

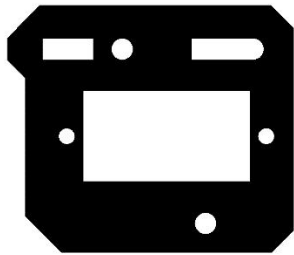
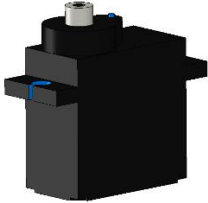
Lesson 6 RaspClaws Assembly

Before starting assembly, be sure to adjust all servos to 90° according to the instructions in [Lesson 5 Preparations before Assembly](#).

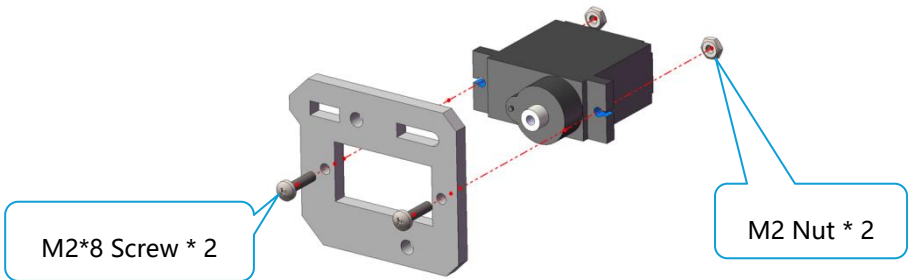
There is a protective film on the surface of the acrylic. Please tear it off.

6.1 Assemble the Robot's Left Legs (Assemble 3 sets)

1. Use two **M2*8 Screws** and two **M2 Nuts** to fix **Servo** to part **A01**.

A01	
Servo	

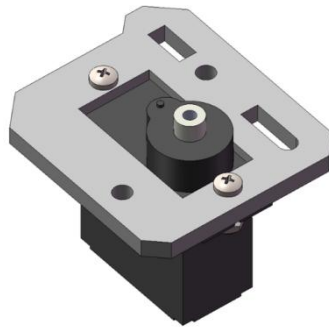
Assemble the following components:



M2*8 Screw * 2

M2 Nut * 2

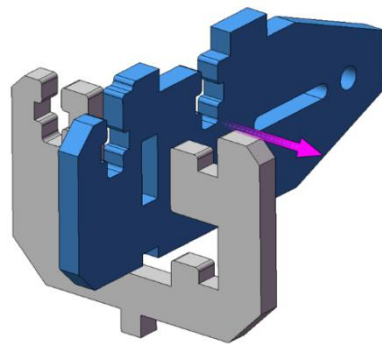
After Assembly:



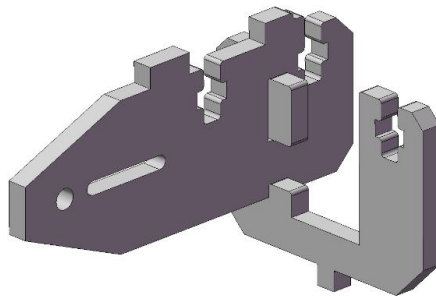
2. First, snap part **A03** into the corresponding slot of part **A02**, then snap the assembled part **A02** into the corresponding slot of part **A01**, and finally fix them with three **M3*10 Screws** and three **M3 Nuts**.

A02	A black 2D silhouette of a mechanical part. It has a long, narrow body with a pointed left end. There is a small circular hole near the left end and a larger rectangular slot in the middle. The right end is wider and has several notches and protrusions.
A03	A black 2D silhouette of a mechanical part. It has a U-shaped profile with a central vertical slot. The top and bottom edges have several notches and protrusions, suggesting it is designed to fit into a specific slot or housing.

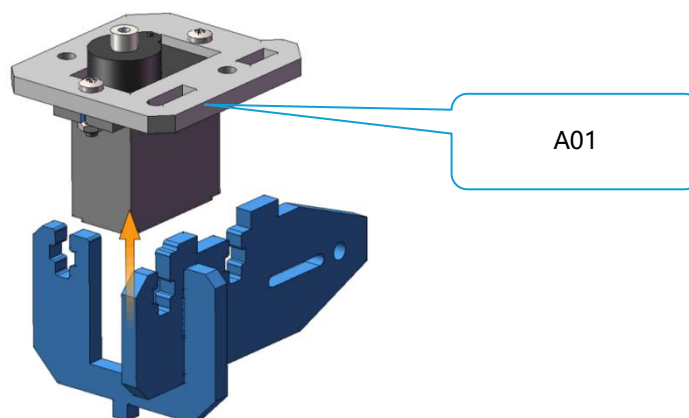
Assemble the following components:



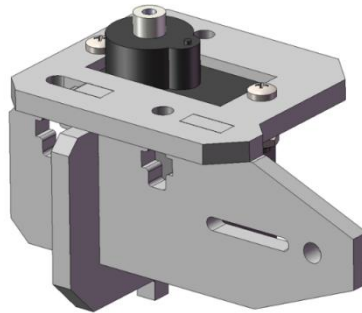
After Assembly:



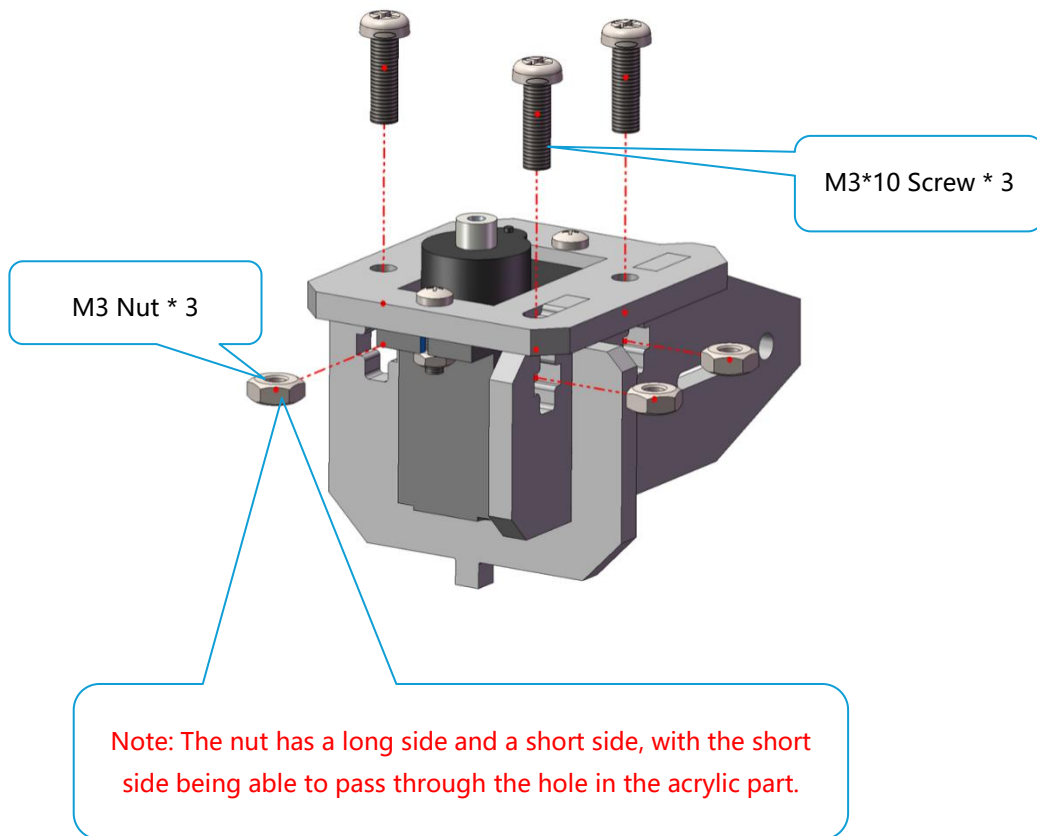
Assemble the following components:



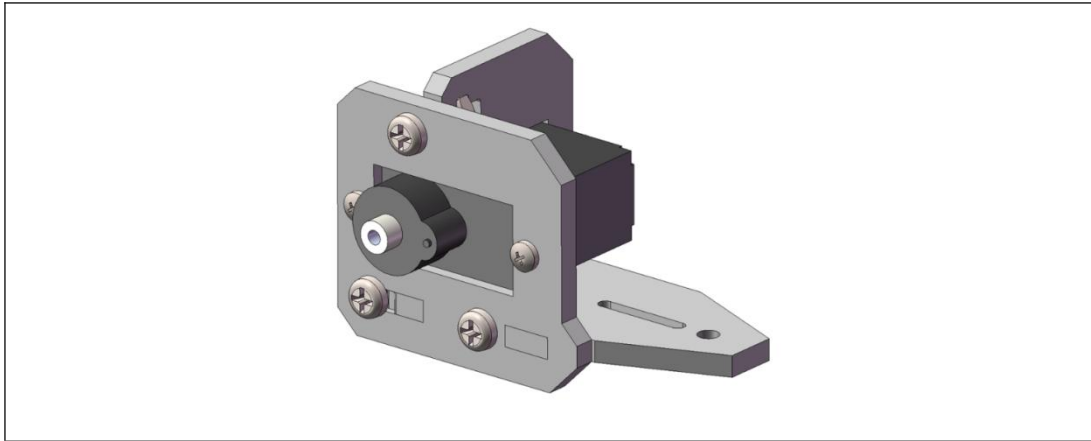
After Assembly:



Assemble the following components:



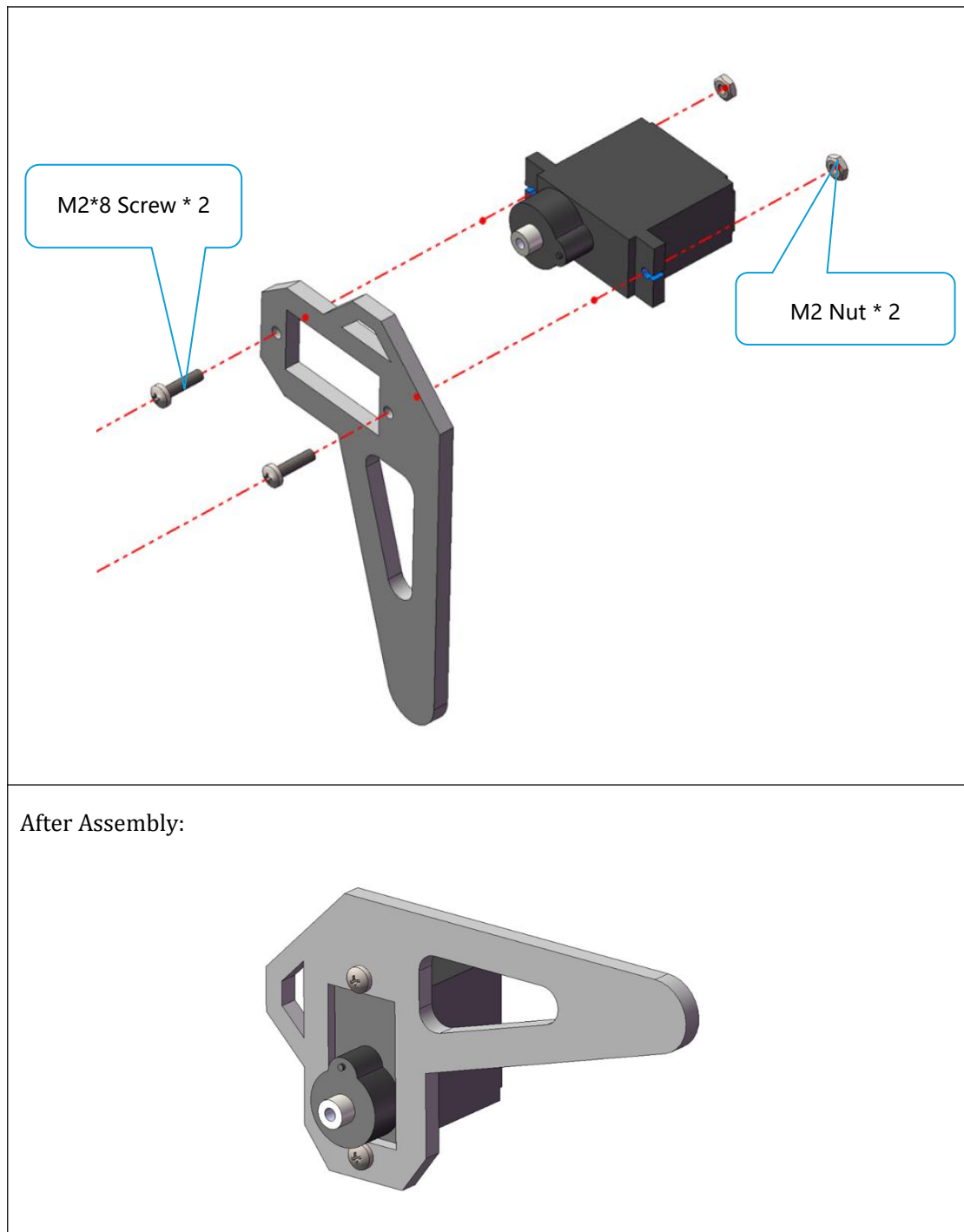
After Assembly:



3. Use two **M2*8 Screws** and two **M2 Nuts** to fix **Servo** to part **A04**.

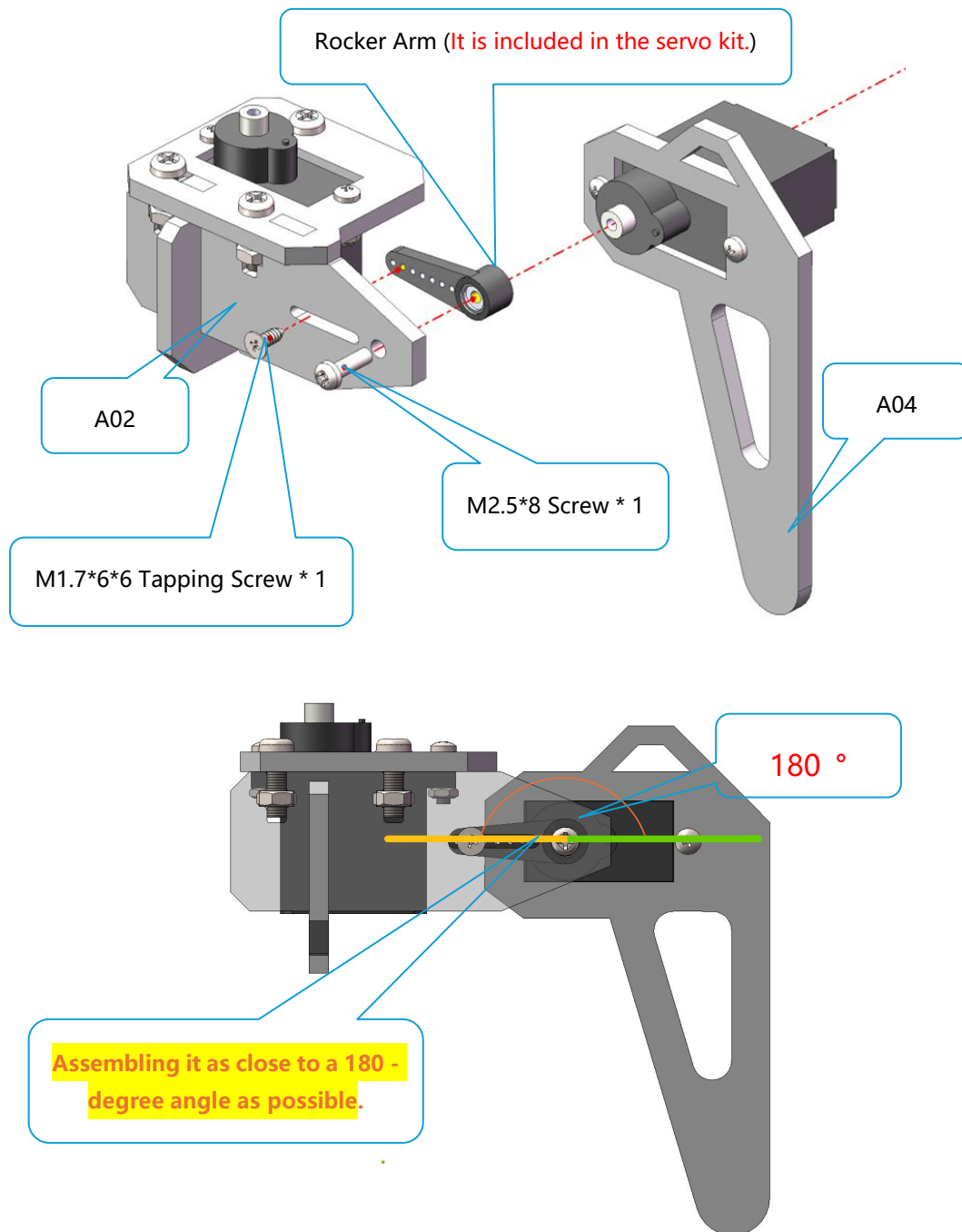
A04	A 3D CAD model of part A04, which is a black L-shaped bracket. It has a long horizontal arm and a shorter vertical arm. There are two small circular holes on the vertical arm, one near the top and one near the bottom. The horizontal arm has a larger rectangular cutout in the center.
Servo	A 3D CAD model of a servo motor. It is black with a silver-colored output shaft at the top. There are blue and red markings on the side of the servo, likely indicating the direction of rotation or a specific model.

Assemble the following components:

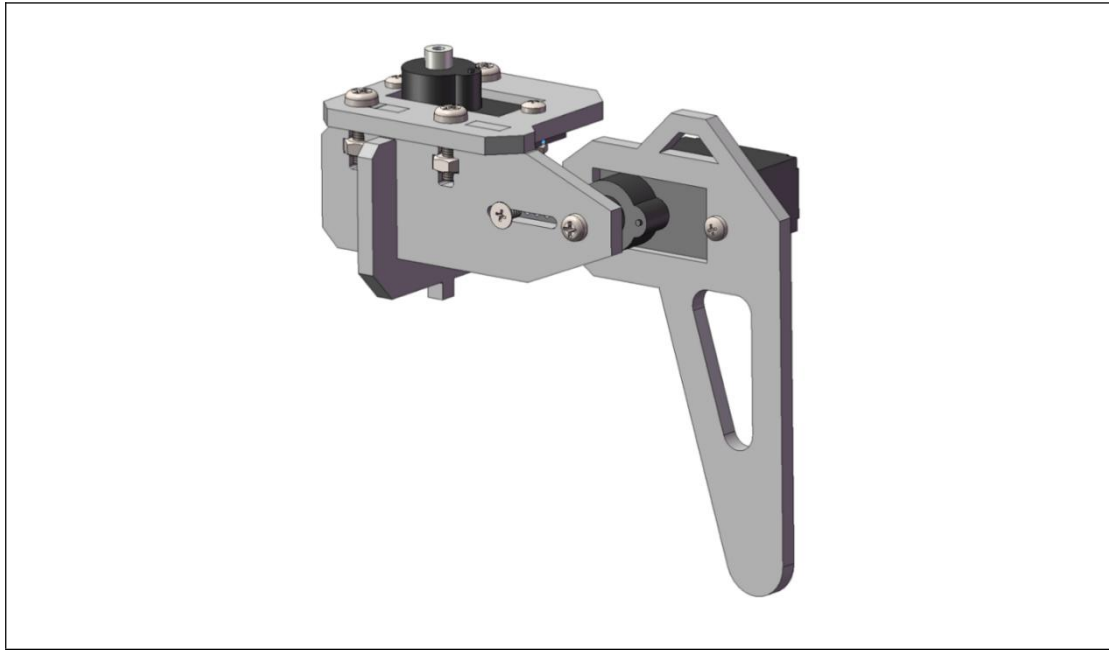


4. Connect assembled part **A02** and assembled part **A04** together using an **M1.7*6**
***6 Tapping Screw**, a **Rocker Arm**, and an **M2.5*8 Screw**. (Note: Fix the rocker arm
at the angle depicted in the picture.)

