GEEETECH A30 3D Printer

—User Manual—

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Terms

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Safety and Compliance

Radio and Television Interference

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

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

The following booklet compiled by FCC may help you: “How to Identify and Resolve Radio-TV Interference Problems”

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment will void your right to use the equipment in accordance with FCC regulations.

Radio Specifications

	WLAN RF Frequency			
Frequency	Gange	Protocol	Wireless Types	Wireless Specification

			Taoglas，P/N	Within 2.4 GHz Band
2.4 GHz	2.412 - 2.472 GHz	802.11 b/g/n	FX831.07.0100C	2.5 dBi

Safety alert symbols precede each safety message in this manual. These symbols indicate potential safety hazards that could harm you or others or cause product or property damage.

Warning: The Geeetech A30 generates high temperatures. Always allow the Geeetech A30 to cool down before you reach inside.

Warning: The Geeetech A30 includes moving parts that can cause injury. Never reach inside the Geeetech A30 while it is in operation.

Warning: There is a risk of shock. This product is not user serviceable.

Warning: Do not leave the Geeetech A30 unattended during operation.

Caution: Do not print using materials that have not been approved by GEEETECH for use with the Geeetech A30.

Caution: The socket outlet must be located near the equipment and must be easily accessible.

Caution: In case of emergency, please disconnect the Geeetech A30 from the wall socket.

Caution: The Geeetech A30 melts plastic during printing. Plastic odors are emitted during this operation. Make sure to set up the Geeetech A30 in a well-ventilated area.

1. About Geeetech A30

Geeetech A30 is a new addition to Geeetech's extensive range of desktop 3D printers. With a build volume of 320*320*420 mm, A30 offers a generous 42 cm of model design flexibility on the Z axis, which would entirely satisfy your "large" printing need. Meanwhile, the sturdy frame, strong and wear-resistant, greatly improves the stability of the machine during printing. Besides, this new printer comes almost fully assembled and could start to work after just fitting several screws.

The extruder is of remote style, ensuring that the printing head could move quickly, accurately and stably. With a 3D touch, it is easy to auto level the heated bed.

Placing the control box aside makes the whole frame simpler without reducing its stability. The touch screen and filament holder perfectly fit on the box, convenient for you to direct control over the printer and load filament. What's more, the Geeetech logo is eye-catching but not out of place against the black tone.

When it comes to the printing performance, A30 prints at the accuracy of 0.05mm and at the speed of 80-110mm/s, able to deliver items with nice surface and strong structure. Reliable quality is inseparable from good printing settings. A30 could be controlled via the touch screen, Wi-Fi connected App, or the host software on a computer.

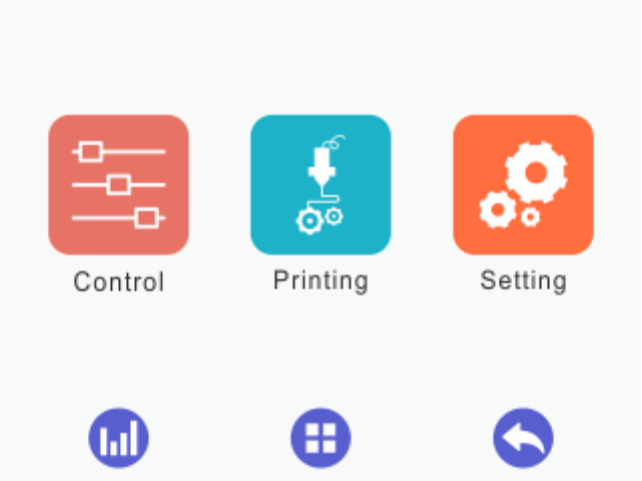
The 3.2″ full-color touch screen, intuitive and easy-to-use, enables you to manually control the whole printing process. Combining the touch screen with a TF card, the printer could run untethered to the computer. In addition, after assembling a Wi-Fi module, you could use App to remote control A30, enjoy a large number of free 3D models and share your fascinating printing moments with others. It is also practical for beginners and pros to control the printer with Geeetech self-developed printing and control software EasyPrint 3D, via which it is easy to slice a model, set the relevant printing parameters and upgrade firmware in time.

Besides, its two other stellar features --- filament detector kit and break-resuming capability, could greatly enhance your printing experience. A30 is compatible with a wide range of filaments, covering PLA, ABS, nylon, wood polymers, etc. You could produce items of various styles and obtain indescribable printing joys.

2. Introduction to the Menu of the Control Panel

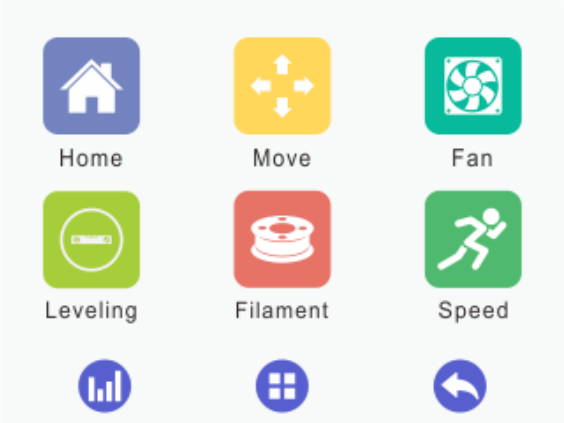
2.1 Home Page

After you start Geeetech A30, on the touch screen will appear the home page, showing three main menu functions: control, printing and setting. Click on the three menus respectively to direct detailed operation over the overall printing process.

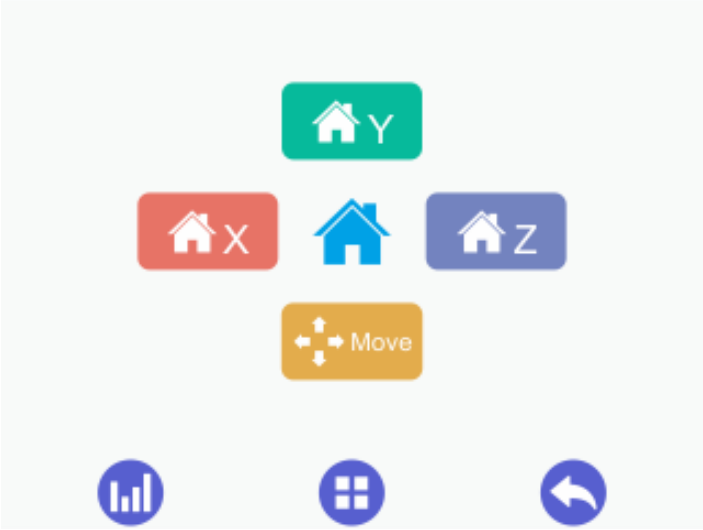


2.2 Control

Click the [Control] menu to enter the corresponding interface, where it is convenient to manually control the 3D printer by means of the following functions: home, move, fan, leveling, filament and speed, as shown by the picture below.



2.2.1 Home

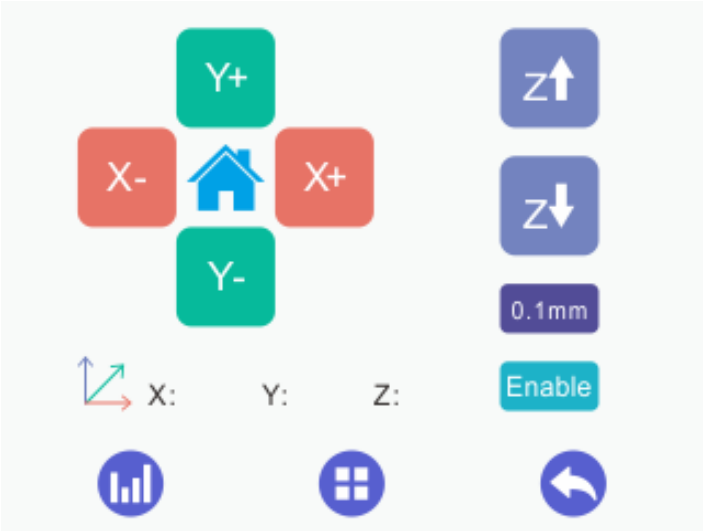


1) When the printer is running with a TF card or connected with a computer, clicking on the [Home] menu is disabled. This situation also applies to the [Disable] status of the stepper motors.

2) When the printer is idle, you can click to home X/Y/Z axis respectively. Besides, it is efficient to click to home the three axises simultaneously.

3) Choose the button to get to the [Move] interface.

2.2.2 Move



1) When the printer is running with a TF card or connected with a computer, clicking on the [Move] menu is disabled. This situation also applies to the [Disable] status of the

stepper motors.

2) When the printer is idle,

X-: X axis moves away from the end stop;

X+: X axis moves towards the end stop;

Y-: Y axis moves away from the end stop;

Y+: Y axis moves towards the end stop.

: The motor of Z axis moves upward;

: The motor of Z axis moves downward;

: Click to return to the [home] interface.

Moving distance: Choose one of the values to adjust the moving distance of motors, before you move each axis. If you fail to choose the corresponding moving distance, the motor will move according to the current one by default.

There are five values available. It is convenient to switch the five moving distances by each click.

Choose 0.05mm and click the moving button, and the motor will move 0.05mm per time. It is the same with the 0.1mm, 1mm, 10mm and 50mm moving distance.

button to disable/ enable the stepper motors.

Click this button to switch the [Disable] and [Enable] status of the stepper motors. When you start the printer, the default status is [Enable]. The motors will autonomously turn into the [Enable] status with the following three operations: 1) start to print; 2) leveling; 3) loading filament.

1) When the printer is running with a TF card or connected with a computer, the status of the motors is not switchable.

2) When the printer does not print or stops temporarily,

a. Switch the button to [Enable] to disable the motors. Under this condition, you can’t manually adjust the position of X/Y/Z axis.

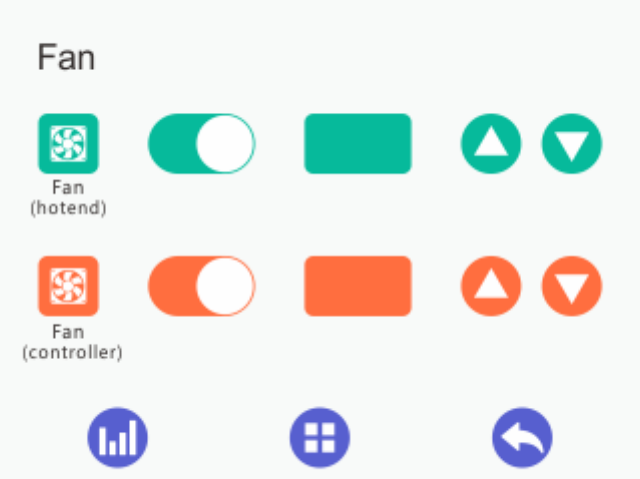
b. Switch the button to [Disable] to enable the motors. Under this condition, you can manually adjust the position of X/Y/Z axis and home the printer.

The display of the coordinates of the X/Y/Z axis

1）When the motors are disabled, the 888.8 icon indicates that the coordinates are unknown.

2）When the motors are enabled, the real-time coordinates of the X/Y/Z axis will appear.

2.2.3 Fan



On this interface you can observe and modify the status of the fans for the extruder and the control board.

1) The two fan switches are closed by default, when you start the printer. It will autonomously open upon printing. During the printing process, it is convenient to switch on or off the fans by clicking the buttons.

   When the switches are on, you can adjust the speed of the fans;

   When the switches are off, the speed of the fans can’t be modified.

