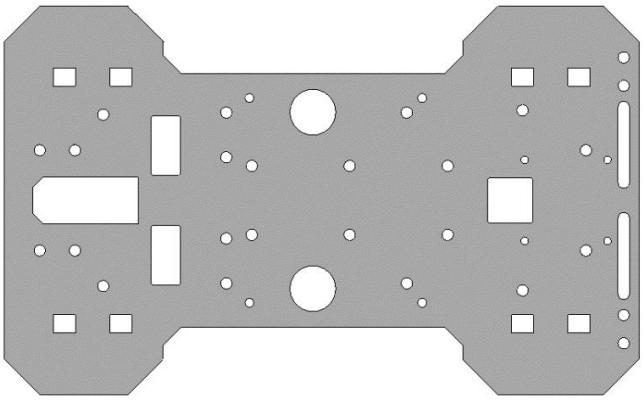
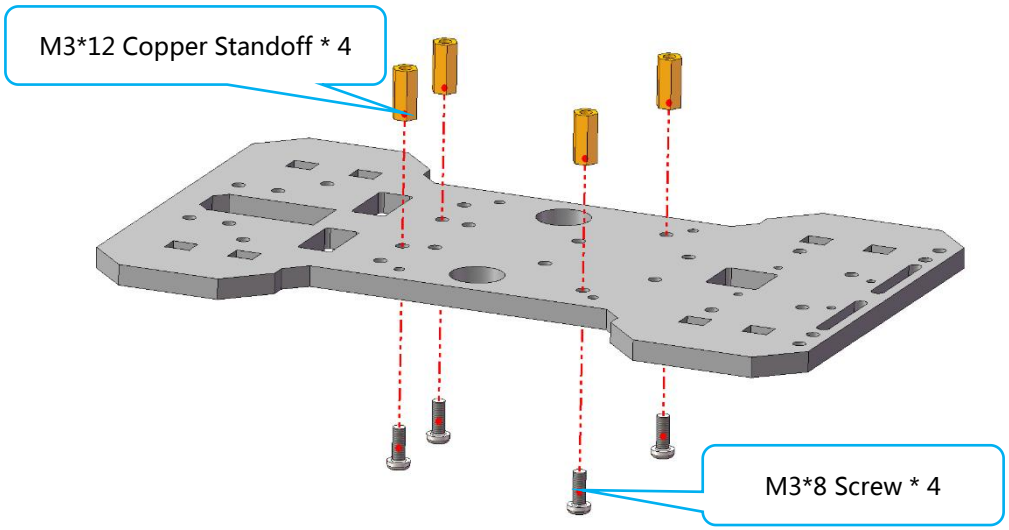
Lesson 4 Assembly of Adeept 4WD Smart Car with Mecanum Wheels

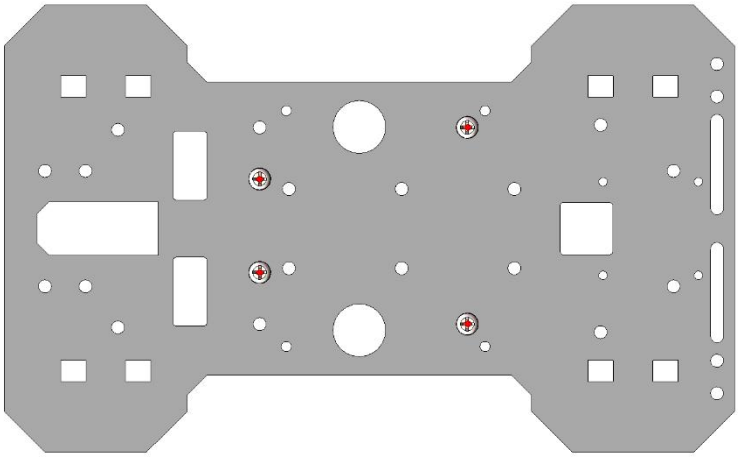
6.1 Assemble the Robot's Body

1. Place four **M3*12 Copper Standoffs** on the holes of part **A01**, and then fix them with four **M3*8 Screws**.

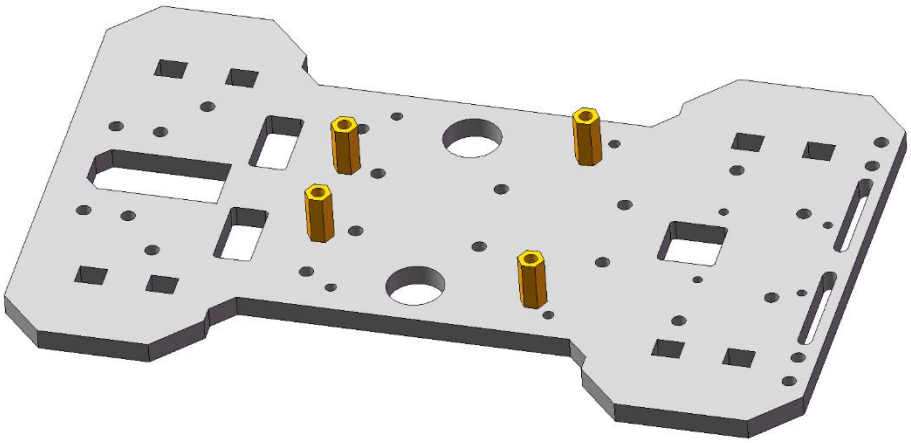
A01	

Assemble the following components:





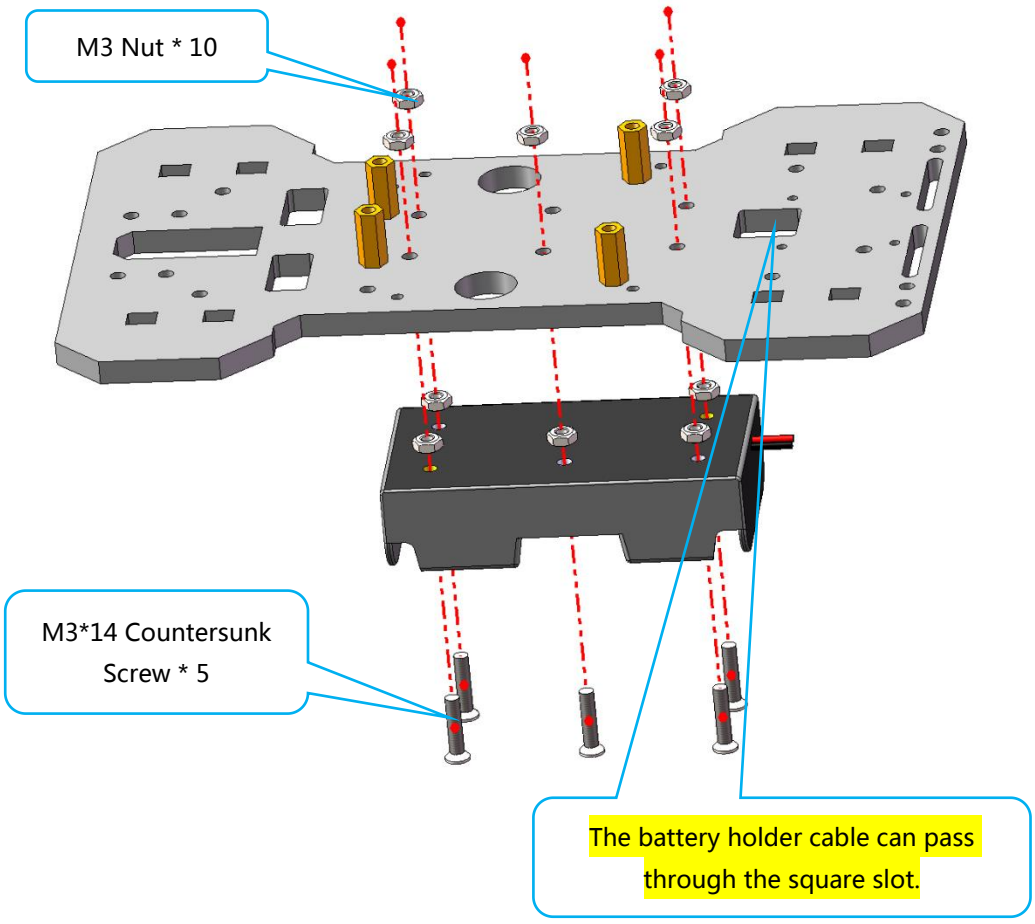
After Assembly:

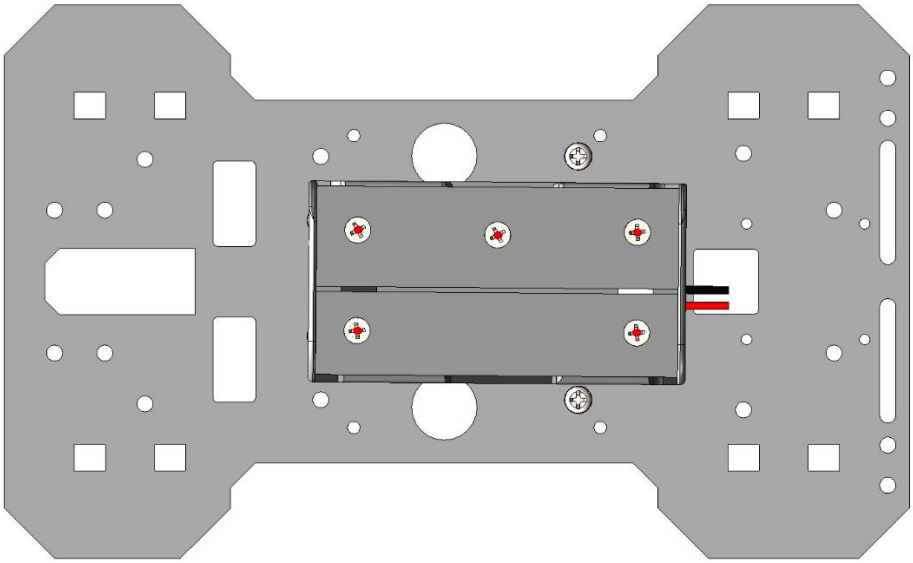


2. Fix the **18650 Battery Holder** to part **A01** with five **M3*14 Countersunk Screws** and ten **M3 Nuts**.

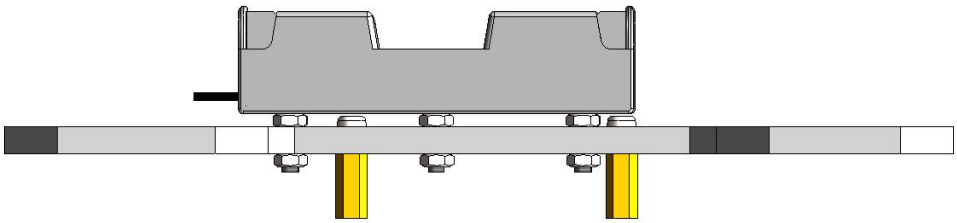
18650 Battery Holder	

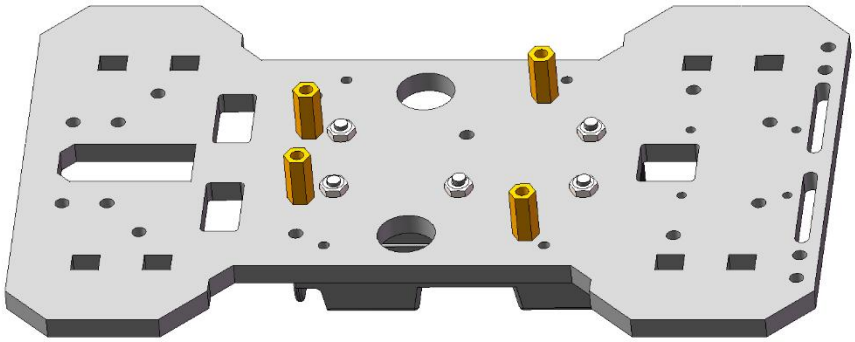
Assemble the following components:



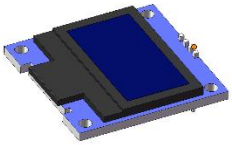


After Assembly:

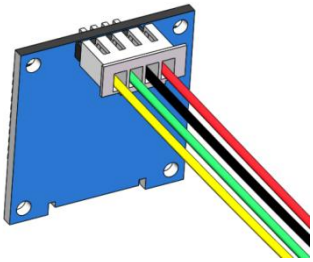


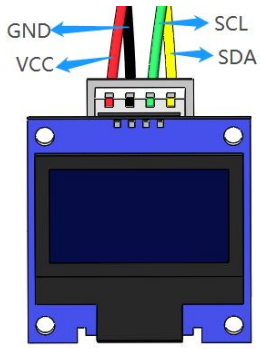


3. Fix four **M2*11 Copper Standoffs** in place with four **M2*8 Screws**. Then, fix the **OLED Screen** with four **M2*8 Screws**. (**Before installing the OLED screen, you need to connect the cables.**)

