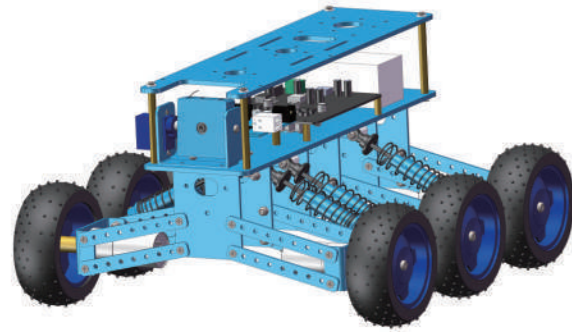




# 6WD Arduino Robot manual



- ① Please read this manual carefully before using
- ② The company reserves the right of explanation
- ③ Product appearance, please prevail in kind
- ④ Please keep the manual after reading

## About us

Shenzhen Yahboom Technology Co., Ltd. is a professional company specialized in open source hardware and maker education. We have two Enterprise Concept: turn ideas into reality and Let more children become maker. Company's products now have covered early childhood education, intelligent robot education, university automation technology education, and so on. In addition, the company provides long-term help and products for colleges and training institutions to develop a training program.

Package list			
	Alu alloy parallel suspension strip*24		Alu alloy parallel suspension bracket*6
	Alu alloy motor bracket*6		Alu chassis bottom*1
	Alu chassis upper*1		Shock absorber*6
	Tyre*6		Coupling*6
	370 motor*6		Copper pillar package
	5.5-7 open-end wrench*1		Screwdriver*1
	M3*10mm screw package		M3 Lock nut package
	Separation pillar*12 Plastic spacer*20 M3*25 screw*12 M4*8 screw*18		6WD breakout*1 [Option]
	Magic sticker*1 Battery*1 Battery charger*1 [Option]		Arduino UNO control board*1 [Option]
	Motor drive module*1 [Option]		Bluetooth module*1 [Option]
	Camera module*1 M3*10mm screw *2 M3 nut *2		Camera package [Option]
	Servo*1 Camera bracket*1		

### Installation step

#### 01 Parallel suspension installation

When installing parallel suspension strips (screw holes at the ends of 24 suspension strips), the screws need a little space for movement. It is recommended that all screws be tightened first and then loosened according to a certain angle (90°~180°).

M3\*10mm screw  
M3 lock nut  
Design Sketch

#### 02 Parallel suspension bracket installation

Parallel suspension brackets are installed with a suspension bar bent near the parallel suspension bracket

M3 lock nut  
M3\*10mm screw  
Design Sketch

#### 03 Shock absorber bracket installation

The other end of the shock-absorbing bracket needs to be symmetrical with the previous installation (the parallel hanging strips are installed on the same side, and the parallel-suspension bracket bends)

M3\*10mm screw  
M3\*10mm screw  
Design Sketch  
Design Sketch

#### 04 Shock absorber installation

M3 lock nut  
M3\*25mm screw  
Separation pillar  
Design Sketch

#### 05 Chassis bottom installation

M3\*10mm screw  
M3 lock nut  
Design Sketch

#### 06 Parallel suspension system installation

M3 lock nut  
M3\*10mm screw  
Design Sketch

#### 07 Motor installation

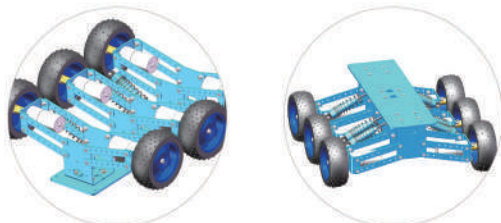
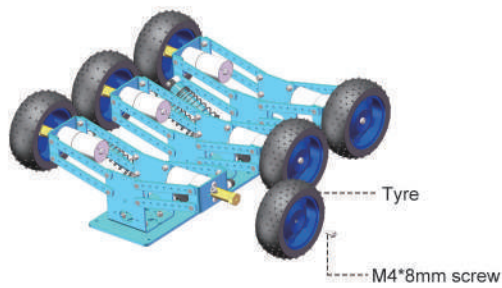
M3 plastic spacer  
M3\*10mm screw  
Design Sketch