2)

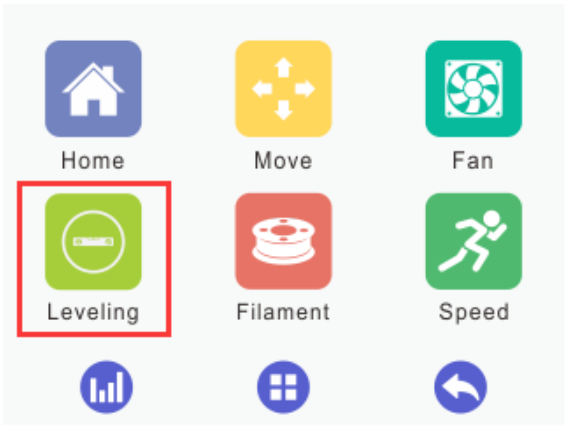
shows the real-time speed of the fans.

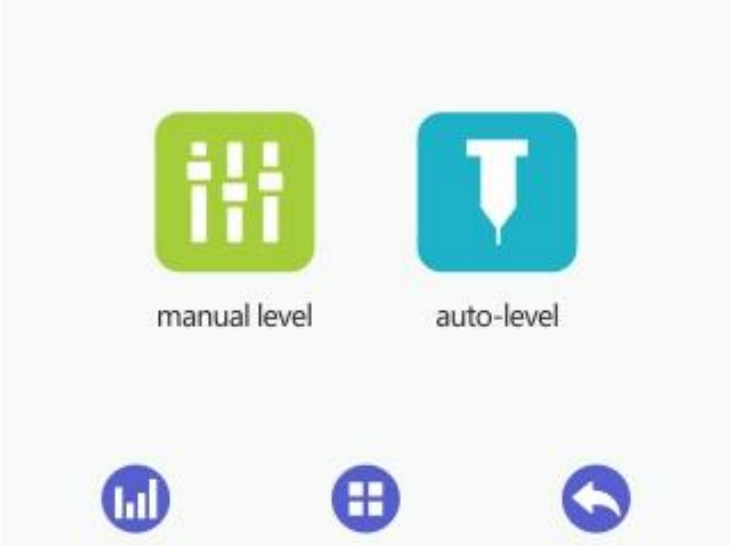
3) for adjusting the fan speed: the speed increases/ reduces by

5 at every click.

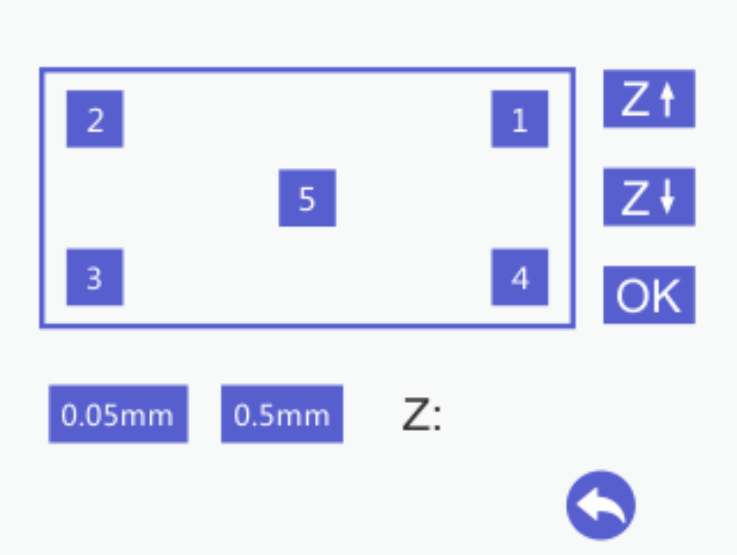
2.2.4 Leveling

For your first time to use manual leveling function, you need to enter the leveling interface by clicking , and choose auto level icon to turn off the switch on the auto-leveling interface, as shown in the picture.





Then return to the former interface to choose the manual level icon . The following part shows how to manually level the build platform with 5 point leveling method.



1) When the printer is running with a TF card or connected with a computer, the leveling function is unavailable. This situation also applies to the [Disable] status of the stepper motors.

2) When the printer is idle, please enter the leveling interface. Meanwhile, home the printer and click the Leveling button on the panel to prepare for the leveling.

Click the 1, 2, 3, 4, 5 to move the extruder to the corresponding point. Use a piece of A4 paper to complete the auxiliary leveling process.

a. Choose 5: Z axis rises to Z=10mm and the extruder moves to point 5. And then the printing head moves to Z=0mm. Use a piece of A4 paper to check the

distance between the printing head and the build platform.

b. Choose 1: Z axis rises to Z=10mm and the extruder moves to point 1. And then the printing head moves to Z=0mm. Use a piece of A4 paper to check the distance between the printing head and the build platform.

c. Choose 2: Z axis rises to Z=10mm and the extruder moves to point 2. And then the printing head moves to Z=0mm. Use a piece of A4 paper to check the distance between the printing head and the build platform.

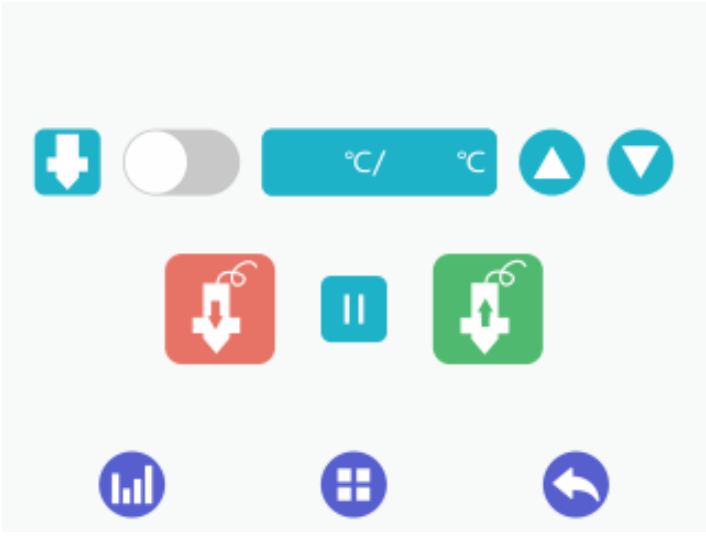
d. Choose 3: Z axis rises to Z=10mm and the extruder moves to point 3. And then the printing head moves to Z=0mm. Use a piece of A4 paper to check the distance between the printing head and the build platform.

e. Choose 4: Z axis rises to Z=10mm and the extruder moves to point 4. And then the printing head moves to Z=0mm. Use a piece of A4 paper to check the distance between the printing head and the build platform.

（Note: The sequence of leveling the 1,2,3,4 points can be random.）

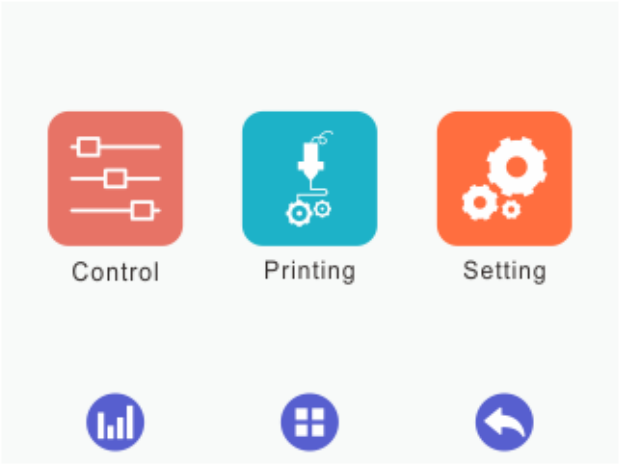
2.2.5 Filament

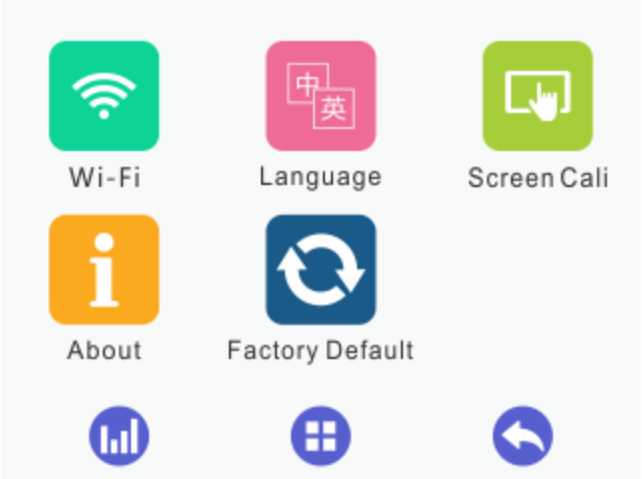
The filament interface consists of a switch for extruder temperature, the real-time and target temperature of the extruder and the buttons for temperature adjustment and loading/ unloading filament, click to stop loading/ unloading.



2.3 Setting

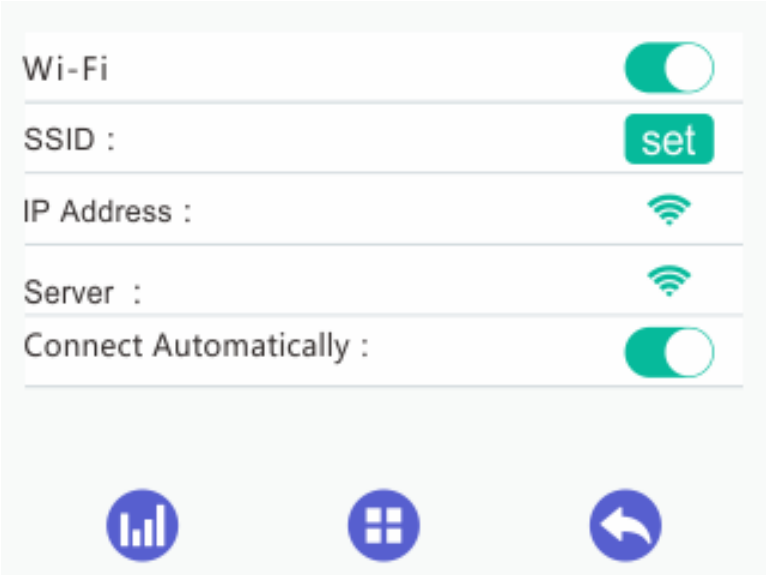
Choose [Setting] on the home page to visit the following interface, composed of the relevant settings for Wi-Fi connectivity, language, screen calibration, about Geeetech A30, factory default, etc.



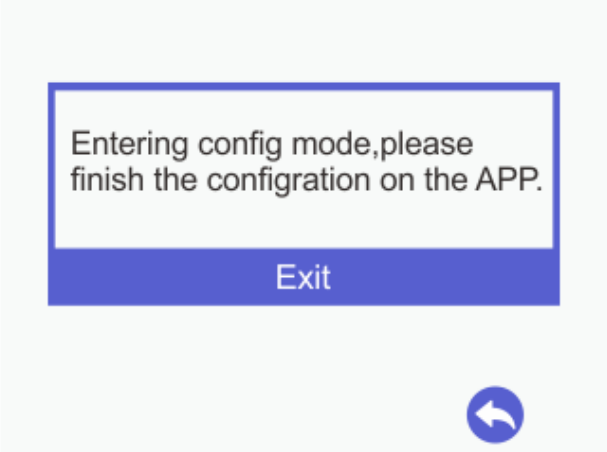


2.3.1 Wi-Fi Connectivity

This sub-interface shows the Wi-Fi switch, SSID, IP address, the IP of the server and the button for autonomous Wi-Fi connectivity upon starting the printer [Connect Autonomously].



Switch on the Wi-Fi button and click the [Set] to visit the interface for Wi-Fi configuration, as shown by the picture below.



The remaining settings shall be completed on the EasyPrint 3D App. Upon finishing all the configurations, the Wi-Fi connectivity interface will display the relevant information. When all the configurations are successful, the Wi-Fi icon will turn into green .

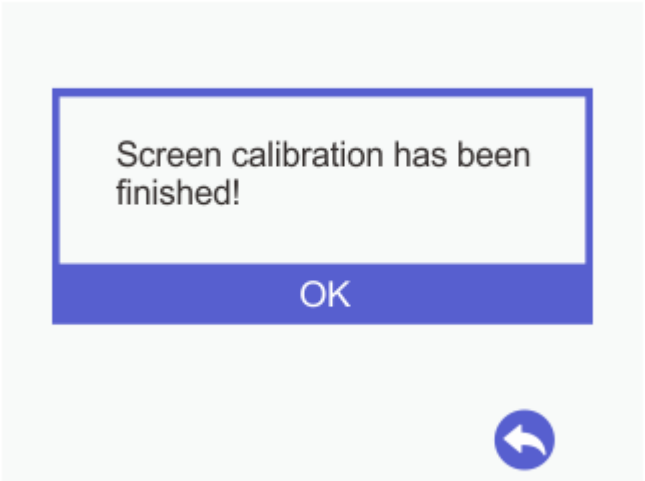
2.3.2 Language

Geeetech A30 is compatible with two languages: Chinese and English. You could switch to the corresponding language for your need.

2.3.3 Calibrating the Touch Screen

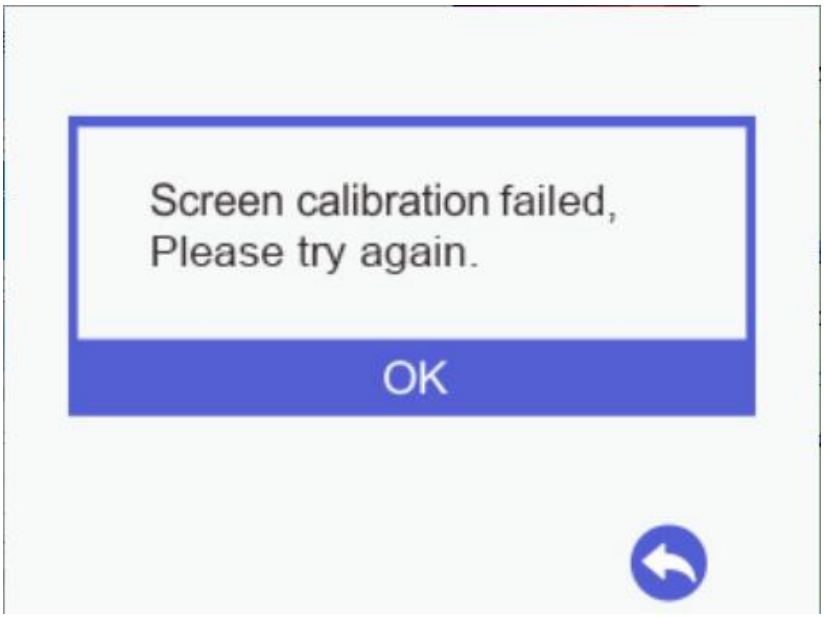
The touch screen may have errors in terms of its displaying effects, for the reason of long-time usage. But no worries! It is effective to calibrate the screen via the calibration function.

Click to enter the [screen calibration] mode. Click the "+" on the screen, according to the prompts. If the calibration is successful, a prompt box will pop up, as shown by the picture below.



Choose [Ok] to return to the [settings] screen.

If screen calibration fails, a prompt box will pop up as the picture below shows. Click [OK] to recalibrate the screen.



2.3.4 About

Choose [About] to visit the [Info] interface, where you could check the relevant information about Geeetech A30, as shown by the picture below.

2.3.5 Factory Default

1) [Factory Default] is disabled, when the printer is running with a TF card or connected with a computer, or it stops working temporarily.

2) [Factory Default] is enabled, when the printer stops running temporarily, with a TF card or connected with a computer.

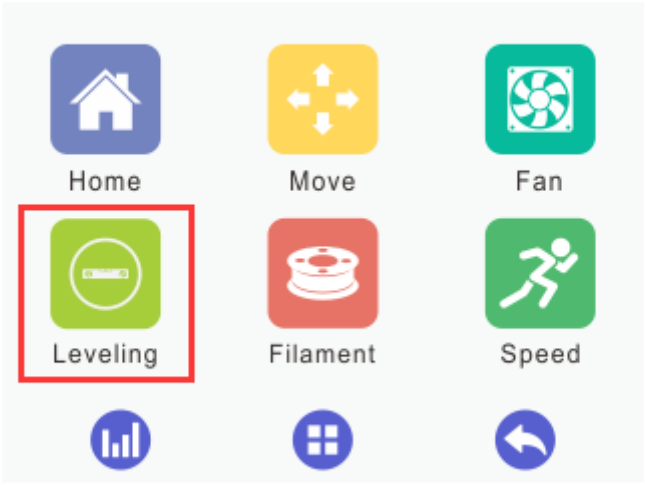
Click the [Factory Default] button , and a prompt box will appear, as shown by the picture below.

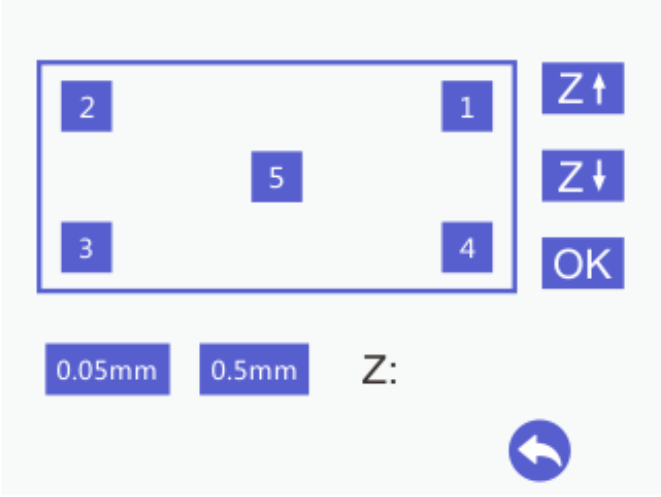
Choose [Yes]: restore factory and restart the printer.

Choose [No]: return to the [settings] interface.

3. Leveling the Build Platform

Step1. Choose [Leveling] icon to enter the interface to start to level the build platform. Meanwhile the motors will be homed and Z axis will move downward to Z=10mm.





Step 2. **Coarse leveling**. Click the leveling point 5, the extruder will move to the fifth point. Put a piece of A4 paper between the nozzle and build platform. Slide the paper back and forth. Stop when you feel the nozzle just start to grab a little bit.

If you cannot feel a little bit friction at all, it means the distance between the nozzle and build platform is too far and the adhesion of filament to the platform will be not guaranteed. You need to click the downward icon

to move the Z axis down in order to reduce the distance between the nozzle and the build platform.

If you can feel obvious friction, it means the distance between the nozzle and build platform is too close. The filament can't be extruded out or can even be jammed. You need to click the upward icon

to raise the Z axis in order to increase the distance between the nozzle and the build platform.

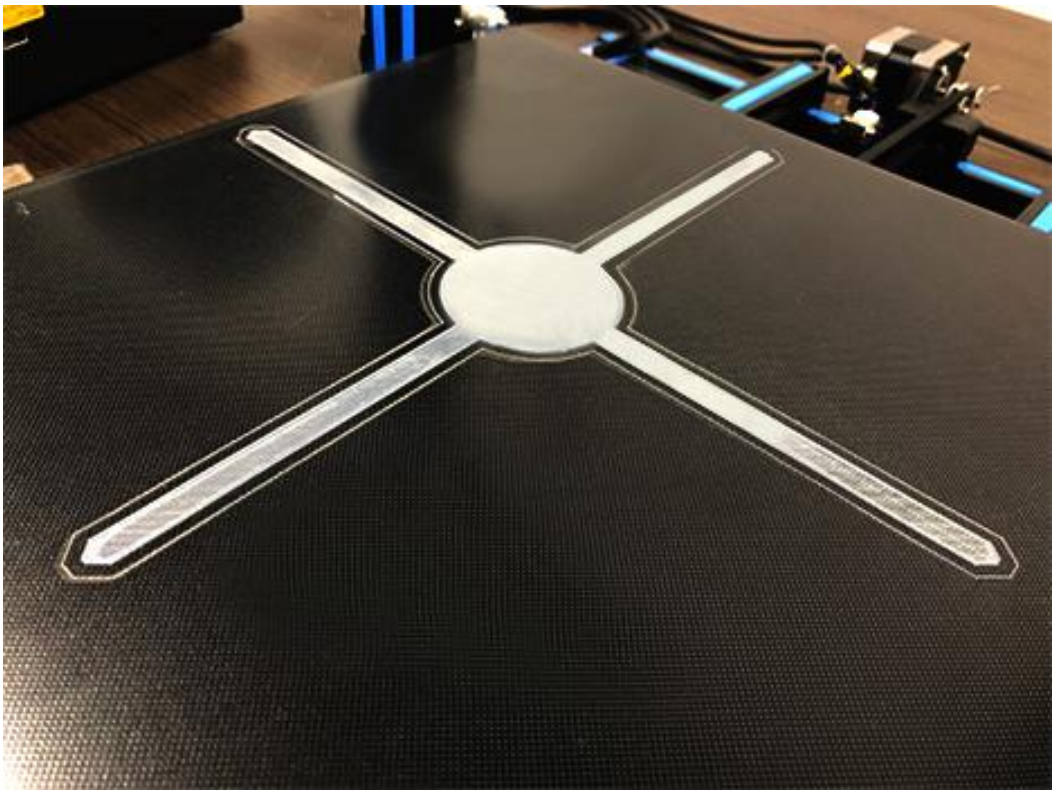
Step3. **Fine leveling**. Move the extruder to the other 4 points and adjust the corresponding screws until you get the same amount of friction as you felt with the fifth one. Take leveling point 1 for instance.

If you cannot feel a little bit friction at all, it means the distance between the nozzle and build platform is too far and the adhesion of filament to the platform will be not guaranteed. You need to anticlockwise rotate the nut on the platform which is corresponding to leveling point 1 and raise the build platform up to reduce the distance between the nozzle and the build platform.

If you can feel obvious friction, it means the distance between the nozzle and build platform is too close. The filament can't be extruded out or can even be jammed. You need to clockwise rotate the nut on the platform which is corresponding to leveling point 1 and the drop build platform off to increase the distance between the nozzle and the build platform.

Once you have adjusted each of the four screws, go back and check each one again, since adjusting one screw can affect another. There is no need to go around the build platform more than twice.

After leveling, the filament should be fully extruded with smooth lines and closely stick to the platform, as shown in the picture below.



Notes:

i. When you finish leveling job, we recommend you test the build platform again to ensure the satisfying leveling.

ii. When the printer is violently shaken during shipping and moving, the height of the build platform may be affected. You need readjust the leveling.

iii. When there is the wrapping, curling or after you dismount the extruder, please readjust the leveling.

After restoring factory settings, we suggest you check the height of the nozzle and platform.

4. Start to Print

Geeetech A30 could be used under three conditions: printing with EasyPrint 3D, stand-alone printing with a TF card and printing via Wi-Fi connectivity.

4.1 Printing with EasyPrint 3D

We use EasyPrint 3D as the printing and control software by default. Please click on here to download.

After your downloading, it is convenient to install this software by following the

guidance.

4.1.1 Connect Geeetech A30

Connect the printer to your computer (Windows 7) with USB cable, the motherboard driver installer will automatically appear and your OS will complete the overall installation process. After the installation, please find the corresponding COM port in the Windows "Device Manager". Turn on the power switch.

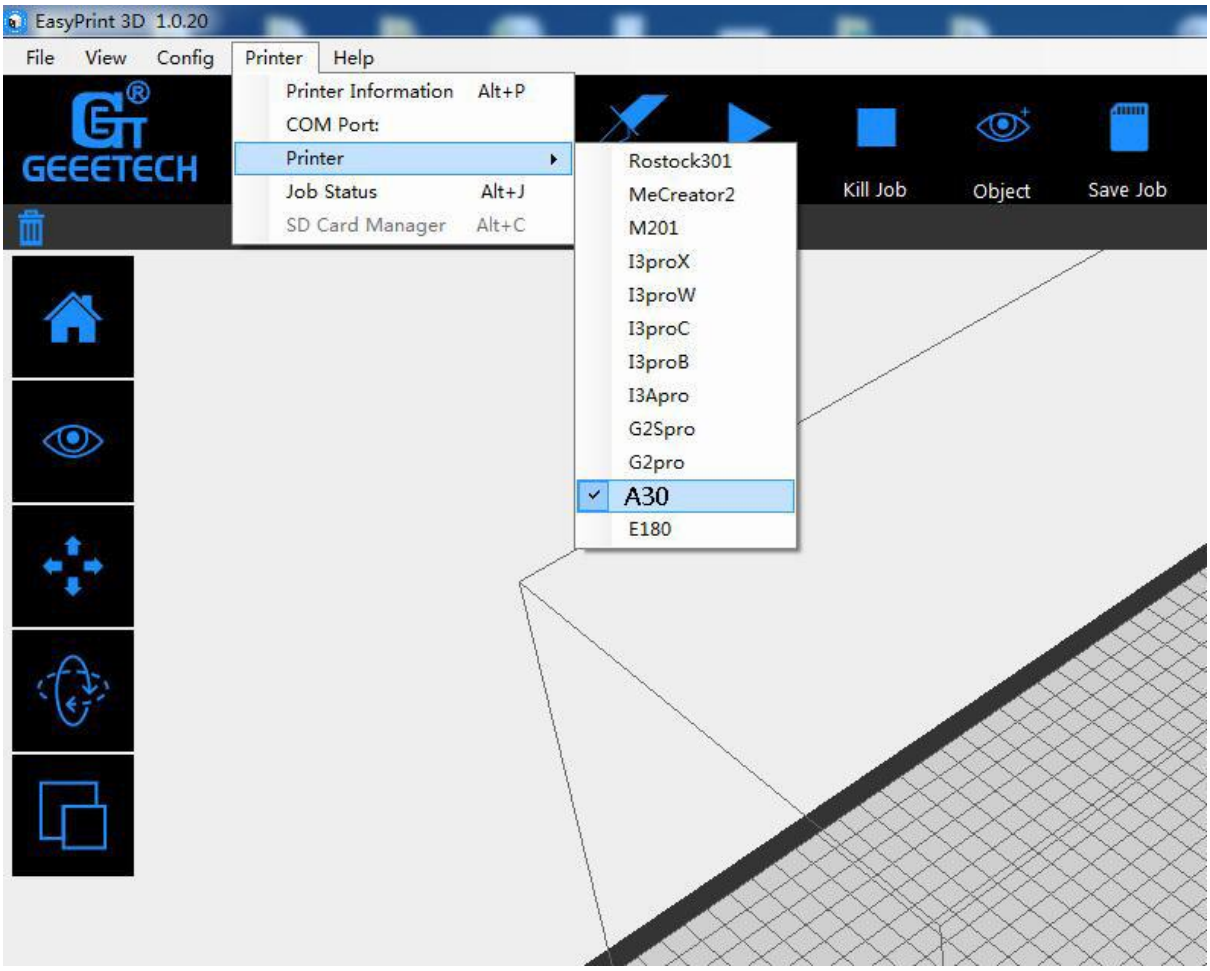
The following are detailed steps:

1. Start EasyPrint 3D (your first time to use EasyPrint 3D).

2. Click the [printer] menu on the top left to choose the corresponding COM port. The COM refers to the serial port between your printer and computer, the same with the COM in the device manager. If you can’t find the COM, please check if the power switch is turned on or the USB cable is well connected.

3. Select your printer.

Click the [printer] menu on the top left and choose the printer type as Geeetech A30.



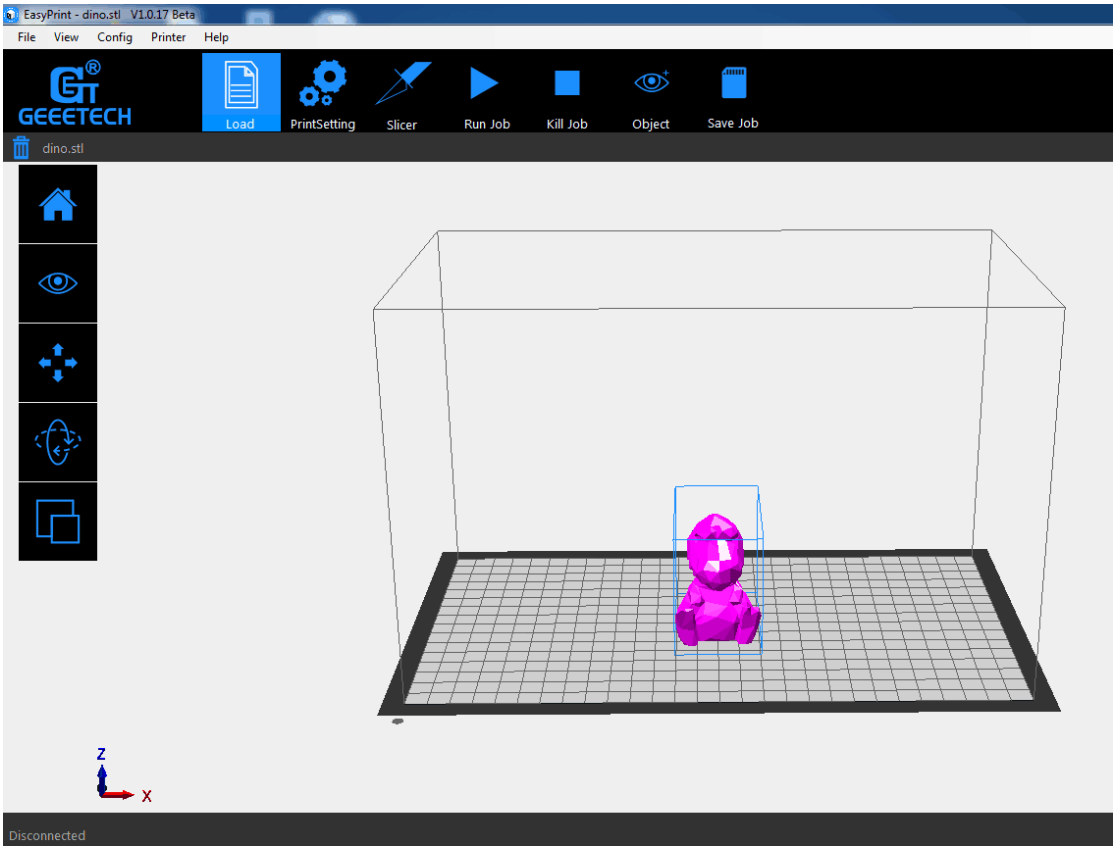
4. Click the [connect] button on the top right to connect Geeetech A30 with your computer. At this time, you could observe the real-time status of the Geeetech A30 on the bottom of EasyPrint 3D.

Now we've completed the preparatory job before printing. In the next part, we will load and slice a 3D model and begin to print.

4.1.2 Slice and Print

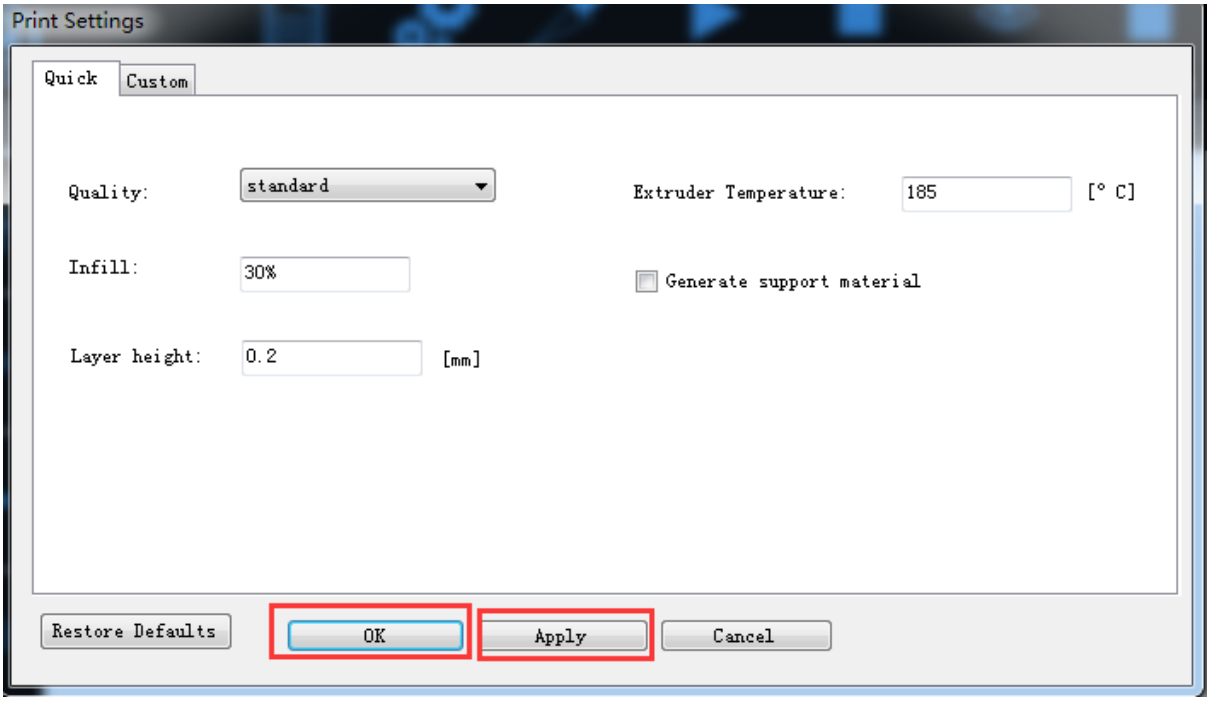
The file format of the model file for 3D printer is usually .stl. Geeetech A30 supports the following file format: **STL, G-code.** You can download models on the internet for printing. Of course you can also design some creative models by yourselves. Here we print a small dragon.

1) First, start the EasyPrint 3D and long-press the left mouse button to drag the .stl file to the virtual build platform. When the file is placed in the build volume and closely attached to the platform, the model is red. The model turns green in reverse.

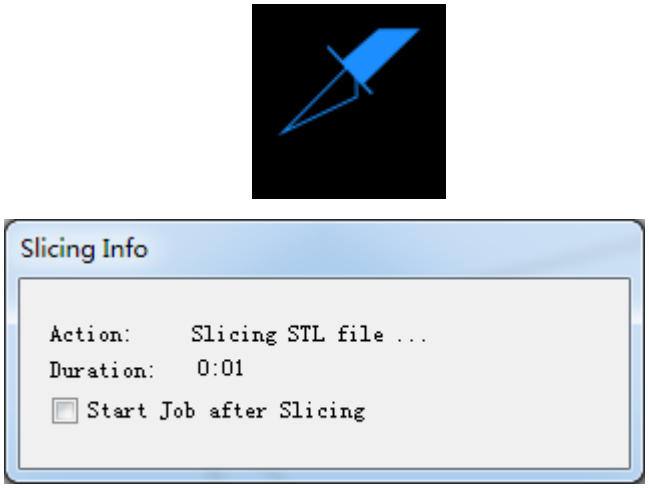


2) Print settings: click the [print settings] menu and modify the relevant parameters. Here we take the [Quick] mode as an example.

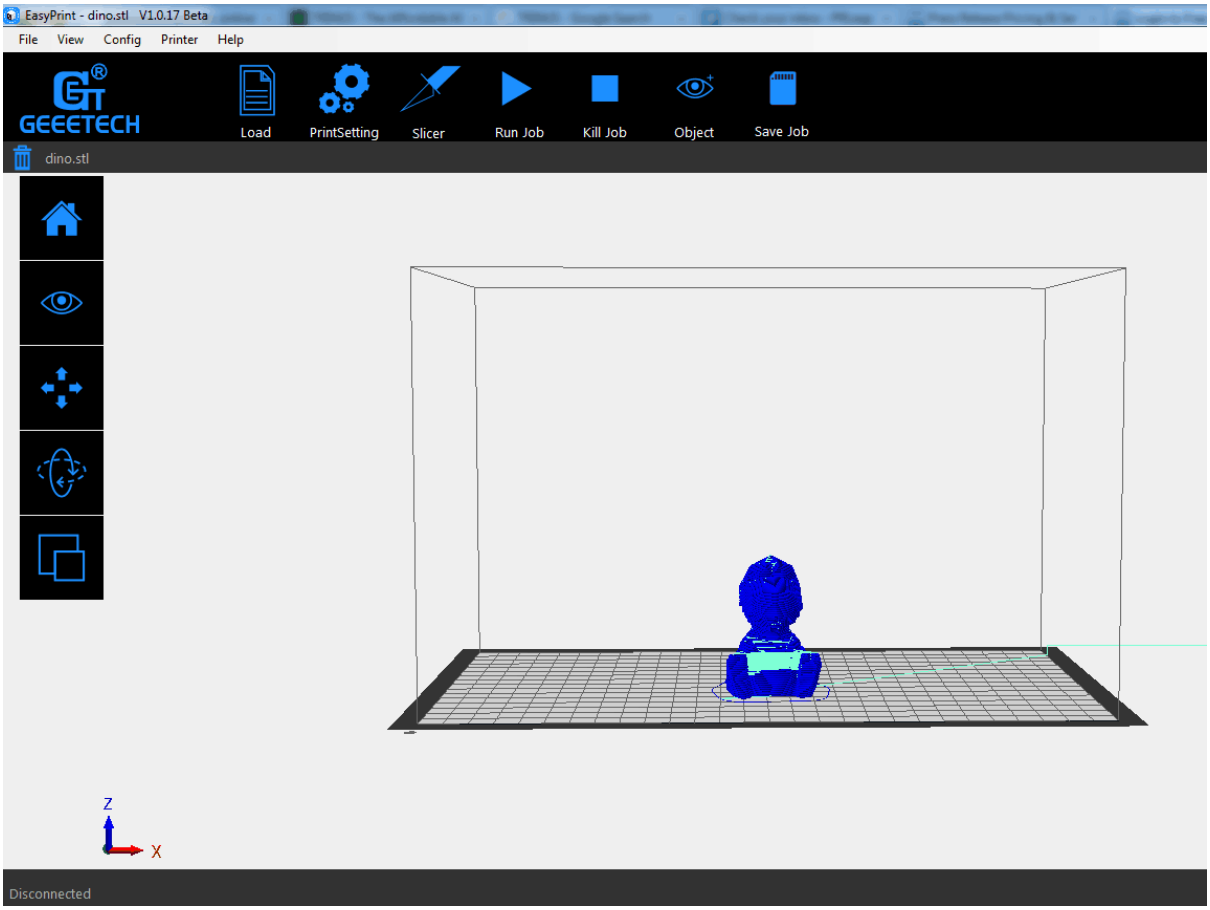
Choose the [Quick] mode, set the printing quality as [Standard] and take the parameters like [Infill], [Extruder temperature] and [Layer height] by default. Select the [Support] button, according to your printing need. Finally, click [Apply] and [OK].



3) Click [slicer] in the menu to slice the .stl file. You can observe the slicing time in the following picture.



Upon slicing, you get the .gcode file.



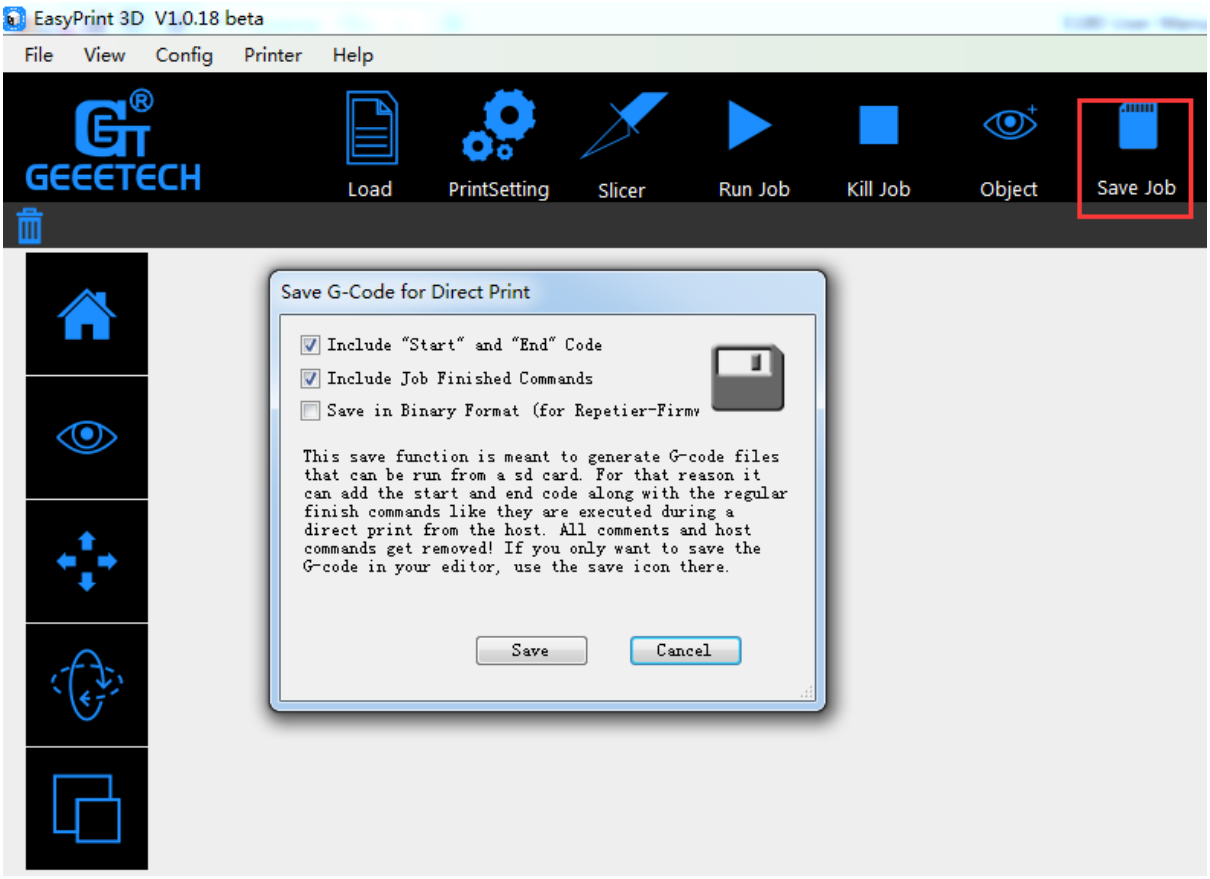
4) The last step is to click [Run job] to start your printing journey.

After clicking [Run job], Geeetech A30 will enter printing mode. The printer begins to work as soon the heating process is over.

4.2 Stand-alone Printing with a TF Card

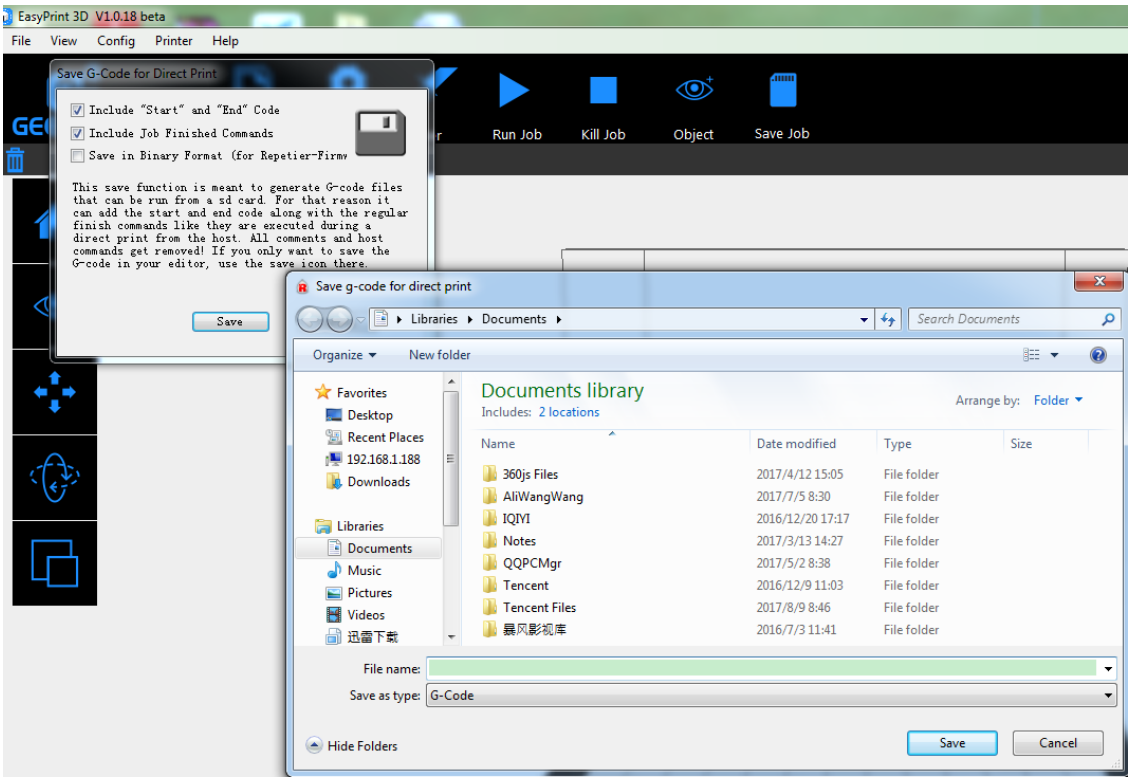
Geeetech A30 can run stand-alone with a TF card, untethered to your computer. All you need to do is save 3D models in the TF card for printing. Here are the detailed procedures.

1) After slicing, please click “Save job” to save the file for direct printing



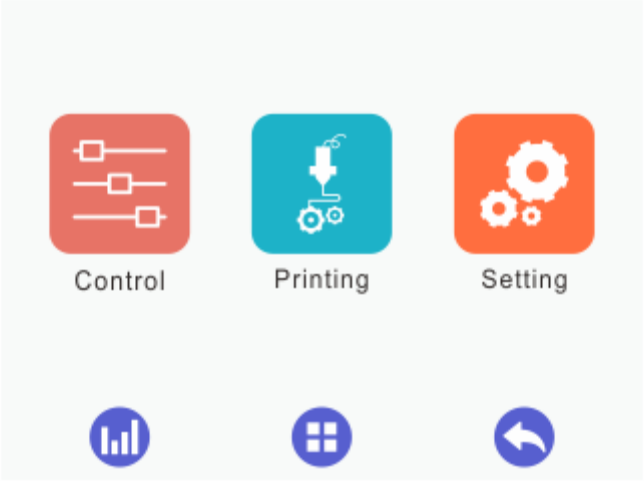
2) Click the [Save] button to save the .Gcode file in TF card, as shown in the picture below.

Note: The .Gcode file shall be kept in the root file of TF card, or the printer can't recognize the file.

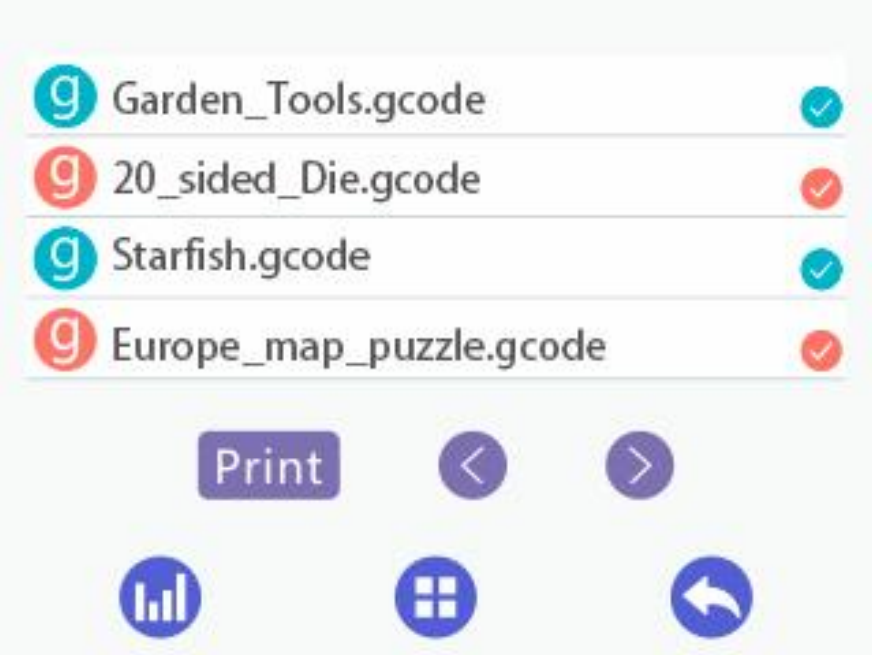


3) Insert the TF card into the slot on the control box of Geeetech A30.

4) Click the [Printing] button on the home page of the touch screen.



5) Choose your 3D model file from the file list and click [Print].



4.3 Printing via Wi-Fi Connectivity

After your successful configuration of a Wi-Fi module, Cloud 3D printing solution conveniently provides you with EasyPrint 3D App to enjoy free 3D models by just slightly pressing to start your printing journey. Even if you are not keeping company with your printer, you can control the printer via EasyPrint 3D APP.

EasyPrint 3D App offers the simple, intuitive user interface, full-featured and easy-to-manage. You can select the 3D model from the cloud library via App, adjust the printing setting in real time, monitor the printing process and save the relevant files.

EasyPrint 3D App only supports Android system so far. IOS system is under developing. Please stay tuned.

4.3.1 Install EasyPrint 3D APP

Download the EasyPrint 3D APP here and install the EasyPrint 3D App.

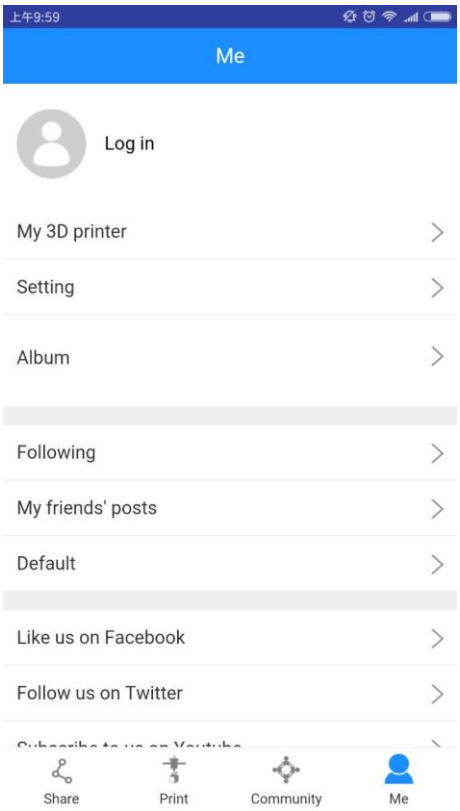
www.geeetech.com/firmware/EasyPrint3D_Android.apk

You could also download EasyPrint 3D App on Google Play and App Store.

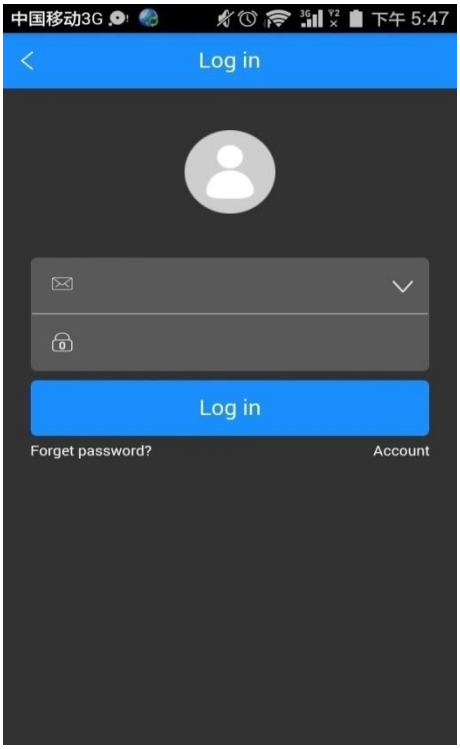
Once finishing installation, enter *Me* to register and log in.

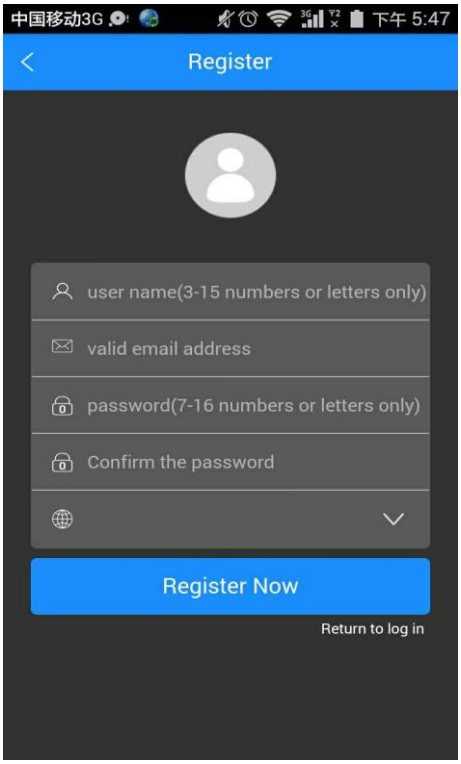
Here are the login steps.

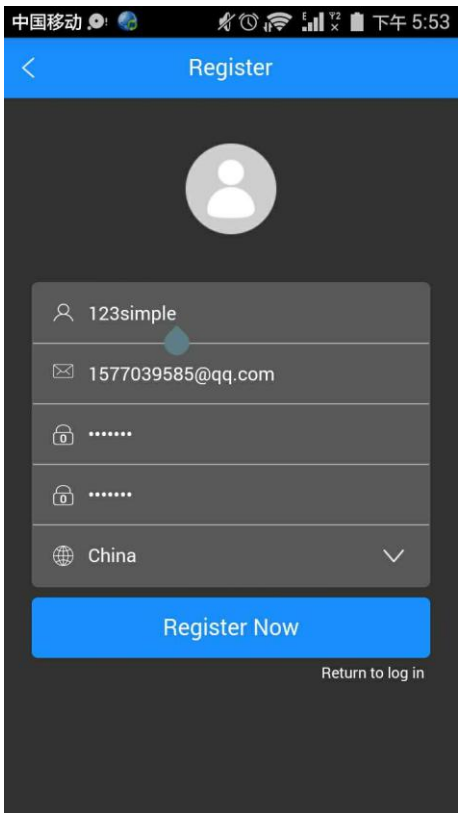
Step1. Open EasyPrint 3D App. Click the [Log in] button in the [Me] interface to finish your registration.



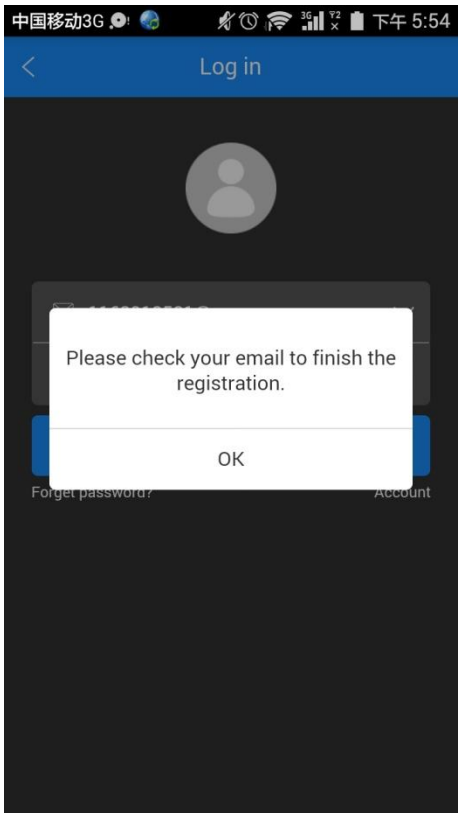
Step 2. For beginners, click [Account] to register. Enter your own account information (Note: There is no space in the user name. For foreign users, please choose “English” for your server address.)


中国移动3G
下午 5:47
Log in
Log in
Forget password?
Account


中国移动3G
下午 5:47
Register
user name(3-15 numbers or letters only)
valid email address
password(7-16 numbers or letters only)
Confirm the password
Register Now
Return to log in



Step 3. Click [Register Now] and a pop-up interface will appear for your to check your email.



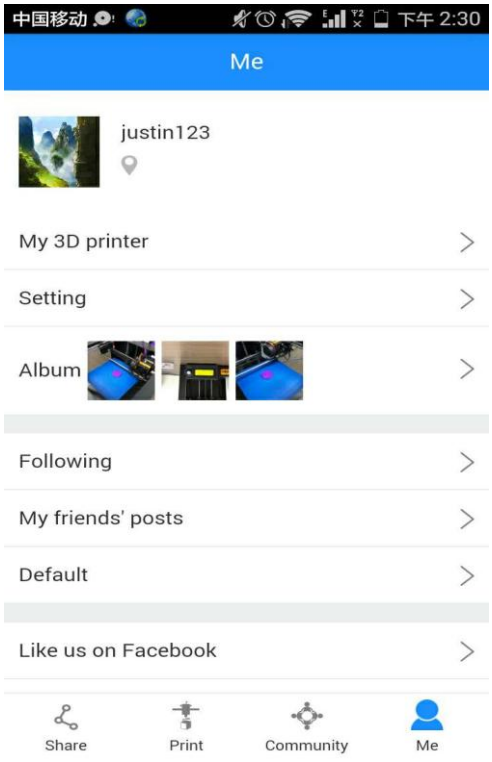
Step 4. Click OK and check your email. Log in with your account information.

Note: As the EasyPrint 3D APP is continuously upgraded, some UI and workflow may be different, please follow the APP.

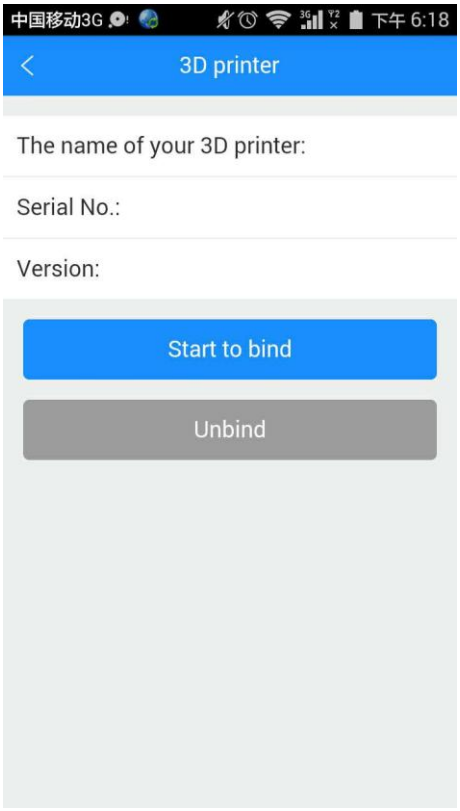
4.3.2 Bind printer to EasyPrint 3D App

Log in and bind the printer. In ***Me—My 3D Printer***, finish the binding process following the instructions on App.

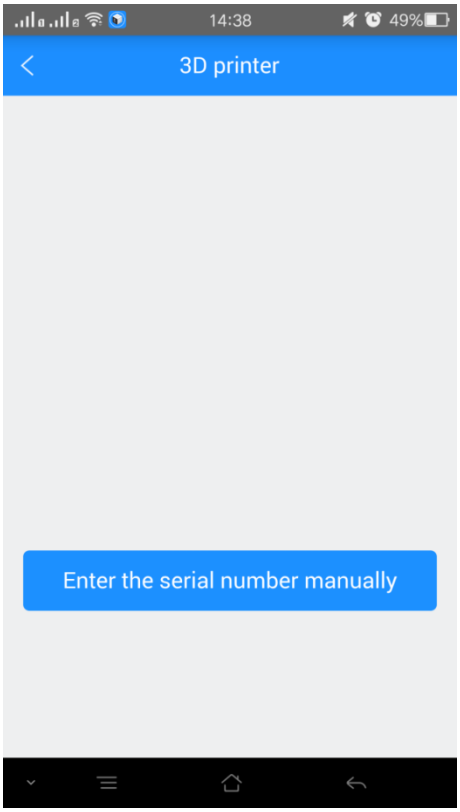
Step 1. Click ***My 3D printer***

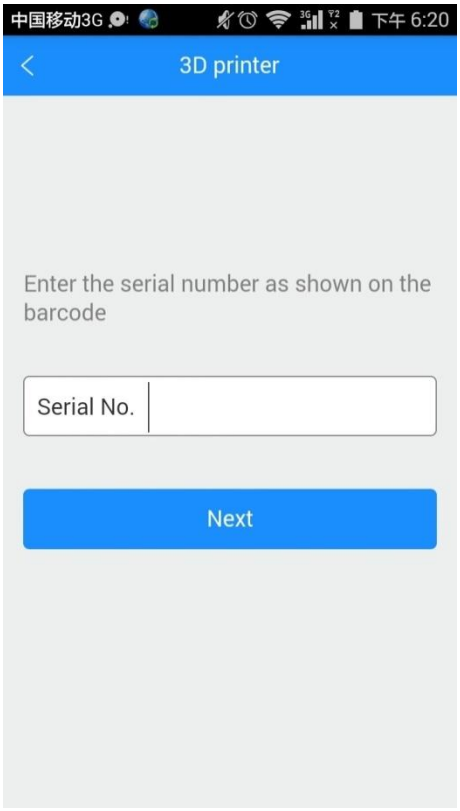


Step2. Click the “Start to bind” button.

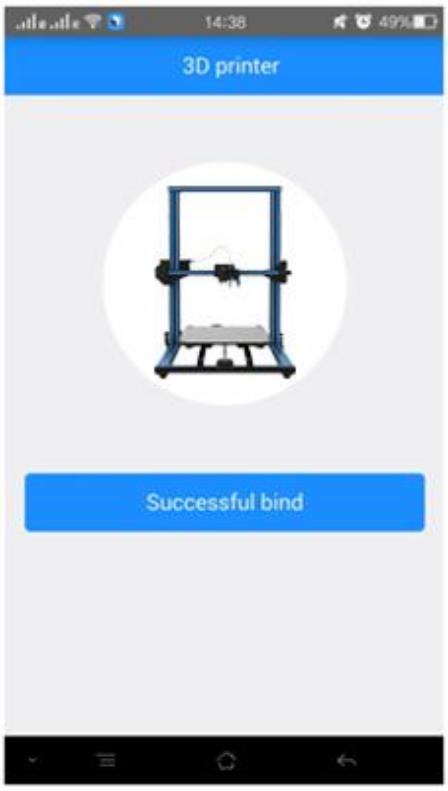


Step 3. Click the button in the picture below to enter the serial number manually.





Step 3. Click “Next” and the picture below will pop up to inform you that the binding process is successful.



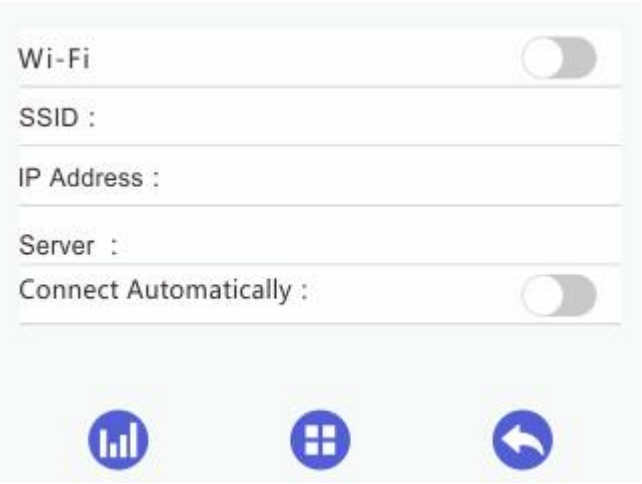
4. Then you will see the following interface, showing that the printer is off-line.

That's the whole binding process. In the next part, we will finish the Wi-Fi configurations step by step. Be patient~

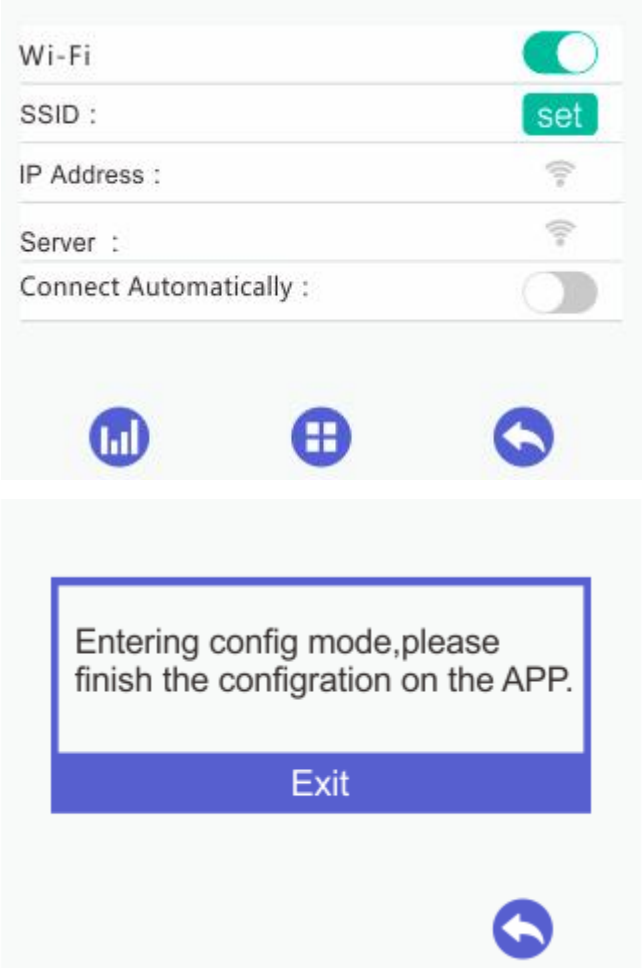
4.3.3 Wi-Fi Configurations

Detailed configuration procedures for Wi-Fi connectivity are as follows:

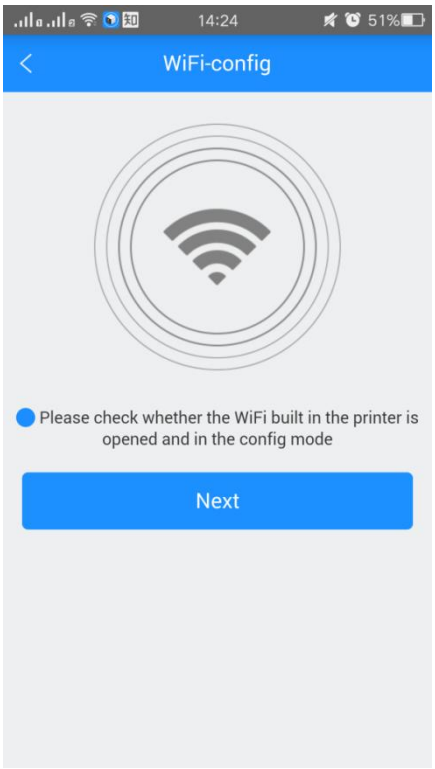
Step 1. In Wi-Fi setting interface on the control panel, choose Wi-Fi button to enter Wi-Fi interface, as shown in the picture below.



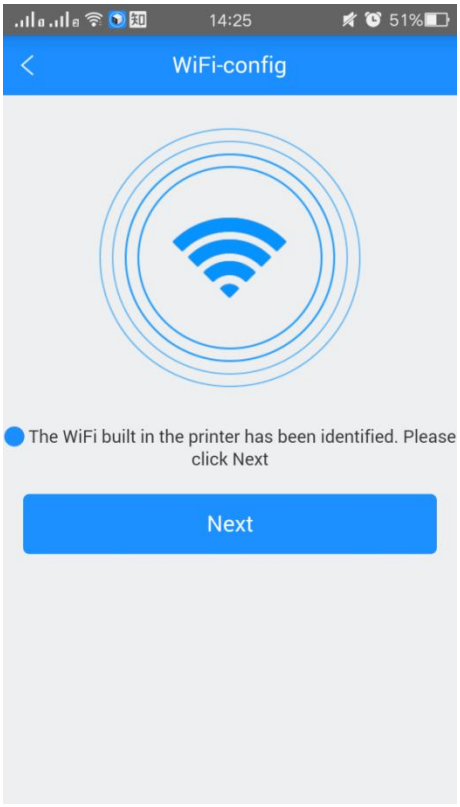
Step 2. Turn on Wi-Fi and click the button [Set] to enter the Config mode, as shown in the picture below.



Step 3. Open EasyPrint 3D App and click [Print]. At the page of pop-up, click the button “Wi-Fi” to enter Wi-Fi configuration, as shown in the picture below.

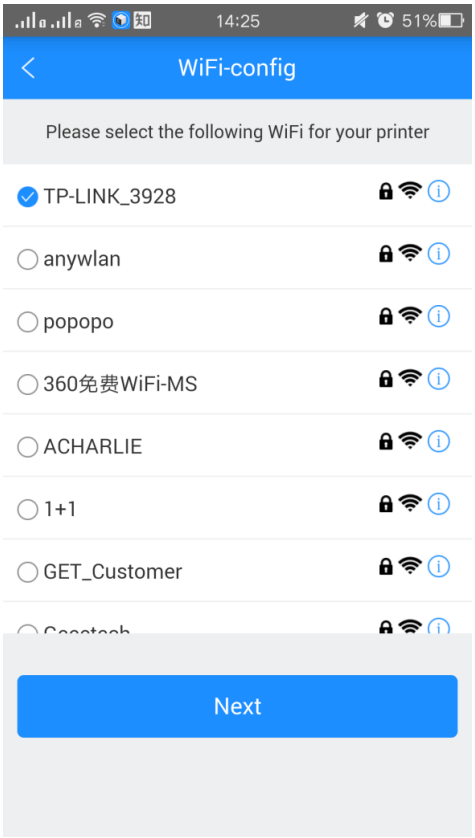


Step 4. Click [Next] to start to detect Wi-Fi built in the printer. If the Wi-Fi is detected, you could see the following picture.