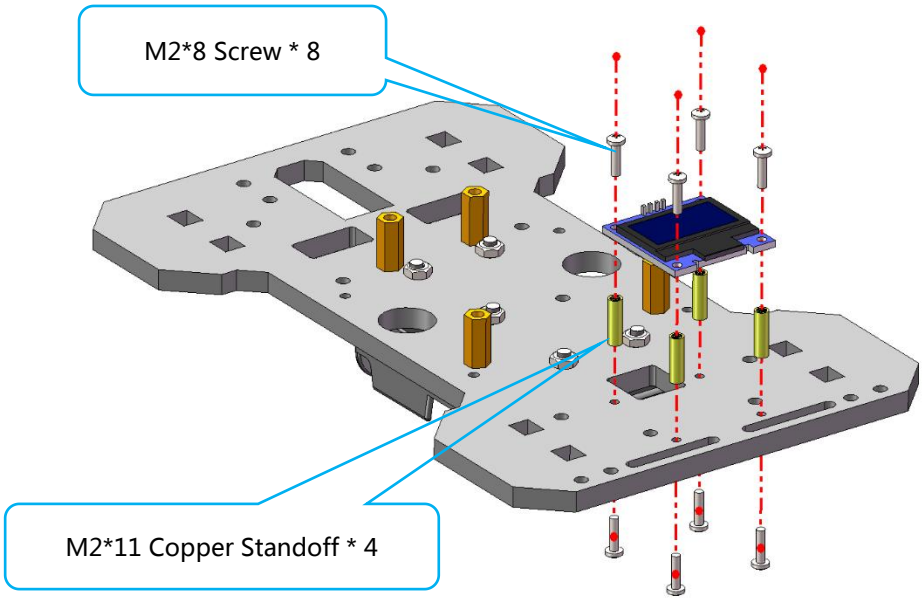
OLED Screen	

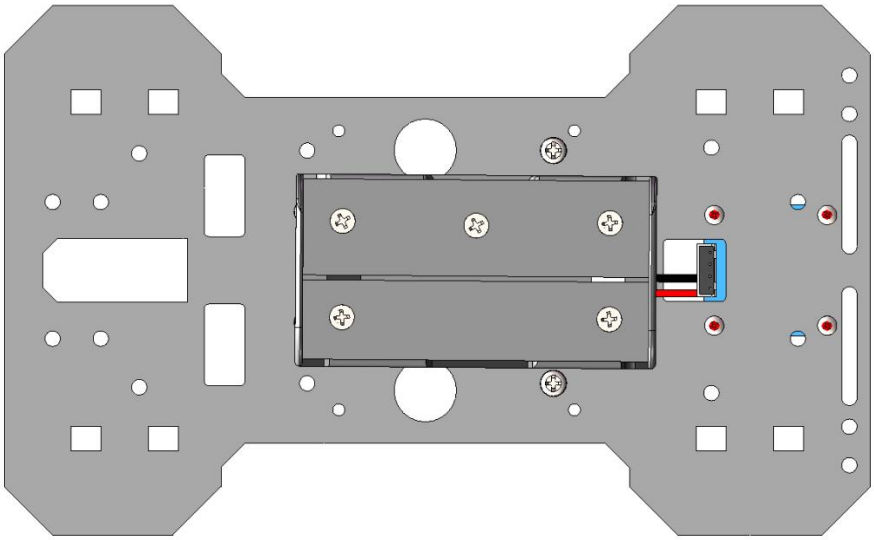
Assemble the following components:



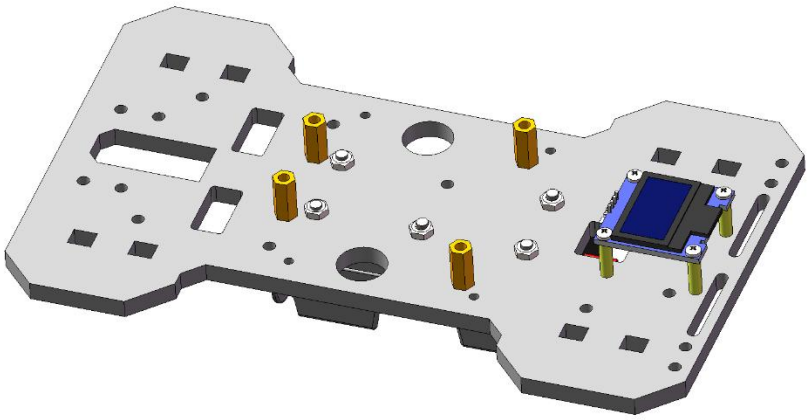


The yellow line corresponds to SDA and the red line corresponds to VCC.





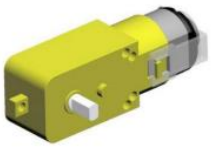
After Assembly:



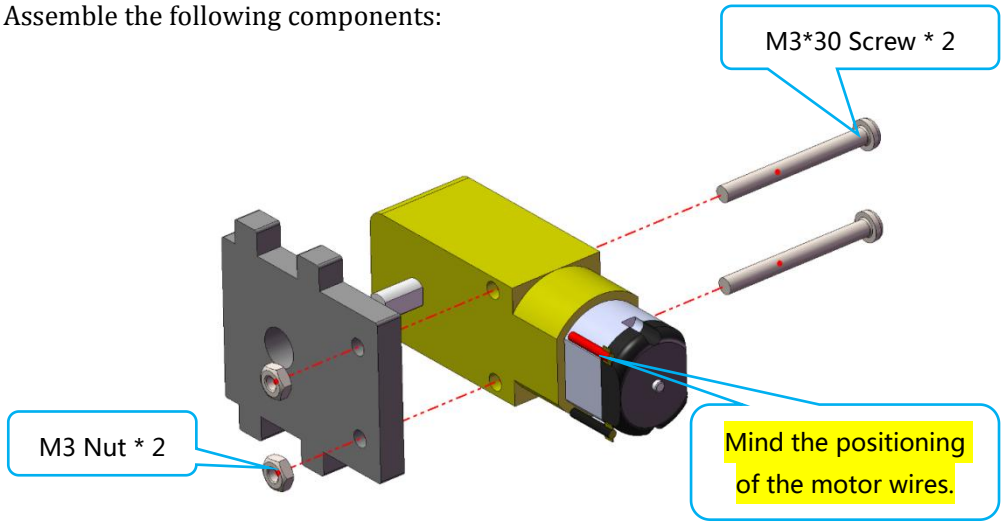
6.2 Assemble the Rear Wheels

1. Use two **M3*30 Screws** and two **M3 Nuts** to fix the **DC Motor** to part **A03**.

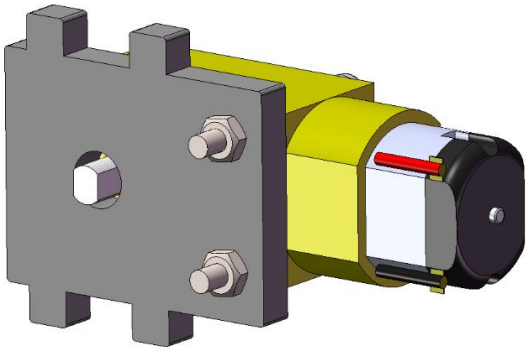
Assemble 4 sets.

A03	
DC Motor	

Assemble the following components:

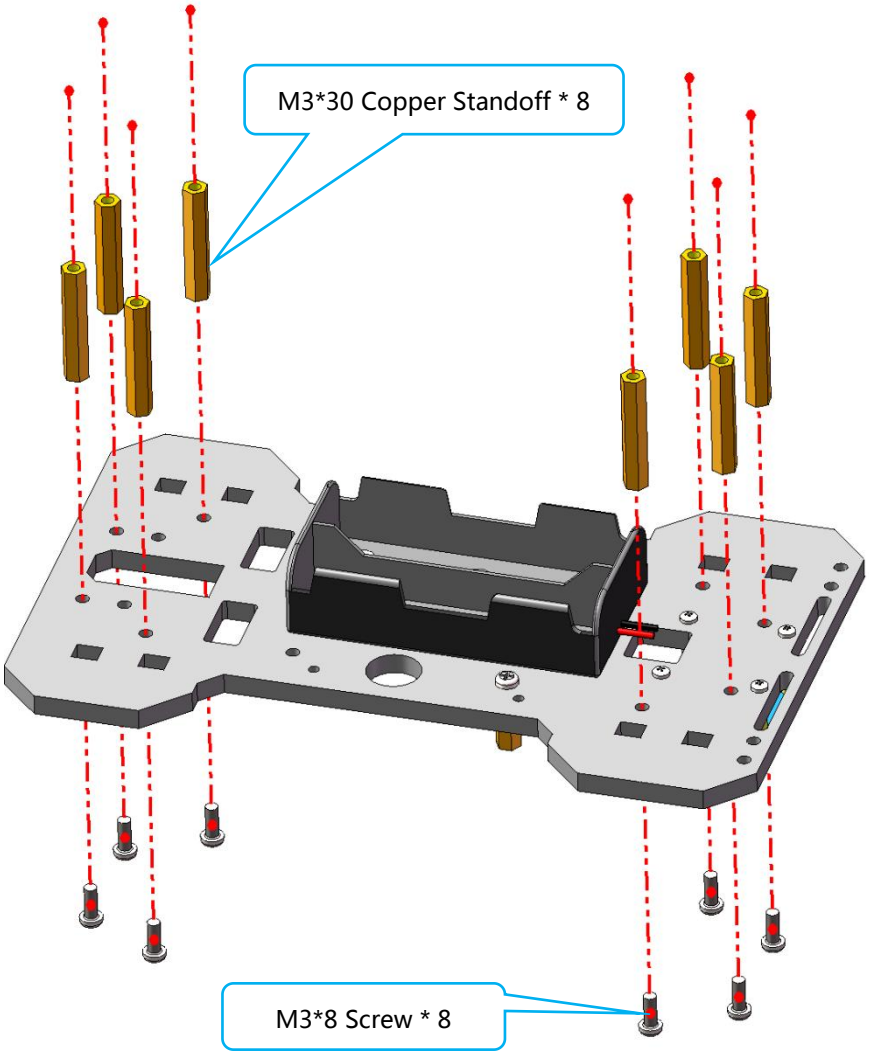


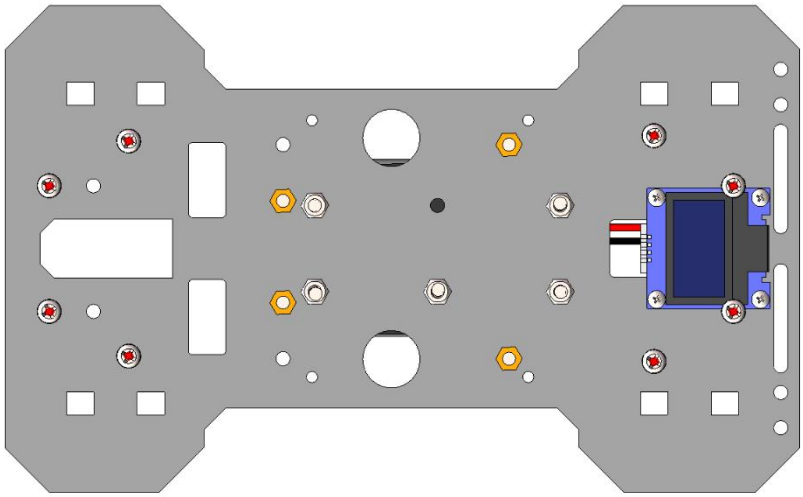
After Assembly:



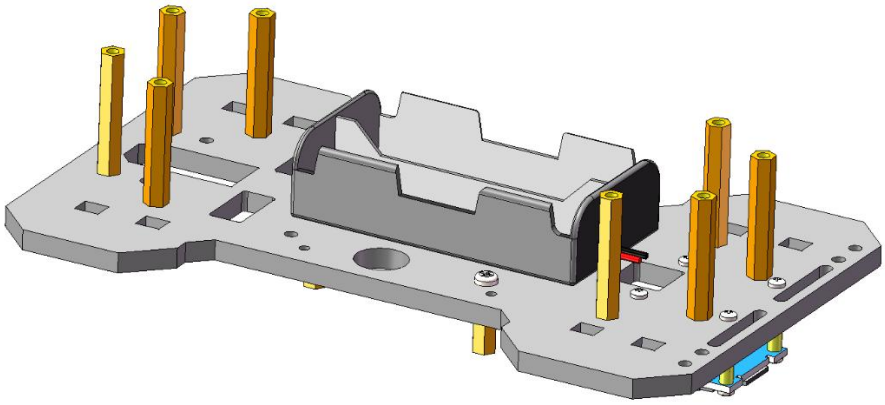
2. Use eight **M3*8 Screws** to fix eight **M3*30 Copper Standoffs** to part **A01**.