#### 08 Coupling installation

The screw hole of the coupling must be aligned with the cut surface of the motor shaft

M4\*8mm screw  
Design Sketch

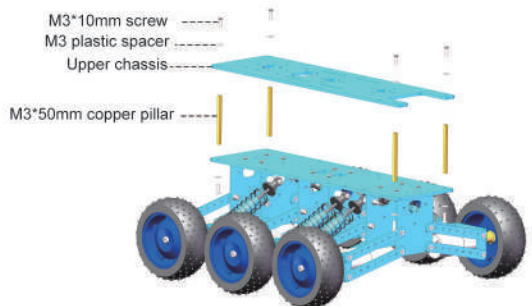
## 09 Tyre installation



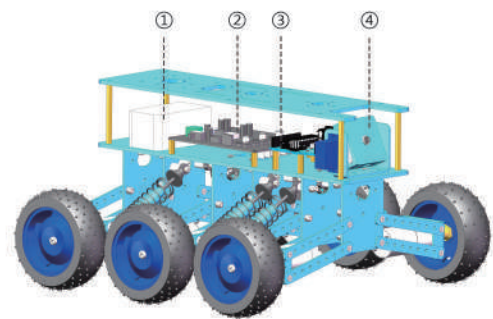
Design Sketch

Design Sketch

## 10 Upper chassis installation

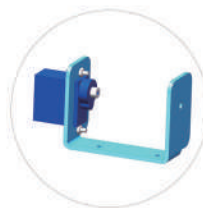
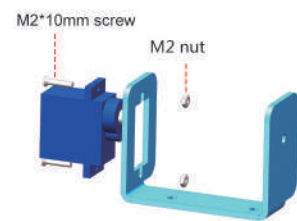


