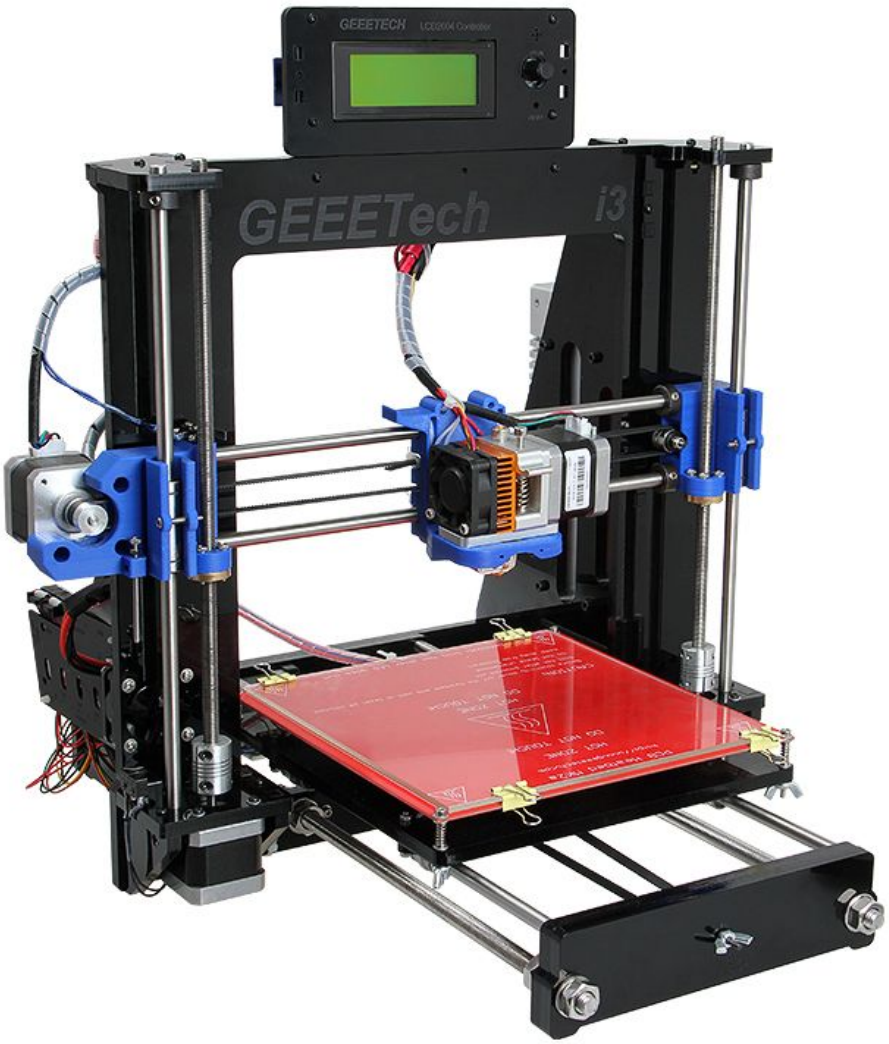
Assemble Instruction of Geeetech Acrylic Prusa I3

Pro & pro B & pro C



Safety Instructions

Building the printer will require a certain amount of physical dexterity, common sense and a thorough understanding of what you are doing. We have provided this detailed instruction to help you assemble it easily.

However ultimately we cannot be responsible for your health and safety whilst building or operating the printer, with that in mind be sure you are confident with what you are doing prior to commencing with building or buying. Read the entire manual to enable you to make an informed decision.

Building and operating involves electricity, so all necessary precautions should be taken and adhered to, the printer runs on 12V supplied by a certified power supply, so you shouldn't ever have to get involved with anything over 12V but bear in mind there can still be high currents involved and even at 12V they shouldn't be taken lightly.

High temperatures are involved with 3D Printing, the Extrusion nozzle of the hot end can run about 230°C, the heated bed runs 110°C and the molten plastic extruded will initially be at around 200°C, so special care and attention should be made when handling these parts of the printer during operation.

We wouldn't recommend leaving your printer running unattended, or at least until you are confident to do so. We cannot be held responsible for any loss, damage, threat, hurt or other negligent result from either building or using the printer.

Preparation

1. Unpack the kit and check if all parts are in the box and check the condition of each part, there might be some damage during shipping. To help you with this, there is BOM in the box and each bag was labeled with part number.

2. Contact our customer service immediately by email or through the website if you find any missing or damaged parts. And on the bottom of the BOM, there is a signature of reviewer, please take a picture of it and attach the picture in your mail.

3. Read through each chapter of these instructions to gain an over-all idea of what is involved and how long it might take, before starting on the work described.

4. Before you start, you can put all the part in order to save your time especially those screws and nuts. Do not mix them up.

5. Ensure you have the necessary skills to carry out the work, or enlist the help of someone who does.

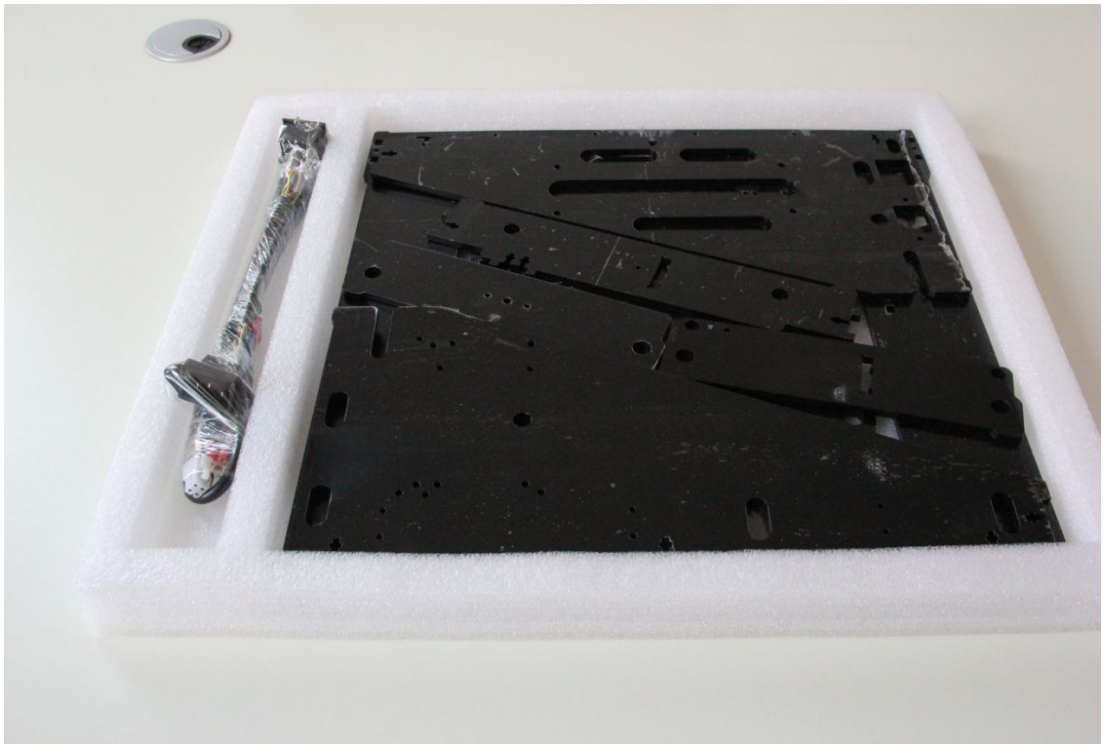
6. Work on a big firm table or bench in a clean dry well-lit area.

7. This kit contains tiny parts; please keep them away from kids under 3.

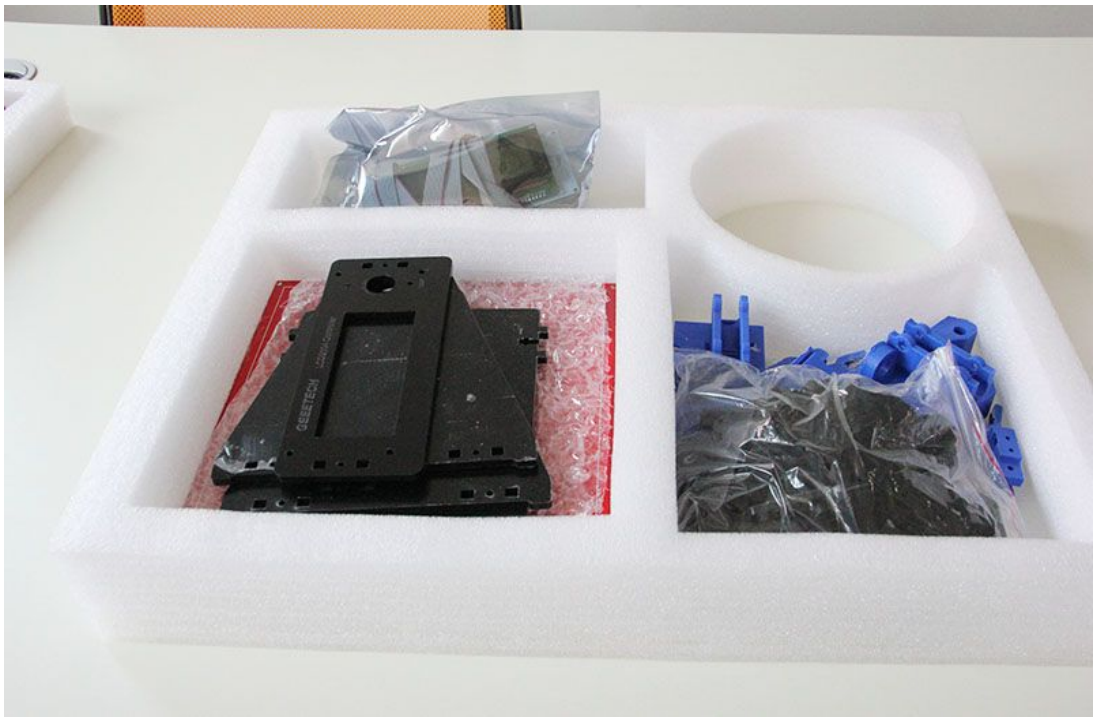
8. Ask for help if you run into any problems - our contact details are on the website and we will always do our best to resolve any problems encountered.

1 Unfold the box and check the package

Unfold the package and take all the parts out to check the condition of the items. As you can see, all the parts are packed very carefully.



- All the acrylic plate has been etched with part ID and the plate is covered with a sheet of Kraft paper, you need to tear them off.



Tips:

1. Before assembly, you are advised to put all the parts, especially the screws and nuts

in order, which will save you a lot of time looking for the required parts.

2. The part ID is corresponding to the number labeled on the bag of every part. Some parts may not have label, you can refer to the pictures on the package list.

2 Assemble Y axis

2.1 Assemble the rods of a Y axis

Step1. Assemble the 2 threaded rods.

Required parts	Required number	Part ID	Pic
M10 threaded rod	2	NO.5	
Y plate connecting plate	2	NO.A14	
M10 spring washer	6	NO.18	
M10 washer	8	NO.9	

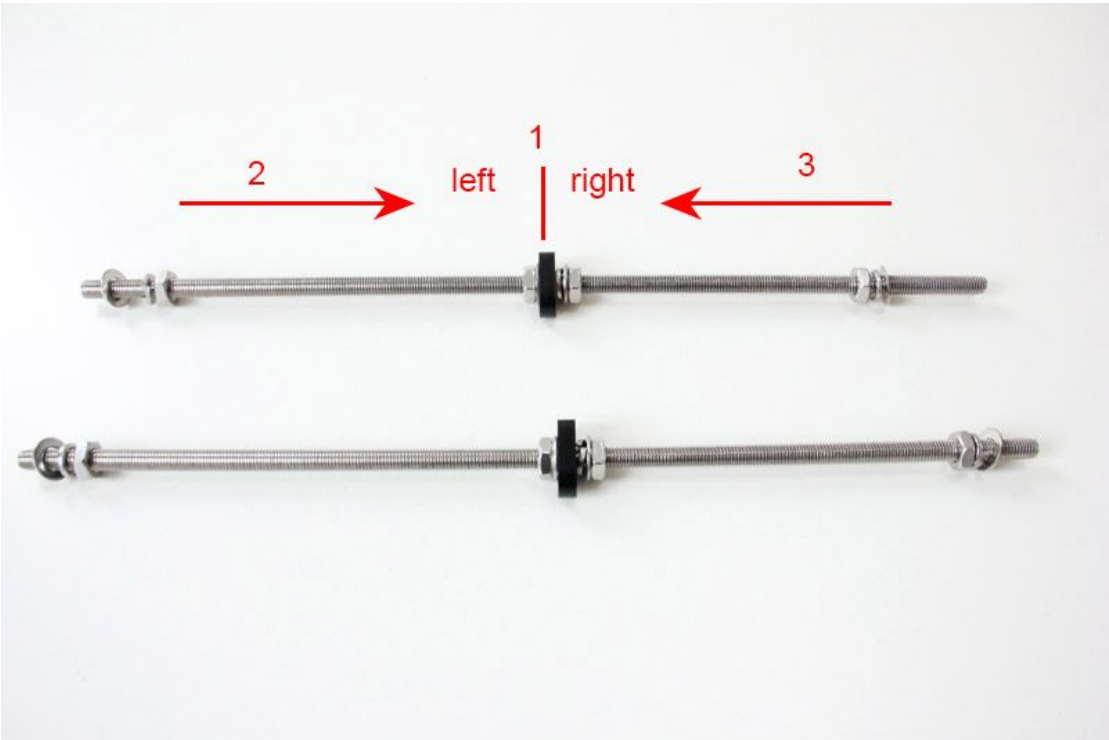
M10 nut	8	NO.12	

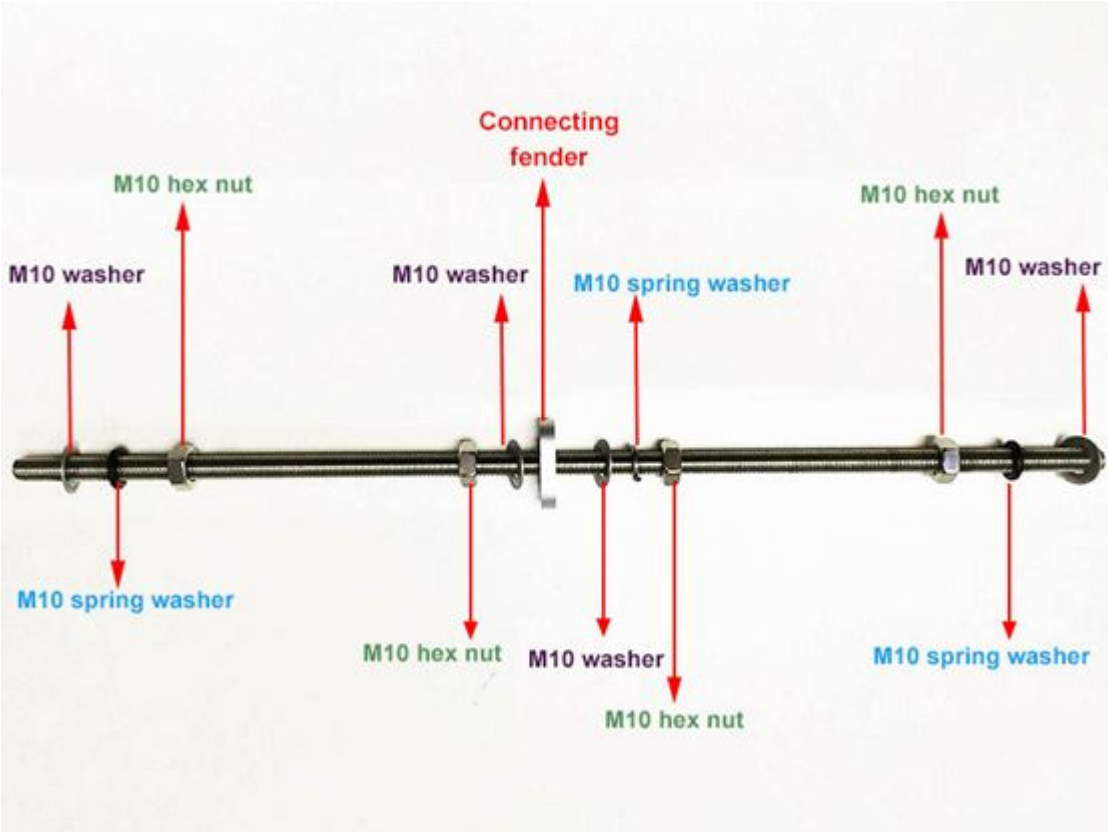
Thread the nuts and washers into the two M10 threaded rods separately. The order should be:

1) Thread the acrylic fender (Y plate connecting plate) in the middle.

2) Thread the M10 washer > M8 spring washer >M10 nut > M10 nut > M10 washer on the left

3) Thread theM10 washer < M8 spring washer < M10 nut < M10 nut< M8 spring washer < M10 washer on the right





Step2. Assemble the 2 smooth rods

Required parts	Required number	Part ID	Pic
M8 smooth rod	2	NO.3	
LM8UU Linear bearings	4	NO.39	

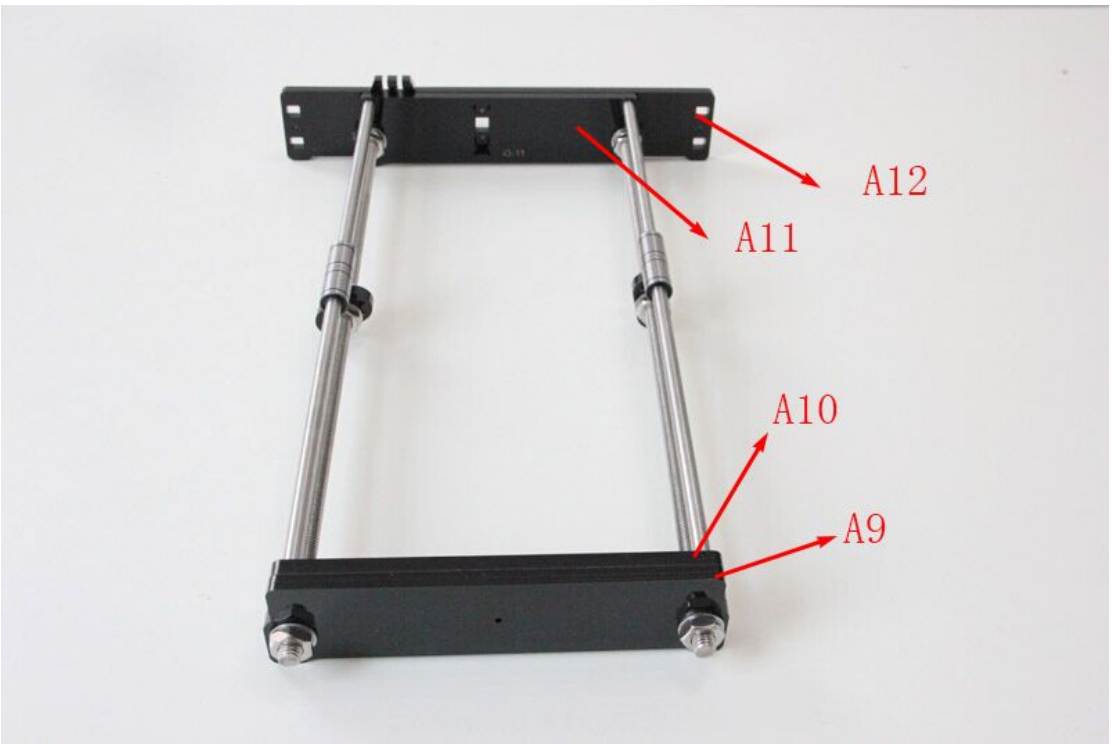
Slide 2 bearings on each smooth rod. Before you slide the bearings please make sure they are clean.

1.2. Attach the front and rear Acrylic support plates of the rods.

Required parts	Required number	Part ID	Pic
Acrylic plate(front)	2	NO. A9, A 10	
Acrylic plate(rear)	2	NO. A 11, A 12	
M10 washer	4	NO.9	
M10 nut	4	NO.12	
Screw locking ring	2	NO.19	

Step1.Slide the locking ring on the smooth rods, thread the rods into the acrylic plate; adjust the length so that the smooth rods fit snugly between the front and rear piece.

Step2. Screw up the rods and plate with M10 nut and M10 washer.



* Tips: Try to keep the rods parallel and the four acrylic pieces parallel. The Y-axis must be a rectangle, that is the rods on both side should be parallel, so is the front and back plate. Otherwise it will cause obstruction for the belt later. You can use a Digital Caliper to measure.

*Note: As we re-designed the rear plate, there are two more holes on A12, in this case, you need to use the screw locking ring to fix the rod.

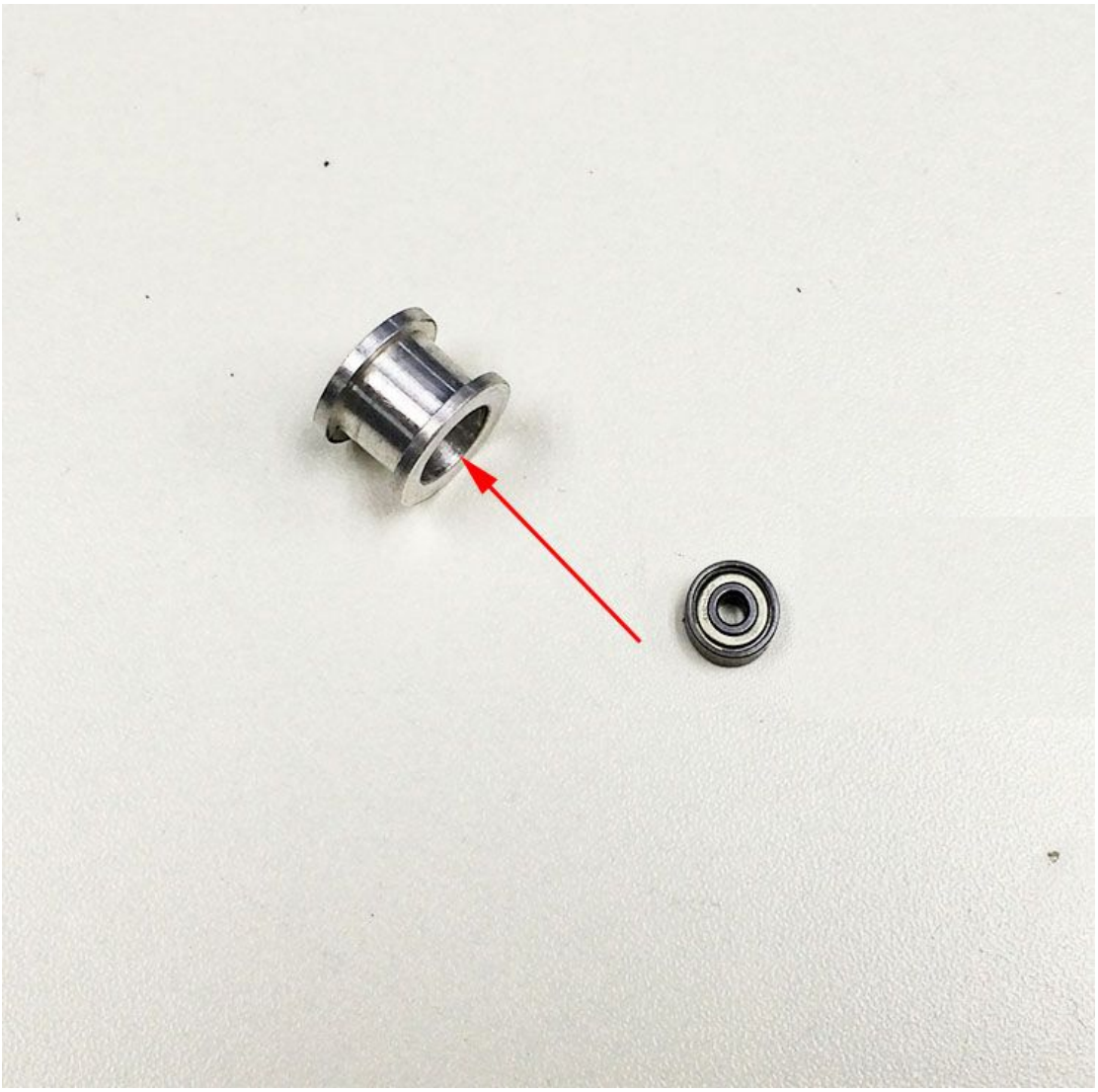
2.2 Assemble the Y idler

Required parts	Required number	Part ID	Pic
Ball bearing	2	NO.38	
bearing holder	1	NO.66	

Driven wheel	1	No.37	
M3 x 20 screw	1	NO.27	
M3 wing nut	1	NO.15	
M4 x25 screw	1	NO.34	
M4 lock nut	1	NO.14	

Step1. Thread the M3 x 20mm screw through the bearing holder.

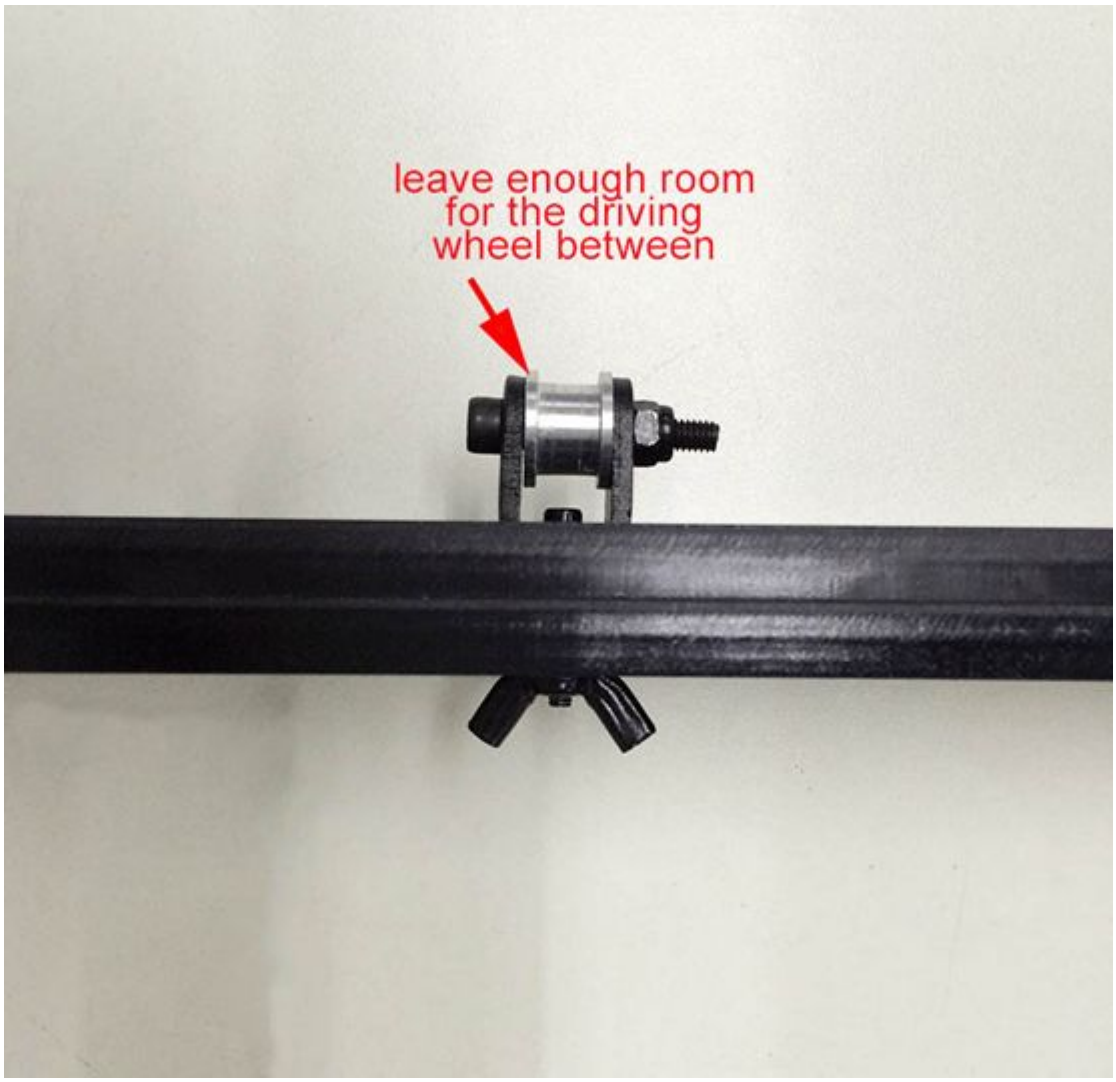
Step2. Insert the two MR84zz ball bearings into both ends of the driving wheel.



Step3. Put the M4 x25 screw and M4 washer through the driving wheel. Lock the other end with a M4 lock nut. You may need a wrench to tighten locking nut.

*Do not screw it too tight, you should leave enough room for the wheel to turn freely.

Step4. Mount the assembled bearing holder onto the front support plates from inside to outside. And screw it with a wing nut.

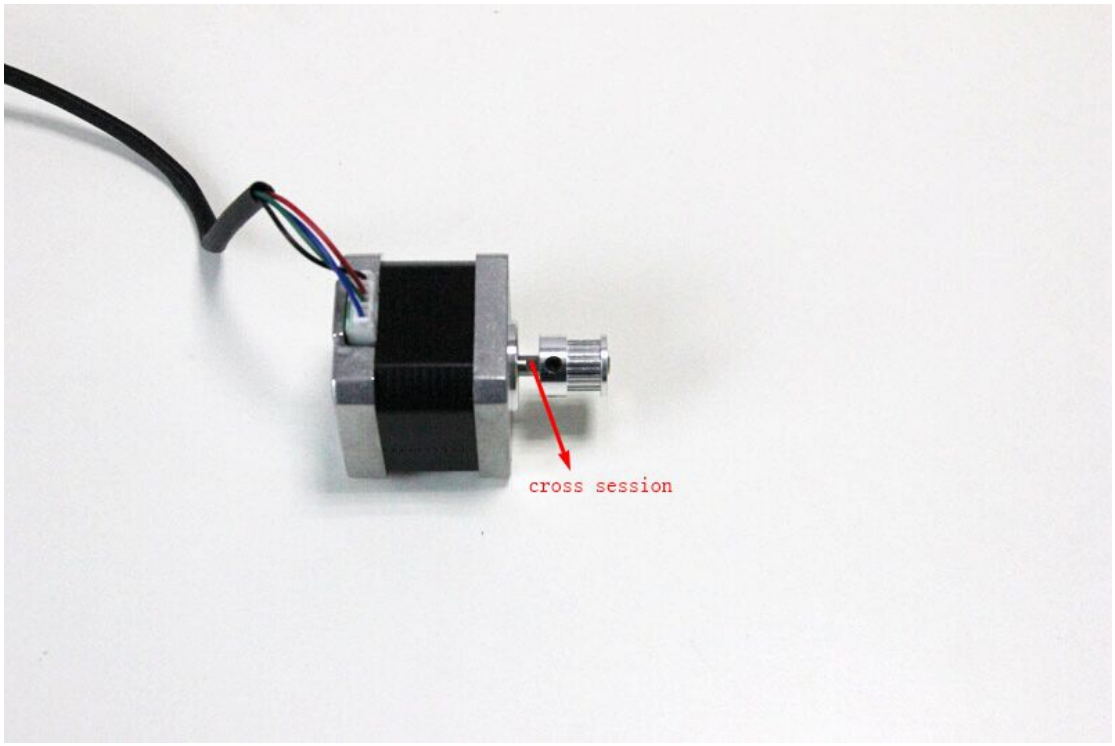


2.3 Mount the Y motor

Required parts	Required number	Part ID	Pic
Y motor fix plate	1	NO. A13	
Stepper motor	1	NO.75	

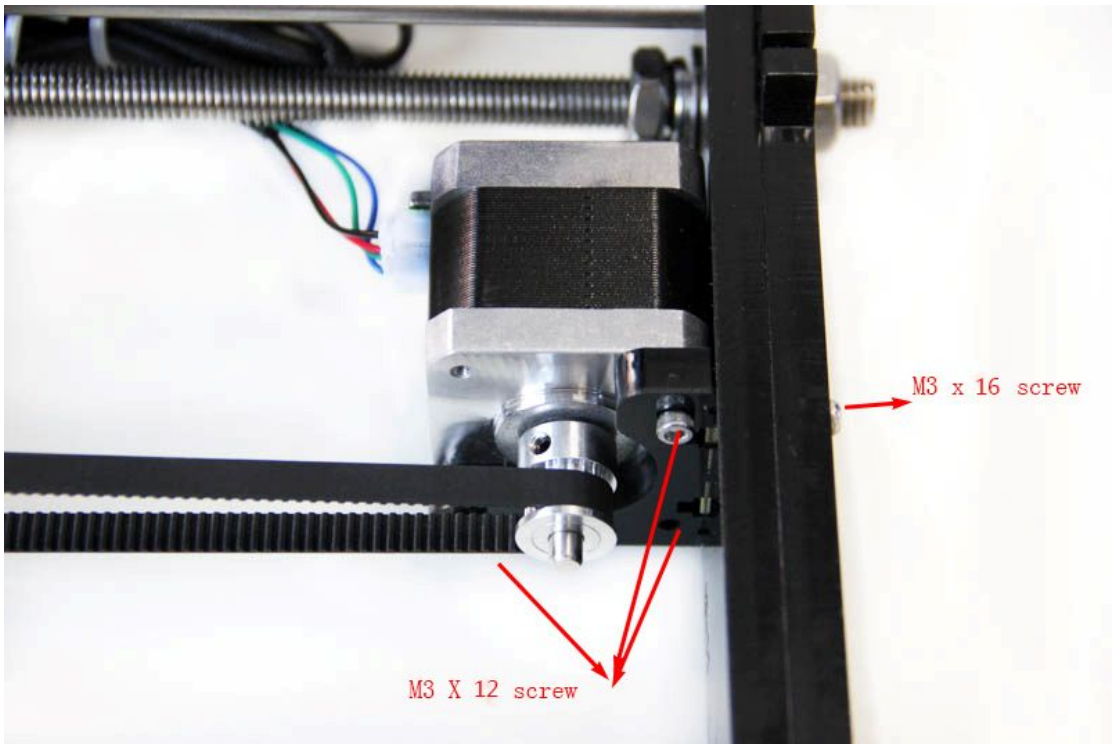
Pulley	1	NO.43	
M3 x 12 screw	3	NO.25	
M3 x 16 screw	2	NO.26	
M3 square nut	2	NO.16	

Step1. Mount the pulley on the motor shaft, one of the screws should be screwed on the cross section of the shaft. Screw it as tight as possible.



Step2. Insert the motor block into the slot; you may need to use a little strength to do this, but be careful not to break or crack any of the Acrylic pieces. Then screw the motor on the block plate with 3 M3 x 12 screws and fix the block plate with 2 M3 x

16 screws and M3 square nut.

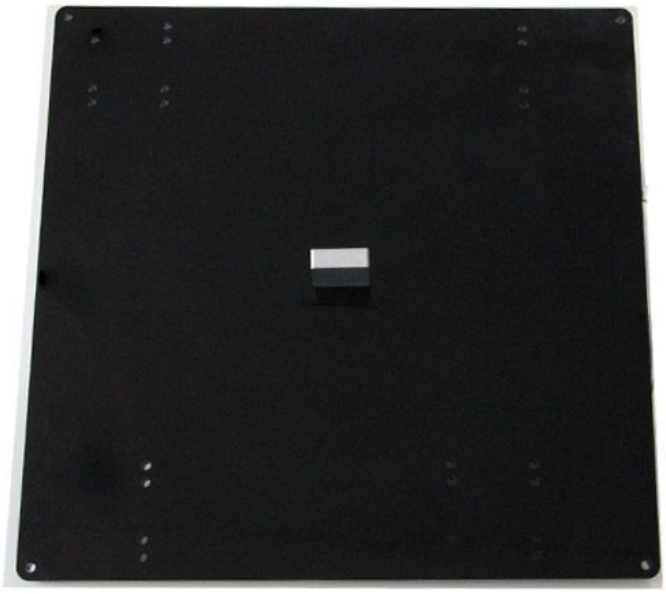


2.4 Build the printing platform

Required parts	Required number	Part ID	Pic
Y platform support	1	NO.A15	
Y bearing block	4	NO.A16	
Belt mount	1	NO.67	

Nylon tie	4	NO.54	
M3 x 10 screw	2	NO.24	
M3 x 20 screw	8	NO.27	
M3 nut	8	NO.11	

Step1. Mount the belt mount on the bottom side of the platform with 2 M3 x 10 screws.



Step2. Mount the 4 bearing blocks on the platform with M3 x 20 screws on the same side with the belt-mount. Screw with M3 nuts.

Step3. Get the build platform plate zip-tied to the 4 linear bearings of Y- Axis.

*The belt-mount and the fenders are under the platform.

2.5 **Mount the Y –axis belt.**

Required parts	Required number	Part ID	Pic
Timing belt	1	NO.41	
M3 x 10 screw	2	NO.24	
M3 washer	2	NO.7	

Step1. Drill a hole on one end of the belt（the hole can be as the diameter of the M3 screw, leave enough margin ）

Step2. Fix the belt on one side of the belt -mount with a M3 x 10 screw and washer.

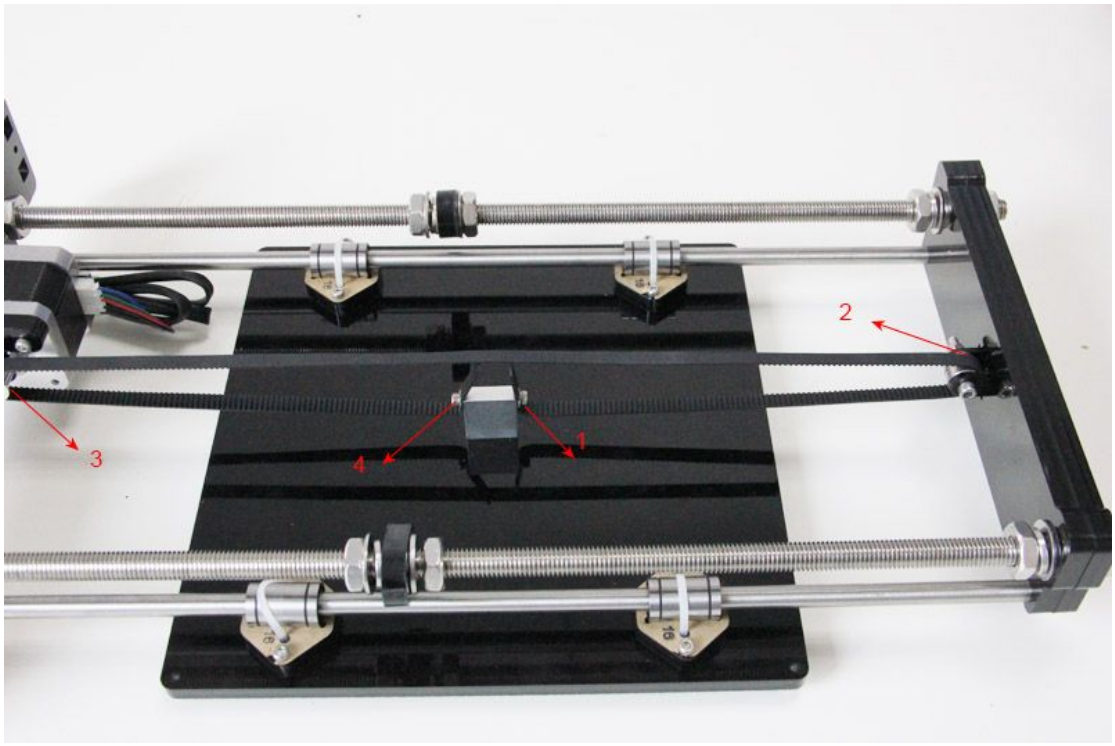
Step3. Thread the belt around the pulley on the motor and the Y idler.

Step4. Drill a hole on the other end of the belt and fix it on the belt -mount with a M3

x 10 screw and M3 washer.

*Tips:

1. before you drill your second hole, make sure to pull belt tightly to make sure to find proper placement of hole for a tight belt, if it is too loose, it will hinder the move of t he print platform.

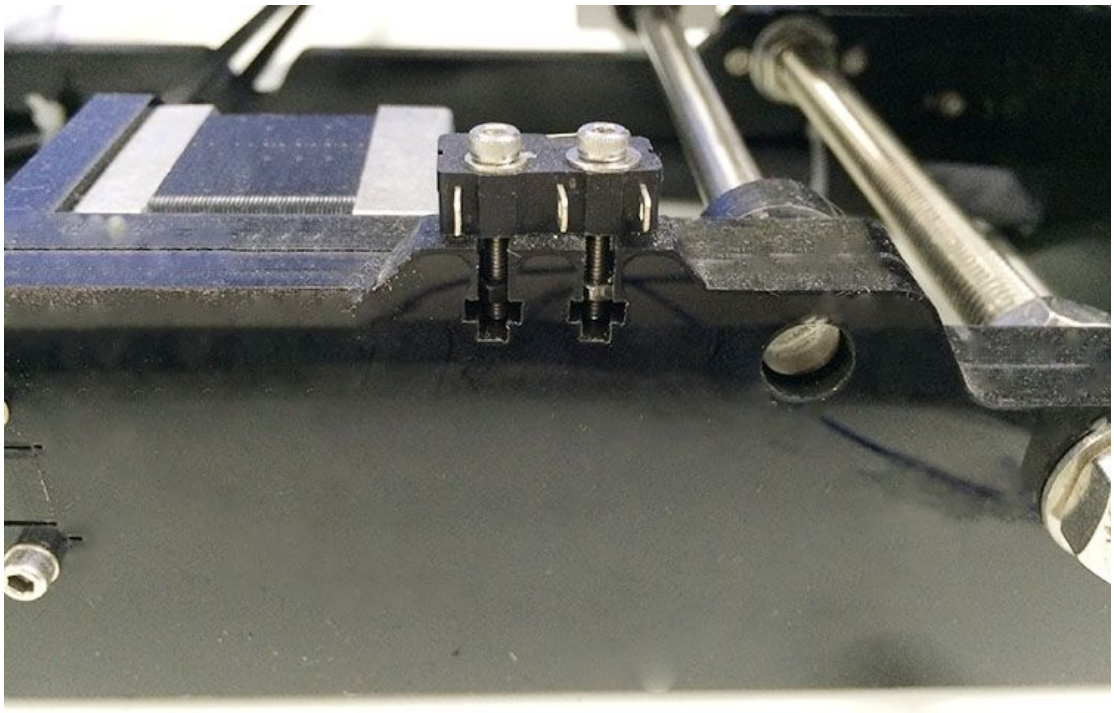


2.6 mount the End stop of Y-axis

Required parts	Required number	Part ID	Pic

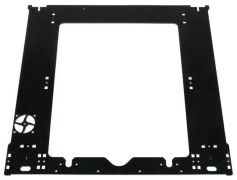
End stop	1	NO.44	
M2.5 X 16 screw	2	NO.22	
M2.5 Hex nut	2	NO.10	

Mount the end stop on the rear support plate of Y axis with M2.5 X 16 screw and M2.5 Hex nut.



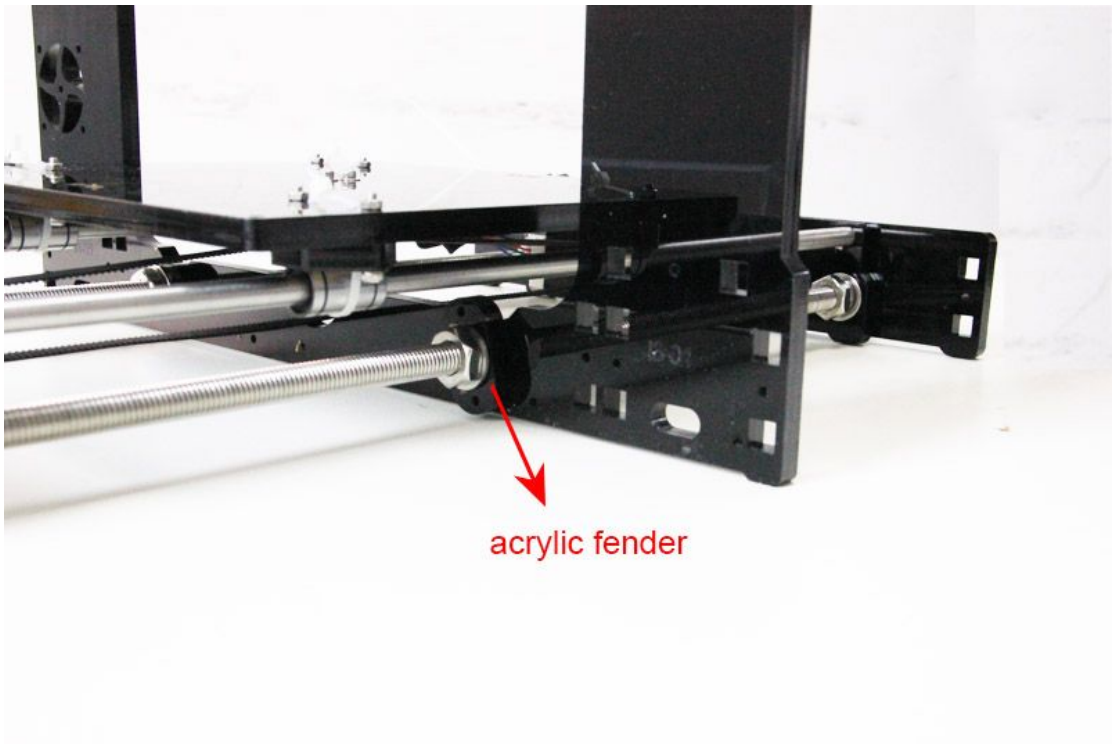
3 Assemble Y - Z axis

Required parts	Required number	Part ID	Pic

X-Z frame	1	NO.A1	
M3 x 20 screw	4	NO.27	
M3 nut	4	NO.11	

Step1. Held upright the main frame is after the acrylic fender washers on the threaded rods. Here you can use the A2 panel as a reference to measure the distance A1 and A12 (the rear plate).

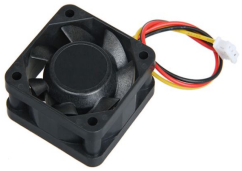
Step2. Screw up the main frame to the acrylic fender with M3 x 20 screws.



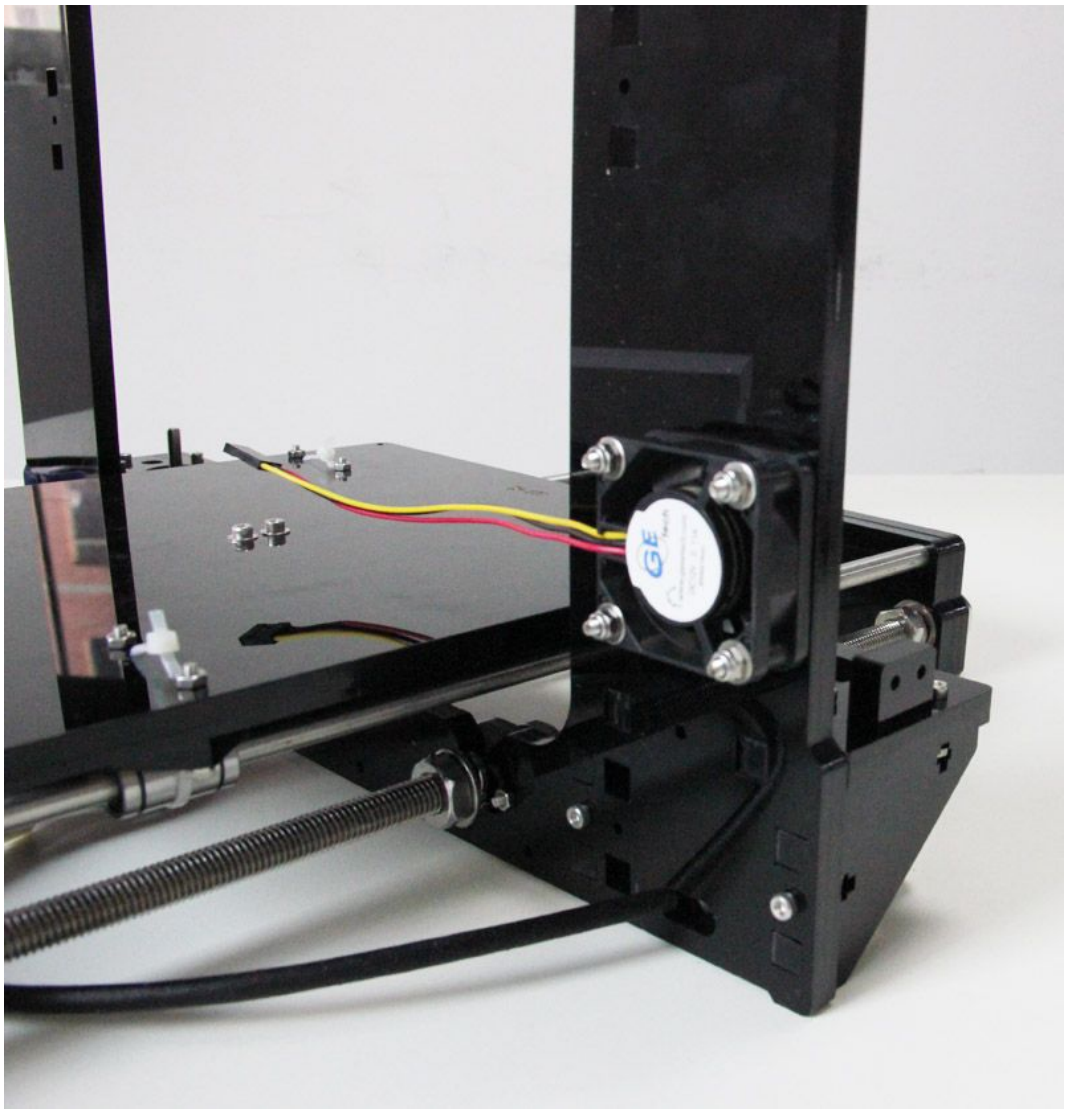
Step3. Screw up the M10 screw on the threaded rod of Y-axis. You can see the finished picture.

4 Mount the fan

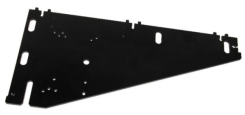
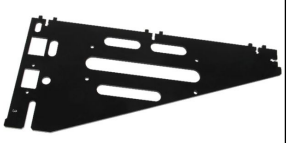
Required parts	Required	Part ID	Pic

	number		
Fan	1	NO.70	
M3 x 30 screw	4	NO.28	
M3 locknut	4	NO.13	

Fix the fan on the right side of the frame with 4 M3 x 30 screw and lock nut. Mind the direction of the wires. (Please pay attention to the direction of the fan)



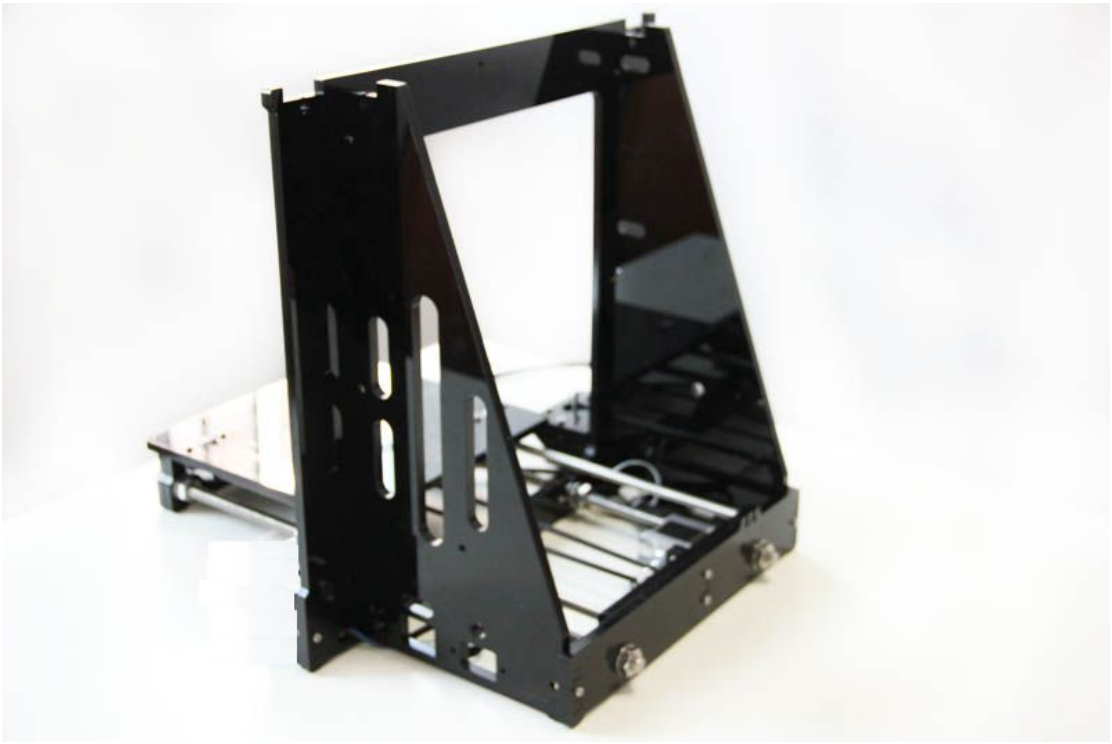
5 Assemble the right and left side panel

Required parts	Required number	Part ID	Pic
Acrylic left frame	1	NO.A2	
Acrylic right frame	1	NO.A3	

M3 x 16 screw	8	NO.26	
M3 square nut	8	NO.16	

Step1. Screw up the X-Z frame and the side panel then connect the rear part of the Y axis and the side panel together. You may need to adjust the distance of the X-Z frame to the rear plate.

All you need here is M3 x 16 screws and M3 square nuts.



6 Assemble the Z axis (the vertical axis)

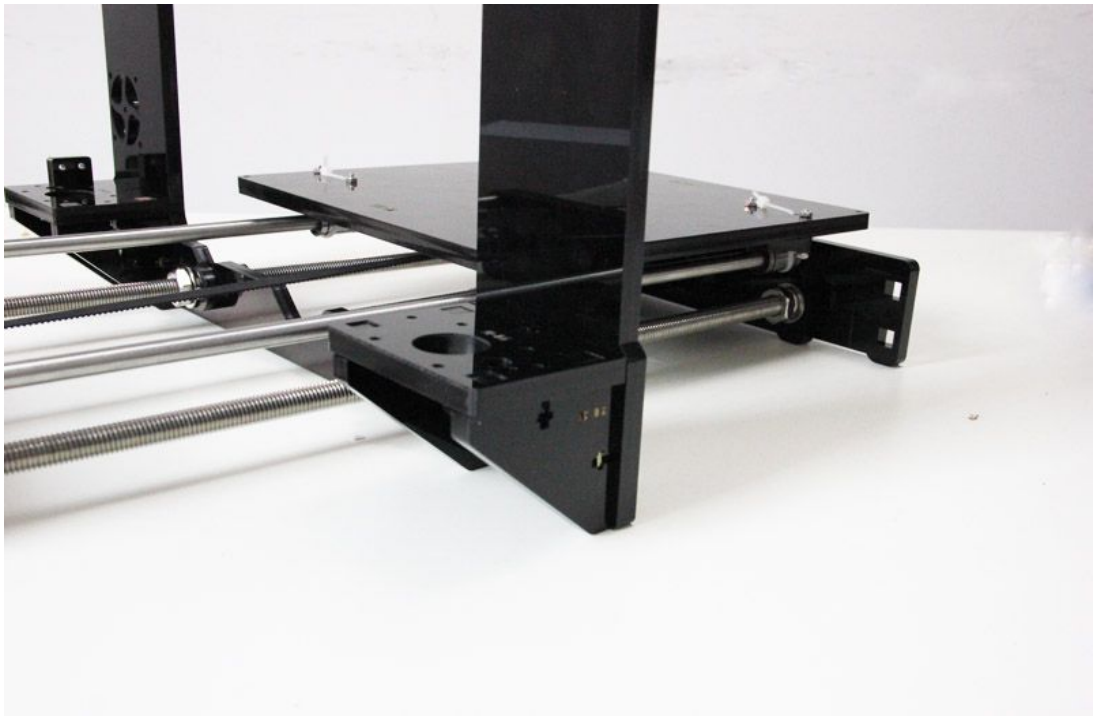
6.1 Assemble the Z-axis bottom mount

Required parts	Required number	Part ID	Pic

Z Motor fixed plate	2	NO.A4, A5	
Z Motor support plate	4	NO.A6, A7	
M3 x 16 screw	10	NO.26	
M3 square nut	10	NO.16	

Step1. It would be easier to mount the A4/A5 to A6 and A7 first, and then mount the assembled part to A1.

Step2.Screw up the acrylic plates with M3 x 16 screws and M3 square nuts.

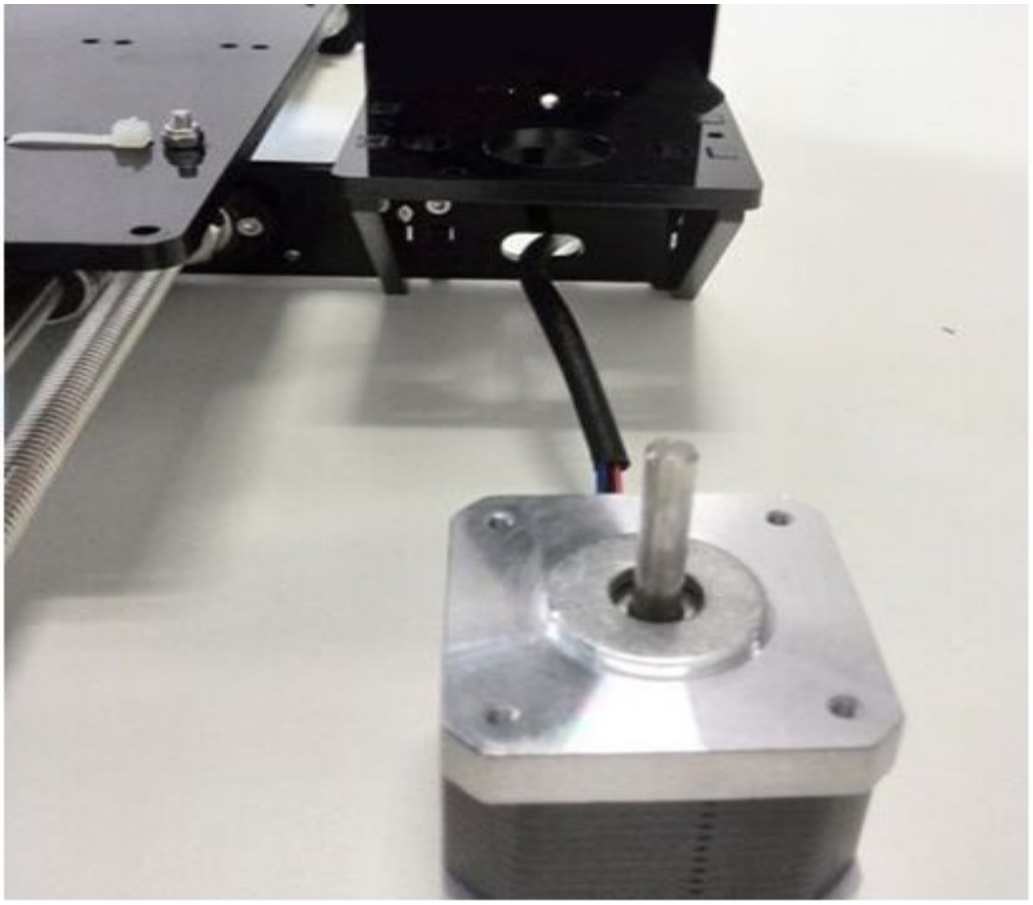


*The right and left bottom mount are different; the left one has a mount for the Z end stop. Please look at the following picture.

6.2 Assemble the 2 Z motors

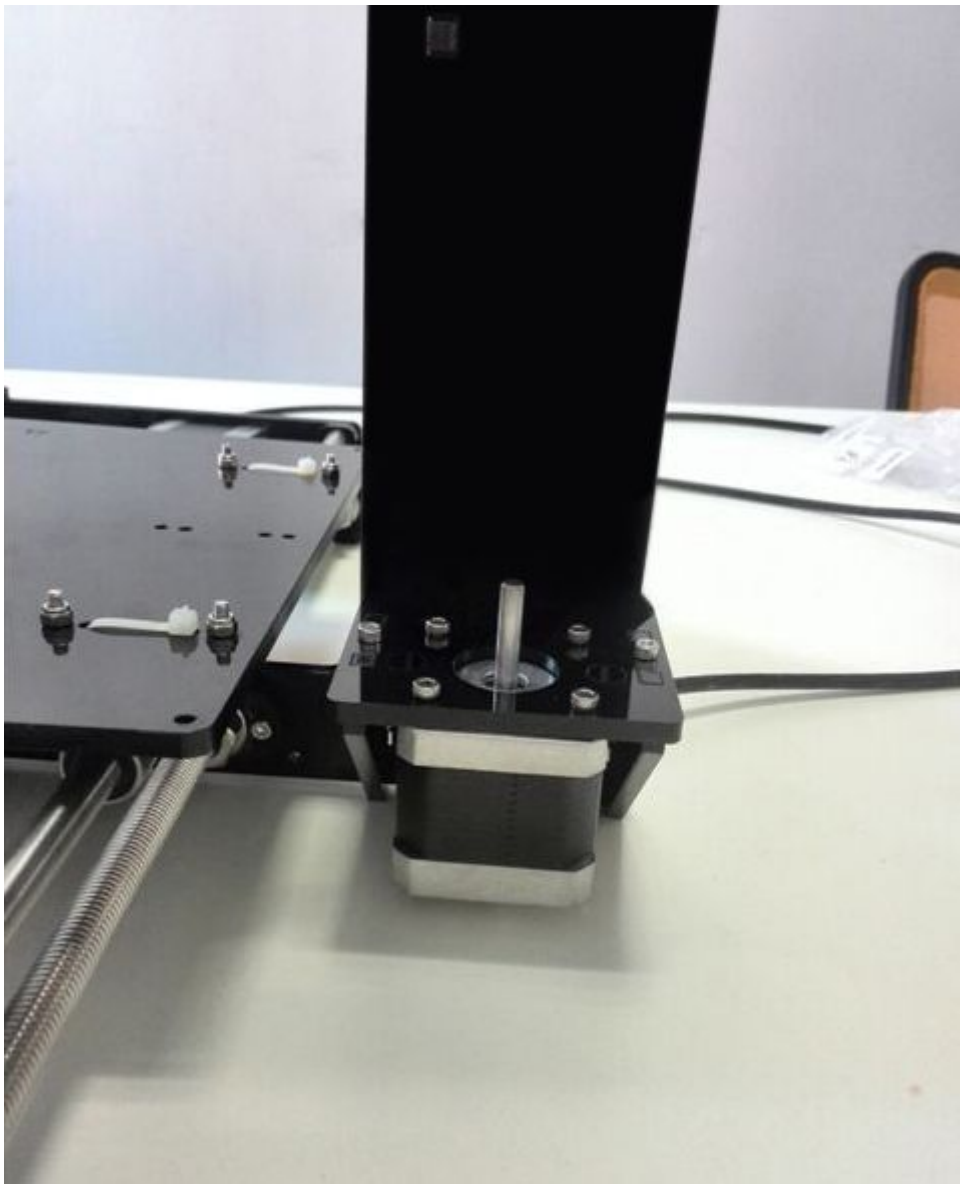
Required parts	Required number	Part ID	Pic
Stepper Motor	2	NO.75	
M3 x 12screw	8	NO.25	

Step1.Thread the wires of the motors through the holes



Step2. Screw up the motors with 4 M3 x 12 screws.

Do the same with the other Z motor.

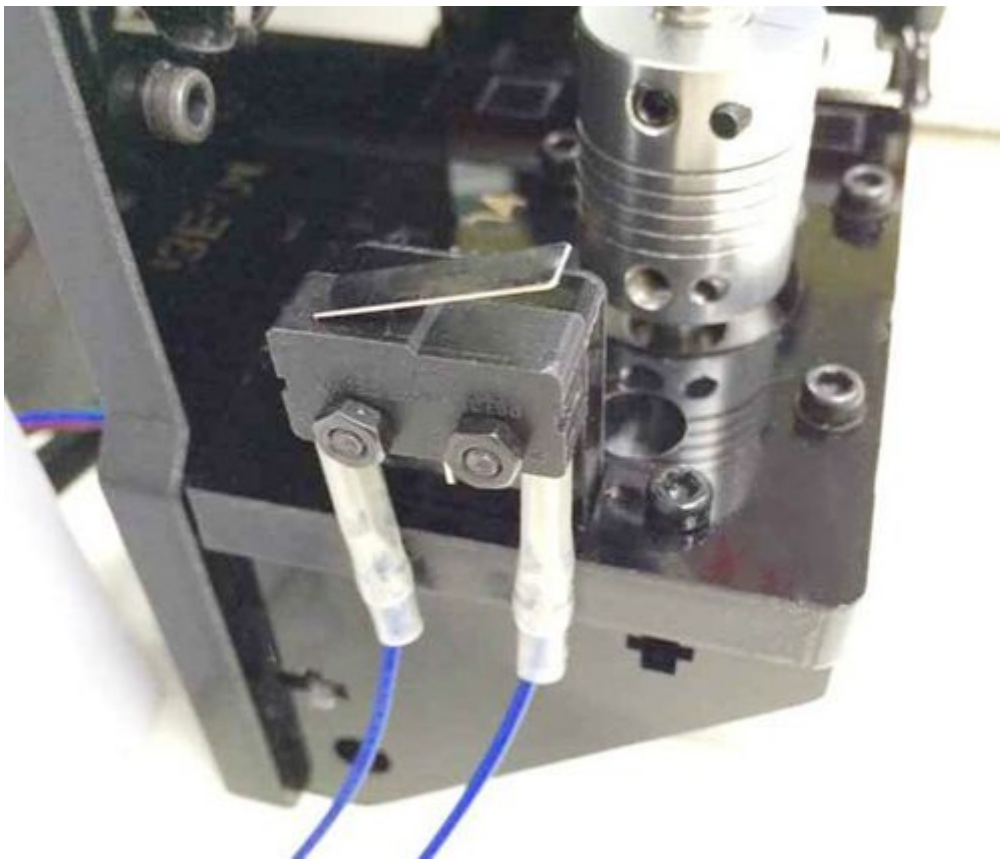


6.3 Mount the End stop of Z-axis

Required parts	Required number	Part ID	Pic
End stop	1	NO.45	

M 3 X 16 screw	2	NO.26	
M 3 nut	2	NO.11	

Mount the endstop on the outside of A7 with M2.5 x 16mm screw and M2.5 hex nut.



7 Assemble the X axis (the horizontal axis)

7.1Assemble the X Axis left end

Step1. Mount the Z-axis nut.

Part name	Required number	Part ID	pic
M3 x 16mm screw	4	No. 26	
M3 washer	4	No. 7	

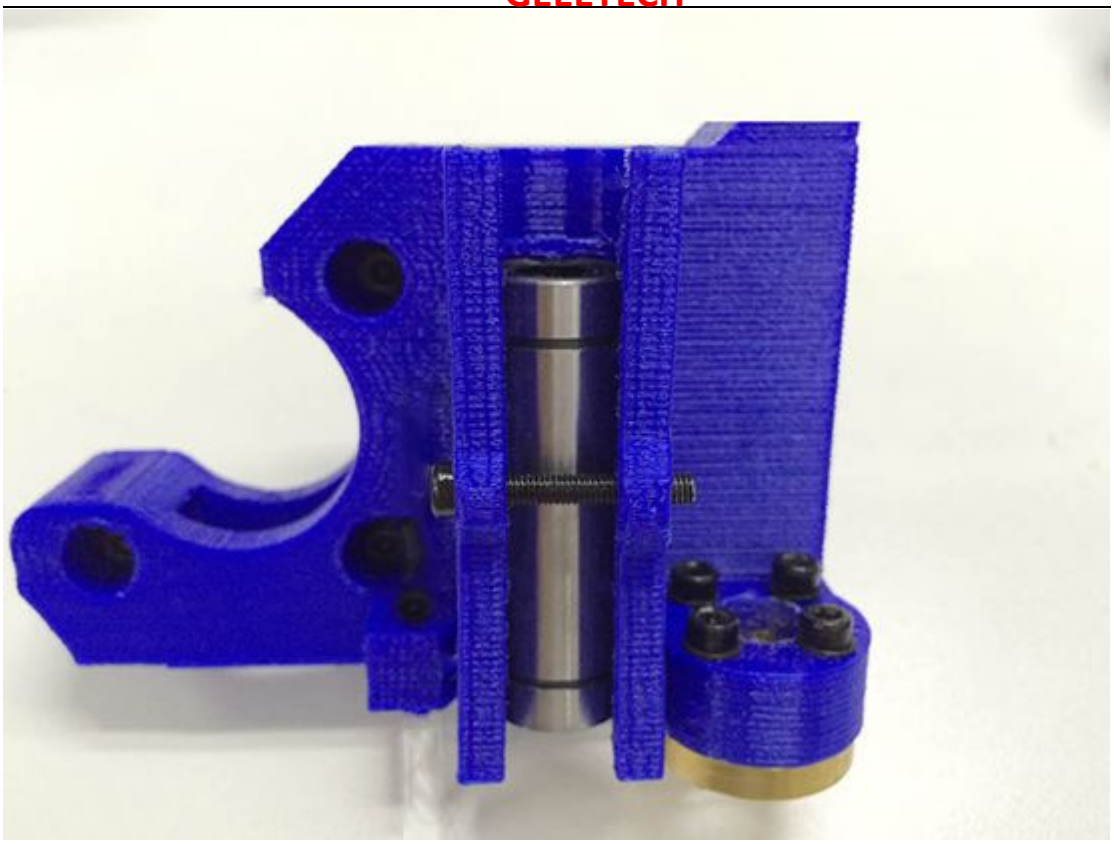
Z-axis nut	1	No.17	
X-axis left end	1	No.P1	

Mount the Z nut on the X-axis left end from bottom to up, fix with M3 x 16mm screw and M3 washer.

Step2. Add the linear bearing

Part name	Part ID	Required number	pic
M3 x 20mm screw	No. 27	2	
M3 hex nut	No. 11	4	
M3 washer	No. 7	4	
Linear Bearing LM8LUU	No. 40	1	

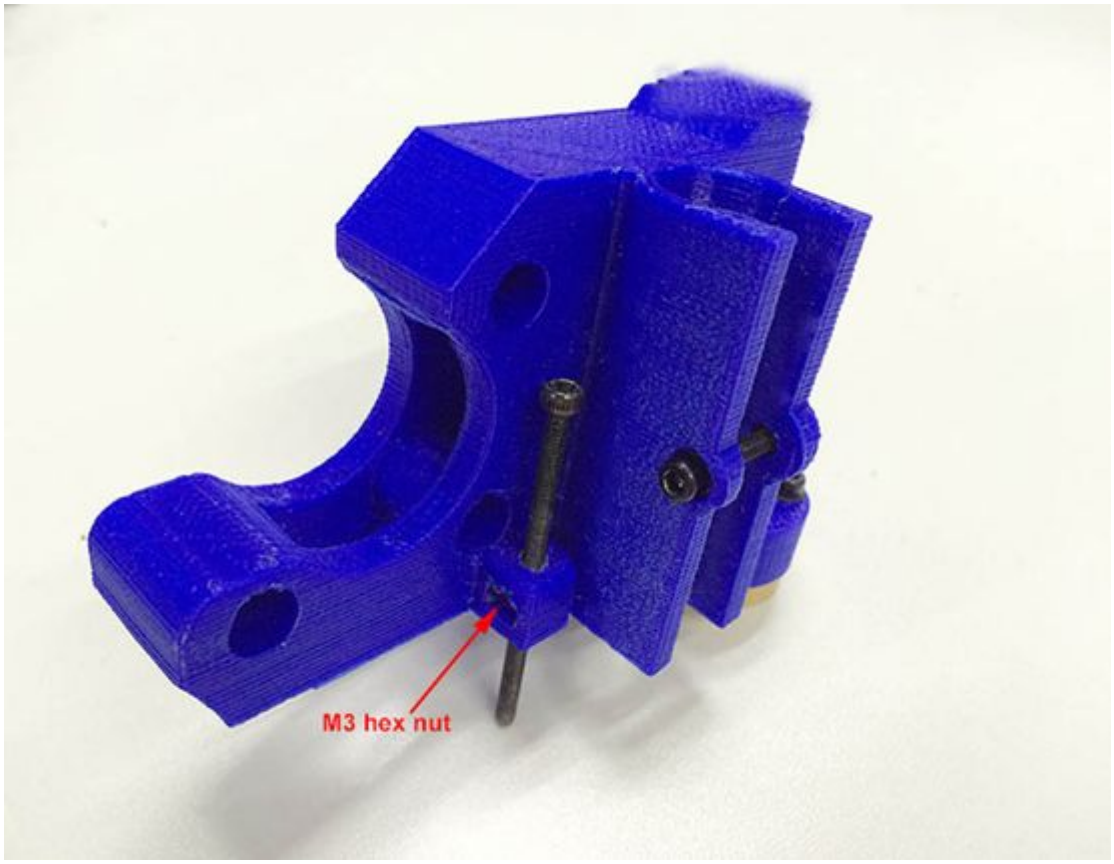
Insert the Linear Bearing into the groove of X-axis left end, lock it with a M3 x 20mm screw, M3 washer and M3 hex nut.



Step2. Mount the endstop trigger.

Part name	Part ID	Required number	pic
M3 x 50 screw	No.31	1	
M3 hex nut	No. 11	4	

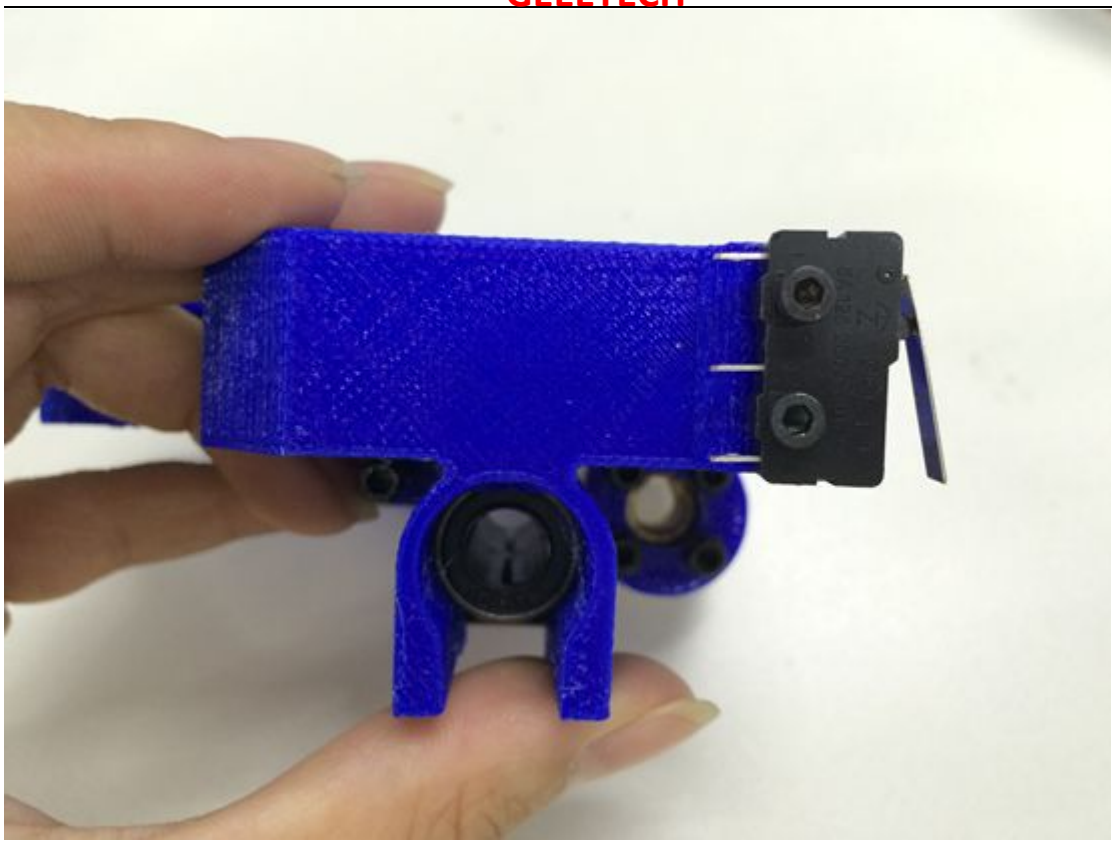
1. Put the M3 hex nut into the nut slot.
2. Thread half of the M3x50mm screw into the screw hole.



Step3. Mount the endstop

Part name	Part ID	Required number	pic
M2.5 x 12mm screw	No. 21	2	
End stop	No.46	1	

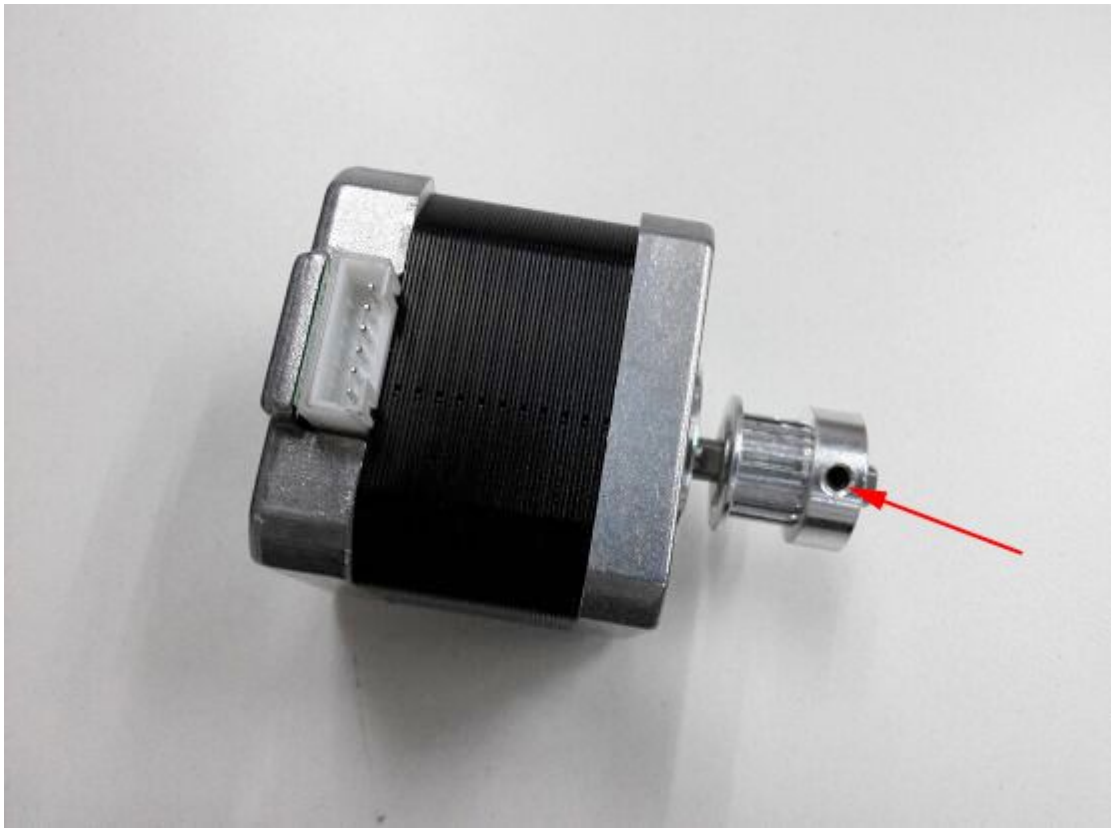
Mount the endstop on the top of X-axis left end with 2 M2.5 x 12mm screw. You can use the file to enlarge the screw hole.

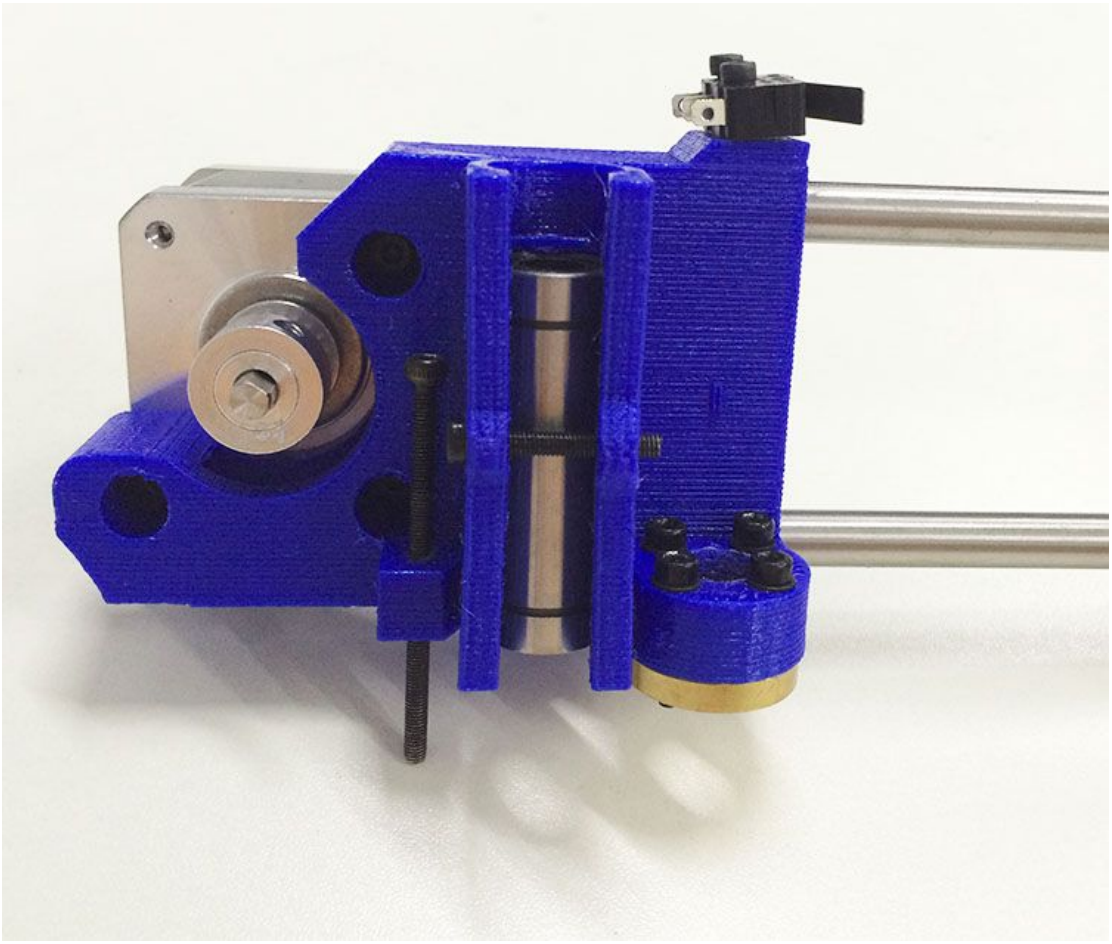


7.2 Mount the X-axis motor.

Required parts	Required number	Part ID	Pic
Stepper motor	1	NO.75	
Pulley	1	NO.43	
M3 x 8 screw	3	NO.23	

Please pay attention to the mount direction of the pulley, which is opposite to that of the Y-axis.





7.3 Assemble the right end of the X axis. (X idler)

Step1. Mount the Z axis nut

Part name	Part ID	Required number	pic
M3 x 16mm screw	No. 26	4	
M3 washer	No. 7	4	
Z-axis nut	No.17	1	

X-axis right end	No.P2	1	

Mount the Z axis nut on the bottom of X-axis right end with 4 M3 x 16mm screws and M3 washers.

Step2. Add the linear bearing

Part name	Part ID	Required number	pic
M3 x 20mm screw	No. 27	2	
M3 hex nut	No. 11	4	
Linear Bearing LM8LUU	No. 40	1	

Insert the Linear Bearing into the groove of X-axis right end; lock it with a M3 x 20mm screw, M3 washer and M3 hex nut.

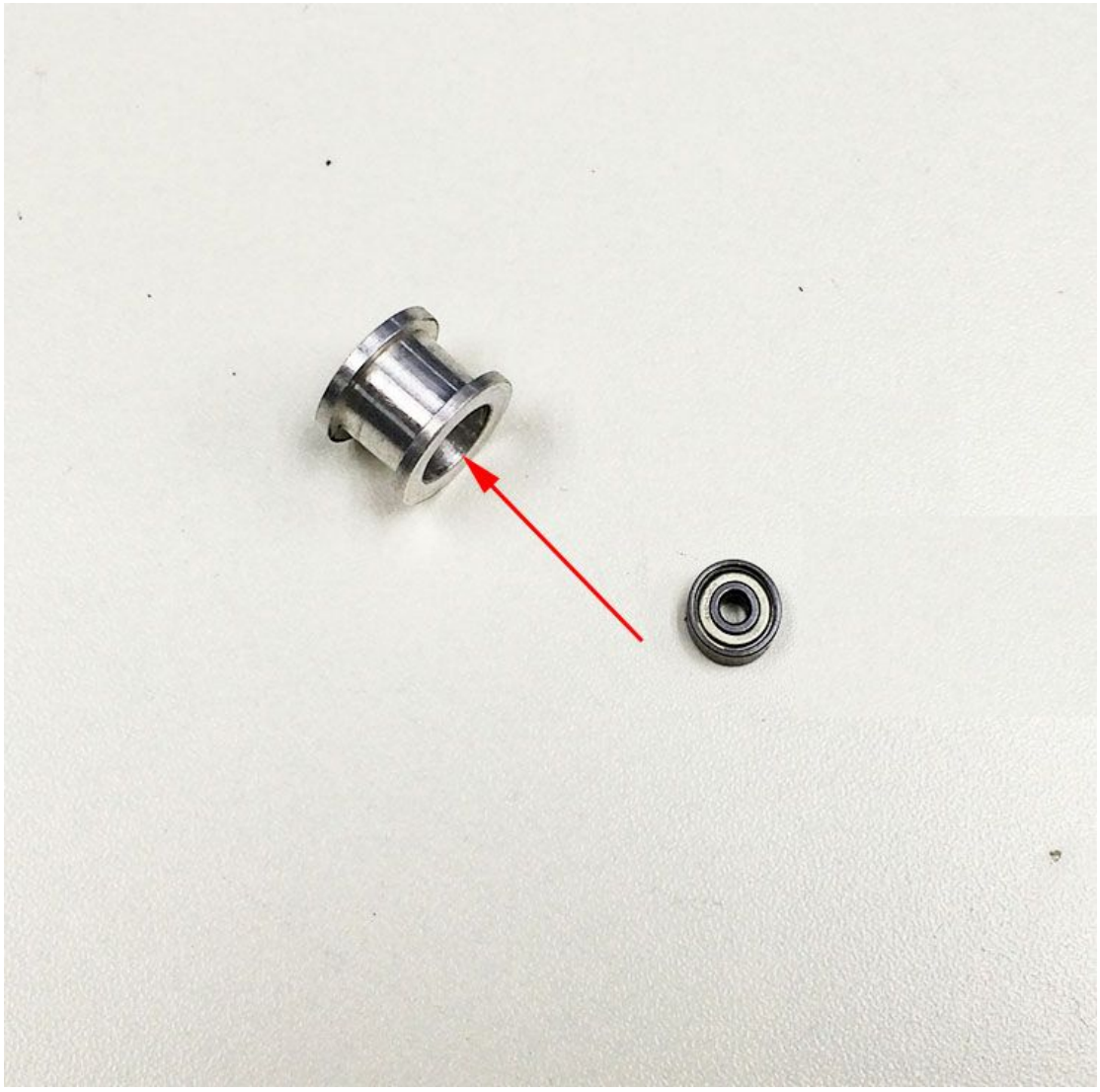
7.4 Assemble the X-Axis Idler

Required parts	Required number	Part ID	Pic
Ball bearing	2	NO.38	
bearing holder	1	NO.66	
Driving wheel	1	No.37	

M3 x 40 screw	1	NO.30	
M3 wing nut	1	NO.15	
M4 x25 screw	1	NO.34	
M4 lock nut	1	NO.14	

Step1. Thread the M3 x 40 mm screw through the bearing holder.

Step2. Insert the two MR84zz ball bearings into both ends of the driving wheel.



Step3. Put the M4 x25 screw and M4 washer through the driving wheel. Lock the other end with a M4 lock nut. You may need a wrench to tighten locking nut.

*Do not screw it too tight, you should leave enough room for the wheel to turn freely.

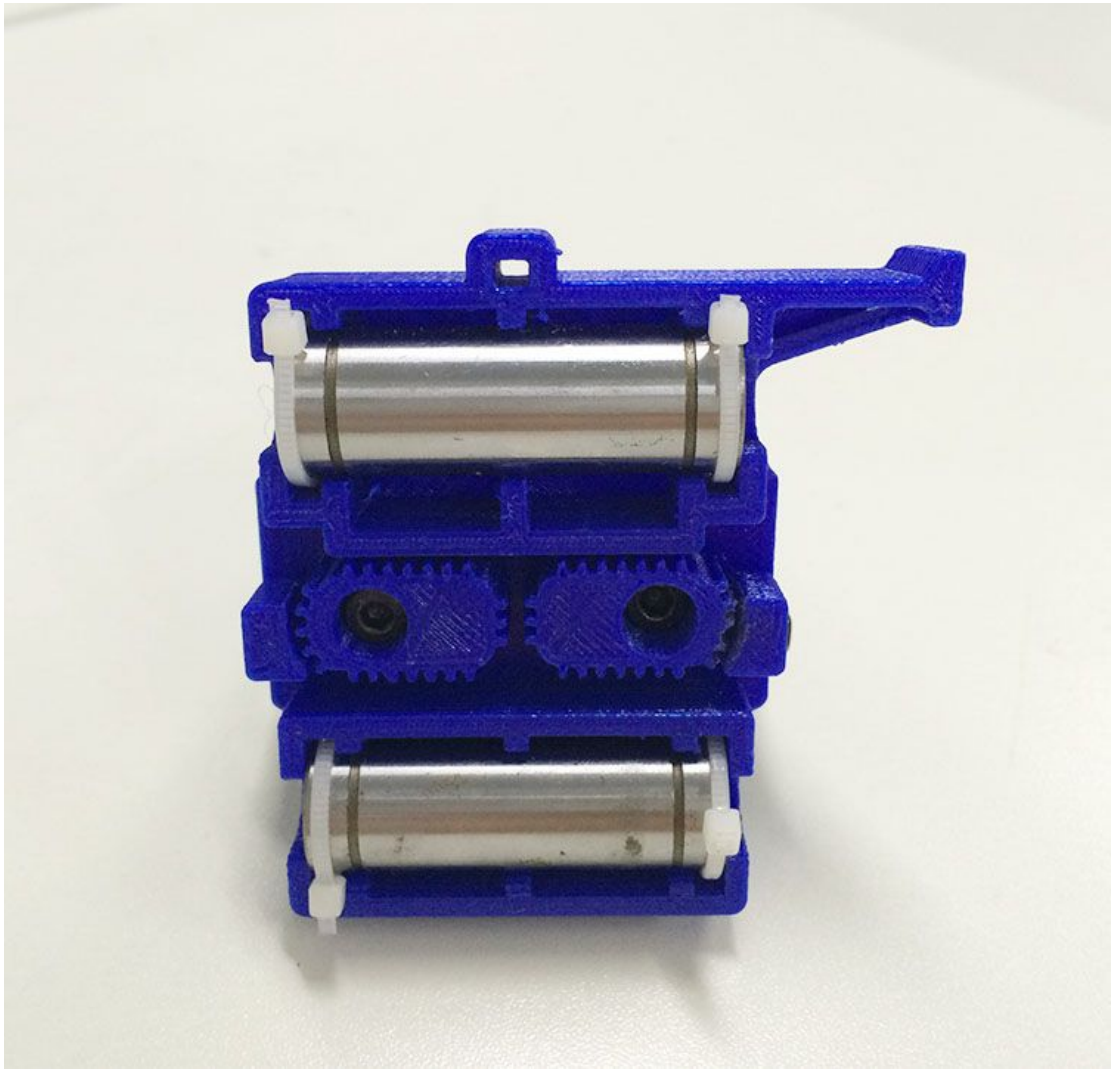
7.5 Mount the extruder holder carriage.

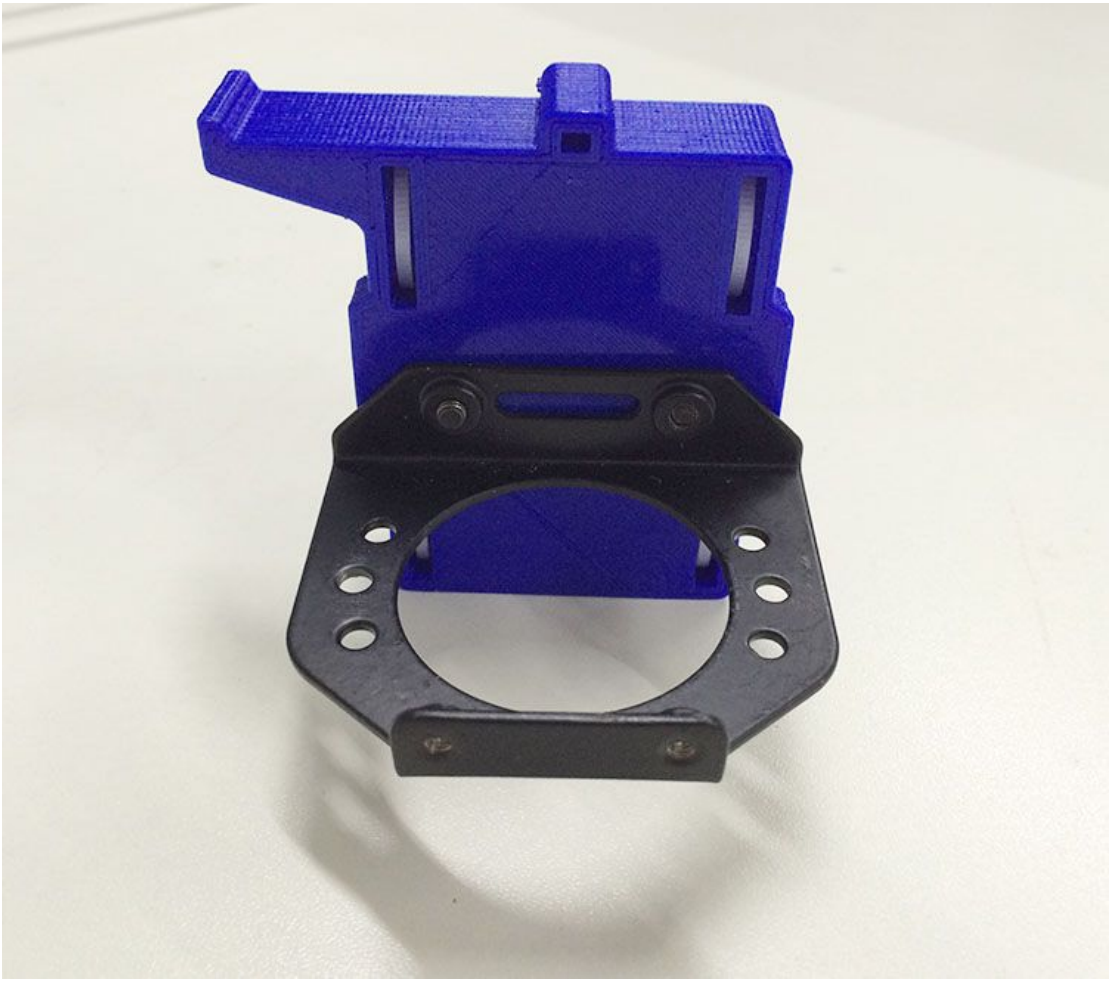
Required parts	Required number	Part ID	Pic
Extruder bracket	1	NO.M1	
M4 x 12 screw	2	NO.33	
Print bracket	1	NO.P1	

Zip tie	4	NO.54	
LM8UU linear bearing	2	NO.40	

Step1. Insert the linear bearing into the slot of Print bracket; tie them up with nylon ties.

Step2. Screw up the NO.P1 and the NO.M1 with two M4 x 12screws. Like this:



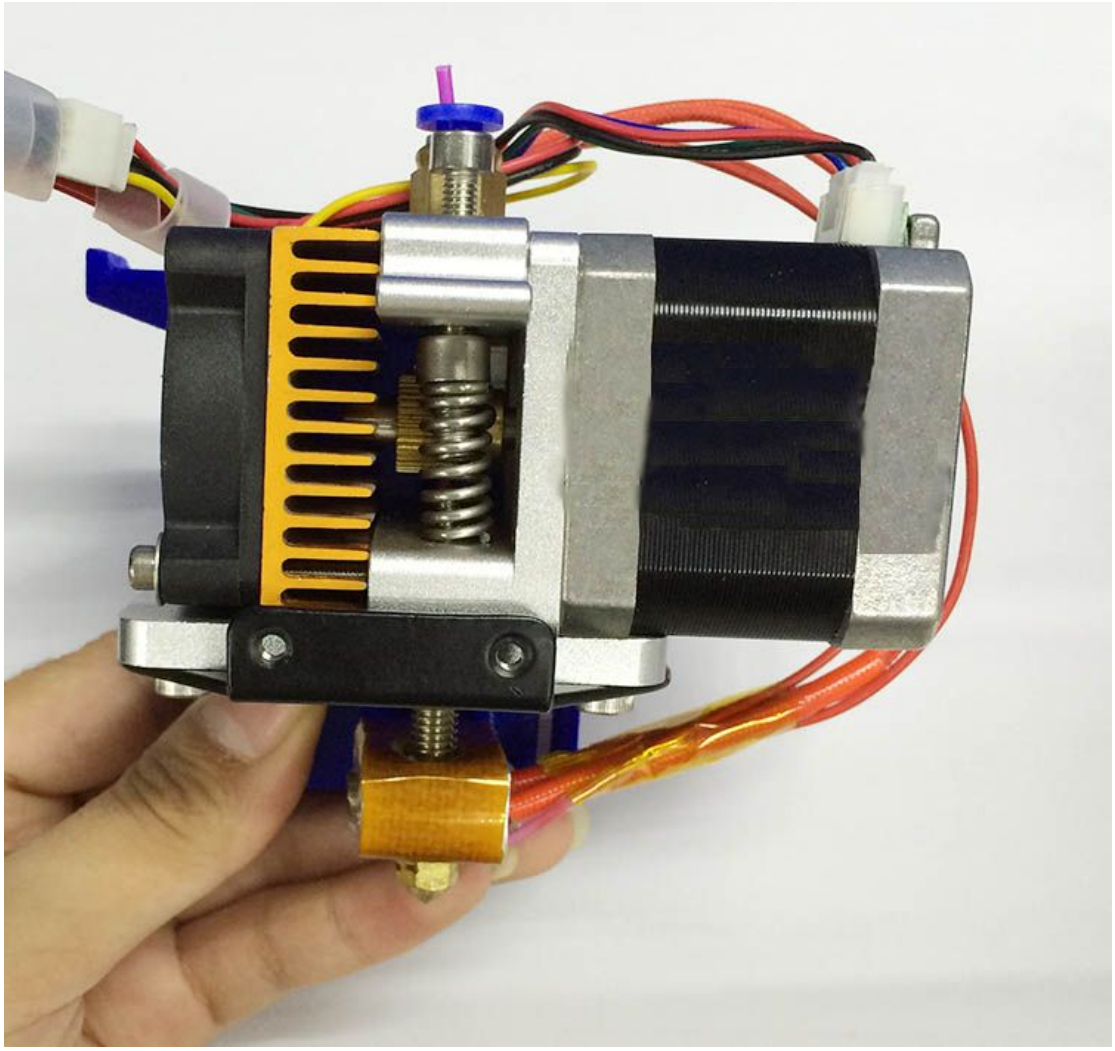


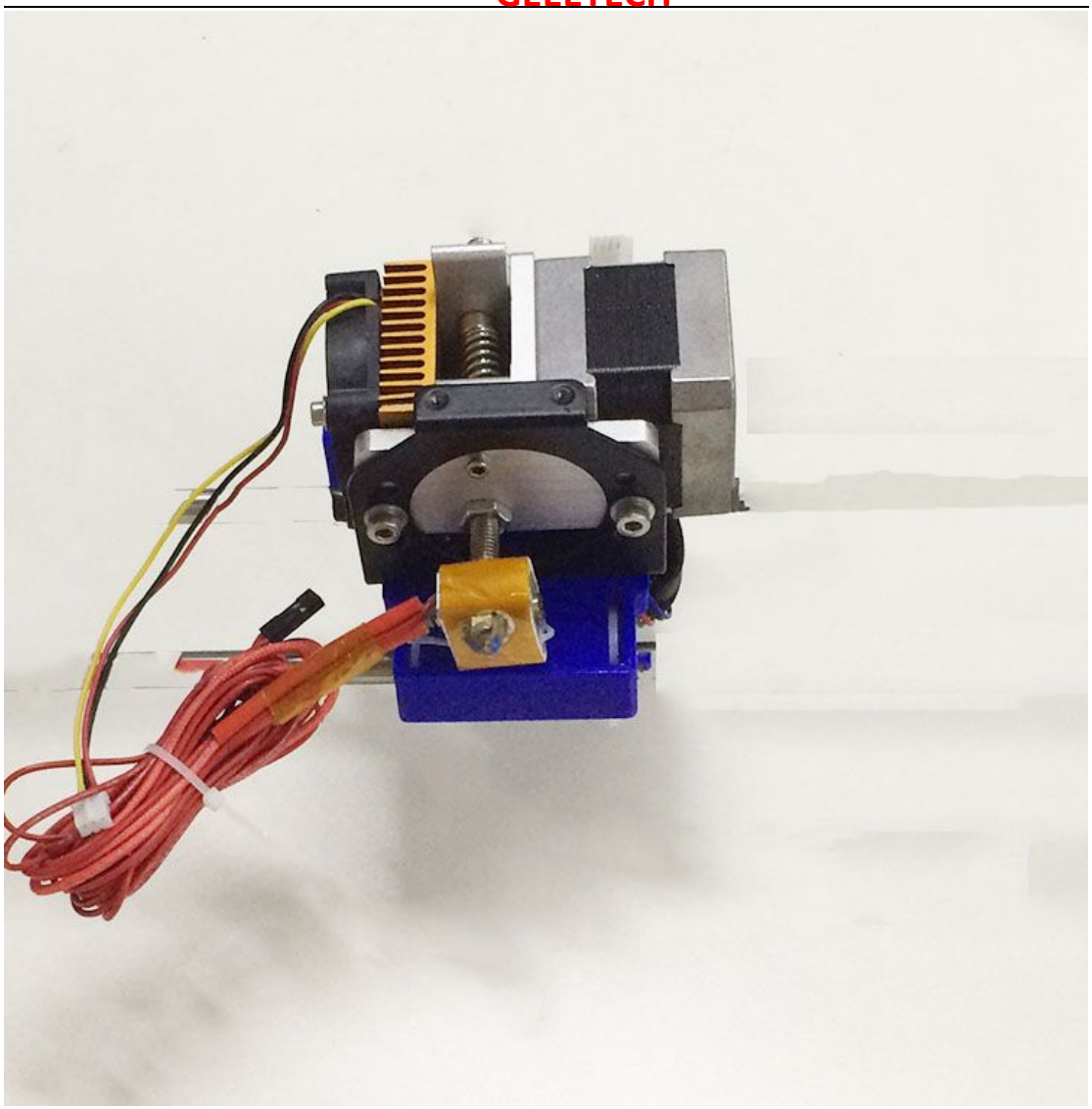
Do the same for your dual extruder carriage if you are assembling the pro C model.

7.6 Mount the extruder

Required parts	Required Number	Part ID	Pic
MK8 extruder	1	NO.79	
M4 x 6mm screw	2	NO.32	
M4 washer	2	NO.8	

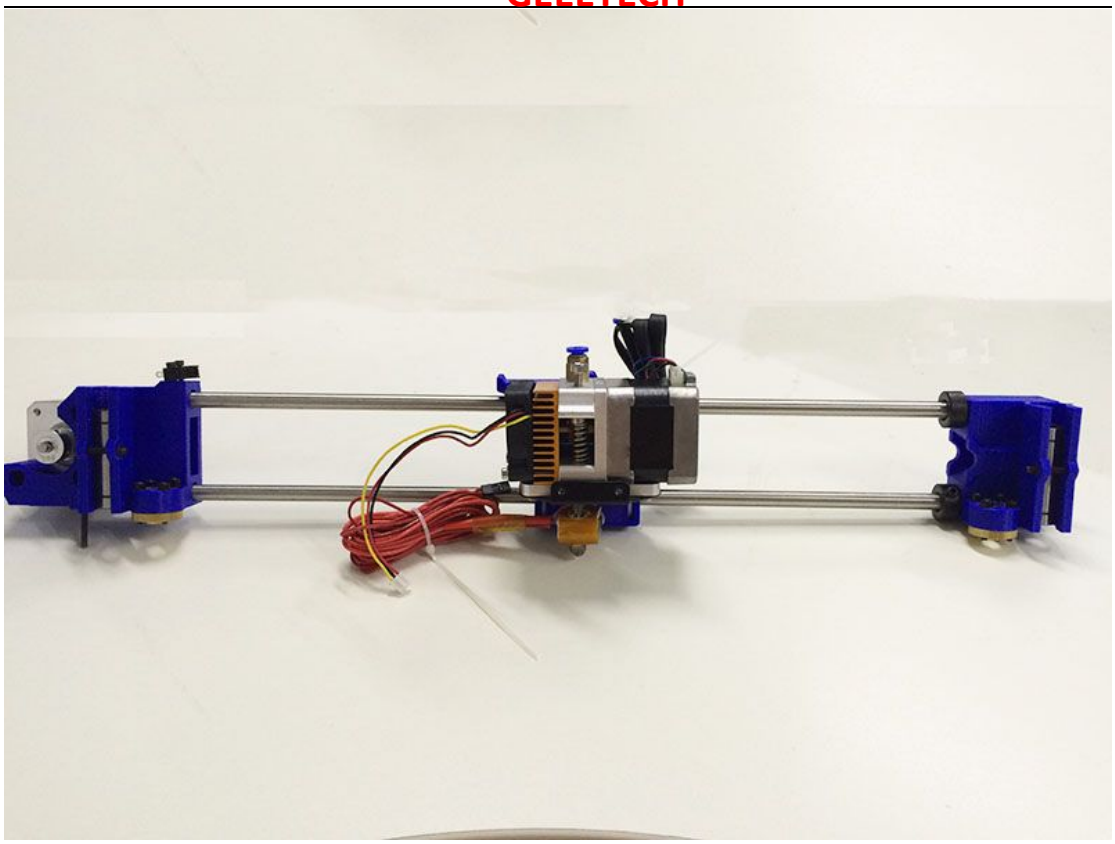
Step1. Mount the assembled extruder on the extruder support. Use 2 M4 x 6 mm screws and M4 washers to fix.





7.7 Assemble the X-axis together

Required parts	Required number	Part ID	Pic
Screw locking ring	2	NO.19	
370mm smooth rod	2	NO.2	



8 Assemble the Z axis.

Required parts	Required number	Part ID	Pic
Couplings	2	NO.69	
L322 threaded rod	2	NO.4	
L322 mm smooth rod	2	NO.1	

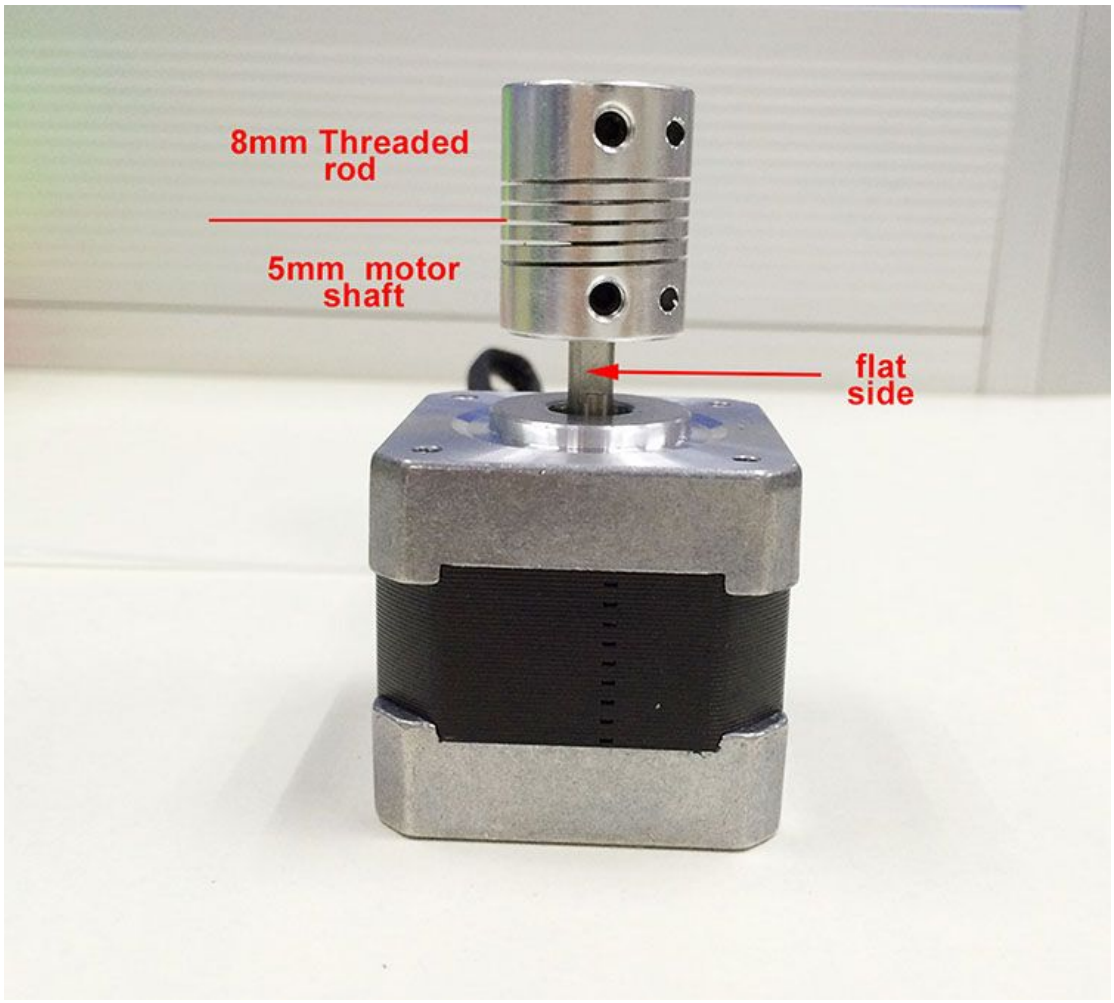
Step1. Fix the two couplings on both of the motor shaft..

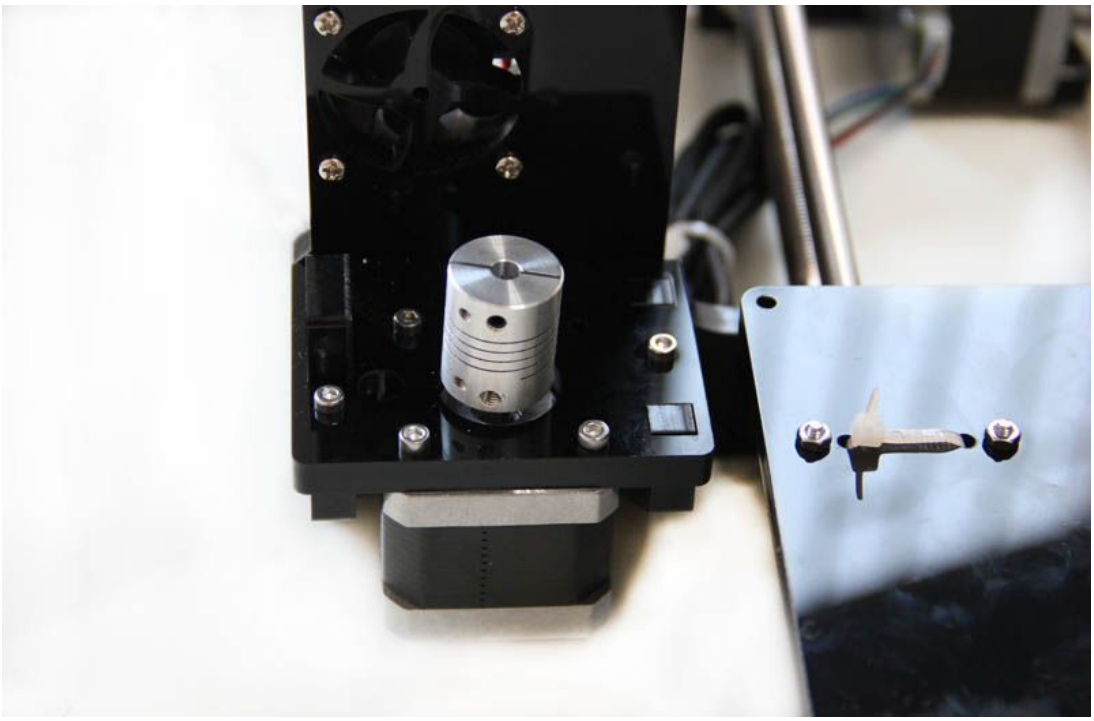
Please note:

1. The opening of both end, one is 5mm, another is 8mm, connect the 5mm hole to

the motor shaft.

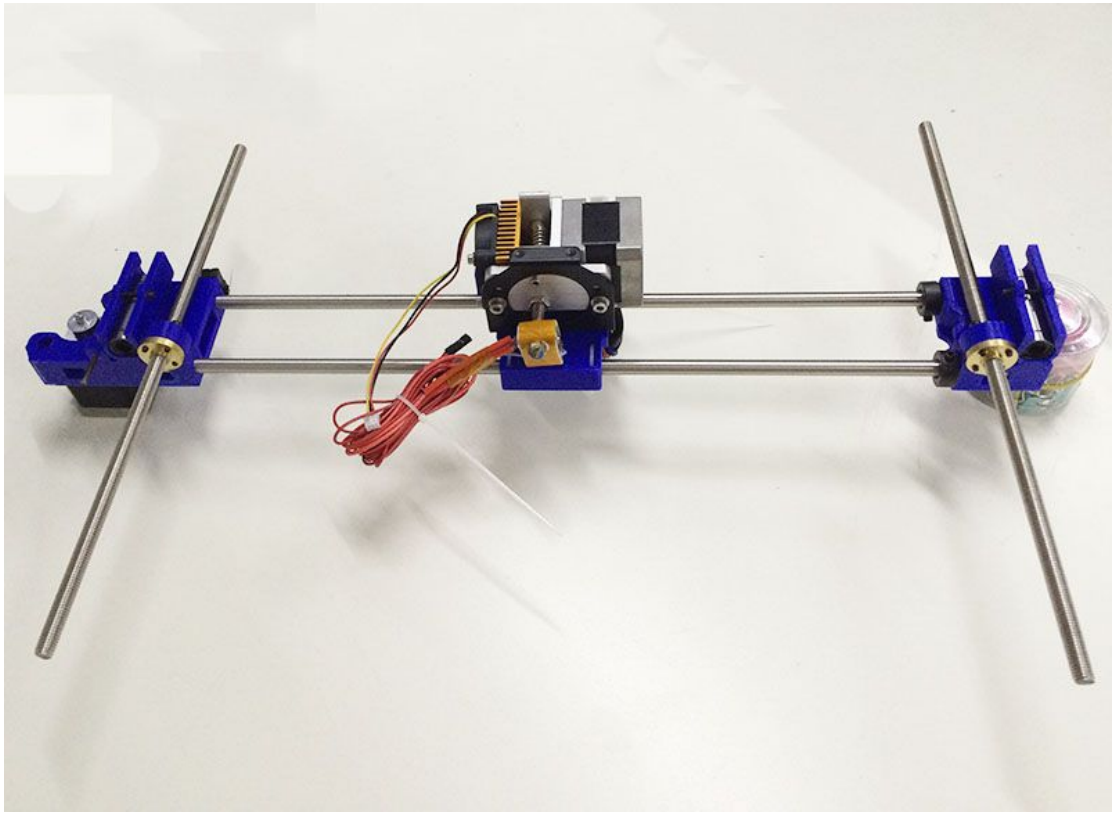
2. Screw the small bolt of the 5mm part on the **upper part of the flat side** of the motor shaft tightly.



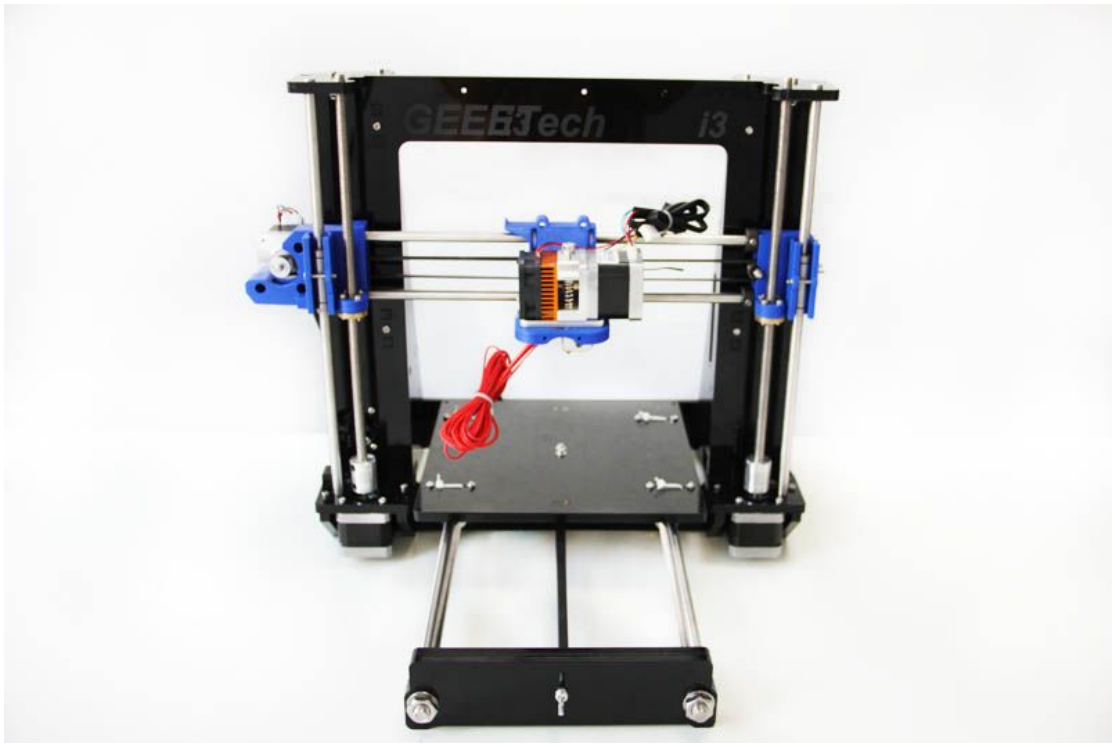


Step2. Thread the threaded rods of Z axis through the brass nuts.

Keep both end of X axis at the same place of the rod, you are advised to measure the distance of the both side so that they are at the same level when you put them up.



Step3. Put the assembled X-axis on the Z-axis. Then slide the smooth rod into the linear bearings.



Step4. Assemble the top mount of the Z-axis.

Required parts	Required number	Part ID	Pic
Z-axis top mount	2	NO.A8	
M3 x 16 screw	4	NO.26	
M3 square nut	4	NO.16	
locking ring	2	No.32	

1. Put the locking ring on the smooth rods separately.

2. Fix the Z-axis top mount with M3 x 16 mm screws and M3 square nuts.

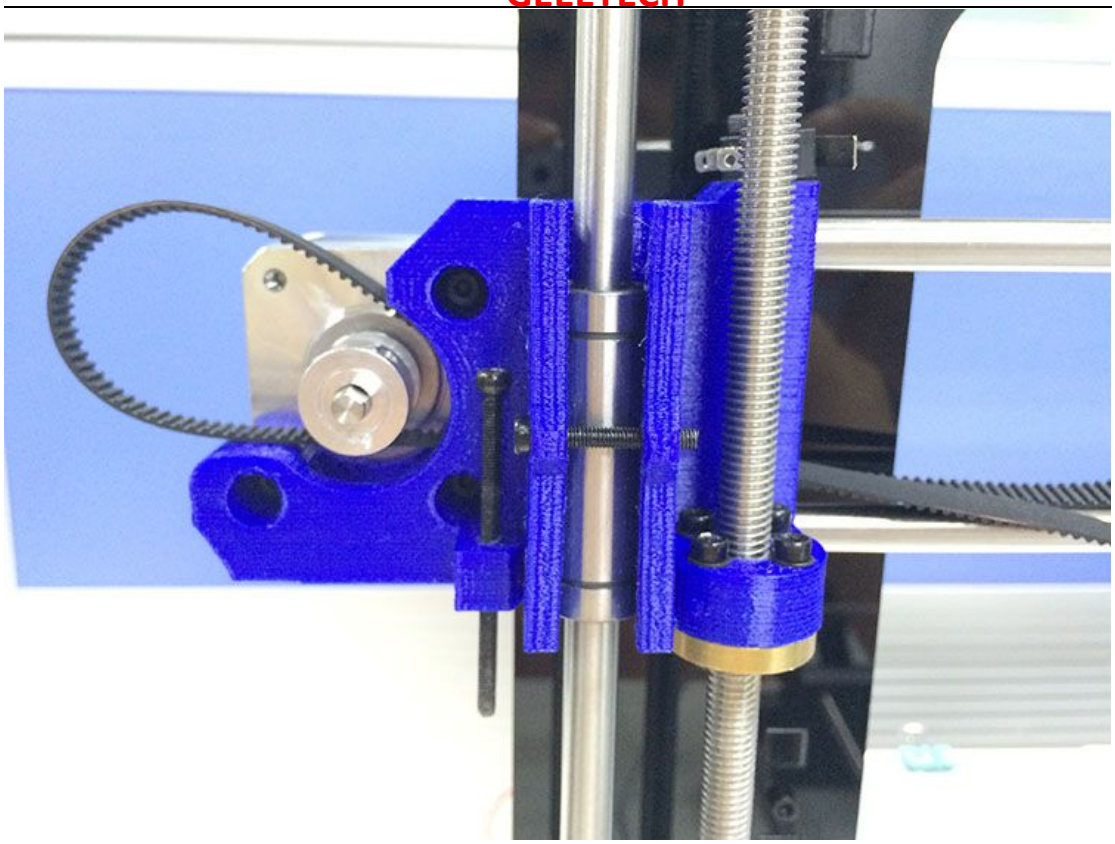
* You need to adjust the two end of the X axis to make sure **the smooth rods and the threaded rod of Z axis is vertical, and the X axis is horizontal ,** which is very important, or it will hinder the move of the Z axis.

9 Add the X-axis belt.

Required parts	Required number	Part ID	Pic
Timing Belt	1	NO.42	
Nylon tie	2	NO.54	

Step1. Thread the belt around pulley on the motor end.

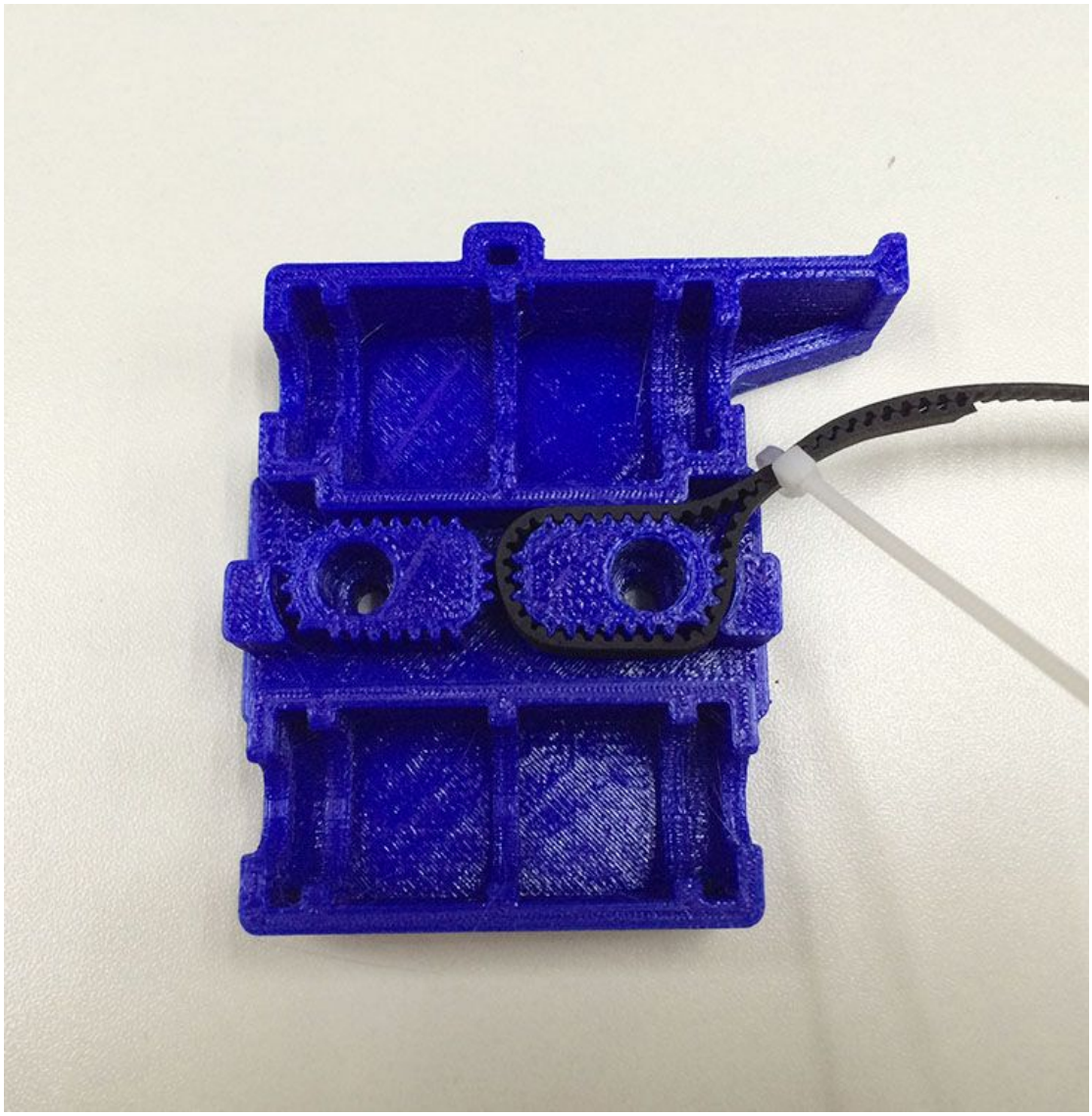
(*The two linear bearings in the picture should be a longer one, please ignore it)



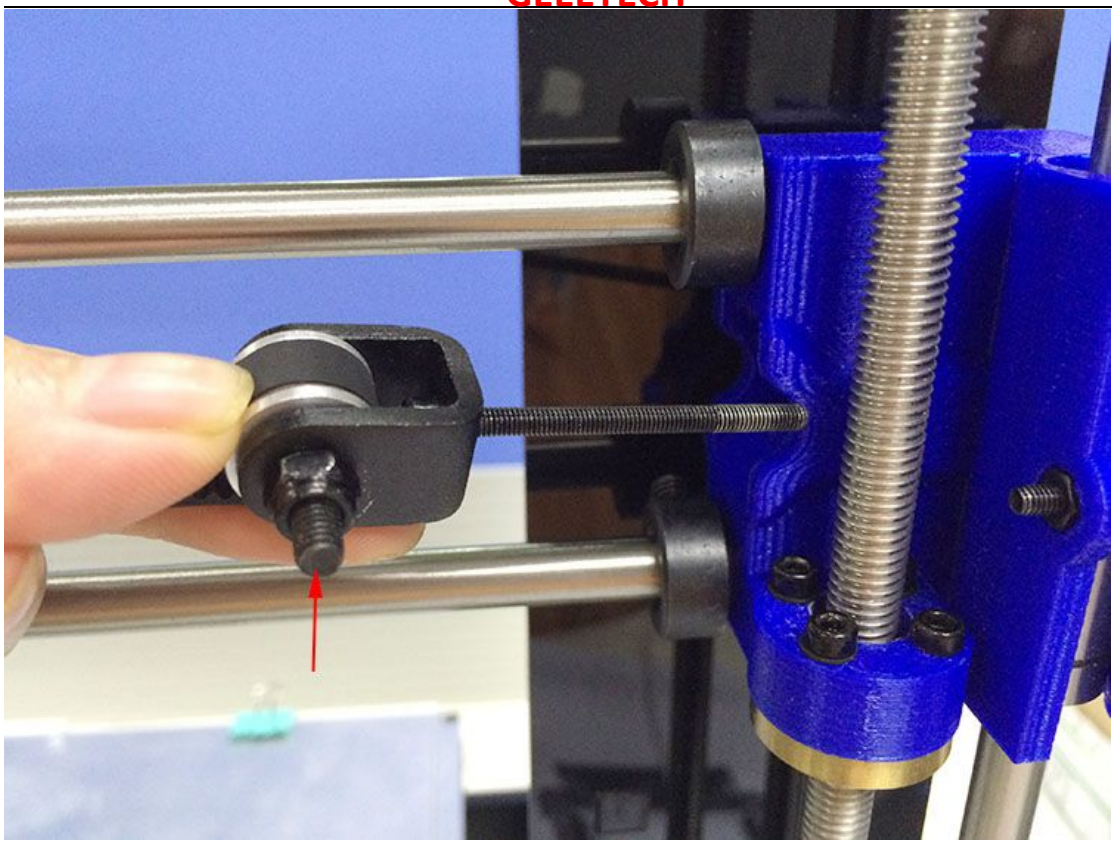
Step2. Insert the belt into the groove. You may need to file the groove a bit larger.

*Pay attention to the tooth mesh of the belt and that on the bracket. Tie up both ends tightly.

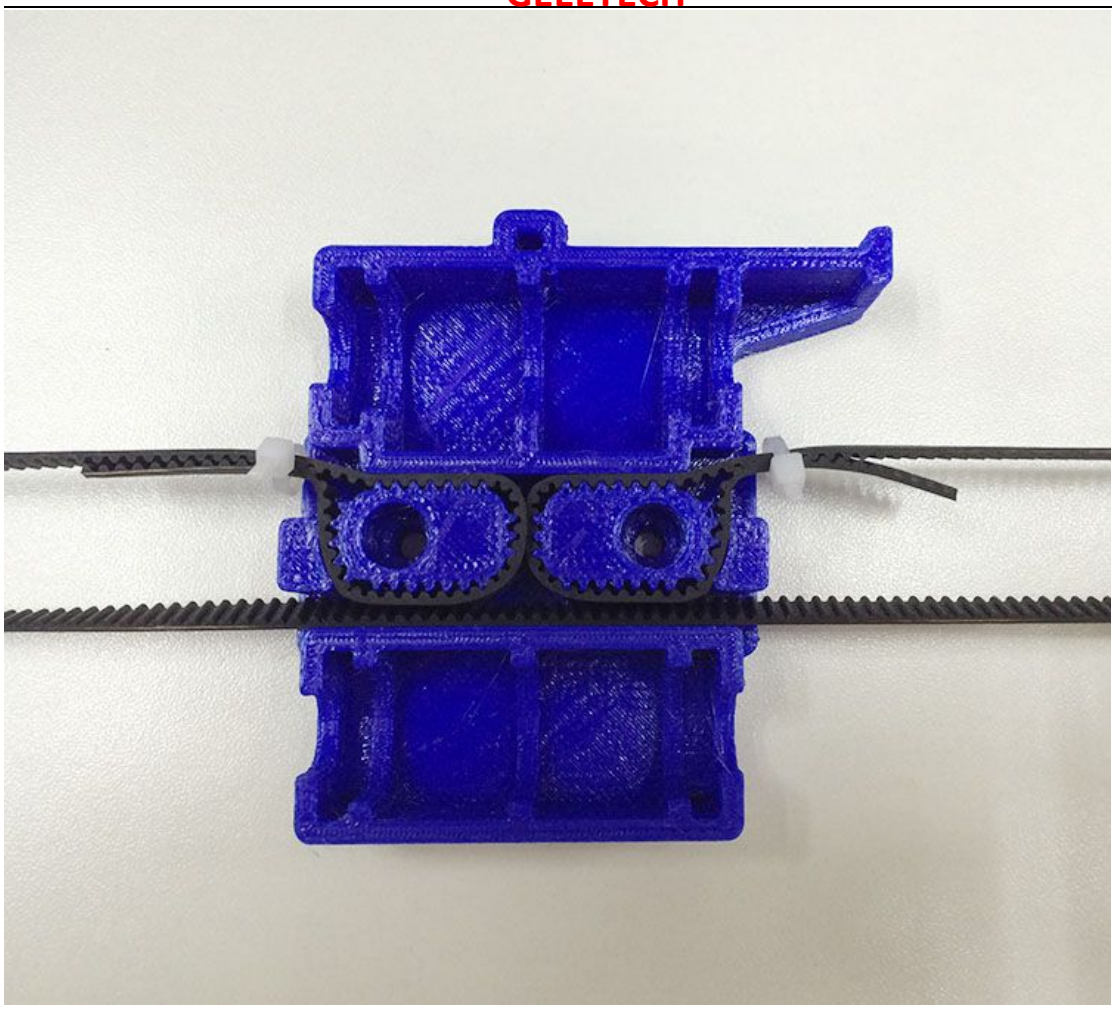
Refer to this:



Step3. Thread another end of the belt through the bearing holder, around the driving wheel. (Note the direction of the M4x25mm screw). Insert it into the right end of the X-axis. And lock it up with a wing nut.



Step4. Insert another end of the belt into the groove. You may need to use the tweezers or something small and smooth to press the other belt help you insert this one. Tie it up with a zip tie.



*Pay attention to the tooth mesh of the belt and that on the bracket. Tie up both ends tightly.

10. Attach he heated bed.

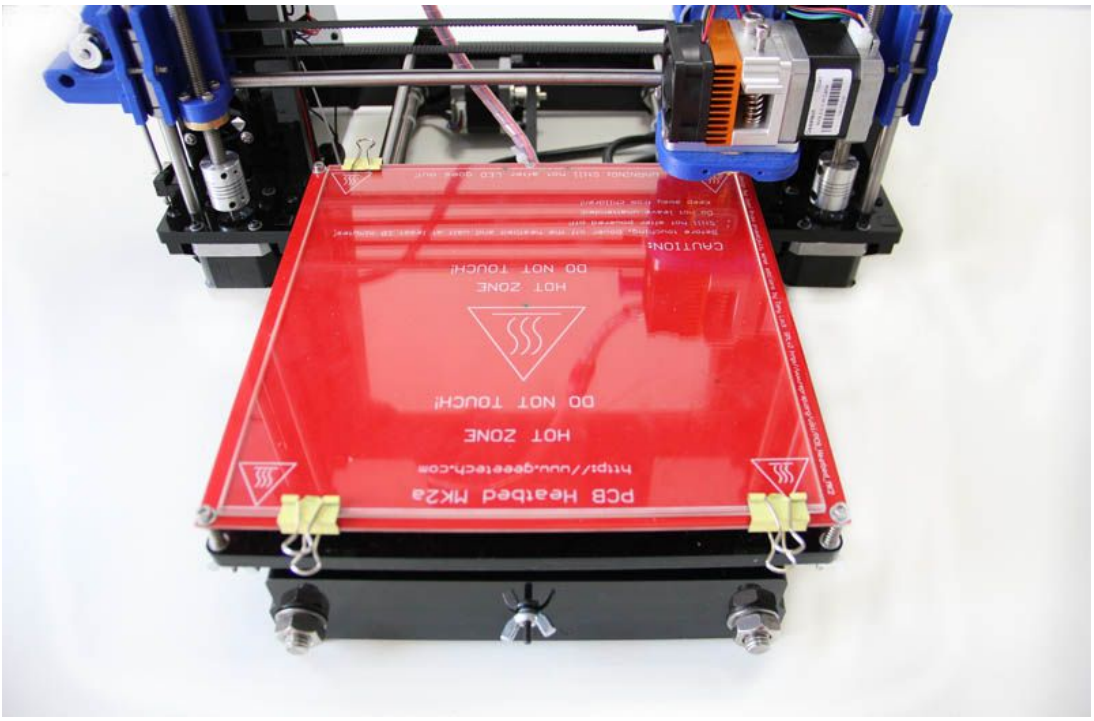
Required parts	Required number	Part ID	Pic
MK2A Heat bed	1	NO.71	

Borosilicate glass	1	NO.72	
Heating wire	2	NO.51	
Thermometry wire	2	NO.50	
Wing nut	4	NO.15	
Spring	4	NO.37	
M3 x35 screw	4	NO.29	
clamp	4	NO.53	

*All our heated bed is pre-soldered or attached before shipping; you can attach the bed directly here.

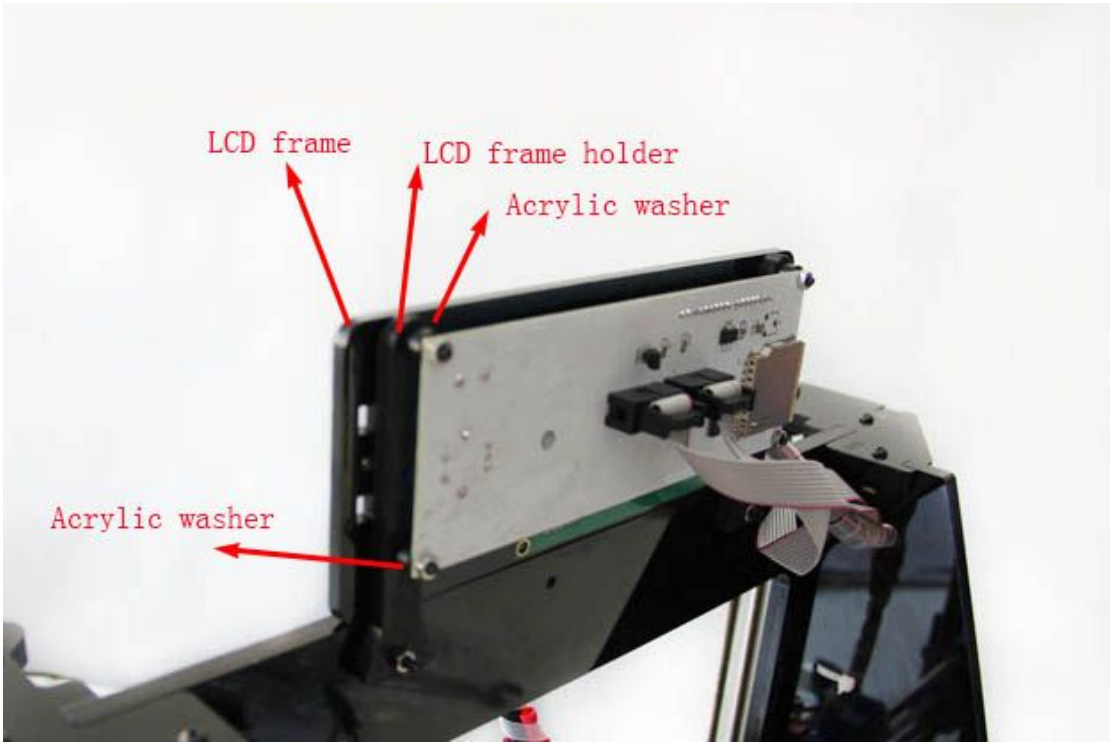
Mount the heat bed on the platform with 4 M3 x35 screws and wing nuts with springs in between. Clamp the heat bed and the glass sheet.

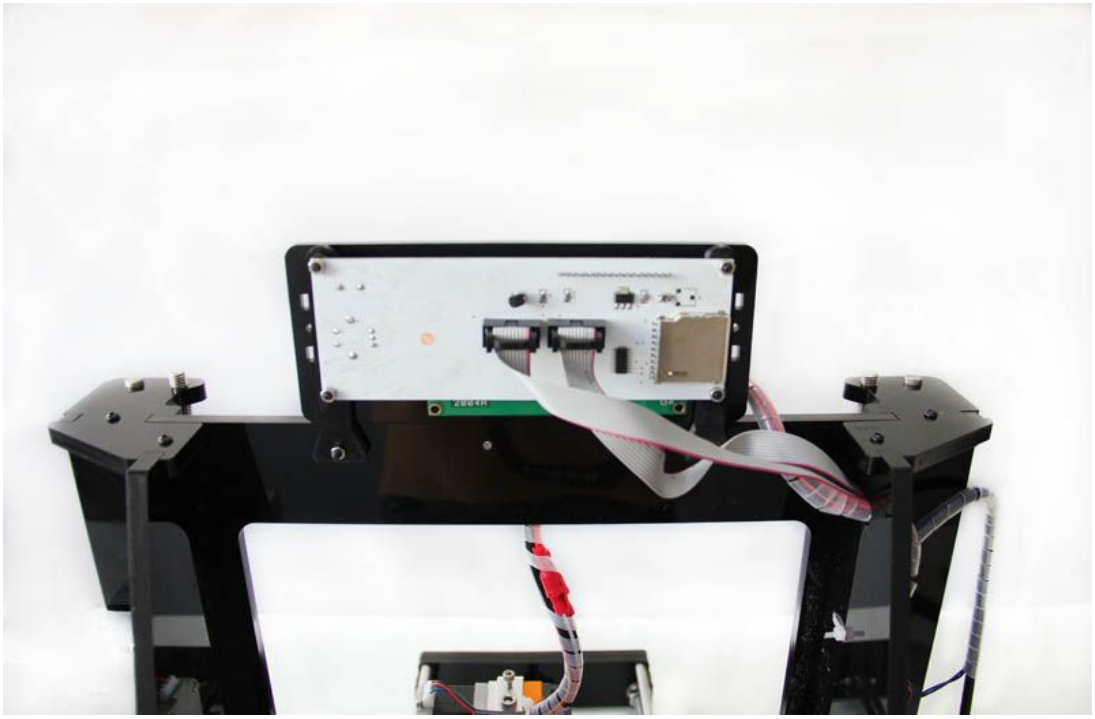
*the soldered side is better to be attached downwards.



11 Mount the LCD panel frame.

Required parts	Required number	Part ID	Pic
LCD 2004	1	NO.80	
LCD frame	1	NO.A21	
LCD frame holder	2	NO.A23	
Acrylic washer	4	NO.A20	
M3 x 20 screw	6	NO.27	
M3 nut	4	NO.11	



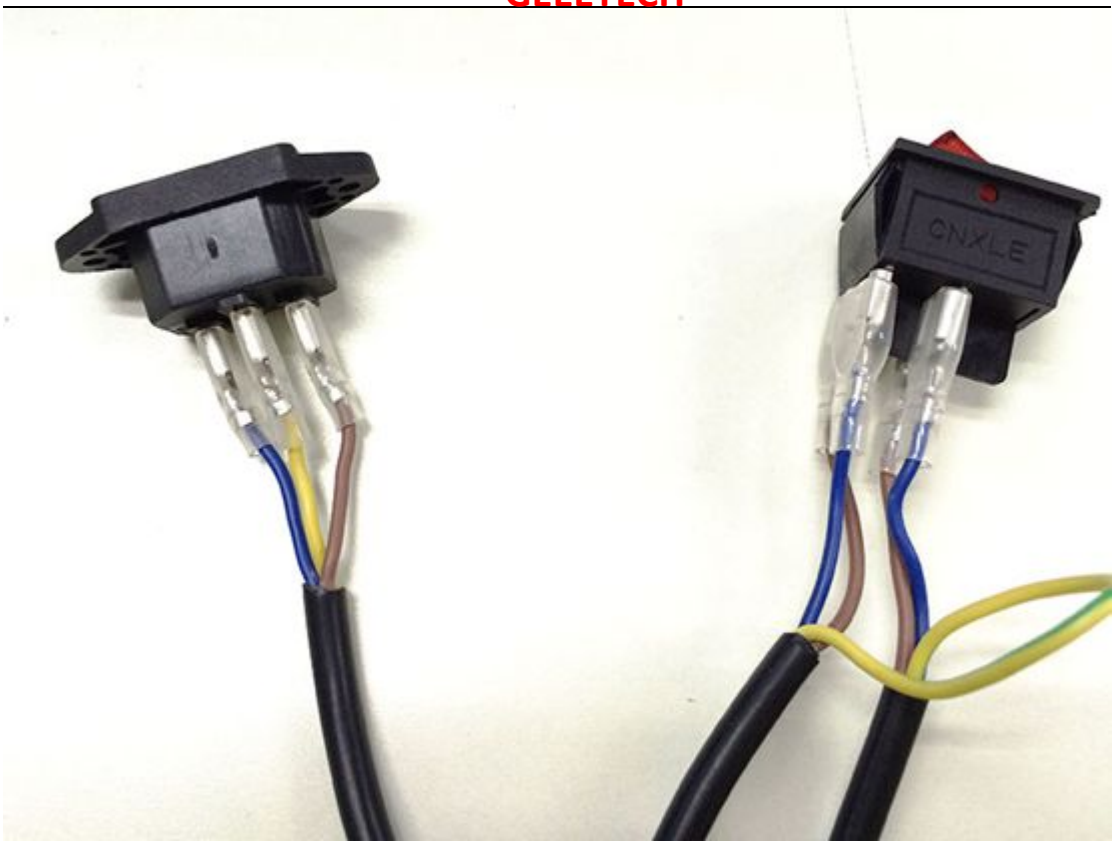


If you cannot make the LCD frame stand on the A1, you can put another fender (Part No.46) on the third screws.

12 Mount the PSU

Required parts	Required number	Part ID	Pic
Power supply	1	NO.74	
M3 x 10 screw	3	NO.24	
M3 x 16 bolt	2	NO.36	
M3 nut	2	NO.11	
3D Power cable	1	NO.52	

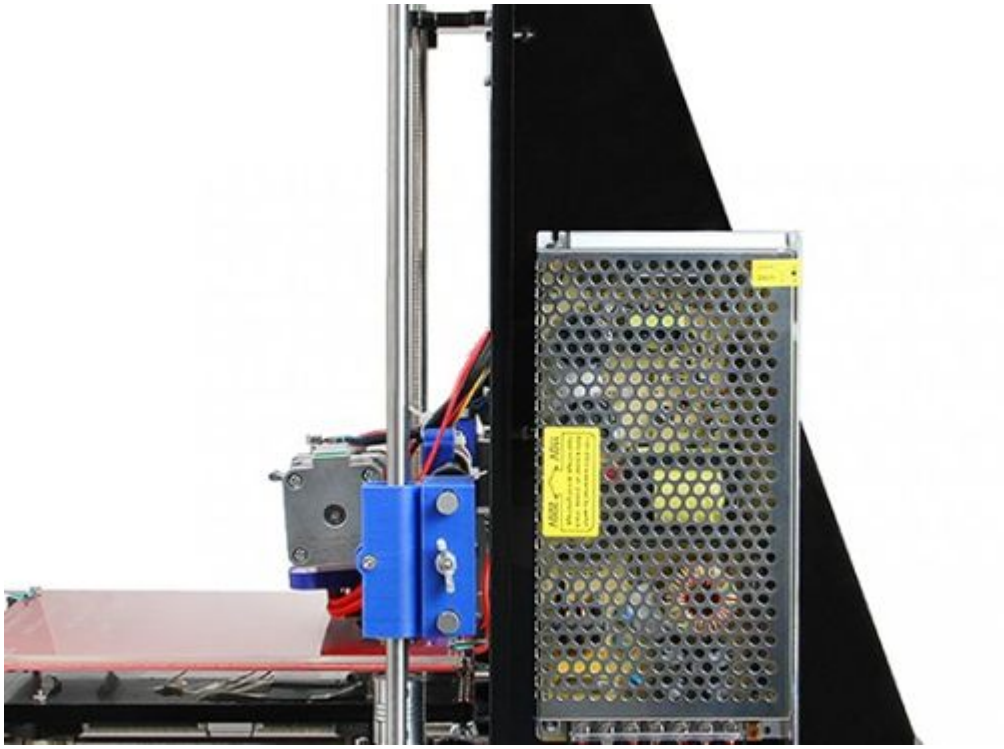
Step1. Take off the wires connected to the socket; before you do, please take a photo of the wire connection, in case you connect them wrongly later.



Step2. Mount the socket on the bottom of the right side panel with 2 M3 x 16 Hex Counter- sunk-head screws and M3 hex nut.

Step3. Thread the wires that are connected to the red switch through another hole on the bottom of the right side panel from outside to inside and connect the 3 wires (brown, blue, yellow) to the socket, do not mix them up. Refer to the above picture. Then pull the other wires out.

Step3. Mount the PSU (Power supply unit) on the right side panel with 3 M3 x 10 screws.



Step4. Thread the power cable (No.68) from inside to outside.

Step5. Now we can connect the wires to the PSU.

1) Mind the color of the wires. The wrong connection of the wire will cause serious damage to the PSU and even to the control board of the printer.

As you can see, there are 7 wires and 7 screws in total.

Note the correspondence between the color of wires and the connector.

Brown------L

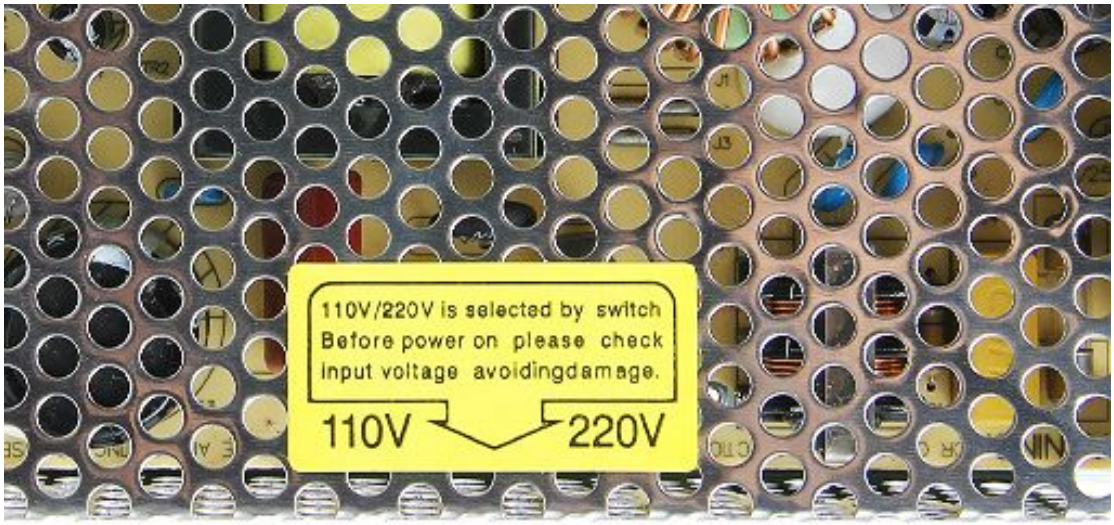
Blue ------N

Yellow------GND

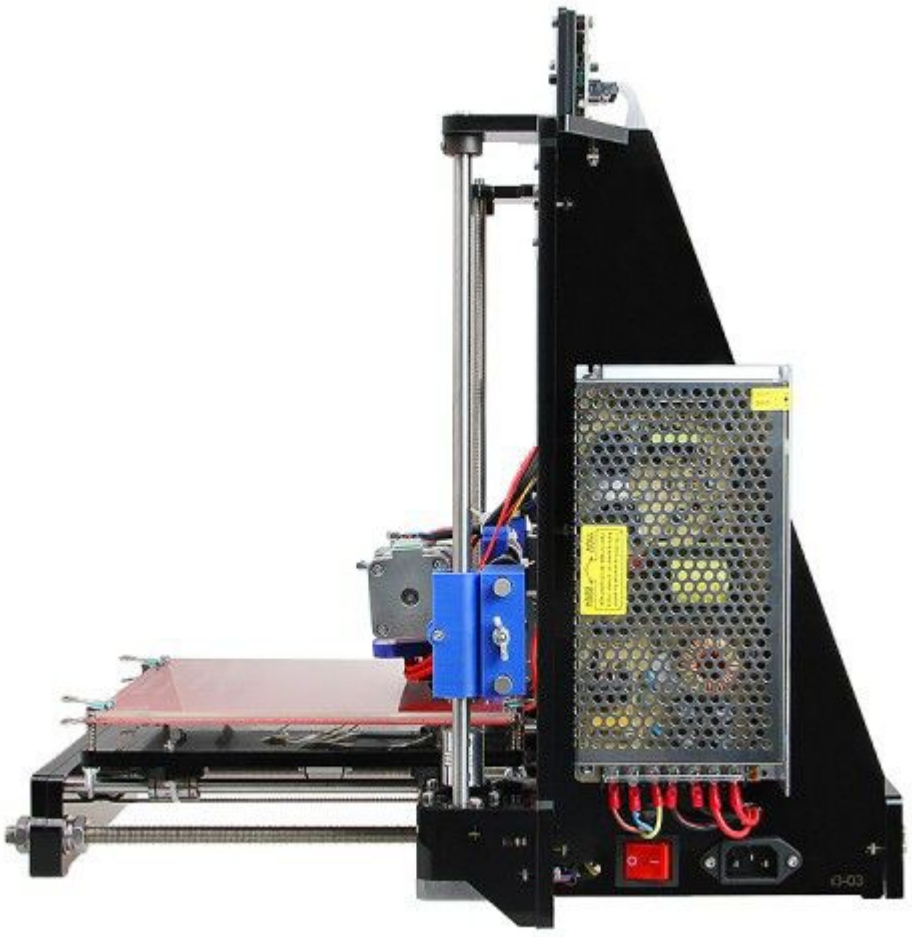
Red ------ --+ V

Black------COM

2) Pay attention to the switch on the right side of the PSU, there are two options of voltage: 110 V and 220V, choose according the standard in your country. As shown in the following picture. Remove the yellow paper; you can use some hard sticks to reach the switch.



See the finished picture here.



Close the cover of the connector in case any electric shock.

13 Mount the control board

Part name	Part ID	Required number	pic
Control board kit	No.77	1	
Sticker	No.56	1	

Heat sink	No.55	1	
Spacer	No.47	4	
M3 x 16 mm screw	No.26	4	
M3 hex nut	No.11	1	

Step1. Cut the sticker into small pieces.

Step2. Past the heat sink onto the chip of the A4988 drivers (on the main board) . The sticker is double sided adhesive.

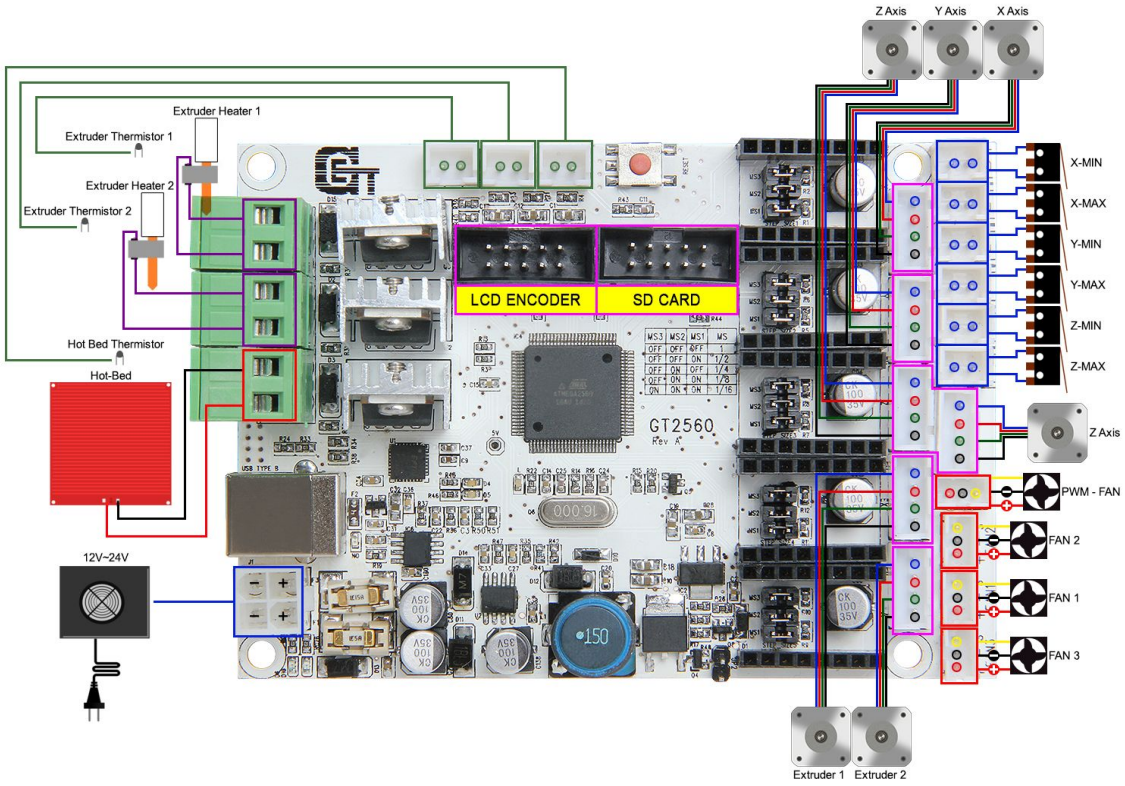
Step3. Insert the spacer into the holes of the board from back to front, Mount the board kit on the left side panel with 4 M3 x 16mm screws and M3 washers on the side panel.

Note the direction of the board; the green connectors are downwards to get enough heat dissipation from the fan.

14 Wiring

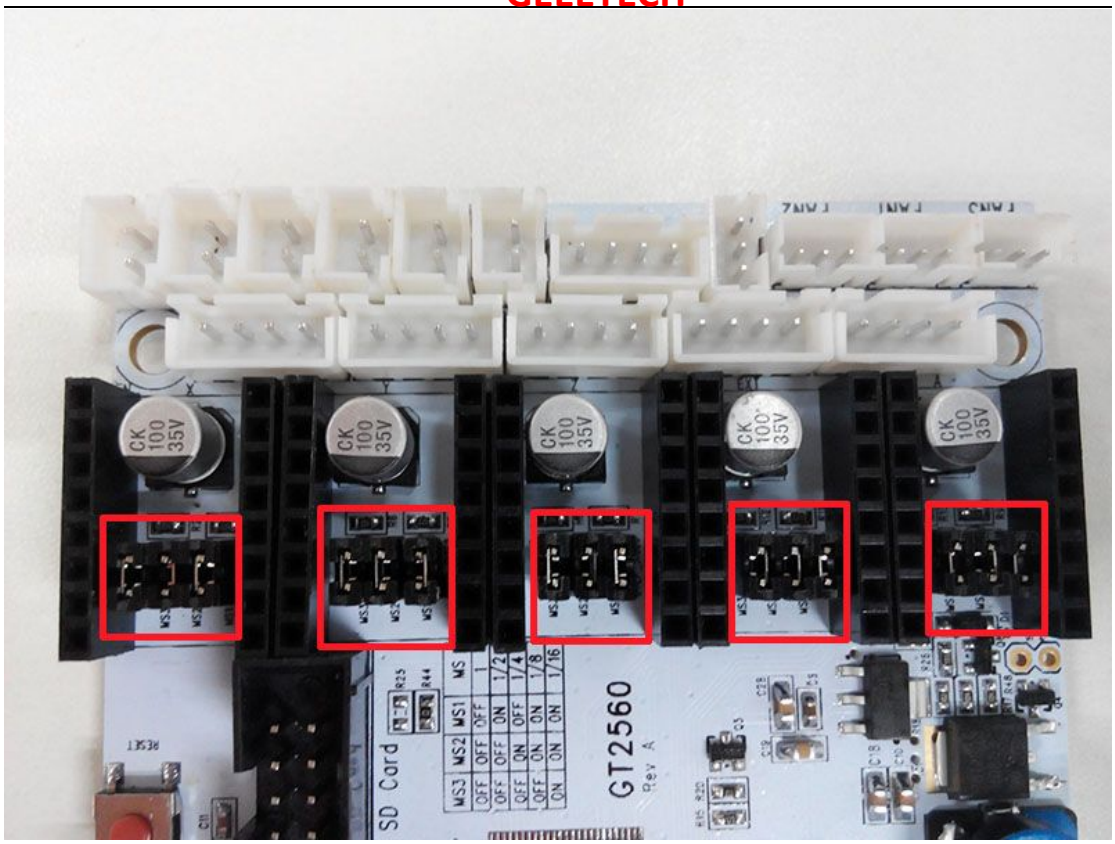
GT2560

Before you start wiring, please take a look at the wiring schematics.



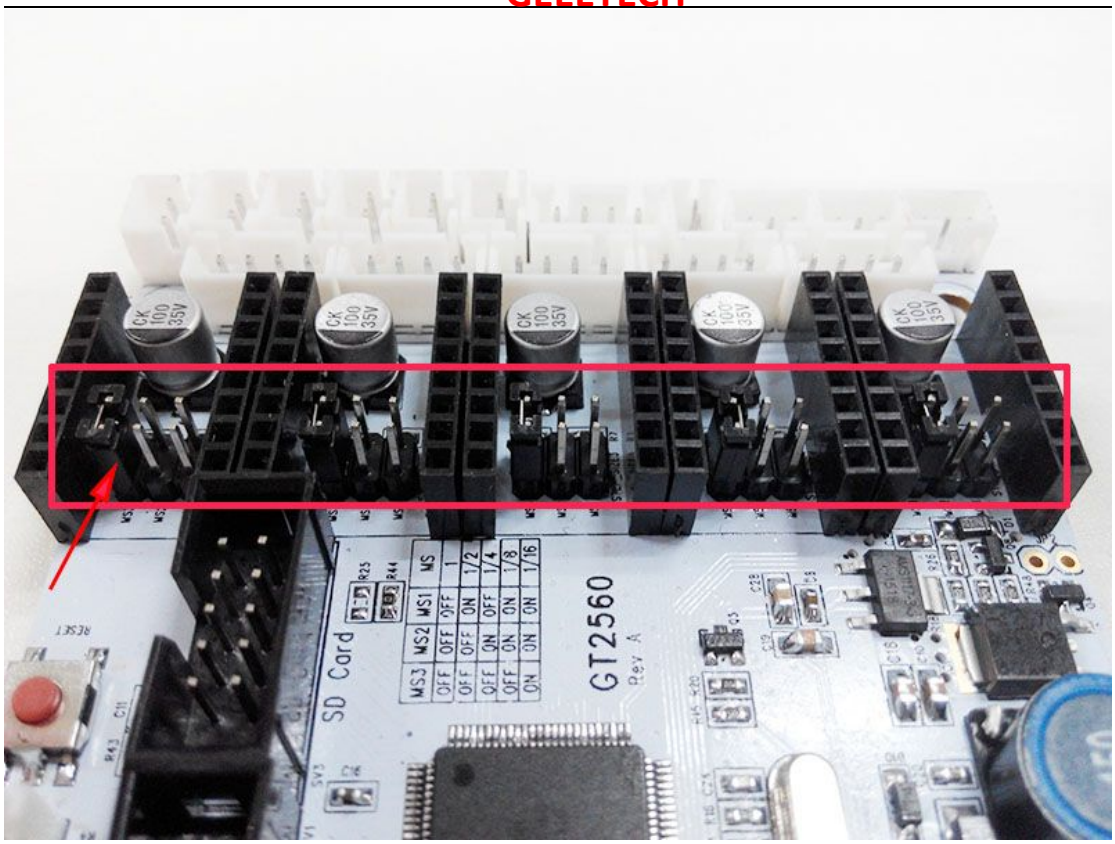
You can see original picture here.

Step1. The subdivision of stepper motor can be setup by jumper cap, plug all the jumper caps (For A4988)

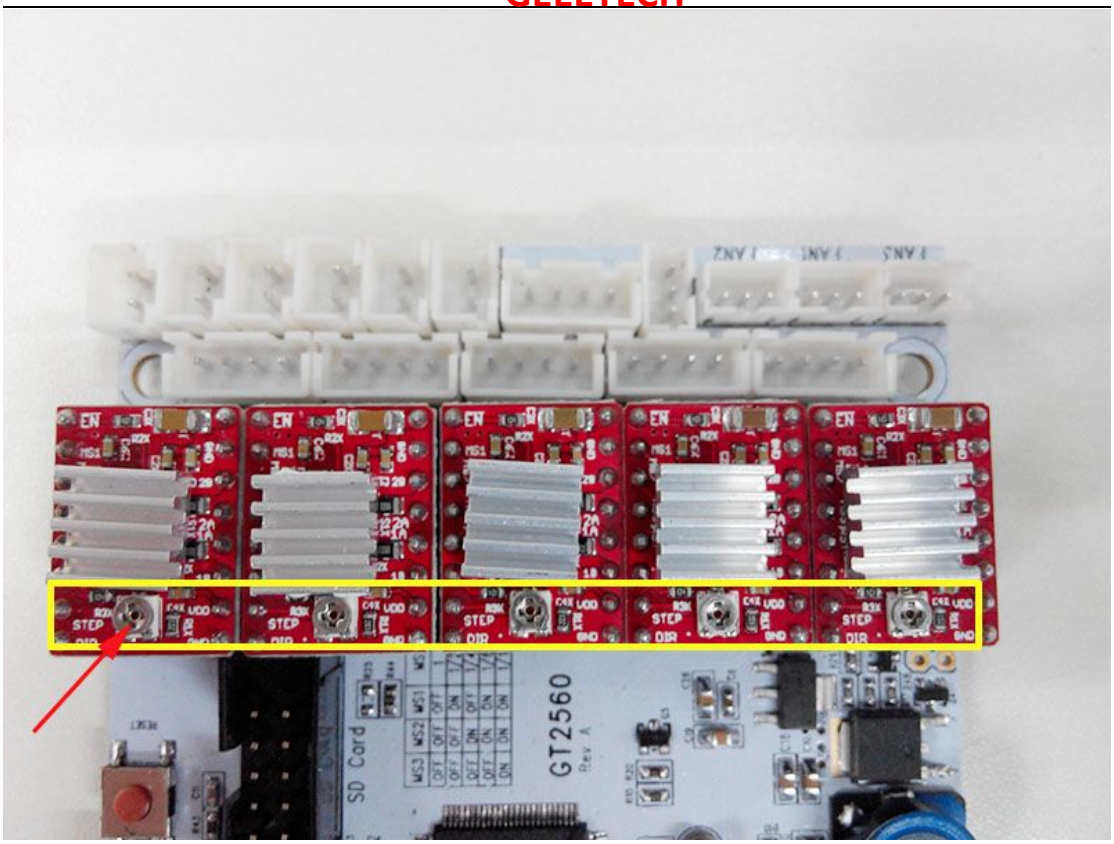


If you are using DRV8825 instead of A4988, the jumper caps should be changed as follow:

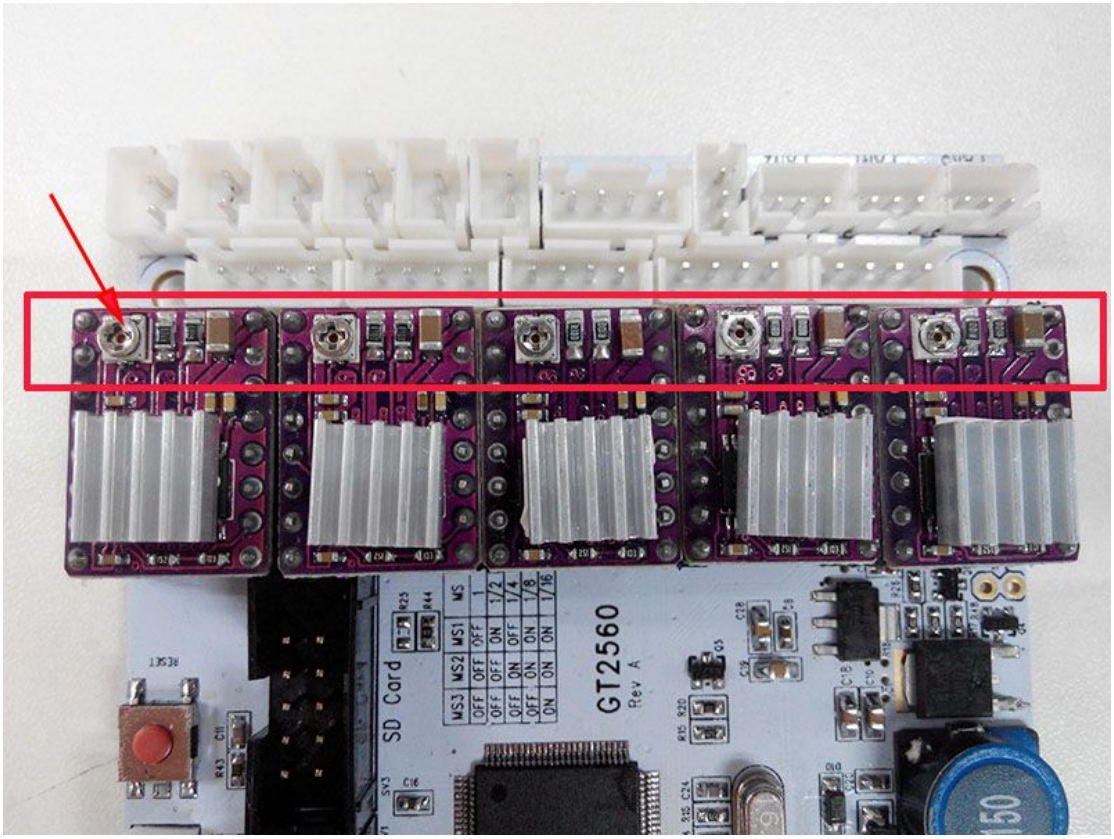
Note please, as your printer is single extruder, you will not use the extruder 2.



Step2. Plug the 4 A4988 into the stepper motor driver slot. Mind the directions of A4988.



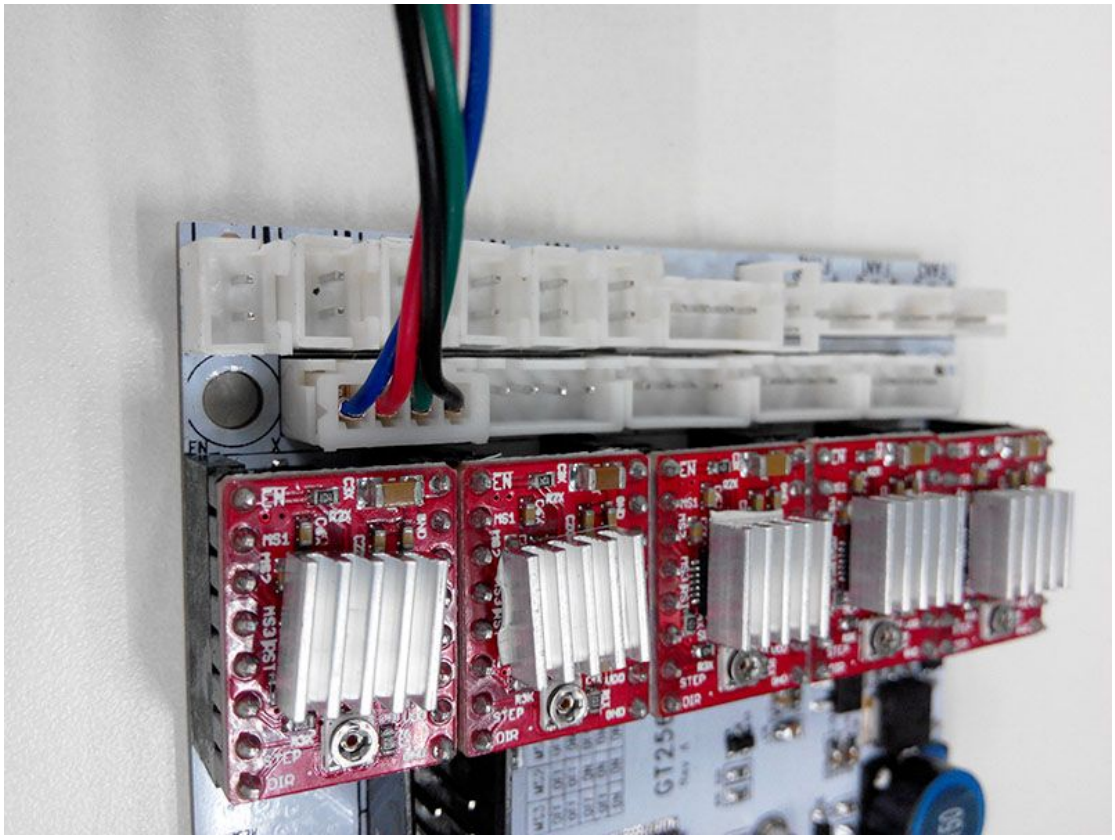
If you are using DRV8825 instead of A4988, The correct connections are as follow:



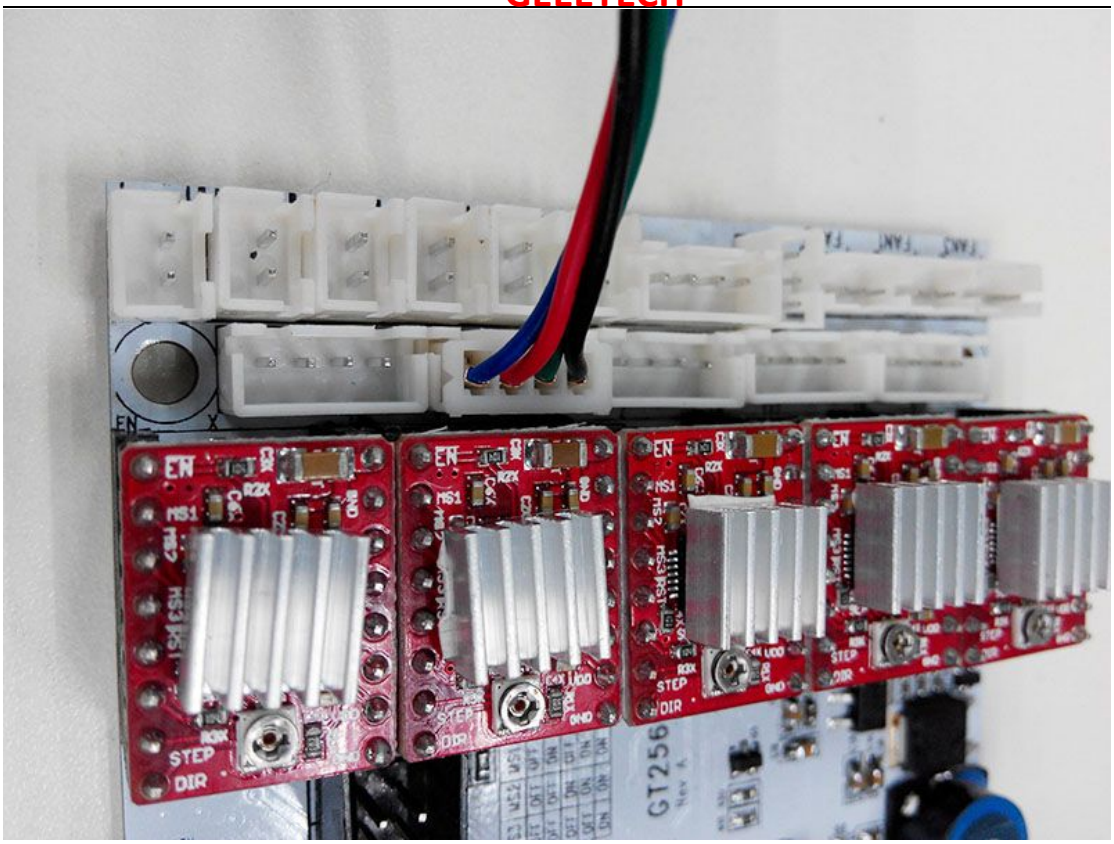
For your convenience, the above two steps is finished by us. you can skip them.

Step3. Connect wires for motors.

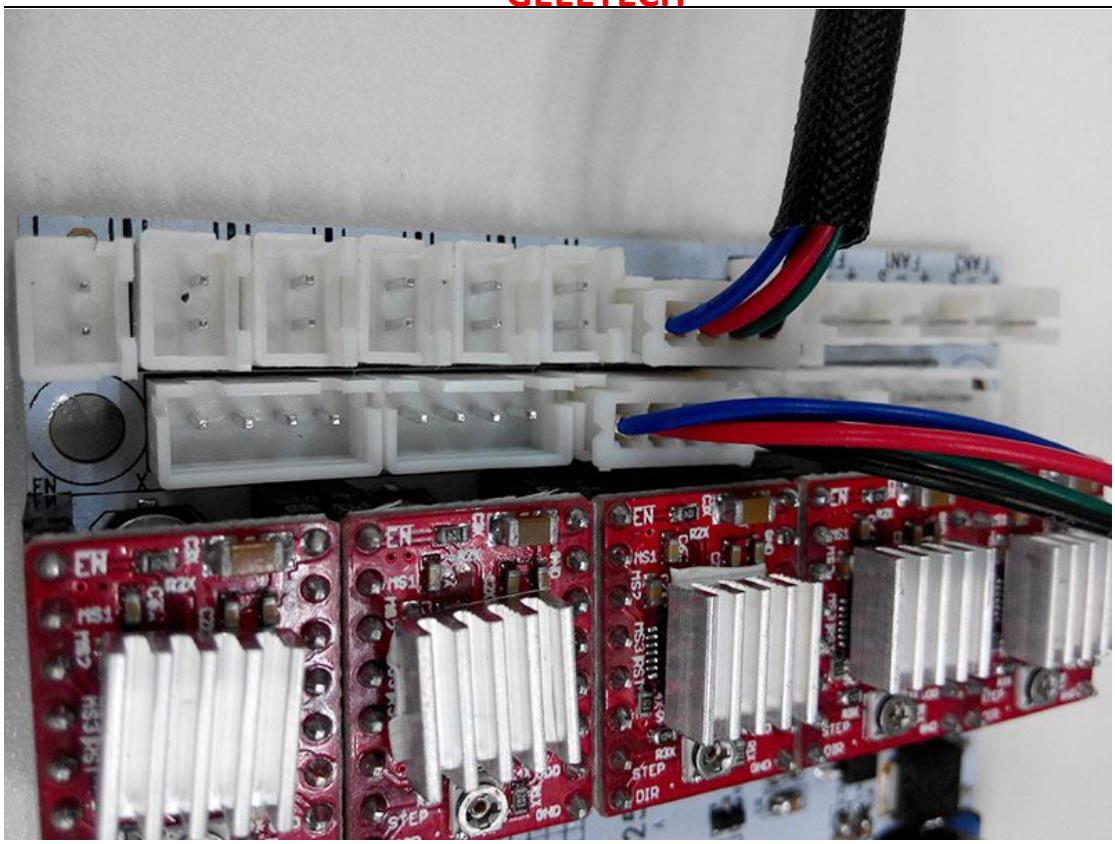
1) Connect wires for X-axis motor.



2) Connect wires for Y-axis motor.



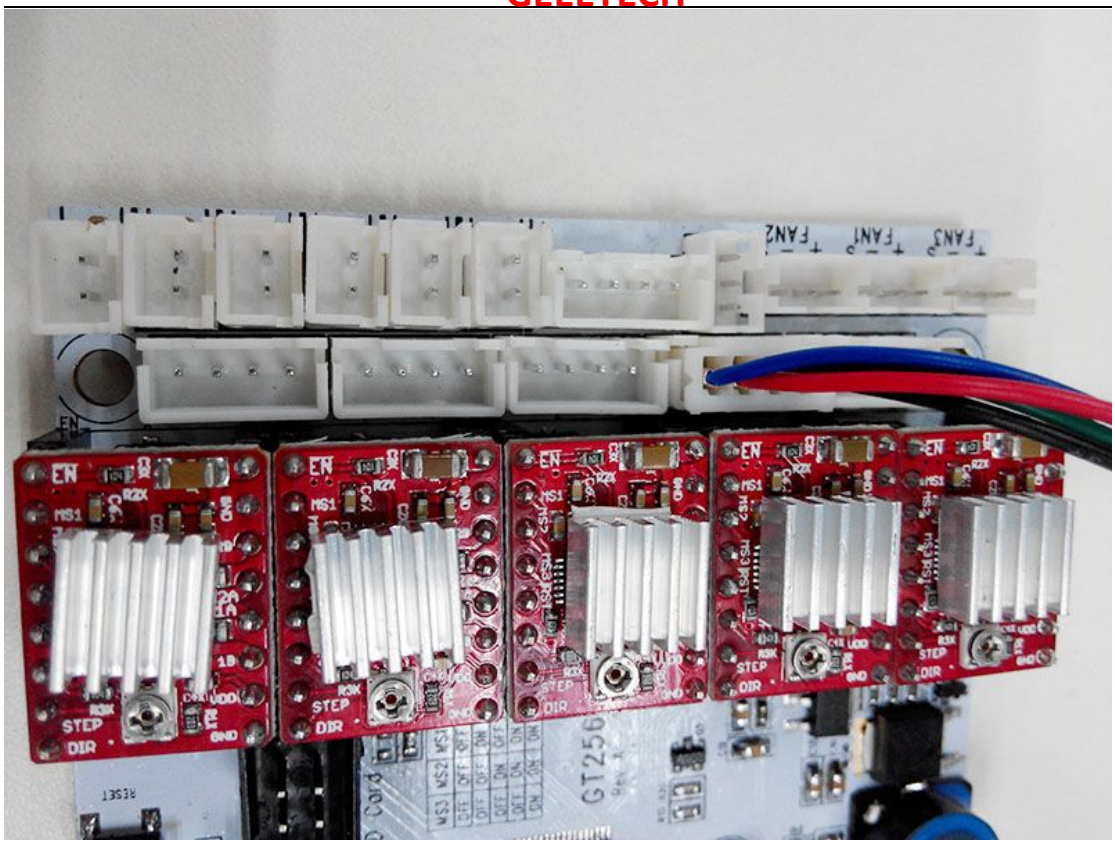
3) Connect wires for Z-axis motor.

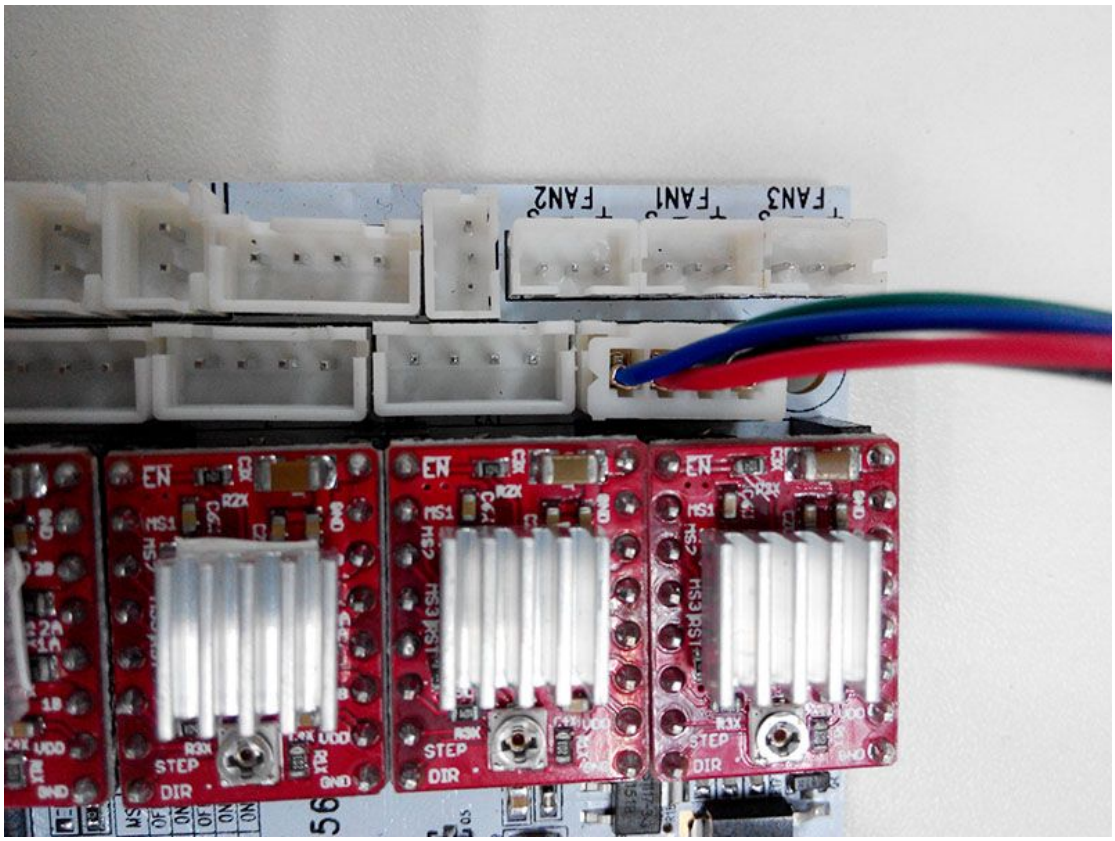


4) Connect Extruder motors.

You can connect the extruder to either of the motor slot.

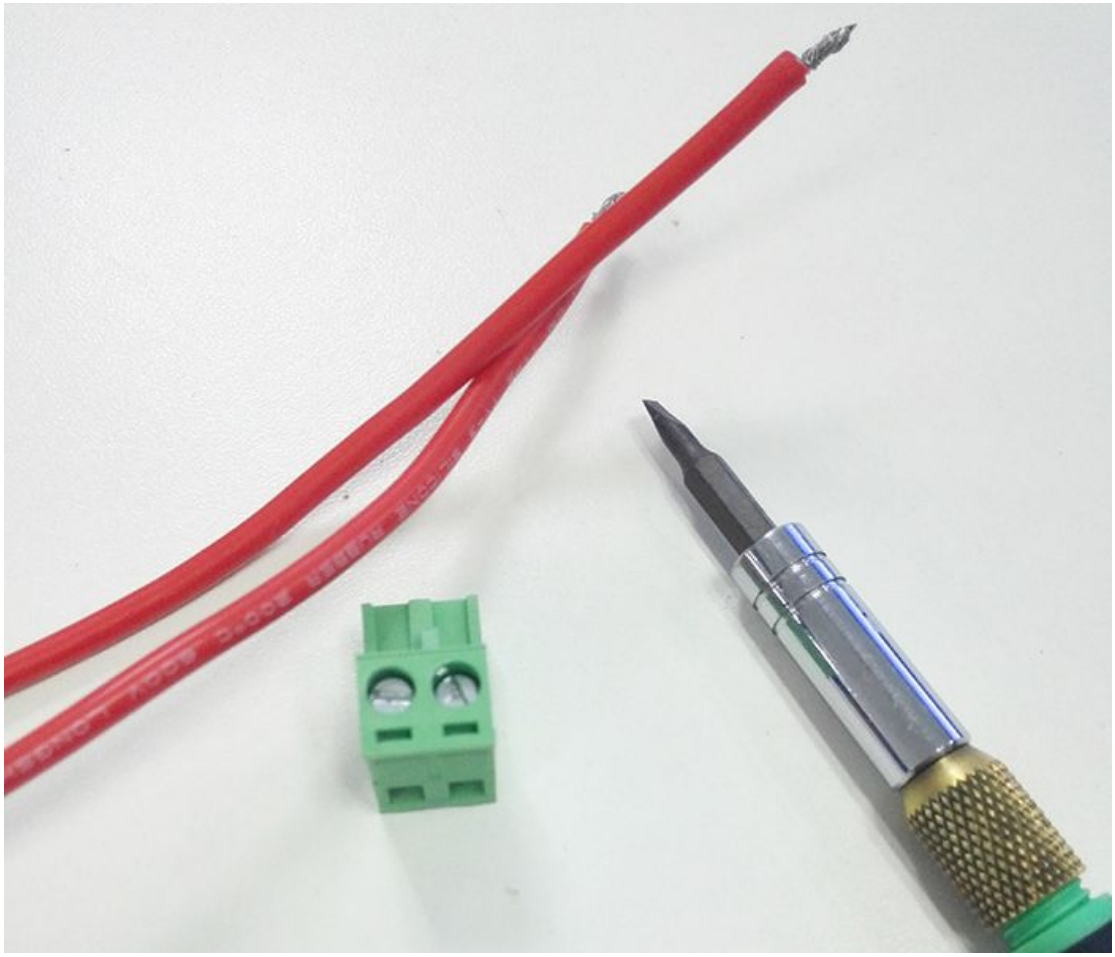
If you got two extruders, you are advised to mark them as extruder 1 and extruder 2, in respond to the silk-screen on the board.

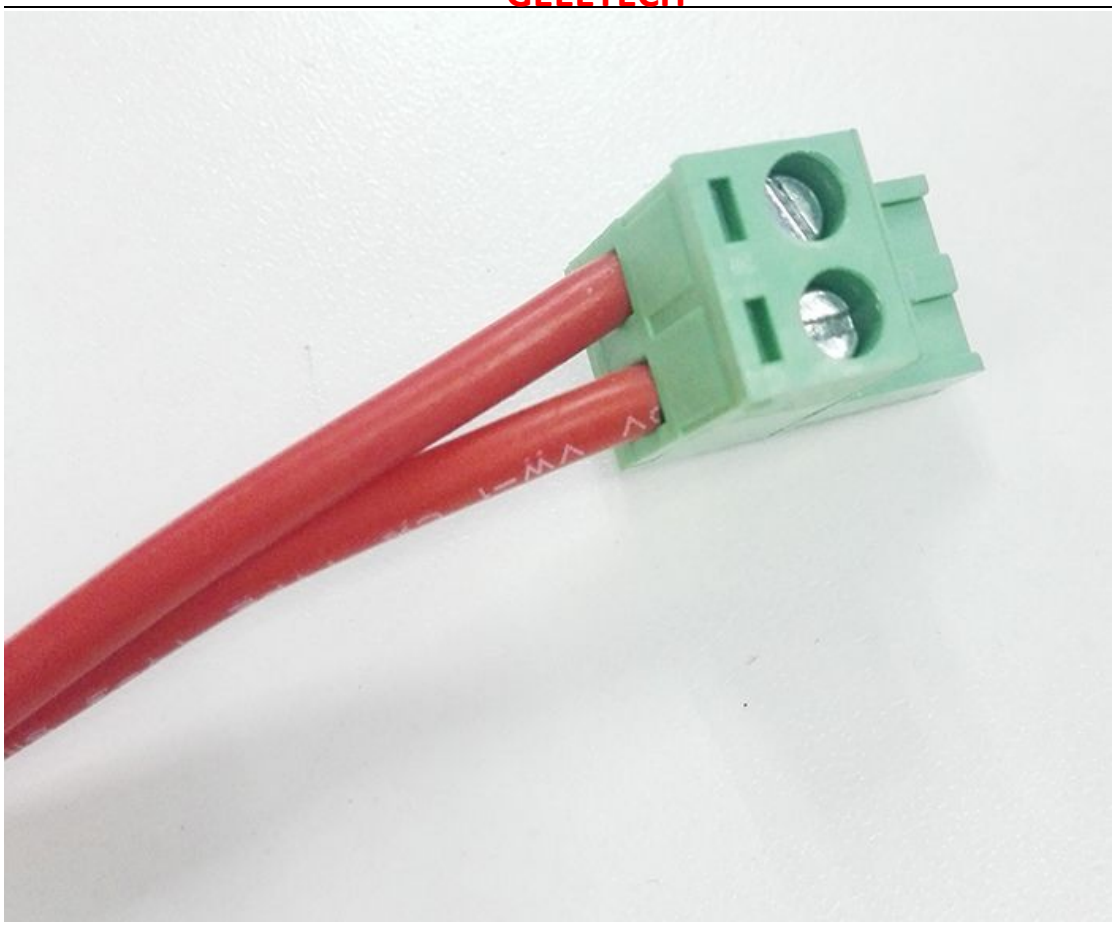




Step4. Connect heating wires.

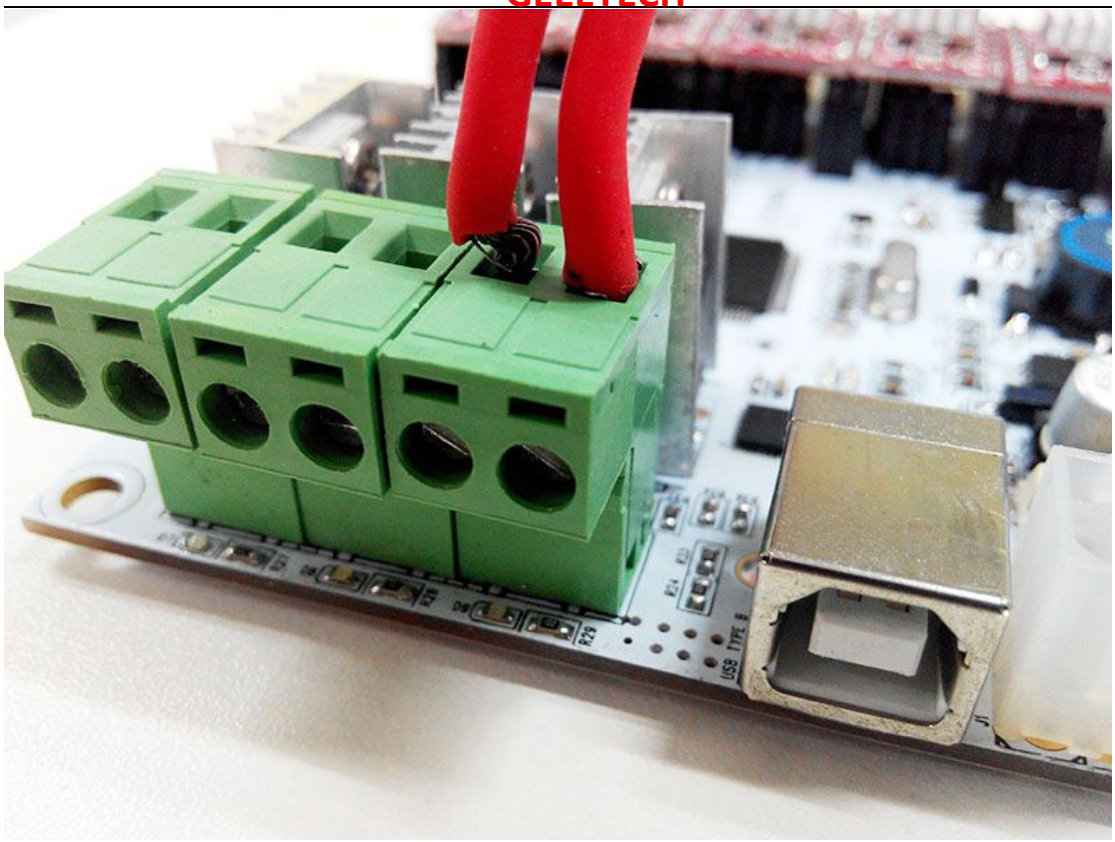
Loosed the screws in the green terminal and put the red wires into the slot and screw it up.



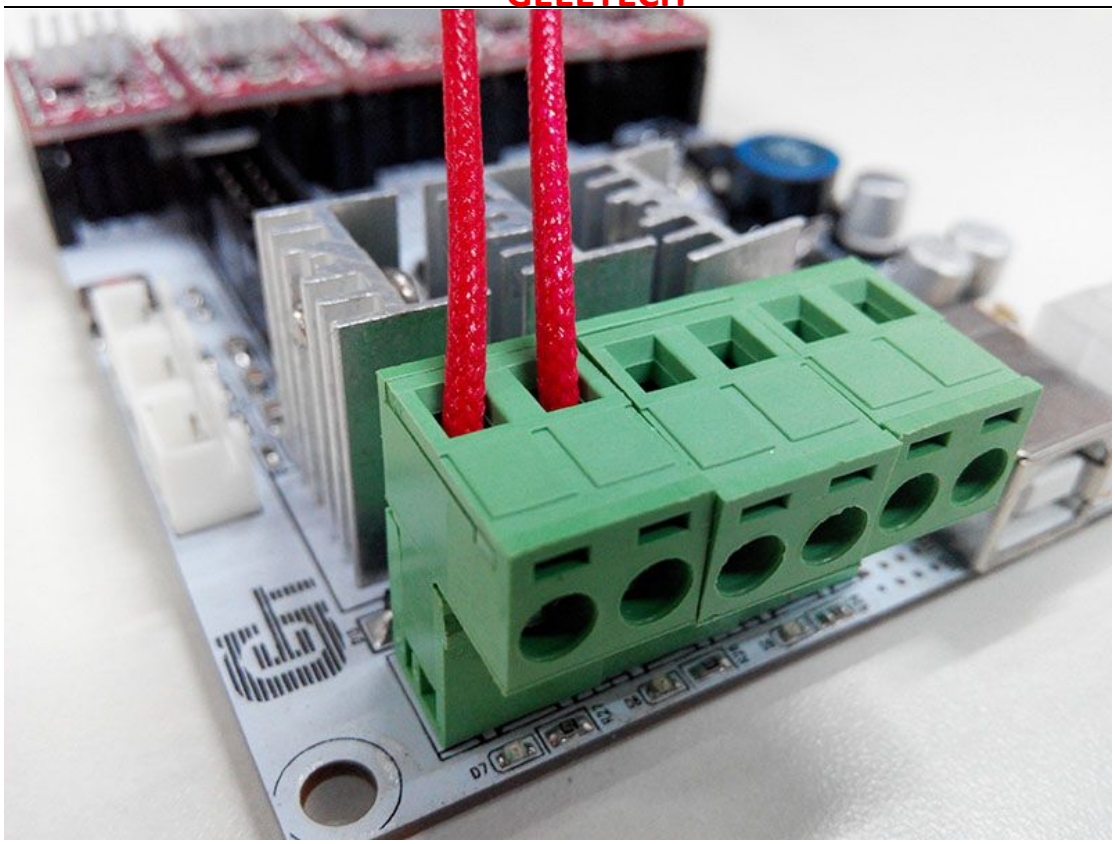


* There is no “+” and “-“for heating wires

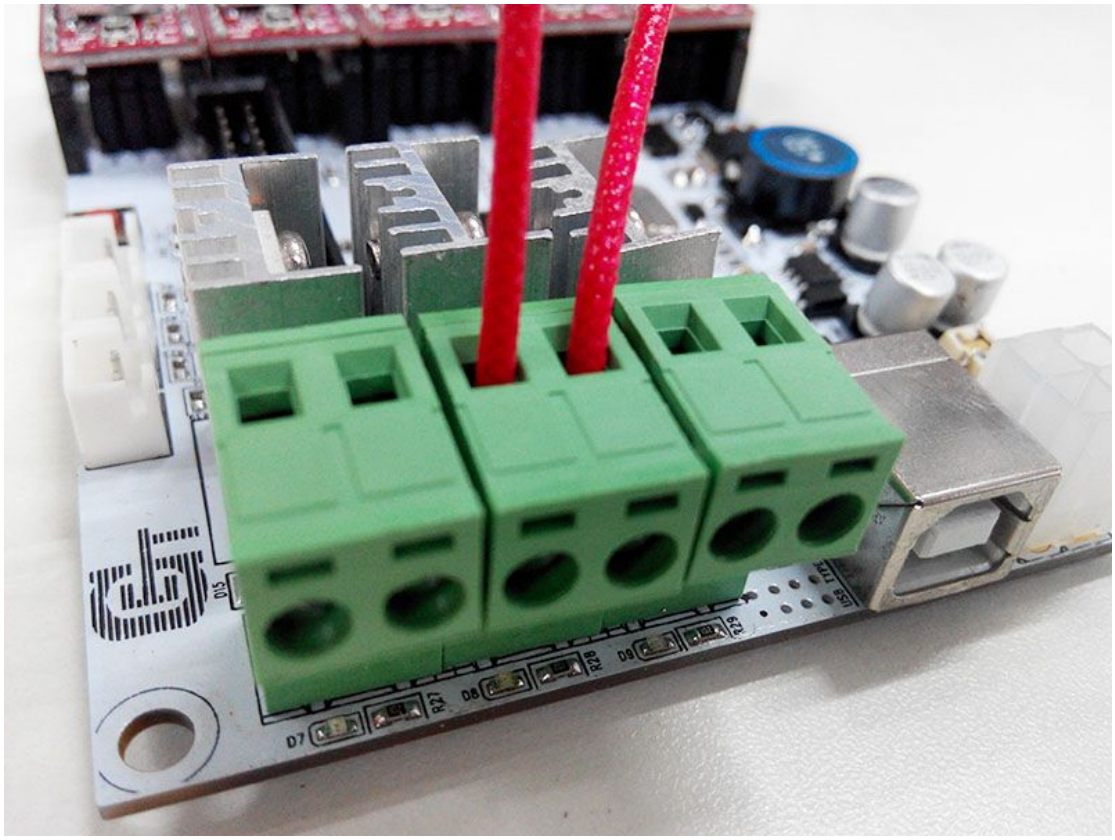
1） Connect heating wires for heatbed.



2） Connect heating wires for extruder 1.

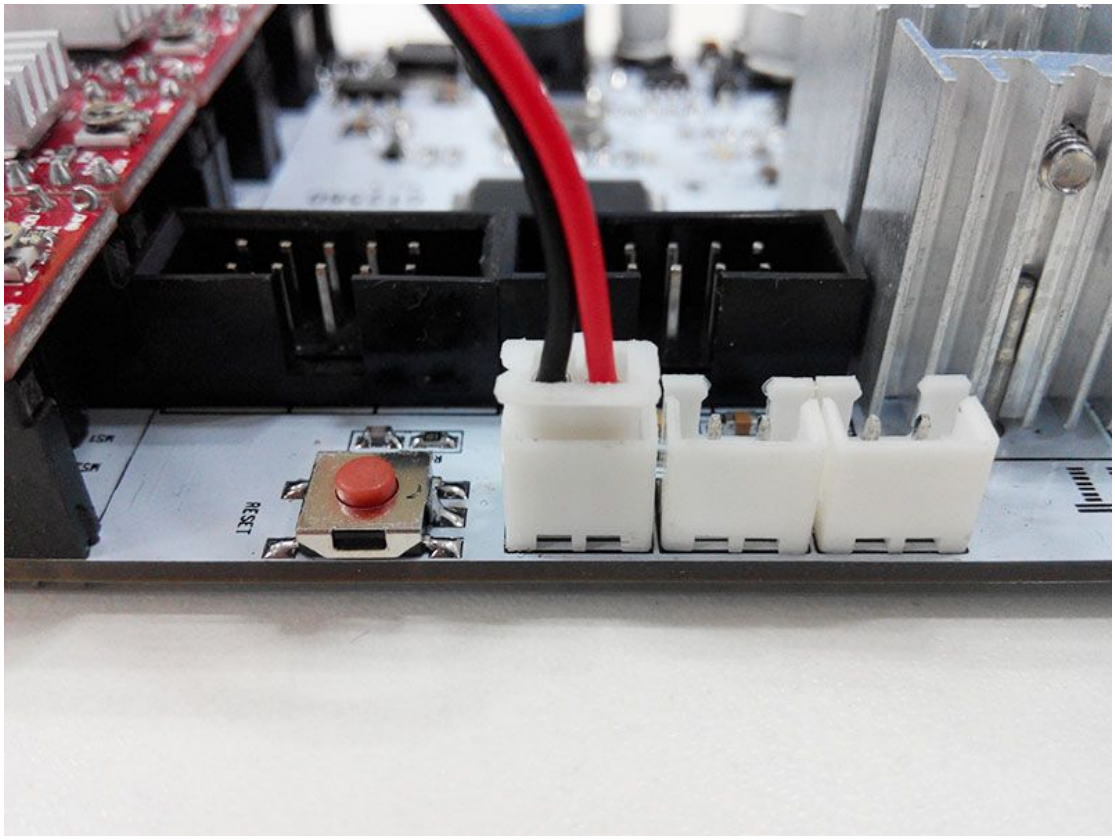


3） Connect heating wires for extruder 2.

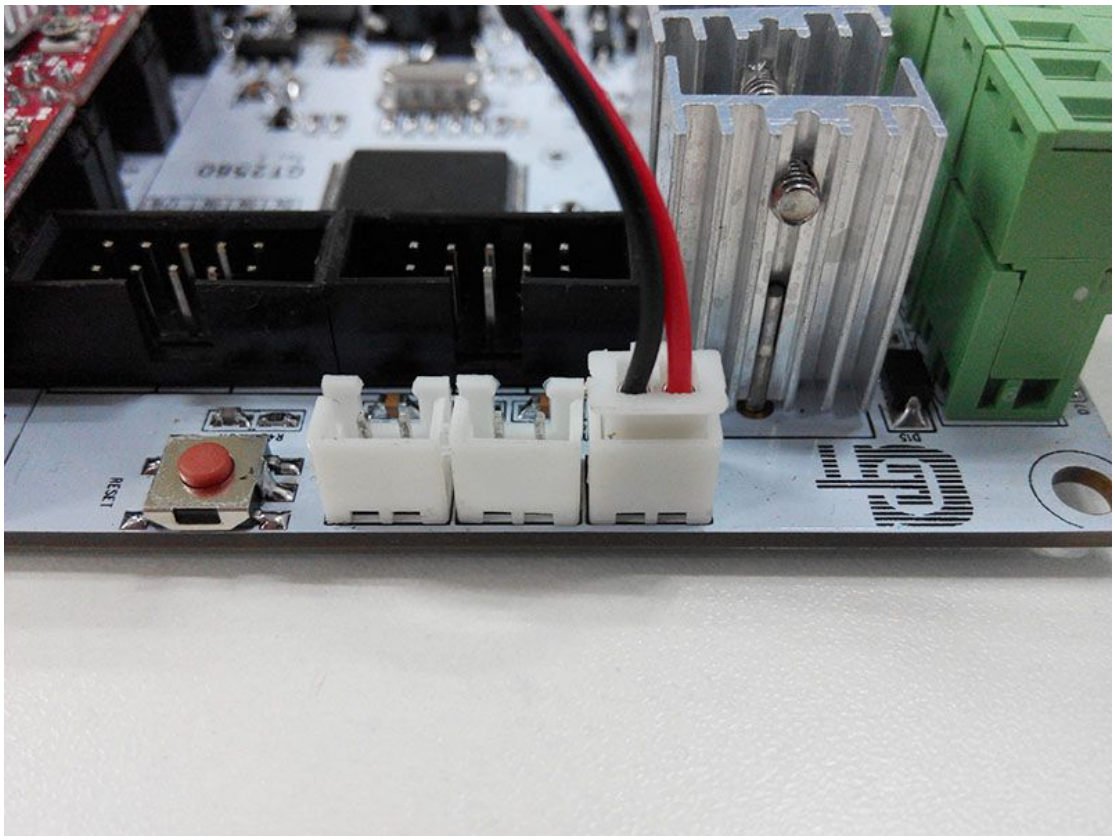


Step4. Connect wires for thermistor.

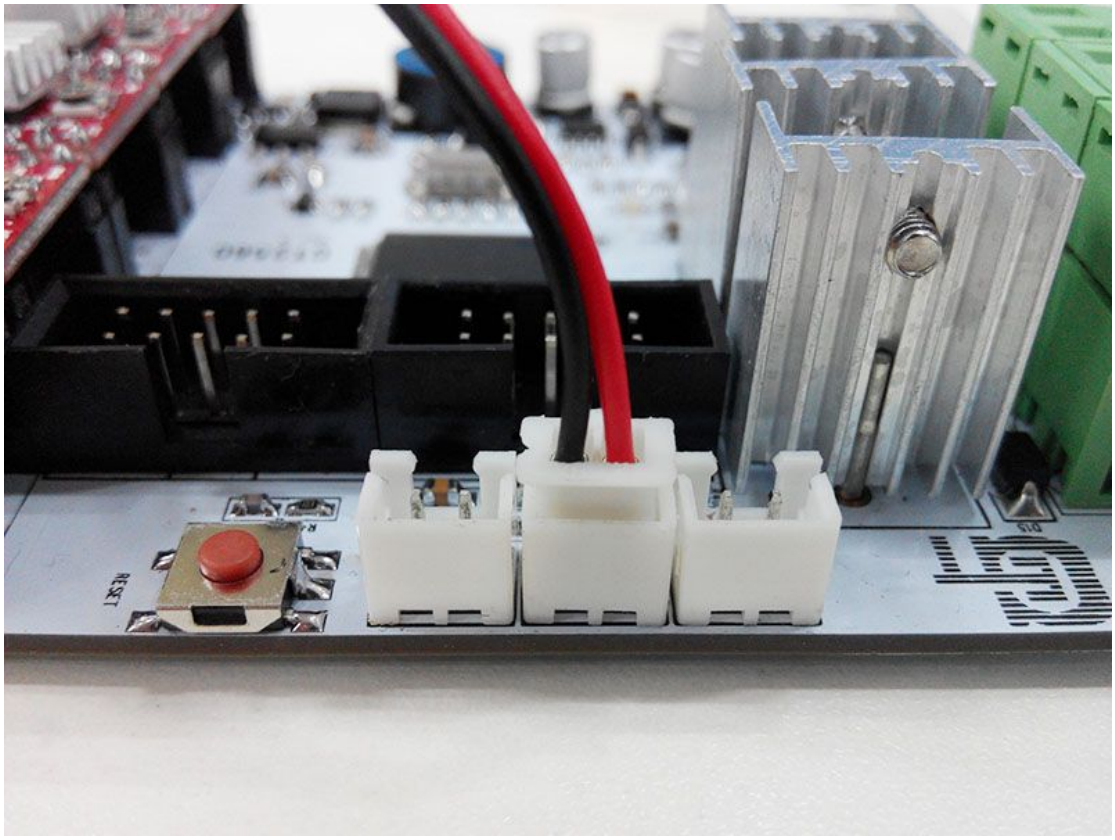
1) Connect wires for thermistor of heatbed.



2) Connect wires for thermistor of extruder 1.



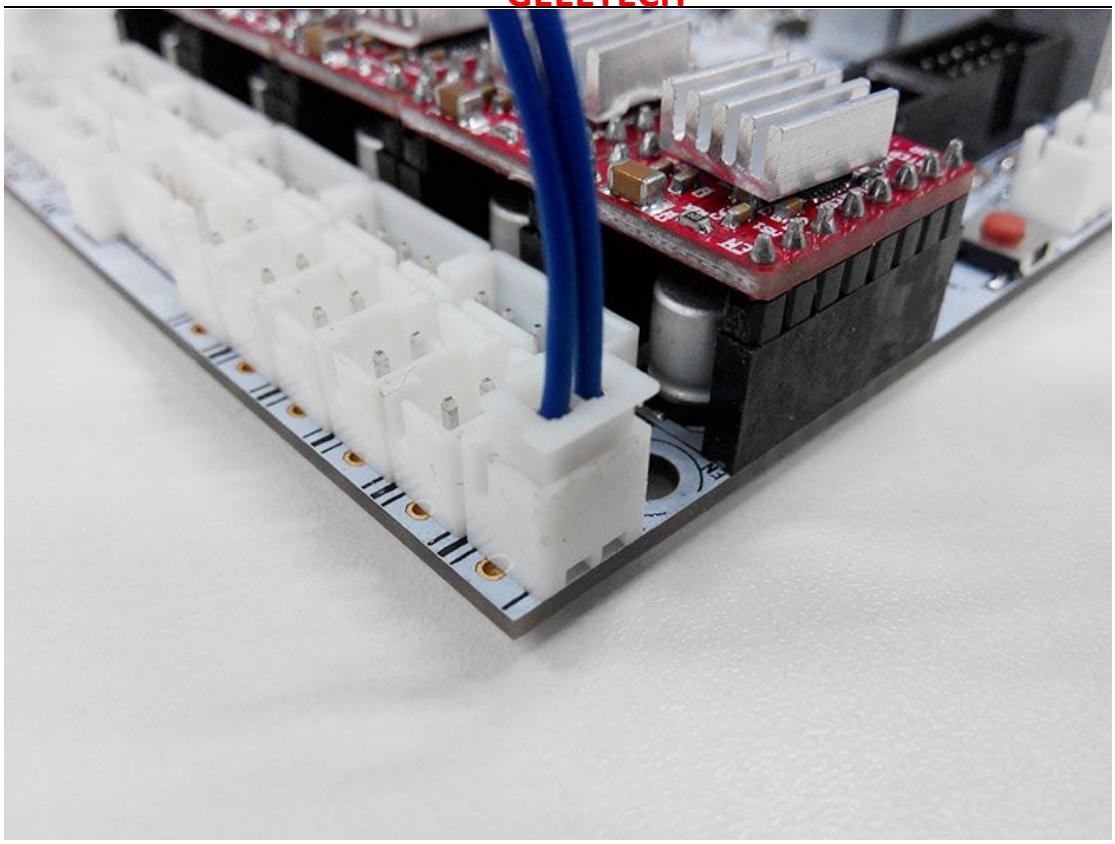
3) Connect wires for thermistor of extruder 2.



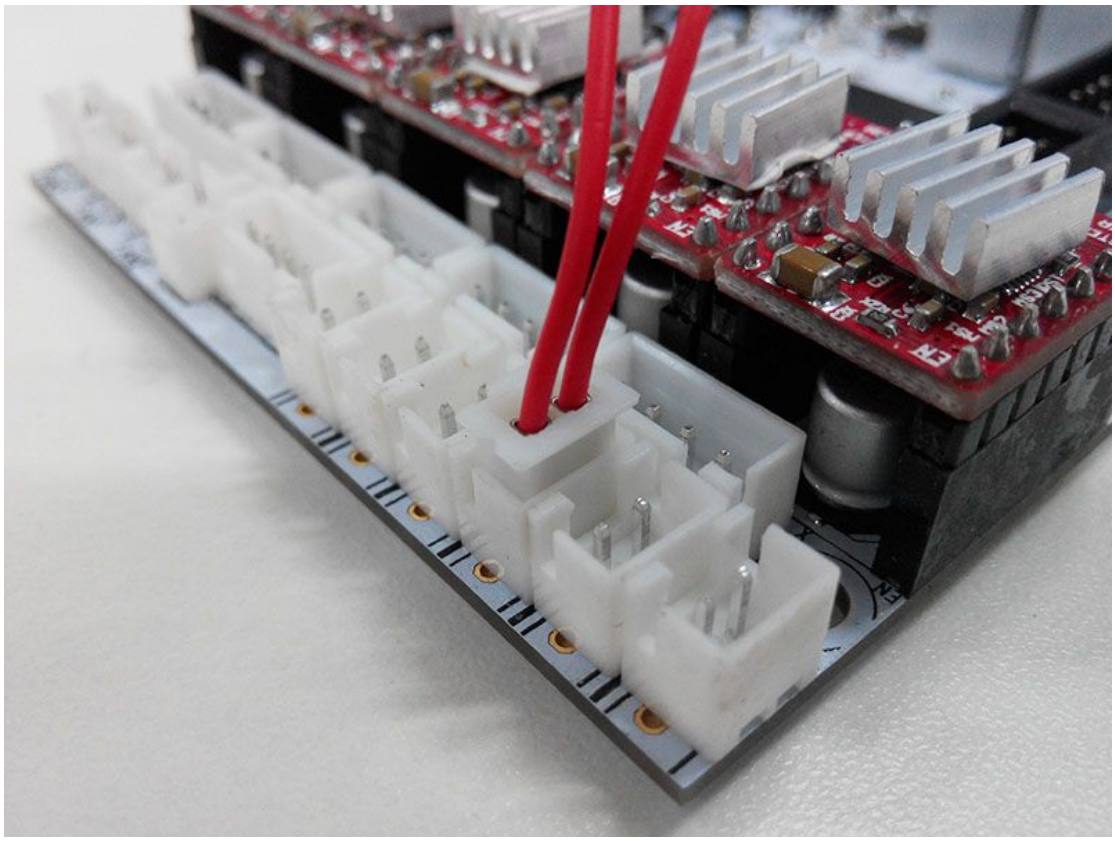
Step5. Connect wires for endstop.

* There is no “+” and “-“for endstop

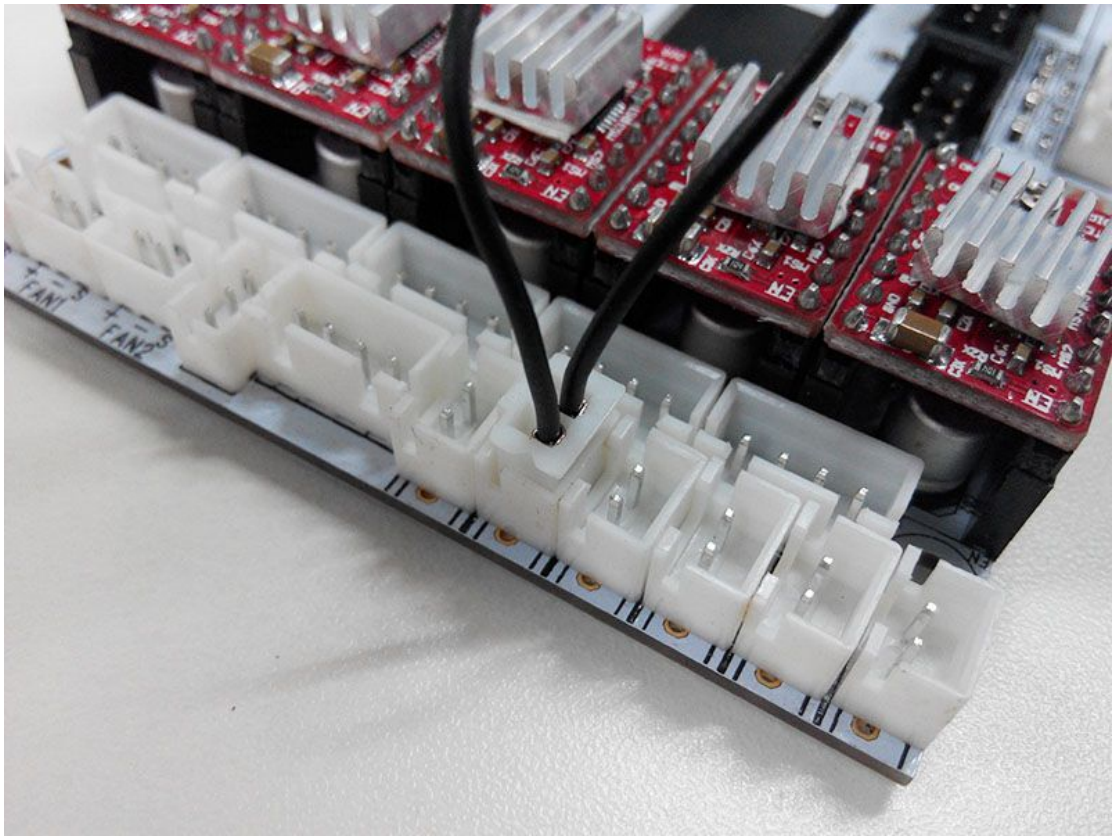
1) Connect wires for endstop of X-axis at X-Min.



2) Connect wires for endstop of Y-axis at Y-Min.



3) Connect wires for endstop of Z-axis at Z-Min.



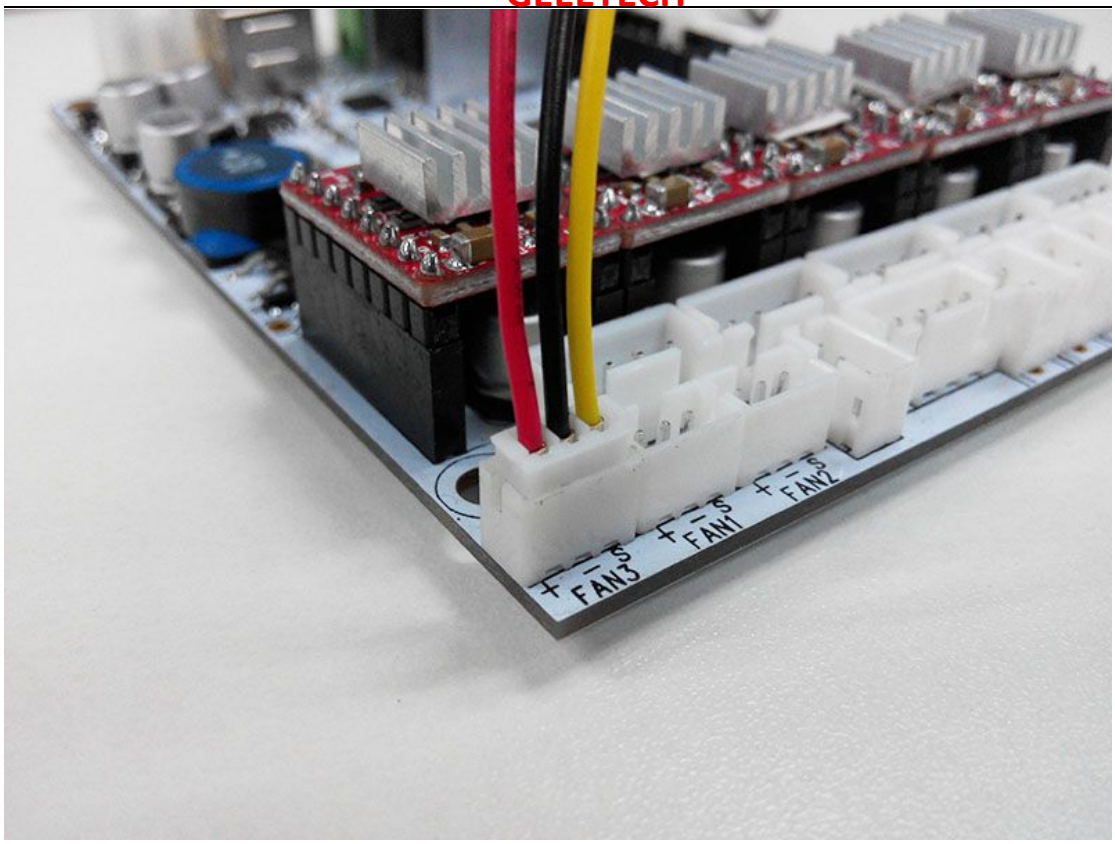
Step6. Connect wires for Fan.

1) Connect fan for control board at FAN3.

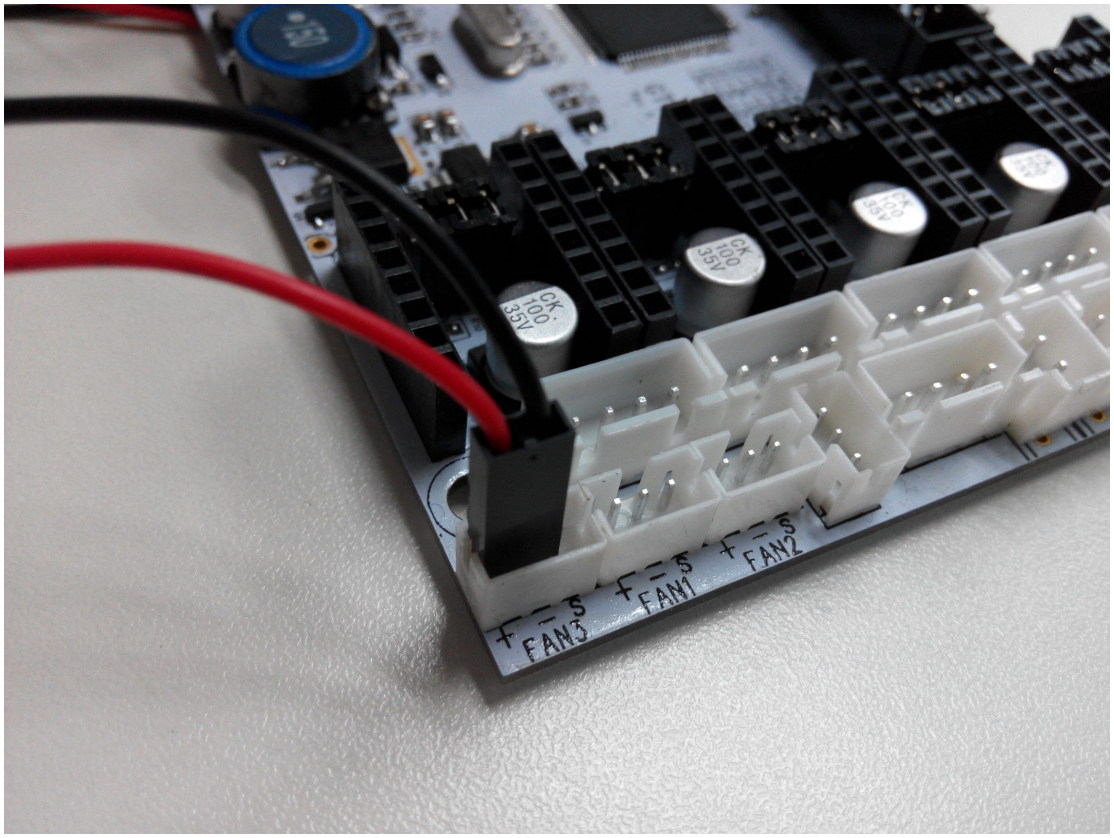
Note the “+” and “-“for fan

Red: +

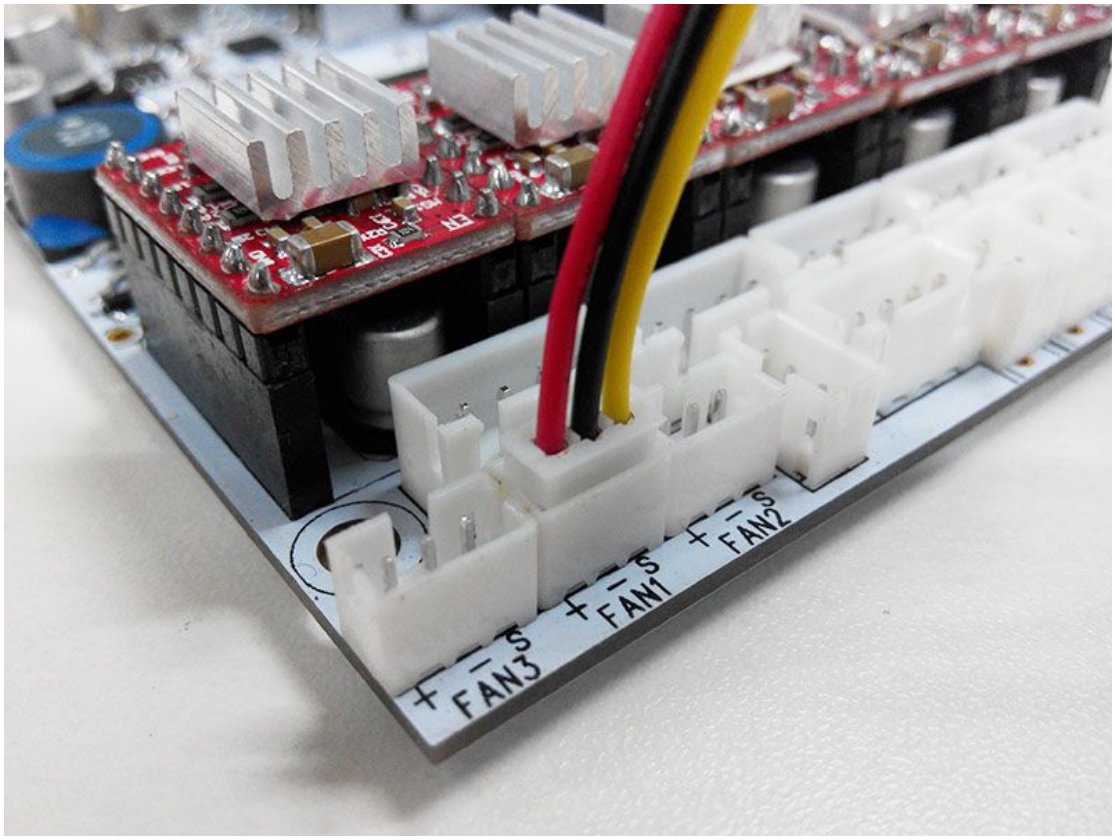
Black: -



If you use the 2-pin extension wire for the fan, just plug them on the + and - of the slo t.



2) Connect fan for extruder at FAN1.



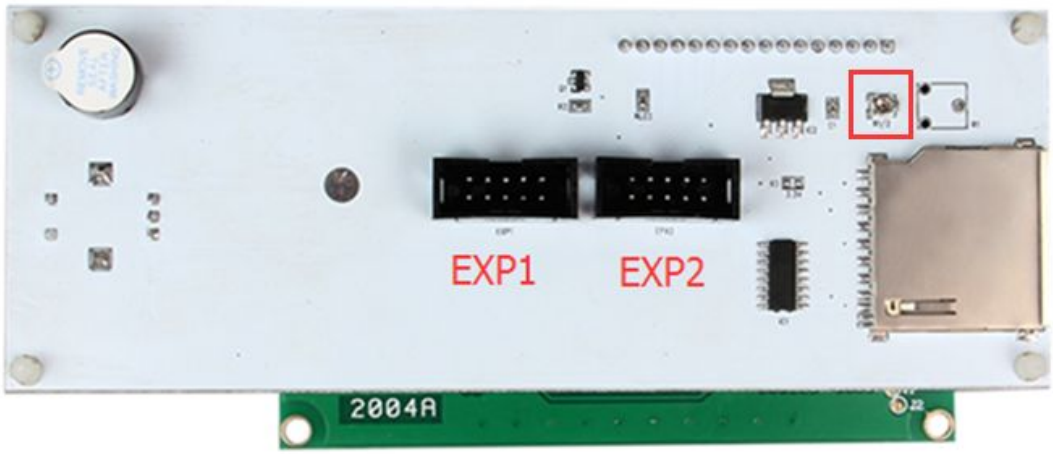
Step7. Connect wires for LCD panel.

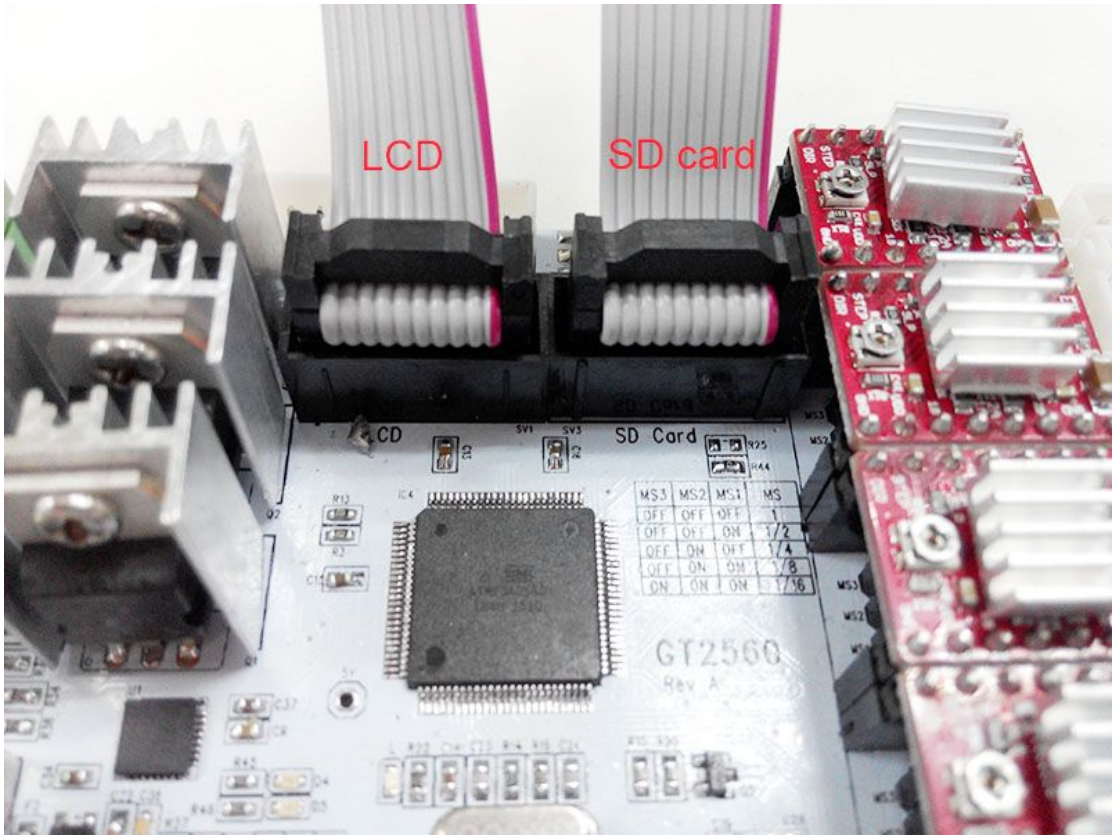
There are two cables, one is for LCD encoder, the other is for SD card, do not connect them reversed.

EXP1 to LCD

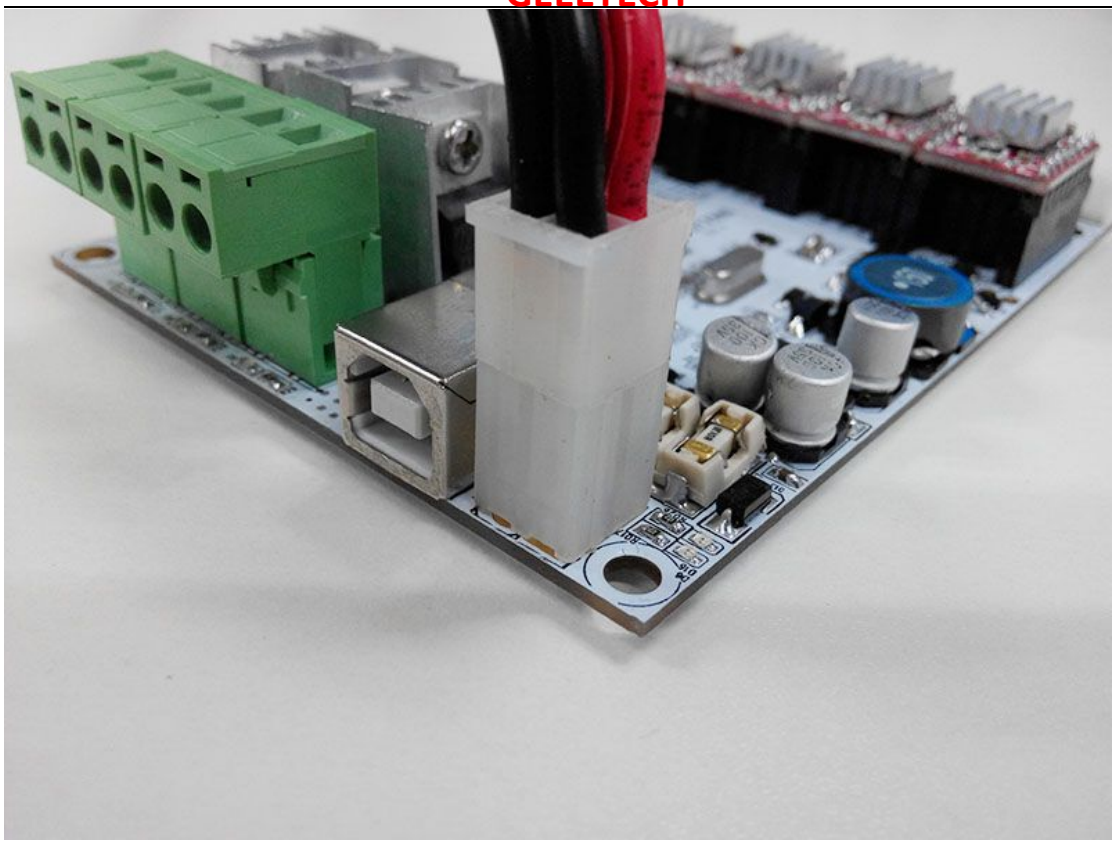
EXP2 to SD card

BTW, do you see the small screw above the SD card reader, if the text in of the LCD phases in an out or there is only blocks on the screen, you can adjust this screw to recovery it.





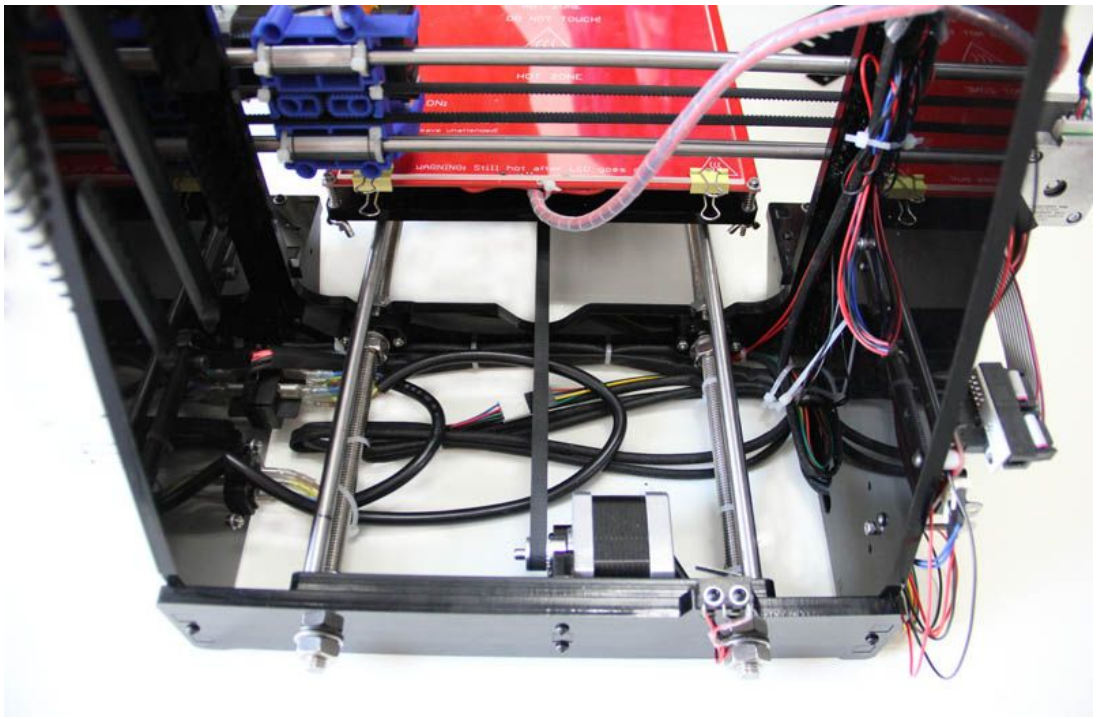
Step8. Connect wires for power input.



That is all for the wiring of GT2560.

15. Tidy out the wires.

Use the wire coil to tie put those wires together. There are holes on the acrylic plates for the wires, you can arrange them as you like.



16 Mount the filament spool.

Required parts	Required number	Part ID	Pic
Filament side panel	3	NO.A17, A18	 
M3 x 16 screw	4	NO.26	
M3 square nut	4	NO.16	
PVC tube	2	NO.60,61	

The whole printer assembly work is already done.

17 Tips

Before even attempting the first print it is vital that the printer is correctly calibrated. Skipping or rushing this step will result in frustration and failed prints later, so it is important to take the time to make sure the machine is correctly set up.

Each machine may have its own calibration procedure and this manual will not attempt to cover all the variations. Instead here is a list of key points that should be addressed.

- Frame is stable and correctly aligned.
- Rods are correctly aligned
- Belts are taut.
- Driving wheel turns smoothly
- Bed is level in relation to the path of the extruder.
- Filament rolls freely from the spool, without causing too much tension on the

extruder.

- Current for stepper motors is set to the correct level.
- Wires are correctly connected
- Couplings and pulleys are fixed tightly

Firmware settings are correct including: axis movement speeds and acceleration; temperature control; end-stops; motor directions.

Extruder is calibrated in the firmware with the correct steps per mm of filament.
The point regarding the extruder step rate is vital. Slic3r expects that the machine will accurately produce a set amount of filament when told to do so. Too much will result in blobs and other imperfections in the print, too little will result in gaps and poor inter-layer adhesion. For how to set up the printer, please visit:

To know how to set up, please refer to wiki:
http://www.geeetech.com/wiki/index.php/Acrylic_Prusa_Mendel_I3