Assemble the following components:

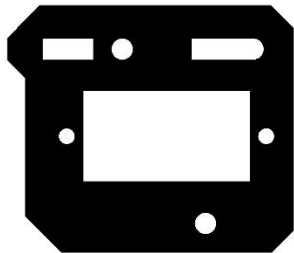
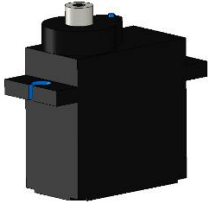


After Assembly:

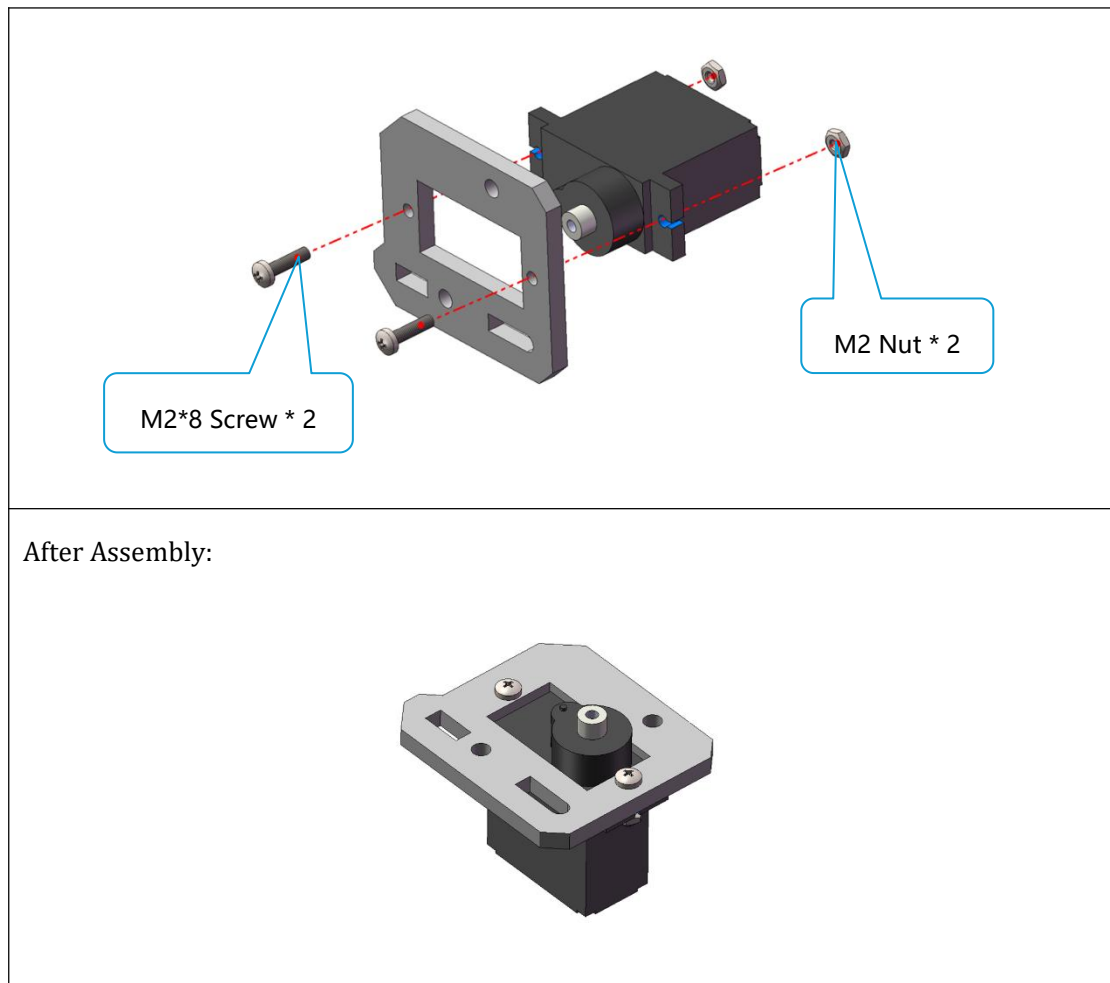


6.2 Assemble the Robot's Right Legs (Assemble 3 sets)

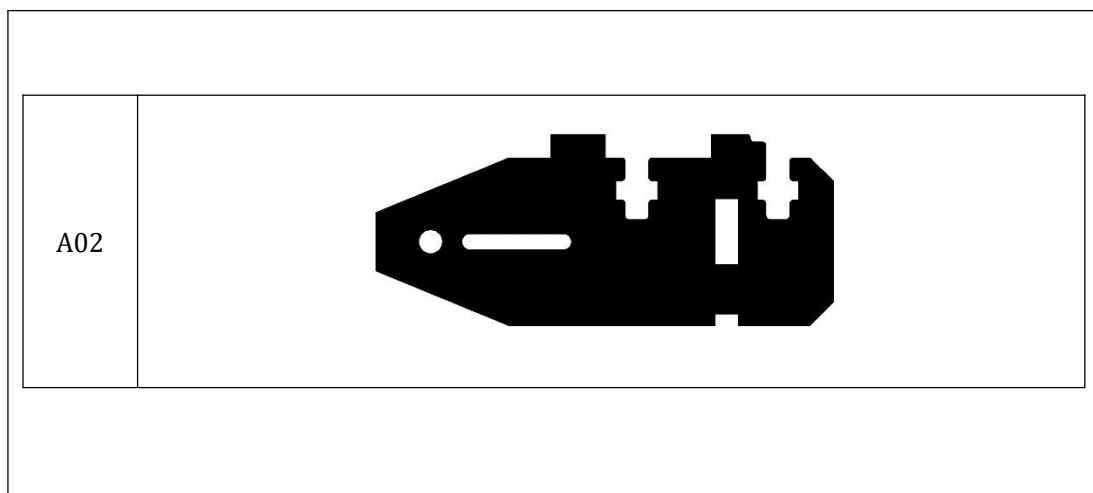
1. Use two **M2*8 Screws** and two **M2 Nuts** to fix **Servo** to part **A01**.

A01	
Servo	

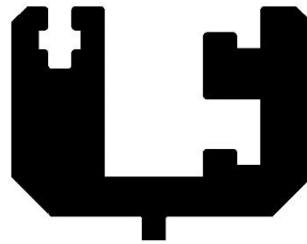
Assemble the following components:



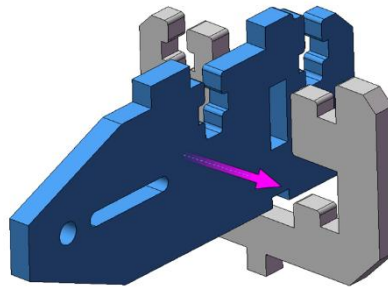
4. First, snap part **A03** into the corresponding slot of part **A02**, then snap the assembled part **A02** into the corresponding slot of part **A01**, and finally fix them with three **M3*10 Screws** and three **M3 Nuts**.



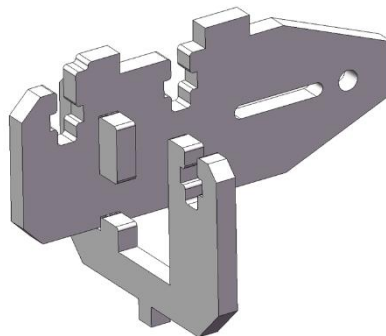
A03



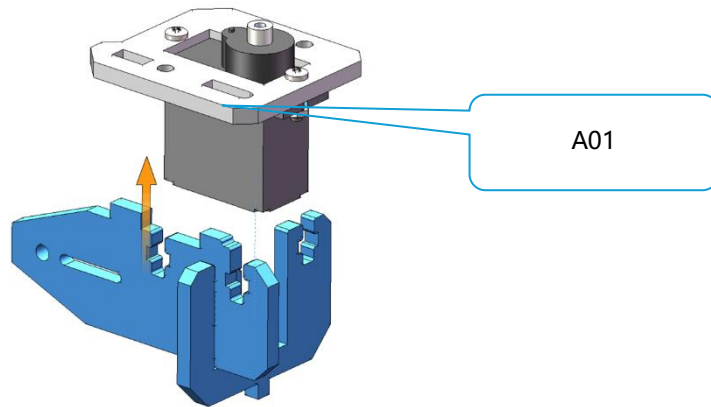
Assemble the following components:



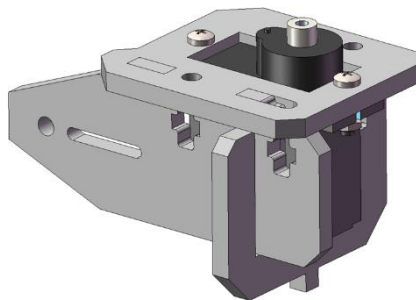
After Assembly:



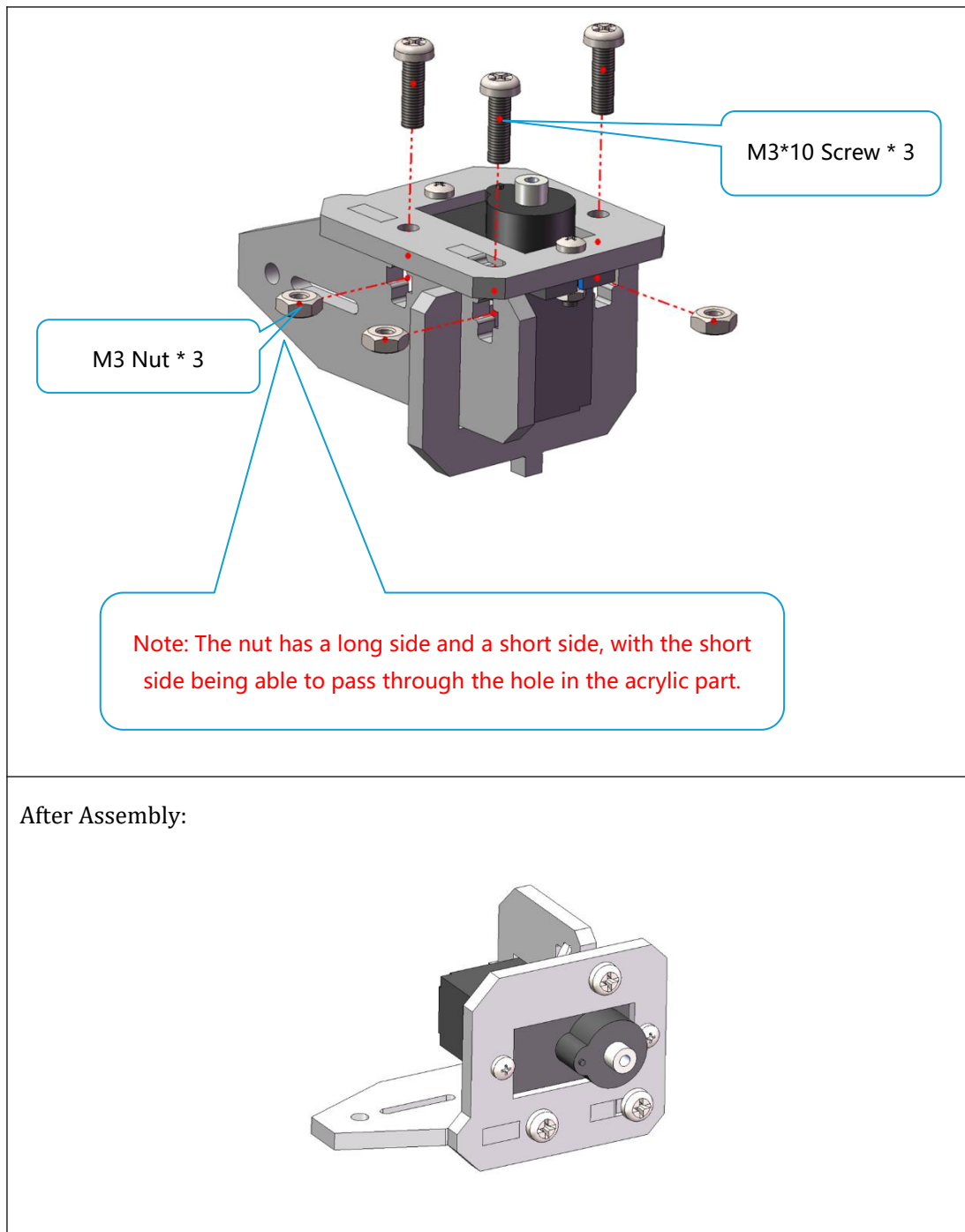
Assemble the following components:



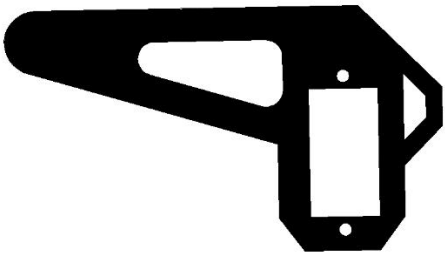

After Assembly:



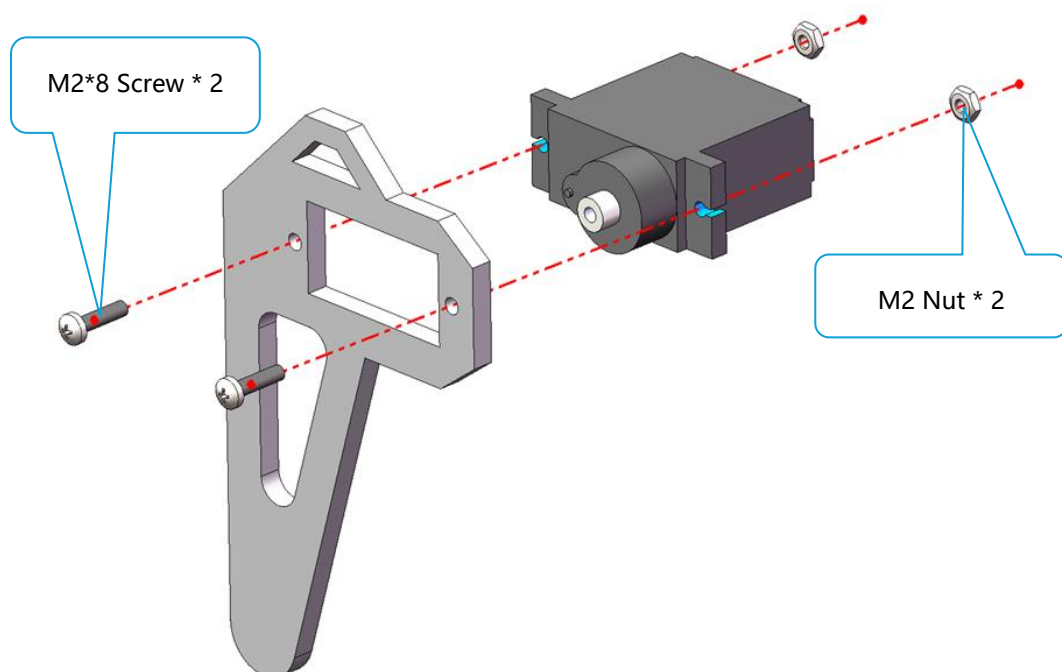
Assemble the following components:



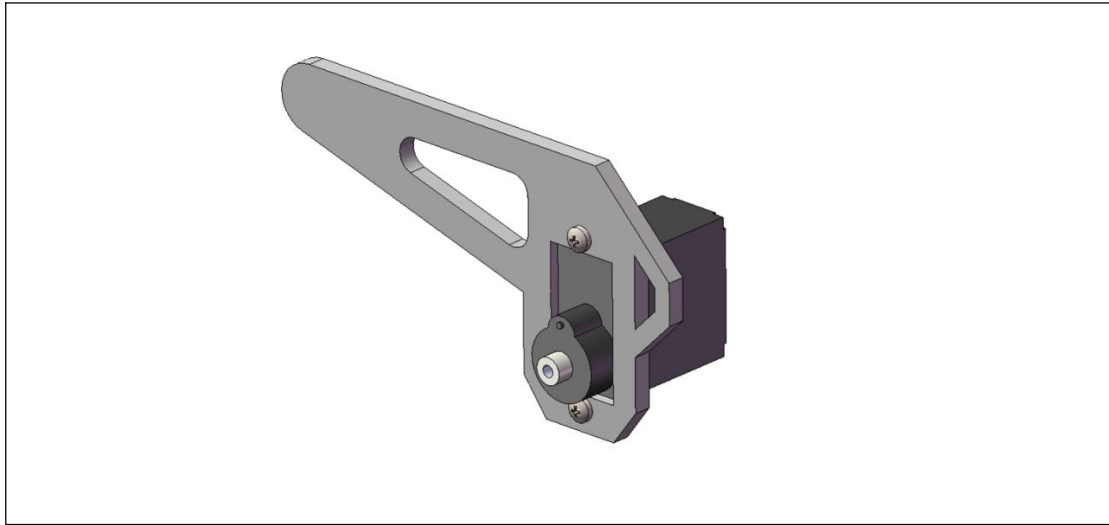
5. Use two **M2*8 Screws** and two **M2 Nuts** to fix **Servo** to part **A04**.

A04	
Servo	

Assemble the following components:

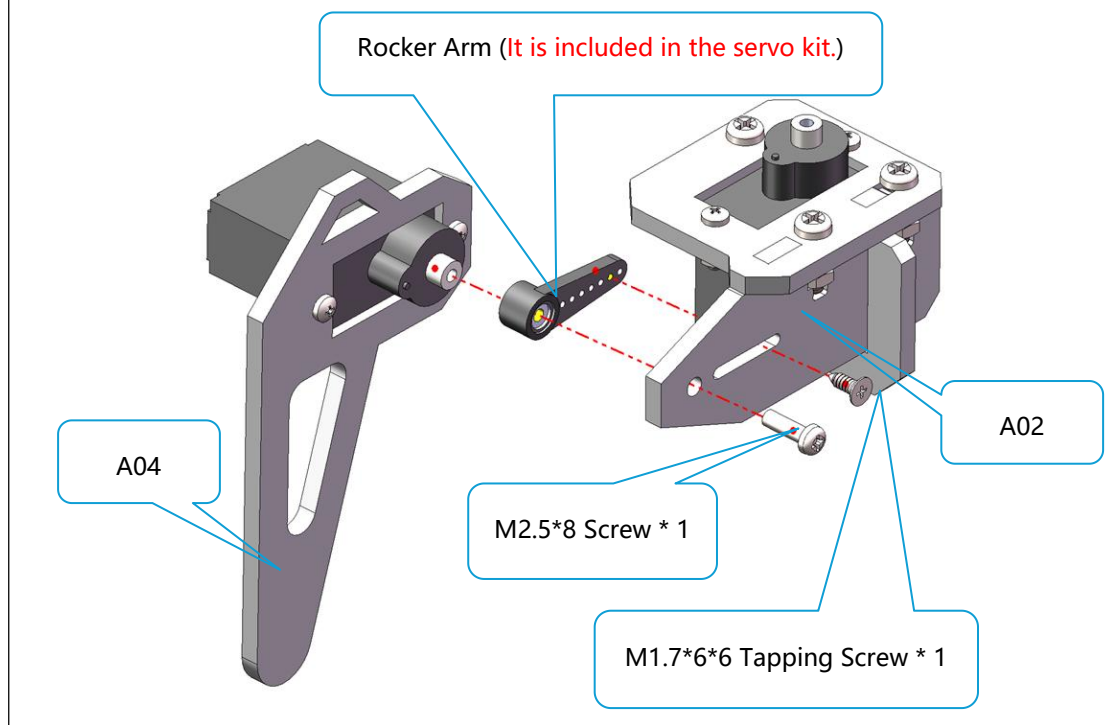


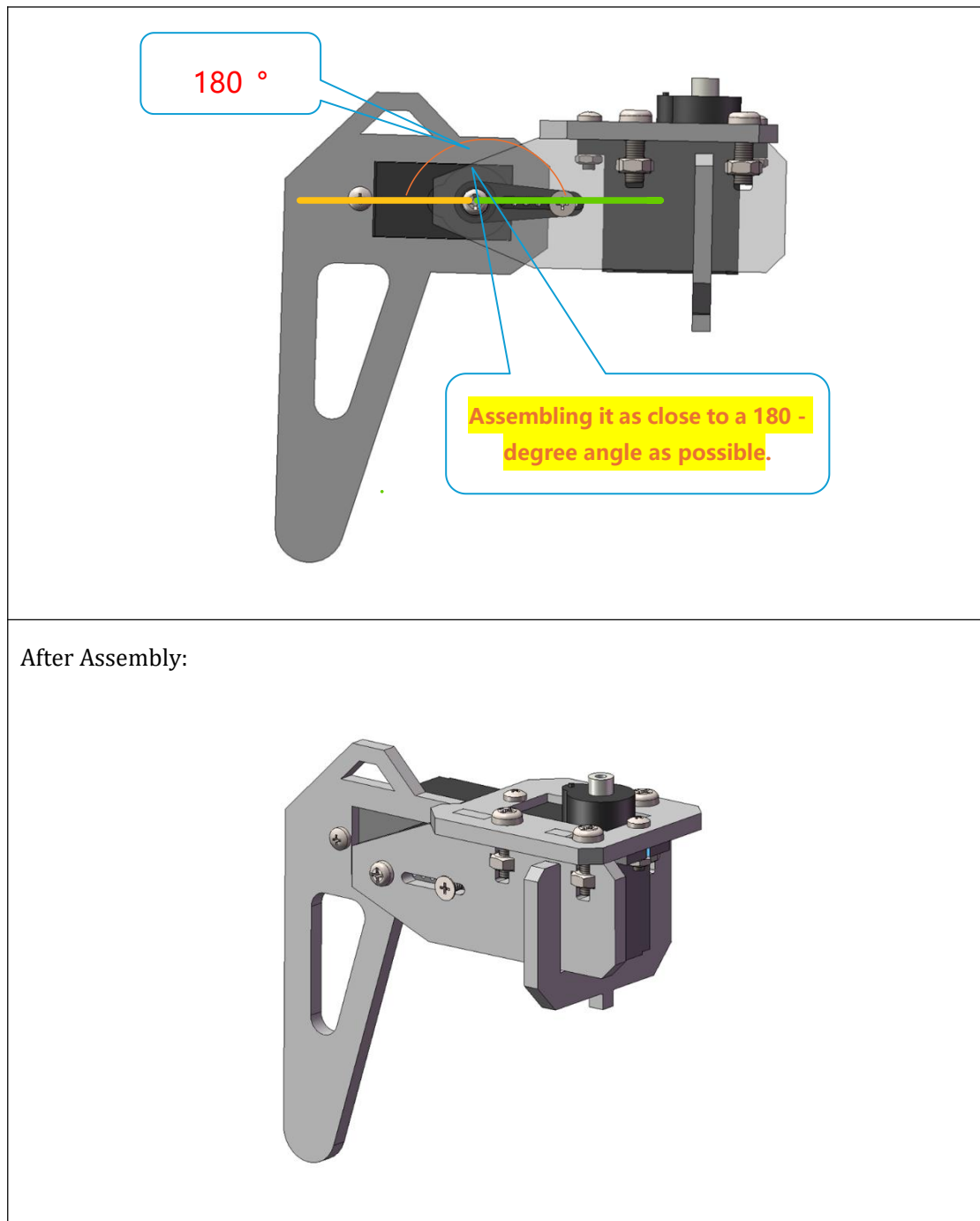
After Assembly:



4. Connect assembled part **A02** and assembled part **A04** together using an **M1.7*6*6 Tapping Screw**, a **Rocker Arm**, and an **M2.5*8 Screw**. (Note: Fix the rocker arm at the angle depicted in the picture.)

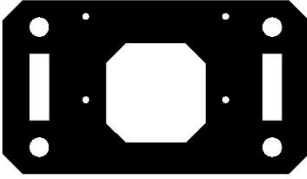
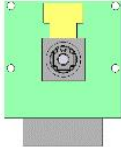
Assemble the following components:



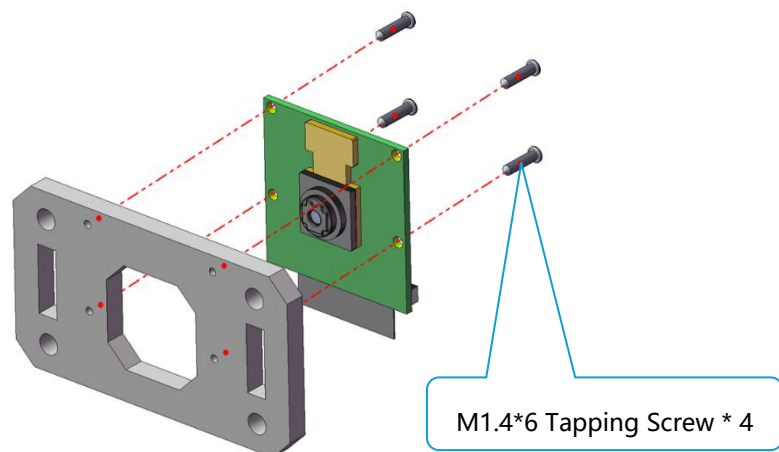


6.3 Assemble the Robot's Head

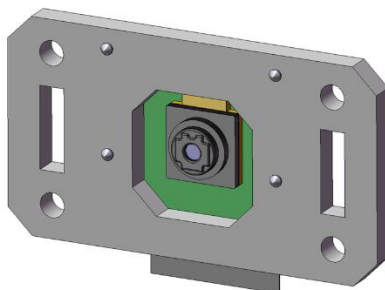
1. Fix the **Camera Module** to part **A05** with four **M1.4*6 Tapping Screws**.

A05	
Camera Module	

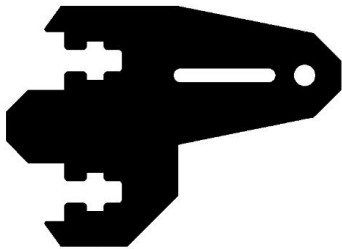
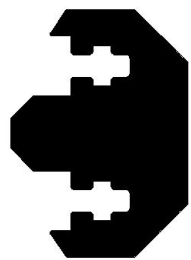
Assemble the following components:



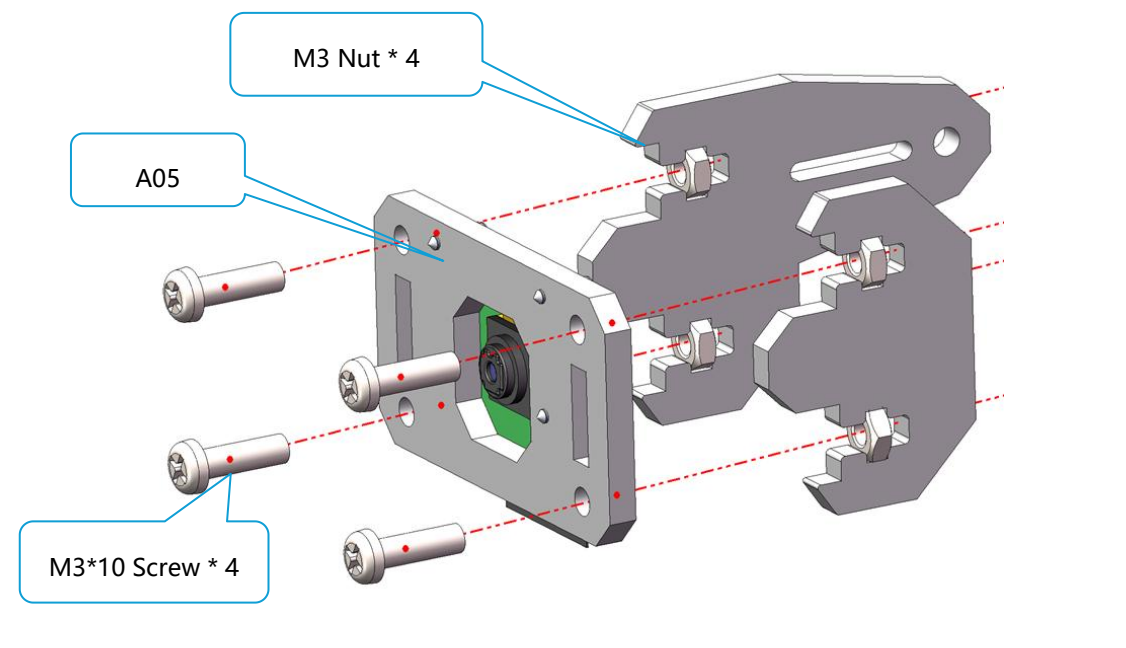
After Assembly:



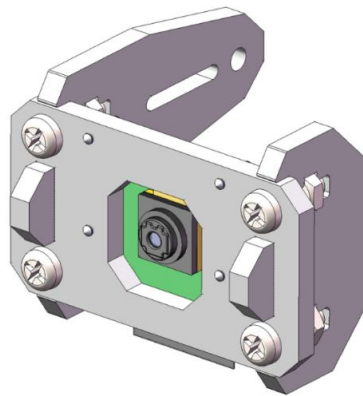
2. First, snap part **A06** and part **A07** into the corresponding slots of assembled part **A05** respectively, then fix them with four **M3*10 Screws** and four **M3 Nuts**.

A06	
A07	

Assemble the following components:

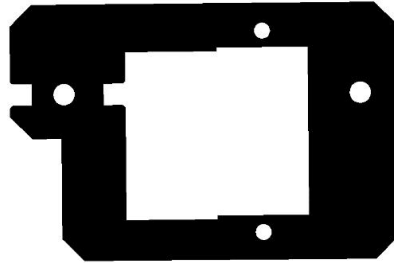


After Assembly:

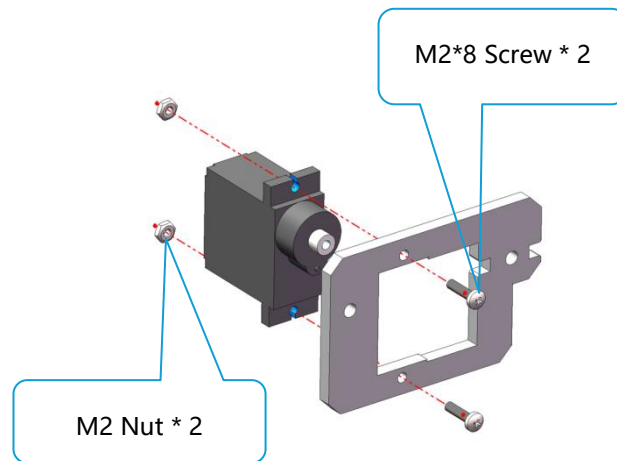


3. Use two **M2*8 Screws** and two **M2 Nuts** to fix **Servo** to part **A08**.

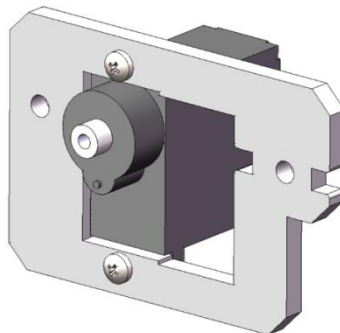
A08



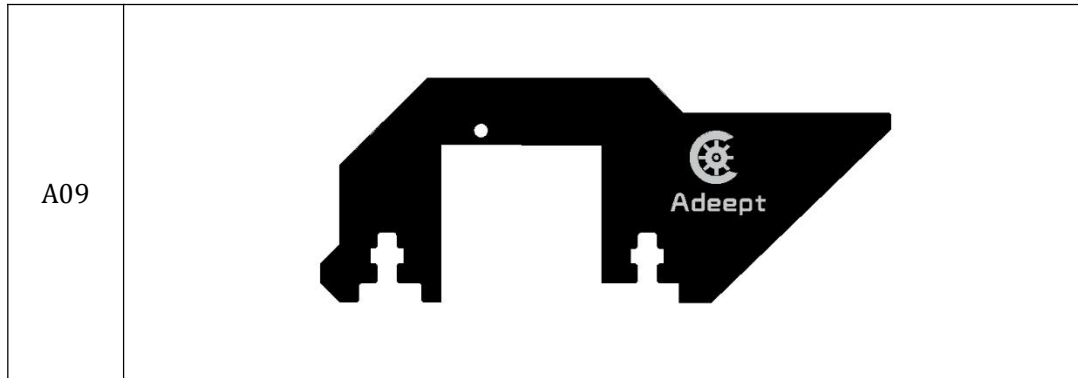
Assemble the following components:



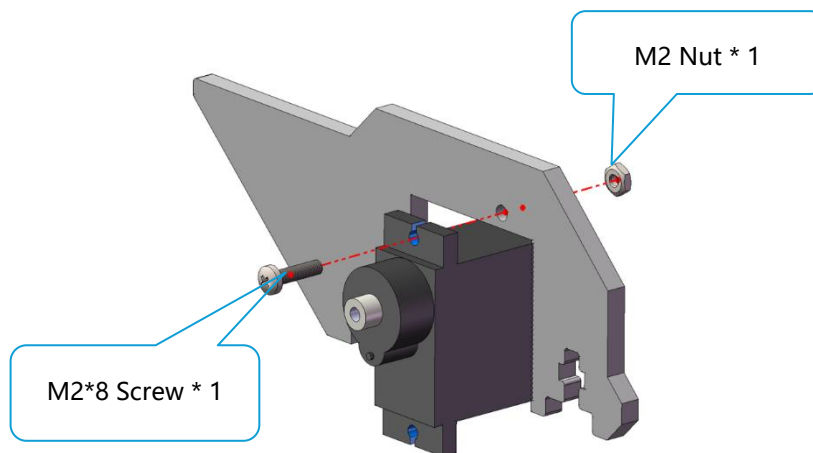
After Assembly:



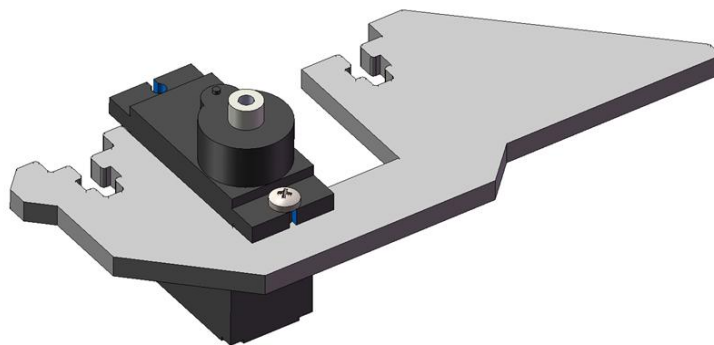
4. Use an **M2*8 Screw** and an **M2 Nut** to fix **Servo** to part **A09**.



Assemble the following components:

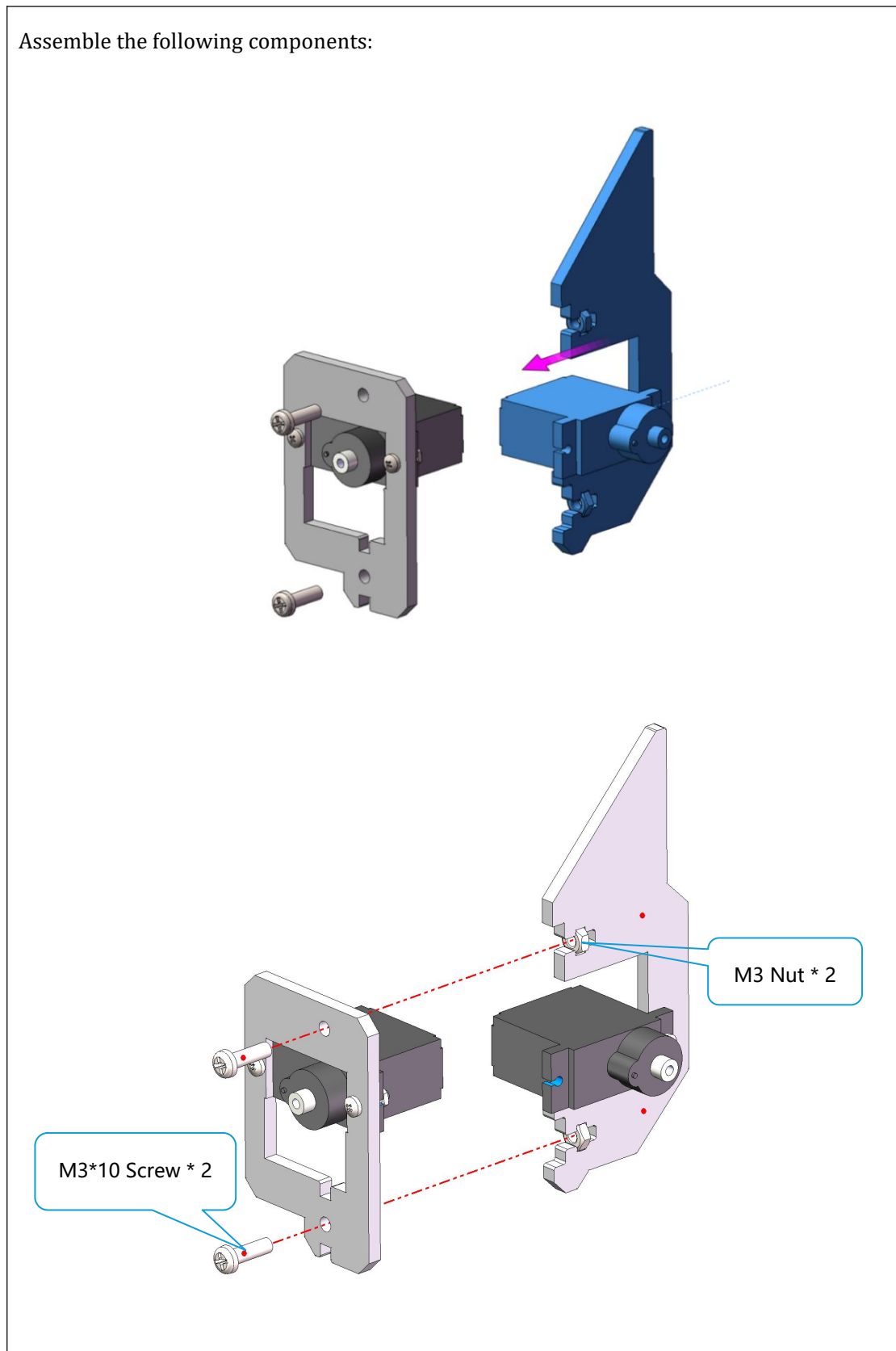


After Assembly:

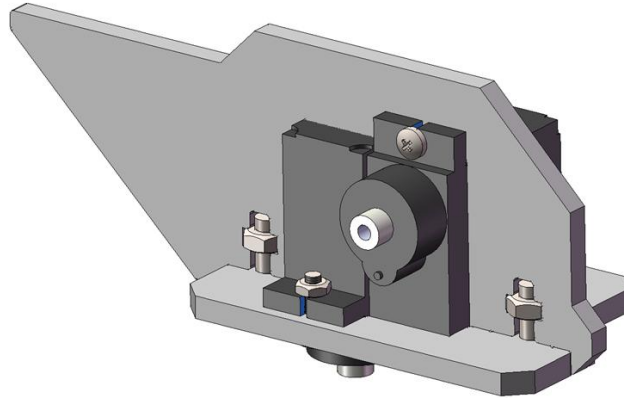


5. Connect part **A08** and part **A09** using two **M3*10 Screws** and two **M3 Nuts**.

Assemble the following components:

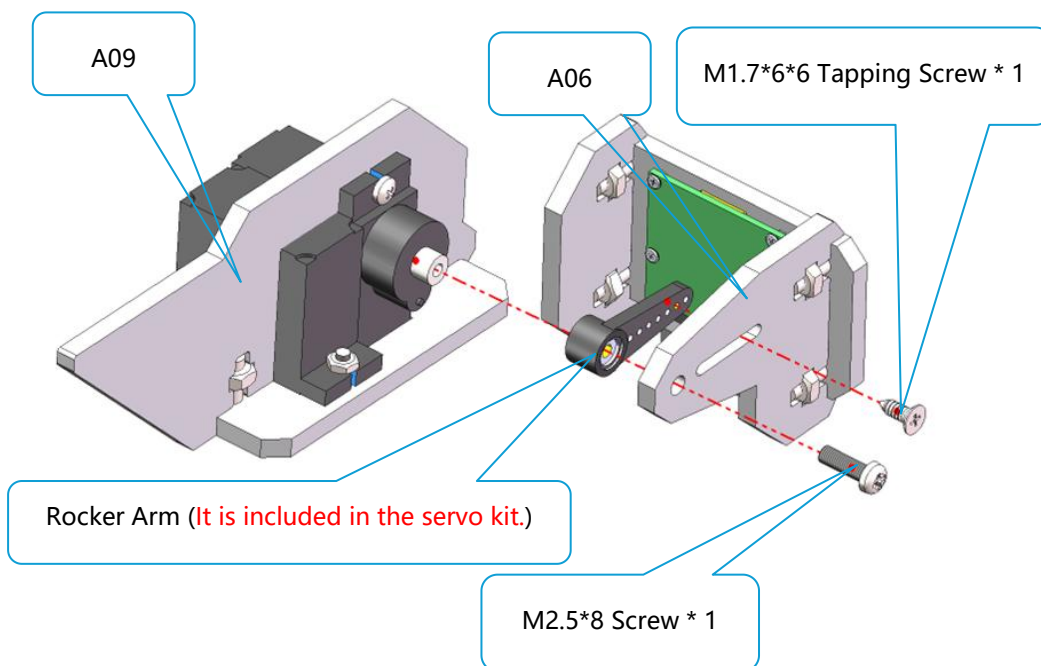


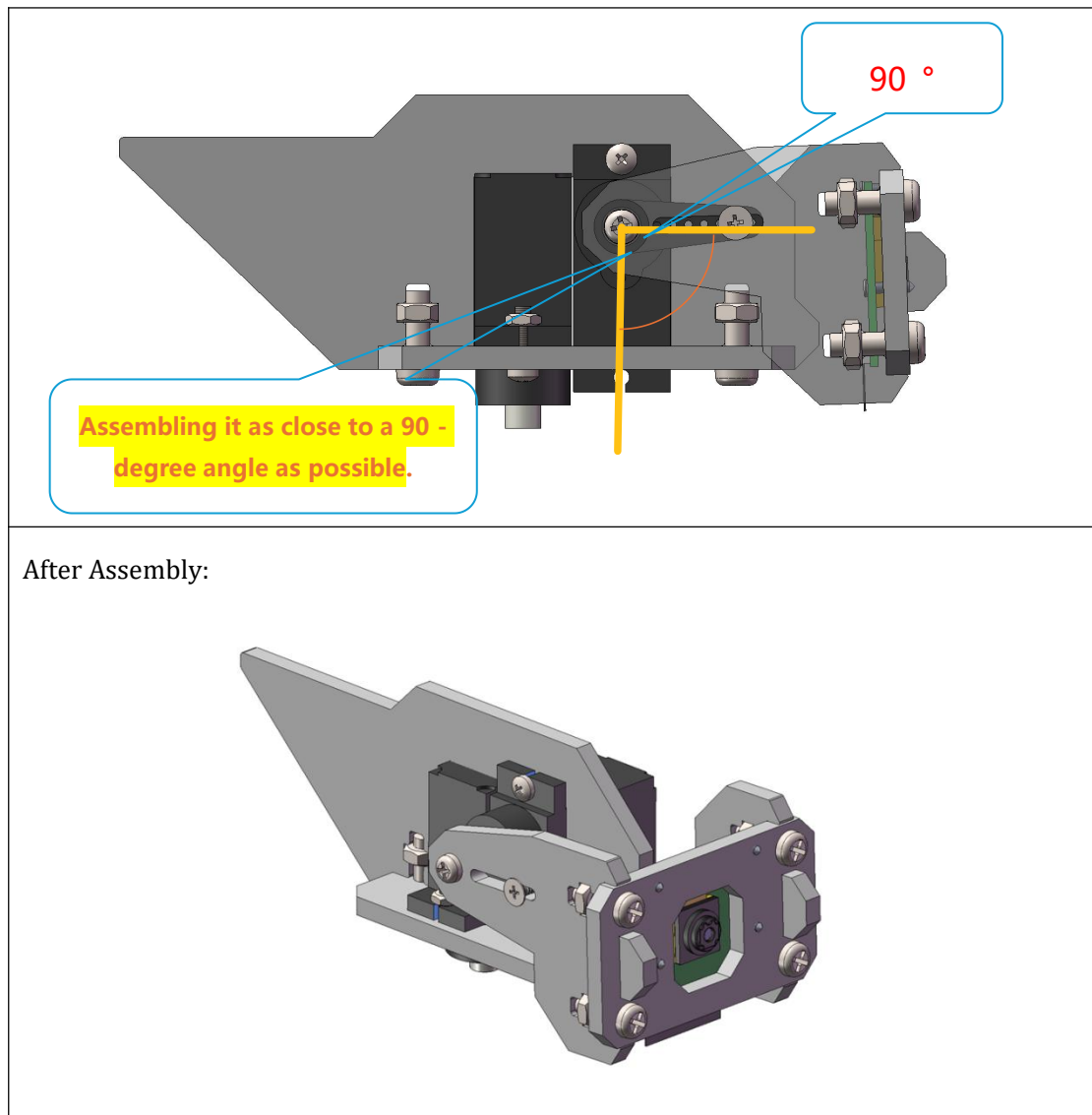
After Assembly:



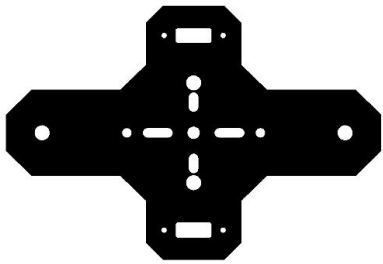
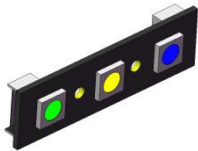
6. Fix assembled part **A06** and assembled part **A09** together using an **M1.7*6*6 Tapping Screw**, a **Rocker Arm**, and an **M2.5*8 Screw**. (Note: Fix the rocker arm at the angle depicted in the picture.)

Assemble the following components:

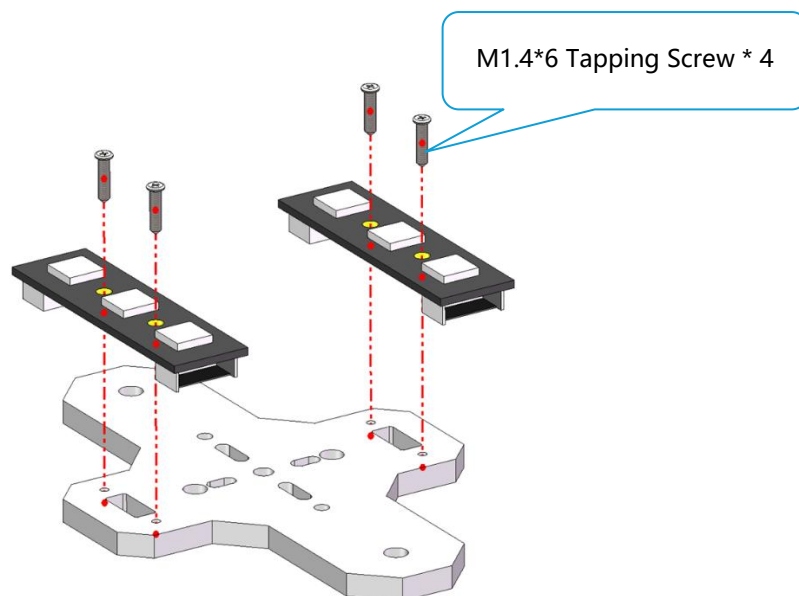




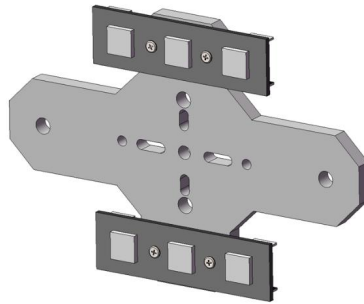
7. Fix two **WS2812 RGB LED** onto part **A10** with four **M1.4*6 Tapping Screws**.

A10	
WS2812 RGB LED	

Assemble the following components:



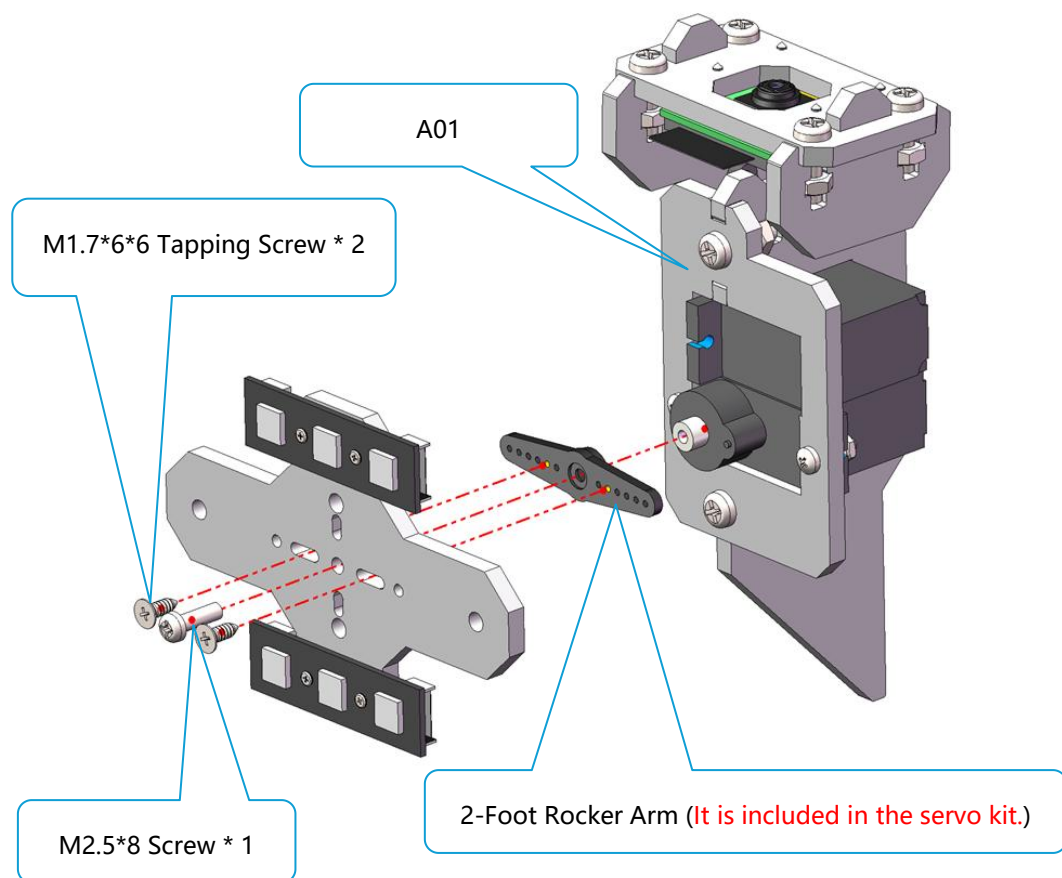
After Assembly:

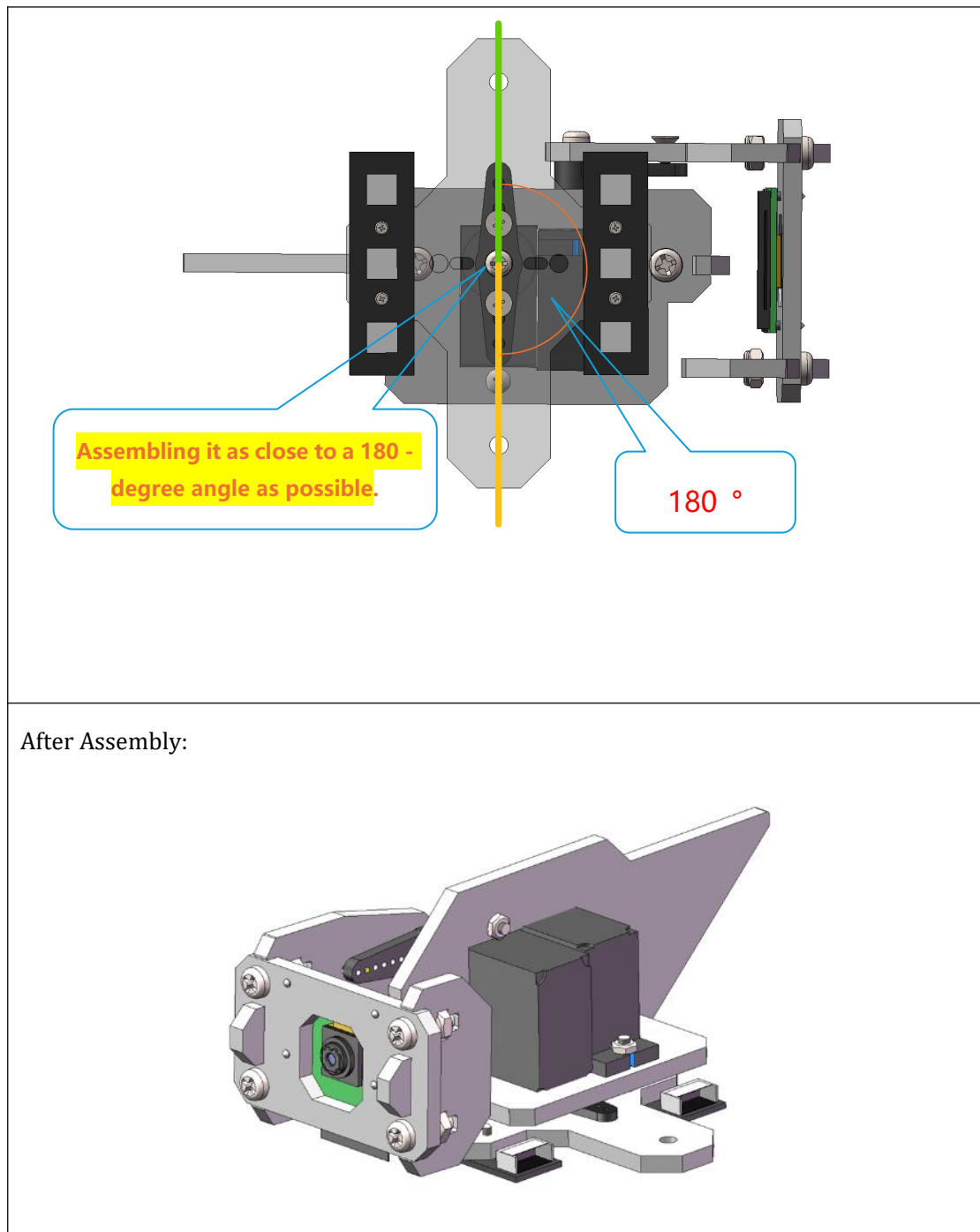


8. Fix assembled part **A01** and assembled part **A10** together using two **M1.7*6*6**

Tapping Screws, a **2-Foot Rocker Arm**, and an **M2.5*8 Screw**. (Note: Fix the rocker arm at the angle depicted in the picture.)

Assemble the following components:





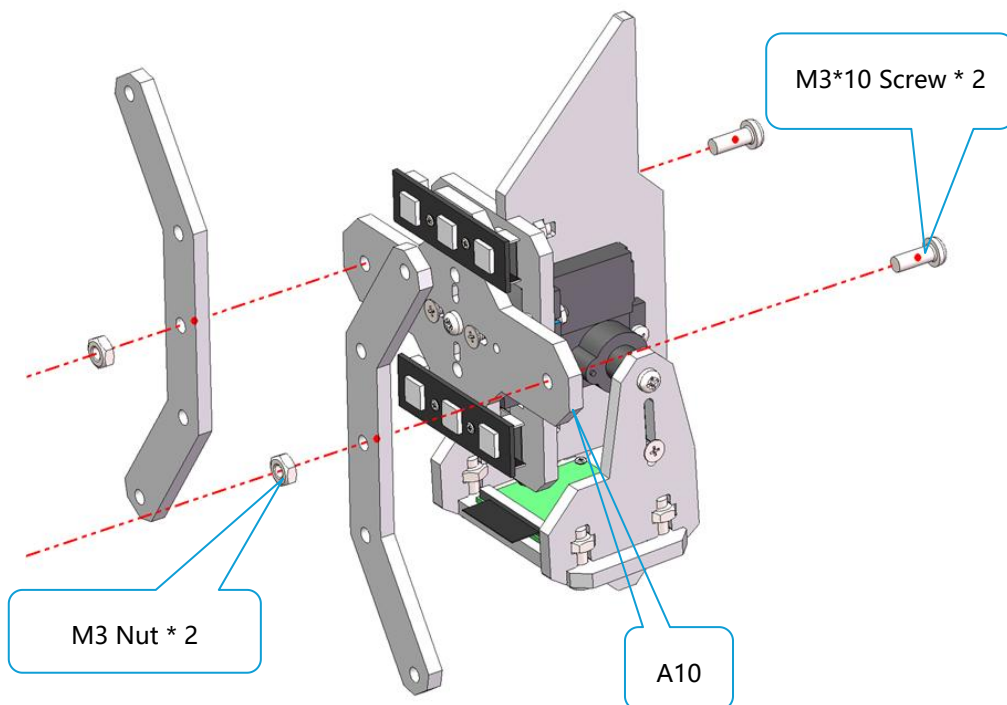
9. Fix two parts **A11** and assembled part **A10** using two **M3*10 Screws** and two **M3 Nuts**.

