

**ORTUR**



**Laser Master 3**  
Assembly Manual

## Navigation

Disclaimer and Safety Guidelines	3
Packing List	4
Assemble the Machine	6
Port Description	18
Adjustment of Rollers and Timing Belts	19

**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](mailto: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°C ~ 30°C.
13. The flame sensor is provided to keep our equipment as safe as possible and no warranty, written or implied, is made as to the availability or functionality of the flame sensor.

## 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



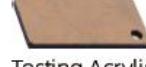
2mm Allen Key \*1



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



YRR Motor Wire \*1



Power Adapter \*1



Card Reader +  
TF Card \*1



Machine Key \*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



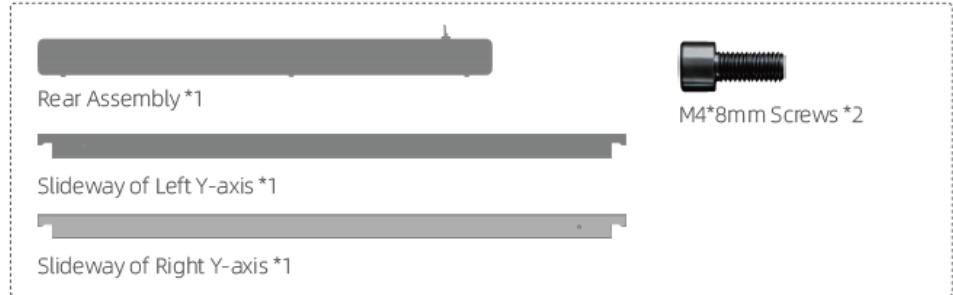
Thumb Screw \*1



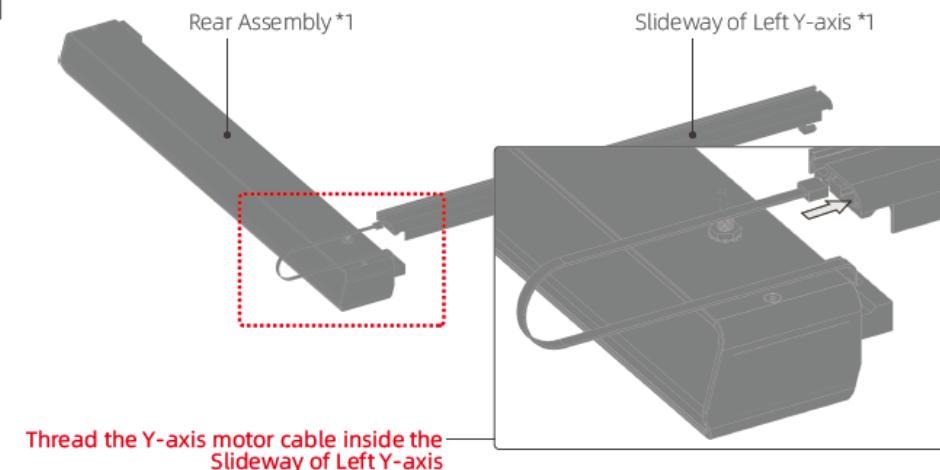
Air Assist \*1

## Assemble the Machine

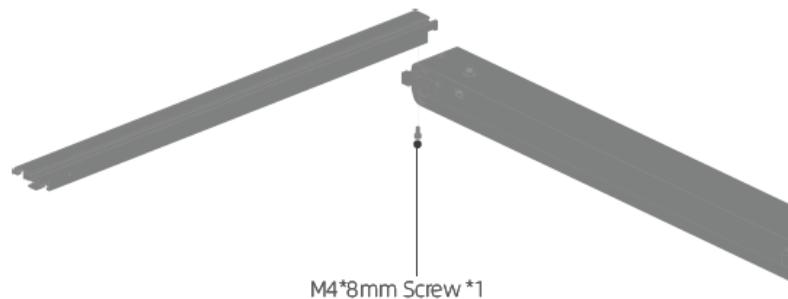
1.0 You need the following parts ready



1.1

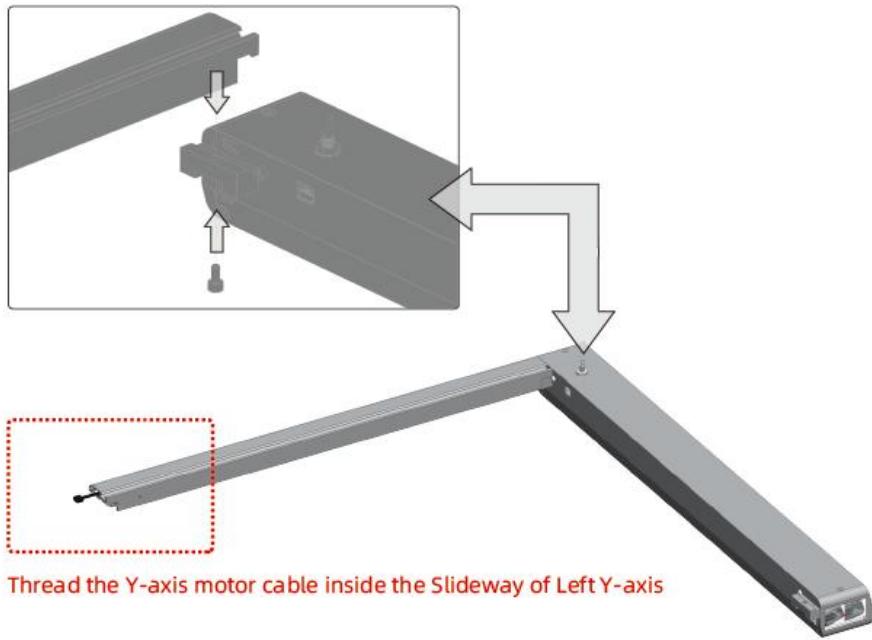


1.2

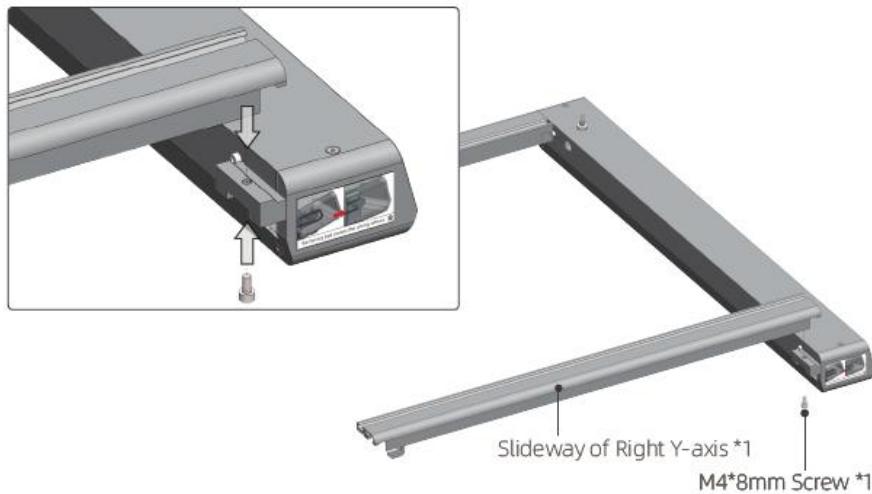


EN

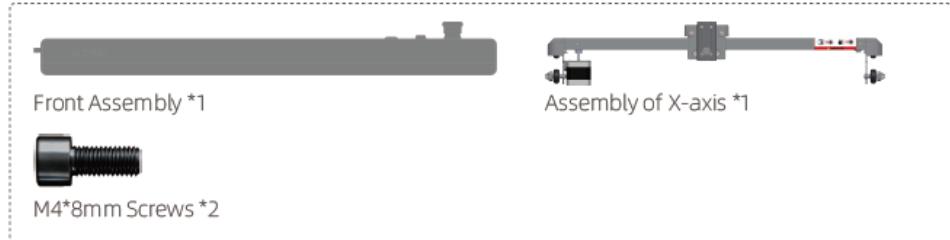
© 2022 ORTUR 6



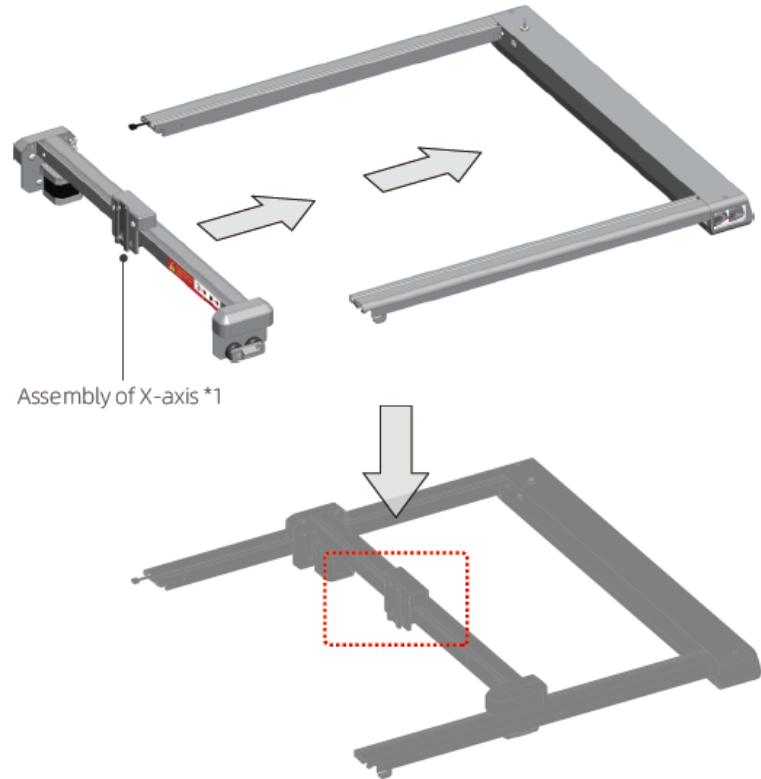
1.3



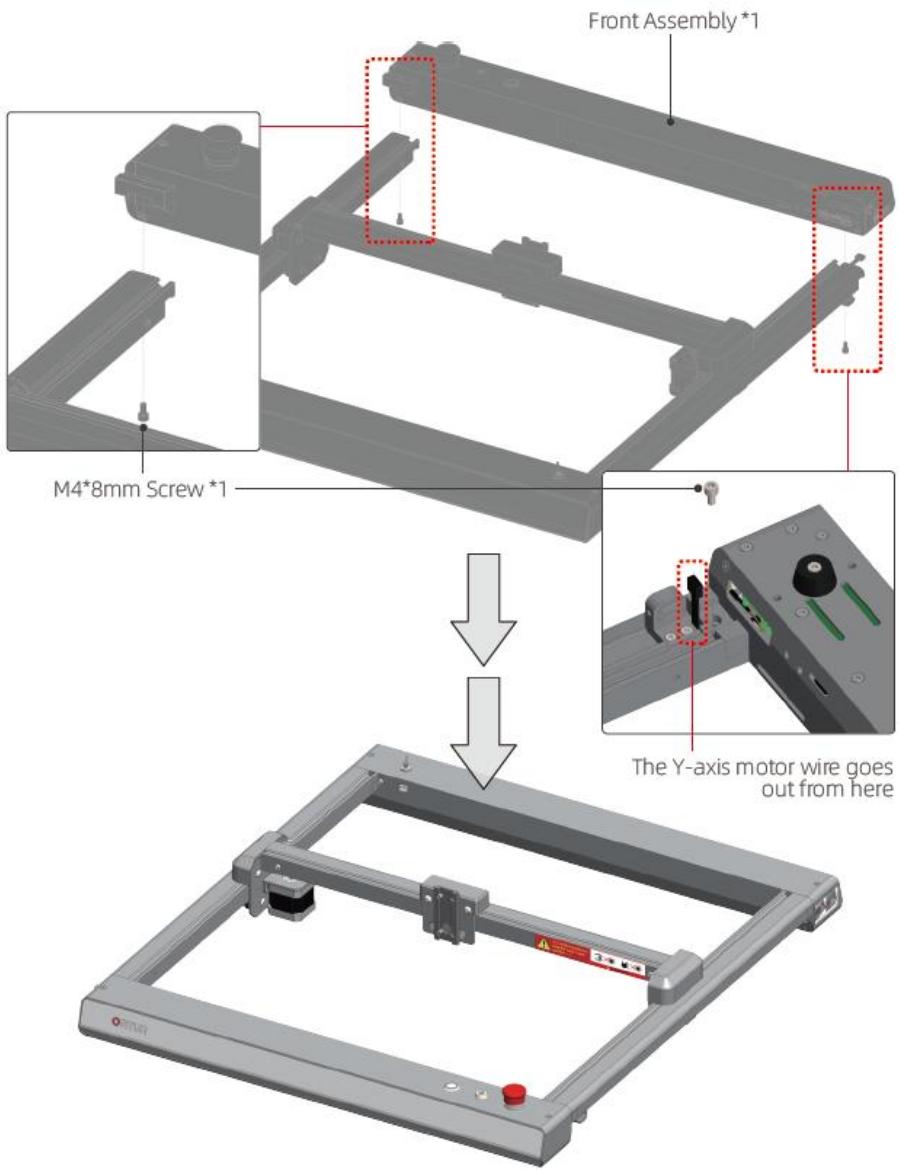
## 2.0 You need the following parts ready



## 2.1



2.2



3.0 You need the following parts ready



Synchronized  
Belt \*2



M3\*6mm  
Screws \*2

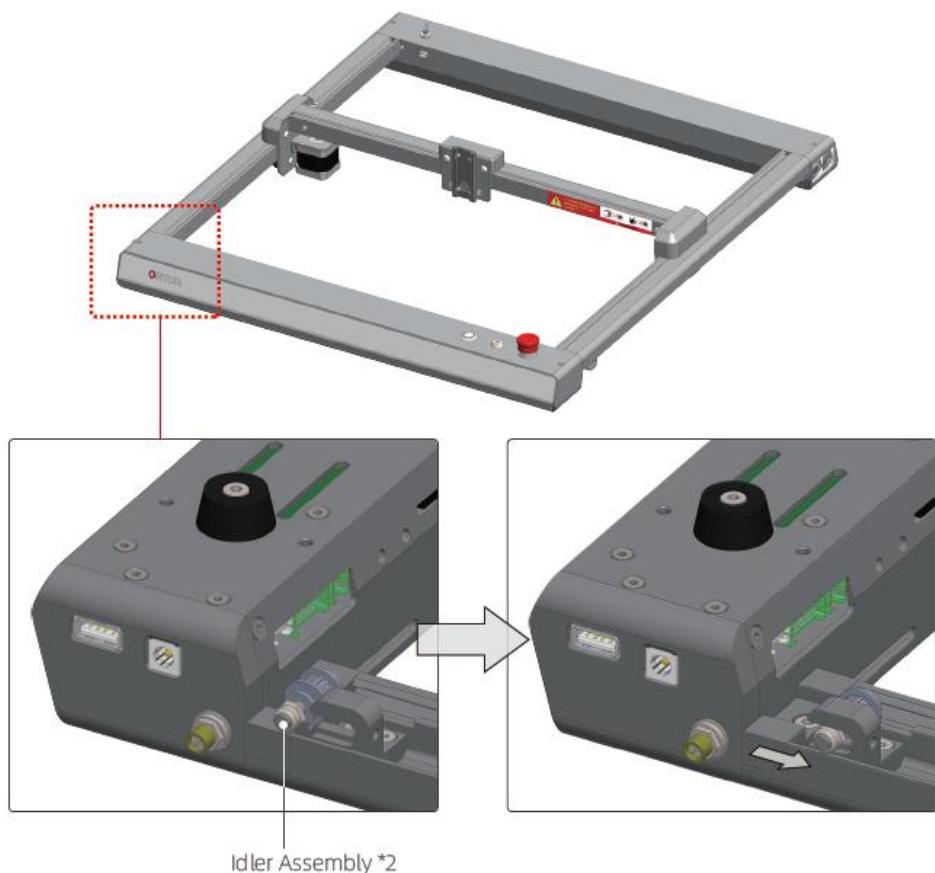


Idler Assembly \*2

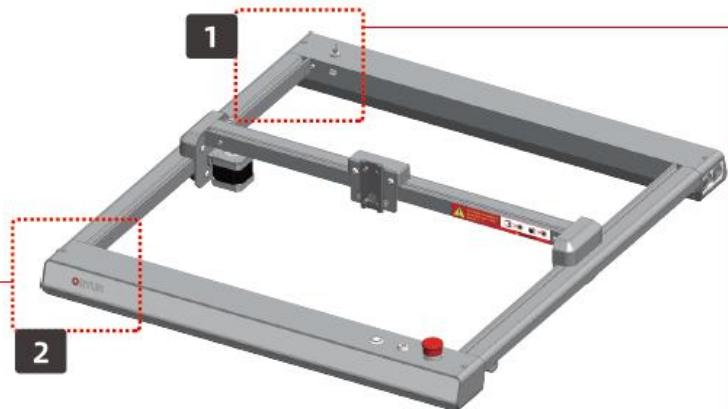


M4 Set Screws \*2

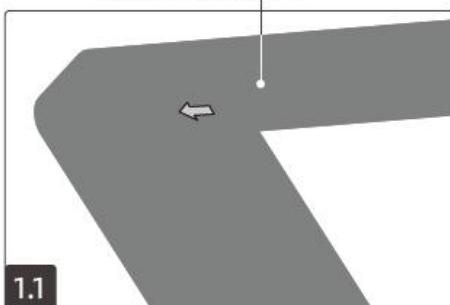
3.1



3.2



Synchronized Belt \*1



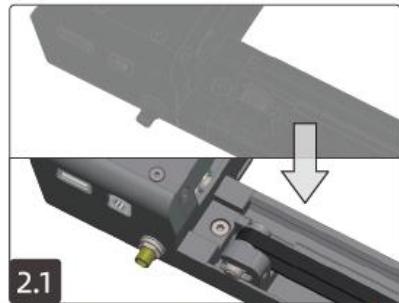
1.1



1.2



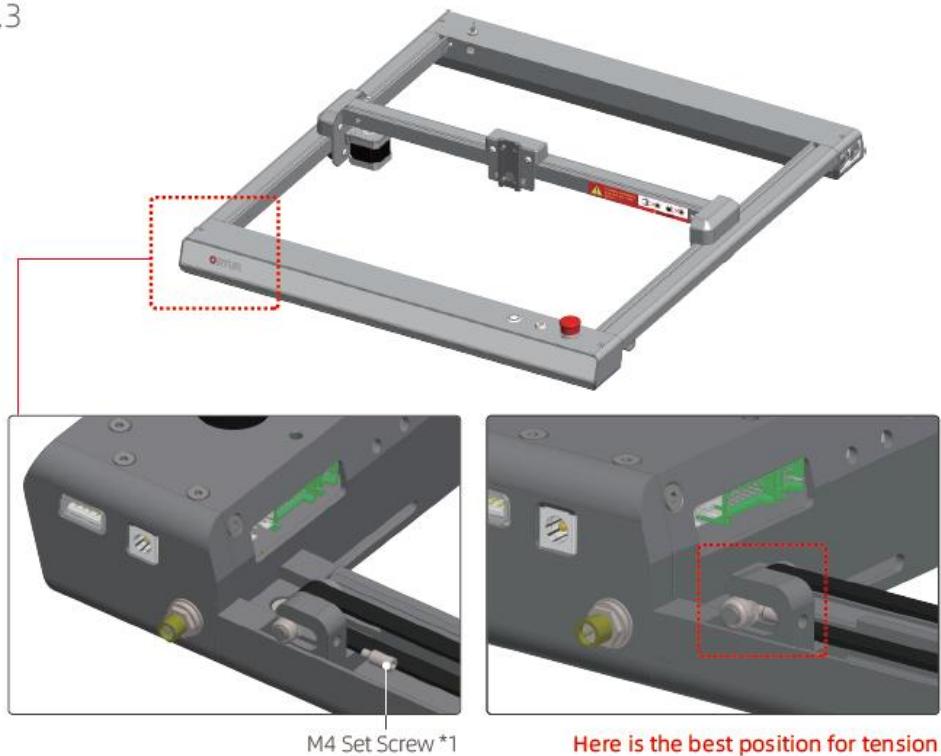
1.3



2.1

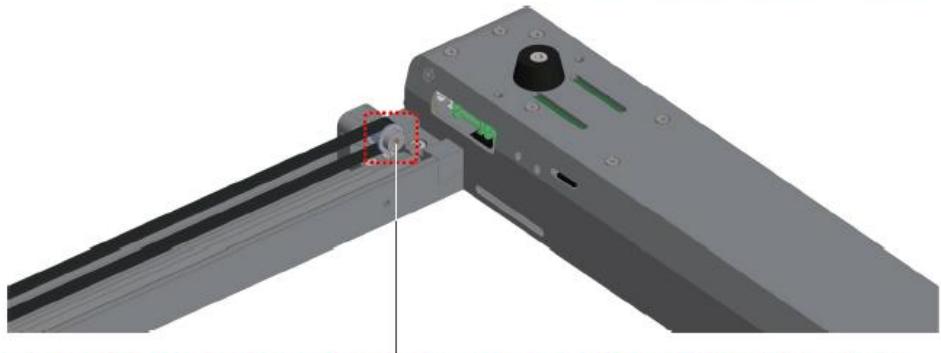
The installation steps of the synchronous belt  
on the left and right sides are the same

3.3



M4 Set Screw \*1

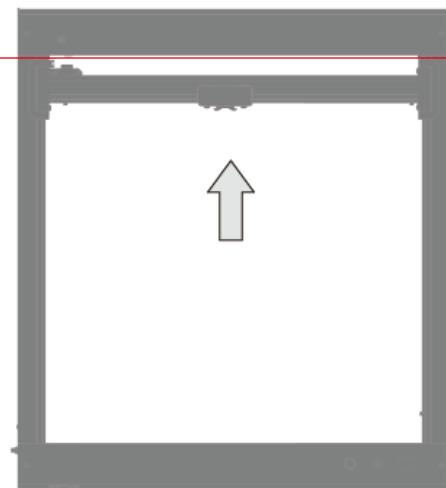
Here is the best position for tension



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

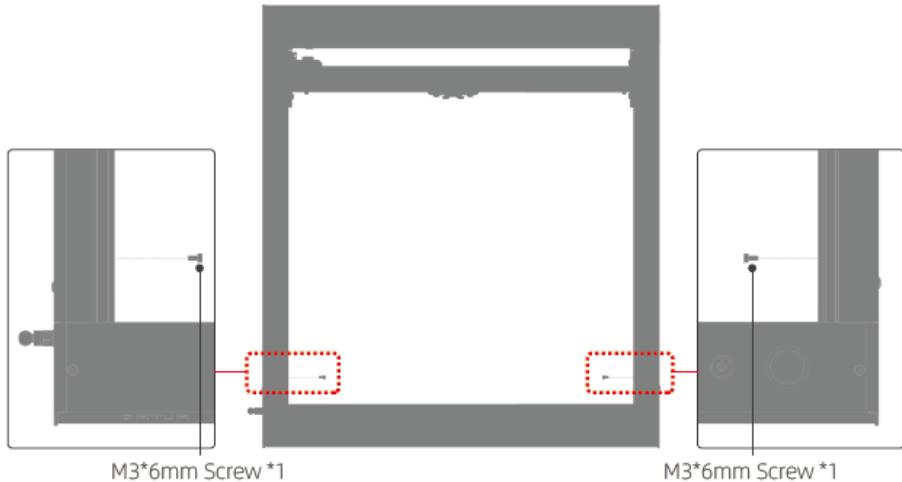
#### 4.0 You need the following parts ready



#### 4.1



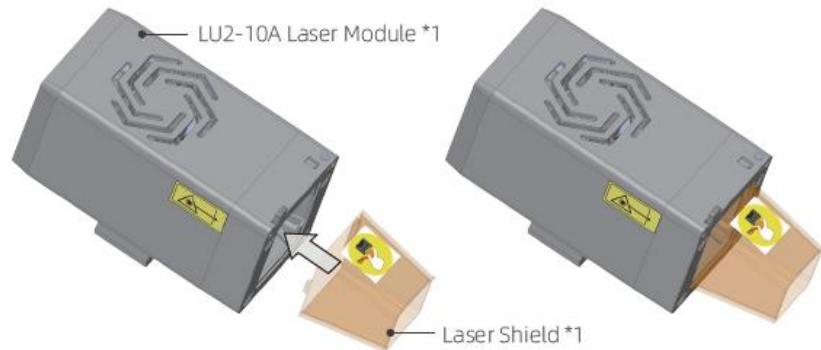
#### 4.2



## 5.0 You need the following parts ready



### 5.1



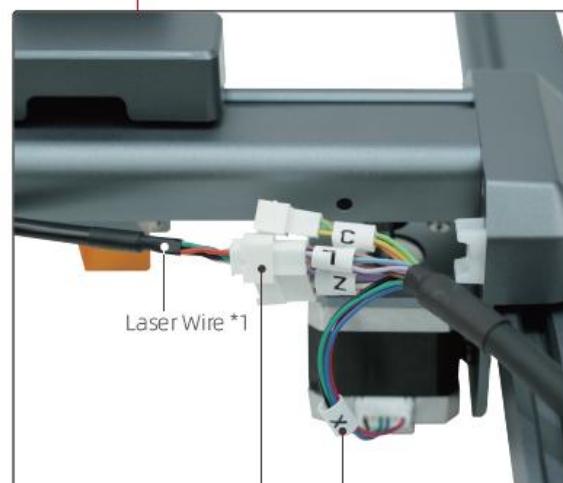
### 5.2



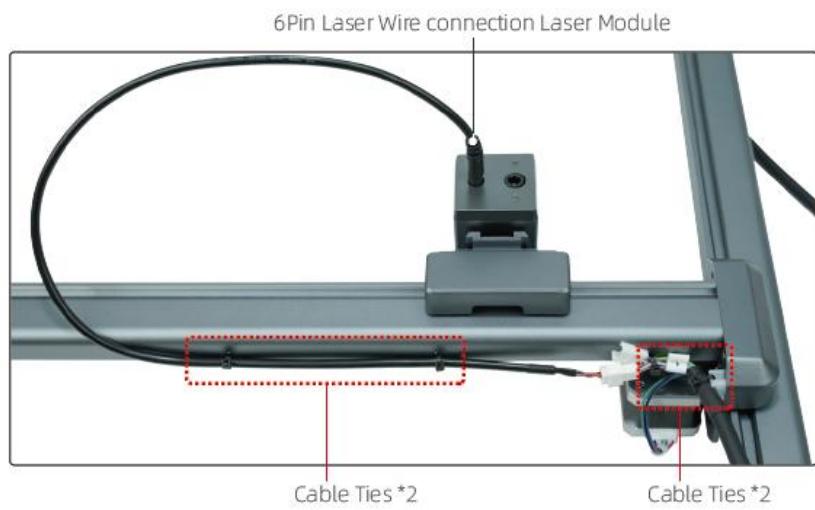
## 6.0 Connect Wire



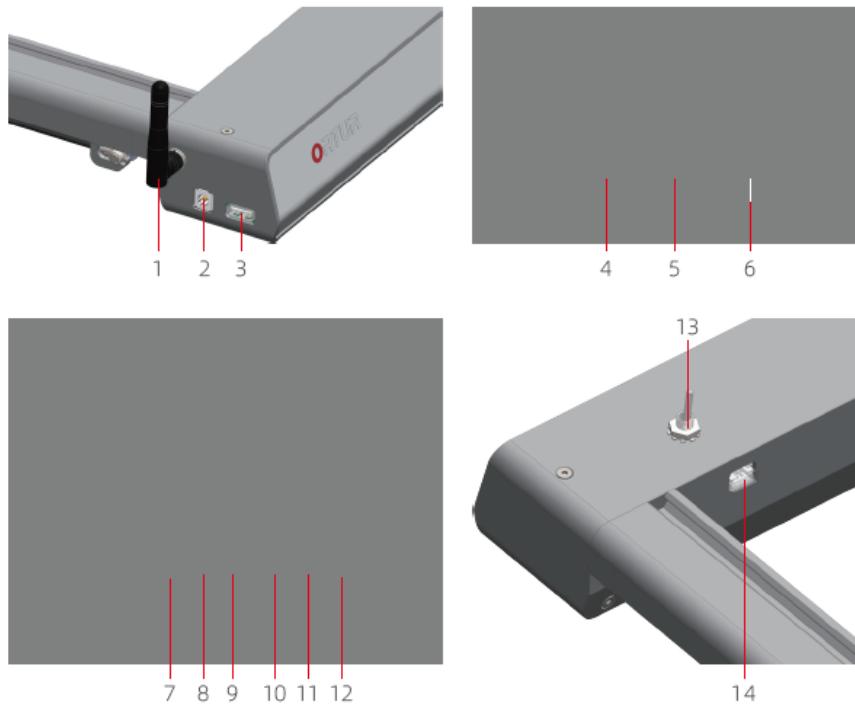
Y-axis Motor Cable / Circuit Group \*1



Laser Wire connected to L line      X connected to X-axis motor



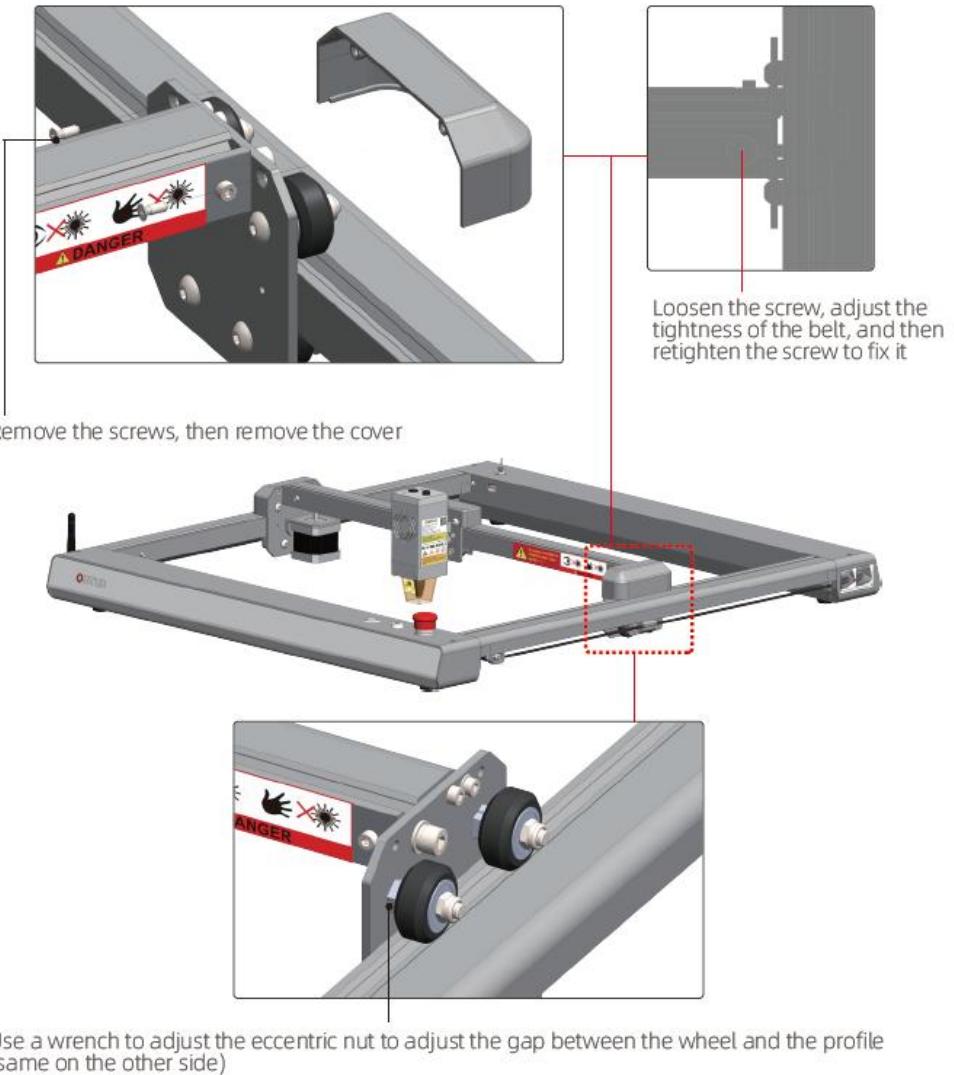
## 7.0 Port Description



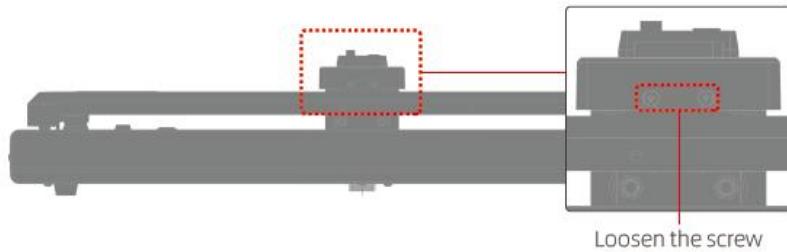
1. WIFI Aerial	8. Upgrade Button (for Upgrading Firmware)
2. Power Input	9. Reset Button
3. USB Port	10. Input and Output Ports
4. Main Power Button (Status Light)	11. Harness Interface
5. Key Switch	12. Y-axis Motor Interface
6. Emergency Stop Button	13. YRR Transfer Switch
7. TF-card	14. YRR Motor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

## 8.0 Adjustment of rollers and timing belts

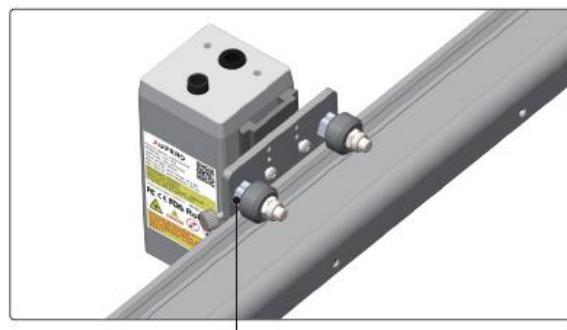
### 8.1



8.2



Remove the cover



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

**FCC Warning Statement**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC Radiation Exposure Statement**

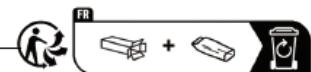
The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located for operating in conjunction with any other antenna or transmitter.

**(EN) Address:**

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Dongguan Ortur Intelligent Technologies Co.,Ltd.



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