Design Sketch

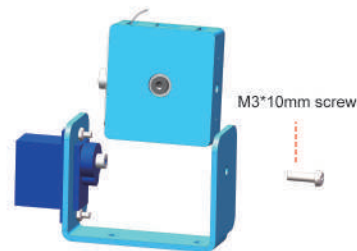


- ① 12.6V battery
- ② 6WD breakout
- ③ Arduino control board
- ④ camera

### Camera installation



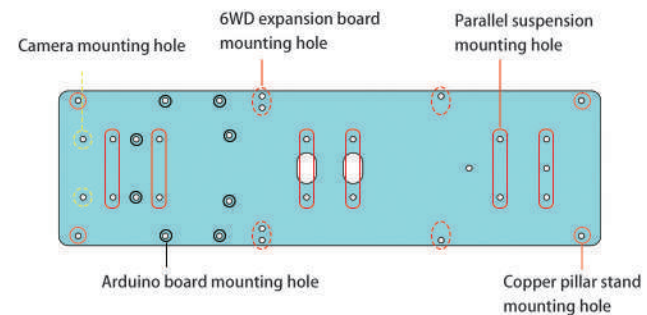
Design Sketch



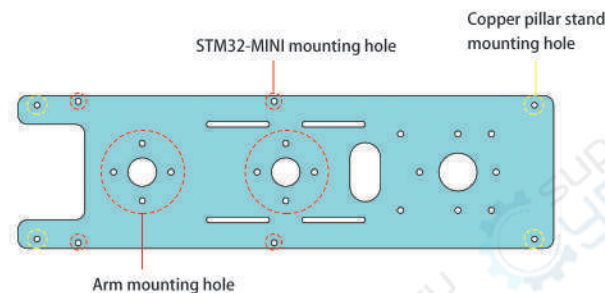
Design Sketch

## Hole introduction

### 6WD chassis bottom

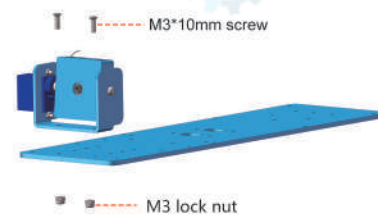


### 6WD chassis upper



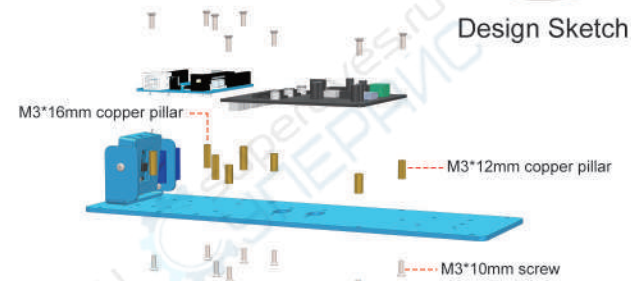
## Optional module installation

### Camera module installation



Design Sketch

## Control board and expansion board installation

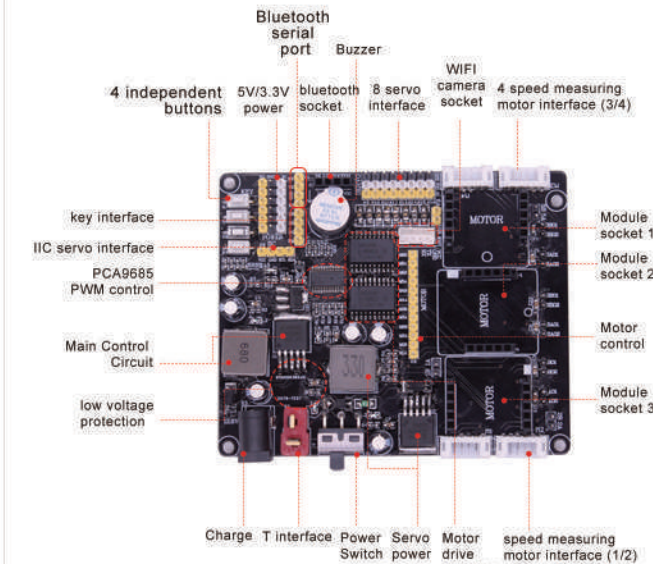


## Battery installation

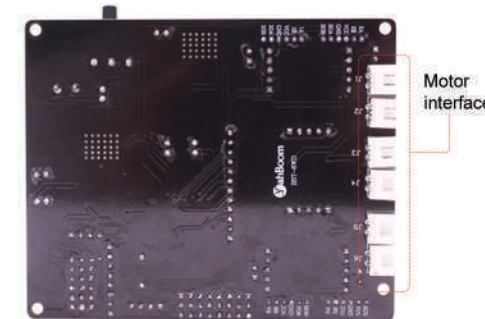


## Expansion board module circuit diagram

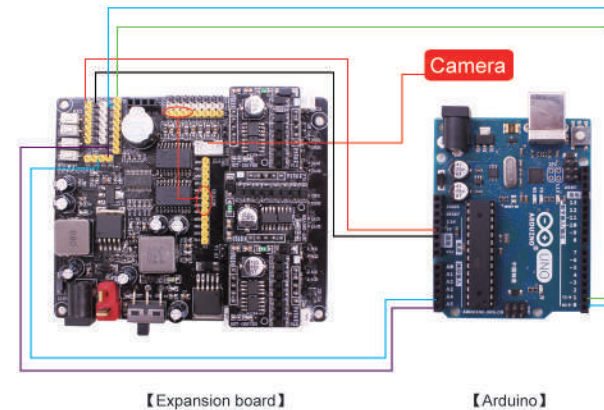
Front



Back



## Wiring diagram



Expansion board	Arduino	Expansion board	Expansion board
5V	5V	S0 ( IO )	M3A
GND	GND	S1 ( IO )	M3B
RX	TX	S2 ( IO )	M4A
TX	RX	S3 ( IO )	M4B
SCL	A4		
SDA	A5		

Expansion board	Camera servo
S7(GND)	Brown GND
S7(VCC)	Red VCC
S7(IO)	Orange IO

Note: Only one of the two control methods can be selected, Camera or Bluetooth. If you use camera control, Bluetooth control can not be used; if you use Bluetooth control, camera control can not be used, This is to prevent uncontrollable interference with the other party's signal.

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