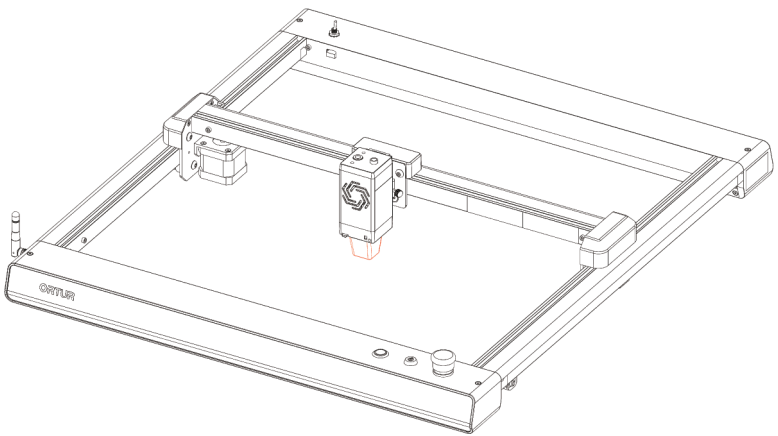
ORTUR



Laser Master 3

Assembly Manual

Navigation

Dear Customer:

Thank you for purchasing Ortur product and hope you have a good experience.
If you are having technical issues with our machine, we have a 24 hours team of customer support that would quickly address the problem.
Please visit our ticketing system at
https://ortur.tech/support
or email us at
support@ortur.tech

There is also a QR code for scanning to go to the ticketing system webpage.

Disclaimer and Safety Guidelines ⚠

1. The laser engraver could generate laser light. It is strictly forbidden to place any living body under the laser emission port (this port is marked with a yellow warning sign).

2. Patients with photosensitive epilepsy are prohibited from using or approaching the laser device.

3. When using the laser engraving machine, the operator and anyone near the machine must wear laser safety glasses. Do not operate the laser without glasses protection (laser goggles). Our machines come with a pair of safety goggles, but additional laser safety glasses can be purchased commercially.
Requirements for goggles: wavelength protection 400-445nm (+-5nm), outer diameter +5, minimum L-level L5.

4. When the laser engraver is working, the operator must pay close attention and not place it alone to prevent the engraved material from catching fire.
Please set up the laser engraver in a fireproof area and ensure good ventilation.
If possible, we recommend that you purchase a fire extinguisher and keep it close to the machine.

5. Using the laser engraver in a room that can be closed by a door, making sure that neither the laser beam nor stray light can penetrate the window.

6. When using the laser engraver, put the door sign or the warning light on the door to indicate that the laser engraver is running.

7. Make sure there is no flammable material near the laser engraver, we recommend put a fireproof mat under the machine.

8. Ensure adequate environment when operating the laser engraving. Engraving certain materials may generate fumes, which should be exhausted by a dedicated filtered exhaust.

9. When the machine is running, do not touch the laser beam or touch it with other objects, which may cause serious bodily injury or beam reflection.
Do not touch the radiator, you may burn your body and hands when the laser engraver just stops working.

10. Do not let children or teenagers use the laser engraver alone (especially children under the age of 14), adult supervision is required at all times.

11. For commercial use, using and registering with regulatory authorities and professional associations is mandatory.

12. The operating temperature range of the machine is -15℃ ~ 30℃.

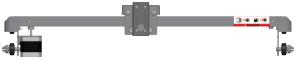
13. There would be a high risk of fire, when the laser irradiates the engraved object. If the laser engraver is working, it must be taken care of at all times by the skilled operator, who know how to use a fire extinguisher, so that any unexpected situations could be dealt with in time.