Assemble the following components:



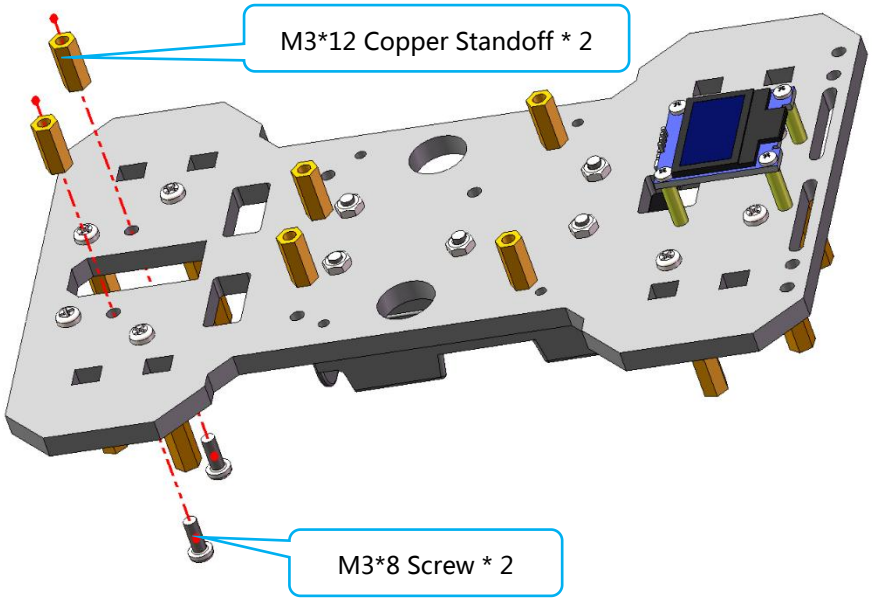


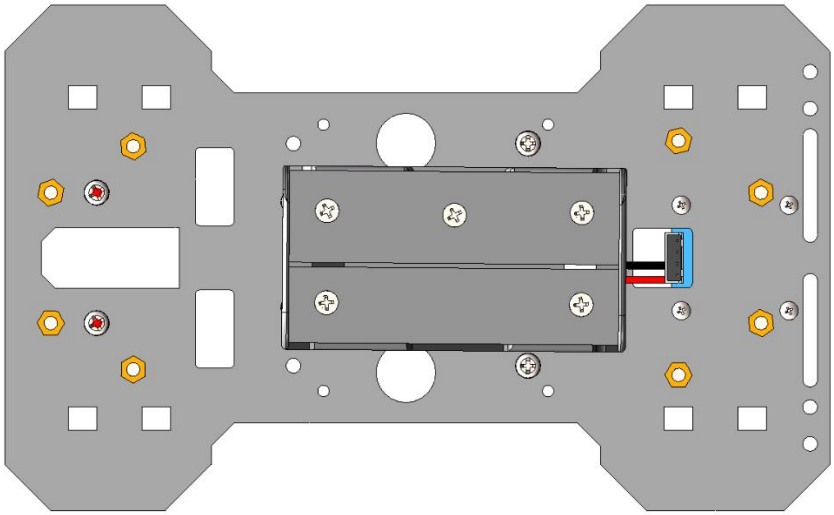
After Assembly:



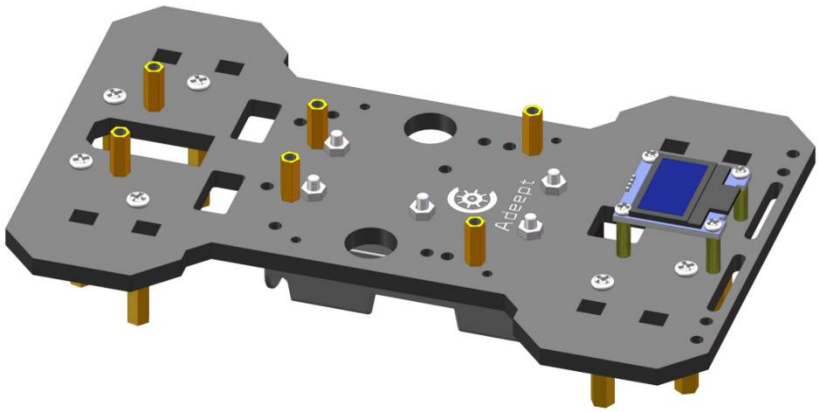
3. Use two **M3*8 Screws** to fix two **M3*12 Copper Standoffs** to part **A01**

Assemble the following components:

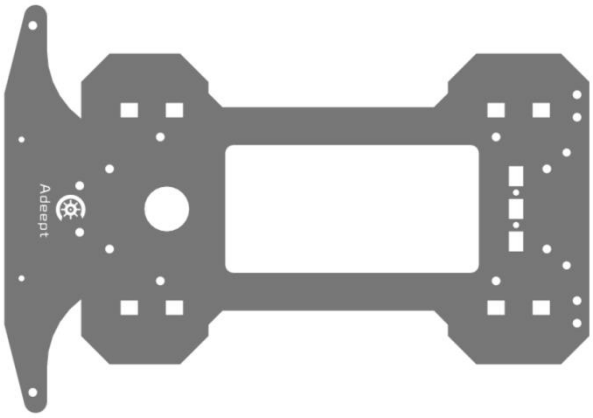




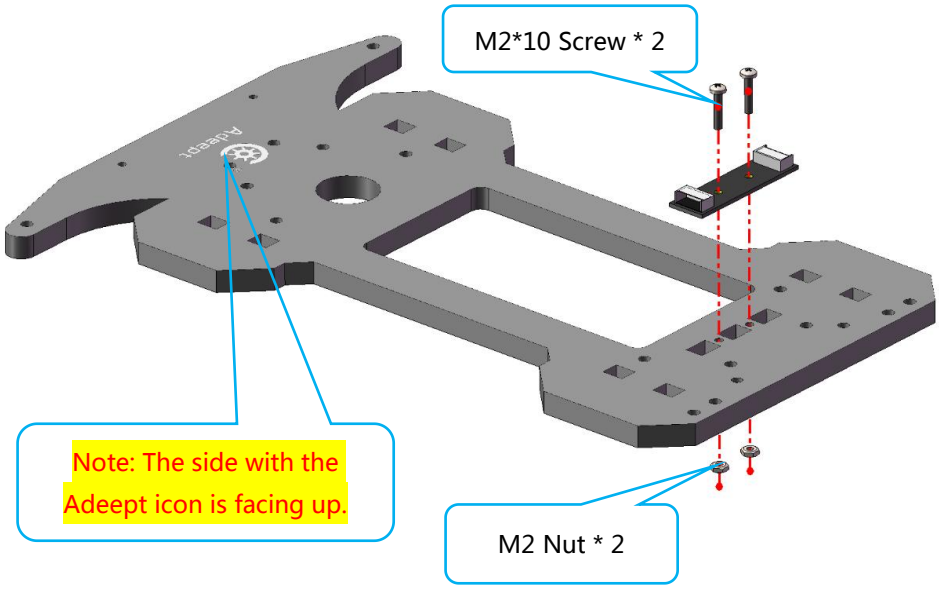
After Assembly:



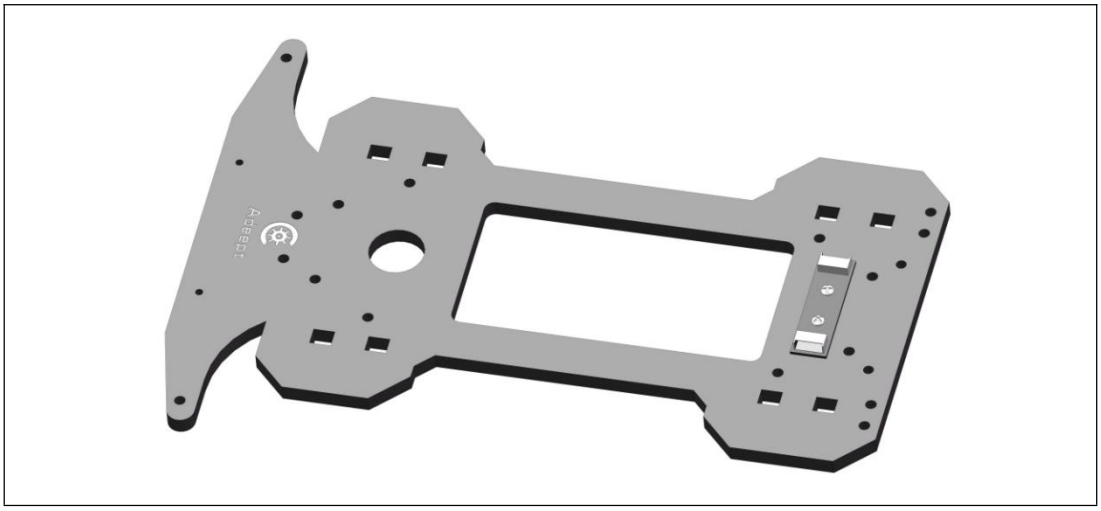
4.Fix the **WS2812 RGB LED** to part **A02** with two **M2*10 Screws** and two **M2 Nuts**.

A02	
WS2812 RGB LED	

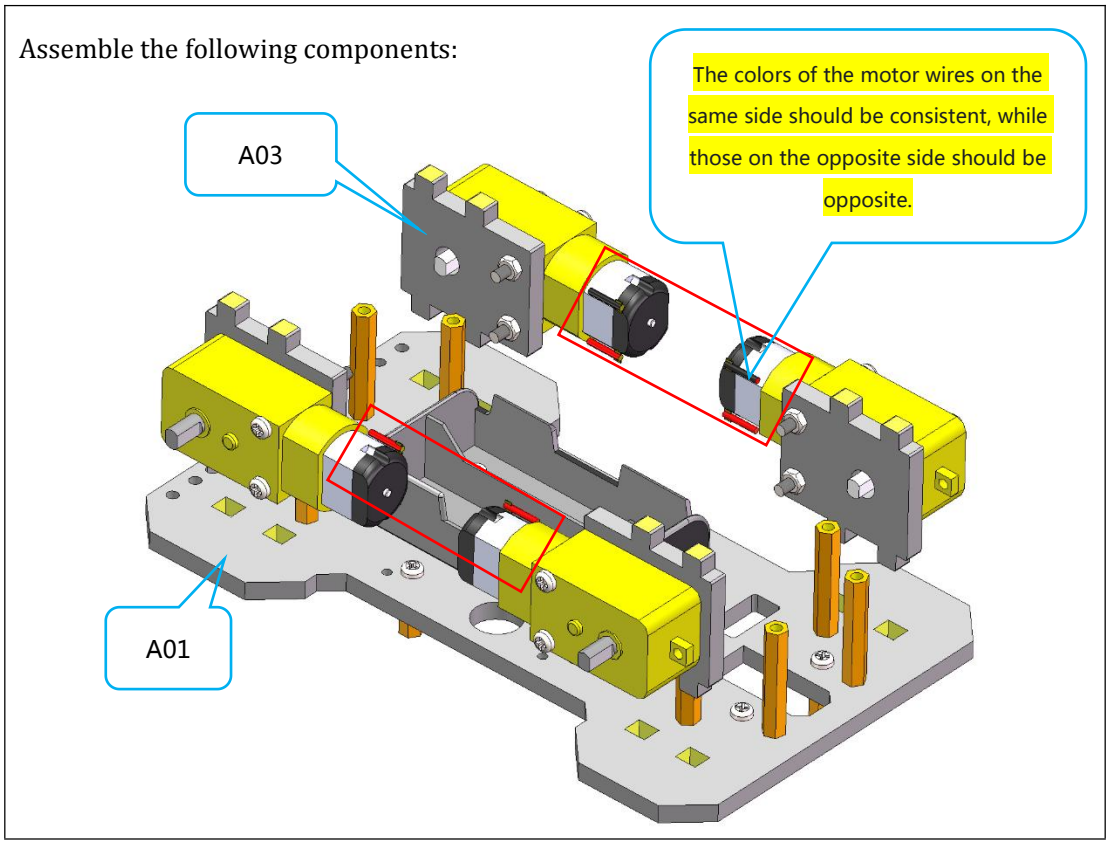
Assemble the following components:



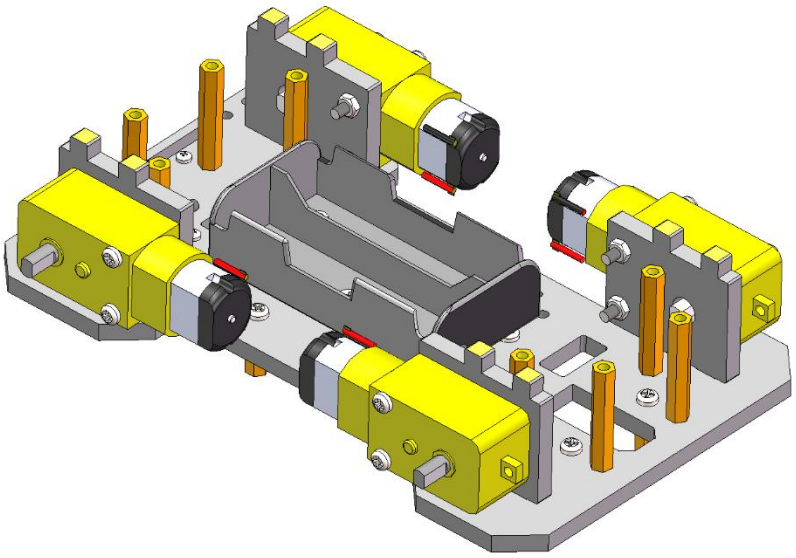
After Assembly:

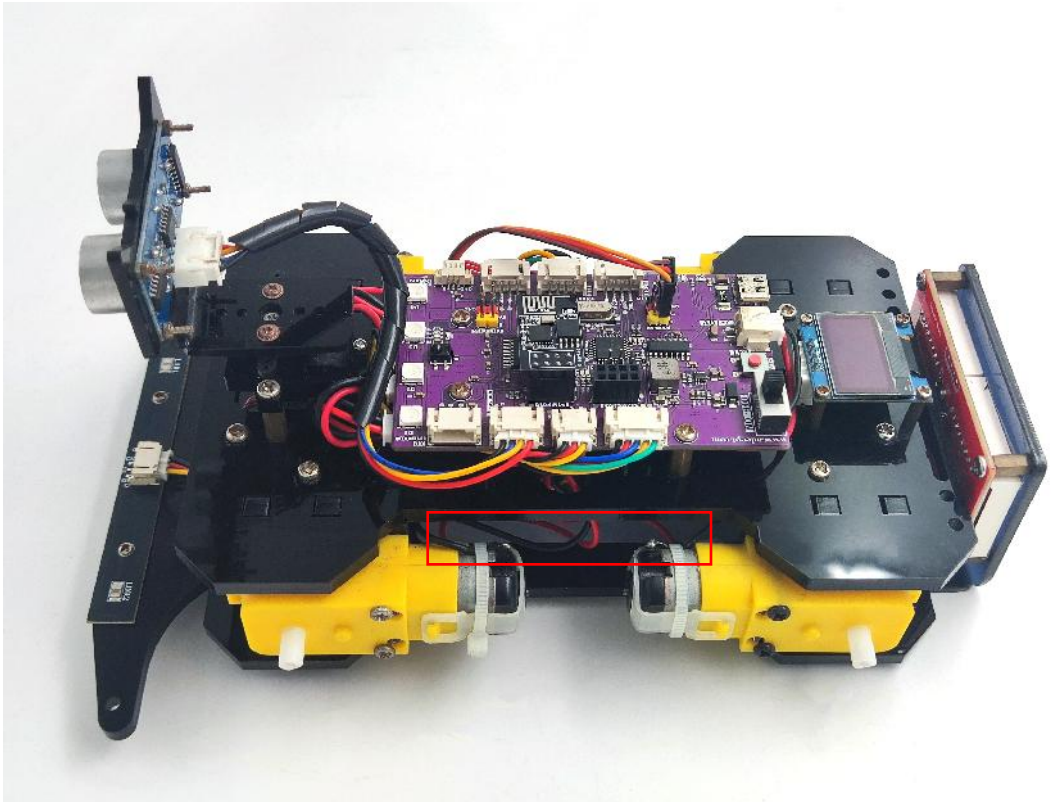


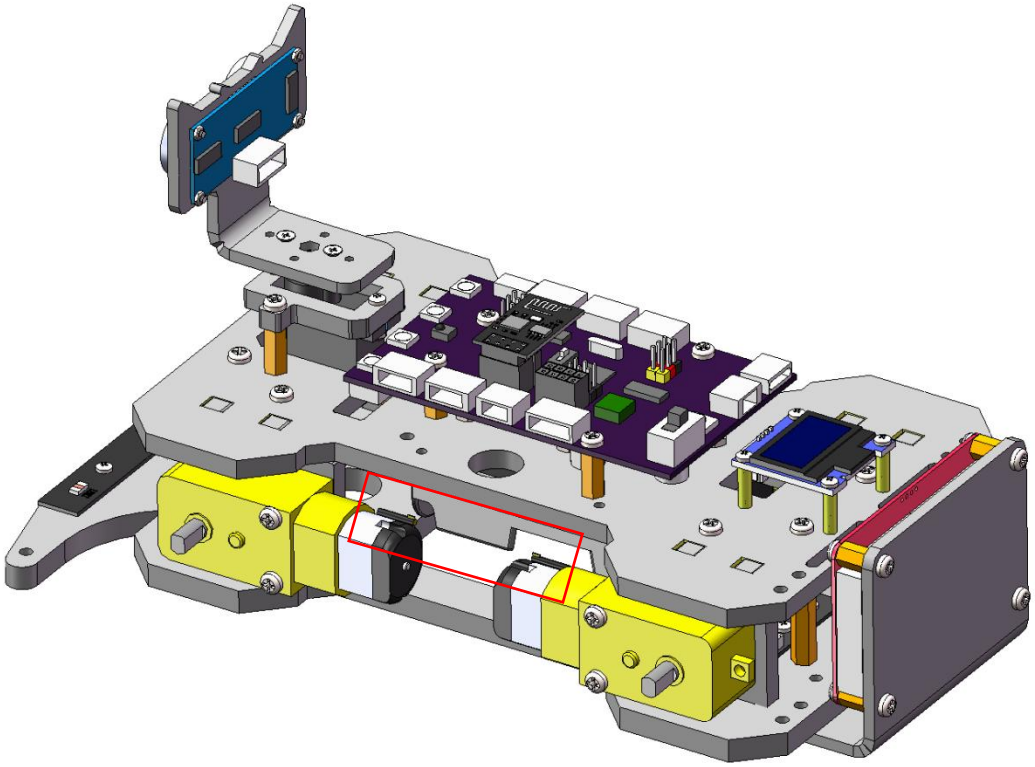
5. Fix the assembled part **A03** onto part **A01**, ensuring that the slots of all components are correctly aligned.(Due to the opposite polarity of the left and right motors, during installation, it is necessary to ensure that the colors of the motor wires on the same side are consistent, while those on the opposite side are opposite.)

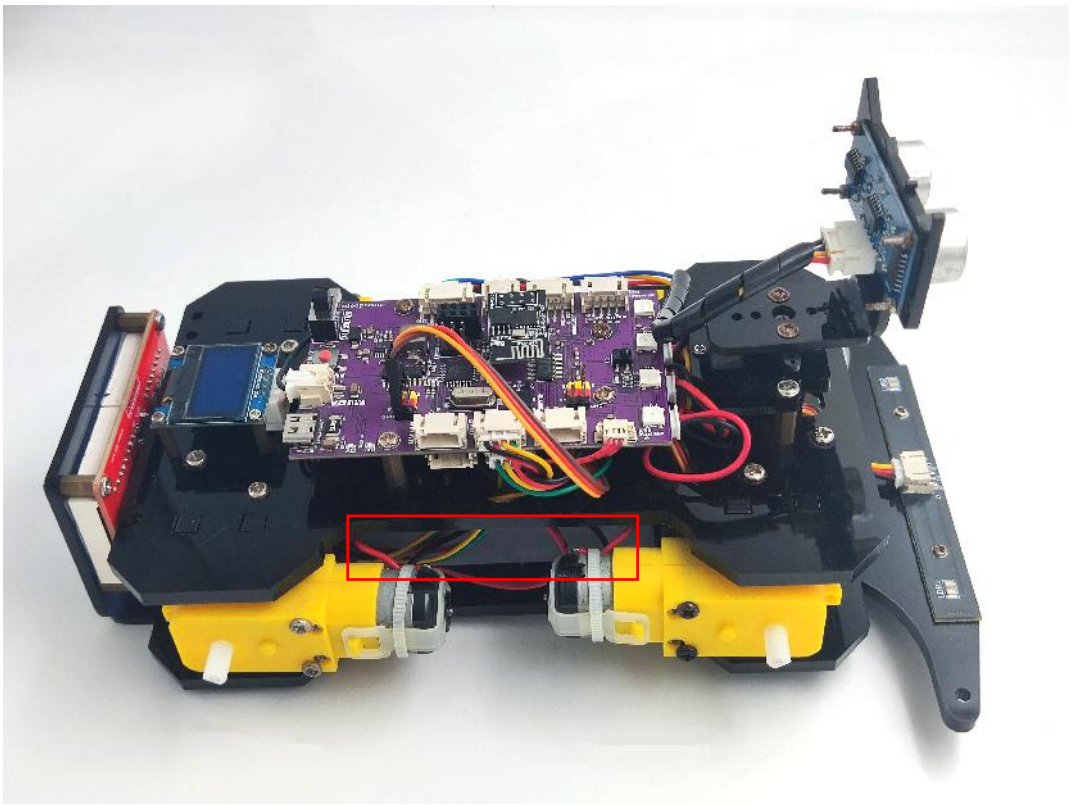


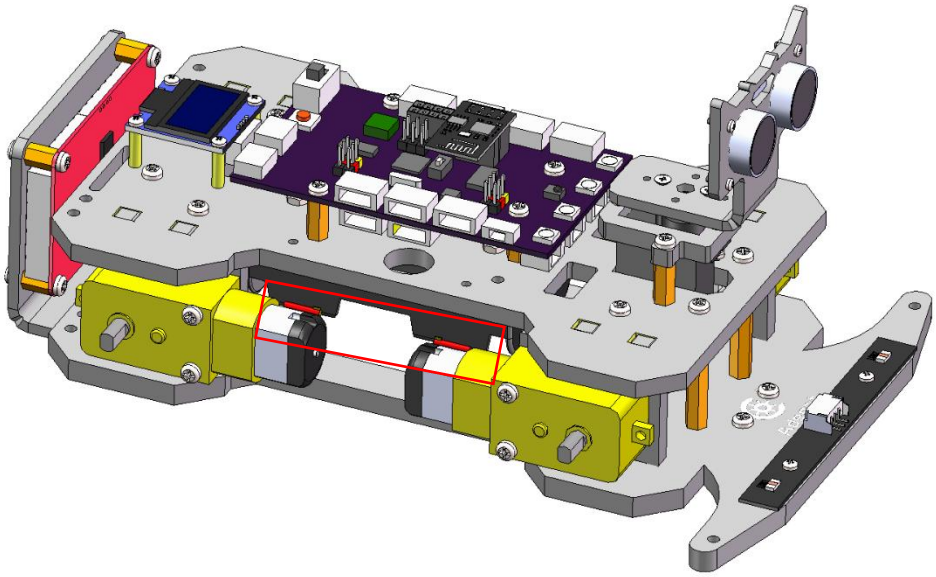
After Assembly:





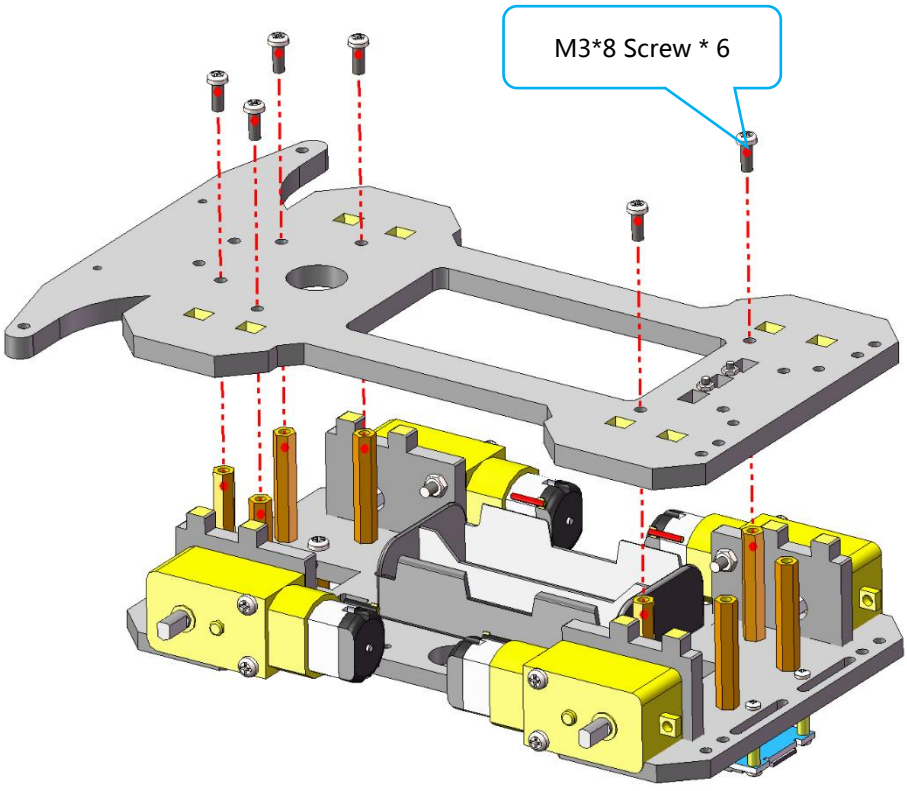




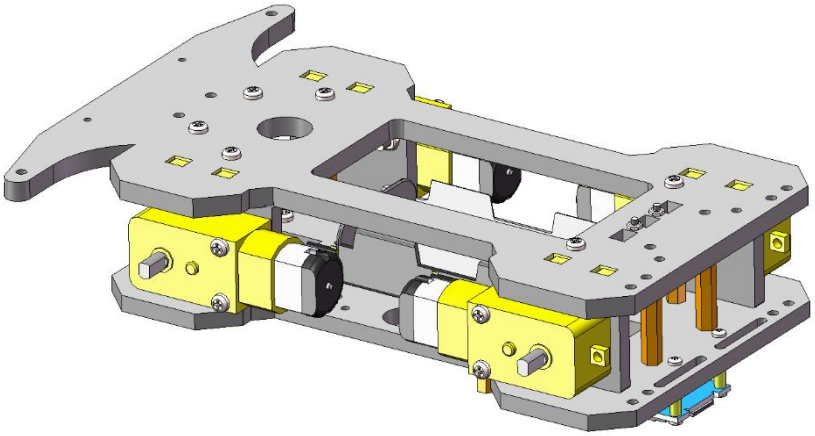


6. Use six **M3*8 Screws** to fix part **A02** to part **A01**.

Assemble the following components:



After Assembly:

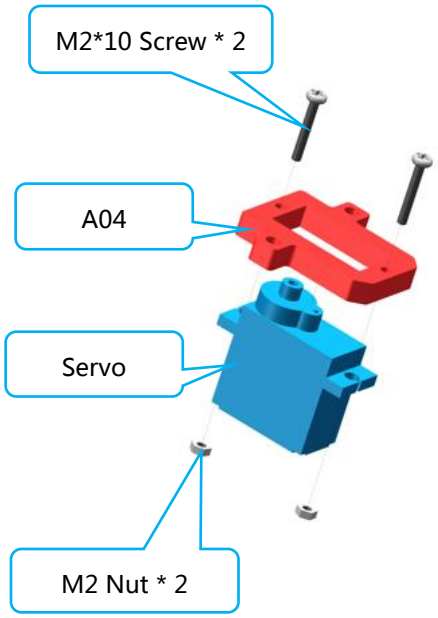


6.3 Assemble the Robot's Head

1. Use two **M2*10 Screws** and two **M2 Nuts** to assemble the **Servo** to part **A04**.

A04	
Servo	

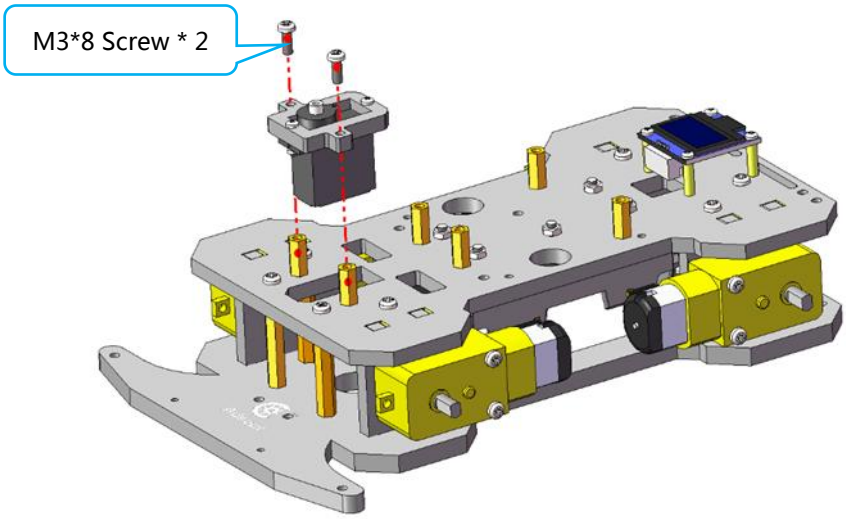
Assemble the following components:



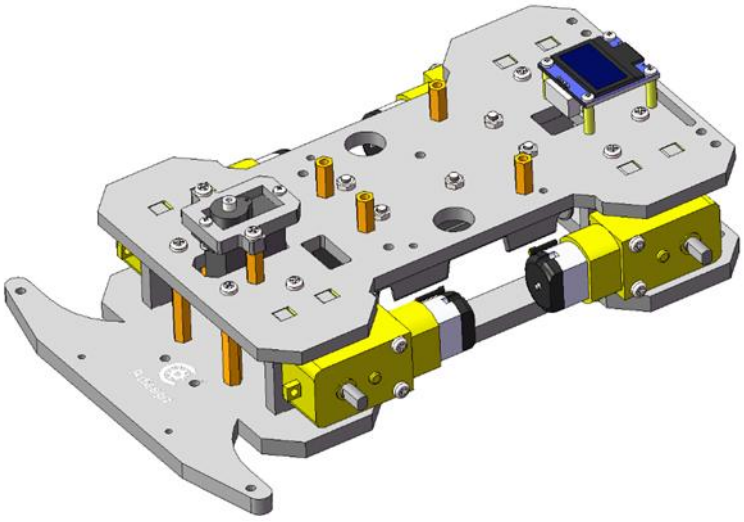
After Assembly:

2. Use two **M3*8 Screws** to fix the **Servo**.

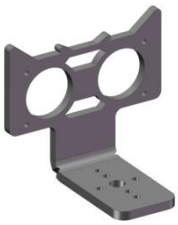
Assemble the following components:



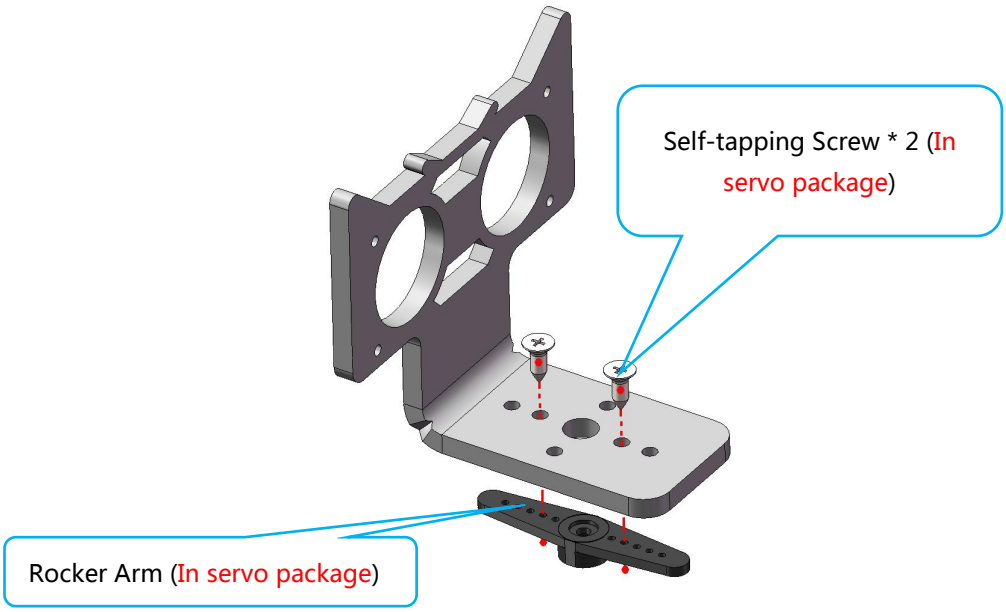
After Assembly:



3. Fix the **Rocker Arm** to part **A06.**

A06	

Assemble the following components:

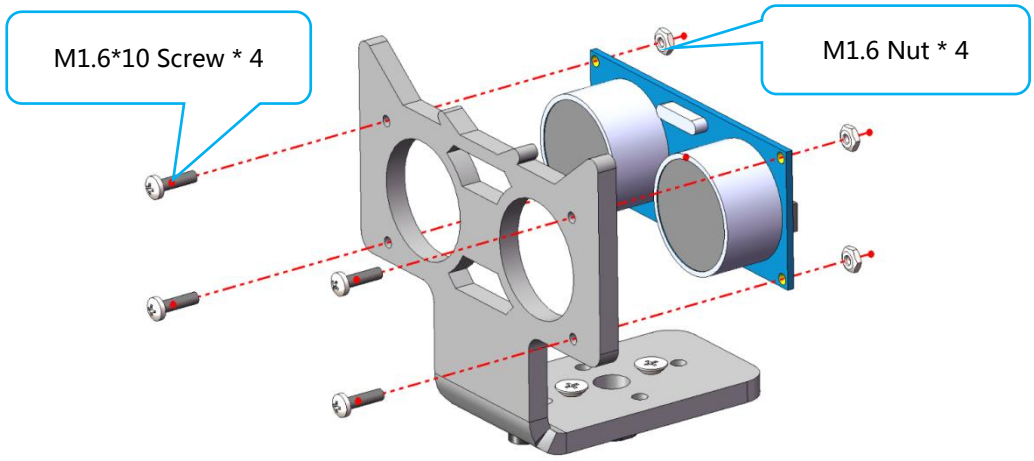


After Assembly:

4. Use four **M1.6*10 Screws** and four **M1.6 Nuts** to fix the **Ultrasonic Module** to part **A06.**

Ultrasonic Module	

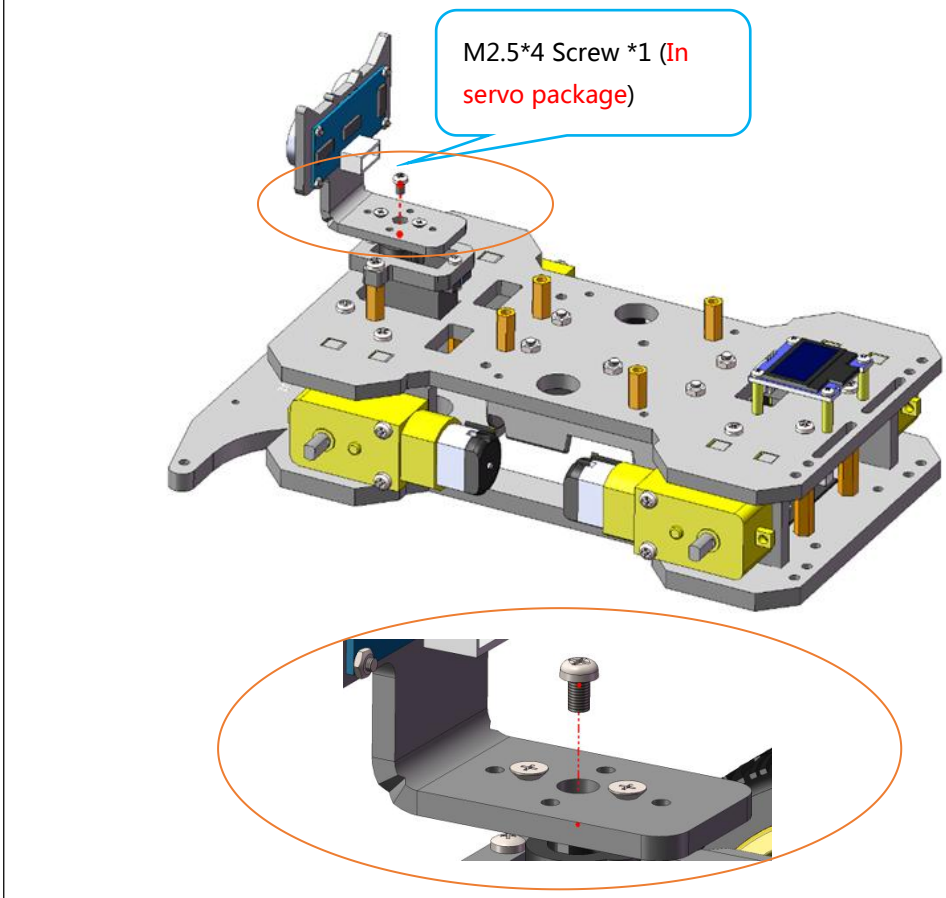
Assemble the following components:



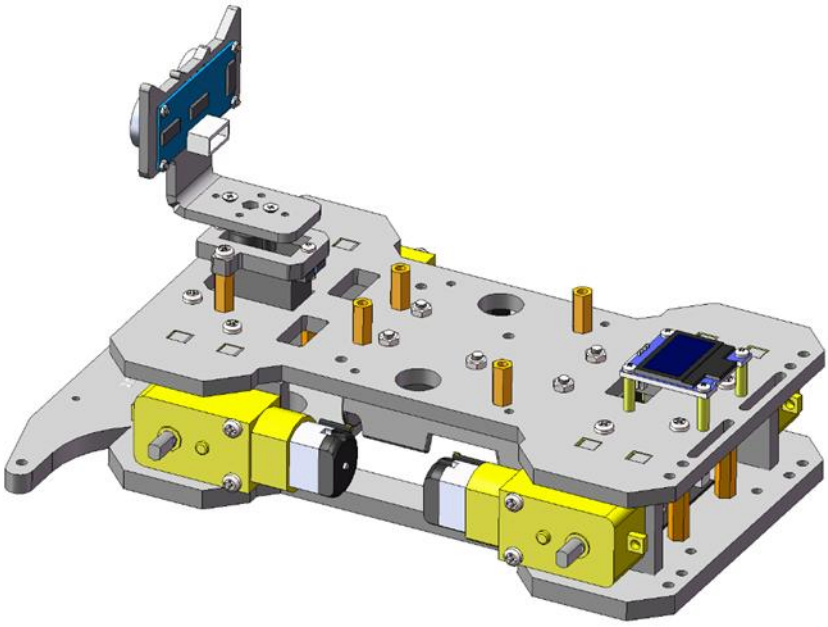
After Assembly:

5. Fix part **A06** to the **Servo.**

Assemble the following components:

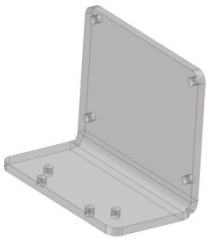


After Assembly:

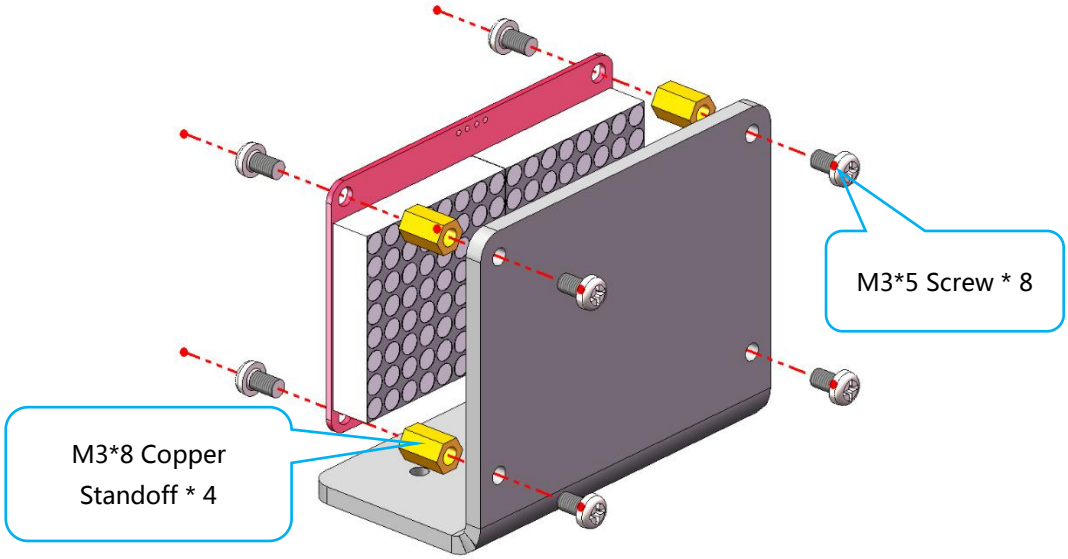


6.4 Assemble the Robot's Modules

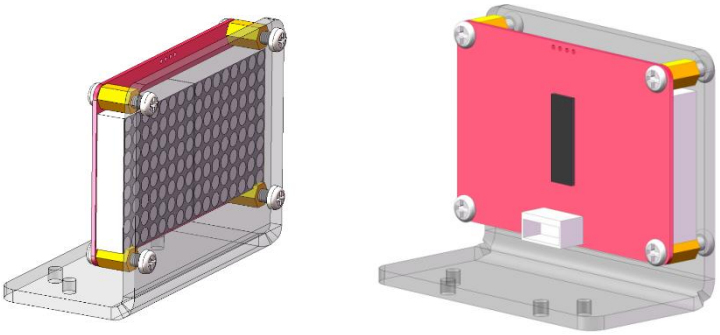
1. Use eight **M3*5 Screws** and four **M3*8 Copper Standoffs** to fix the **I2C Matrix Display Module** to part **A05**.

A05	
I2C Matrix Display Module	

Assemble the following components:

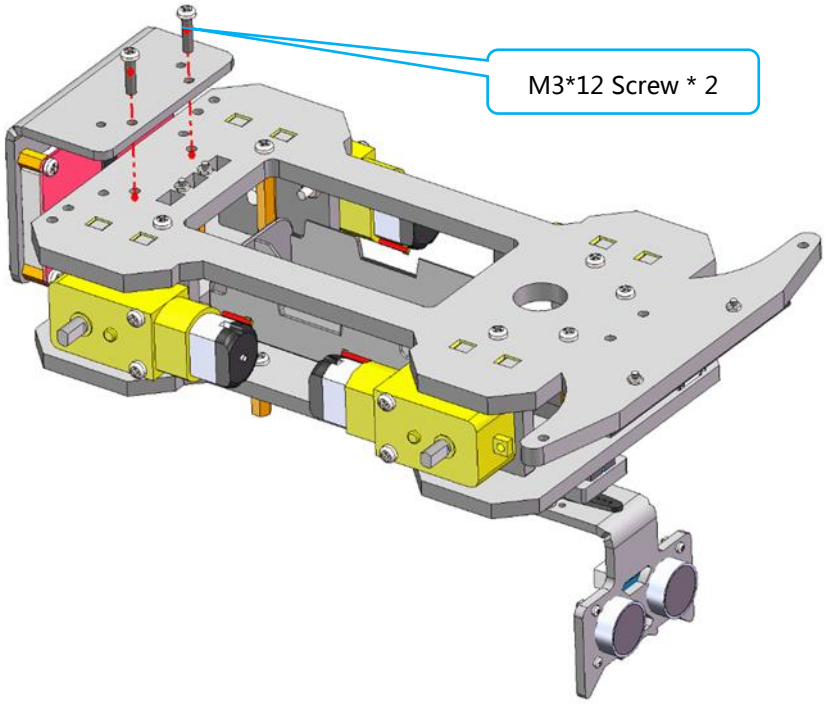


After Assembly:

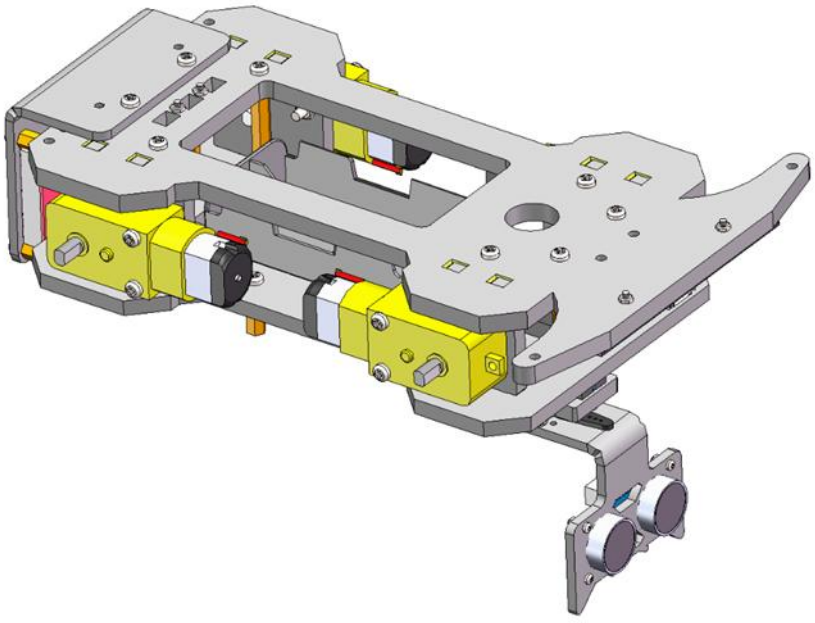


2. Use two **M3*12 Screws** to fix part **A05** to part **A02**.

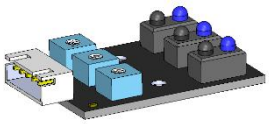
Assemble the following components:



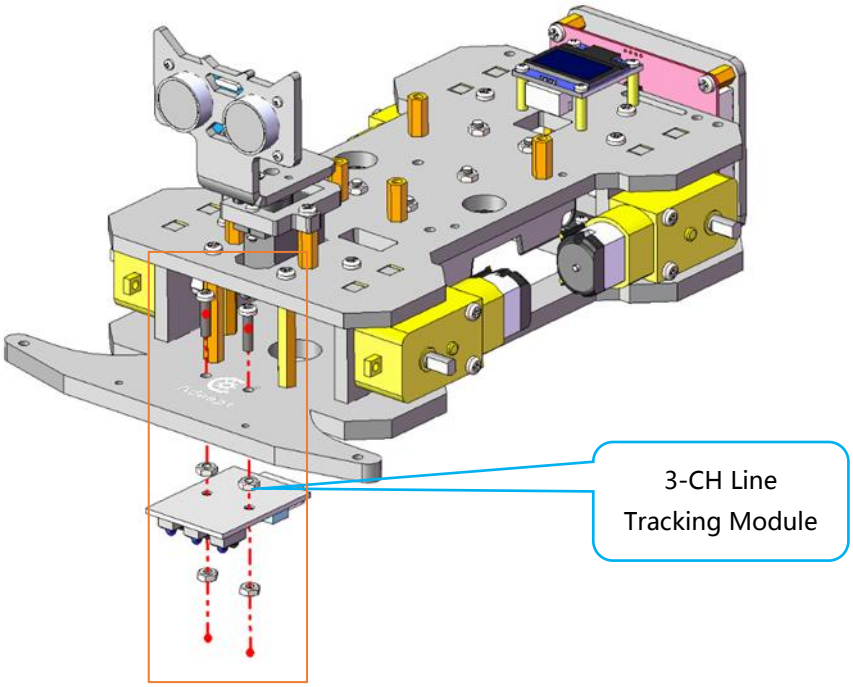
After Assembly:

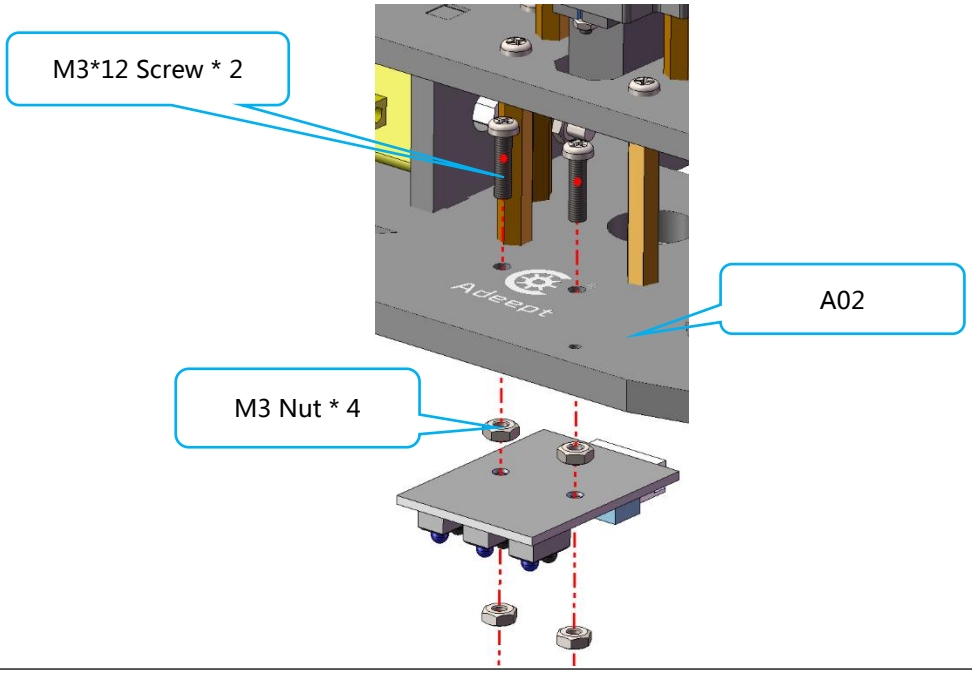


3. Use two **M3*12 Screws** and four **M3 Nuts** to fix the **3-CH Line Tracking Module** to part **A02**.

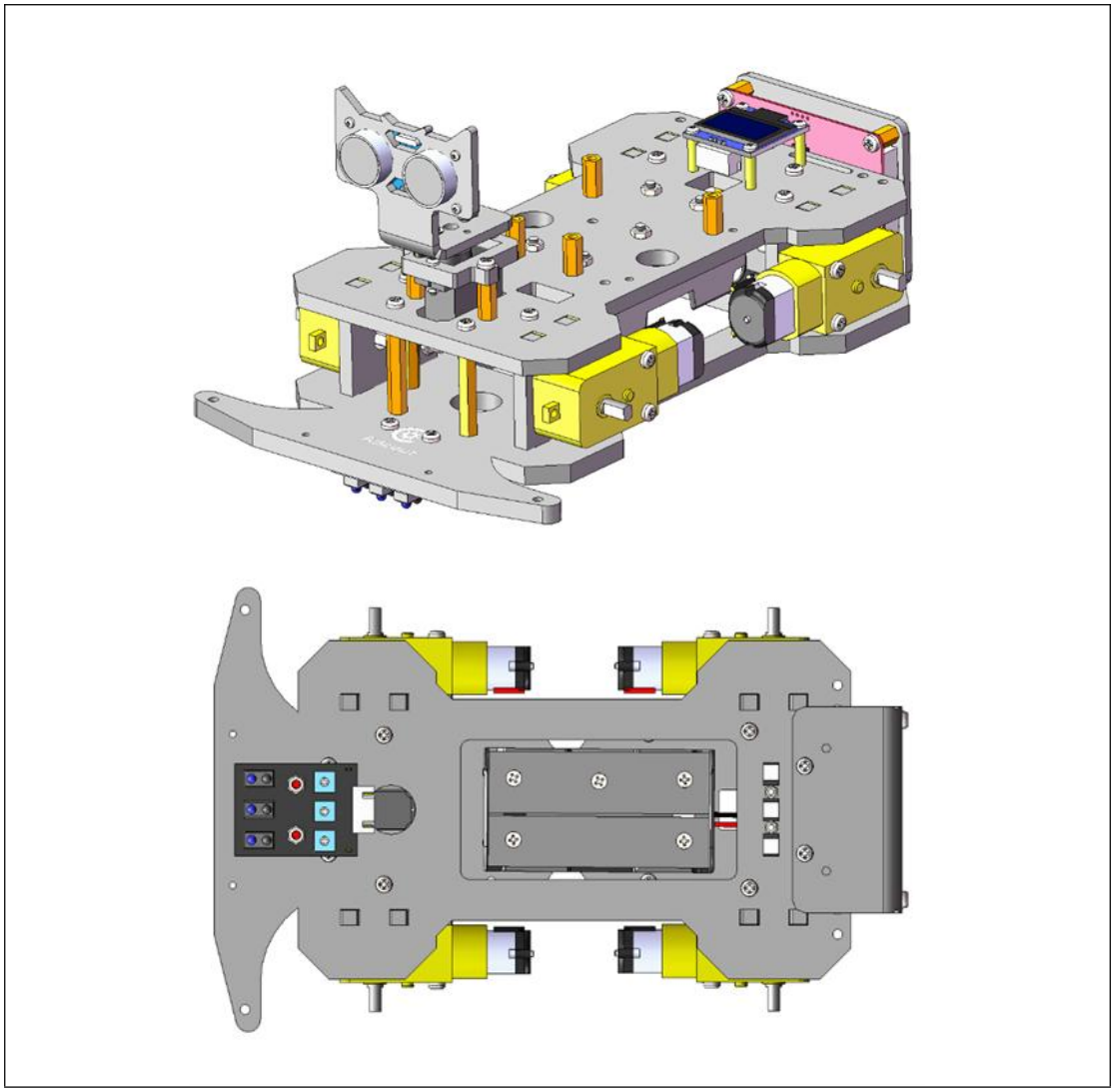
3-CH Line Tracking Module	

Assemble the following components:

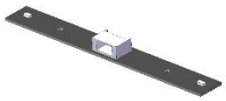




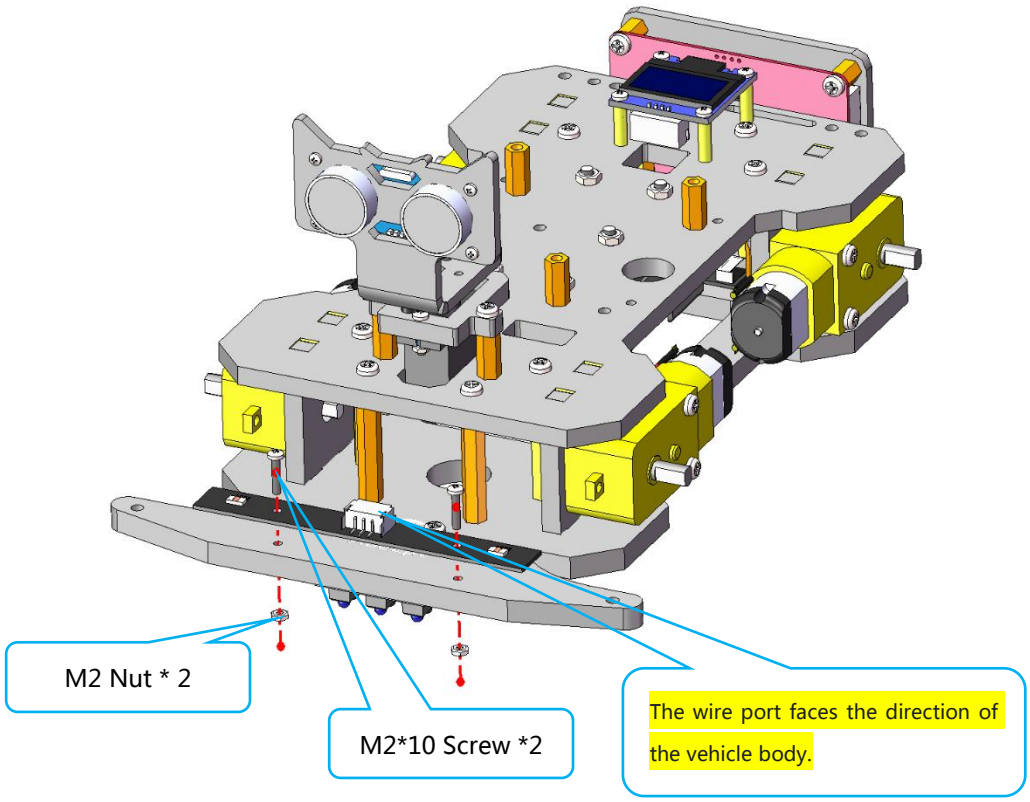
After Assembly:



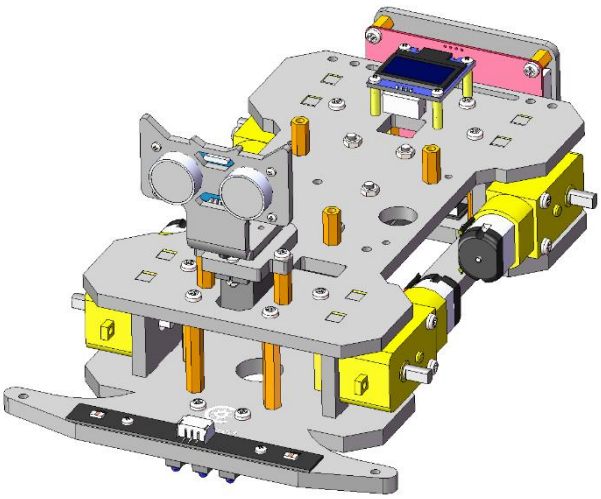
4. Use two **M2*10 Screws** and **two M2 Nuts** to fix the **Light Tracking Module** to part **A02**.

Light Tracking Module	

Assemble the following components:

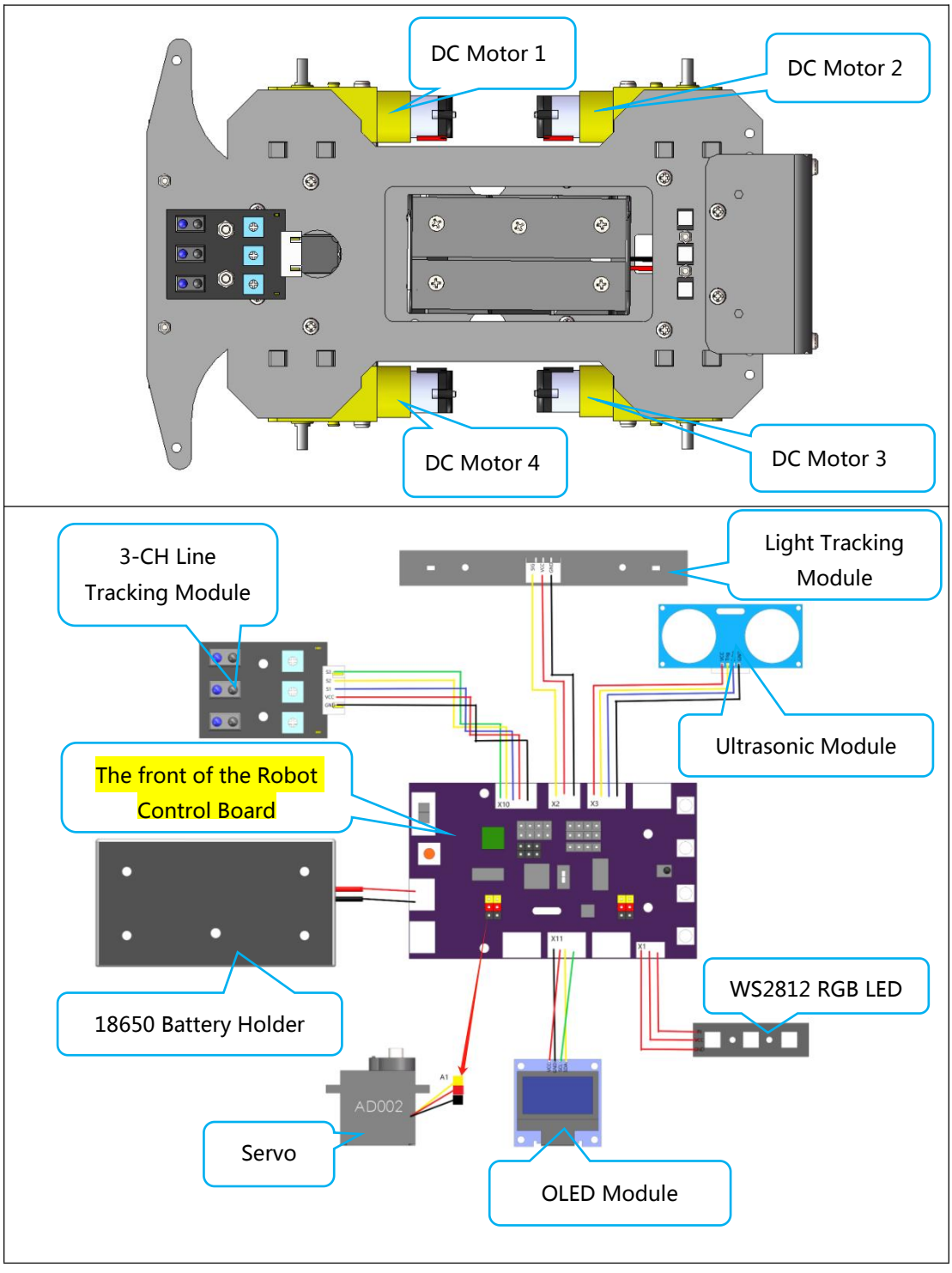


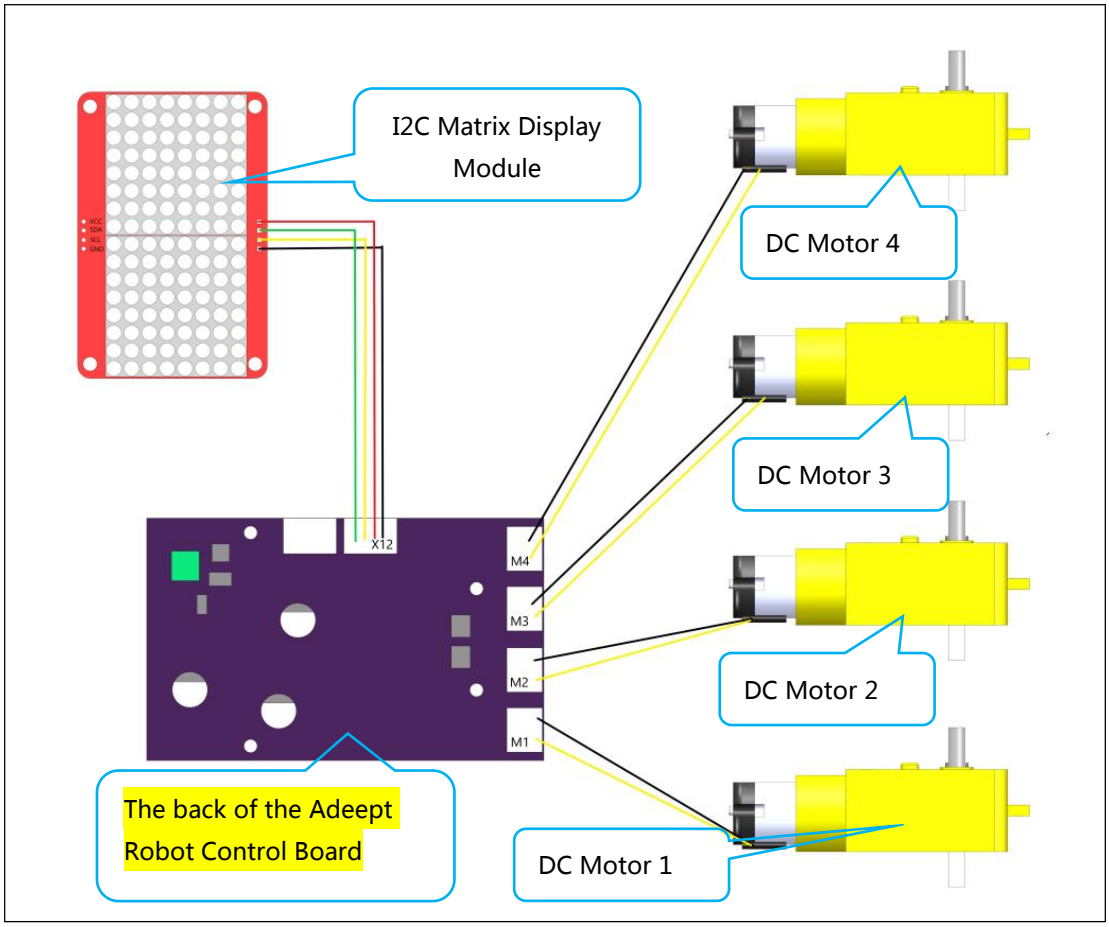
After Assembly:



6.5 Assembly the Adeept Robot Control Board

1. Please connect the circuit correctly before installation. As is shown in the following picture.

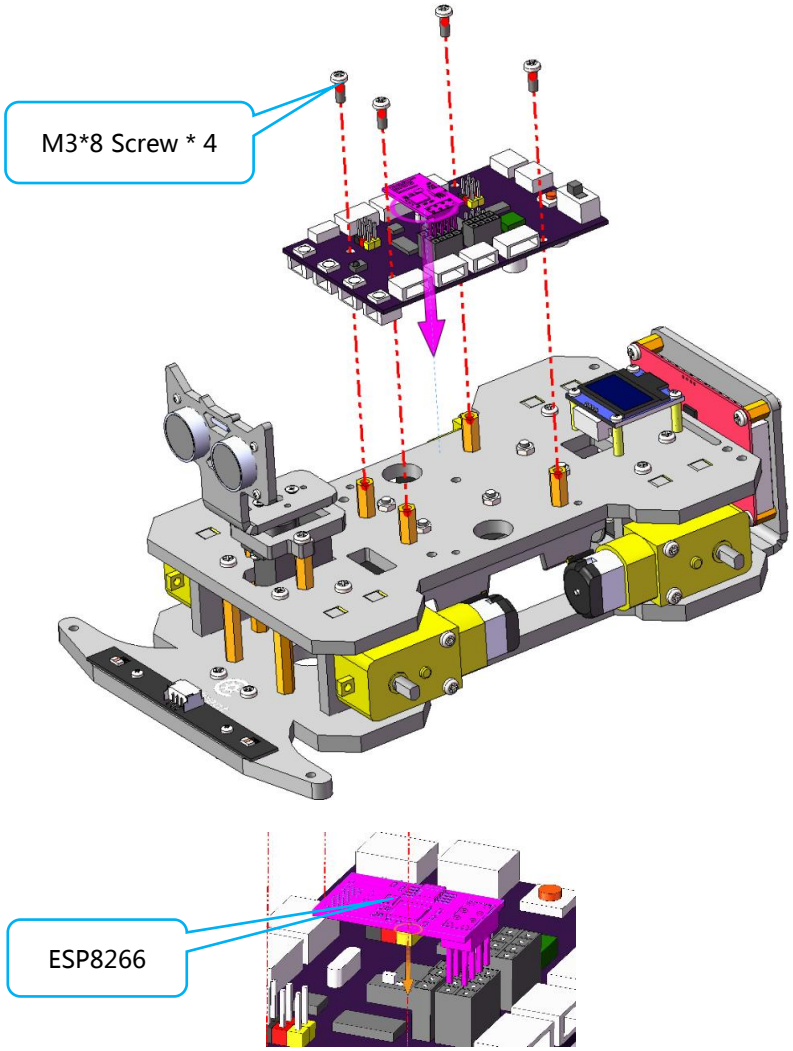




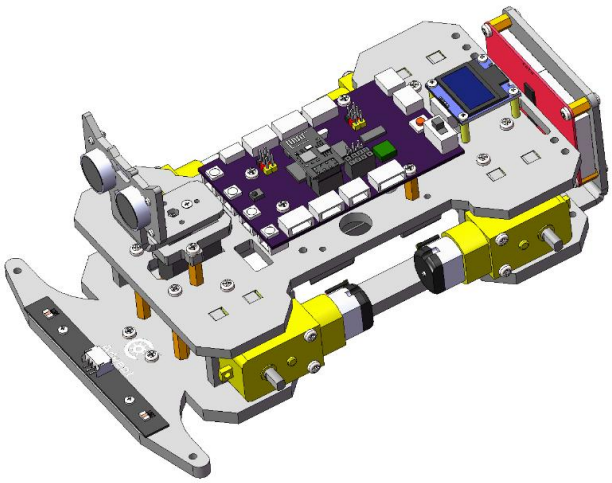
2. Fix the **Adeept Robot Control Board** and **ESP8266** to part **A01** with four **M3*8 Screws**.

Adeept Robot Control Board	
ESP8266	

Assemble the following components:



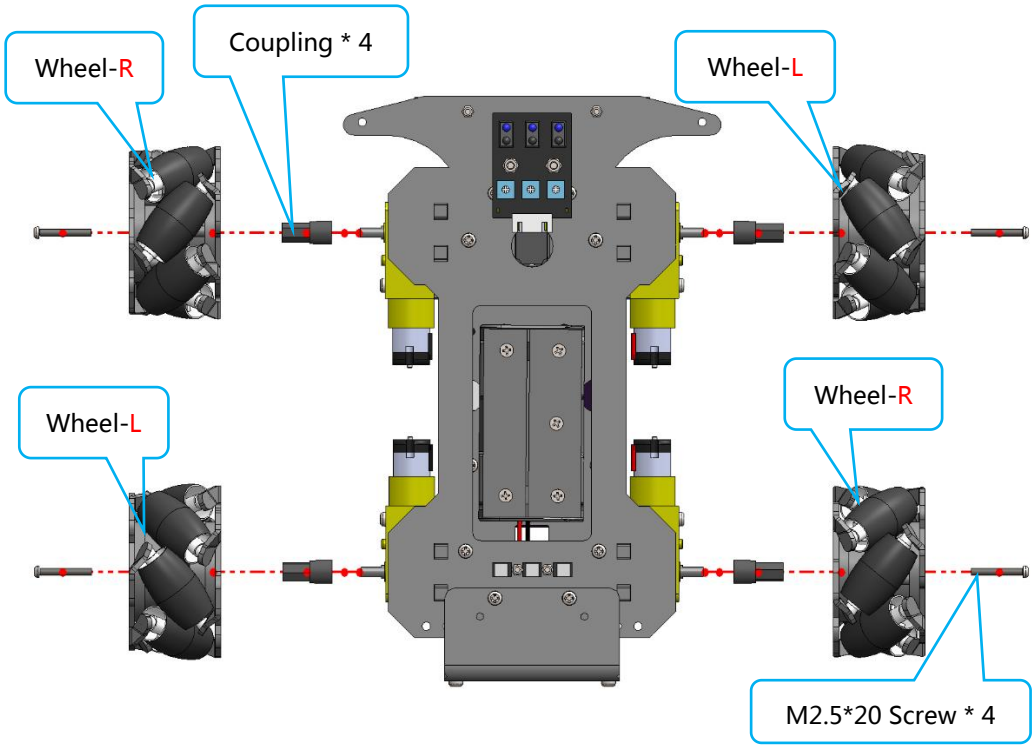
After Assembly:

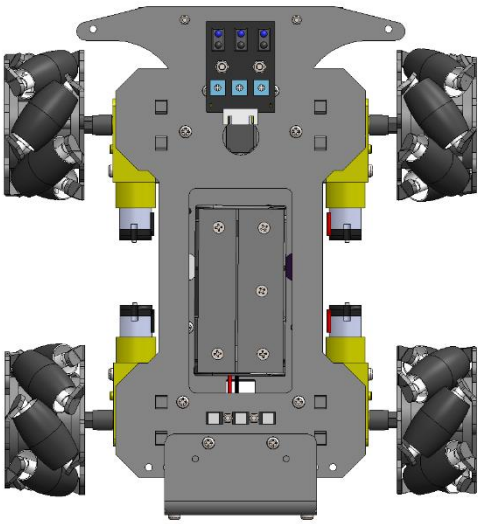


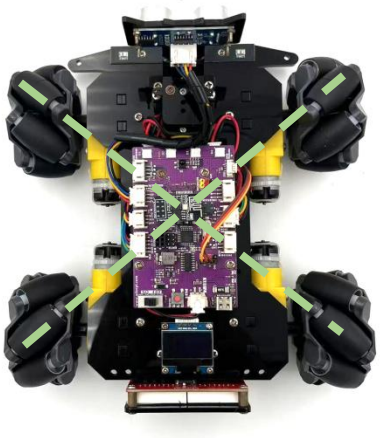
3. Install four **Mecanum Wheels** onto the motor shaft with four **Coupling** and four **M2.5*20 Screws.**

Mecanum Wheel-L	
Mecanum Wheel-R	
Coupling	

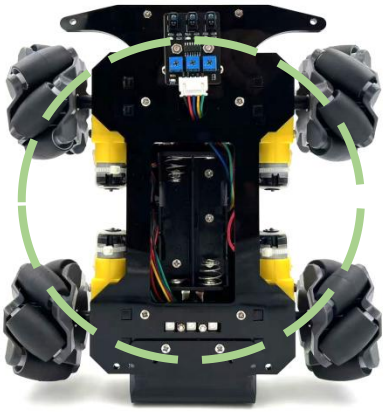
Assemble the following components:







X



O

Note: The Mecanum wheel car adopts the O-rectangle assembly method. The actual wheel is "X" when viewed from above, and is "O" when it is actually in contact with the ground. (looking up from below the Mecanum wheel car)

After Assembly: