and find the **WIFI\_control\_car.ino** program.
5. Unplug the WIFI camera module and upload the **WIFI\_control\_car.ino** program to the car. When the words "Done uploading" appear in the lower left corner of the Arduino IDE programming interface, the program has been successfully downloaded.
6. After the program download is complete, plug in the WiFi camera wiring.
7. Turn on the car power switch, you can see that the red indicator light on the WIFI camera module is flashing (or it is always on, due to different batches, some modules are flashing, some are long).
8. Open the WIFI settings of your phone and you will be able to search for "**Yahboom\_WIFI**" and connect without entering a password.
9. After connecting **Yahboom\_WIFI**, open **Yahboom\_Robot.apk** and follow the steps below to see the camera screen and control the car.

First, we need to click on the top left corner of the APK to select the device as shown below.



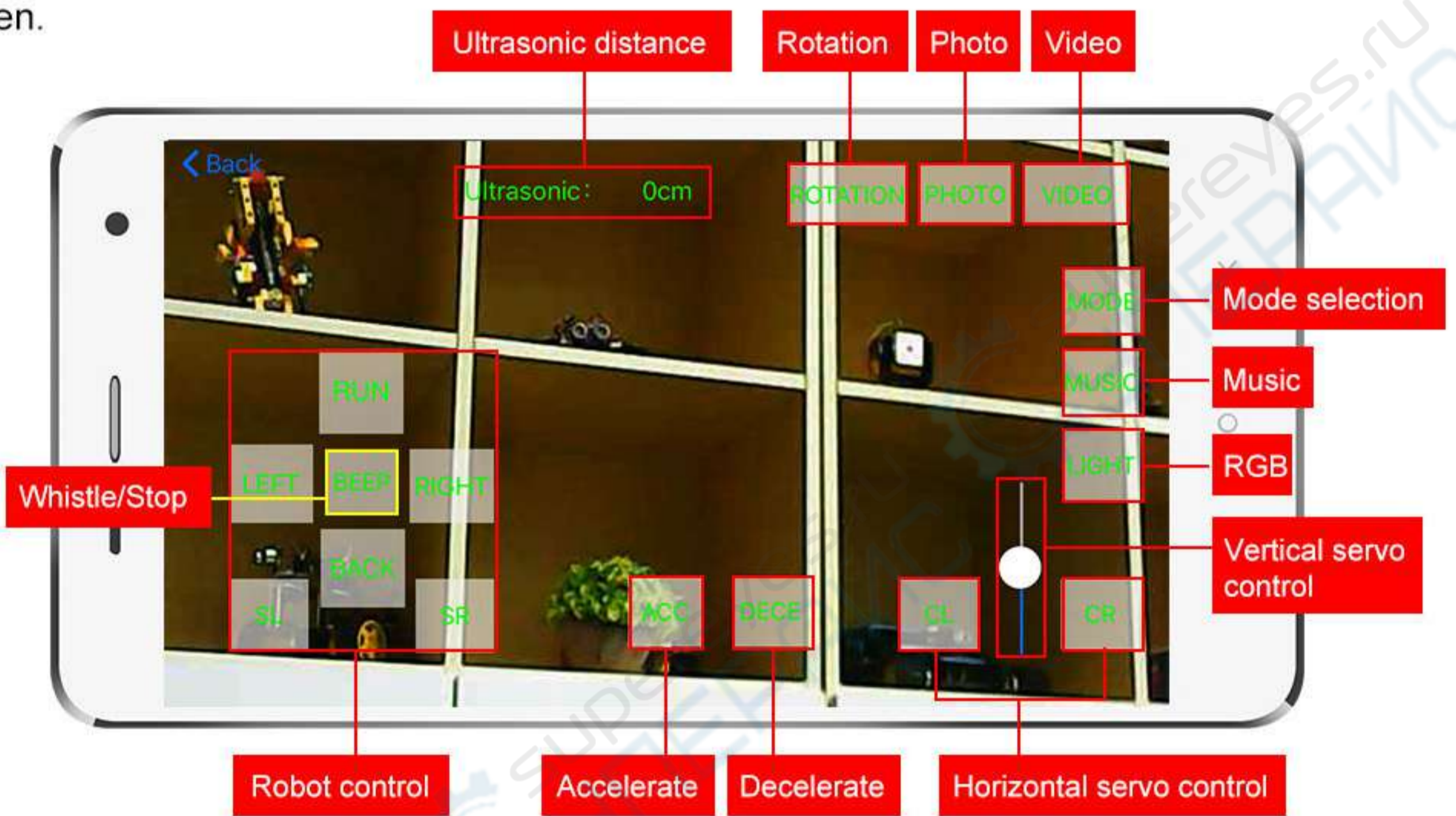


Then, select **[Roboduino]** to enter the remote control interface, as shown below:

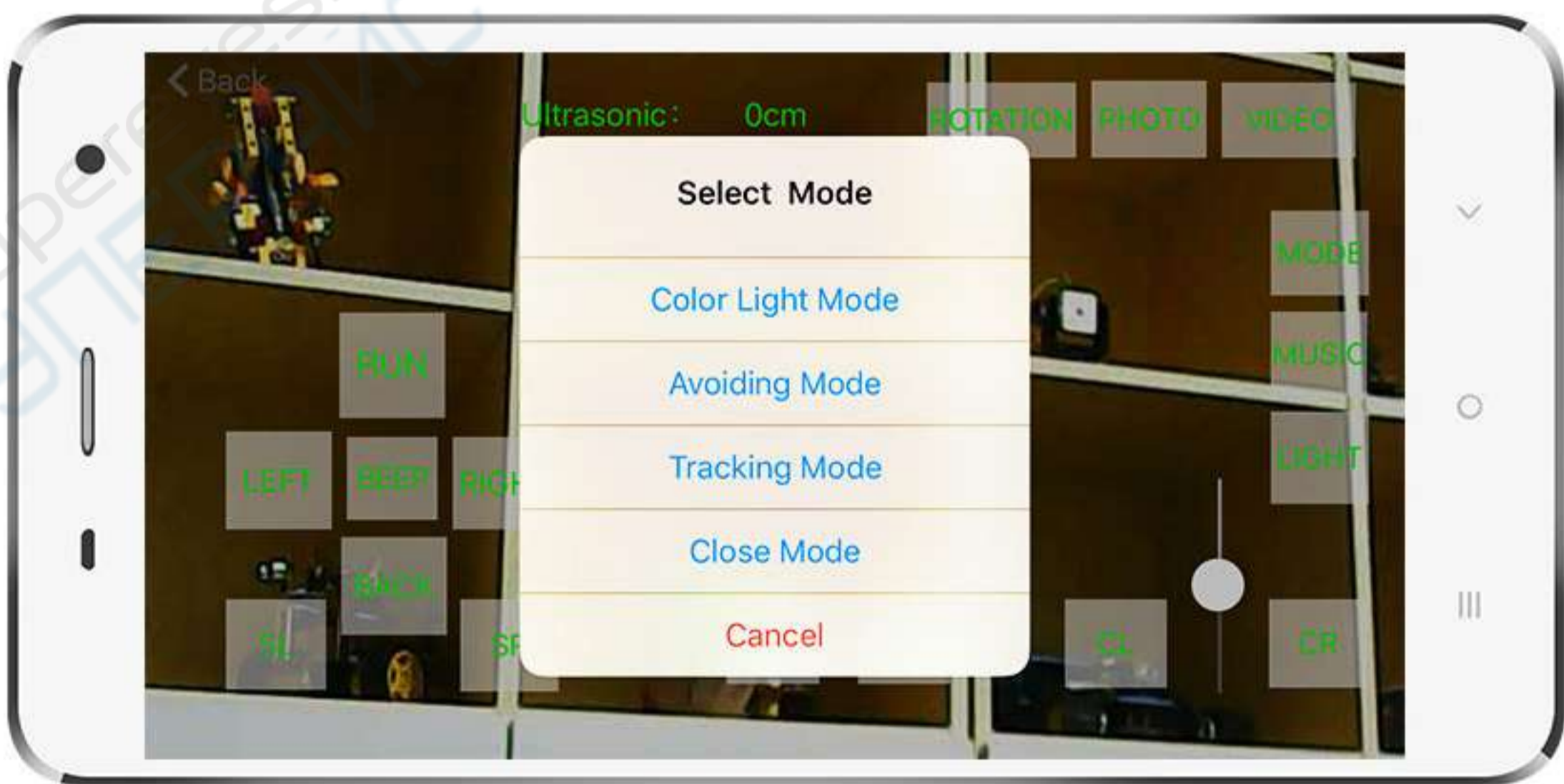


### Control page

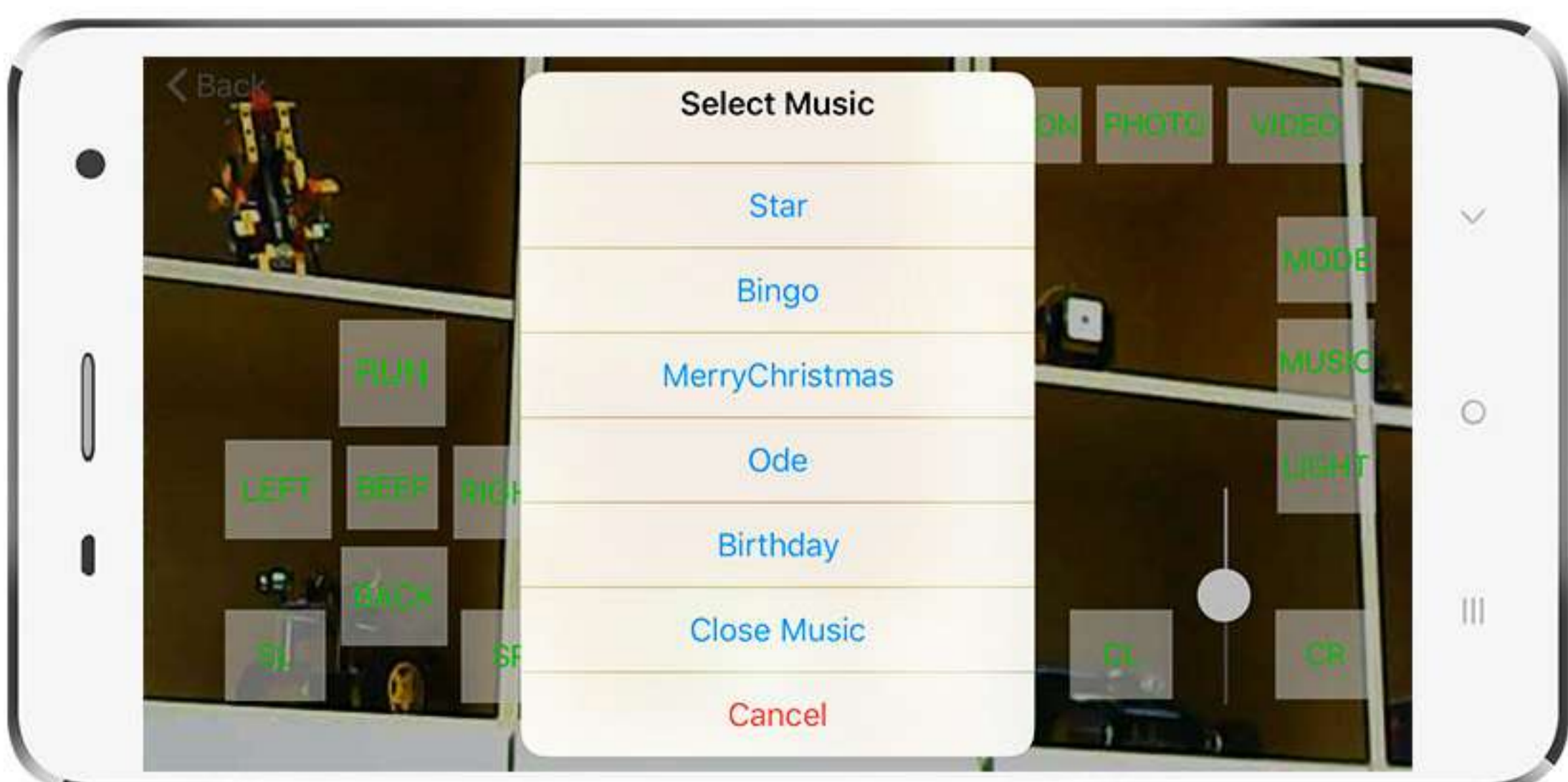
Note: If you find that the video screen is the opposite, click on "ROTATION" to rotate the screen.



### Mode selection page



### Music selection page



### ① Why the computer can not identify the port when I connect the car to the computer with the data cable to prepare the download program?

A: Before this, please confirm whether the CH340 driver has been successfully installed on the computer. For the specific installation steps, please refer to the official website learning area: [\[Preparation before class\]](#)---[\[Installation of CH340 Drive\]](#).

### ② Why can I compile successfully when using the program we provide, but I can't upload it successfully after selecting the correct serial port?

A: Since the WIFI camera (or Bluetooth module) and the Uno board use the same serial port (RX, TX), after unplugging the WIFI camera module (or Bluetooth module), you can upload the program normally.

### ③ Why did some programs have been uploaded (such as Tracking, Ultrasonic avoid, etc.) but the car does not work?

A: Since some programs use the start button setting during the writing process, if the customer finds that the smart car does not work after the burning process, please press the start button (K1) on the expansion board, the car will start.

### ④ Why did you upload the inspection program we provided, and the car could not be patrolled normally?

A: 1) In order to avoid the interference of sunlight on the infrared line sensor, it is necessary to conduct a line inspection experiment indoors.  
2) Before conducting the line inspection experiment, you need to modify the parameters in the program according to the actual situation of the track circuit that you are currently using. For specific tutorials, please read the official website learning area: [\[Basic course\]](#)---[\[Tracking\]](#).

### ⑤ Why can't the infrared remote controller control the car?

A: 1) Please confirm whether the infrared remote control program provided by us has been successfully uploaded. Please refer to [\[Basic course\]](#)---[\[IR control\]](#).  
2) In order to avoid the interference of sunlight on the infrared line sensor, it is necessary to conduct a line inspection experiment indoors.  
3) Remove the plastic gasket on the back of the infrared remote control before performing the infrared remote control.  
4) During remote control, the infrared transmitting probe (transparent) on the front of the infrared remote control needs to face the infrared receiving head (black) above the trolley expansion board.

### ⑥ Why does the car turn off the power after opening the power by increasing the speed of the car by programming and downloading the program successfully?

A: The reason for this phenomenon is that the expansion board and the battery are protected by current. When the current is too large (when the speed of the car is too large), the power will be automatically cut off.

Solution:

- 1) Make sure that the car battery is fully powered, preferably after fully charging.
- 2) We recommend that the speed of the motor must not exceed 150 when programming. (It is fast enough). If the speed of the motor is set to exceed 150, the current will be too large and the above phenomenon will occur, and the TT motor will be damaged.

**⑦ Why can the mobile phone only transmit the video but not access the internet after connecting to the wifi of the camera module?**

A: After the mobile phone is connected to the camera's wifi, the camera and the mobile phone are all in the same LAN. The video can be transmitted, but the camera itself is not connected to the external network, so it is not possible to access the Internet.

**⑧ How long does it take to charge two batteries? How long can I use after fully charged?**

A: Under normal circumstances, it takes about 3.5 hours to fully charge, and about 30-40 minutes working after fully charged.

## Lithium-ion battery safety specification

1. When charging the battery, you need to remove the battery from the car and put it in the charger properly.
2. Don't use the battery while charging to prevent the charger or battery from exploding.
3. Please charge the battery when the voltage of each battery is about 3.7V. Each battery voltage is about 4.2V after fully charged.
4. Unplug the battery when the device is not used for a long time and keep each battery voltage between 3.7V-3.9V. When storing the battery, do not mix it with metal objects. Do not remove the insulation film on the outside of the battery.
5. When the battery is charging, the charger indicator lights up red and full green light. After charging is completed, the charger and power supply should be unplugged in time to avoid overcharging and damaging the battery. Someone needs to be present when charging.
6. Don't insert the charger into the battery holder of the expansion board. Don't directly supply the robot with the battery charger.
7. Please use the official battery, power adapter and battery box provided by Yahboom.
8. Keep away from heat, fire, any liquid. Don't use it in wet or rain. Humid environment may cause the battery to ignite or even explode.
9. Don't use the battery when it is leaking, damaged, heated, deformed, discolored, smelly or any other abnormal phenomenon, and contact Yahboom or other agents in time.
10. Please use the battery at 0 ° C ~35 ° C environment. The battery will be damaged or the discharge performance will be extremely reduced at other temperatures.
11. Intentional puncture, short circuit, reverse connection, unauthorized welding, impact, crushing, and throwing of batteries are strictly prohibited. Do not use the battery in a strong static and magnetic field environment, otherwise the battery may leak fluid, catch fire or even explode.
12. It is strictly forbidden to modify the hardware circuit board without permission.
13. Do not allow children to replace batteries without adult supervision. Keep batteries out of the reach of children.
14. Do not mix new and old batteries or different types of batteries, especially dry batteries and rechargeable batteries.
15. If the charger smokes, the battery hot (the outer packaging will crack in severe cases) or the battery leaks: please disconnect the power strip or the main gate, then quickly pull out the charger, remove the battery and put it in an open area.

Solemnly declare: Users must read this specification carefully, especially the parameter indicators, precautions, etc., understand the use method and application range of the product. Any economic loss and safety accident caused by failure to comply with the above-mentioned lithium ion battery use specifications or operating errors shall be borne by the user.

## Download APK

Android users scan the following QR code by browser or search "YahboomRobot" in Play Store to download APP;

iOS users scan the following QR code by camera or search "YahboomRobot" in App Store to download APP.



iOS



Android

## Tutorial link

<http://www.yahboom.net/study/Roboduino>

## Technical Support

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