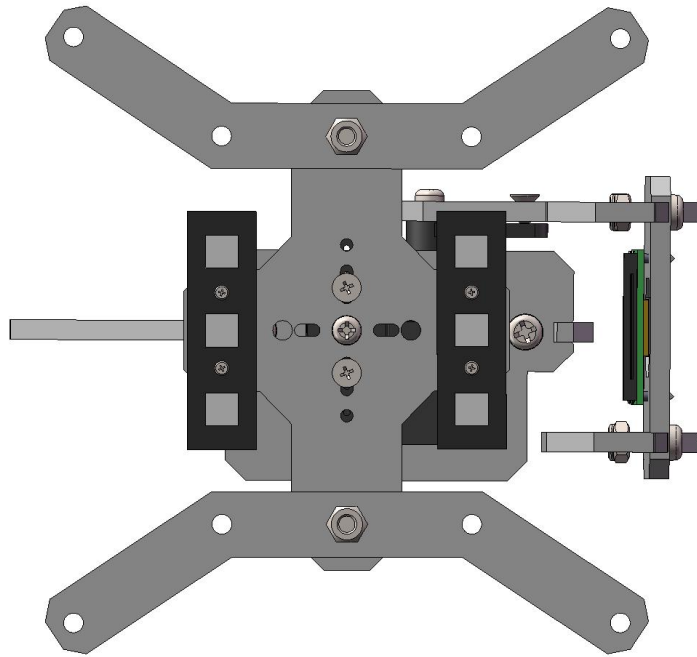


A11

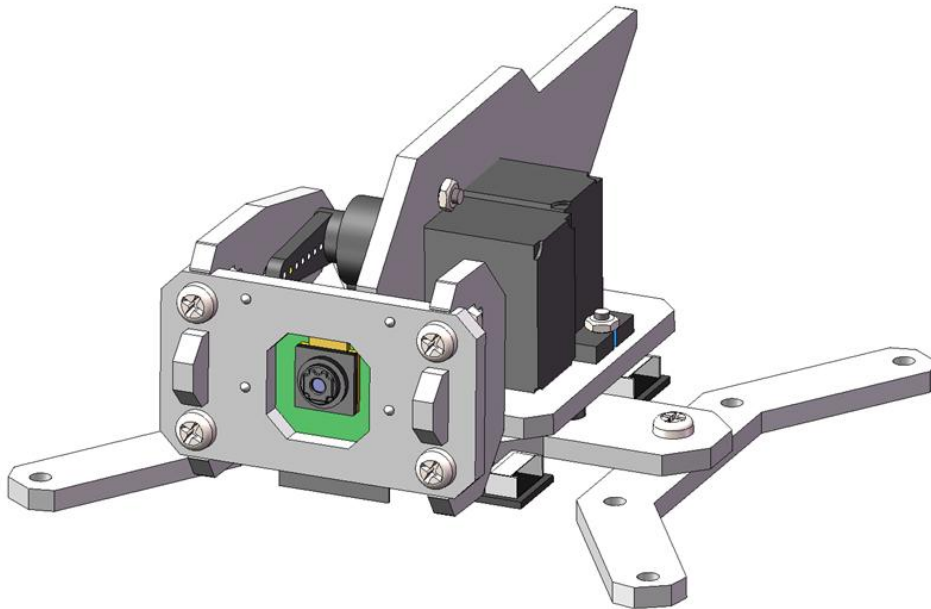


Assemble the following components:



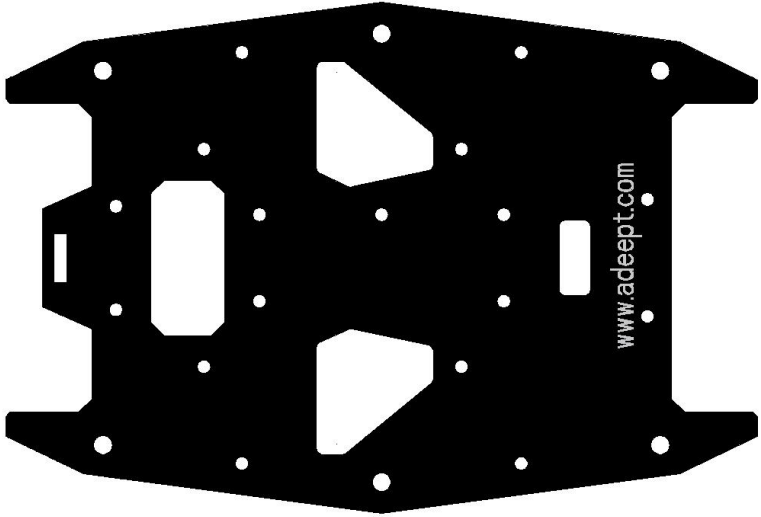
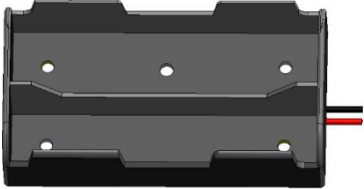


After Assembly:

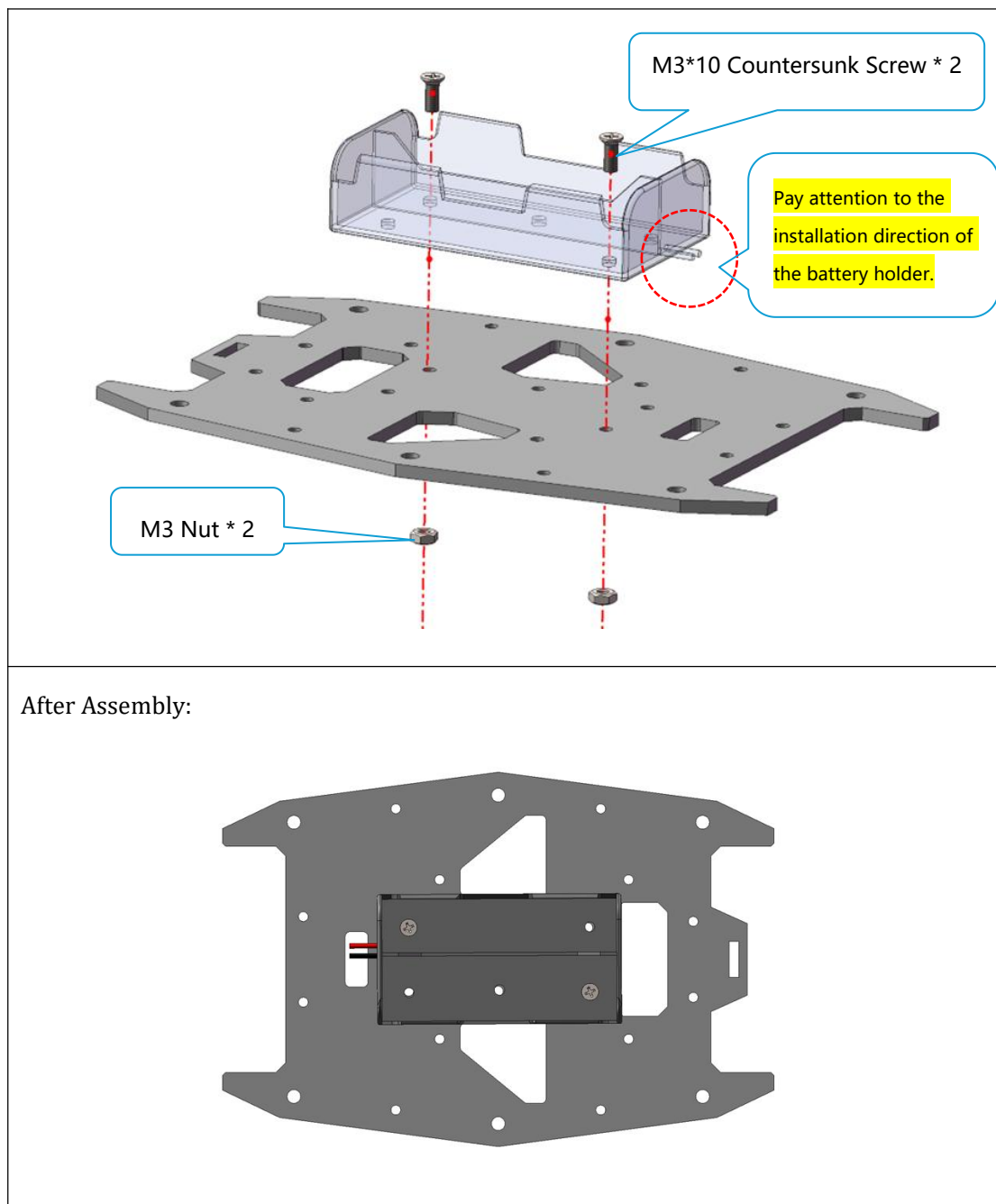


6.4 Assemble the Robot's Body

1. Fix the **18650 Battery Holder** to part **A12** using two **M3*10 Countersunk Screws** and two **M3 Nuts**.

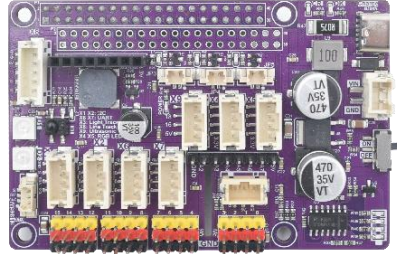
A12	
18650 Battery Holder	

Assemble the following components:

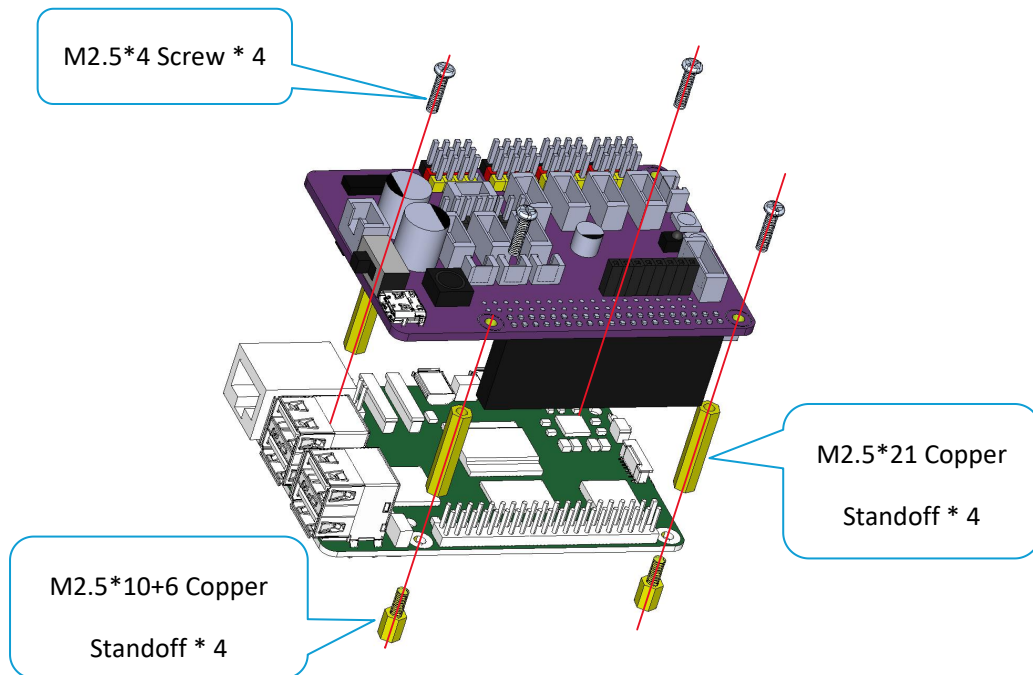


2. Fix the **Adeept Robot HAT V3.2** to the **Raspberry Pi Board** (which is not included in this kit, and you need to purchase it separately) using four **M2.5*10+6 Copper Standoffs**, four **M2.5*21 Copper Standoffs**, and four **M2.5*4 Screws**. (NOTE: Don't forget to plug the camera cable into the corresponding slot on the Raspberry Pi board!!!)

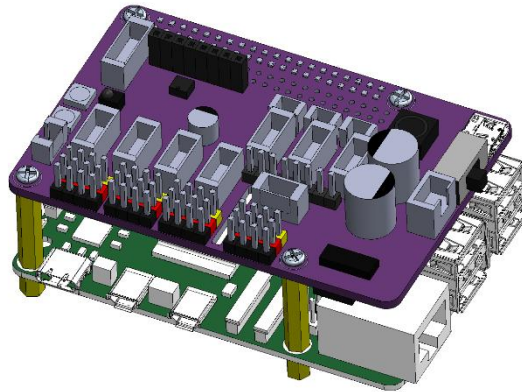
Adeept Robot HAT V3.2



Assemble the following components:

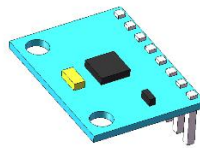


After Assembly:

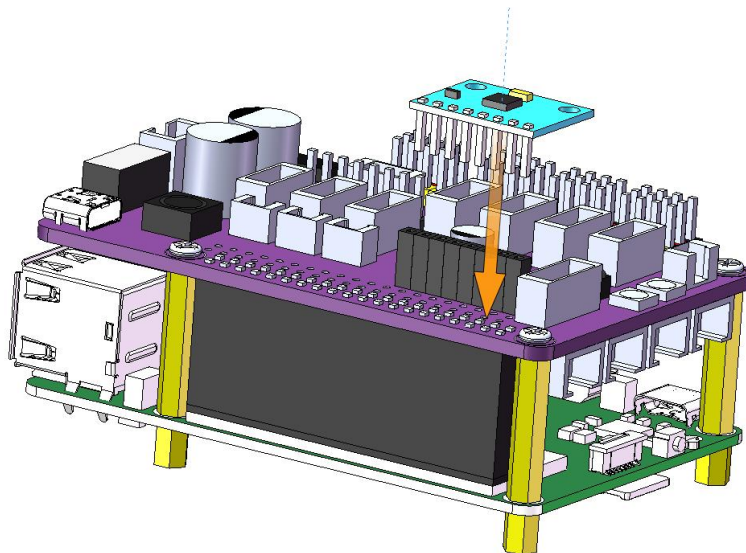


3. Secure the **MPU-6050** to the **Adeept Robot HAT V3.2**.

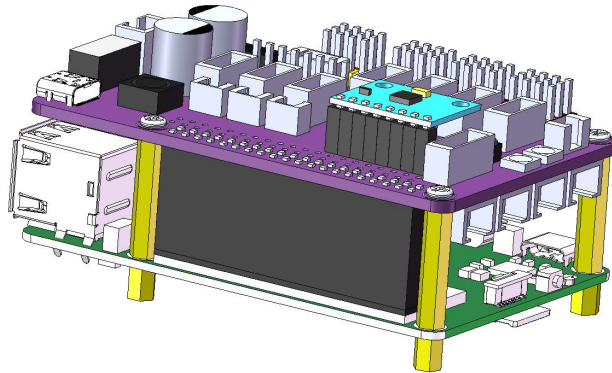
MPU-6050



Assemble the following components:

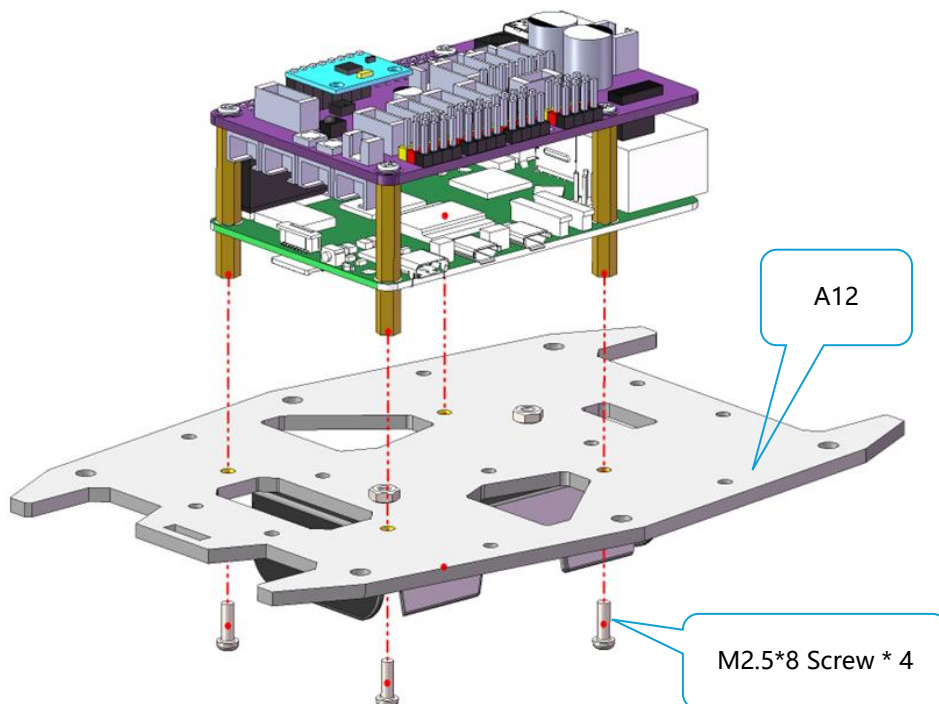


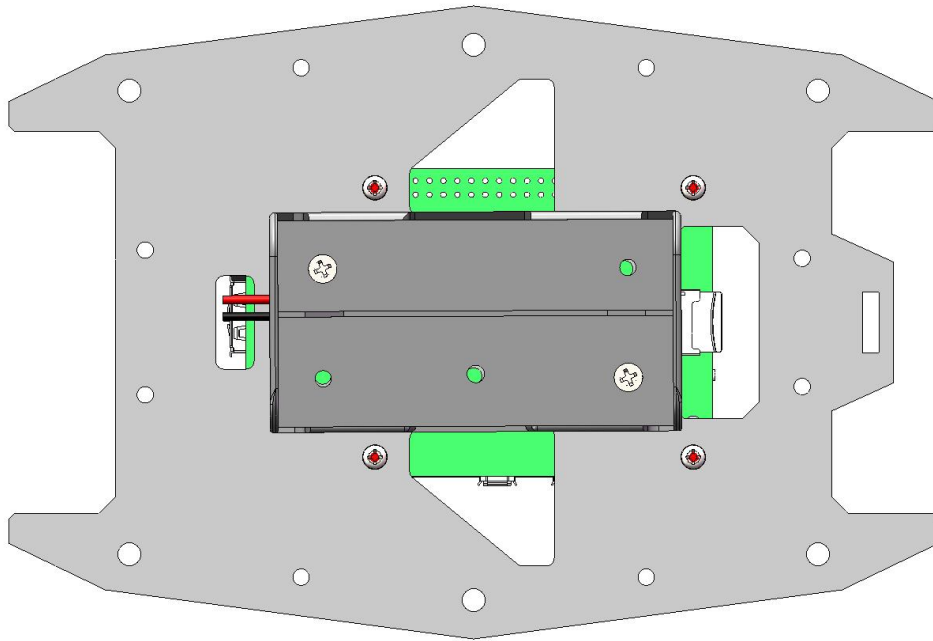
After Assembly:



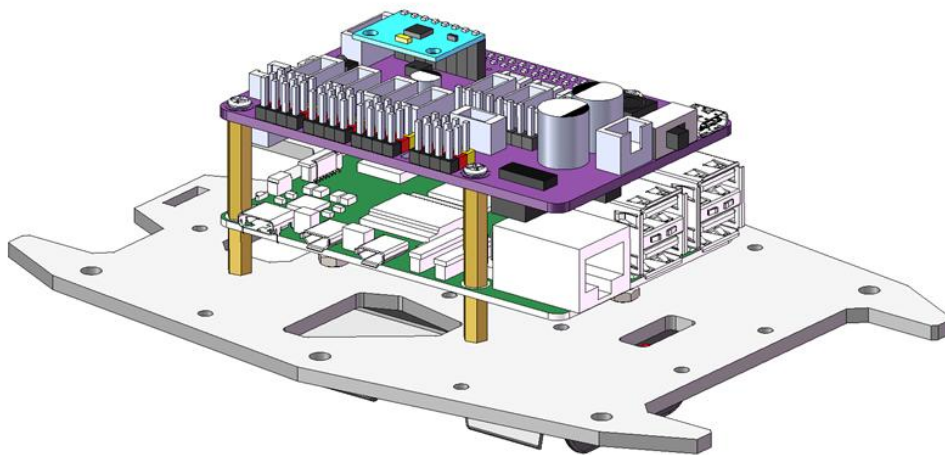
4. Fix the assembled **Raspberry Pi Board** to part **A12** using four **M2.5*8 Screws**.

