

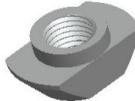
# Installation of Core-XY-Head 3D Printer



## 1 product assembly

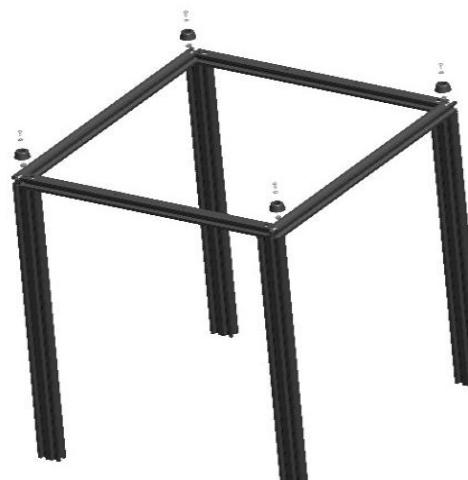
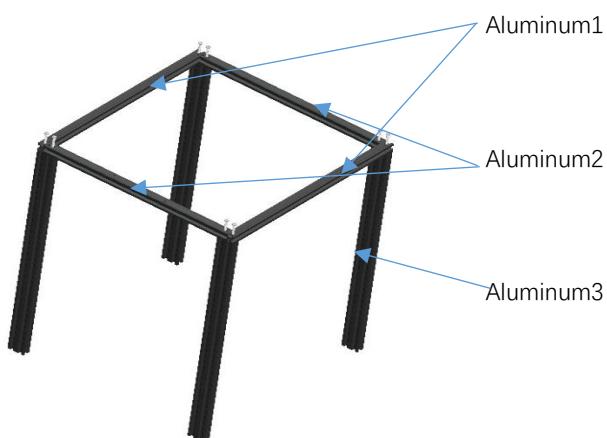
### Step 1: assemble the underframe

#### Assembly material specification and quantity:

						
Aluminum1 20*20*530 4pcs	Aluminum2 20*20*460 2pcs	Aluminum3 20*40*530 4pcs	Foot padΦ 26*12 4pcs	screwsPM5* 25 12pcs	screwsPM4* 9 4pcs	spacerM4 4pcs
						
boat nutsM4 4pcs						

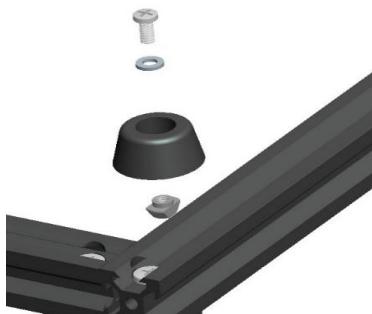
1. Take Aluminum1, 2 pieces, Aluminum2,2 pieces, Aluminum3,4 pieces, assemble them in the direction shown, and fasten them with 8 screws of PM5\*25.

Note: before locking the screws, align the edges of the aluminum profile vertically.



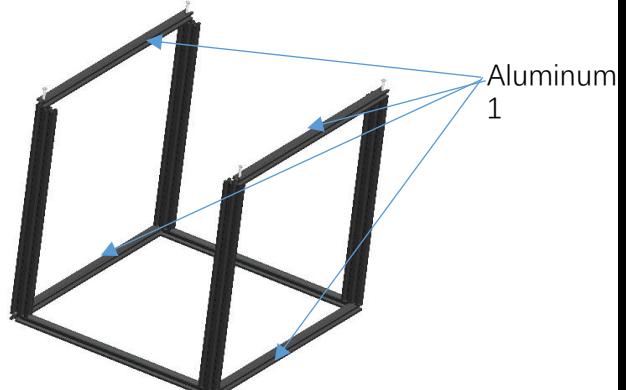
2. Take the Foot pads, spacer M4, screw PM4\*9 and boat nut M4, assemble them in the order shown, and lock them on the aluminum profile 1, about 20mm away from the end.

Assembly technique of M4 boat nuts: first, align the M4 nut with the aluminum profile groove and put it into the aluminum profile groove. Unscrew with the screwdriver and release the M4 boat nut to cross the aluminum profile inner groove and then screw it forward.



3. Take Aluminum1 2pcs, assemble them in the direction shown, and screw them with 4 screws of PM5\*25.

Note: do not lock the screw tightly to facilitate subsequent adjustment.



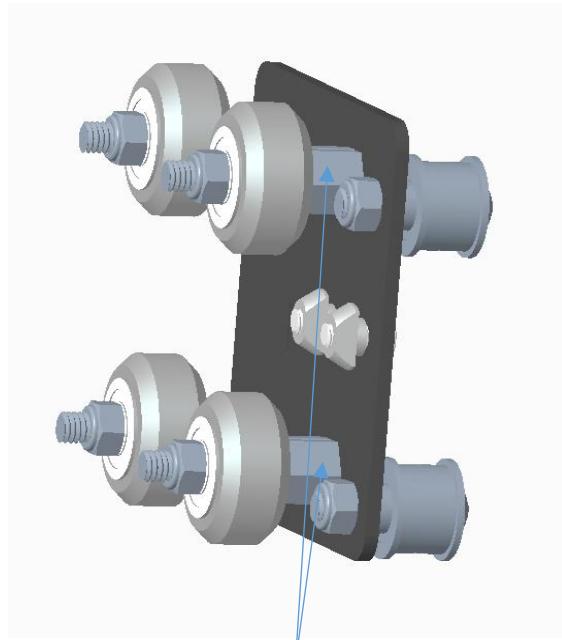
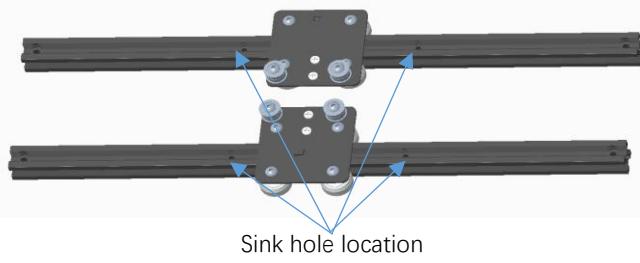
## Step 2: install the sliding plate

Assembly material specification and quantity:

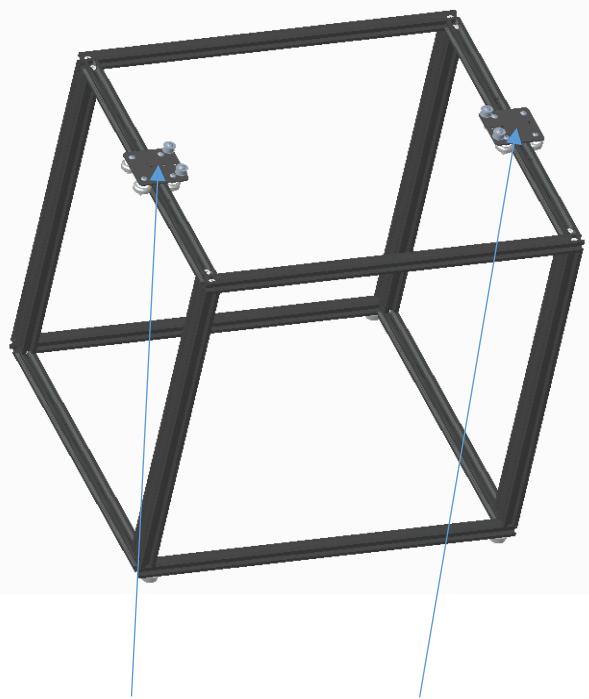
underframe 1pcs	left sliding plate components 1pcs	right sliding plate components 1pcs	Aluminum2 20*20*460 2pcs	screwsPM5* 25 4pcs	boat nutsM4 4个	screwPM4*8 4件

1. Take Aluminum2 2pcs and insert the left and right components of the slide respectively, as shown in the figure. Screw on 4 screws PM4\*8 and 4 boat nuts M4.

Note: the pulley is on the side without holes, and the skateboard is on the side with four holes.



The eccentric nut clearance adjustment

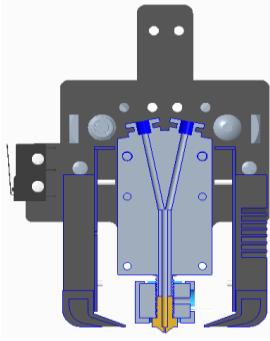
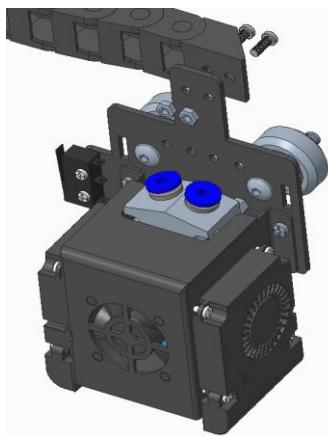


### Step 3: print head installation

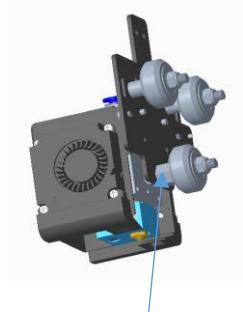
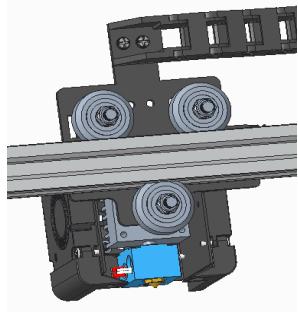
Assembly material specification and quantity:

frame 1pcs	Aluminum4 20*20*484 1pcs	print head component(incl drag chain) 1pcs	boat nutsM4 4个	nuts M3 4pcs	drag chain riser 1pcs	screws PM3*8 2pcs	screws PM3*16 2pcs	screws PM4*12 2pcs

1. As shown in the figure, put 2 PM3\*8 screws through the drag chain, A shaft bracket, and lock them with 2 nut M3.



2. Insert aluminum4 into the print head assembly, as shown in the figure. The eccentric nut clearance adjustment



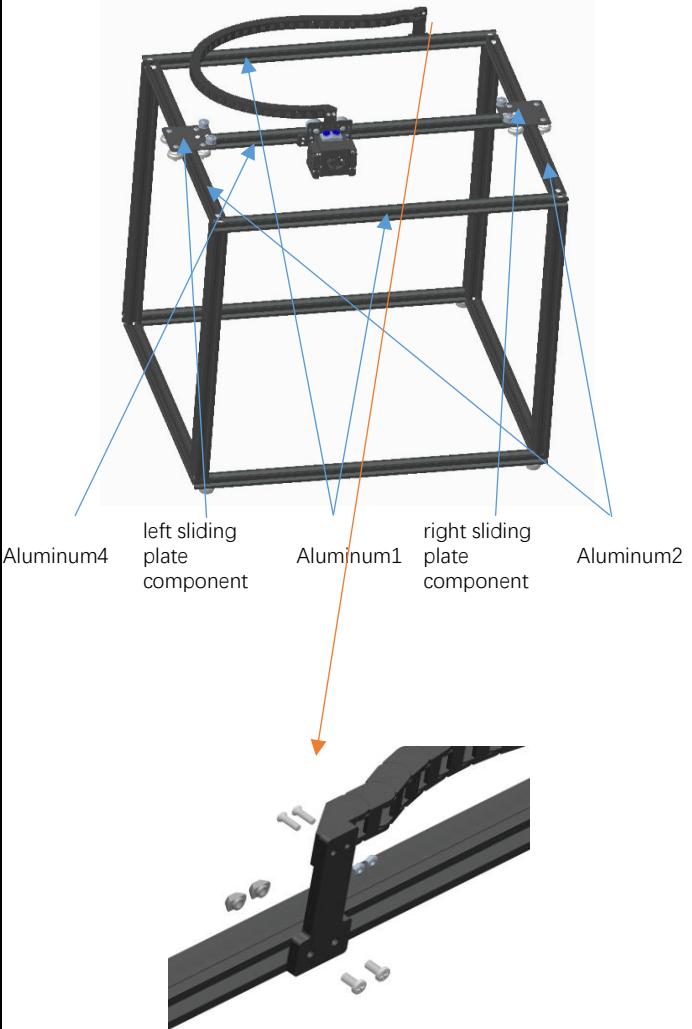
The eccentric nut

3. The aluminum 4 components, in the left side of the chassis components of the boat nut, screw screws on the sliding plate PM4 \* 8, as shown, move aluminum4, move and flexible, locking PM4 \* 8 screws, move aluminum 4 again, move and flexible, locking in aluminum 1/2 PM5 \* 25 screw, move aluminum 4 again, confirm the move and flexible. Otherwise, please adjust it repeatedly to ensure that the slide table moves flexibly and without clearance shaking after locking the screw.

Note: aluminum4 ends and aluminum profile 2 are 3mm apart.

Assembly technique of M4 boat nuts: first, align the M4 nut with the aluminum profile groove and put it into the aluminum profile groove. Unscrew with the screwdriver and release the M4 boat nut to cross the aluminum profile inner groove and then screw it forward.

Align the chain holes, as shown in the figure, with 2 PM3\*16 screws through and 2 M3 nuts locked; Thread 2 PM4\*12 screws through the drag chain riser, screw 2 boat nut M4 through the aluminum groove, and lock the screw PM4\*12.

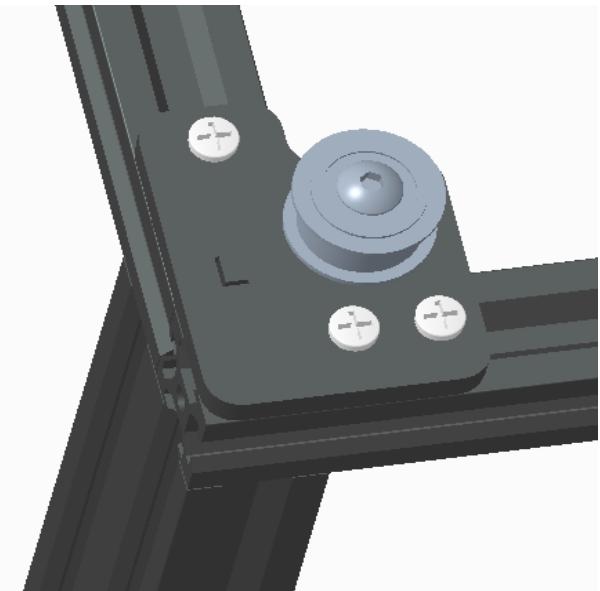


#### Step 4: installation of XY motor components and over-wheel installation

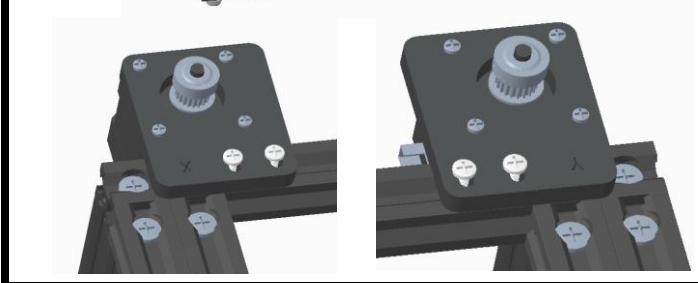
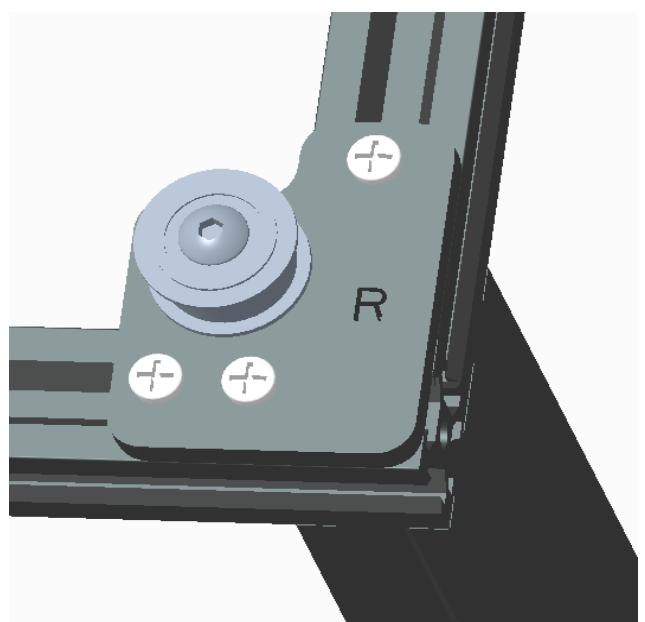
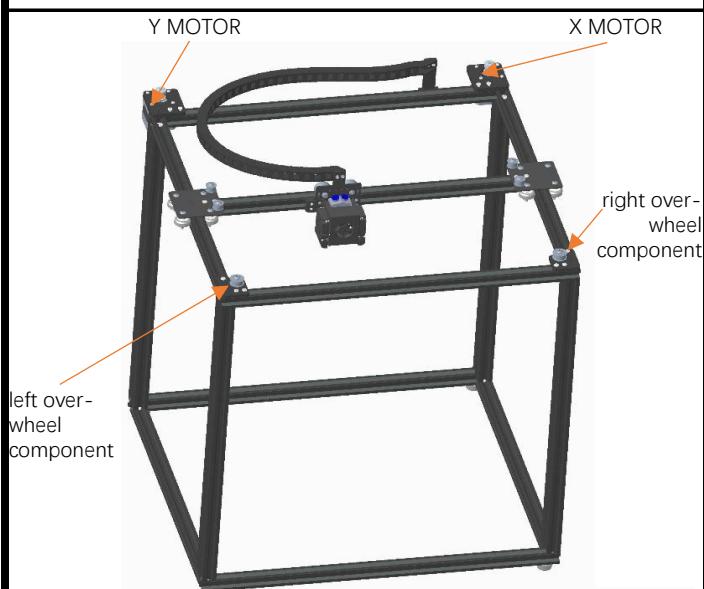
Assembly material specification and quantity:

underframe component 1pcs	screwsPM4*8 6pcs	motor 2pcs	Y motor plate 1pcs	X motor plate 1pcs	right over-wheel component 1pcs	left over-wheel component 1pcs	boat nutsM4 10pcs	screwsPM4*12 4pcs	screwsPM3*10 8pcs

1. Take 1 motor and 1 piece of Y motor board, align them at the position as shown in the figure, use 4 screws of PM3\*10, screw into the motor and fasten them, use 2 screws of PM4\*12 through the acrylic board, and screw on 2 ship type nuts M4. Similarly, assemble X motor component 1 as shown.



1. Place the X/Y motor component, left/right via wheel component, and fix it on the aluminum profile with boat nut M4 according to the position shown. Align the edge.

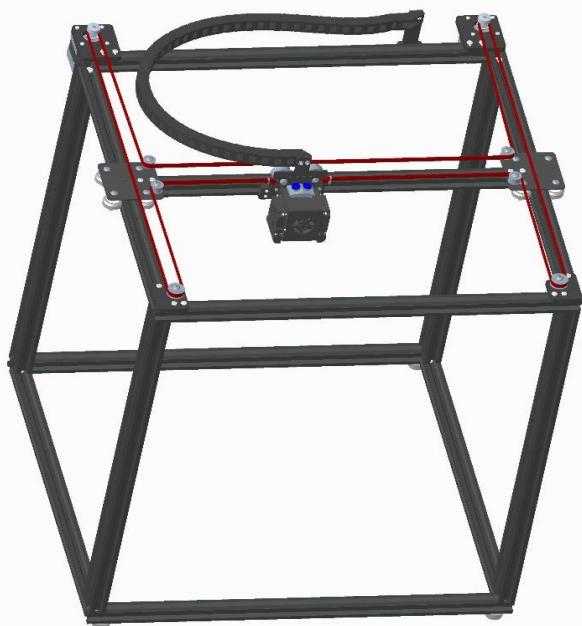


## Step 5: assemble the belt

Assembly material specification and quantity:

								
frame 1pcs	belt 2pcs	Tie 4pcs						

1. Move the belt through as shown, wrap the motor gear on the rack surface, and determine the belt trend. Press the slide plate against the motor bottom plate and fasten it with the tie belt at the lower end of the sheet metal groove of the print head assembly. Loosen the motor baseplate screw, pull the motor assembly outward, tighten the belt (do not force too much), and lock the screw.



X MOTOR

Y MOTOR

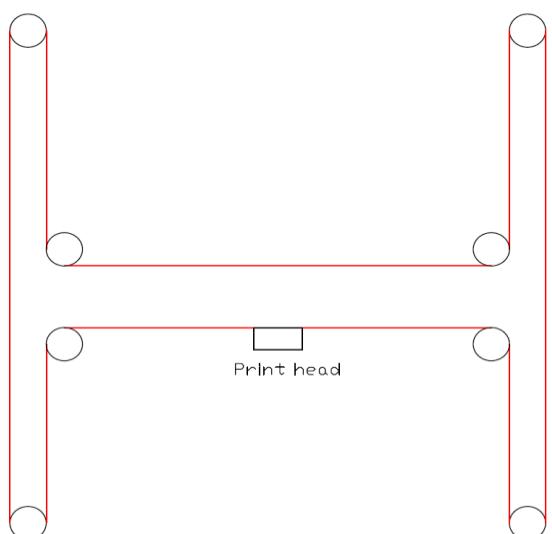
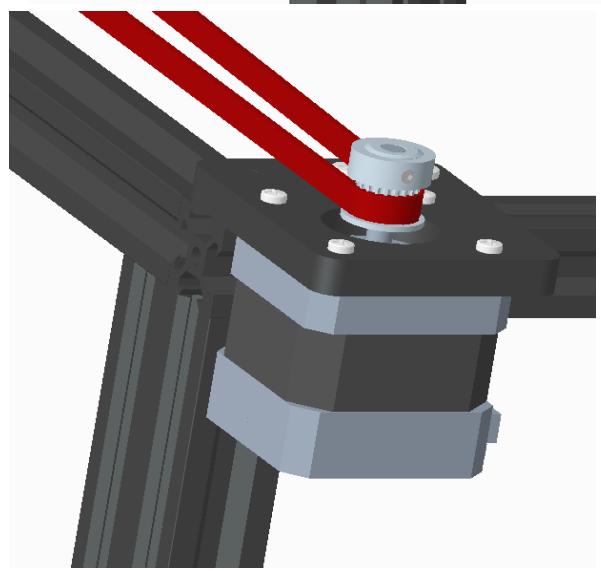
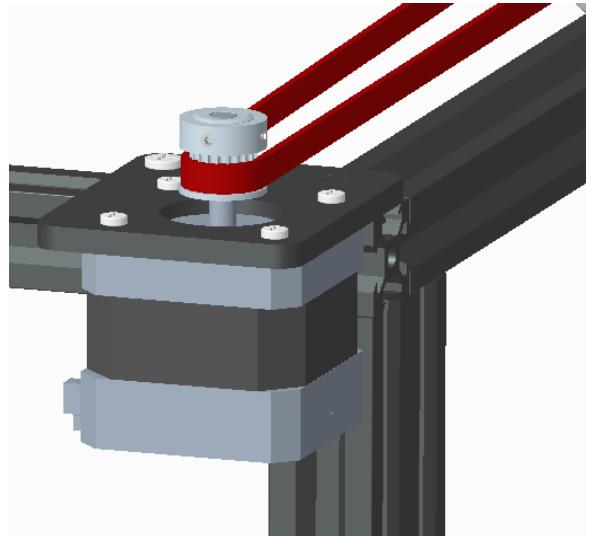
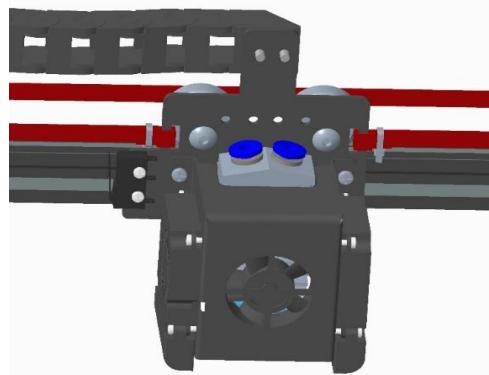
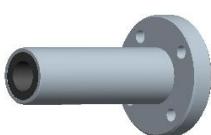
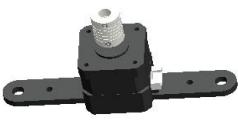
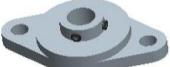


Diagram of tie the belt



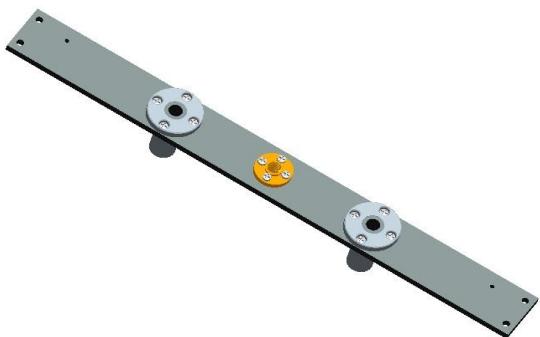
## Step 6: assemble linear bearing and z-axis motor

Assembly material specification and quantity:

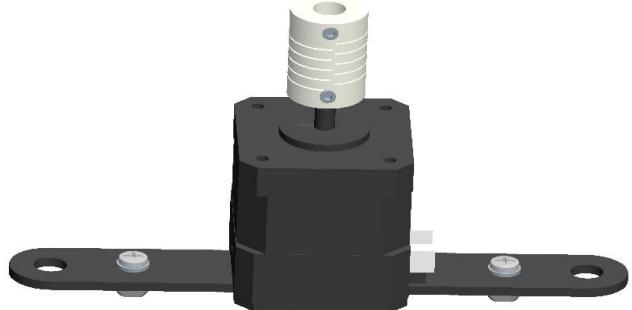
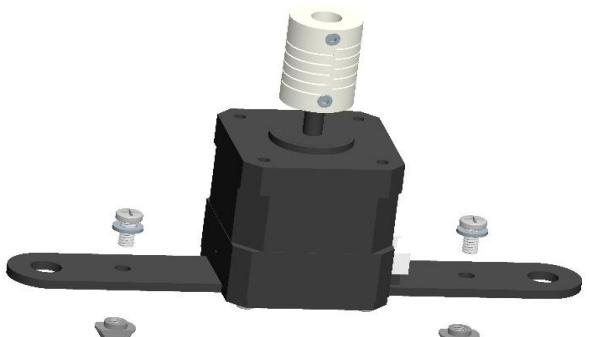
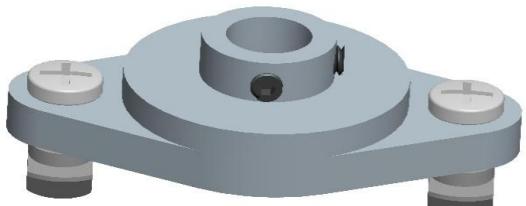
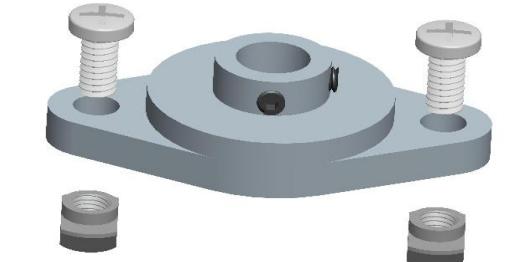
				
beam 2pcs	linear bearing 4pcs	feed crew nut 2pcs	screwPM3*8 24pcs	Z axis motor component 2sets
				
screwPM4*9 4pcs	boat nuts 8pcs	bearing block 2pcs	screwPM4*12 4pcs	gasketM4 4pcs

1. Take 1 piece of beam, 2 pieces of linear bearing and 1 piece of screw nut, align them according to the position shown, and fasten them with 12 screws of PM3\*8. As shown in figure. Assembly 2 sets.

3. Take 1 piece of motor component of Z axis, insert 2 screws PM4\*12 as shown, and screw on 2 boat nuts M4. Assembly 2 sets.



2. Take 1 piece of bearing block, insert 2 screws PM4\*9 into the position shown, and screw on 2 boat nuts M4. Assembly 2 sets.



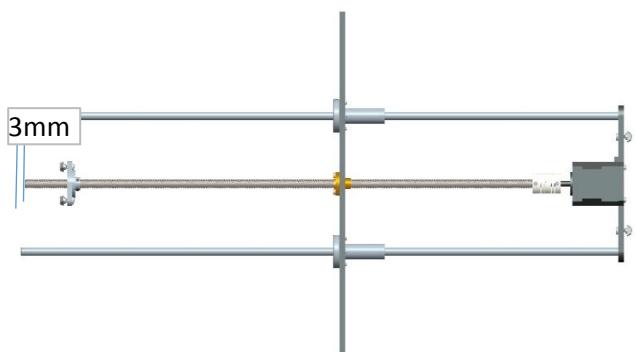
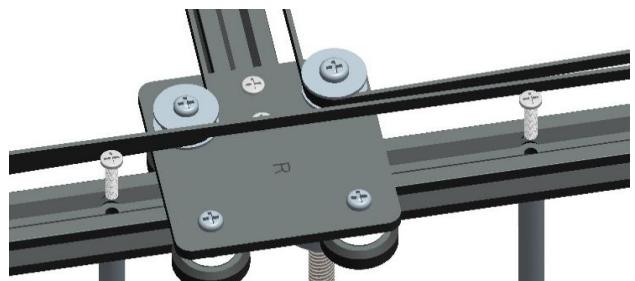
## Step 7: assemble Z axis components

Assembly material specification and quantity:

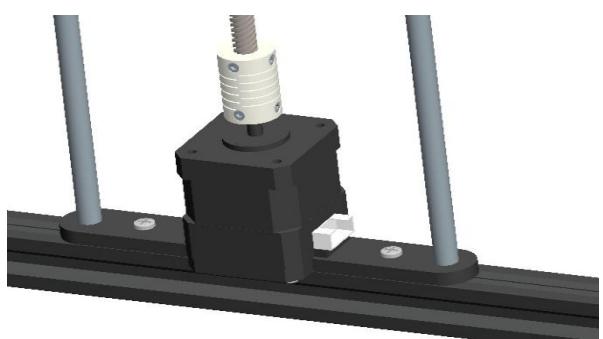
frame 1pcs	Z axis motor bracket 2pcs	beam component 2pcs	bearing block components 2pcs	Polished rod $\Phi 8*528$ 4pcs	Lead screw T8*453 2pcs	screws PM4*20 8pcs	

1. Take 1 piece of motor bracket of Z axis, insert the polished rod into the acrylic plate hole of the motor bracket, and do not protrude, as shown in the figure. Then, insert the cross plate components into the second polished rod, and connect the screw rod through the screw nut to the coupling hole of the motor. Assemble a total of 2 sets -- Z axis sliding rack.

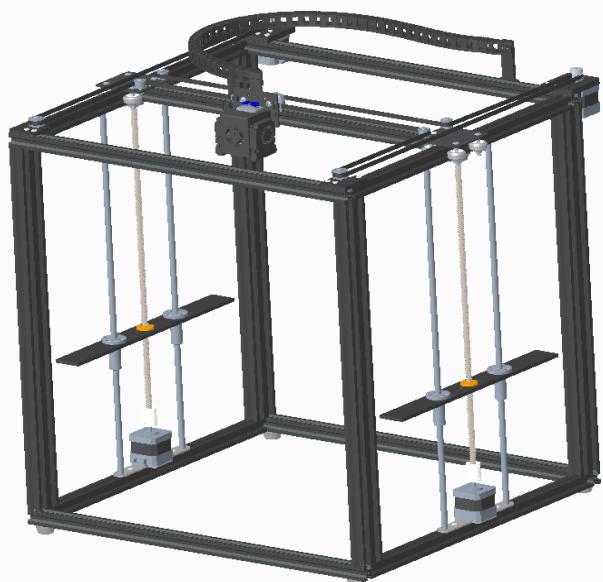
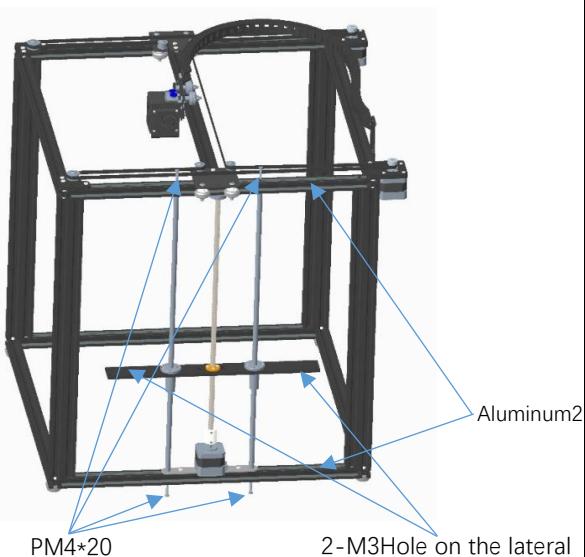
Note: when the screw rod is assembled, the tail is about 3mm inside than the polished rod.



2. Will the Z axis of the carriage motor board ship nut to adjust, and put the Z axis carriage in graphical position within the aluminum 2, here is a hole on the outside of the M3 will be polished rod with aluminum 2 hole alignment, with 20 PM4 \* of the aluminum 2 hole above the screw through the component, connected to the polished rod M4 screw hole, using PM4 \* 20 screws through the aluminum 2 hole under its component, connected to the M4 screw hole position. As shown in the figure; Turn the screw rod, slide the cross plate assembly and the bearing seat to the top, lock the four screws PM4\*20 inside the aluminum profile 2 up and down of the assembly, then lock the boat nut on the bearing seat, and then lock the two meter screws on the bearing seat. Turn the screw and drop the cross plate assembly to make sure it is flexible. Otherwise, please loosen the screw and adjust it again. Finally, lock the 4 meter screws on the coupling and the boat nut screws on the motor board. Turn the screw again to make sure that the board slides up and down smoothly.



3. Repeat step 2 to assemble another z-axis slide carriage, as shown in the figure.



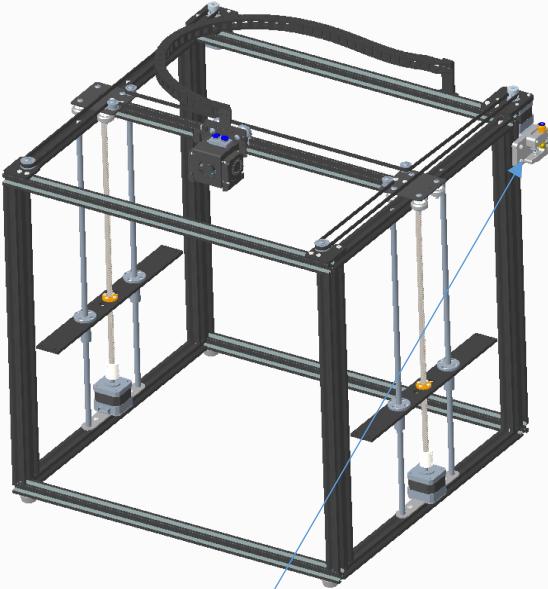
Step 8: feed motor installation

Assembly material specification and quantity:

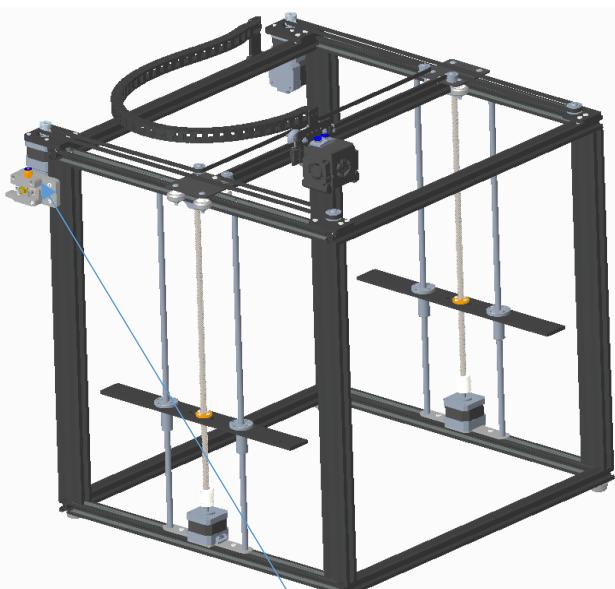
				
frame 1pcs	left feed motor component 1pcs	right feed motor component 1pcs	screwPM4*12 4pcs	boat nutsM4 4pcs

1. Use 2 PM4\*12 screws and boat nut M4 to lock the feeding motor components on the right side of the diagram.

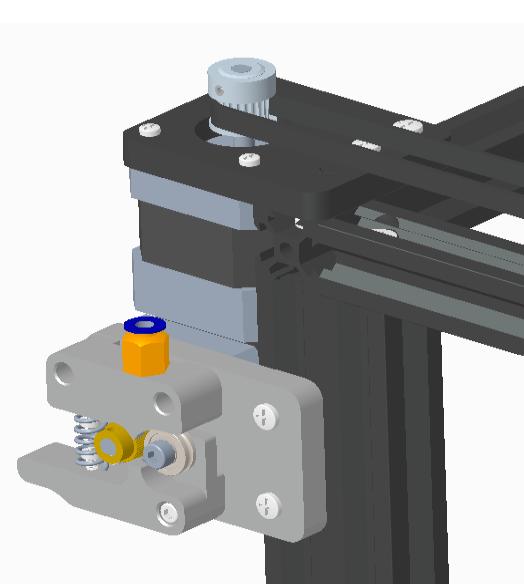
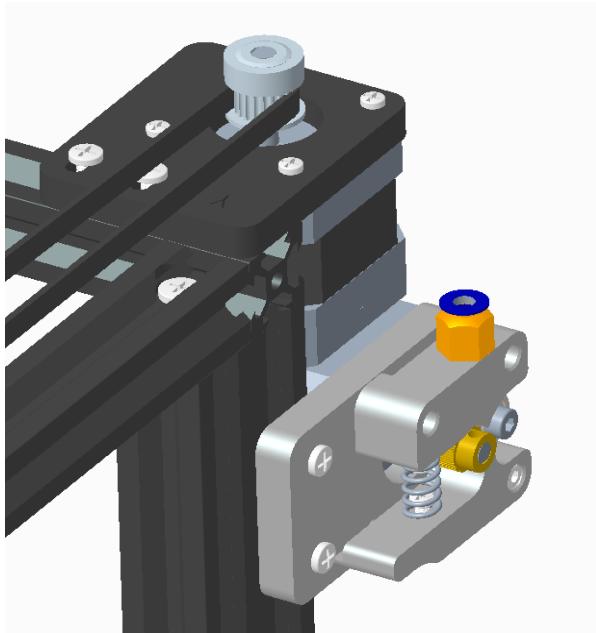
2. Use 2 PM4\*12 screws and boat nut M4 to lock the feeding motor components to the left in the left position shown.



right feed  
motor  
component



left feed  
motor  
component

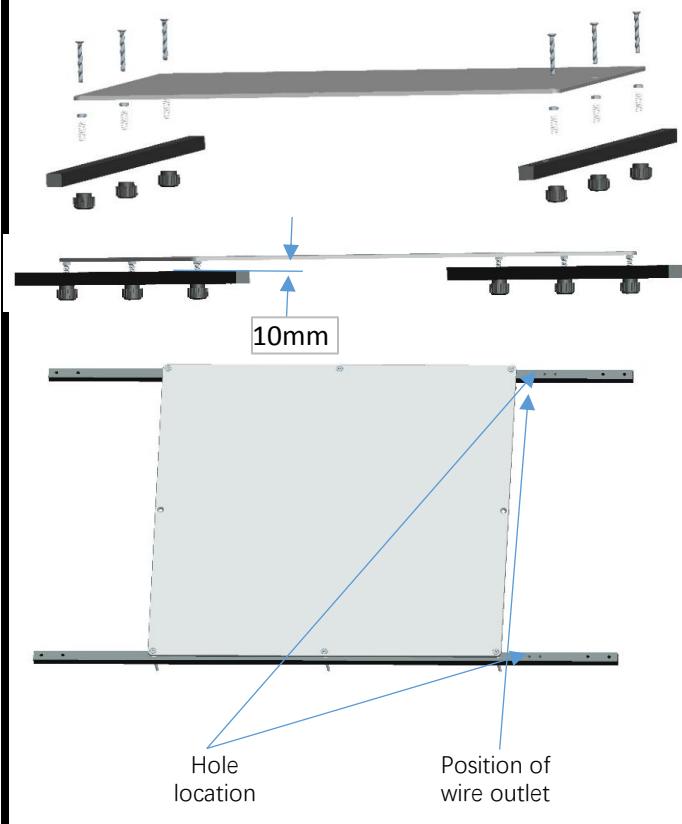


## Step 9: print platform assembly

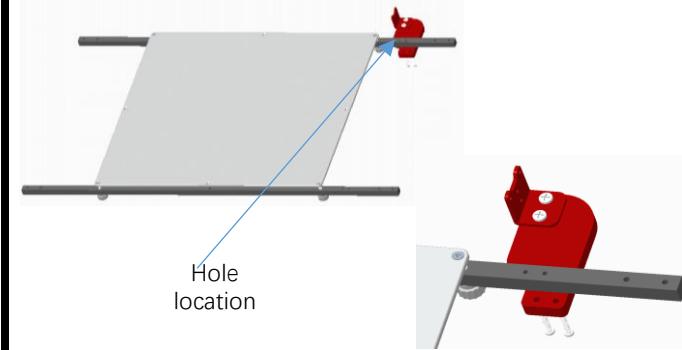
Assembly material specification and quantity:

frame 1pcs	hotbed 330*330*3 1pcs	beam 2pcs	plastic nutsM3 6pcs	spring 6pcs
nutsM3 8pcs	screwKM3*30 6pcs	screwPM4*12 8pcs	drag chain support 1pcs	screwsPM3*10 2pcs

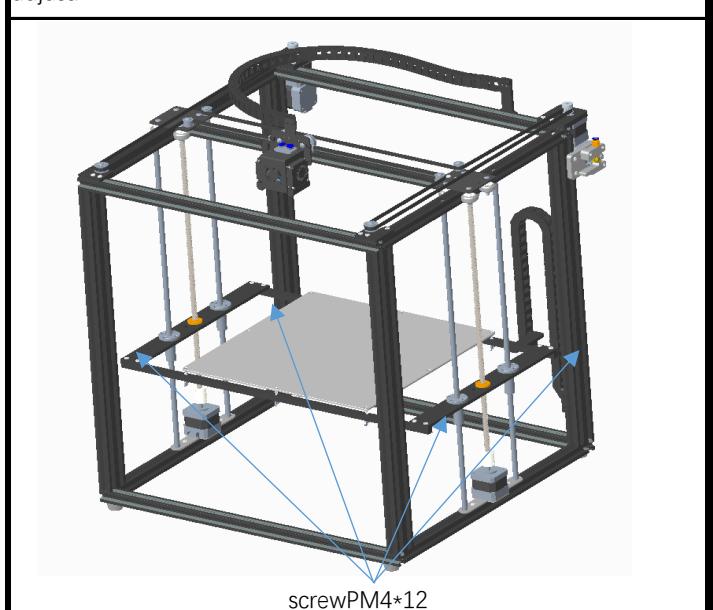
1. Take the hot bed, pass through the hot bed with 6 KM3\*30 screws, and lock it with M3 nut, as shown in the figure;Insert the spring into the screw of KM3\*30, extend from the hole corresponding to the beam, and screw into the plastic nut of M3 to adjust the spacing between the hot bed and the beam by about 10mm.The relation between beam position and wire is shown below.



2. Take 1 piece of drag chain bracket and fasten it to the beam with PM3\*10 screws according to the position shown.

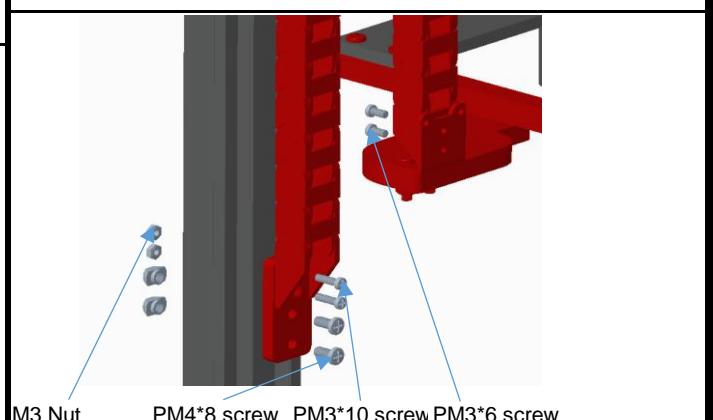


3. Turn the two screw rods to make the left and right side plates on the same plane and fasten the hot bed components to the side plates with 8 PM4\*12 screws,as shown in the figure.The drag chain bracket is close to the side of the feeding motor component.Rotate the screw rod in the same direction to make the platform move up and down synchronously,and make sure the movement is flexible. Otherwise, loosen the screw PM4\*12 to adjust.



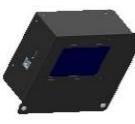
4. Take 2 KB3\*8 screws, as shown in the figure, and tighten the chain support and chain;Take 2 PM3\*10 screws, go through the chain and drag the bottom plate of the chain, and lock them with 2 M3 nuts. As shown in the figure, take 2 PM4\*8 screws, go through the bottom plate of the chain chain, screw on the on-board shape nut M4, lift the hot bed to the top, finish the chain, and lock the aluminum profile with boat nut.

Note: you can twist the tow link head of the second end of the chain, tighten the screw and install it.



## Step 10: motherboard assembly

Assembly material specification and quantity:

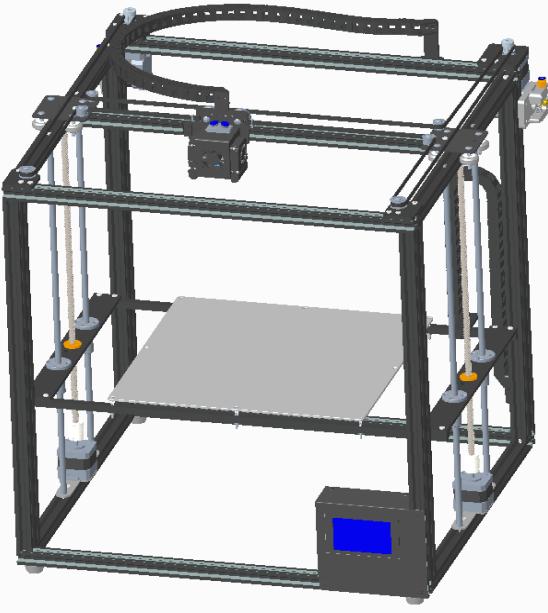
					
mainframe 1pcs	Main components 1pcs	The fan cover 1pcs	boat nutsM4 3pcs	screwPM3*4 4pcs	screwPM4*6 3pcs

1.Take the main board assembly and fan cover plate, place them in the position shown, and lock them with 4 PM3\*4 screws.

3.Fix the main board assembly with boat nut on the aluminum ... as shown.

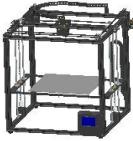


2.Take the screw of boat nut and PM4\*6, and screw the position and main board assembly as shown.

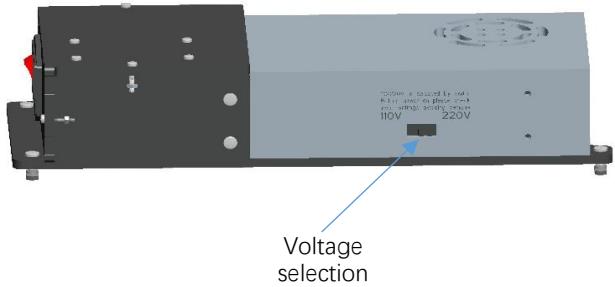


## Step 11: power supply installation

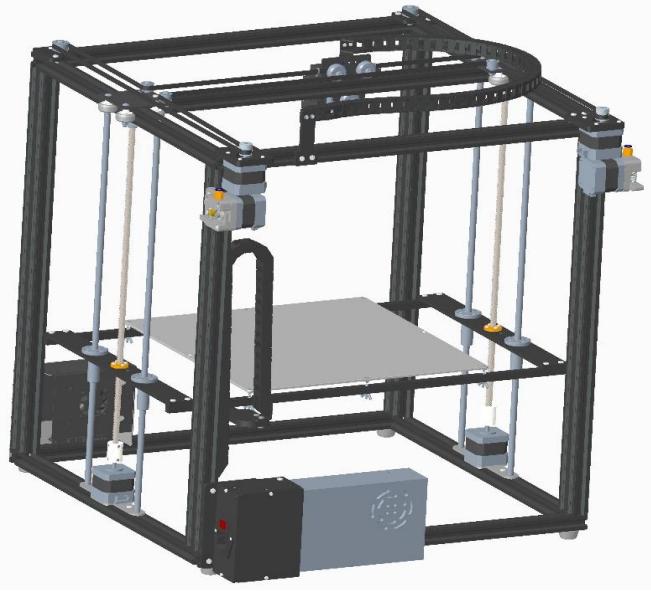
Assembly material specification and quantity:

							
mainframe 1pcs	power 30A component 1pcs	screwPM4*9 3pcs	boat nutsM4 3pcs				

1. Select the power component and select the voltage of 110V/220V according to the power supply voltage in the region. Adjust the gear with one word screwdriver. Select 220V and slide the gear into 220V, as shown in the figure. Select 110V and slide the shift to 110V. Assemble the boat nut M4 and screw PM4\*9 in the position shown.

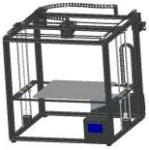


2. Fix the aluminum profile groove with the boat nut and lock the 3 screws PM4\*9, as shown in the figure.

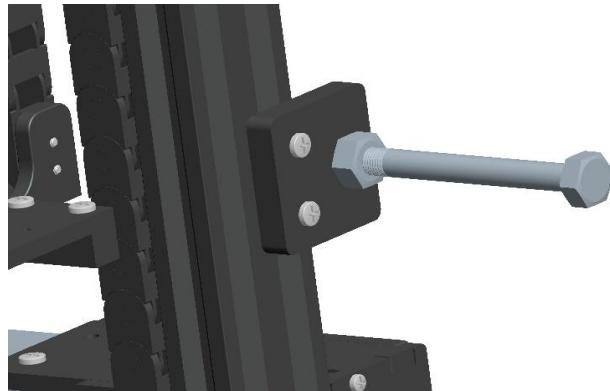


## Step 12: assemble the filament rack

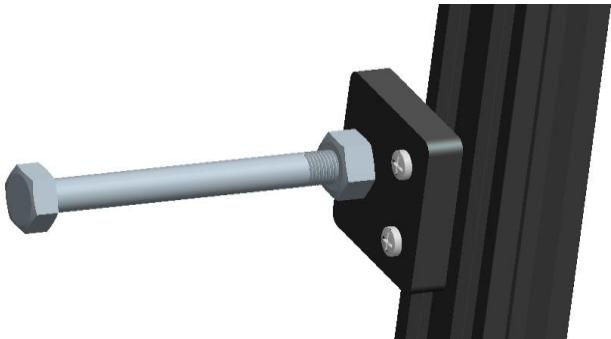
Assembly material specification and quantity:

					
mainframe 1pcs	hex screwM8*100 2pcs	boat nutsM4 4pcs	screwPM4*12 4pcs	nutsM8 4pcs	rack plate 2pcs

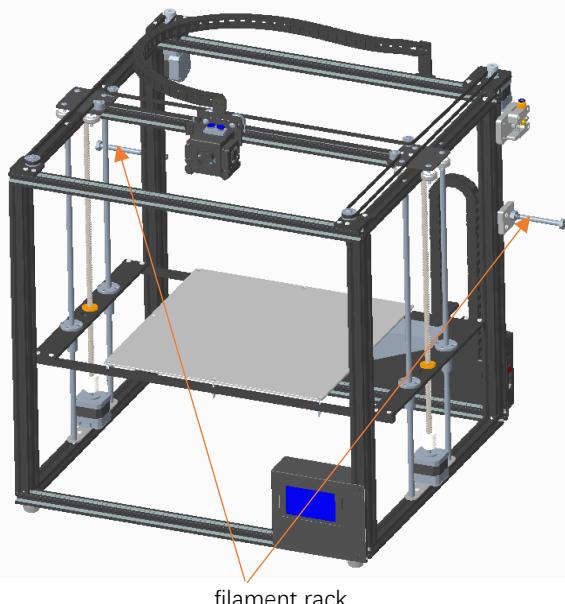
1. Take 1 piece of material rack plate, 1 outer hexagon screw and 2 nut M8, assemble the lock as shown.



2. Take 2 screws of PM4\*8, respectively go through the material rack plate, and screw on the on-board nut M4, as shown in the figure. Repeat 1, 2 steps to assemble the other.

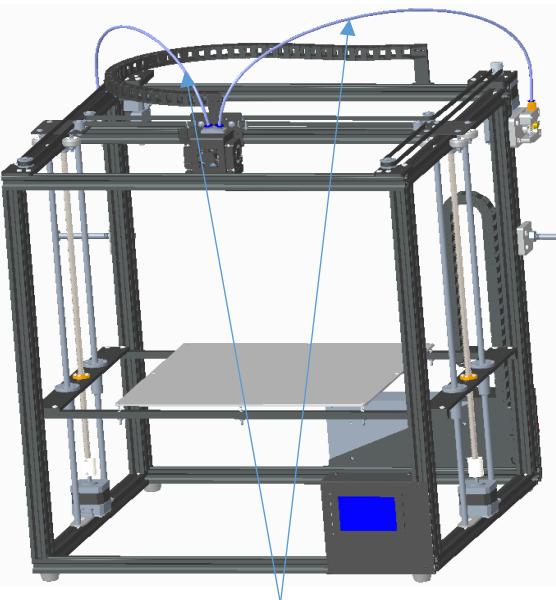
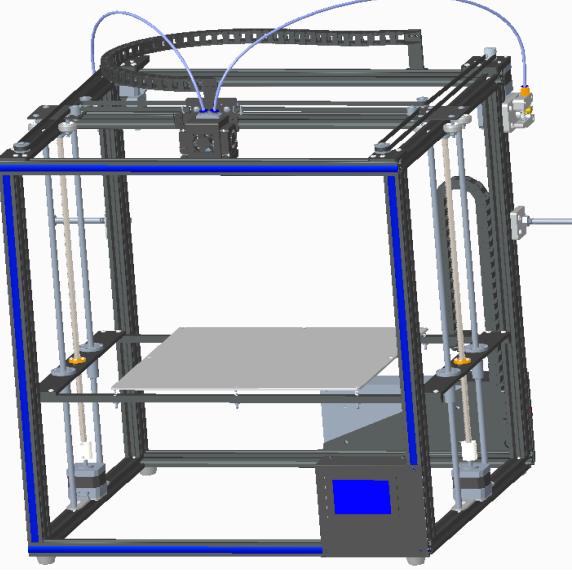
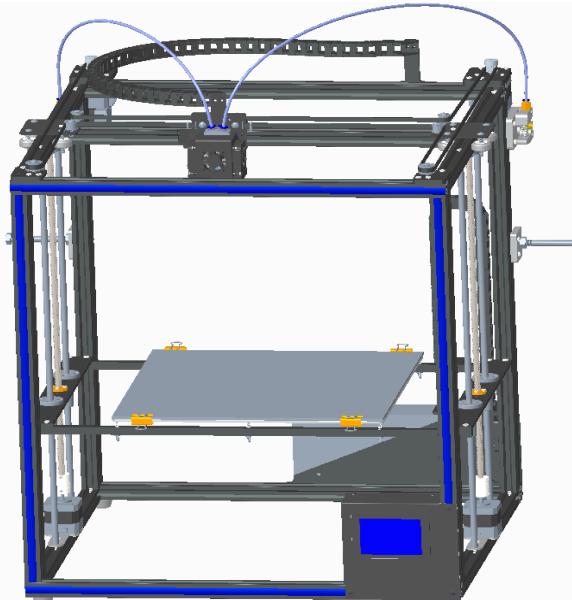


3. Fix the material rack assembly into the aluminum profile groove with boat nut, and lock the 2 screws PM4\*12, as shown in the figure.(hang the material plate on the screw rod)



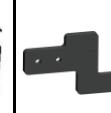
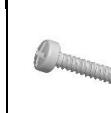
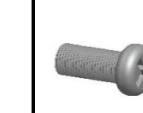
### Step 13: assemble decorative strip and feeding pipe, glass fiber board

Assembly material specification and quantity:

				
mainframe 1pcs	decorative strip 1roll	feeding pipeΦ4 2pcs	glass fiber board 1pcs	clamp 4pcs
1. Pull the feeding tube into the air nozzle hole of the feeding component, press down the plastic outer ring of the air nozzle, insert the feeding tube, loosen the plastic ring and jam the feeding tube, as shown in the figure. Make sure the material tube is jammed. Then put the other end of the feeding tube into the air nozzle of the printing head assembly and confirm that the feeding tube is tightened.			2. Cut the decorative strip to the appropriate length and press it into the aluminum profile groove, as shown in the figure.	
				
3. Place the glass fiber board on the aluminum substrate, align the sides, and fasten with 4 clamps, as shown in the figure.				

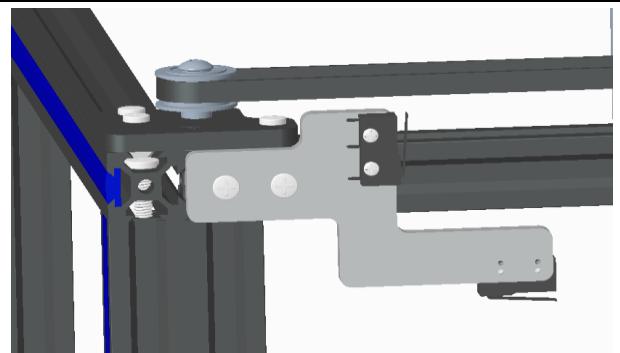
## Step 14: limit switch assembly

Assembly material specification and quantity:

									
mainframe 1pcs	Switch(incl wiring) 2pcs	switch base 1pcs	screwPM3*4 5 1pcs	plastic nutsM3 1pcs	screwPB2*1 0 4pcs	boat nutsM4 2pcs	screw PM4*9 2pcs		

1. Take 1 piece of switch seat and 2 pieces of switch, and insert 2 screws PB2\*10 into it respectively according to the position shown in the picture, and lock the screws.

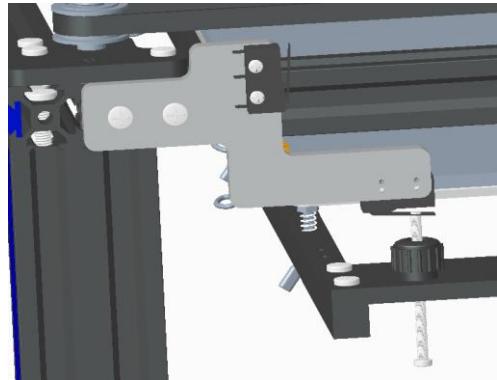
Note: the screw's torque is small, not too hard.



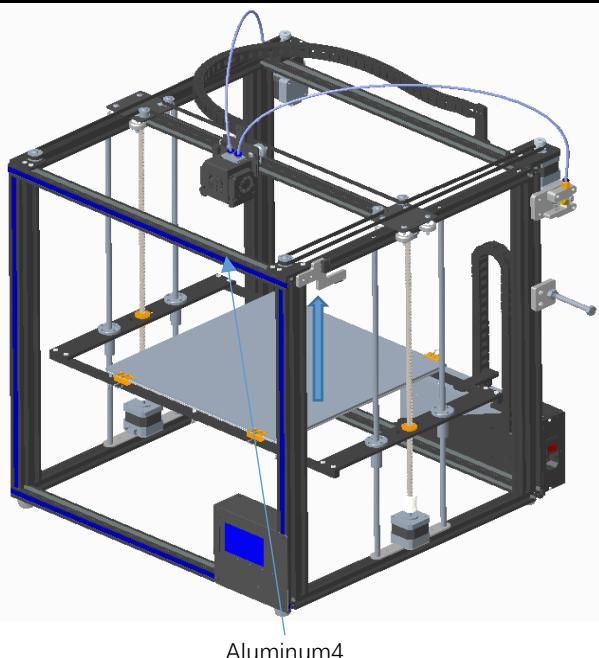
2. Put the switch assembly into 2 screws PM4\*9 according to the position shown, and screw the on-board nut M4



4. Take 1 screw PM3\* 45,1 plastic nut M3, screw in according to the position shown, and pass through the screw tooth hole of horizontal plate M3. After adjusting the hot bed and screw PM3\*45 to the appropriate height, tighten the plastic nut.



3. Fix the switch assembly in the aluminum profile groove with boat nut, as shown in the figure. The edge of the switch seat is aligned with the end face of aluminum profile 4, and lock the 2 screws PM4\*9, as shown in the figure.



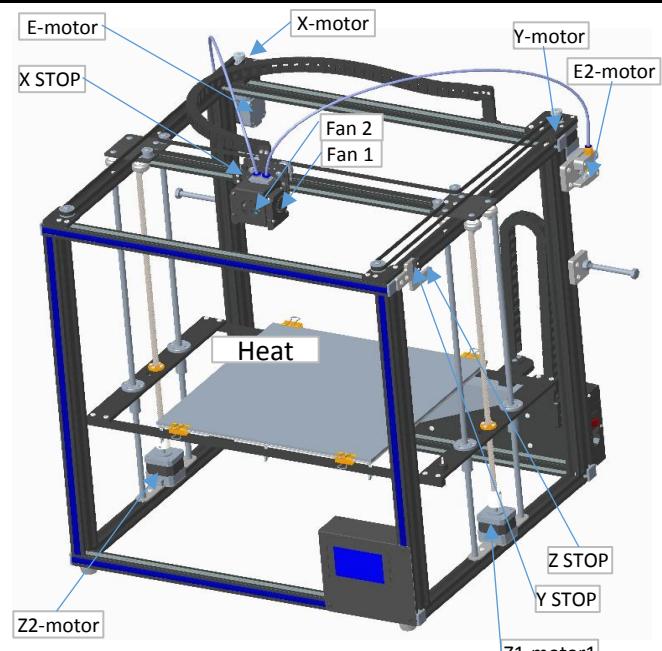
## Step 15: wiring

### Assembly material specification and quantity:

mainframe 1pcs	Switch wire assembly 2pcs	USB cable 1pcs	The power cord 1pcs	The motor wire 4P*6
Wrapping tape 1roll				

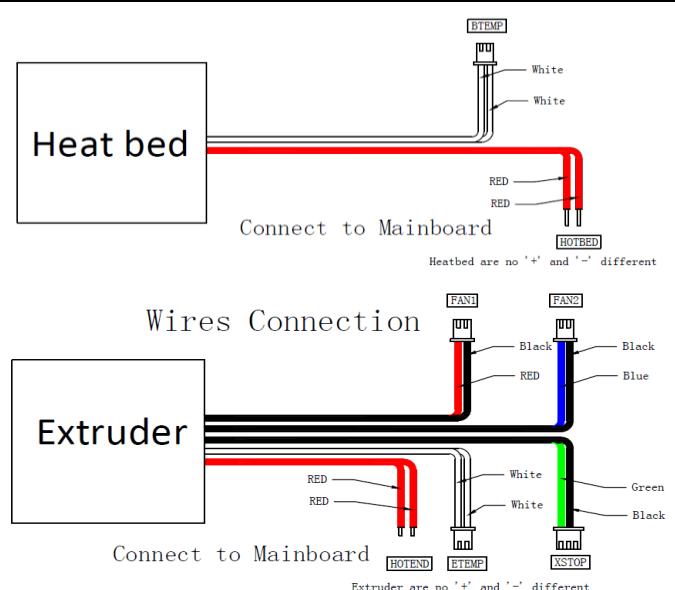


Wiring diagram of main board and display screen



printer wiring

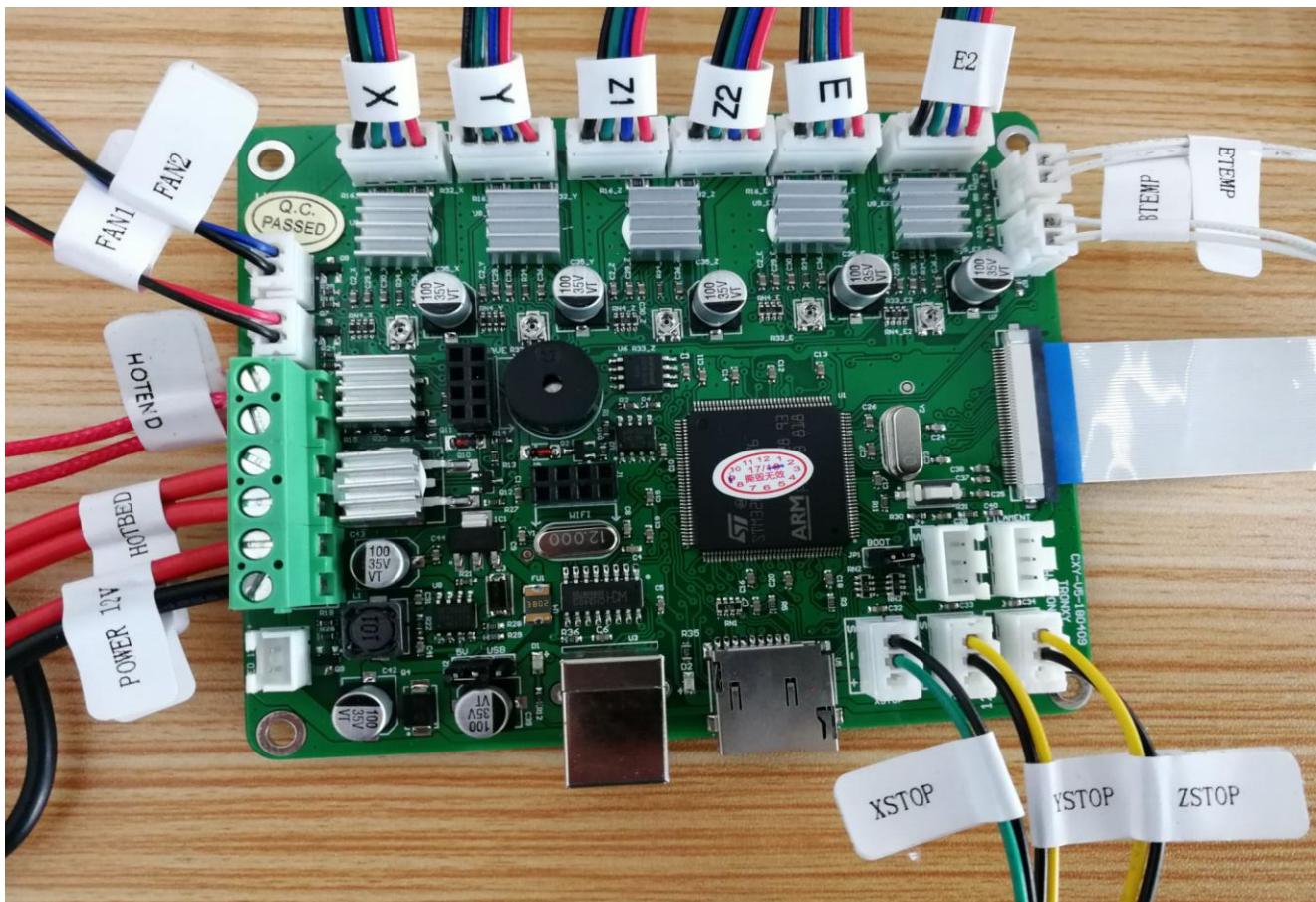
1. Open the upper cover of the control box to reveal the mainboard.
2. Take the motor connection wire (5 pieces) and insert it into the motor terminal seat of X, Y, z-1, z-2, E and E2 corresponding to the main board and the motor respectively, as shown in the figure above.
3. Insert the switch wire terminals of Y and Z into the Y STOP and Z STOP terminals of the main board respectively. As shown above.
4. Lock the 4P wire of the HOTBED outgoing line and 2 red dip tin wires onto the HOTBED terminal block of the main board respectively, with no positive or negative poles. The 2 white line terminals are inserted on the BTEMP terminal seat of the motherboard.
5. Insert the 10P wire out of the extruder head and the red and black terminal FAN1 logo of the wire into the FAN1 terminal seat of the main board; The blue and black terminal FAN2 logo is inserted on the FAN2 terminal seat of the main board; The green and black terminal is inserted on the X STOP terminal seat of the motherboard; 2 white terminals are inserted on the ETEMP terminal seat of the motherboard; 2 red dip tin wire, respectively locked on the HOTEND terminal block of the main board, no positive and negative poles.
6. Connect the Power supply connection to the Power supply terminal of the main board, red positive pole and black negative pole.
7. Select the voltage of 110V/220V according to the power supply voltage in the region.
8. Connect the red line of the upper cover fan to the positive pole of the mainboard power supply and the black line to the negative pole, check the wiring diagram of the physical object, and confirm that the wiring is correct, and install the upper cover.
9. Plug in the power cord, connect the power, and debug the machine.
10. After debugging, tidy the wires and tie them with wrapping tape.



110/220V is selected by switch  
Before power on please check  
input voltage avoiding damage

110V

220V



Wiring diagram of main board