Airframe Parts

Front Assembly *1

Rear Assembly *1

Slideway of Left Y-axis *1



Assembly of X-axis *1

Slideway of Right Y-axis *1

Synchronized Belt *2

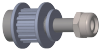
Laser Wire *1

Circuit Group *1

USB Cable *1

M4*8mm Screws *4

M3*6mm Screws *2



Idler Assembly *2

WIFI Aerial *1

M4 Set Screws *2

2mm Allen Key *1

3mm Allen Key *1

Wrench *1

Testing Acrylic *1

Testing Woods *4

2.5mm Allen Key*1

Laser Goggle *1

Brush *1

Cable Ties *10

Testing
Aluminium Flake *1

Power Adapter *1

Card Reader +
TF Card *1

Machine Key *1

YRR Motor Wire *1

Laser Module

LU2-10A
Laser Module *1

Laser Shield *1

Air Flow Regulator *1

Air Pipe *1
(OD:6mm
ID:4mm)

Pipe Connector *1

Thumb Screw *1

Air Assist *1

Assemble the Machine

1.0 You need the following parts ready

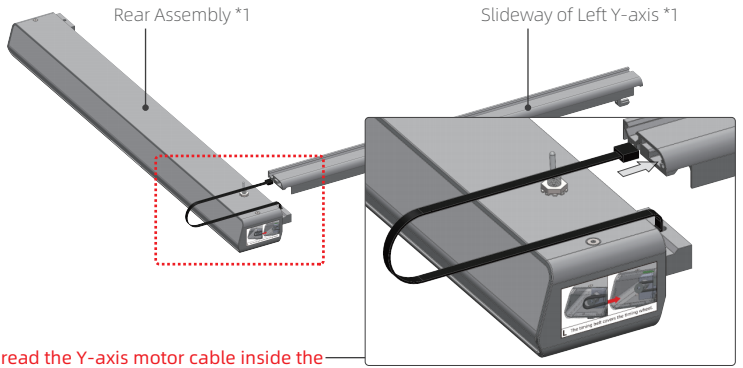
Rear Assembly *1

M4*8mm Screws *2

Slideway of Left Y-axis *1

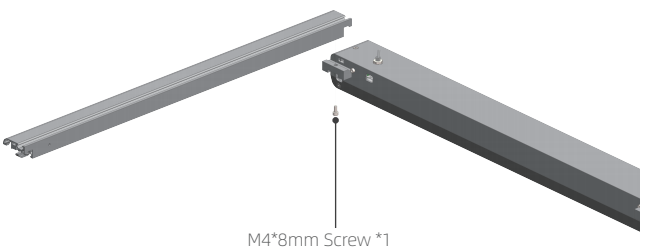
Slideway of Right Y-axis *1

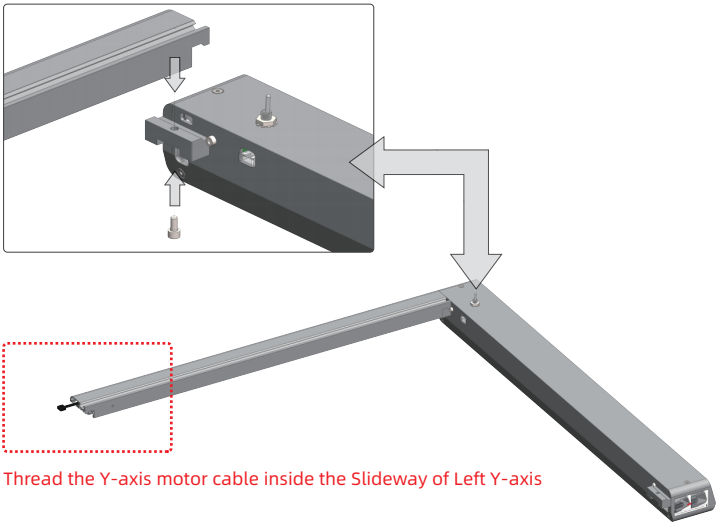
1.1



Thread the Y-axis motor cable inside the Slideway of Left Y-axis

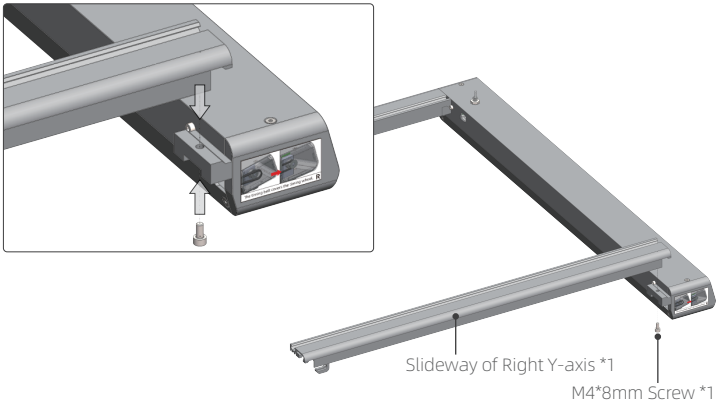
1.2





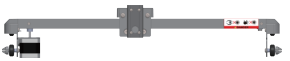
Thread the Y-axis motor cable inside the Slideway of Left Y-axis

1.3



2.0 You need the following parts ready

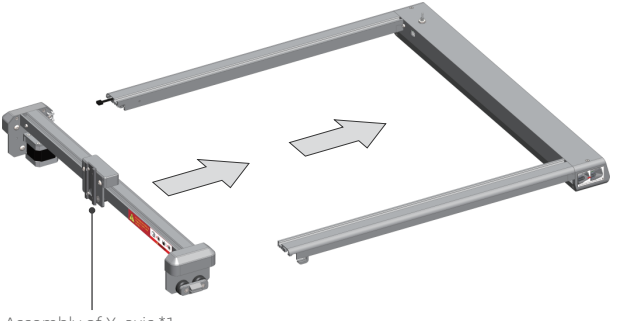
Front Assembly *1



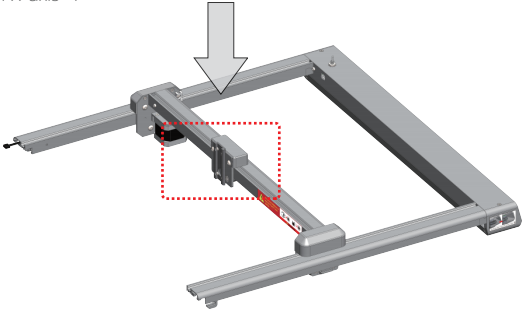
Assembly of X-axis *1

M4*8mm Screws *2

2.1

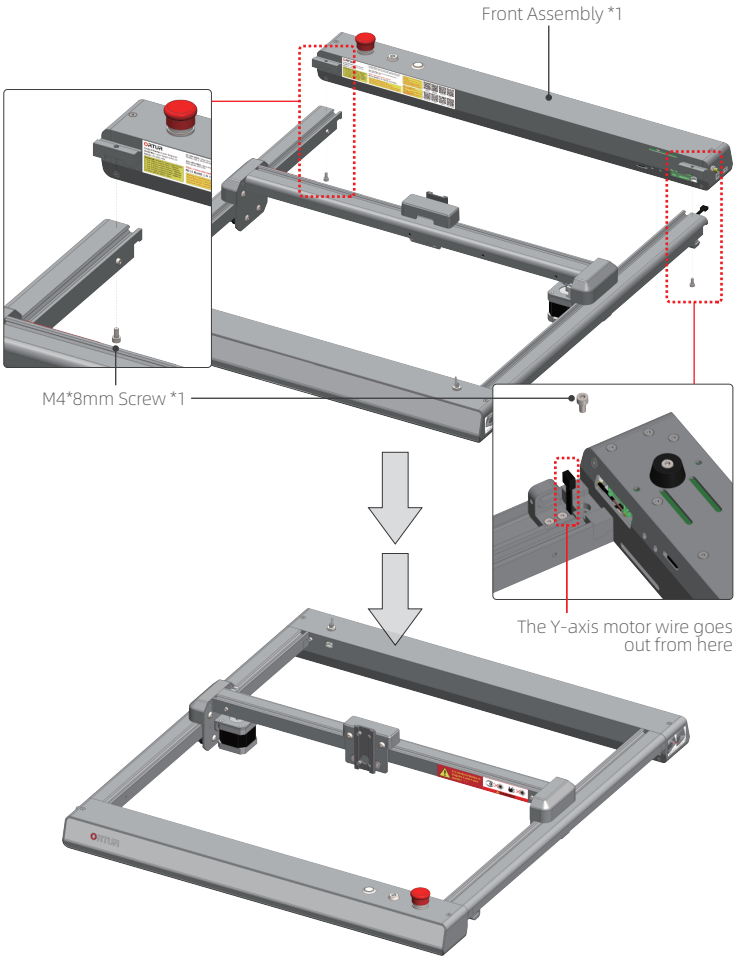


Assembly of X-axis *1



Pay attention to the installation direction of the X-axis assembly

2.2



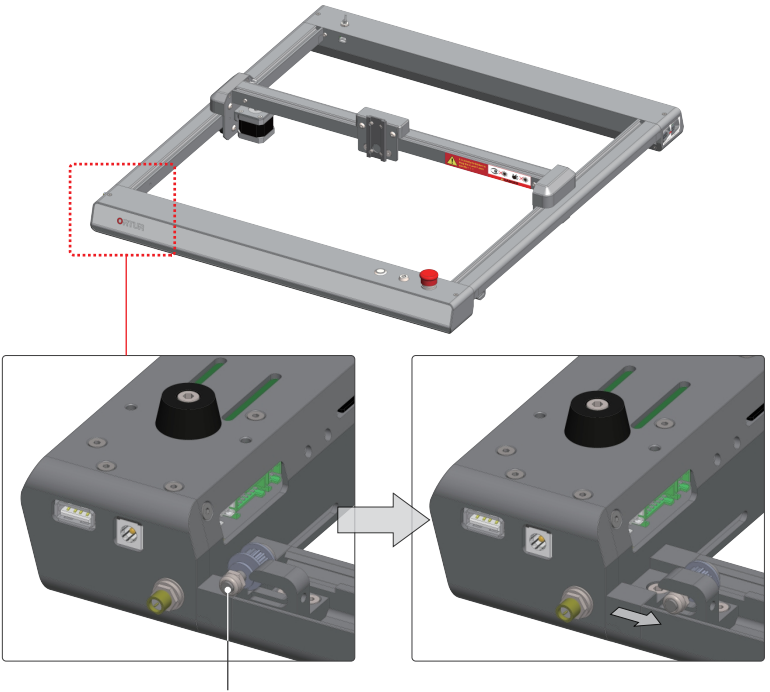
3.0 You need the following parts ready

Synchronized Belt *2

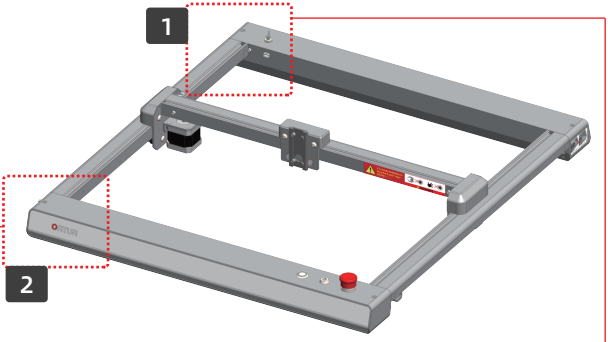
Idler Assembly *2

M4 Set Screws *2

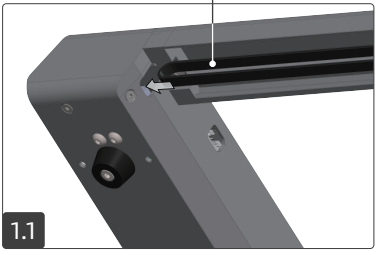
3.1

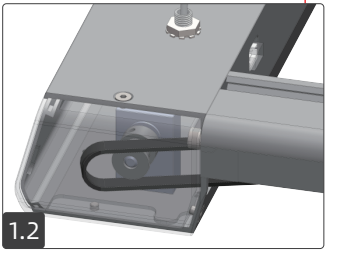


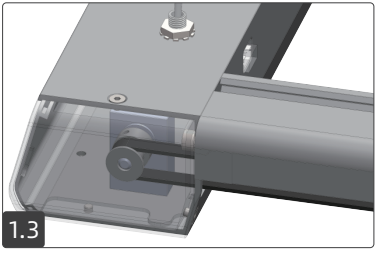
3.2

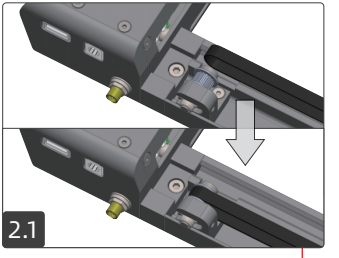


Synchronized Belt *1



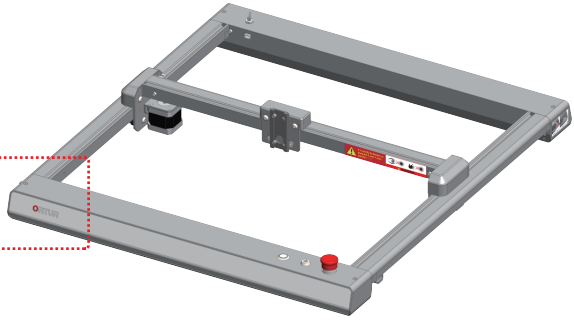


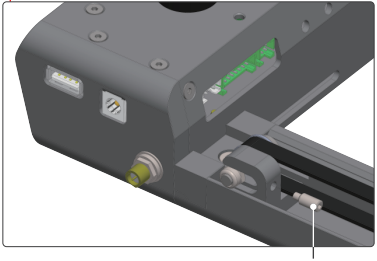




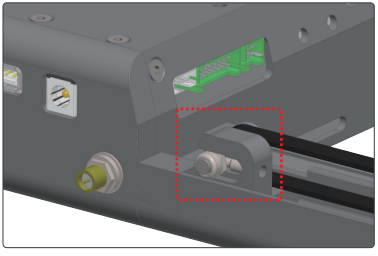
The installation steps of the synchronous belt on the left and right sides are the same

3.3

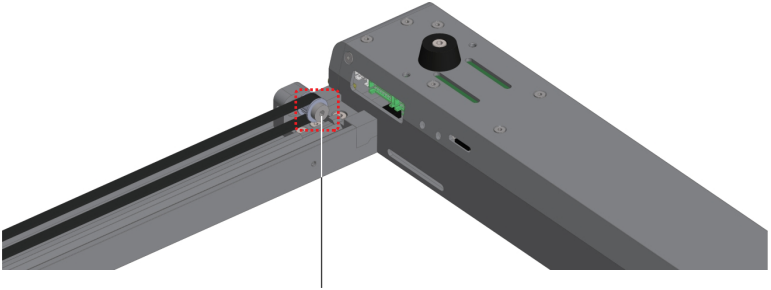




M4 Set Screw *1



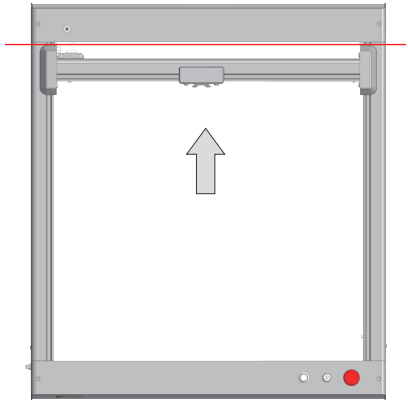
Here is the best position for tension



After the timing belt is tightened, use a 3mm Allen key to lock the idler pulley assembly

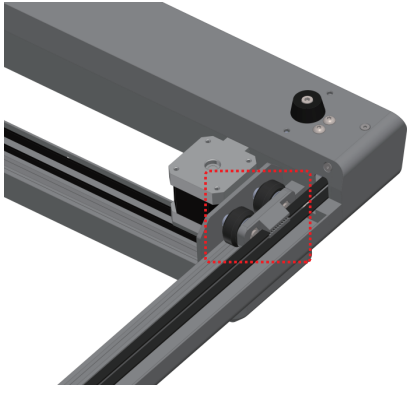
The installation steps are the same for the left and right sides

3.4



Push the X-axis assembly to the rear limit point

3.5



The installation steps are the same for the left and right sides

4.0 You need the following parts ready

WIFI Aerial *1

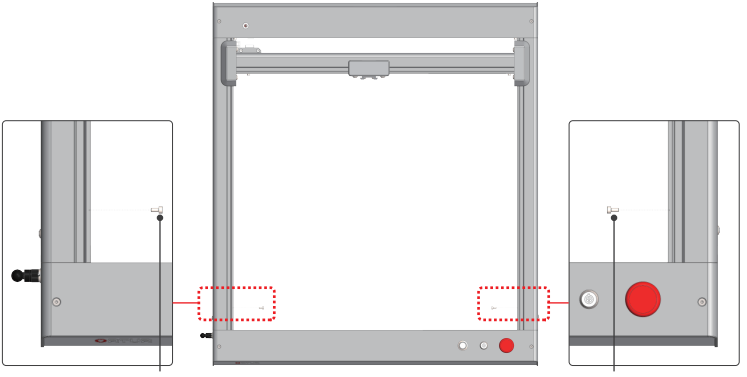
M3*6mm Screws *2

2.5mm Allen Key *1

4.1

WIFI Aerial *1

4.2



M3*6mm Screw *1

M3*6mm Screw *1

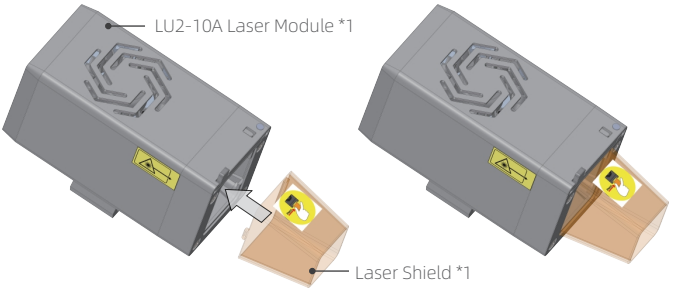
5.0 You need the following parts ready

LU2-10A Laser Module *1

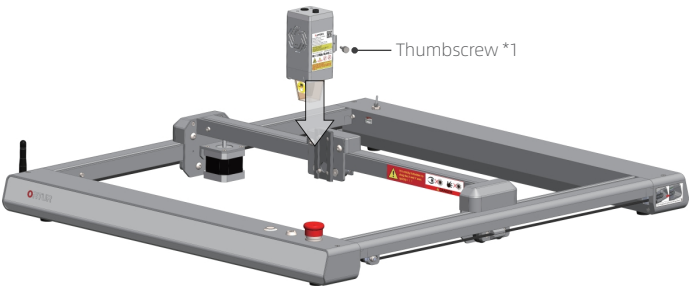
Laser Shield *1

Thumbscrew *1

5.1

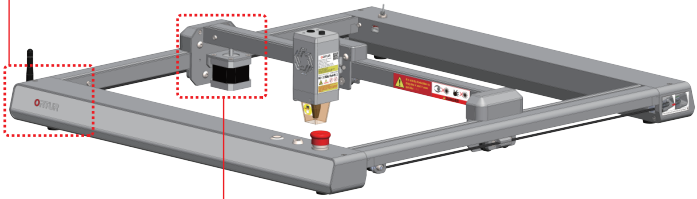


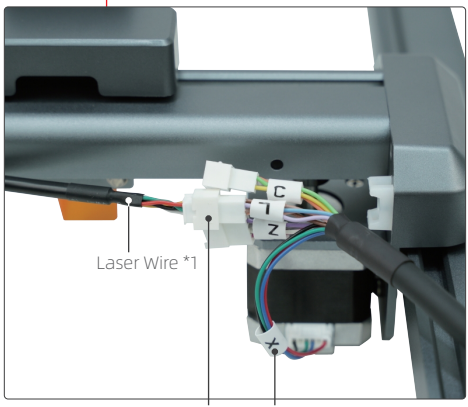
5.2



6.0 Connect Wire

Y-axis Motor Cable / Circuit Group *1

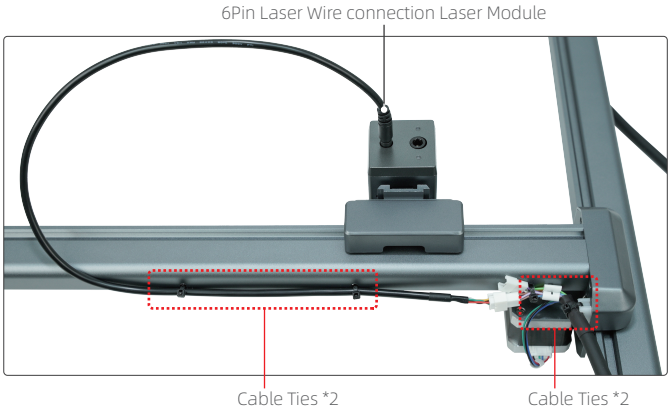


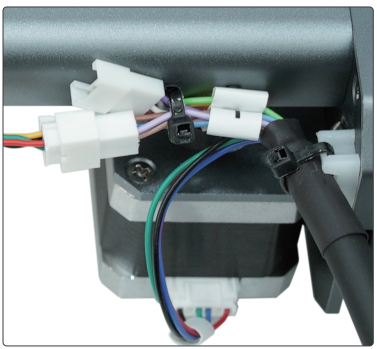


Laser Wire *1

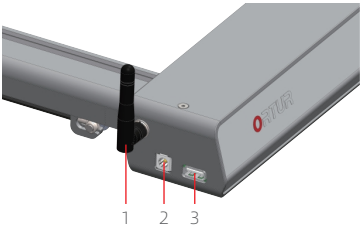
Laser Wire connected to L line

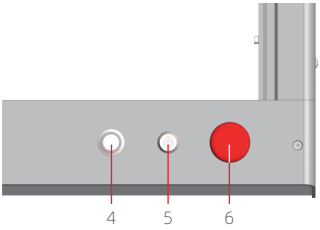
X connected to X-axis motor

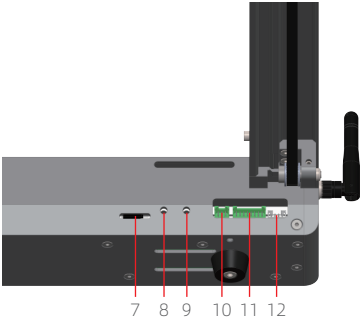

6Pin Laser Wire connection Laser Module
Cable Ties *2
Cable Ties *2

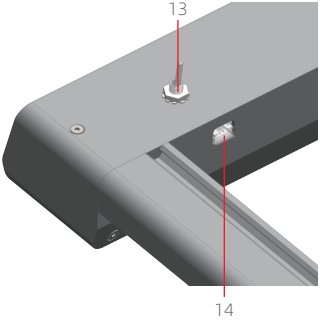


7.0 Port Description





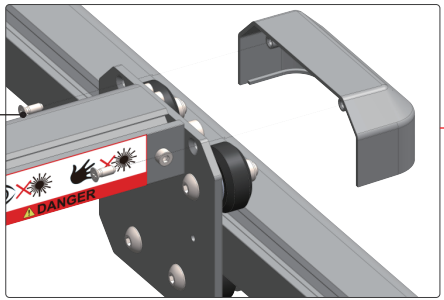




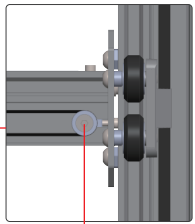
1. WIFI Aerial
2. Power Input
3. USB Port
4. Main Power Button (Status Light)
5. Key Switch
6. Emergency Stop Button
7. TF-card
8. Upgrade Button (for Upgrading Firmware)
9. Reset Button
10. Input and Output Ports
11. Harness Interface
12. Y-axis Motor Interface
13. YRR Transfer Switch
14. YRR Motor Wire Port

8.0 Adjustment of rollers and timing belts

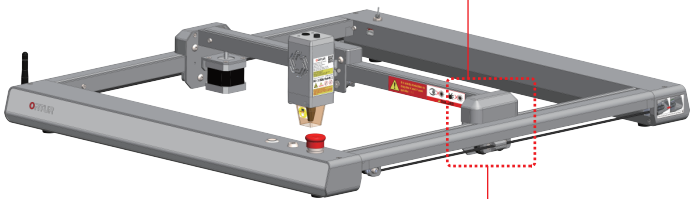
8.1 The factory has been adjusted to the best position, if you need to adjust, please follow the steps below

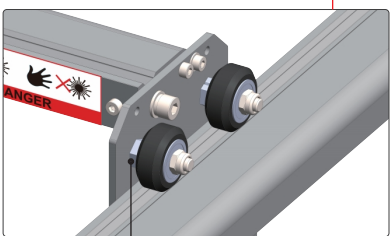


Remove the screws, then remove the cover



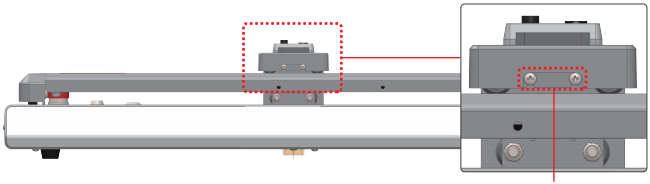
Loosen the screw, adjust the tightness of the belt, and then retighten the screw to fix it



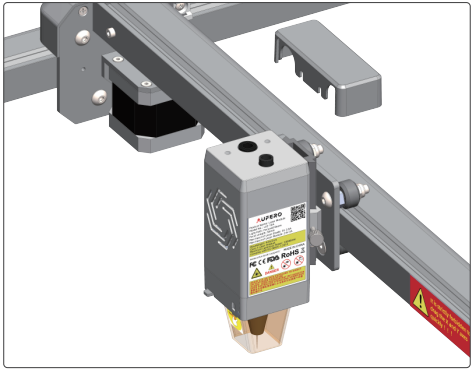


Use a wrench to adjust the eccentric nut to adjust the gap between the wheel and the profile (same on the other side)

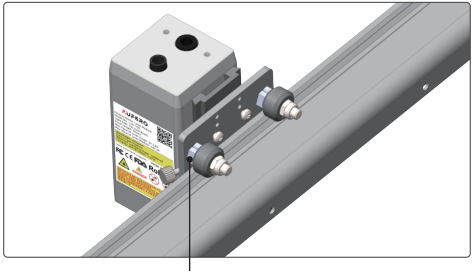
8.2



Loosen the screw



Remove the cover



Use a wrench to adjust the eccentric nut to adjust the gap between the wheel and the profile