Assemble the following components:



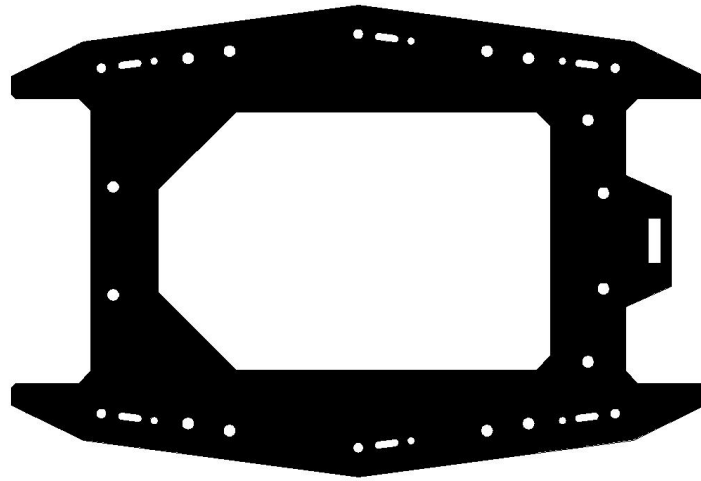


After Assembly:



5. Use six **M1.7*6*6 Tapping Screws** to fix the six **Rocker Arms** of the servos to part **A13**.

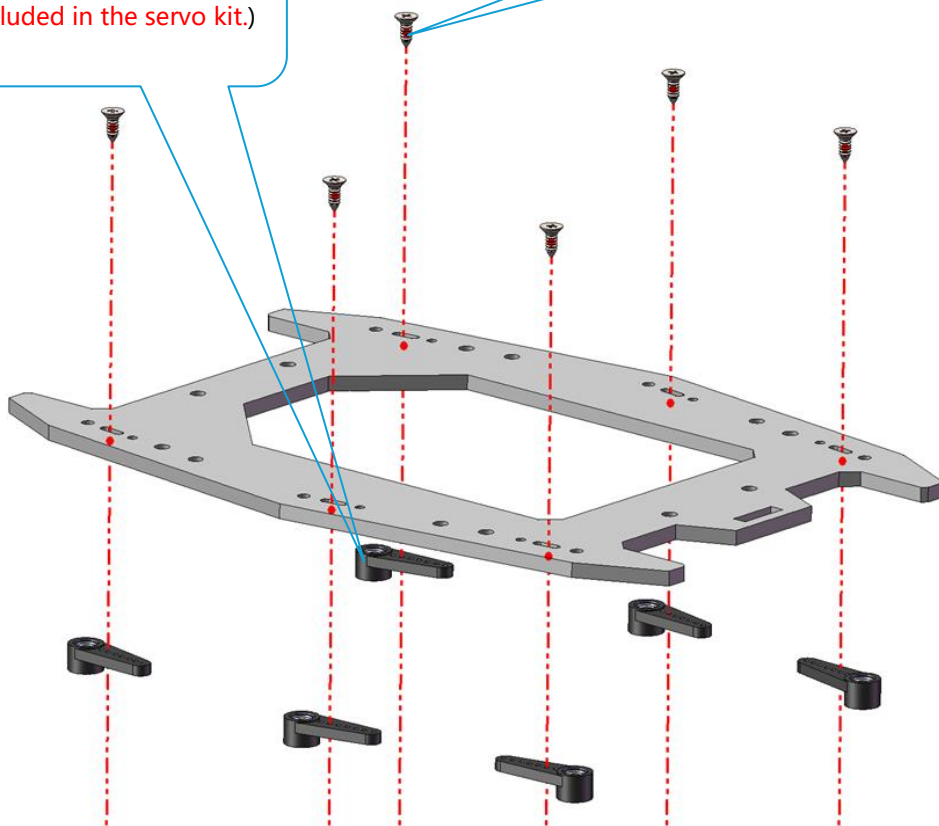
A13

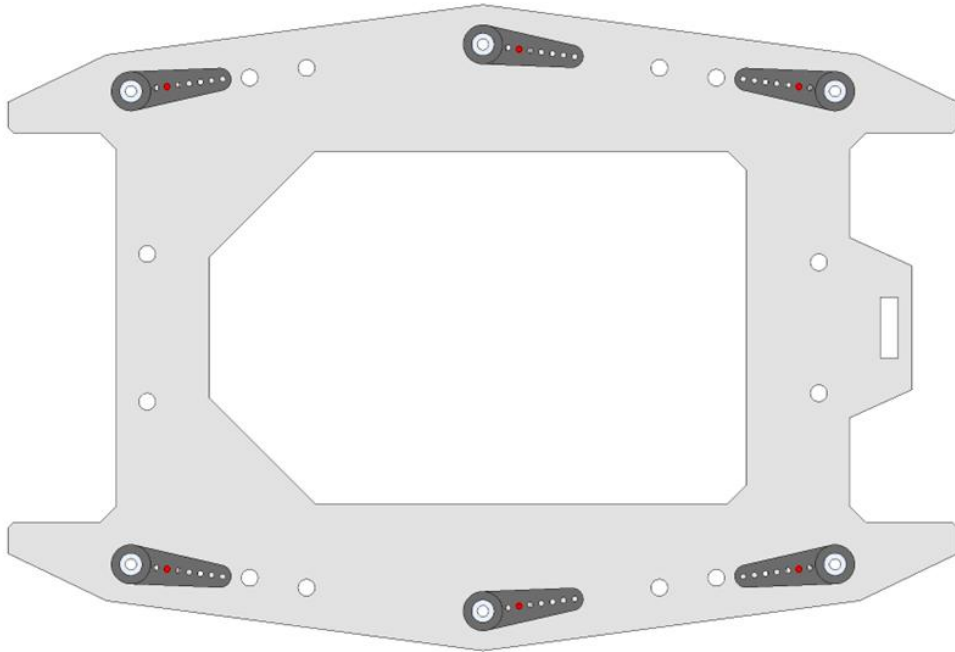


Assemble the following components:

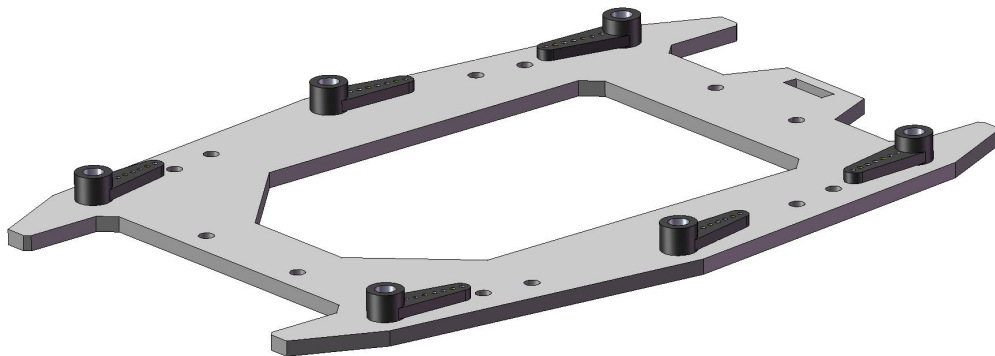
Rocker Arm * 6 (It is
included in the servo kit.)

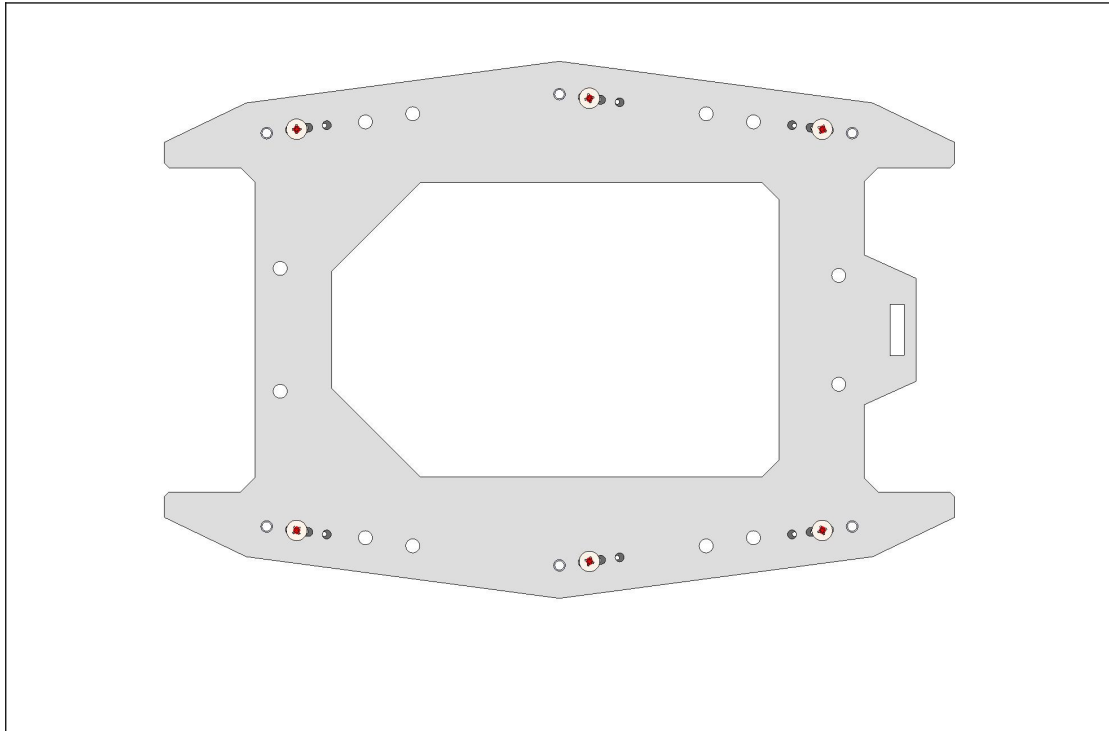
M1.7*6*6 Tapping Screw * 6





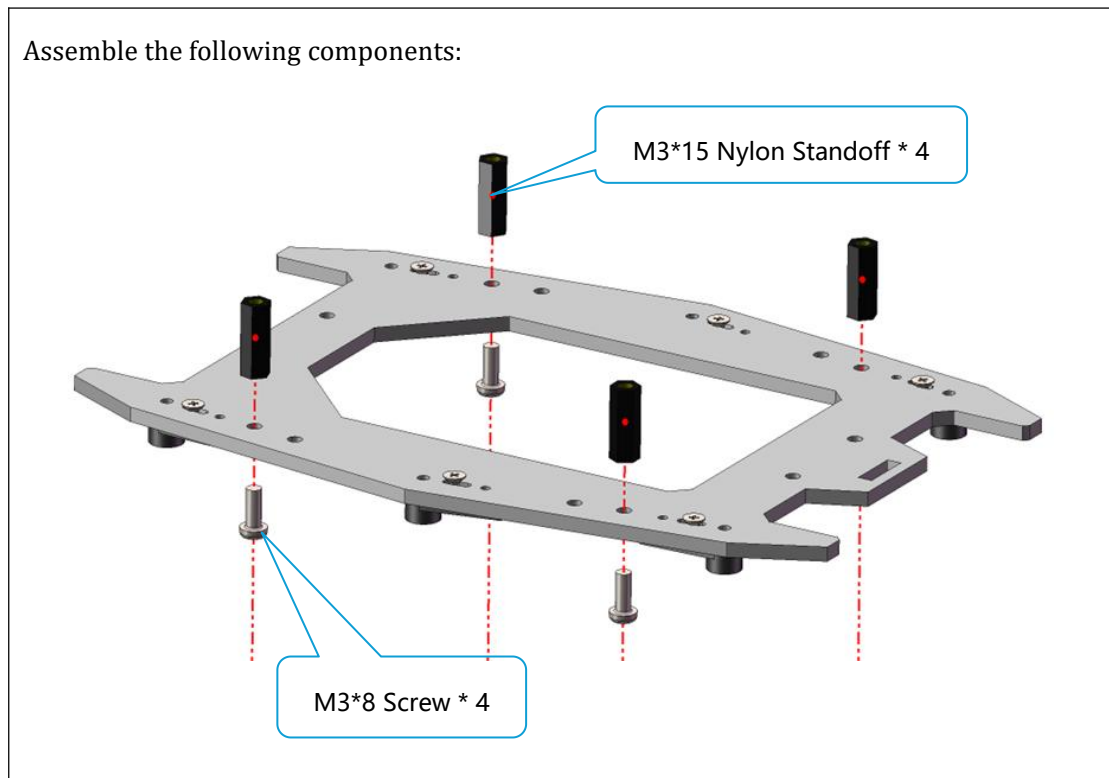
After Assembly:

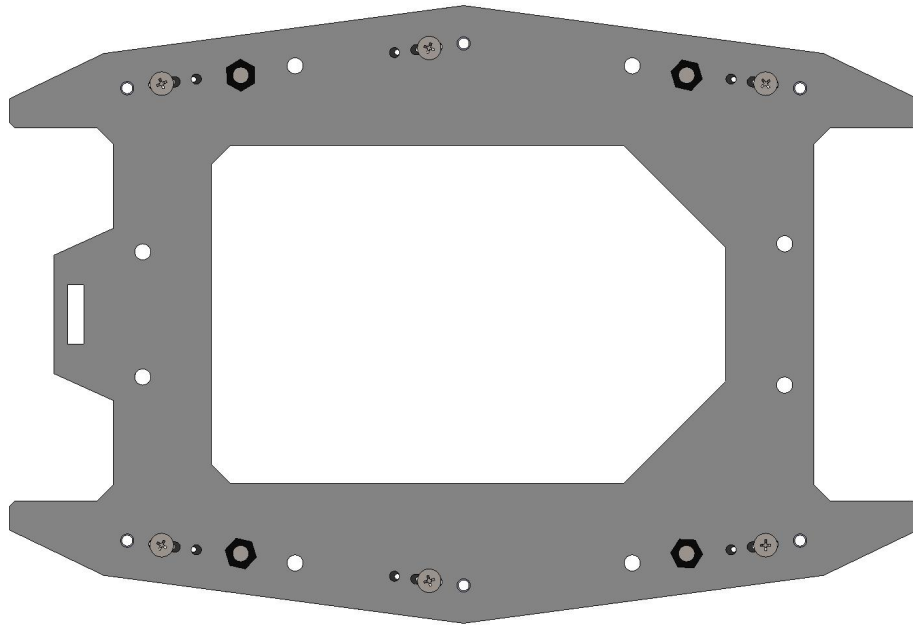




6. Fix four **M3*15 Nylon Standoffs** to the assembled part **A13** using four **M3*8 Screws**.

Assemble the following components:



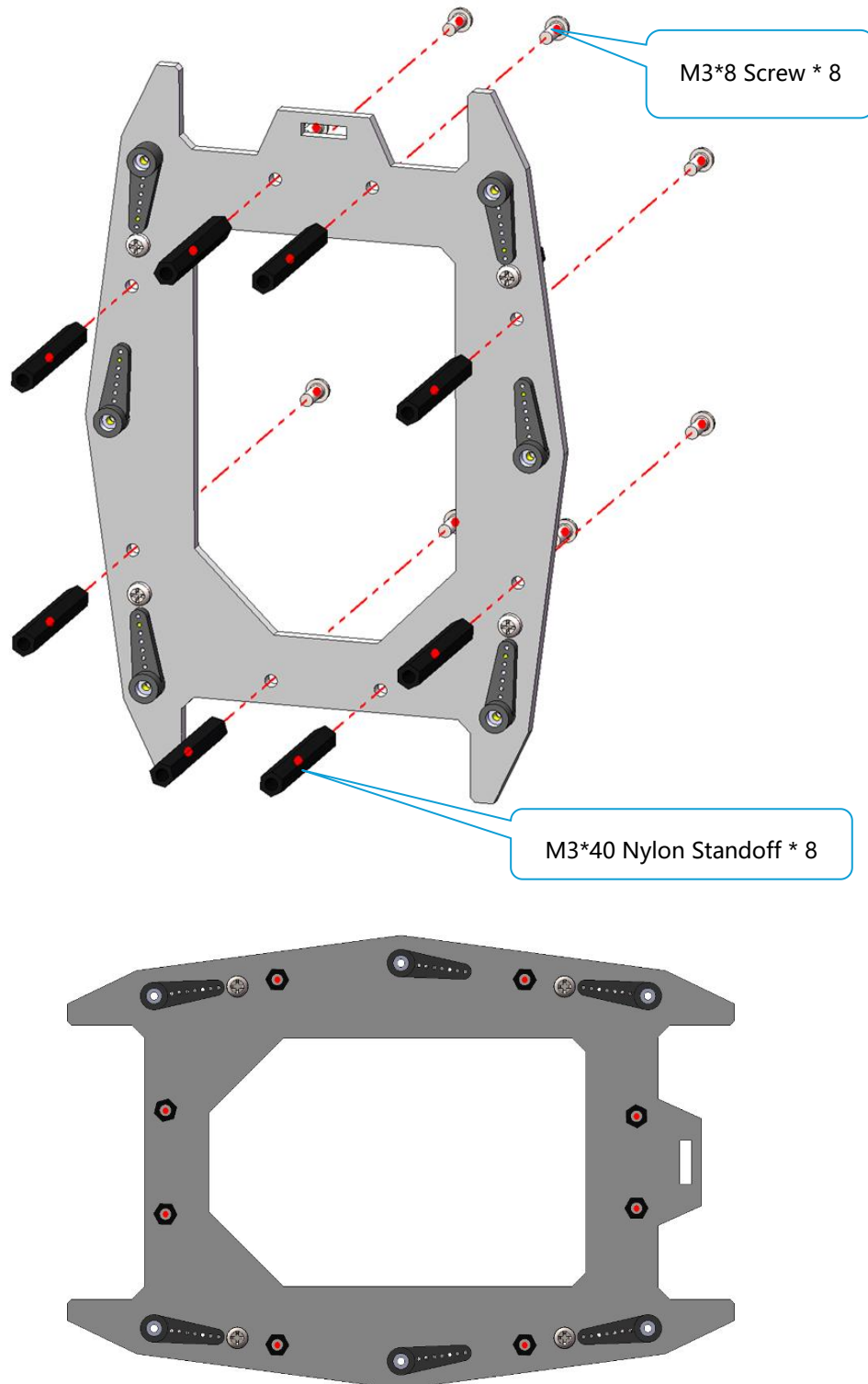


After Assembly:



7. Fix eight **M3*40 Nylon Standoffs** to the assembled part **A13** using eight **M3*8 Screws**.

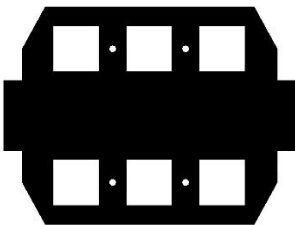
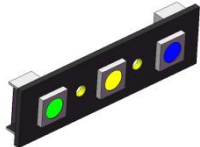
Assemble the following components:



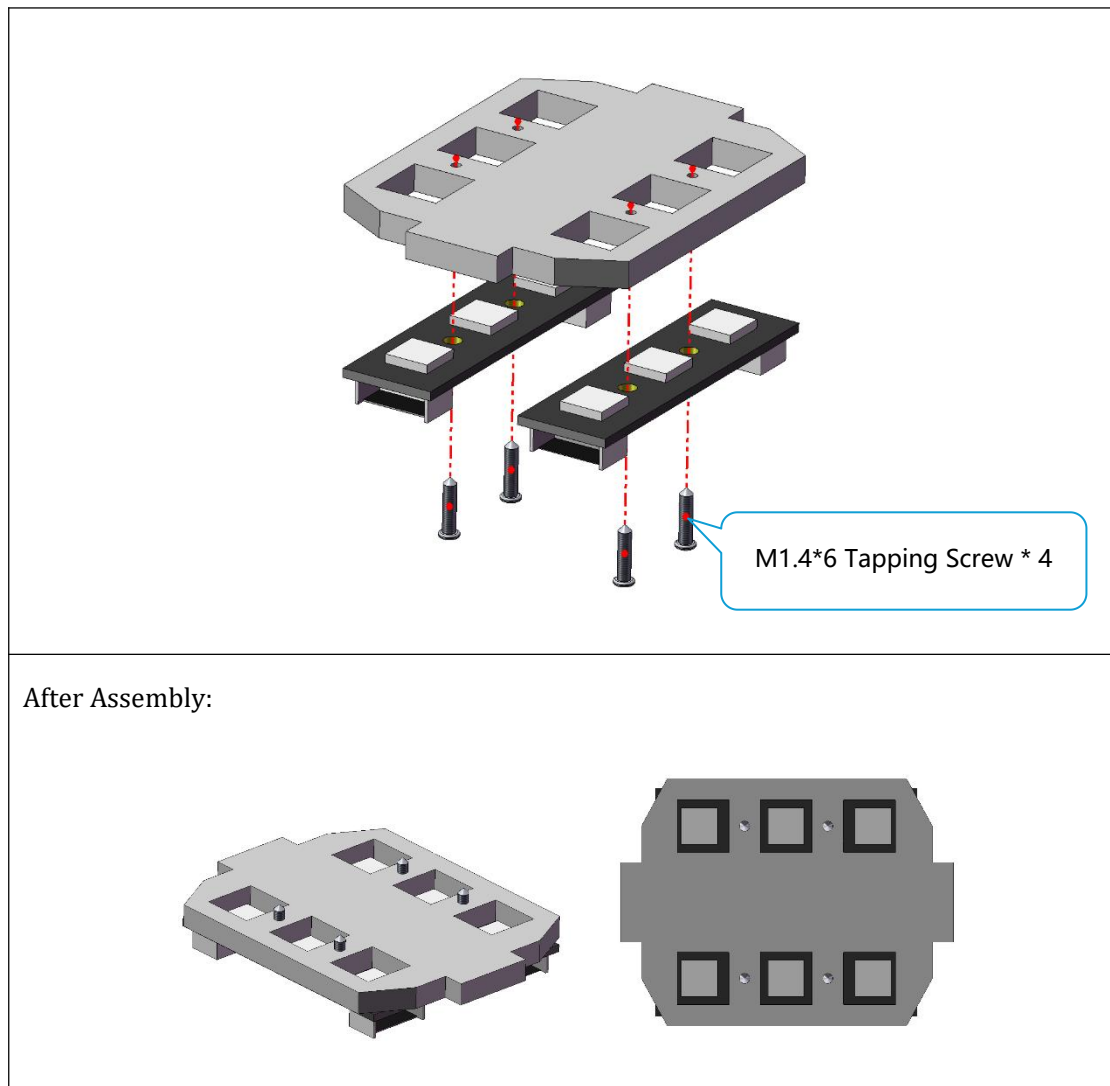
After Assembly:



8. Fix two **WS2812 RGB LED** onto part **A14** with four **M1.4*6 Tapping Screws**.

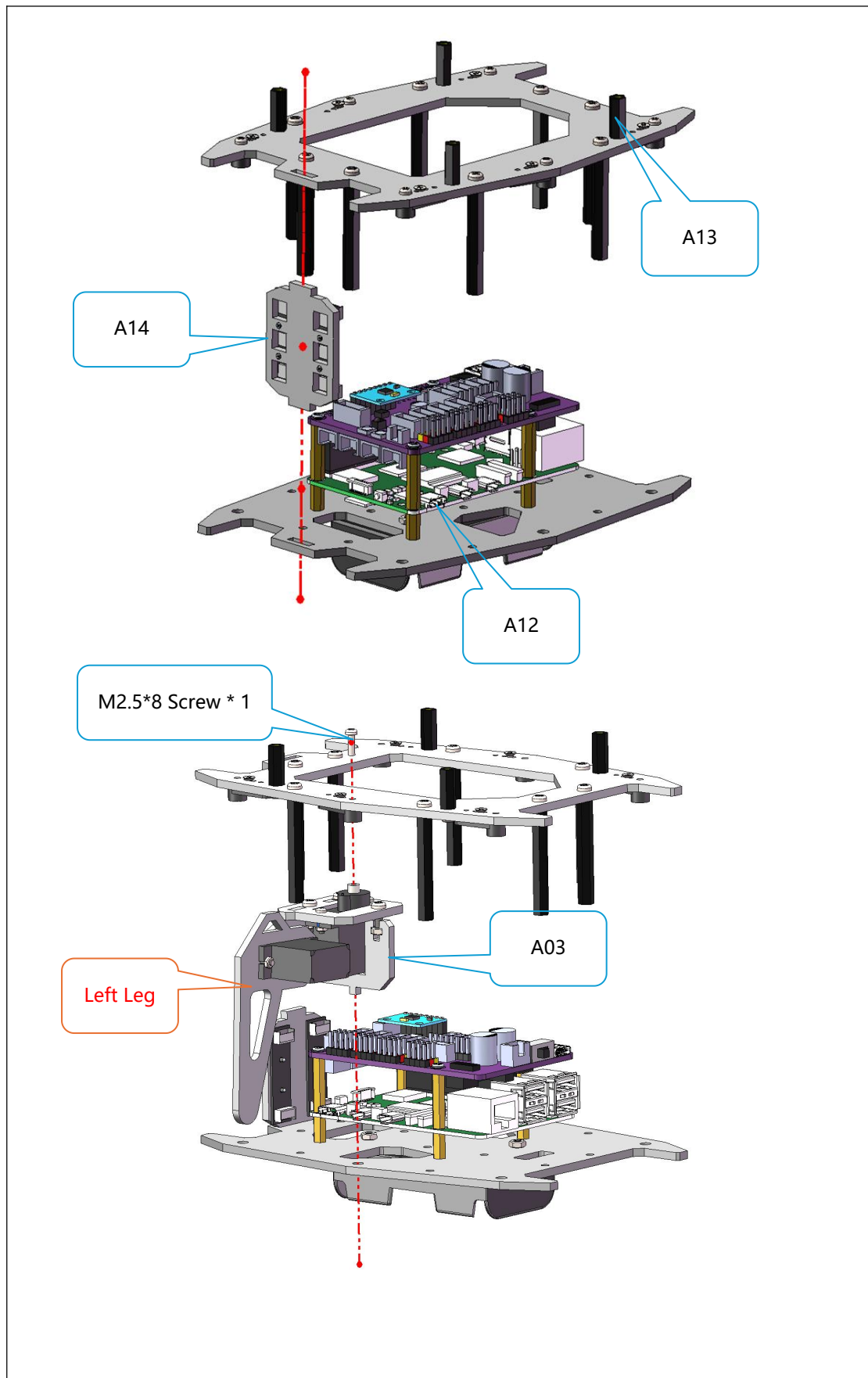
A14	
WS2812 RGB LED	

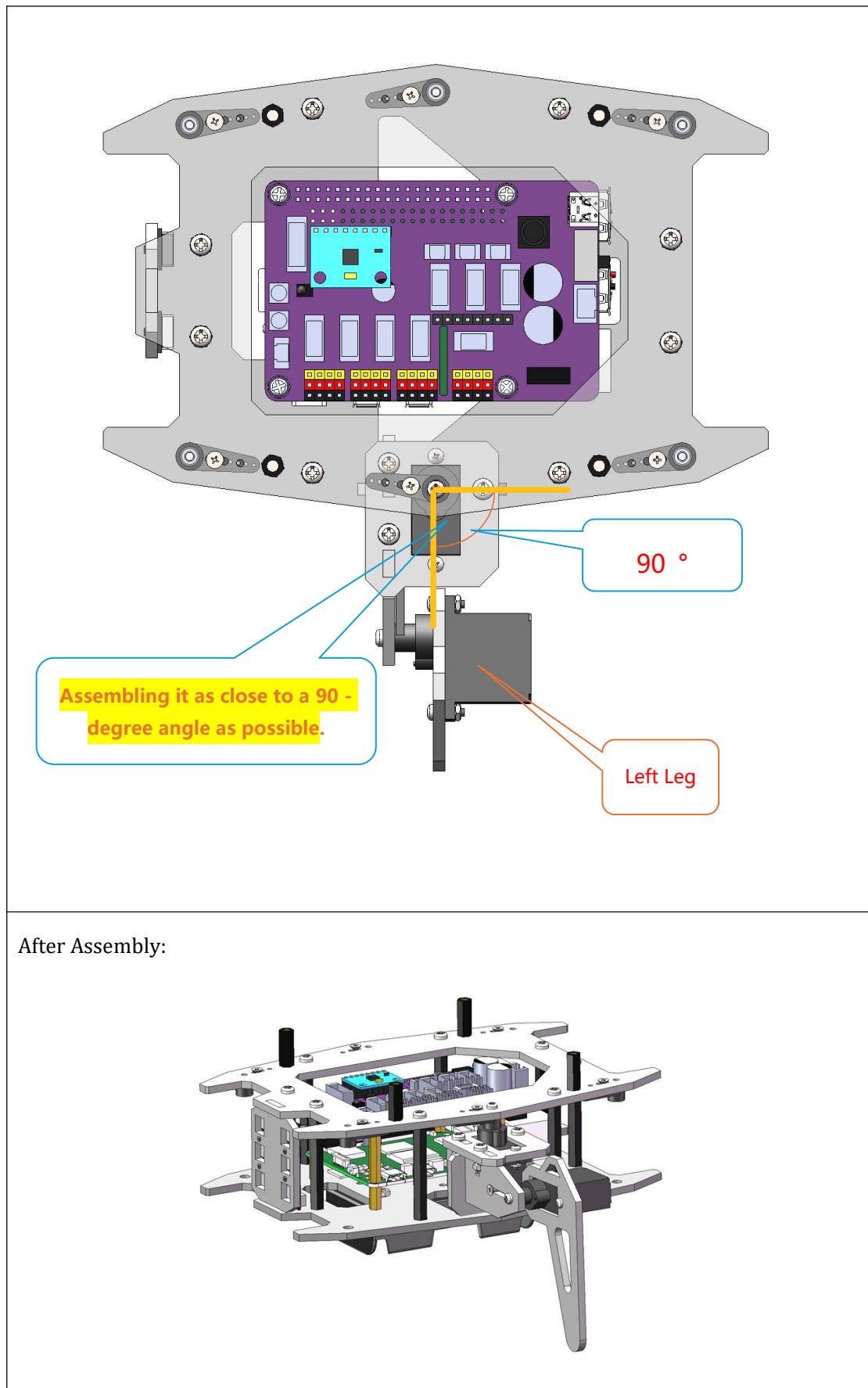
Assemble the following components:

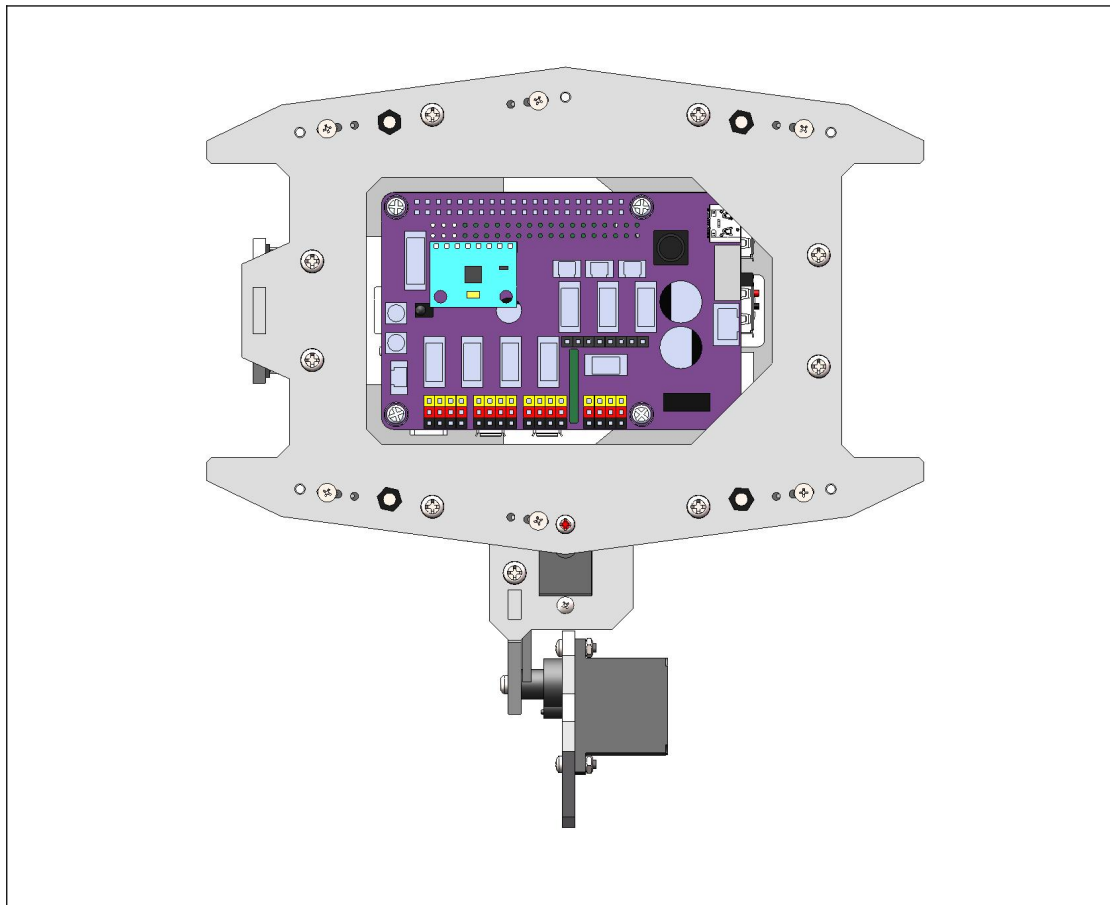


9. First, insert part **A14** into the corresponding slots of parts **A12** and **A13**. Then, insert part **A03** into the corresponding slot of part **A12**. Next, fix the rocker arm on part **A03** and the servo motor together with one **M2.5 × 8 screw**. (Note: Fix the rocker arm at the angle depicted in the picture.)

Assemble the following components:

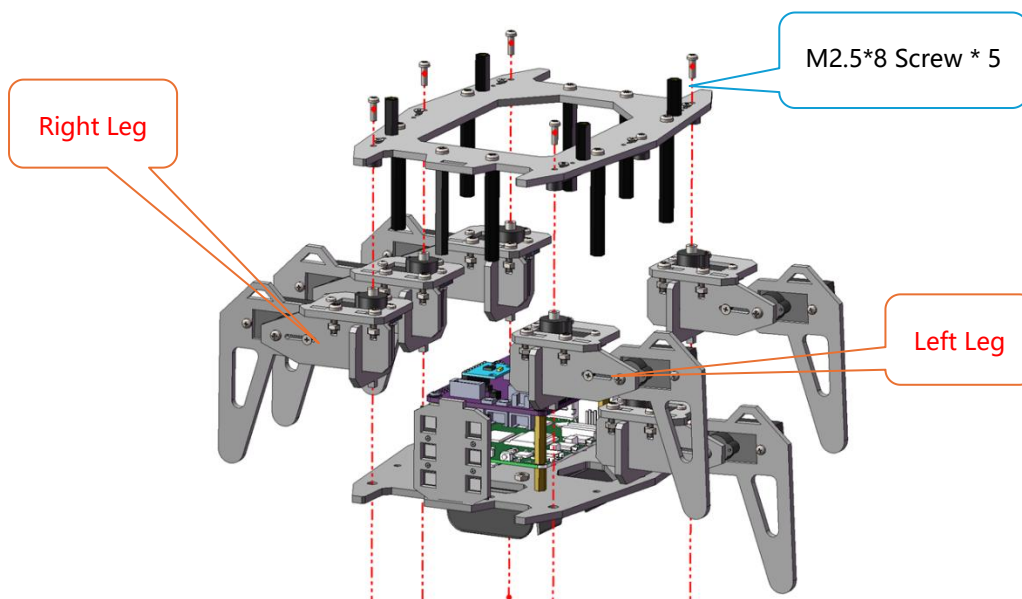


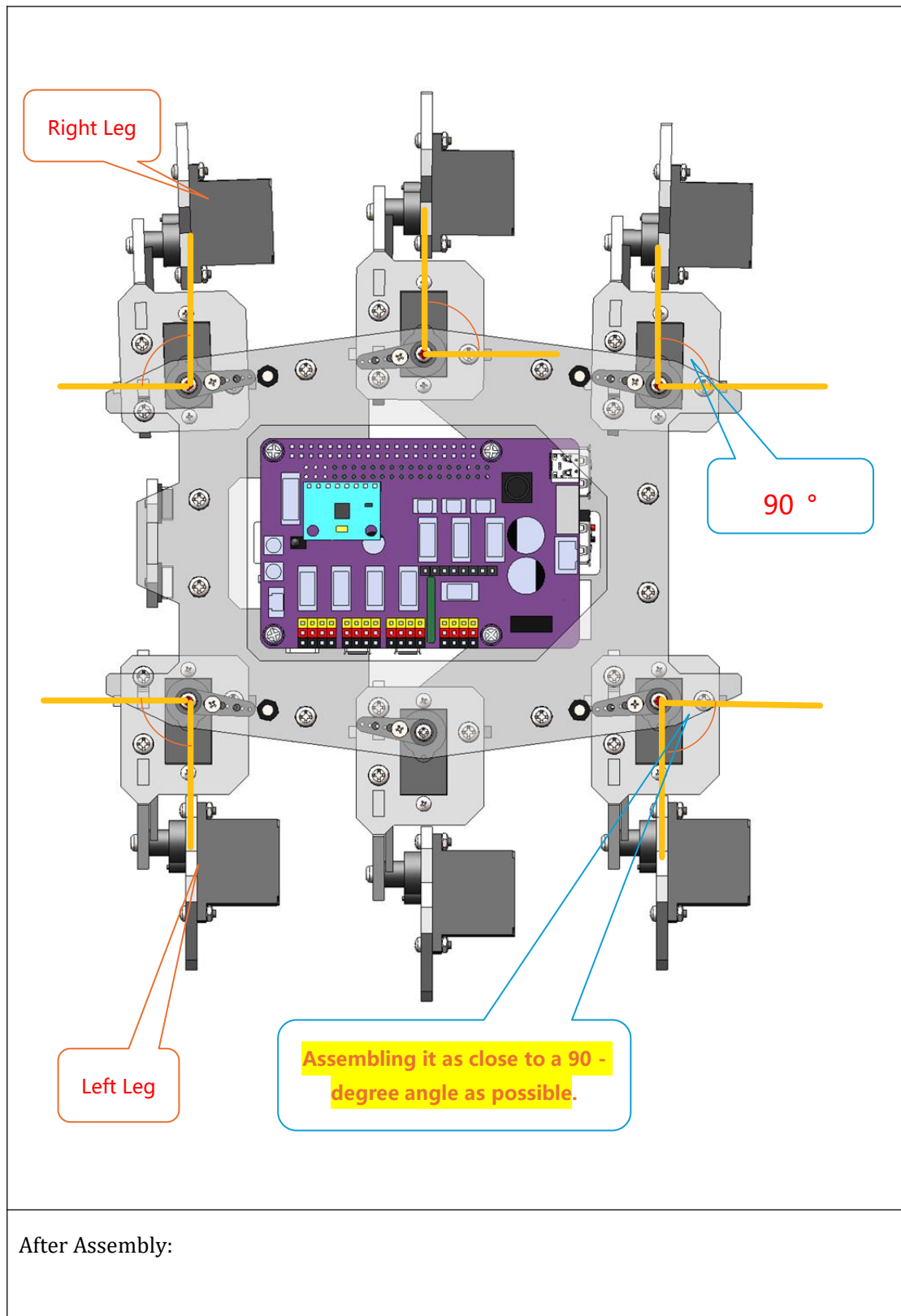


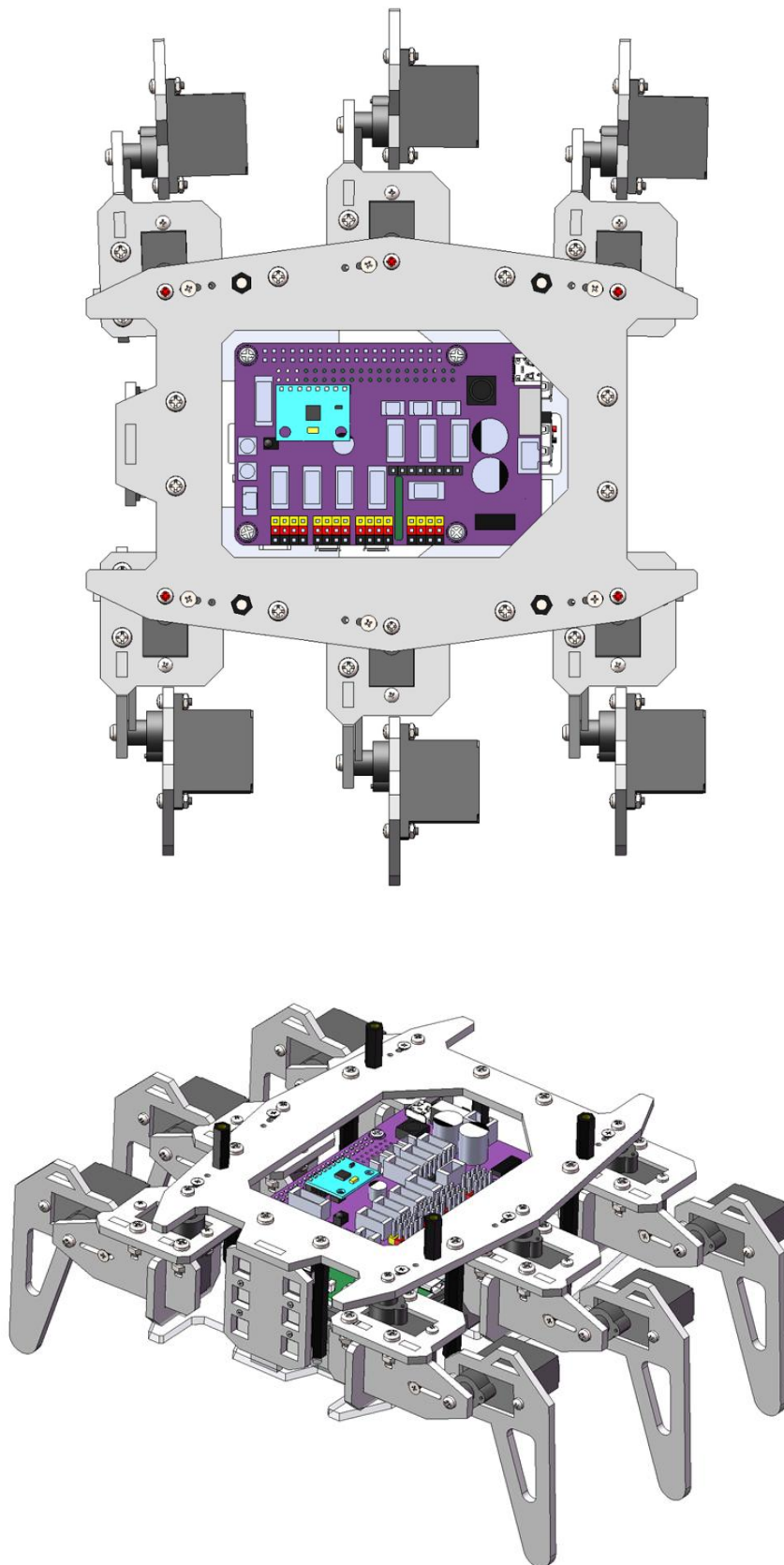


10. In the same way, use five **M2.5 × 8 Screws** to install the remaining robot legs. (Note: Fix the rocker arm at the angle depicted in the picture.)

Assemble the following components:

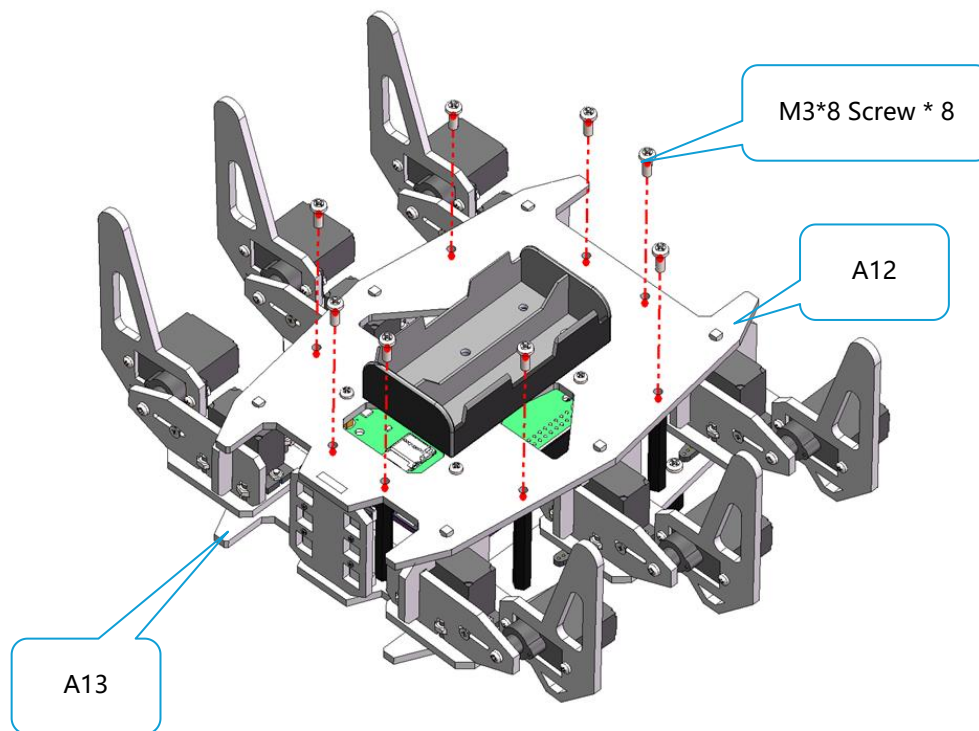


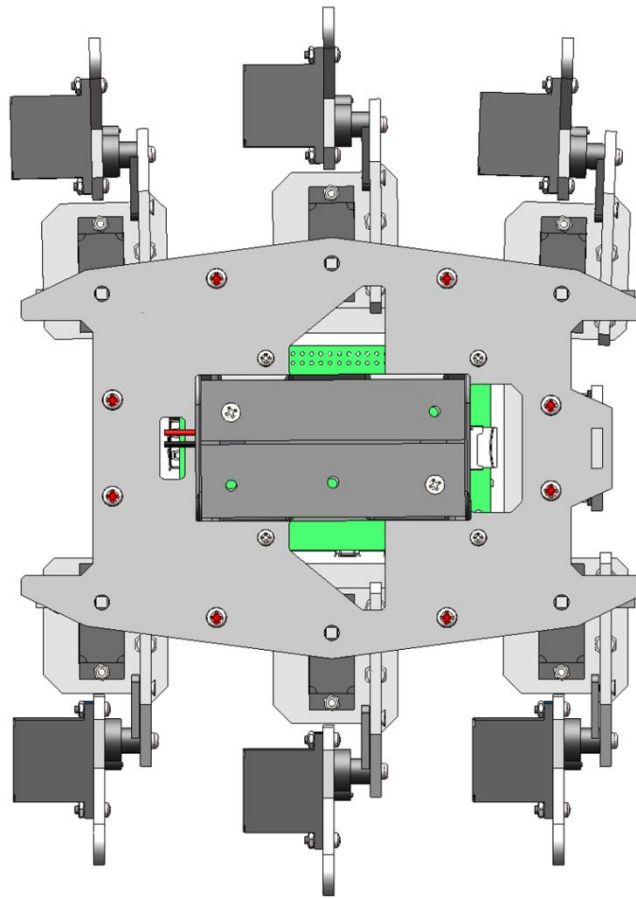




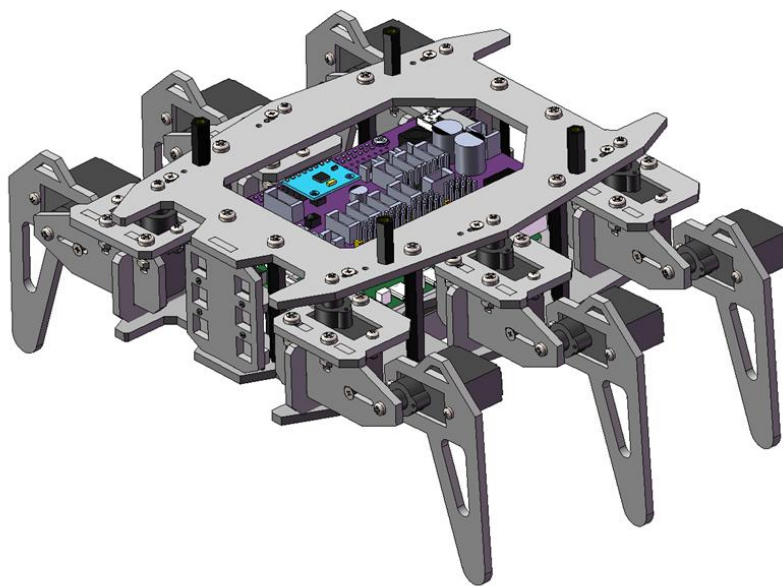
11. Use eight **M3*8 Screws** to fix the assembled parts **A12** and **A13** together.

Assemble the following components:

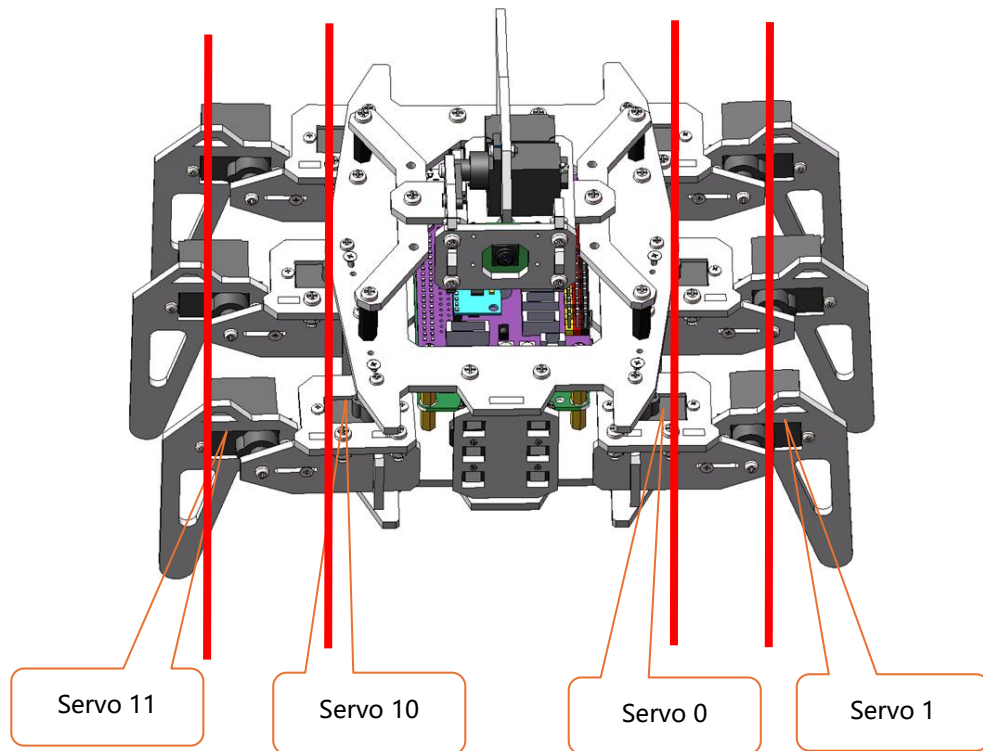




After Assembly:

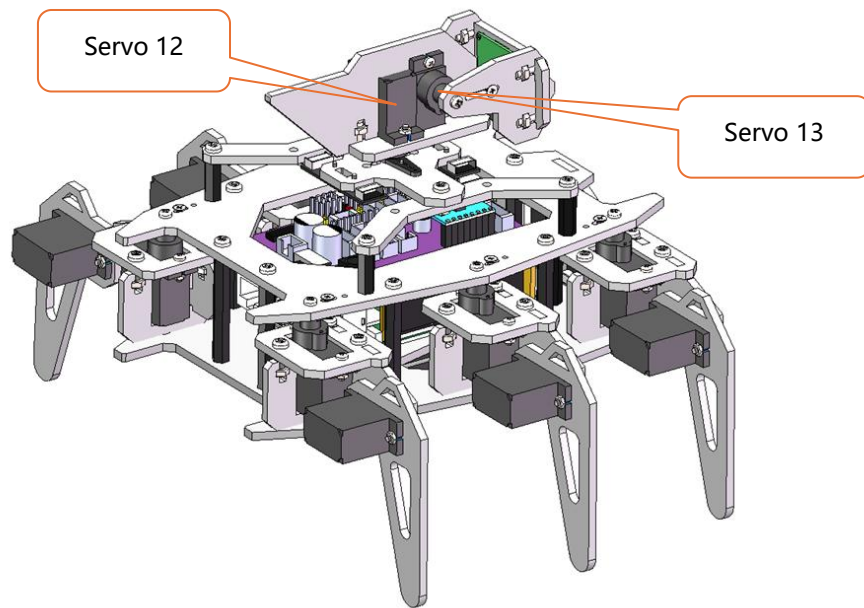


6.5 Assembly the Adeept Robot Control Board

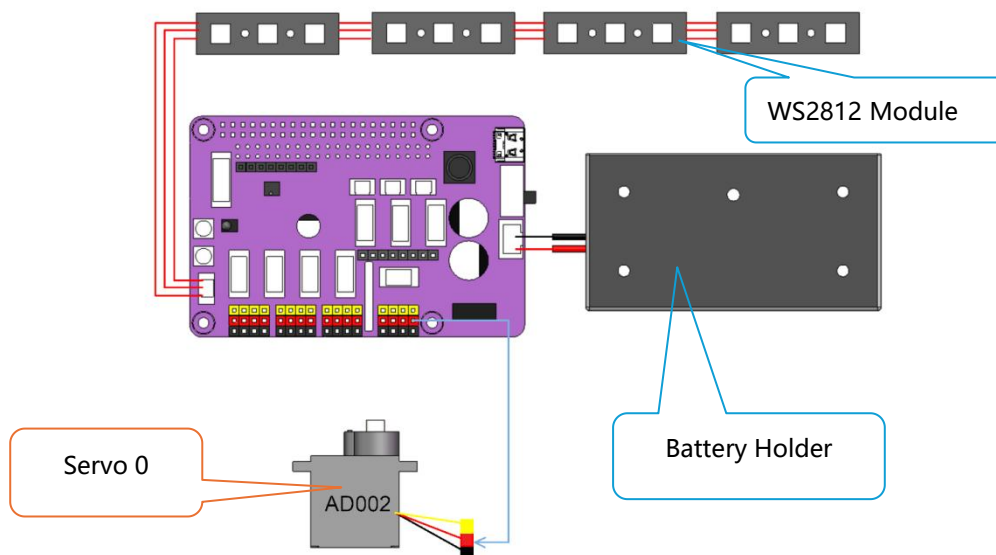


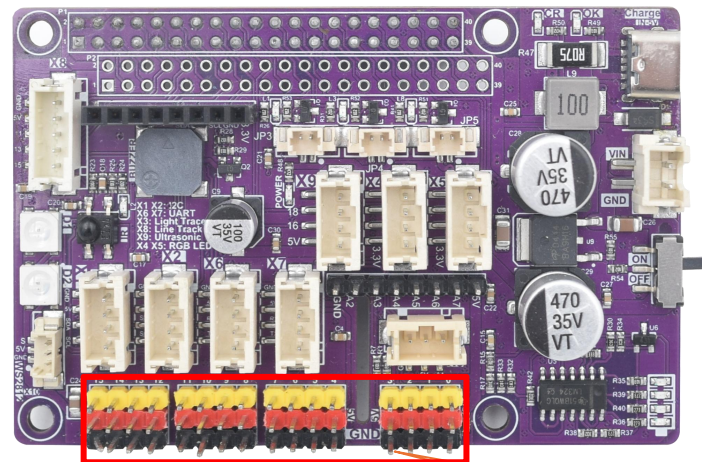
The corresponding PWM numbers of the driver board to the servos.

Servo 7	Servo 6	The body	Servo 4	Servo 5
Servo 9	Servo 8		Servo 2	Servo 3
Servo 11	Servo 10		Servo 0	Servo 1



Connect the components as shown in the figure. The cables must be matched with the ports.





CH0-15

Schematic Diagram of Servo Interface Numbers

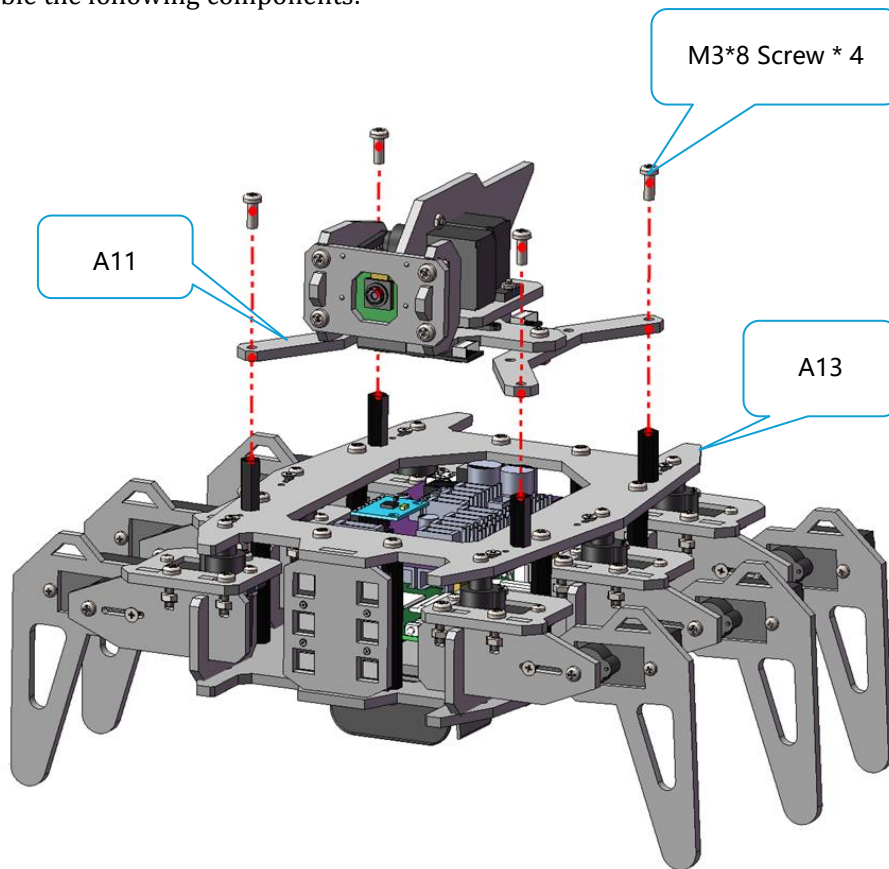
Servo 0	Servo 1	Servo 2	Servo 3	Servo 4
CH0	CH1	CH2	CH3	CH4
Servo 5	Servo 6	Servo 7	Servo 8	Servo 9
CH5	CH6	CH7	CH8	CH9
Servo 10	Servo 11	Servo 12	Servo 13	
CH10	CH11	CH12	CH13	

6.6 The Final Assembly of the Robot.

1. Fix the assembled part **A11** to the assembled part **A13** with four **M3*8 Screws**.

support@adeept.com

Assemble the following components:



After Assembly:

