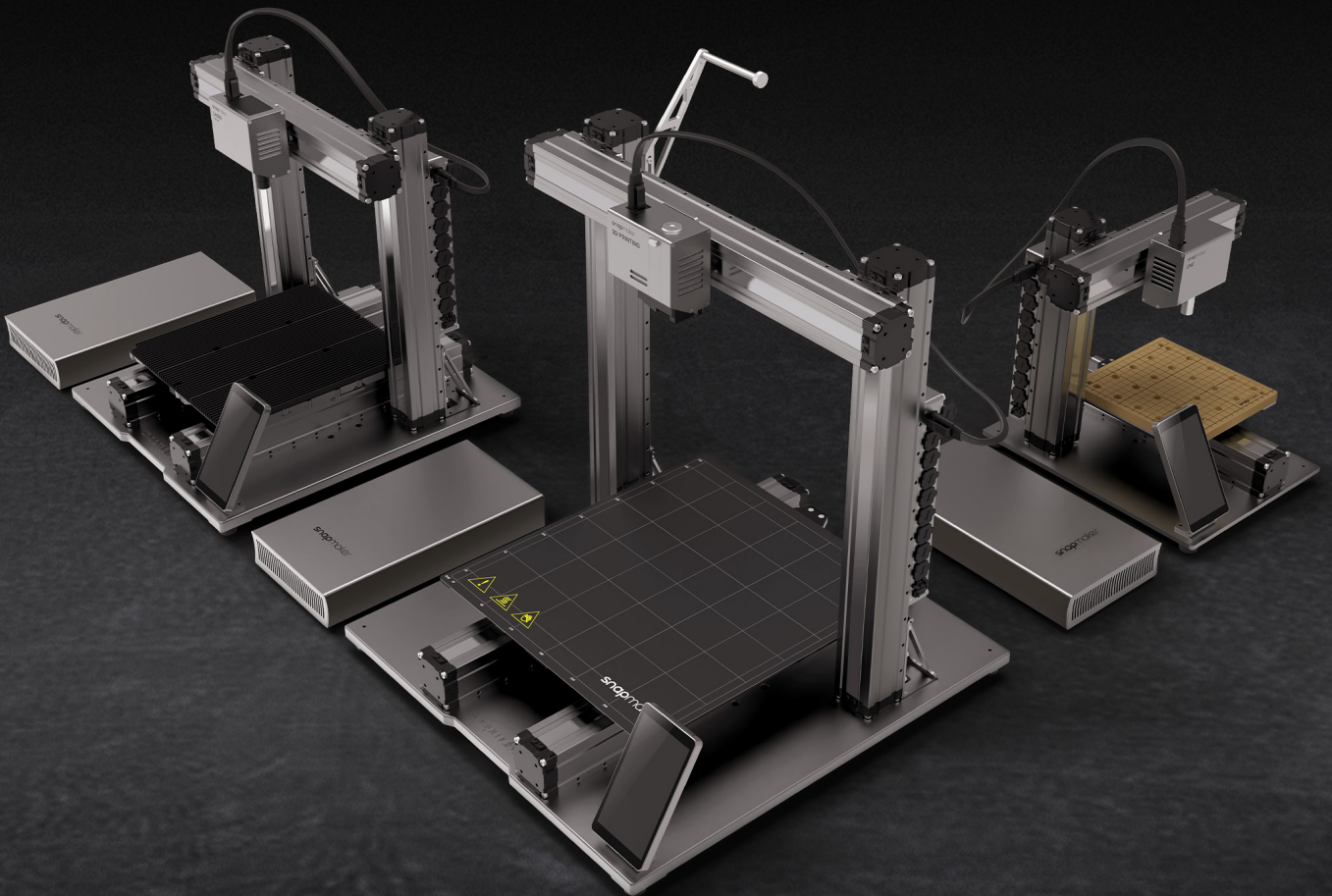




DISTRIBUTOR TECHNICAL SUPPORT V 1.0

Troubleshooting Guide for
Snapmaker 2.0 3-in-1 3D Printers



CONTENTS

01 Hardware

02 Touchscreen

02 Touchscreen Shows "not responding"

02 Touchscreen Shows "Fabscreen has stopped"

02 Touchscreen Flashes

03 Touchscreen Is Black

05 Linear Module

05 Clunk Sound While Y Axes Are Moving

05 Linear Module Burns out Suddenly

05 Linear Module Only Moves in One Direction

06 Slider (Carriage) of Linear Module Comes Loose

09 Stainless Steel Strip of Linear Module Comes Loose

10 3D Printing

10 3D Printing Module Isn't Detected

11 First Layer Doesn't Stick to Print Sheet

12 3D Printing Module Pushes into Print Sheet

13 Filament Runout

14 Filament Won't Load

16 Blobs on Nozzle

18 Touchscreen Shows a -30 °C Nozzle Temp

18 Nozzle Temperature Is Too High

19 Heated Bed Won't Heat up

21 3D Printing Module Clashes against the Print Sheet during Calibration

24 Laser

24 Laser Calibration Fails

25 Laser Is Discontinuous Or Weak

26 Machine Is Stuck in Processing during Auto Focus

27 Camera Capture Doesn't Work

29 Laser Module Doesn't Emit Laser

31 Camera Sign Is Yellow on Touchscreen

33 Laser Won't Turn off

35 Laser Won't Burn Material When Enclosure Is Used

36 Enclosure

38 Others

38 Power Module Doesn't Work

38 G-code File Wi-Fi Transfer Is Unsuccessful

39 Machine Can't Detect USB Drive

39 None of the Toolheads Can Be Detected by Machine

40 Alternative to Upgrading Machine's Firmware via USB Drive

41 Software

42 Luban Won't Generate G-code File

42 Luban Shows "Cannot open this port"

43 Luban Is Blank upon Launched

45 Luban Shows "The machine is not ready"

46 No Camera Capture Button in Luban

47 Appendix

48 Parts List

50 Specs Sheet

This is a troubleshooting guide that helps you locate where the problem is when you use the Snapmaker 2.0 3-in-1 printer, and tells you what to do to solve it. It's divided into two chapters. The first chapter addresses hardware problems, while the second addresses software problems. To ensure all the glossaries are consistent, a parts list is included in Appendix, where you can also find product specifications.

If you have tried all the actions delineated in this guide and still aren't able to solve the problem, we are here to help. Please contact support@snapmaker.com with a detailed description of the problem and a video of your troubleshooting process, and send a carbon copy (cc.) to your sales representative ([@snapmaker.com](mailto: @snapmaker.com)) at Snapmaker.

While we strive to provide correct information, Snapmaker doesn't in any way makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of the information disclosed in this guide.

Snapmaker reserves the right to update this document without notice. In the meantime, you might also find the following resources useful.

- For Quick Start Guides: <https://snapmaker.com/product/snapmaker-2/downloads>.
- For User Manuals: <https://snapmaker.com/product/snapmaker-2/downloads>.
- For the latest version of the firmware:
<https://snapmaker.com/product/snapmaker-2/downloads>.
<https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12>.
- For the latest version of software:
<https://snapmaker.com/product/snapmaker-2/downloads>
<https://luban.xyz/>
<https://github.com/Snapmaker/Luban/releases>
<https://forum.snapmaker.com/t/snapmaker-luban-downloads-and-updates/4949/21>.



Hardware

This chapter covers problems with the modules and addons of the Snapmaker 2.0, which includes the Enclosure, the Touchscreen, the 3D Printing Module, the Laser Module, and the Controller. For problems regarding the Snapmaker Luban, go to the next chapter.

Touchscreen

Touchscreen Shows "not responding"

The Touchscreen shows **the machine isn't responding, would you like to reconnect**. This can happen pre- and mid-printing.

Possible Causes

- **The Controller is broken.**
- **The Touchscreen cable is connected wrongly.**
- **The Touchscreen itself is broken.**

Actions

1. Check the condition of the light at the backside of the Controller. Normally it should be breathing steadily.
 - If it's not breathing, the Controller might have an issue. Replacing it might solve the problem.
 - If it breathes slowly, launch Snapmaker Luban and connect your computer with the machine using a USB cable. If Luban has no problem connecting with and controlling the machine, then the Controller is fine.
2. If Luban can control the machine, then the Touchscreen cable might be the problem. Unplug the Touchscreen cable from the Controller, flip the cable connector 180°, and plug it back in. If this doesn't solve the problem, then the Touchscreen might be the problem. Replacing it might solve the problem.

Touchscreen Shows "Fabscreen has stopped"

Possible Causes

- **There is a bug in the firmware.**
- **G-code file is too large. This usually happens when you transfer the file from Luban to the machine via Wi-Fi.**
- **G-code file can't be parsed by the Touchscreen. This may happen if the G-code file is generated by a third-party software that Snapmaker isn't compatible with.**

Actions

1. Update the firmware. For the latest version, visit <https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12>.
2. Try a smaller G-code file.
3. Download the latest version of Snapmaker Luban from <https://luban.xyz/>, and try to generate the G-code file on Snapmaker Luban.

Touchscreen Flashes

The Touchscreen flashes as in the video: <https://youtu.be/ZwH8v3V9ETo>.

Possible cause

- The Touchscreen might be broken.

Action

Replace the Touchscreen.

Touchscreen Is Black

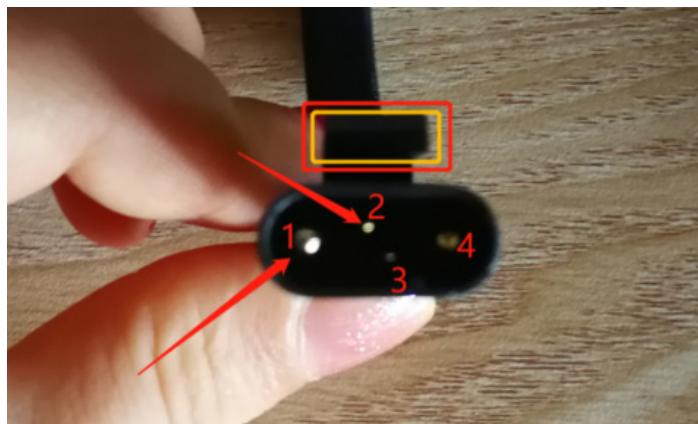
The Touchscreen is black and won't light up.

Possible Causes

- The Touchscreen itself is broken.
- The Controller is broken.
- The Power Module or DC power cable is broken.

Actions

1. Check whether the light at the back of the Controller is breathing.
 - If it breathes slowly, launch Snapmaker Luban, and try to connect your computer with the machine using a USB cable. If Luban has no problem connecting with and controlling the machine, then the Controller is fine. In this case, go to step 2.
 - If it's not breathing, then it might be because the Controller, DC power cable, or the Power Module is broken. In this case, go to step 3.
2. Check whether the Touchscreen cable is connected right. Unplug the Touchscreen cable from the Controller, flip the cable connector 180°, and plug it back in.
 - If this doesn't solve the problem, then the Touchscreen is broken. In this case, replacing a new Touchscreen might solve the problem.
3. Check if the DC power cable and the Power Module work properly.
 - If there is no breathing light at the back of the Controller, and Luban can't control the machine, then it might be because the Controller, DC power cable, or Power Module isn't working properly. In this case, go to step 4.
4. Connect one end of the cable to the Power Module, and turn on the machine. Find a multimeter to measure the voltage of pin 1 and pin 2 (see picture below) at the same time. The normal value should be between 3.0–3.6 V. Then do the same with pin 1 and pin 4. The normal value should be about 22.8–25.2 V.



- If the test values are normal, then the Power Module and the DC power cable are fine, and the Controller is the problem. In this case, replacing the Controller might solve the problem.
- If the values are not normal (pin 1 and pin 4 is 0 V or 3 V, for example), then replacing the Power Module and DC power cable might solve the problem.

Linear Module

Clunk Sound While Y Axes Are Moving

Possible Cause

- The two Y axes are not in sync.

Actions

1. Swap one of the Y axes with the X axis. In most cases, the issue should be solved.
2. If the issue still exists, swap one Y axis with one of the Z axes.

Linear Module Burns out Suddenly

Possible Cause

- The Linear Module is broken.

Actions

Replace the Linear Module.

Linear Module Only Moves in One Direction

Possible Cause

- The end-stop switch is stuck.

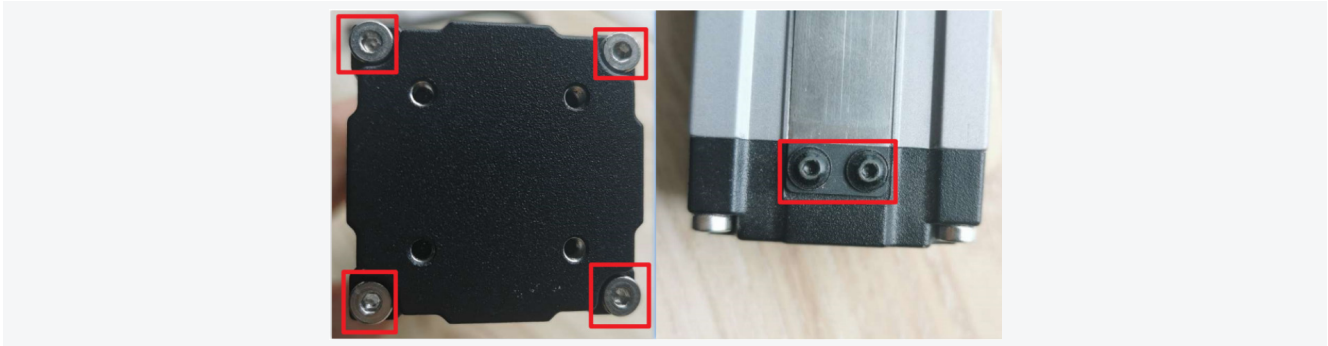
Actions

1. Connect the machine to your computer with a USB cable.
2. Launch the Snapmaker Luban. In the console, input **M119**, and check the status of the end-stop switch.
 - If **X_min** or **X_max** is displayed as **TRIGGERED**, then the end-stop switch of the X Linear Module might be stuck.
 - Similarly, if **Y_min**, **Y_max**, **Z_min**, or **Z_max** is displayed as **TRIGGERED**, then the end stop switch of the Y or Z Linear Modules might be stuck.

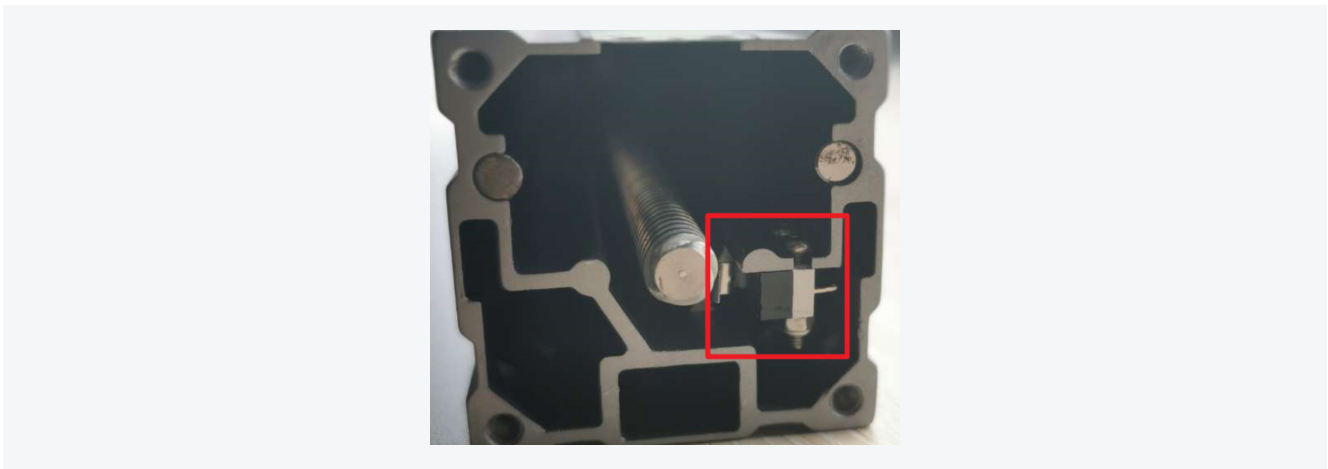
```
ok
> M119
M119
others < Reporting endstop status
others < x_min: open
others < x_max: open
others < y_min: open
others < y_max: open
others < z_min: open
others < z_max: open
others < z_probe: TRIGGERED
others < filament: TRIGGERED
```


3. Fix the end-stop switch on your **TRIGGERED** Linear Module.

3.1 Disassemble the cover (the one with no cable end) of the Linear Module. You will need the 2.5 & 2.0 hex screwdriver.



3.2 Find the end-stop switch. Check if it's stuck.



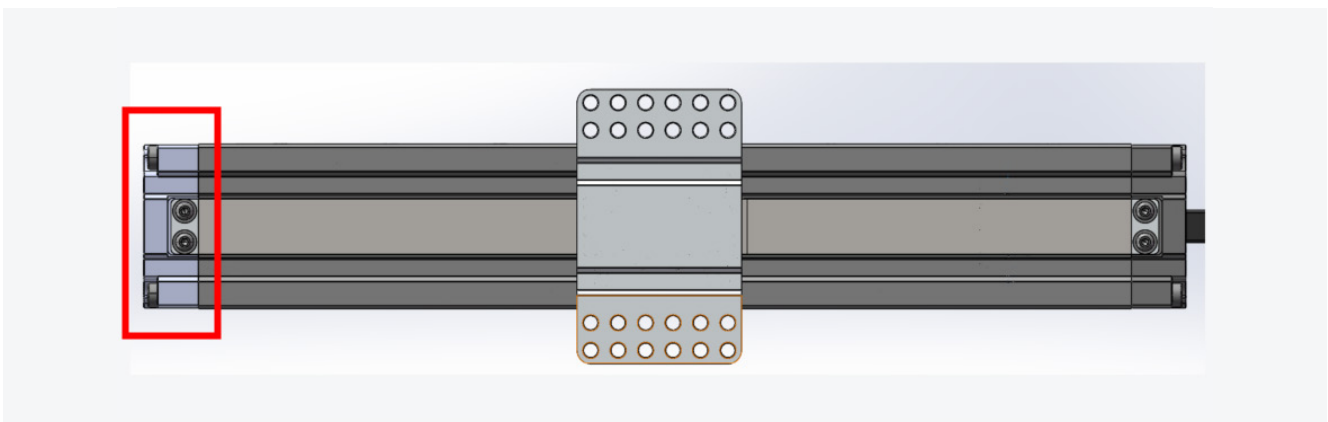
3.3 Tap the end-stop switch and re-assemble the Linear Module.

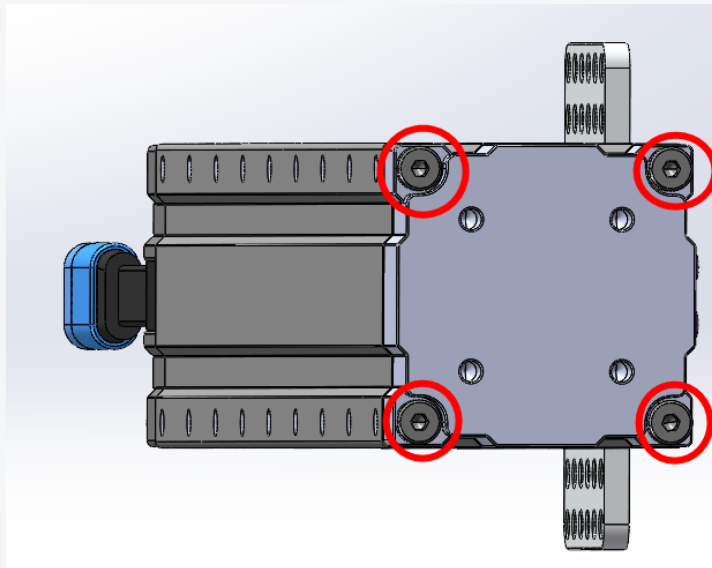
4. Check if the Linear Module works. If not, replacing the Linear Module might solve the problem.

Slider (Carriage) of Linear Module Comes Loose

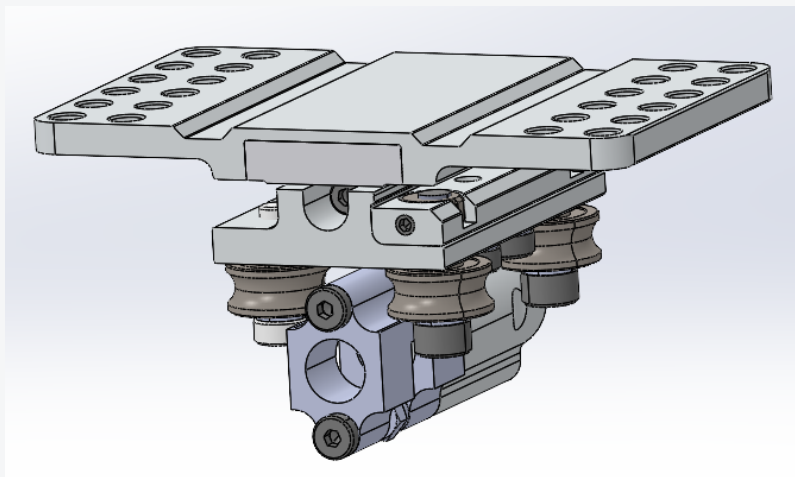
Actions

1. Take the cover (the one with no cable attached) off from the Linear Module. You will need the 2.5 & 2.0 hex screwdriver.

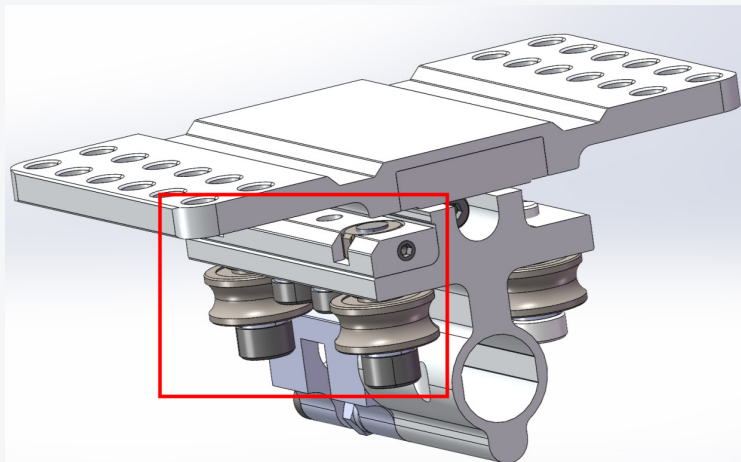




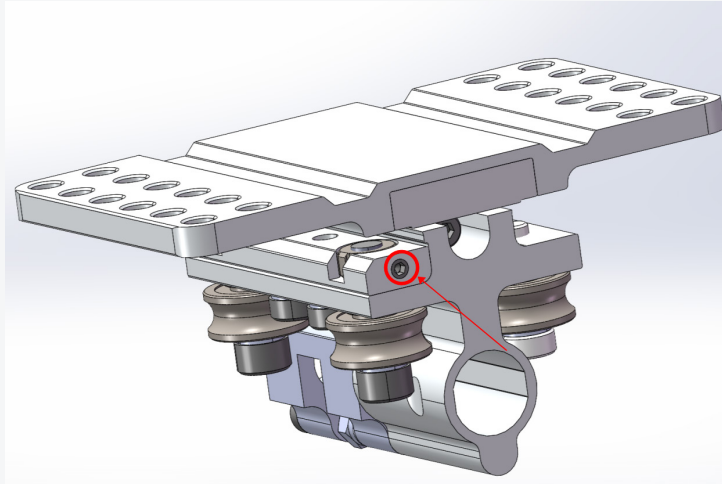
2. Slide the Slider off from the Linear Module.



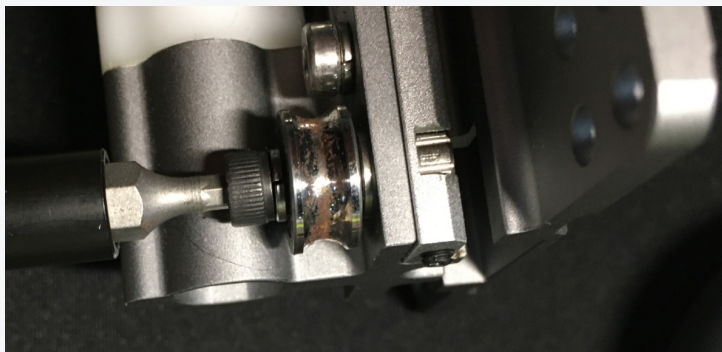
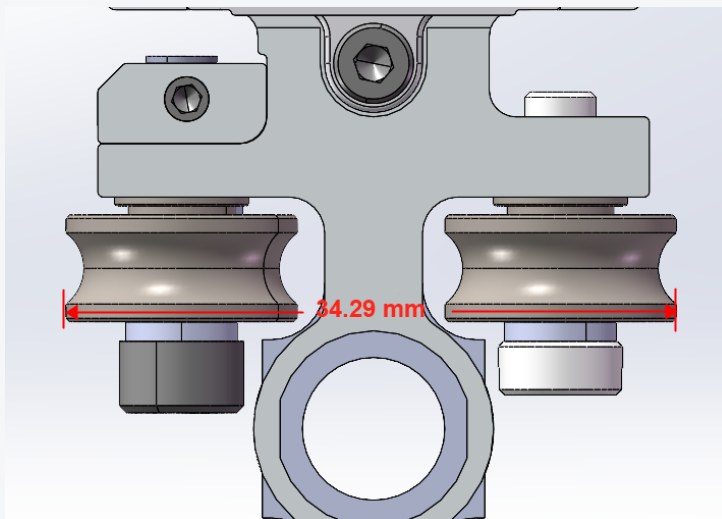
Note: One side of the bearings is adjustable.



3. Loosen the screw circled in the picture below.



4. Twist the bearing screw with an H3 hex screwdriver to adjust the distance between the bearings of two sides. The distance should be 34.29 mm.



5. Tighten the fastening screw first and then tighten the bearing screw.

6. Repeat step 3 to 5 to adjust the other bearing.

7. Re-assemble the Linear Module.

Stainless Steel Strip of Linear Module Comes Loose

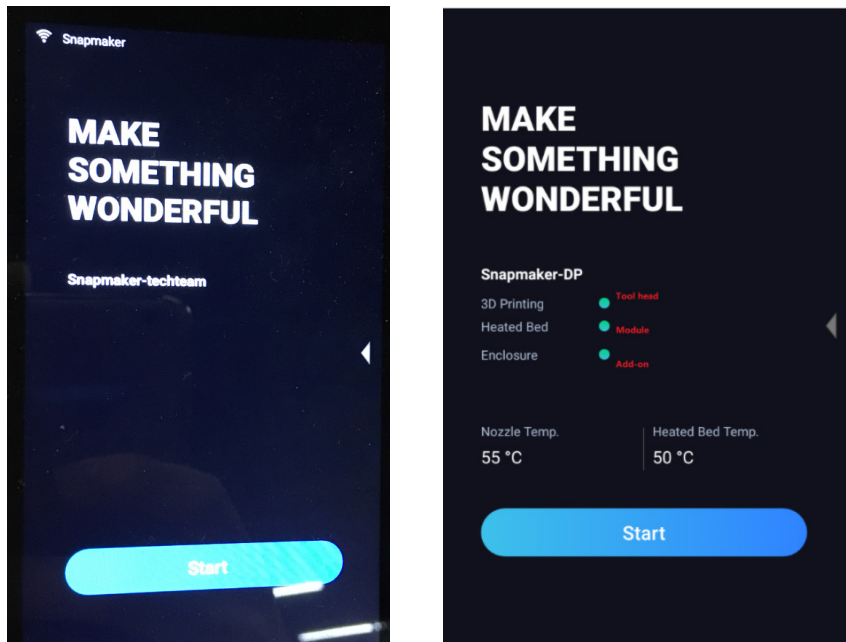
Actions

Please refer to the video on installing the stainless steel strip of the Linear Module at <https://drive.google.com/file/d/1tUFob6tJCzQmuNlBeBNeBUayOdsDXi4W/view?usp=sharing>.

3D Printing

3D Printing Module Isn't Detected

If you turn on the machine, and the Touchscreen displays an error message **Snapmaker tech-team**, then it might be that the 3D Printing Module is not detected by the machine.



Possible Causes

- The toolhead cable is broken.
- The Linear Module or the Controller is broken.
- The 3D Printing Module is broken.

Actions

1. Replace the current toolhead cable with one of the interchangeable cables (see picture below). Use it to connect the machine to your computer. In the Luban console, input **M1999** and see if it displays **3DPRINT Module** in the second line from the bottom.



Toolhead Cable



Y Conversion Cable



Z Conversion Cable

- If it does, then it means the 3D Printing Module is detected. The toolhead cable is broken. Replacing a new toolhead cable can solve the issue.

-If it doesn't, then it means the 3D Printing Module isn't detected. In that case, try the next step.

```

others < Basic ID: 0x00300327
others < Basic ID: 0x000070C9
others < Basic ID: 0x00300351
others < Basic ID: 0x00300357
others < grid manual
others < PL: first free block index: 1
others < PL: first non-free block index: 1
others < PL: data has been masked
others < PL: next write index: 2
others < PL: Unavailable data!
others < 3DPRINT Module
others < Finish init
[]

```

2. Remove all the cables of the Linear Modules from the Controller, and see if the Printing Module, Laser Module, and CNC Module can be detected.
 - If yes, then it means one or more Linear Modules are disrupting Controller Network Area (CAN) communication. Reconnect cables of each Linear Module one by one to the Controller, and identify which Linear Module(s) is broken.
 - If no, then the Controller itself might be broken, replacing it might solve the problem.
3. If the Laser Module and CNC Module can be detected by the Controller, but the Printing Module can't, then the Printing Module itself might be broken, replacing it might solve the problem.

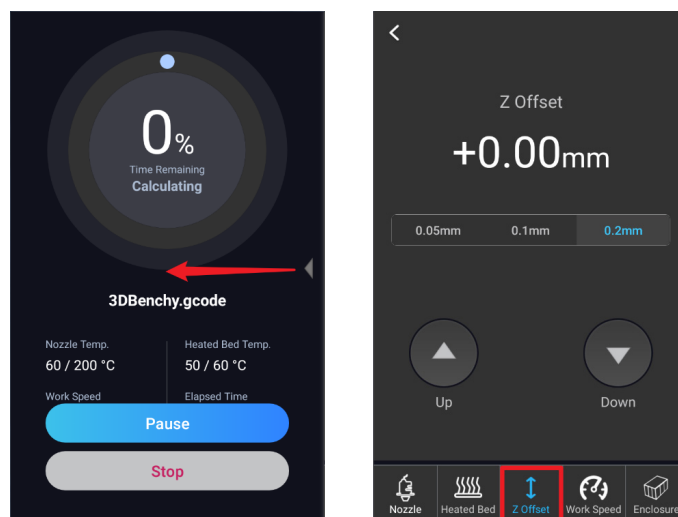
First Layer Doesn't Stick to Print Sheet

Possible Causes

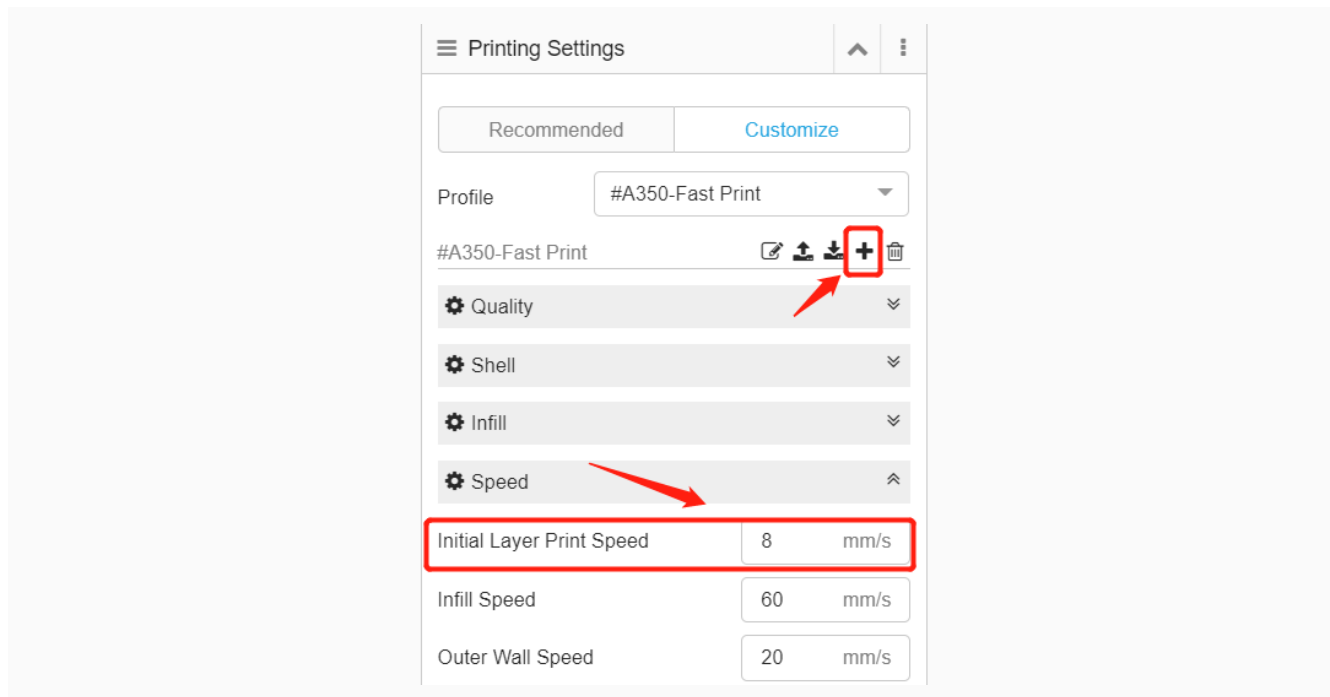
- Calibration is incomplete.
- Printing speed is too fast.
- Filament is compromised.

Actions

1. Recalibrate. For detailed instruction on calibration, refer to the **Quick Start Guide**. If the problem persists, start a new printing session, and right before the filament comes out, swipe left on the Touchscreen to view the hidden menu and then tap **Z Offset** at the bottom. Tap **Up** or **Down** to adjust the nozzle height.



2. In Luban, go to **Printing Settings** to set the **Initial Layer Print Speed** as **8 mm/s** and try again.



3. Try another filament.

3D Printing Module Pushes into Print Sheet

The 3D Printing Module clashes against the Print Sheet during calibration or printing.

Possible Causes

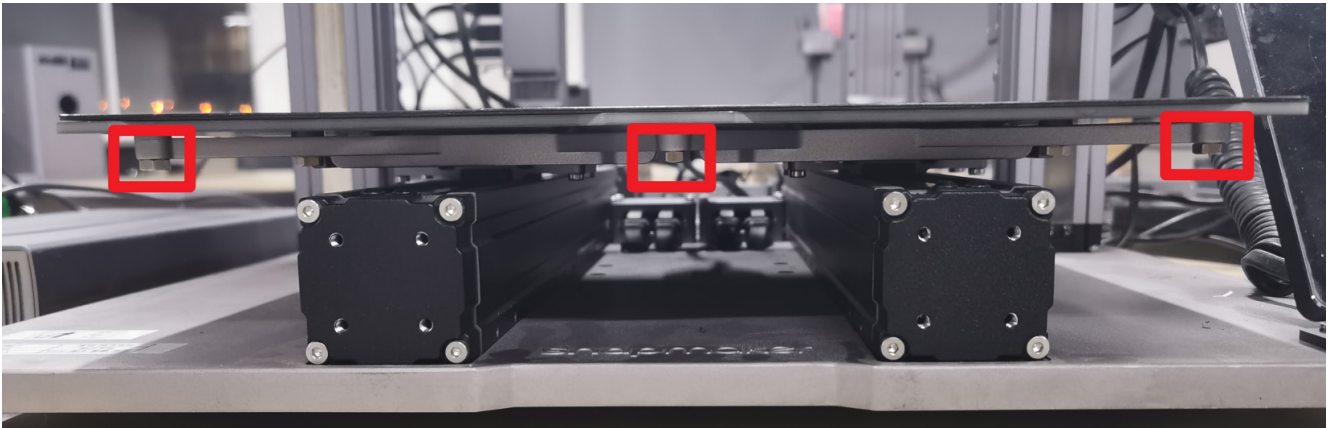
- The Y axes are not assembled properly. In this case, the 3D Printing Module is likely to clash against the Print Sheet at the first or the fifth calibration point.
- The screws on the aluminum grid platform are installed wrongly.
- The probe sensor isn't working properly.
- The probe sensor wiring is worn out.

Actions

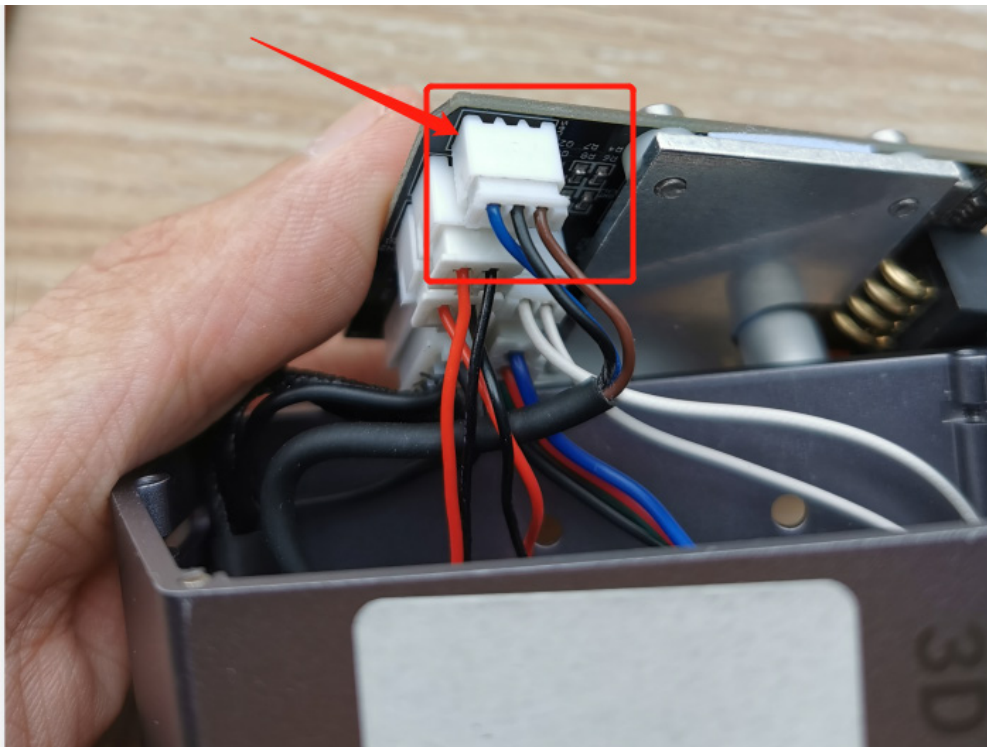
1. Check whether the Y axes are securely fitted into the grooves on the Base Plate as illustrated. If not, adjust the Y axes.



2. Check whether the screws on the aluminum grid platform face downward as illustrated. If not, re-install all the screws on the platform.

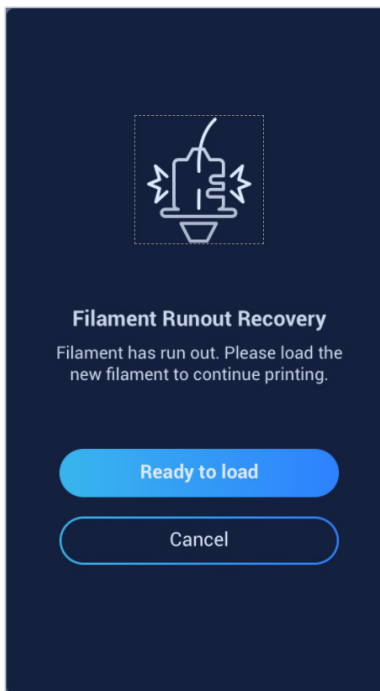


3. If the problem persists, check whether the probe sensor is working properly. For detailed instructions, see [Adjustprobe/proximitysensor of 3DPrinting Module.](#)
4. If the problem persists, check the condition of probe sensor wiring. Open the right cover of the Printing Module and find the sensor wiring. Unplug it and then plug it back in. Close the cover and try again.



Filament Runout

When you start a print, the Touchscreen keeps telling you that the filament has run out when in fact it hasn't.



Possible Causes

- The filament switch is broken.

Actions

1. Remove the fan: https://youtu.be/e2L_Y_HZGgA.
2. Adjust the filament switch: https://youtu.be/_KAQvMNoJUQ.

Filament Won't Load

Possible Causes

- The nozzle is jammed.
- The filament is bent or compromised.
- The 3D Printing Module or Controller is broken.

Actions

1. Replace the hot end. A spare hot end is included in the box. For how to change the hot end, see https://drive.google.com/file/d/16lLntfp-3V-j48pP_-aeRtADg49mSnek/view.
2. Straighten the filament before you insert it into the Printing Module. Or try a different filament. If this does not solve the problem, then the toolhead or the Controller might be broken. Go to the next step.
3. Turn on the machine, and press to open the latch on the 3D Printing Module.



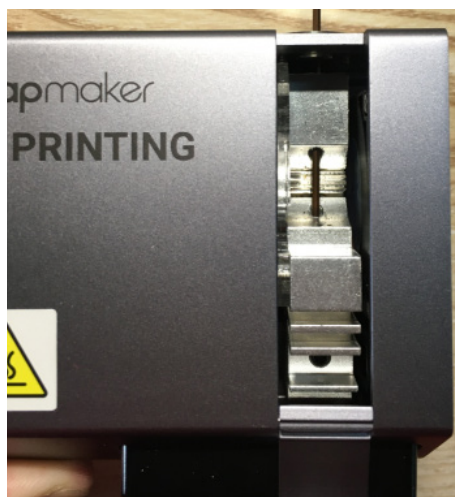
4. On the Touchscreen, go to **Control > Nozzle**.



5. Wait for the nozzle to heat up until you can tap the **Load** or **Unload** button. Make sure the nozzle temperature matches the working temperature of the filament you are using (ABS generally requires a higher temperature than PLA, for example). Tap **Load** to see if the gear inside the 3D Printing Module rotates.



- If it does, then use a metal stick to poke the feeding hole (see picture below). Make sure the filament inside is all cleaned up. Close the small window to try again and see whether the filament can load properly.

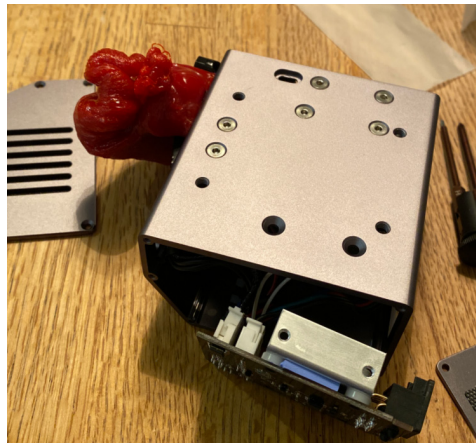
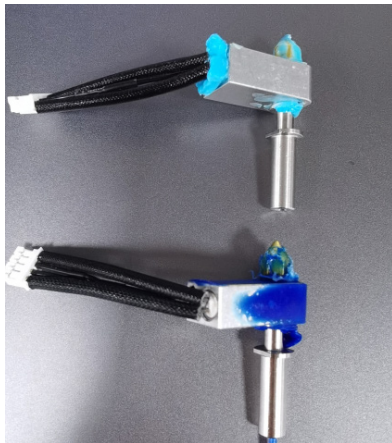


- If it doesn't, then check whether the Laser Module works.
 - If the Laser Module works well, then the Printing Module itself is broken, replacing it might solve the problem.
 - If the Laser Module won't emit blue laser light (or won't stop emitting it, for that matter), then something is wrong with the Controller. It might be that the customer has connected the toolhead cable in the wrong direction, and the Controller and the cable is damaged as a result. Replace the Controller. Then check whether the 3D Printing Module and Laser Module works with the new Controller. If not, these two modules may also be broken and need to be replaced.



Blobs on Nozzle

A blob (see pictures below) happens when the filament is still under pressure from the 3D Printing Module when a layer is finished. This results in a short burst of over extrusion: a blob, also known as Z-scaring or Z-seam. It can also occur mid-printing.



Possible Causes

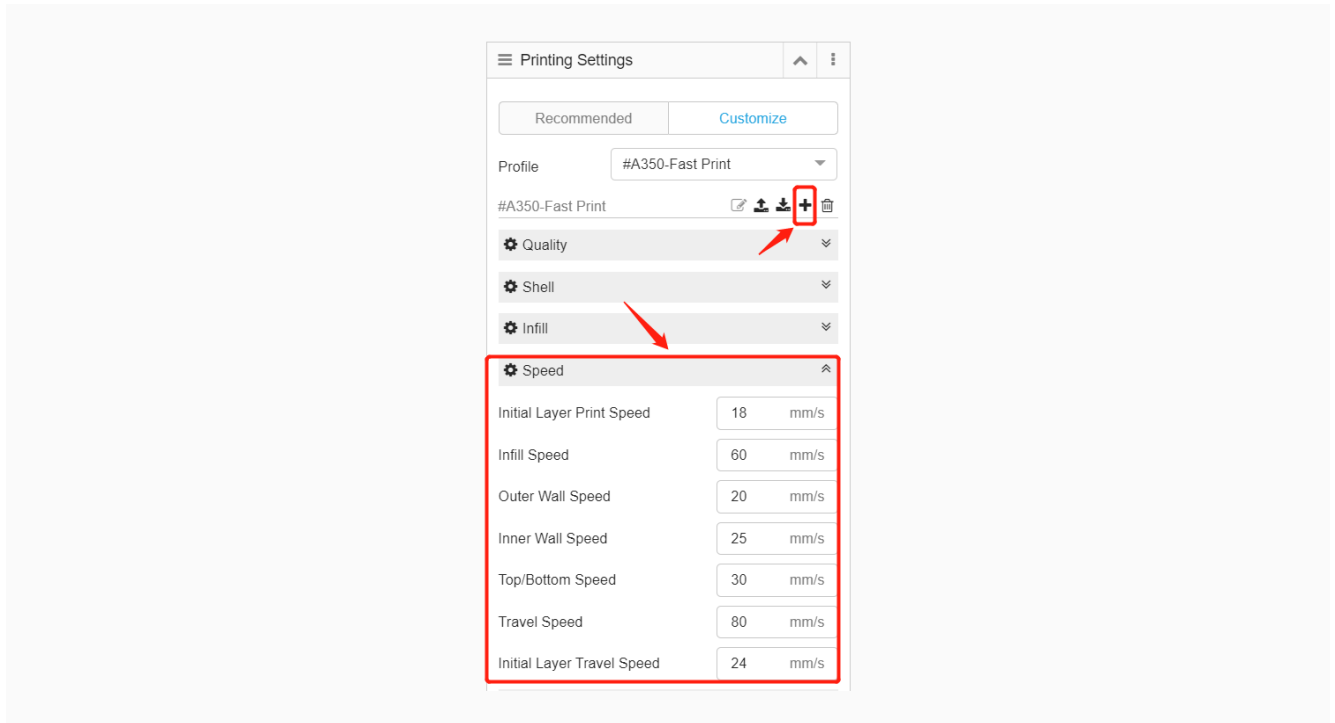
- Print speed is too fast.
- The first layer fails to stick to the Print Sheet.
- The filament is compromised.

Actions

1. Replace the hot end before trying any of the following steps. A spare hot end is included in the box. For how to change the new hot end kit, see https://youtu.be/2anRrb_R63o.

Note: If it's hard to remove the blobs from the current hot end, heat the nozzle up to 230 °C and try again.

2. Lower the printing speed. In Luban, go to **Printing Settings** > Click **+** > put in lower values in **Speed**.



3. Recalibrate. For detailed instruction on calibration, refer to the **Quick Start Guide**.



4. Try another filament.

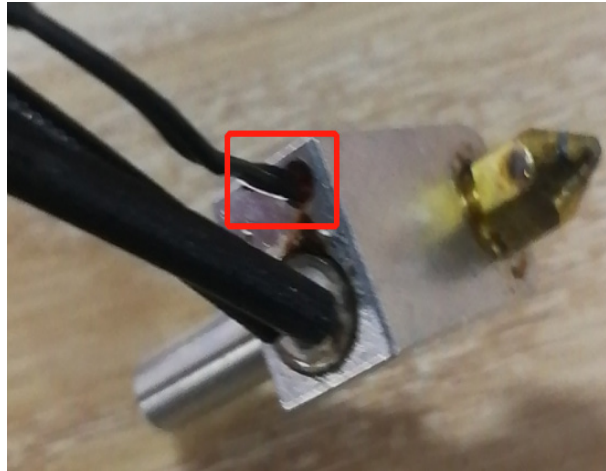
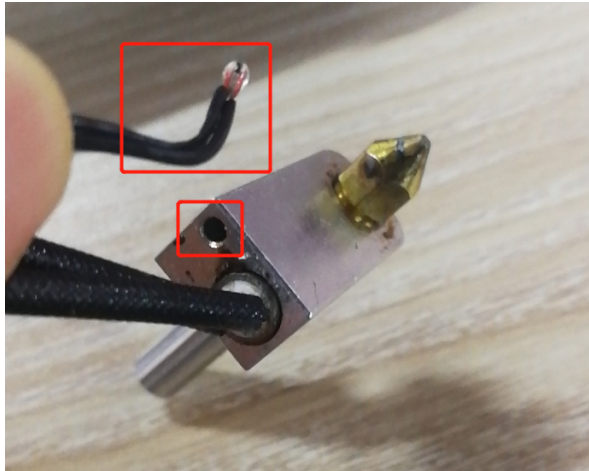
Touchscreen Shows a -30 °C Nozzle Temp

Possible Causes

- The thermistor is dislocated.
- The hot end is broken.

Actions

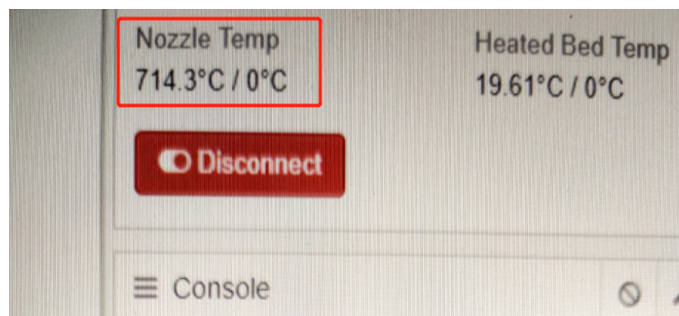
1. Check if the thermistor (see circled in picture below) is securely seated in the hole. Plug it back in if it is not. If the problem persists, try the next step.



2. Replace the hot end. For how to replace the hot end, see https://drive.google.com/file/d/16lLntfp-3V-j48pP_-aeRtADg49mSnek/view.

Nozzle Temperature Is Too High

The Touchscreen or Luban displays a nozzle temperature higher than 300 °C .

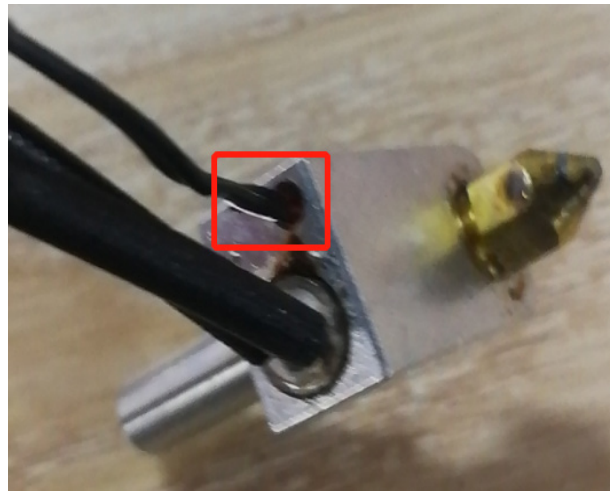
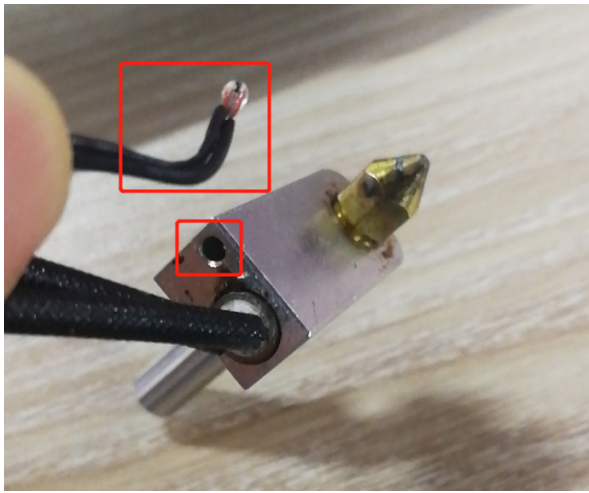


Possible Causes

- The thermistor is dislocated.
- The electrical board of the 3D Printing Module is broken.

Actions

1. Check if the thermistor (see circled in picture below) is securely seated in the hole.



2. If the problem persists, replacing the 3D Printing Module might solve the problem.

Heated Bed Won't Heat up

The Heated Bed won't heat up when you set the target temperature on the Touchscreen or when you start a print.

Possible Causes

- The cable of the Heated Bed is broken.
- The thermistor of the Heated Bed is open- or short-circuited.
- The Heated Bed is open-circuited.
- The Heated Bed port on the Controller is broken.

Actions

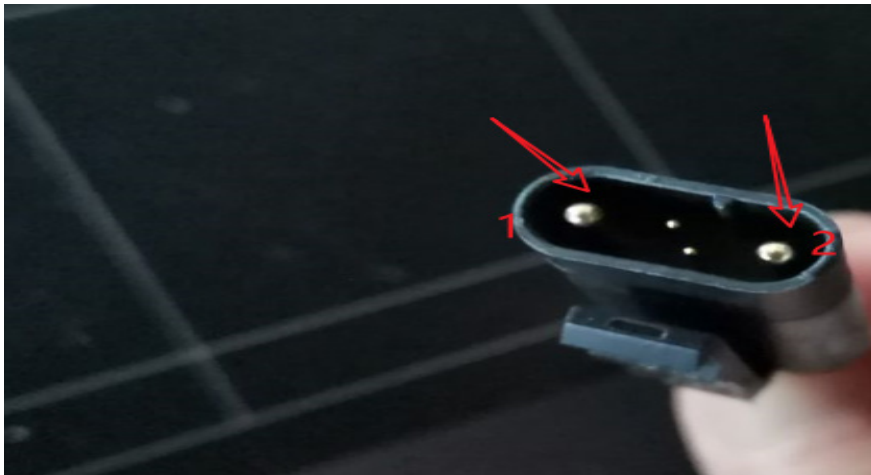
1. Examine the cable of the Heated Bed, and see if it's damaged in any way. If it is, you might need to replace the Heated Bed.



2. Get a multimeter, unplug the Heated Bed cable from the Controller, and measure the resistance of the Heated Bed. The resistance should be in the range of 60 K Ω – 130 K Ω . If the test value is out of the range, then the Heated Bed might be broken, replacing it might solve the issue.



3. Check if the circuit is open. Get a multimeter, set it to **continuity**, and test the two big pins (see picture below) inside the connector of Heated Bed cable.



- If the multimeter displays **1** or **OL** (open loop), then there's no continuity.
 - If the multimeter displays a value of zero (or near zero), and makes a buzz sound, then the circuit is continuous.
4. If previous troubleshooting doesn't solve the problem, then it might be that the Heated Bed port on the Controller is broken. Replacing the controller might solve the problem.

3D Printing Module Clashes against the Print Sheet during Calibration

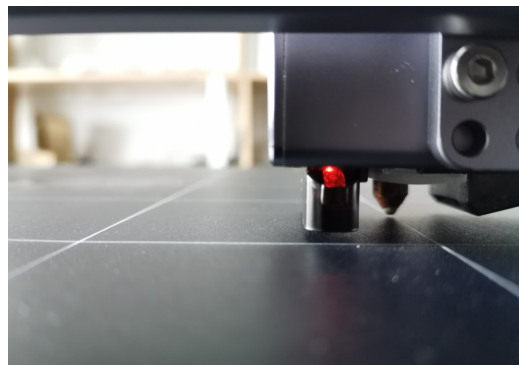
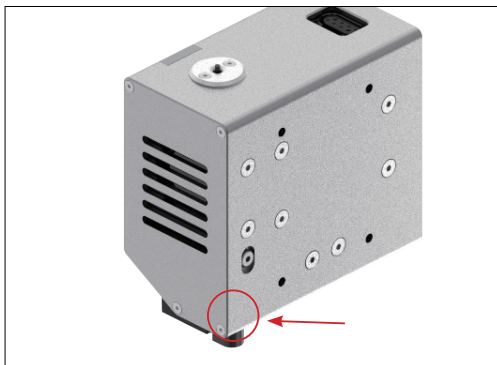
Possible Causes

- You are using an old version of the firmware.
- The sensor isn't seated right.

Actions

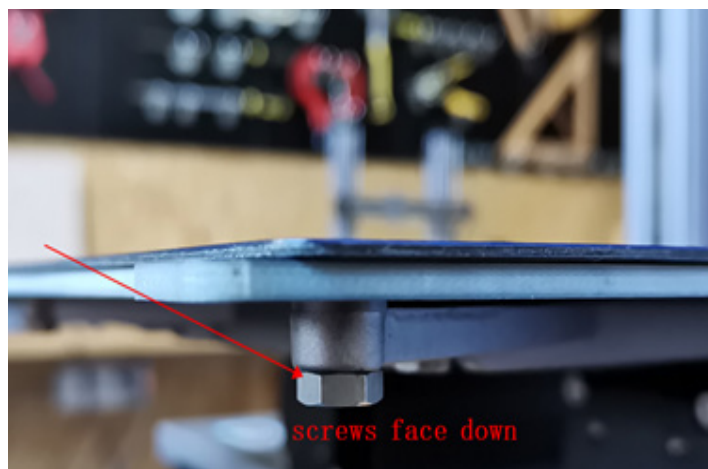
1. Download and install the latest version of firmware from <https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12>. See if this solves the problem. If not, follow the steps below to test your probe sensor.
2. Start auto-calibration on the Touchscreen. The 3D Printing Module will go back to its home position and then move down.
3. Put a palette knife to test the probe sensor as shown in this video: <https://youtu.be/Z47V802sSnc>. If the probe sensor works, the 3D Printing Module will stop moving.

Note: The first picture highlights where the probe sensor is. When the nozzle approaches the Print Sheet, red light will come out from the nozzle, as shown in the second picture.



4. Now if the probe sensor works, then maybe it's because the sensor isn't seated right. In this case, follow the steps below to adjust the height of the probe sensor.

- 4.1 Check if the aluminum platform is correctly assembled.

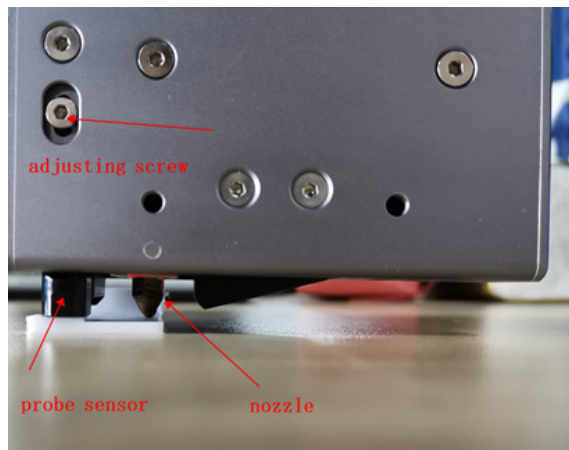


- 4.2 Turn off the machine and assemble the 3D Printing Module as shown in picture below; it lets you adjust the sensor.

Caution: For purpose of troubleshooting, the way you assemble the Printing Module here is different from the one demonstrated in the **Quick Start Guide**. You should only do this when you adjust the probe sensor.



4.3 Loosen the screw of the probe sensor so that it can be adjusted.

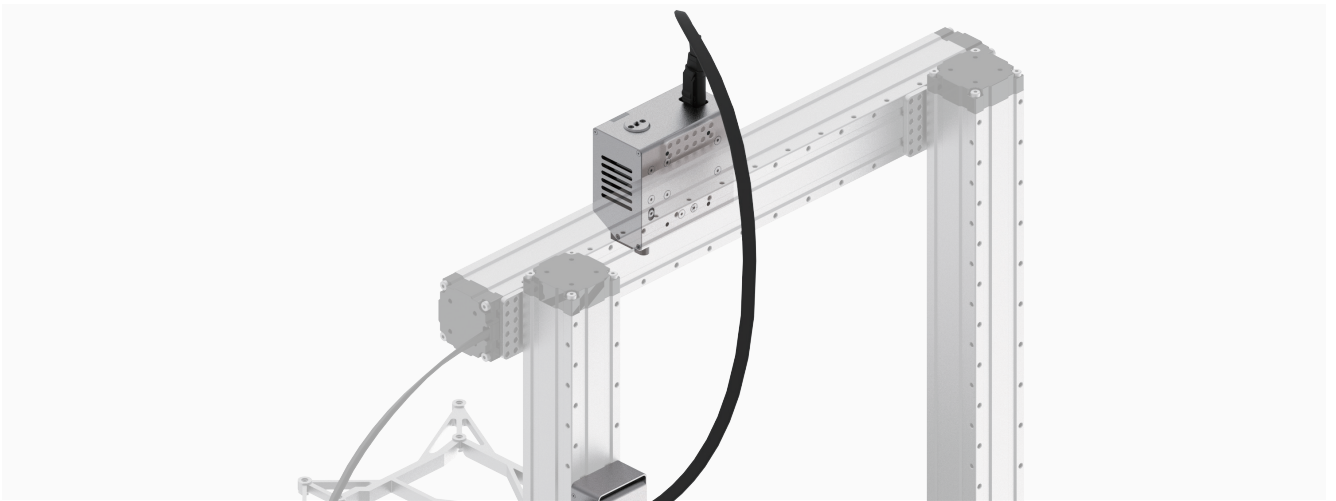


4.4 Find a credit card (or anything with a height of about 1 mm). Move the module down until the nozzle tip touches the Print Sheet; then put the card under the probe sensor so that the sensor is approximately 1 mm higher than where the nozzle tip is.



4.5 Tighten the screw of the probe sensor.

4.6 Reassemble the 3D Printing Module correctly.

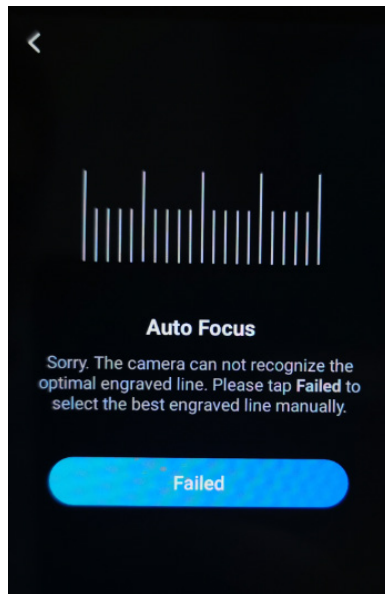


4.7 Redo calibration following the prompts on the Touchscreen. Keep the machine connected to the computer the whole time.

Laser

Laser Calibration Fails

If the Laser Calibration doesn't go well, the Touchscreen will display **Failed**.



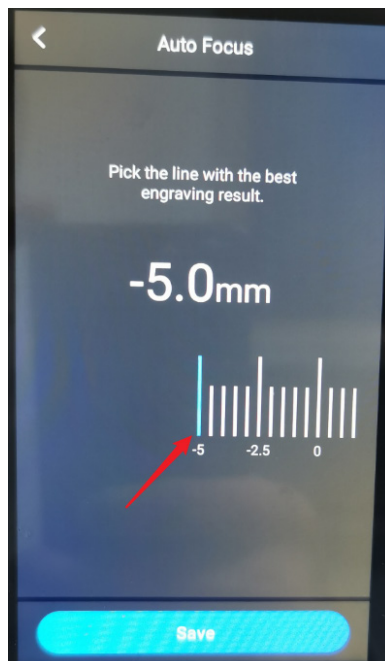
Possible Causes

- The laser is too high.

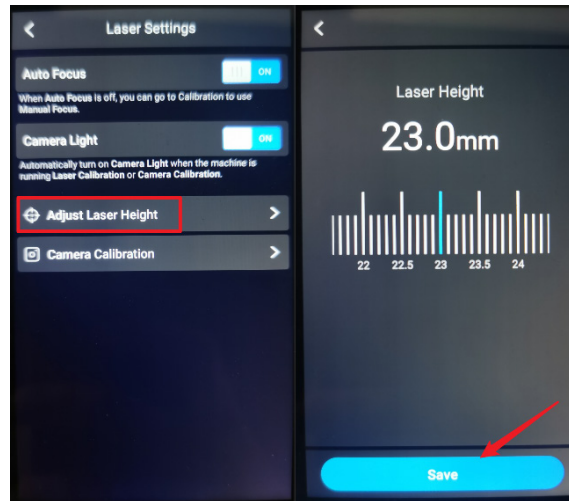
Actions

Two options are available.

1. Redo auto focus. Tap **Failed**, slide the scale left to select the leftmost line, and tap **Save**. The screen should go back to the main menu. Tap **Calibration**. If the problem persists, repeat the steps until calibration succeeds.



2. Change the **Laser Height** manually. On the Touchscreen, tap **Failed** > **Settings** > **Laser** > **Adjust Laser Height**. Set the **Laser Height** to **23.0mm** and then recalibrate. If the Touchscreen keeps showing **Failed**, and several lines fail to be burned, then lower the laser height (to 21.5 mm or 19 mm, for example), and try again.



Laser Is Discontinuous Or Weak

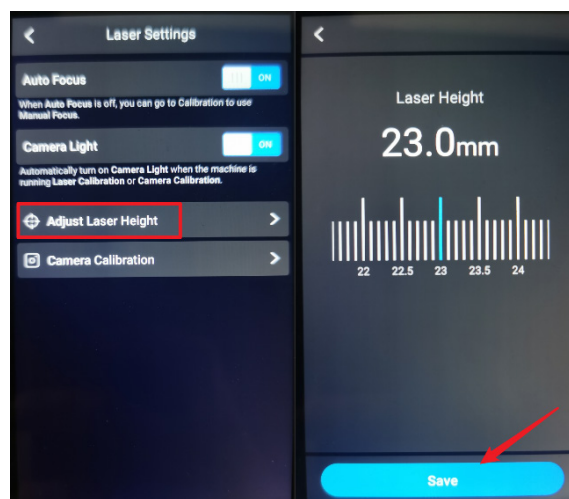
The Laser Module emits weak light and doesn't engrave at its full power, and therefore the module can't finish Auto Focus.

Possible Causes

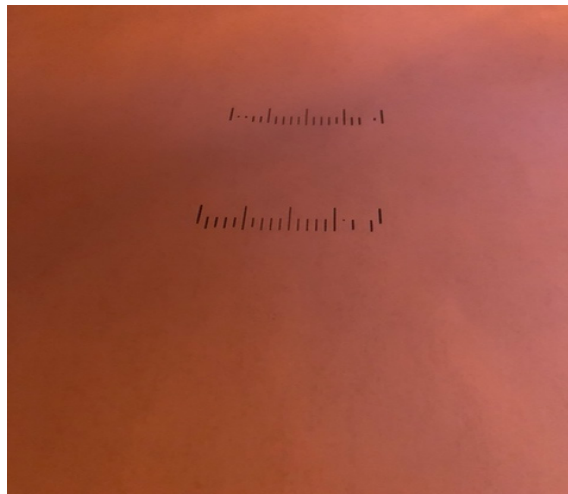
- The Enclosure's door is open during Auto Focus.
- The laser is too high.
- The Laser Module is broken.

Actions

1. Either close the Enclosure's doors or go to **Enclosure** > **Settings** to disable the door detection feature.
2. Change the Laser height manually. On the Touchscreen, tap **Settings** > **Laser** > **Adjust Laser Height**. Set the **Laser Height** to **23.0mm** and then recalibrate. If the Touchscreen keeps showing **Failed**, and several lines won't be burnt out, lower the laser height (to 21.5 mm or 19 mm, for example), and try again.

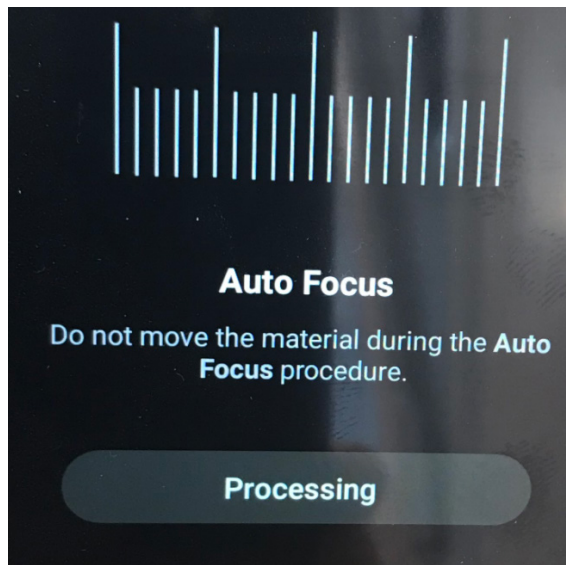


3. If the problem persists after you have tried the options above, and your built-in camera can't find the finest line while auto focusing (see picture below), then the Laser Module should be replaced.



Machine Is Stuck in Processing during Auto Focus

During auto focus, the machine is stuck in the **Processing** screen (see picture below) and won't finish the process.



Possible Cause

- The laser shade is impeding auto focus.

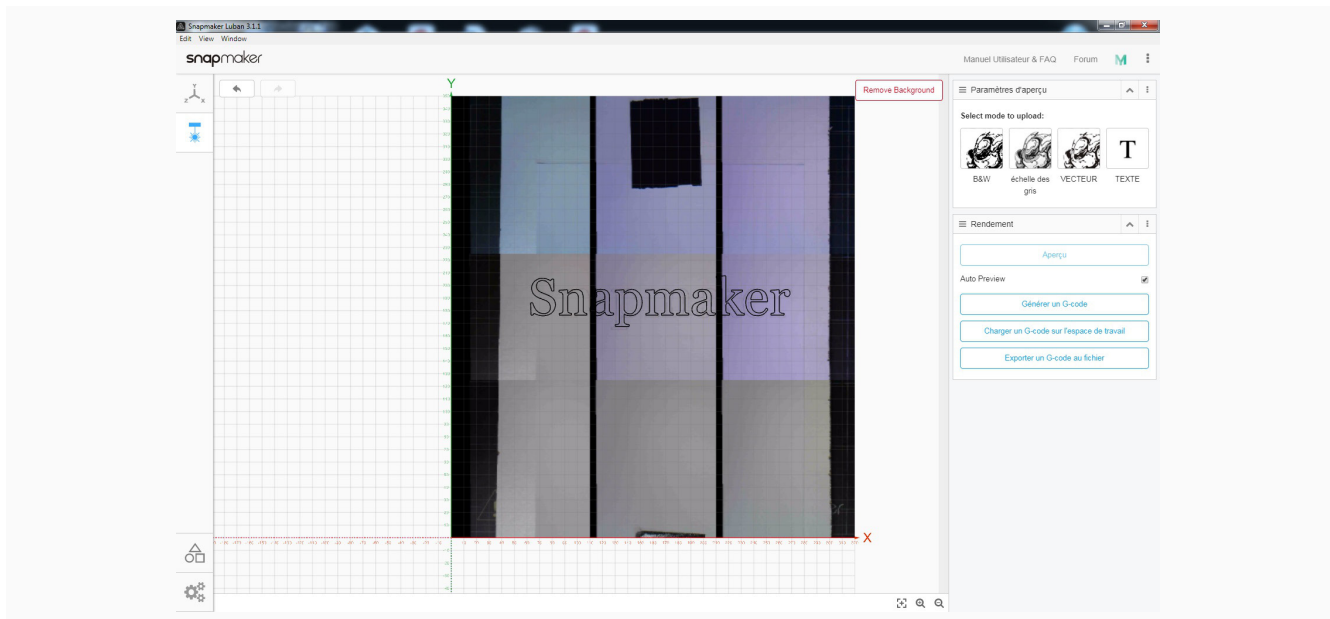
Actions

Twist to remove the bottom half of the laser shade, and see if the problem persists. If so, please export the log file from the Touchscreen to your USB drive and send it to support@snapmaker.com for further investigation. For how to export the log file, see https://drive.google.com/file/d/189CIUW4D4o_Qm2mY2j63N3rKzn7n3zZp/view.



Camera Capture Doesn't Work

If the image isn't fully processed, it indicates that camera capture isn't working properly.

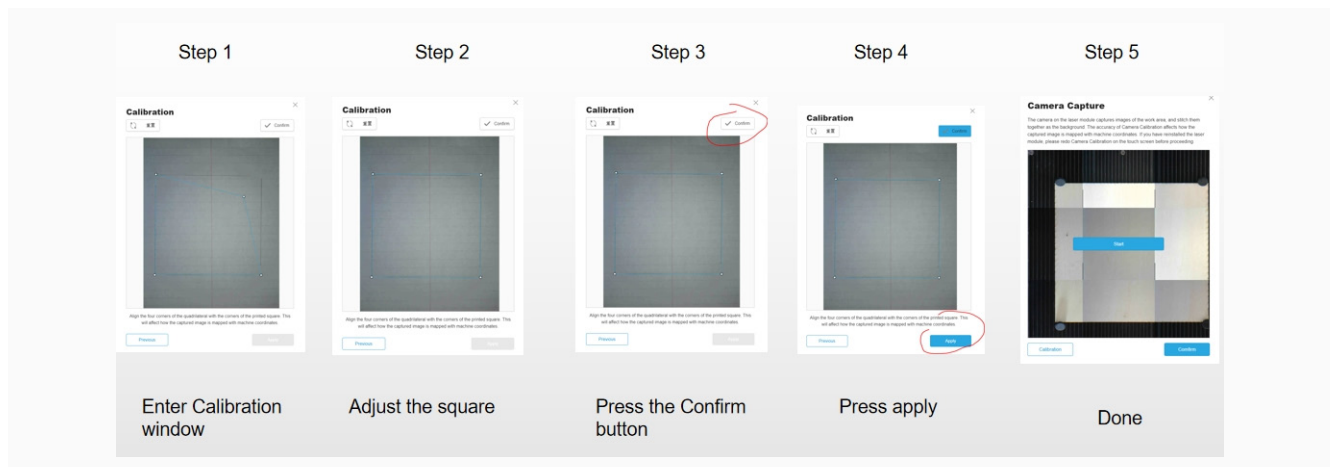


Possible Causes

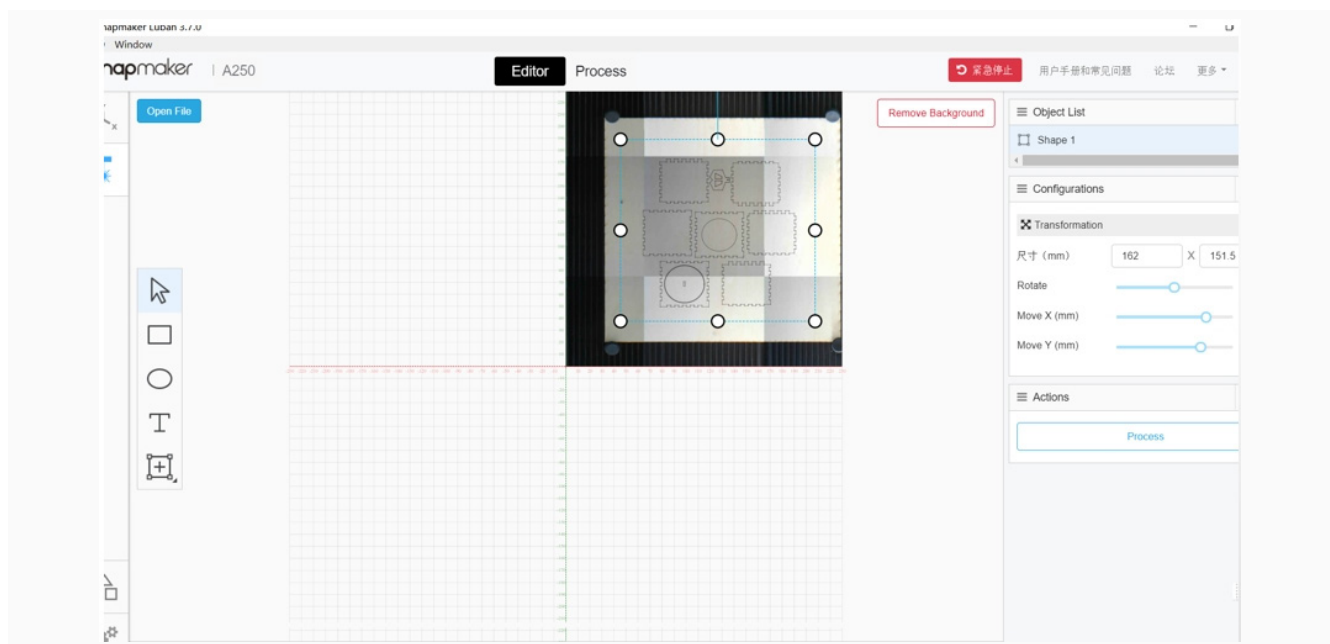
- Your Snapmaker Luban is running the old version.
- You are not using camera capture correctly.

Actions

1. Download the latest version of Snapmaker Luban from <https://snapmaker.com/product/snapmaker-2/downloads>.
2. Watch the tutorial at https://www.youtube.com/watch?v=cult_7nTTpk&t=10s. Or, follow the steps below.
 - 2.1 Click **Calibration** and adjust the square, and then click **Confirm** > **Apply**.



2.2 Click **Start** to see if it works properly.

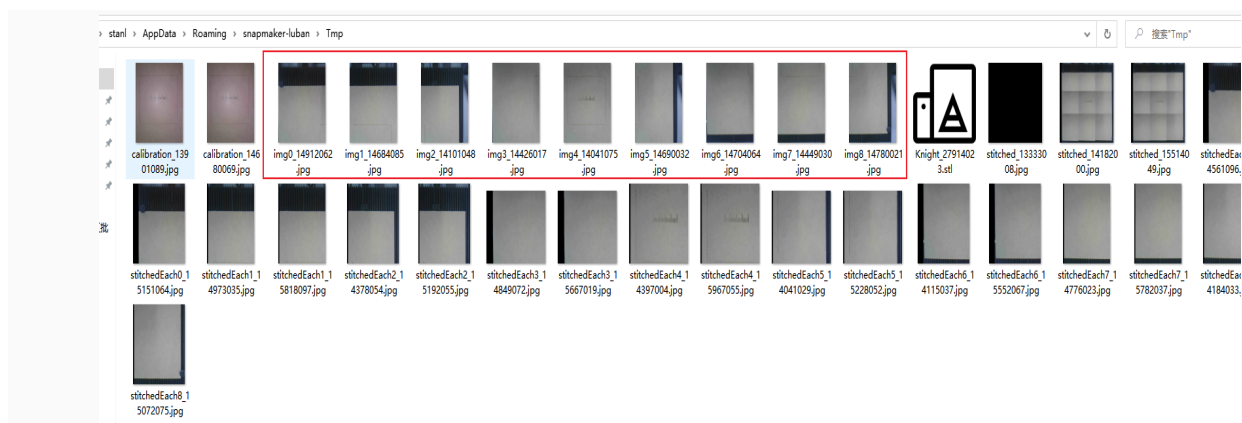


2.3 If the camera capture feature still doesn't work, please find the images generated by the camera through the following path. Export them to your USB drive, and send them to support@snapmaker.com for further investigation.

- **Windows OS:** C:\Users\admin\AppData\Roaming\snapmaker-luban\Tmp

- **macOS:** /Users/admin/Library/Application Support/snapmaker-luban/Tmp

Note: admin is your username.



Laser Module Doesn't Emit Laser

Possible Causes

- The laser is disabled.
- The Controller is broken.

Actions

1. On the Touchscreen, go to **Control > Laser Power > Laser Status** to turn it on. See if blue laser light comes out. If not, go to step 2.



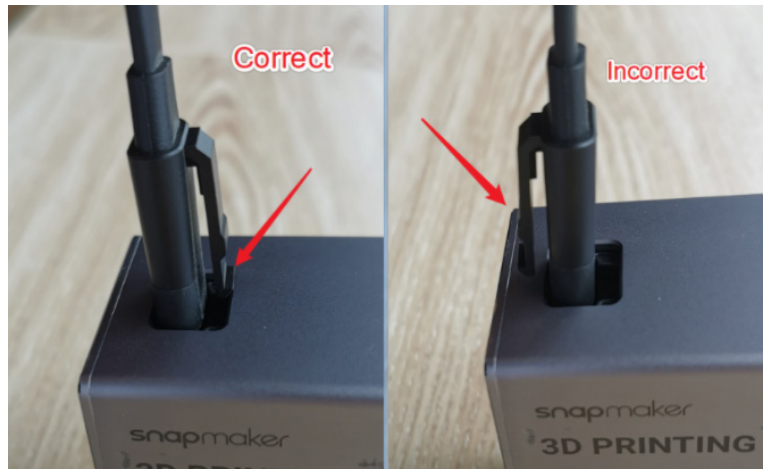
2. Find out which one is the problem first. Get your 3D Printing Module, turn on the machine, and press to open the latch on the 3D Printing Module.



3. On the Touchscreen, tap **Control > Nozzle**.



4. Wait for the nozzle to reach 200 °C , tap **Load** or **Unload**, and see if the gear in the module rotates.
- If it does, then change the toolhead cable.
 - If it doesn't, then the Controller is broken. It might be that the customer has connected the toolhead cable in the wrong direction, and the toolhead and the Controller is damaged as a result. You will need to first replace the Controller. Then, check if the 3D Printing Module and Laser Module works with the new Controller. If not, these modules may also be broken and need to be replaced.



5. Replace the toolhead cable with the Y or Z conversion cable to see if the Laser Module emits light. If it does, then the previous toolhead cable is broken and needs to be replaced.



Toolhead Cable



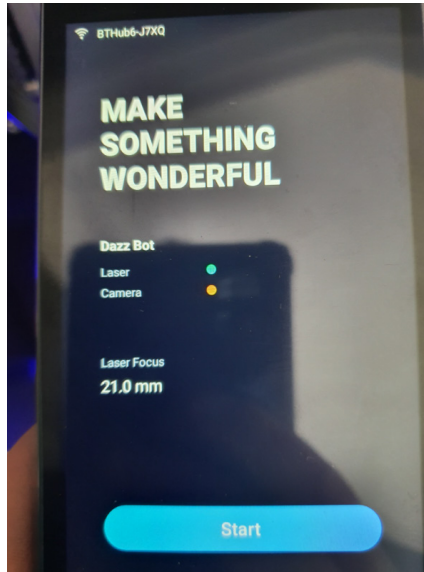
Y Conversion Cable



Z Conversion Cable

Camera Sign Is Yellow on Touchscreen

When the camera sign on the Touchscreen is yellow, it means that the camera isn't working properly.

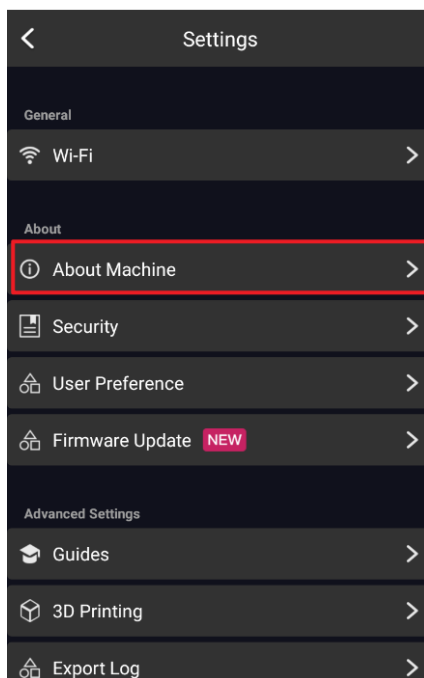


Possible causes

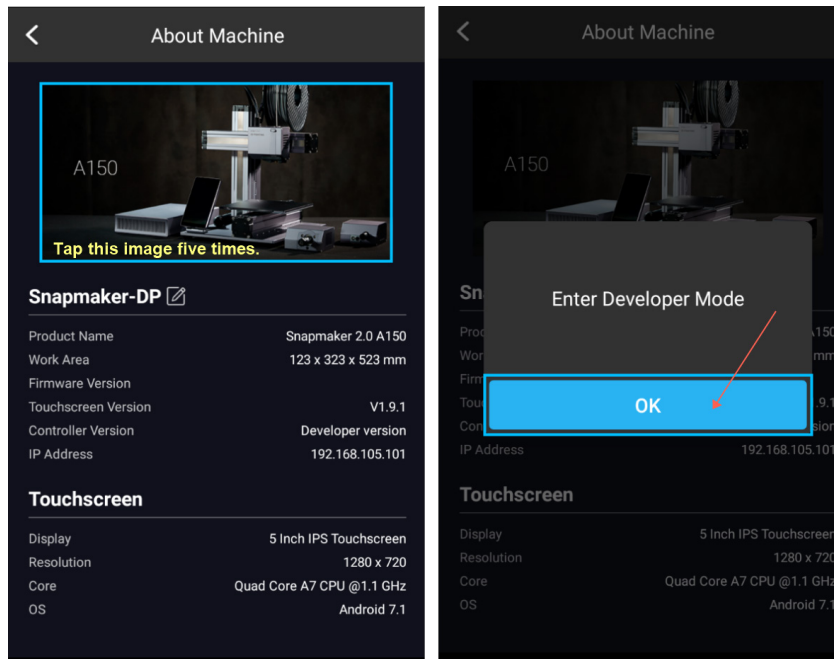
- Something is wrong with the Touchscreen's settings.
- The toolhead cable is broken.

Actions

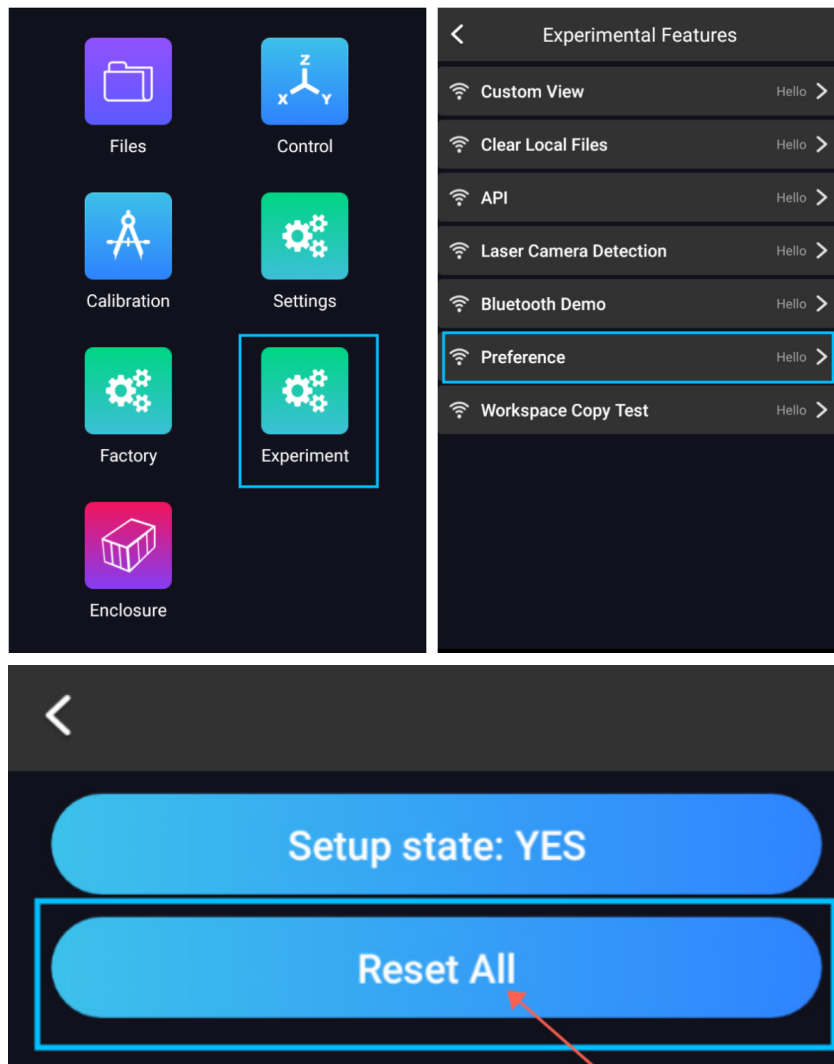
1. Reset the Touchscreen.
 - 1.1 Tap **Settings** > **About Machine**.



1.2 Tap the image five times and the Touchscreen will prompt you to Enter **Developer Mode**. Tap **OK**.



1.3 Under Developer Mode, tap **Experiment > Preference > Reset All**. See if this solves the problem. If not, go to step 2.



2. Replace the current toolhead cable with one of the interchangeable cables (see picture below). See if this solves the problem. If not, then the Laser Module is broken and needs to be replaced.



Toolhead Cable



Y Conversion Cable



Z Conversion Cable

Laser Won't Turn off

The blue laser light of the Laser Module turns on and can't be turned off via the Touchscreen or Snapmaker Luabn.

Possible Causes

- The Toolhead cable is broken.
- The Laser Module or the Controller is broken.

Actions

1. Replace the current Toolhead cable with one of the interchangeable cables (see picture below). See if this solves the problem. If not, please go to step 2.



Toolhead Cable



Y Conversion Cable



Z Conversion Cable

2. Find out which one is the problem first, Laser Module or the Controller.
 - 2.1 Get your 3D Printing Module, turn on the machine, and press to open the latch on the 3D Printing Module. By checking the 3D Printing Module, you will know if the Controller is working.



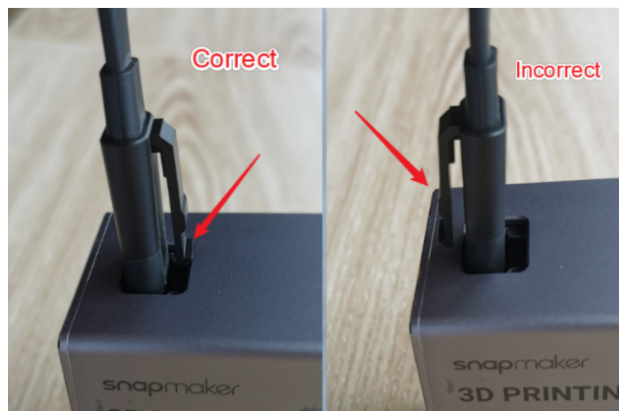
2.2 On the Touchscreen, go to **Control > Nozzle**.



2.3 Wait for the nozzle to heat up until you can tap **Load** or **Unload**. Tap **Load** to see if the gear inside the 3D Printing Module rotates.



- If it does, then the Laser Module might be broken, replacing it might solve the problem.
 - If it doesn't, then something is wrong with the Controller. Go to step 3.
3. Judging by similar cases, the most possible reason is that the toolhead cable connector was plugged in wrongly. This can cause the toolhead and the Controller to ignite.



- You will need to first replace the Controller. Then, check if the 3D Printing Module and the Laser Module work properly with the new Controller. If not, these modules may also be broken and need to be replaced.

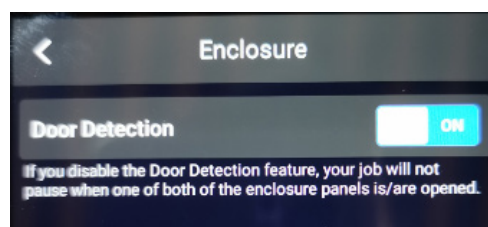
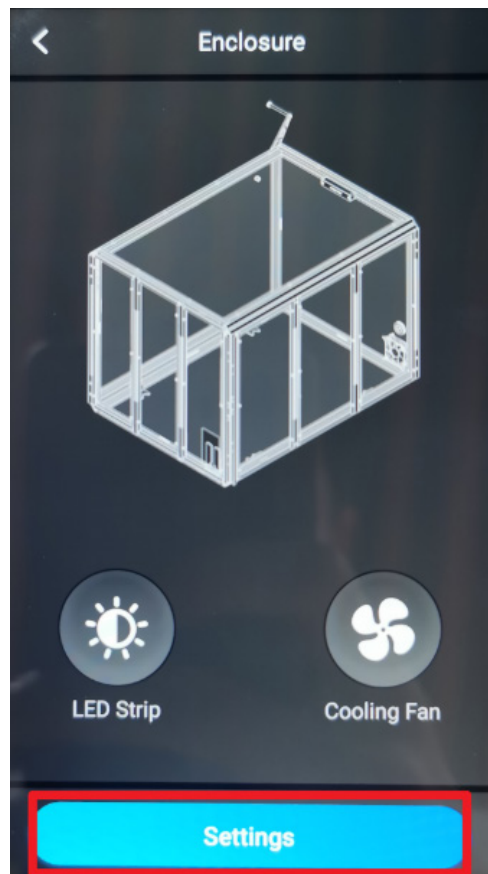
Laser Won't Burn Material When Enclosure Is Used

Possible Cause

- The door of the Enclosure is open when the Laser Module is working.

Actions

Close the enclosure doors before you start to use the Laser Module. Or, if you need the door open when using the Laser Module, turn off the door detection feature. On the Touchscreen, tap **Enclosure** > **Settings** > **Door Detection**.



Caution: Wear the Laser Safety Goggles when the door is open.

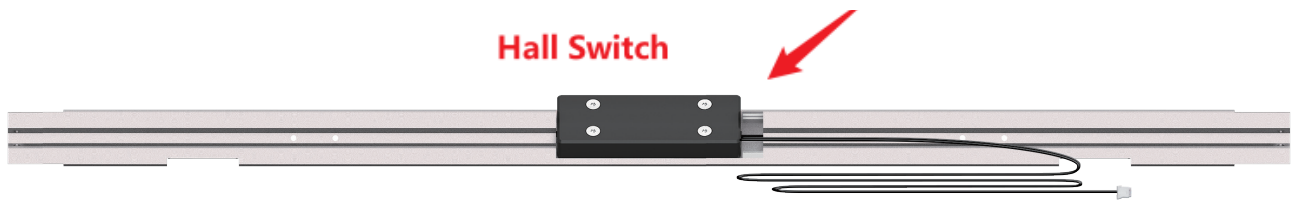
Enclosure

Enclosure Isn't Detected Or Recognized

The Enclosure of Snapmaker 2.0 isn't recognized by the machine. That is, when it's connected to the machine, there is no **Enclosure** icon on the Touchscreen.

Possible Causes

- The firmware is outdated.
- The Converter of the Enclosure is broken.
- The Hall switch is broken, which could result in Enclosure being recognized while the switch is not connected to the Converter, and vice versa, when it's supposed to act the other way around.



- The enclosure cable is broken.
- The enclosure port (addon 3) on the Controller is damaged.

Actions

1. Download the latest firmware from

<https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12> and save it to your USB disk. Insert the disk into the Controller. On Touchscreen, tap **Files**, select the firmware file (in .bin format) and the machine will update. A video tutorial is also available from

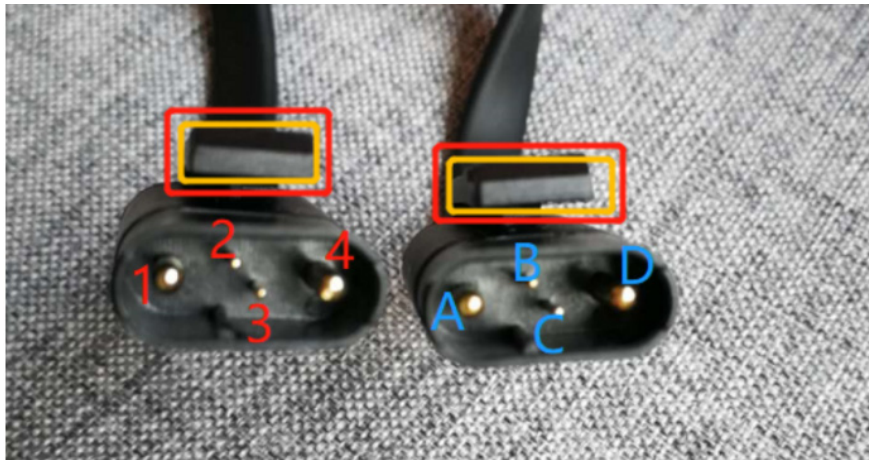
<https://drive.google.com/file/d/1zdfpdYFZZ7IMv6LQgJjAWcxlprqoqZf6/view?usp=sharing>.

Note: The disk should be formatted as FAT32, otherwise it won't be recognized by the machine.

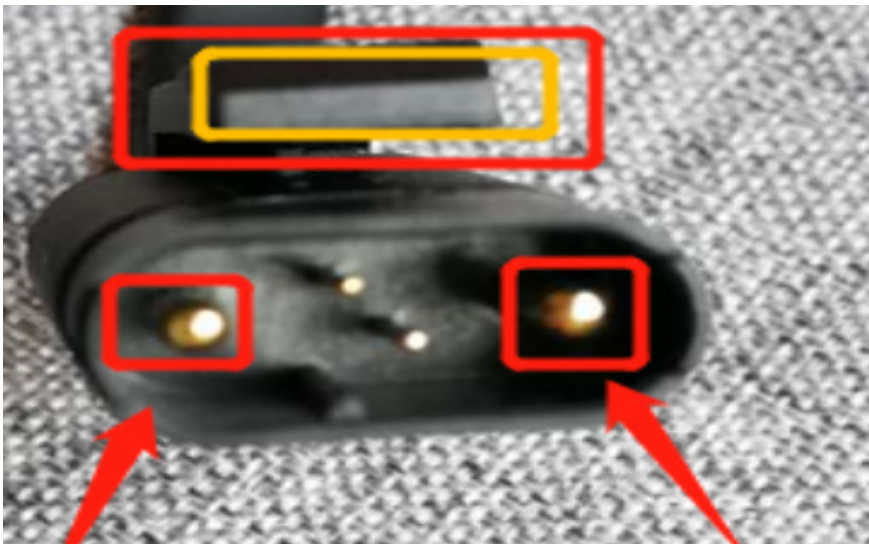
2. Remove all cables from the Converter, and only connect the enclosure cable to the Controller. See if the Enclosure can be recognized by the machine. If yes, then connect other cables to the enclosure converter one by one.
 - If the machine cannot recognize the machine after connecting the Hall switch, there is something wrong with the hall switch. Replacing a new hall switch is needed.
 - If the machine cannot recognize the machine when the enclosure is only connected to the controller, please go to Step 3.



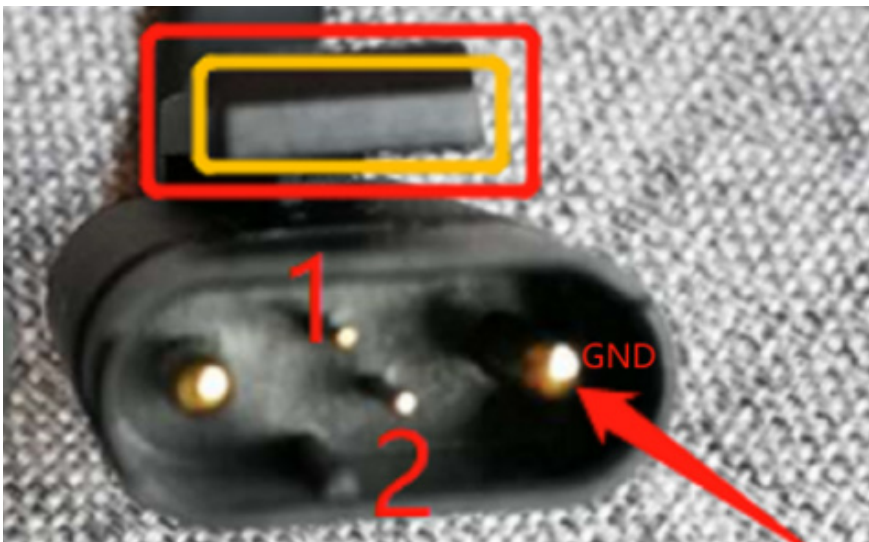
3. Use a multimeter to test whether the enclosure cable is fine. Set the multimeter to buzz mode and test the pins inside each connector of the enclosure cable two by two, in order of 1 & A > 2 & B > 3 & C > 4 & D (see pictures below).
 - If the cable is fine, you will hear a buzz sound. Then, go to step 4 & 5.
 - If there is no buzz sound, the cable is broken. Replacing it might solve the problem.



4. Unplug the enclosure cable from the Converter while the other end remaining connected to the Controller. Turn on the machine. Set the multimeter to voltage mode and test the two big pins. The normal value should be 24 V.



5. Test the GND & pin 1, and then test the GND & pin 2 (see below) respectively. The test results should both be 2.2 V.



If any of the test results in step 4 or 5 is abnormal, then the Controller is broken. Replacing it might solve the problem.

Others

Power Module Doesn't Work

The Power Module is unresponsive when turned on. The LED light won't flash, and the fan won't turn.

Possible Causes

- The voltage is out of working range.
- The AC cable is broken.
- The Power Module is broken.

Actions

1. Make sure the input voltage falls into the range between 88–264 V AC, and the output voltage is 24 V.
2. Use another AC cable to test the module. The AC cable is universal. If the problem is solved, it means that the AC cable is broken and needs to be replaced.



AC Power Cable

3. If the issue still remains after step 1 and step 2, the power module itself is broken. Replacing the power module is needed.

G-code File Wi-Fi Transfer Is Unsuccessful

Users fail to transfer the file from the Luban to the machine via Wi-Fi.

Possible Causes

- Wi-Fi connection is cut off.
- Wi-Fi connection is unsteady.
- The Snapmaker Luban has a bug.
- The G-code file is too large.

Actions

1. Check if the Touchscreen and the computer are connected to the same router.
2. Download and install the latest version of firmware from <https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12>.
3. Download and install the latest version of Luban from <https://snapmaker.com/product/snapmaker-2/downloads>. If this doesn't solve the problem, try the next step. In the meantime, we would appreciate it that you file an issue on our GitHub page: <https://github.com/Snapmaker/Luban>. Your feedback will motivate us to do better.
4. Try a smaller G-code file that is less than 100 MB.

Machine Can't Detect USB Drive

Possible Causes

- The file system of the USB drive isn't compatible with that of the machine.
- The capacity of the USB drive is too big.
- The USB drive is broken.
- The G-code file's suffix is incorrect.
- The USB port on the Touchscreen is broken.

Actions

1. Check if your G-code file end with **.gcode** when the machine is connected to the 3D Printing Module.
Similarly, the G-code file should end with **.nc** and **.cnc** when the machine is connected to the Laser Module and the CNC Module respectively.
2. The machine supports USB drives with a capacity under 16 G. So if your USB drive is anything larger, it might not be compatible with the machine.
3. The machine only supports **FAT32** format, so if your USB drive is programmed to other formats, it won't be detected. You can try formatting your drive as **FAT32**. Note that your disk will be erased during the process, so before reformatting your USB drive, store its files elsewhere. Alternatively, you can use a new drive.
4. If the problem persists, the USB drive might be broken. Try a new USB drive. If this does not solve the problem, go to step 5.
5. Connect a USB mini light or USB mini fan to the USB port on the Controller. See if they work.
 - If yes, then the USB port on the Controller is fine.
 - If not, then the USB port on the Controller is broken, and the Controller needs to be replaced.

None of the Toolheads Can Be Detected by Machine

Possible Causes

- This is an old version of the firmware.
- One or more broken modules are affecting the Controller Network Area (CAN) communication between the Controller and other modules.
- The toolhead port on the Controller is damaged.
- The Controller is broken.

Actions

1. Download and install the latest version of firmware from <https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12>.
2. Turn off the machine, and unplug all the cables (except for the ones for the Power Module and Touchscreen) from the Controller.
3. Connect one of the three toolheads.
4. Restart the machine, and see if the machine can detect the toolhead connected.
 - If no, go to step 5.
 - If yes, go to step 6.

5. Turn off the machine and plug in another toolhead cable to repeat step 3 and 4 until you have tested all the toolheads.

- If the problem persists, please contact us with the results and a recorded video via email.
- If the toolheads can be detected, then the problem is with the Linear Modules or the port on the Controller.

6. Turn off the machine, and plug in the cable of each Linear Modules into the axes ports on the Controller, one at a time. See if they can be detected.

The picture below provides an example. In this picture, **X1**, **Y1** & **Y2**, and **Z1** & **Z2** represent the X axis, Y axis, and Z axis respectively. Write down the result (detectable/not detectable) of each test.

STEP	X-axis port	Y-axis port	Z-axis port	Result
1	X1			
2		X1		
3			X1	
4	Y1			
5		Y1		
6			Y1	
7	Y2			
8		Y2		
9			Y2	
10	Z1			
11		Z1		
12			Z1	
13	Z2			
14		Z2		
15			Z2	

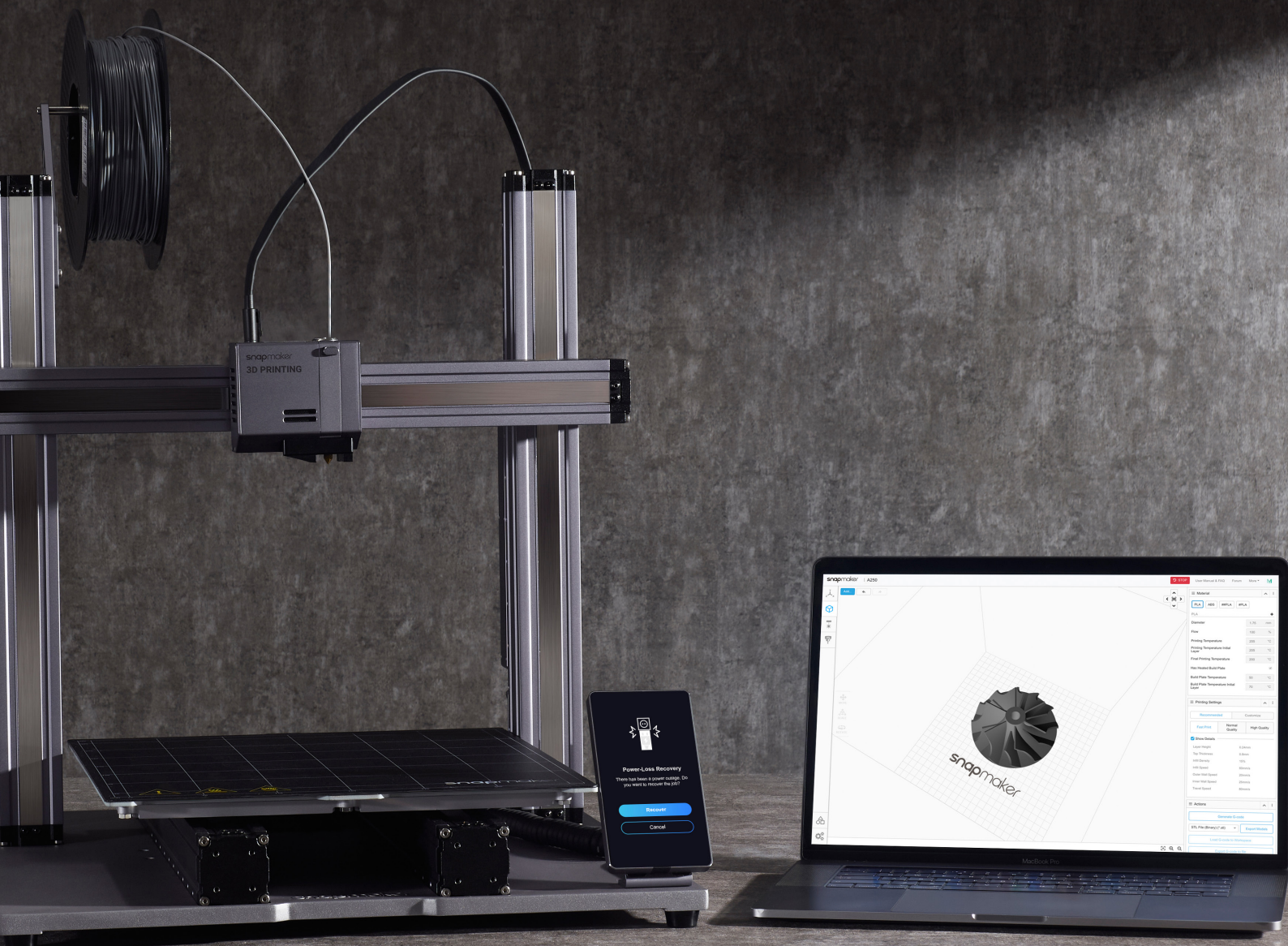
- If all the Linear Modules can be detected, then run cross tests with the cables of two Linear Modules plugged in at the same time.
- If again everything turns out fine, then run cross tests with the cables of three Linear Modules plugged in at the same time.
- If still everything is normal with the Linear Modules, then the converter is broken. Replacing a new converter can solve the issue. Turn off the machine, and reconnect all the cables (select any of the three toolheads), and turn it back on. See if the problem persists. If yes, then contact us.

Alternative to Upgrading Machine's Firmware via USB Drive

Apart from using a USB drive, you can also upgrade the firmware using the software **Postman**. For detailed instructions, see: [Upgrade via Postman.pdf](#).

Software

The Snapmaker Luban is still a young software, compared with many of its counterparts. And as with every software, Snapmaker Luban isn't perfect. The troubleshooting in this chapter is helpful in solving preliminary issues, and you should follow them first. If the problem persists, please contact us at support@snapmaker.com. In the meantime, we would appreciate that you file an issue on our GitHub page: <https://github.com/Snapmaker/Luban>. Your feedback will motivate us to do better.



Luban Won't Generate G-code File

The Snapmaker Luban fails to generate G-code files. The progress bar gets stuck.

Possible Causes

- This is an old version of Luban.
- There is a bug in the software.
- The file is too large to be parsed.

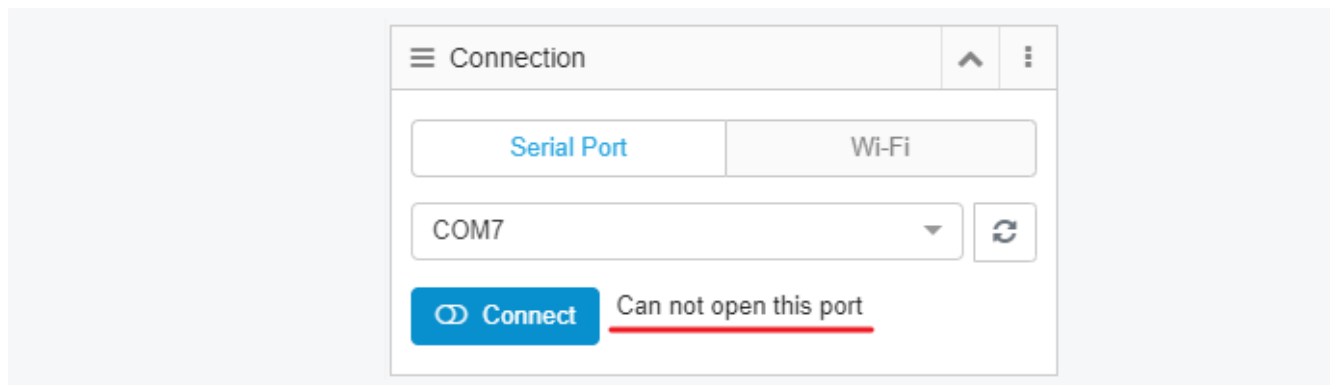
Actions

1. Download and install the latest version from <https://snapmaker.com/product/snapmaker-2/downloads>.
2. Restart or reinstall the Snapmaker Luban.
3. Try a smaller G-code file that is less than 100 MB.

Luban Shows "Cannot open this port"

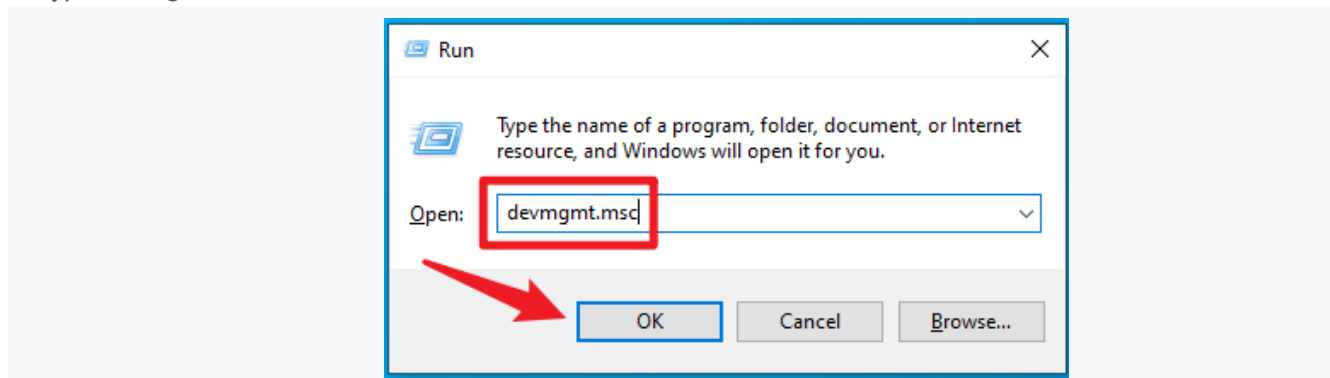
Possible Cause

- You selected the wrong COM port.

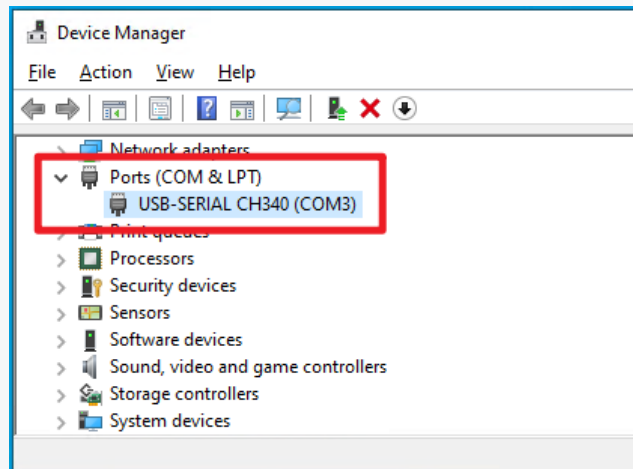


Actions

1. Connect the machine to a computer with a USB cable, and then turn on the machine.
2. Press the **Win** key and the **R** key at the same time.
3. Type **devmgmt.msc** in the search box and click **OK**.



4. Expand **Ports (COM & LPT)**, and the correct COM port to connect is the one with **CH340** in its name.



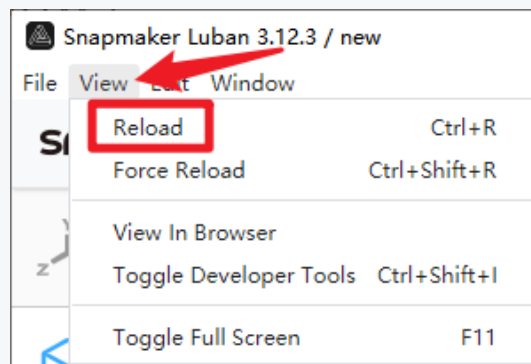
5. Launch the Snapmaker Luban, select the correct port and try again.

Luban Is Blank upon Launched

The Snapmaker Luban goes blank right after you launch it, and only the menu bar on the top-left corner is available.

Actions

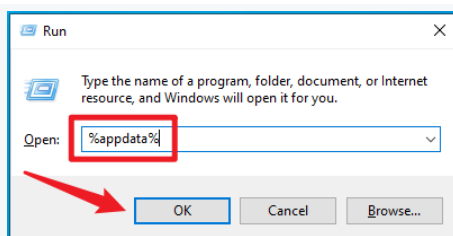
1. Reload Snapmaker Luban. On the menu bar, click View > **Reload** (or press **Ctrl + R**) to reload Luban.




2. Download and install the latest version from

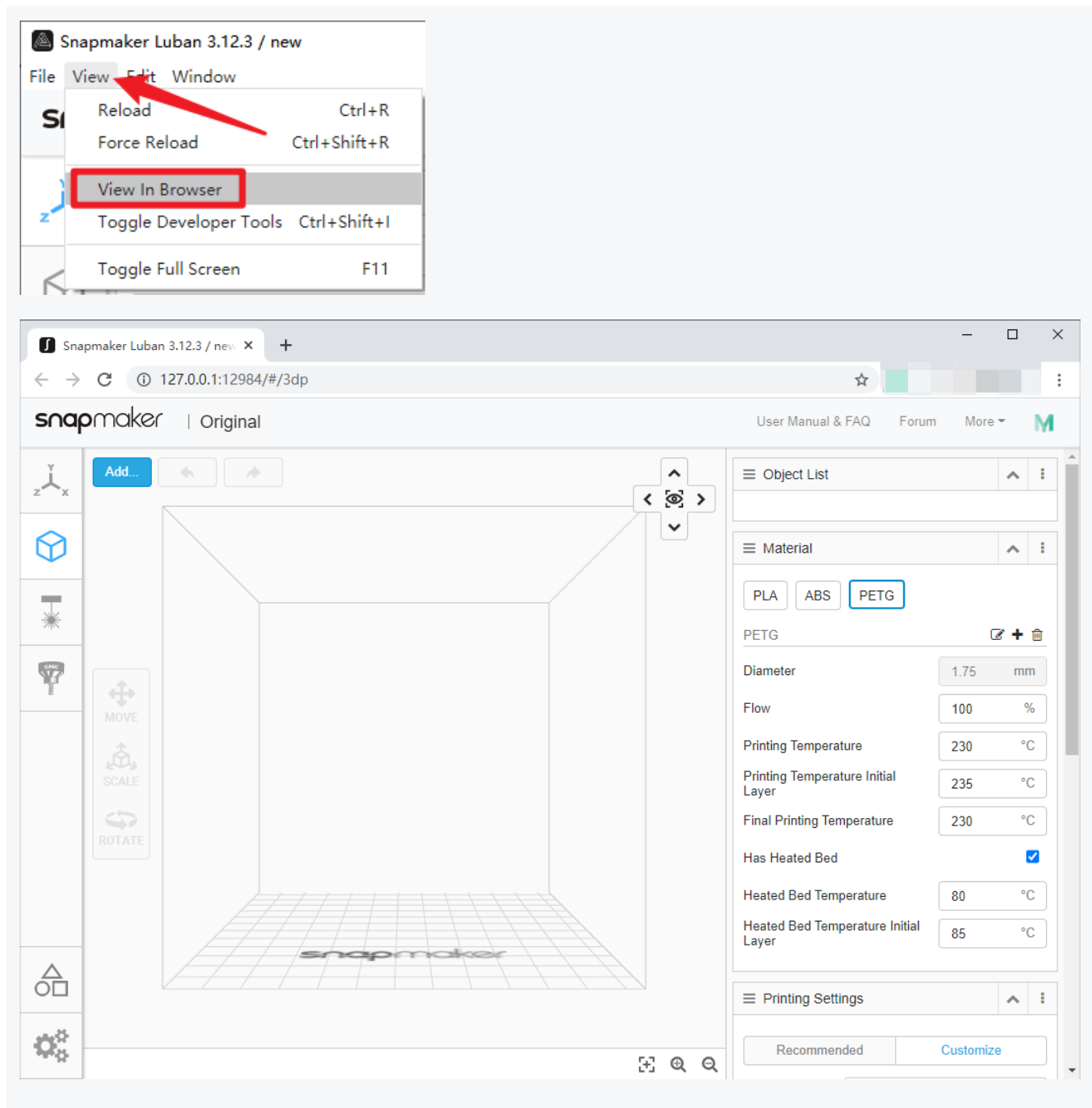
<https://forum.snapmaker.com/t/snapmaker-2-0-firmware-updates-and-downloads/5443/12>. See if this solves the problem. If not, go to step 3.

3. Uninstall Luban and delete the configuration files. Press the **Win** key and the **R** key at the same time. Type **%appdata%** in the blank, and click **OK**. From **Username > AppData > Roaming**, select **snapmaker-luban** folder and delete it.

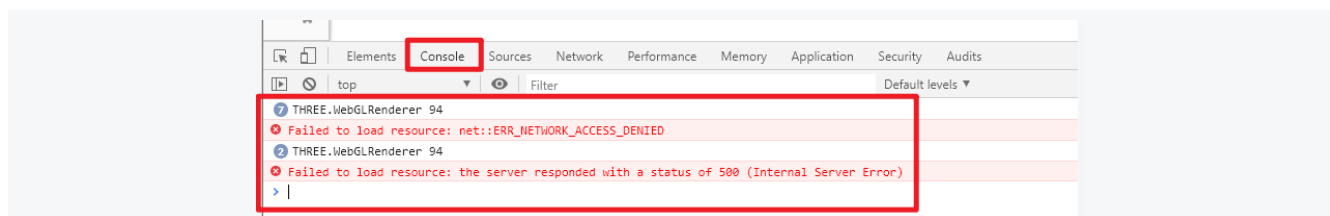


 snapmaker-luban

4. Re-install Snapmaker Luban, and try again.
5. If the problem persists, then proceed to test Snapmaker Luban in your browser.
 - Launch Snapmaker Luban.
 - On the Menu, click **View > View In Browser**. Luban will be opened by your browser.

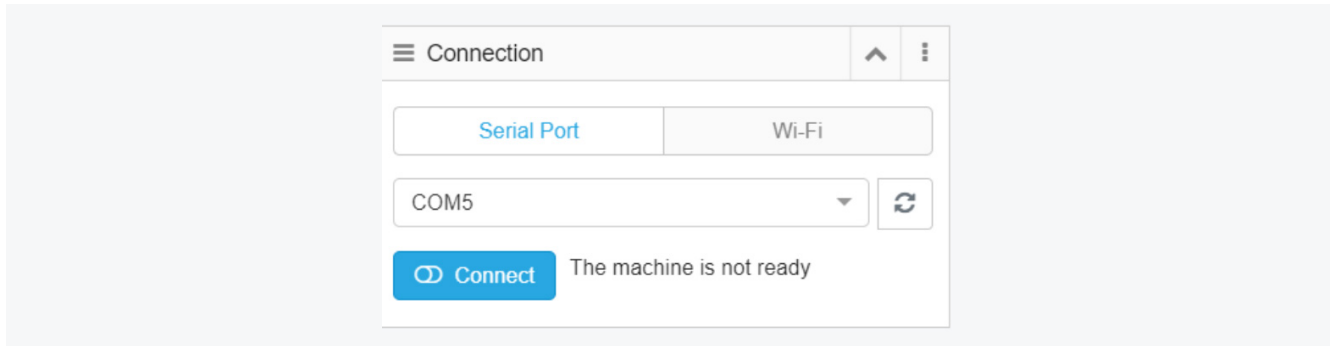


6. If the problem persists, then proceed to track information with the Developer Tool. Launch Luban, and then press **Ctrl + Shift + I** keys at the same time to access the **Developer Tool**. Click **Console**, and screen capture the error messages. Email the captured image to support@snapmaker.com.



Luban Shows "The machine is not ready"

When trying to connect the machine to the Snapmaker Luban, it shows **The machine is not ready** or **cannot open the port**.



Possible Causes

- You haven't installed the CH340 driver.
- You attempted to connect to the wrong port.

Actions

1. Download and install the CH340 driver from <https://snapmaker.com/product/snapmaker-2/downloads>.

CH340 Driver for macOS Mojave 10.14 or later



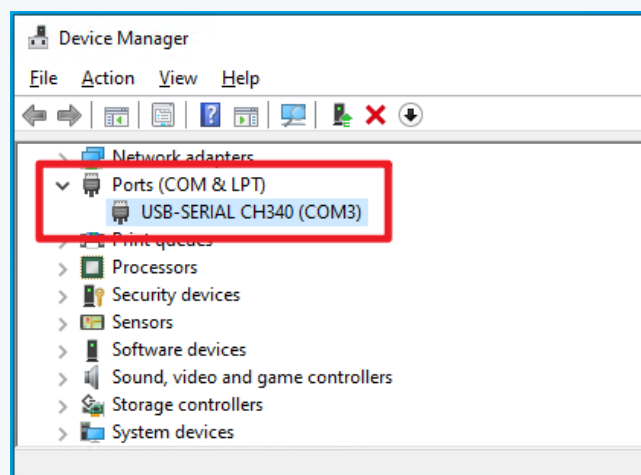
Download and install the driver if you can't find any serial port to connect to on Snapmaker Luban.

CH340 Driver for Windows



Download and install the driver if you can't find any serial port to connect to on Snapmaker Luban.

2. Find the correct port following the steps below. Then launch Luban and try again.
 - 2.1 Connect the machine to a computer via a USB cable, and then turn on the machine.
 - 2.2 Press the **Win** key and the **R** key at the same time.
 - 2.3 Type **devmgmt.msc** in the search box and click **OK**.
 - 2.4 Expand **Ports (COM & LPT)**, and the correct COM port to connect is the one with **CH340** in its name.



No Camera Capture Button in Luban

Possible Cause

- You are using the USB cable to connect the machine to Luban (camera capture can only be accessed via Wi-Fi connection).



USB Cable

Action

Connect the machine with Luban via Wi-Fi instead, and you will be able to use camera capture.

Appendix



Parts List



3D Printing Module



Laser Module



CNC Module



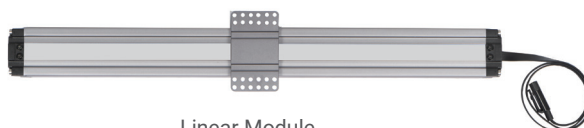
Touchscreen



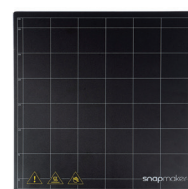
Heated Bed



Controller



Linear Module



Print Sheet



Power Module



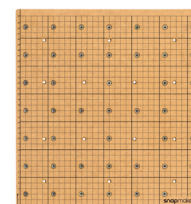
Quick Start Guide



Filament



Material Bag



CNC Carving Platform



Fixture Accessory



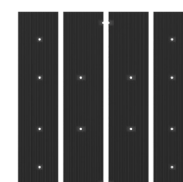
Touchscreen Holder



Converter



Z-Axis Holder



Laser Engraving/Cutting Platform



Filament Holder Sheet



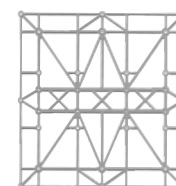
Filament Holder Tube



Arched Fixture



AC Power Cable



Platform



Laser Safety Goggles



CNC Safety Goggles



Tool Box



Base Plate



Toolhead Cable



Y Conversion Cable



Z Conversion Cable



DC Power Cable



USB Cable



Tool Box



M4 x 30 Screw



M4 x 10 Hex Socket Head Screw



M4 x 8 Screw



M4 x 10 Hex Flat Head Screw



M4 x 70 Screw



Wing Nut



Foot + M4 x 10 Hex Socket Head Screw



ER11 Collet (Only for 3.175 mm CNC Bits) + ER11 Nut



Divider



Cable Holder



Steel Strip Adjuster (For Maintenance)



Hot End Kit



Tweezers



Flat End Mill



Ball End Mill



Cable Tie



Silicone Plug



USB Disk



17mm Open-End Wrench



H1.5
H2.0
H2.5
H3.0



Diagonal Pliers



Palette Knife



14mm Open-End Wrench



Screwdriver



Material Bag



CNC Material



Laser Material



Wiping Cloth

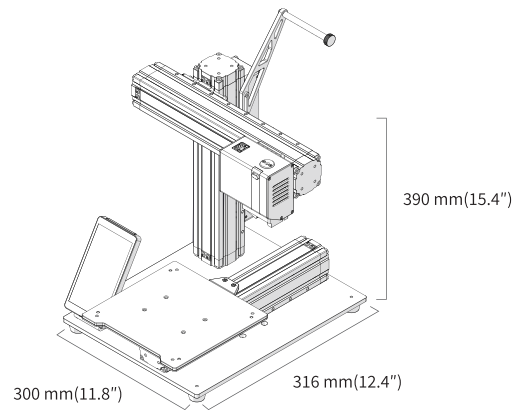


Calibration Card

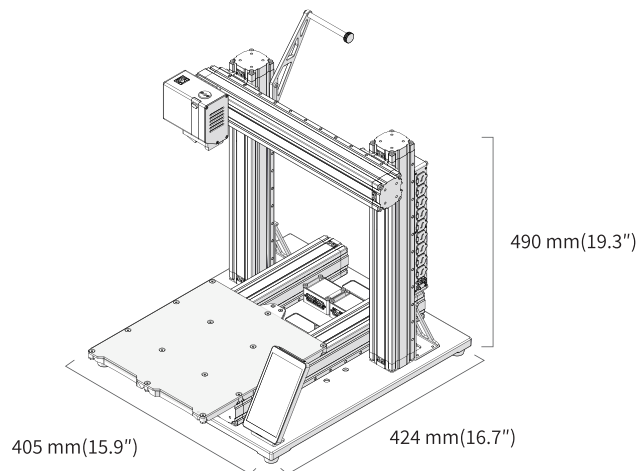
Specs Sheet

Snapmaker 2.0

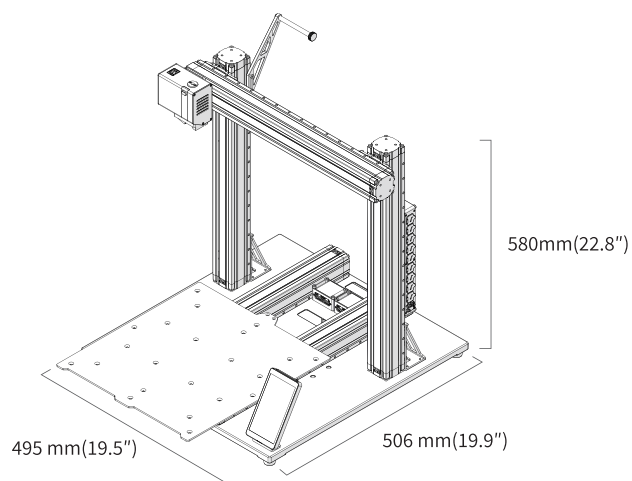
General



The maximum length of the support platform of the Snapmaker 2.0 A150 model is 360 mm.



The maximum length of the support platform of the Snapmaker 2.0 A250 model is 580 mm.

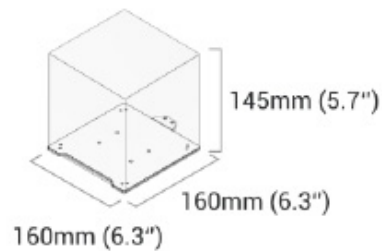


The maximum length of the support platform of the Snapmaker 2.0 A350 model is 660 mm.

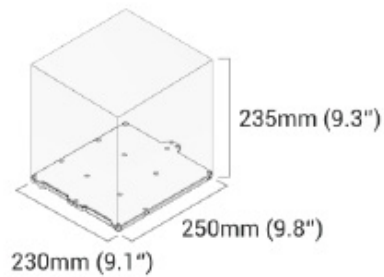
Frame Material	Aluminum Alloys
Connectivity	Wi-Fi, USB Cable, USB Flash Drive
Touchscreen	5", Android OS, Quad Core A7 CPU @ 1.1 GHz
Software	Snapmaker Luban. You can also use third party software to generate G-code files.
Supported OS	macOS, Windows, Linux
Rated Power	320 W

3D Printing

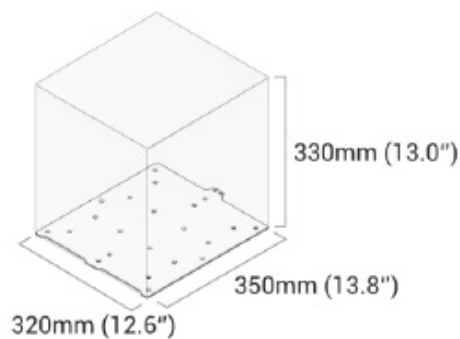
A150



A250



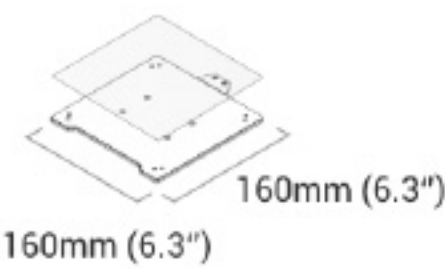
A350



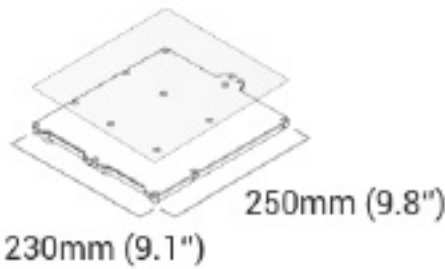
Layer Resolution	50–300 microns
Nozzle Temperature	Up to 275 °C
Supported Materials	PLA, ABS, TPU, Wood Filled PLA, more being tested
Heated Bed Temperature	A150: Up to 110 °C A250: Up to 100 °C A350: Up to 80 °C
Design File Formats	.stl, .obj, .snap3dp
Processable Format	.gcode

Laser

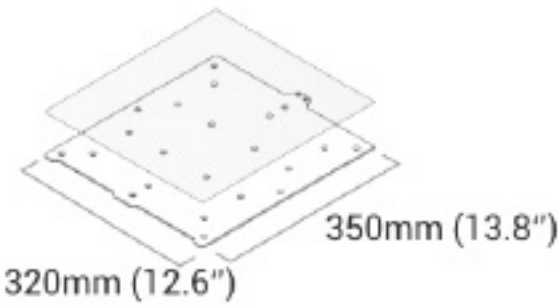
A150



A250



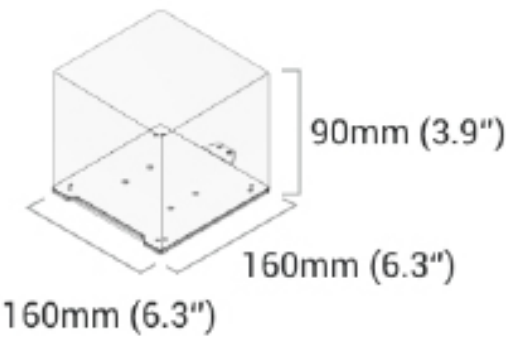
A350



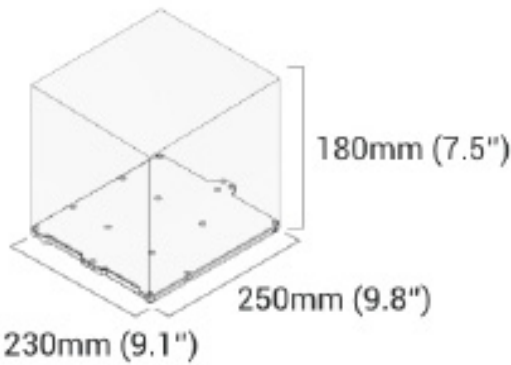
Camera	Built-in Camera
Laser Power	1600 mW 450 nm Laser Diode
Wavelength	450 nm
Safety Class	Class 4
Supported Materials	Wood, leather, plastic, fabric, paper, non-transparent acrylic, more being tested
Design File Formats	.svg, .jpeg, .png, .jpg, .bmp, .dxf, .snapl3r
Processable Format	.nc

CNC

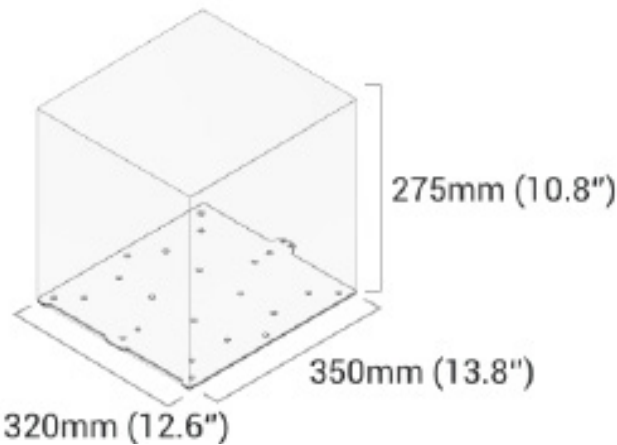
A150



A250



A350



Shank Diameter	0.5 mm–6.35 mm (0.02–0.25 inches)
Spindle Speed	6,000–12,000 RPM
Supported Materials	Wood, acrylic, PCB, carbon fiber sheet, jade, more being tested
Design File Formats	.svg, .jpeg, .png, .jpg, .bmp, .dxf, .snapcnc
Processable Format	.cnc

Note: The specifications are subject to change without notice.

snapmaker

MAKE SOMETHING WONDERFUL

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