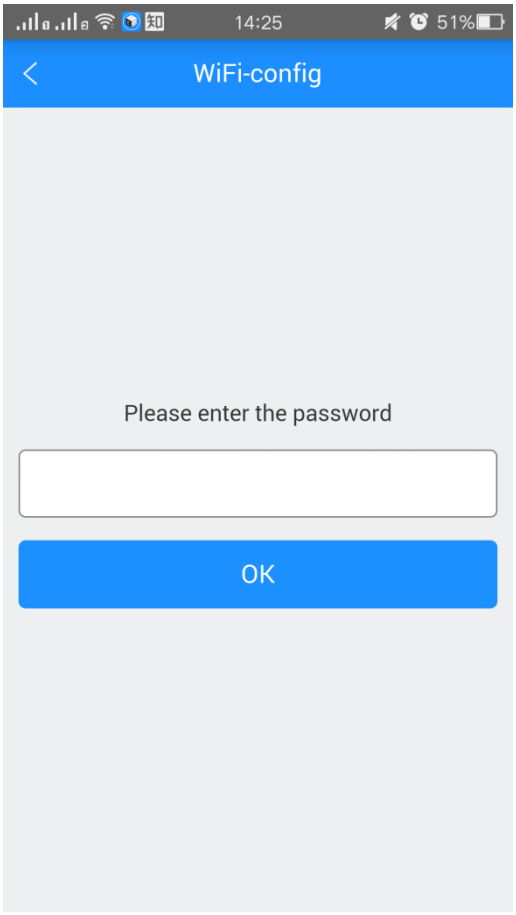


If not detected, it will pop up a prompt window, as shown by the following picture. Click [OK] and again click [Next] to redetect.

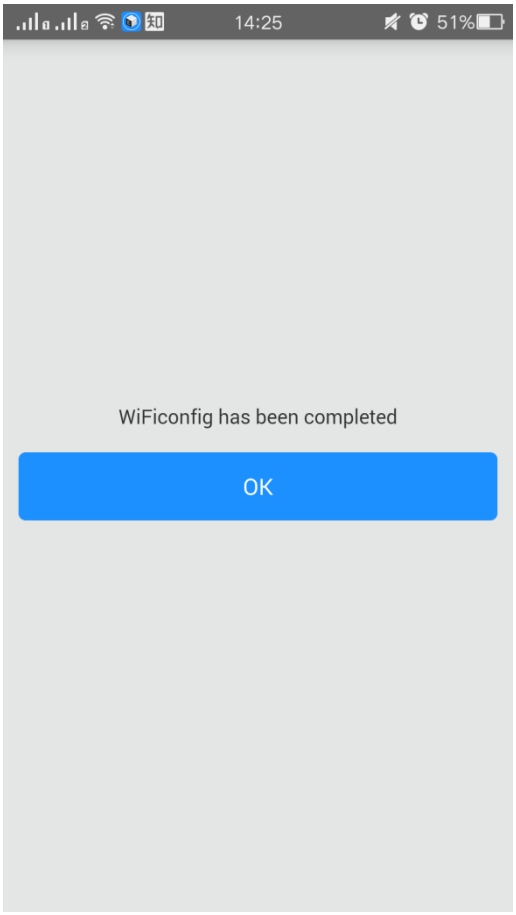
Step 5. Click [Next] and choose a Wi-Fi hotspot for A30, as shown in the picture below.



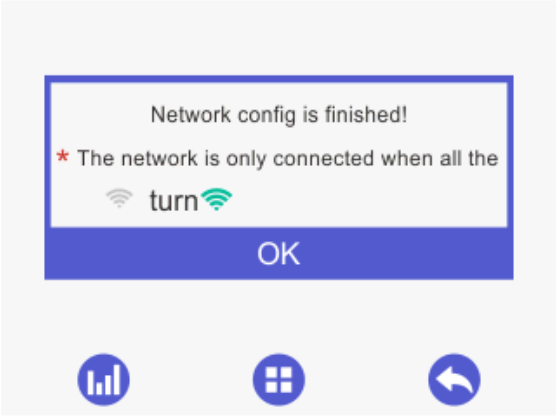
Step 6. Click [Next]. If the Wi-Fi hotspot needs password, the interface will show the Wi-Fi password input box. Just input the correct password, and then click [OK], as shown in the picture below.



Step 7. When you succeed in connecting the Wi-Fi, the interface will show that the configuration is finished, as shown in the picture below.

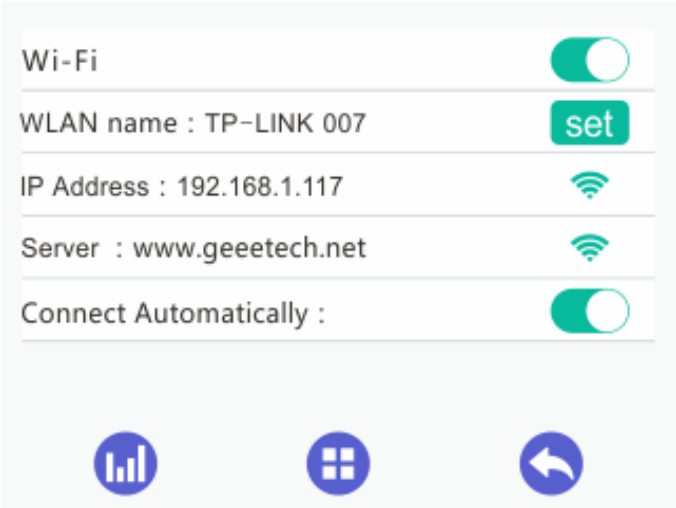


Step 8. Then on the printer the interface returns back to the control panel. You can see the prompt, as shown in the picture below.



Click the button “OK” on control panel, the interface will skip to Wi-Fi interface.

The Wi-Fi icon will turn green on Wi-Fi interface. Meanwhile, SSID, IP Address and Server on this interface will display the relevant information, as shown in the picture below.



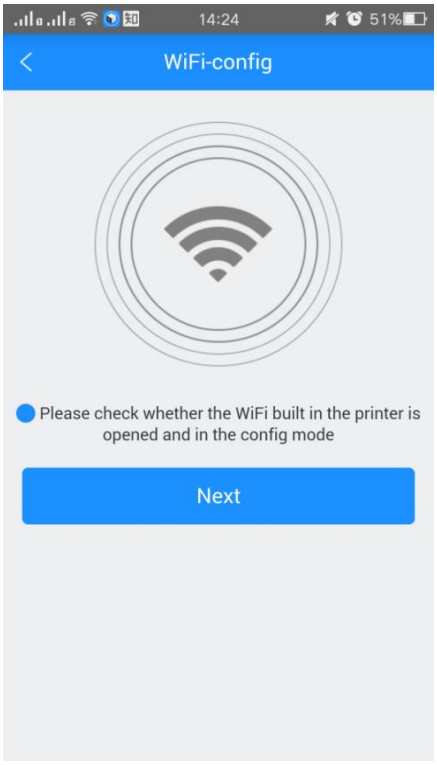
Step 9. Go back to the App, click [OK] to enter the home page. The status on the homepage displays that the printer is on-line. Till here, the configuration between App and the printer is finished. Now you can print and control the printing via App.

Note:

- If you choose a Wi-Fi hotspot without password, click “Next” and continue your setting from step7.

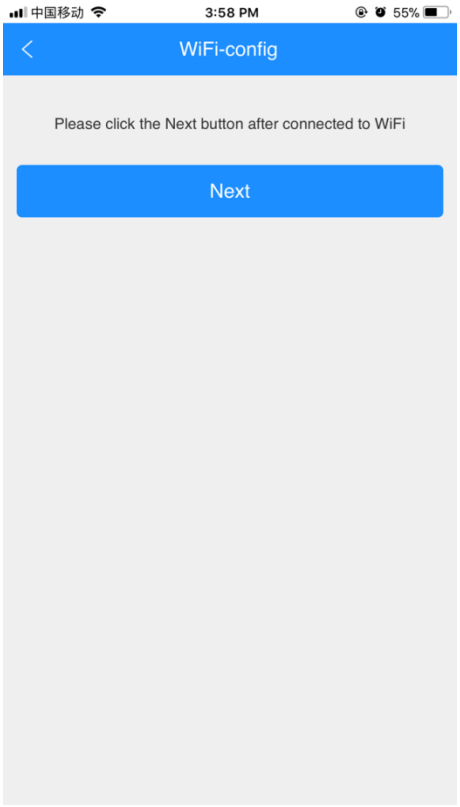
- For iOS users: The configuration steps are a little different from the Android version from Step 4.

Step 4. Click [Next] to start to detect Wi-Fi built in the printer. If the Wi-Fi is detected, you could see the “Settings” interface on your phone.

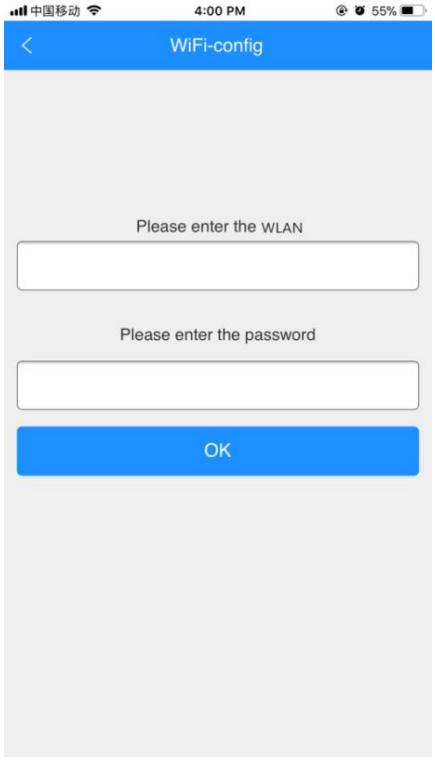


Step 5. Click the Wi-Fi button to connect [Geeetech-Printer] hotspot, as shown in the picture.

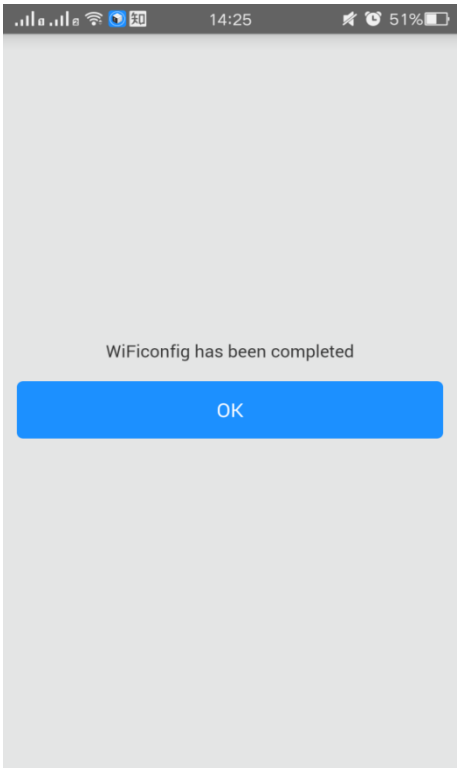
Step 6. Click the [Next] button in the picture below.



Step 7. Enter the WLAN name and password of your router. Click [OK] to connect your Wi-Fi.



Step 8. When you succeed in connecting the Wi-Fi, the interface will show that the configuration is finished, as shown in the picture below.



Then the following interfaces on the control board are the same to the Android version.

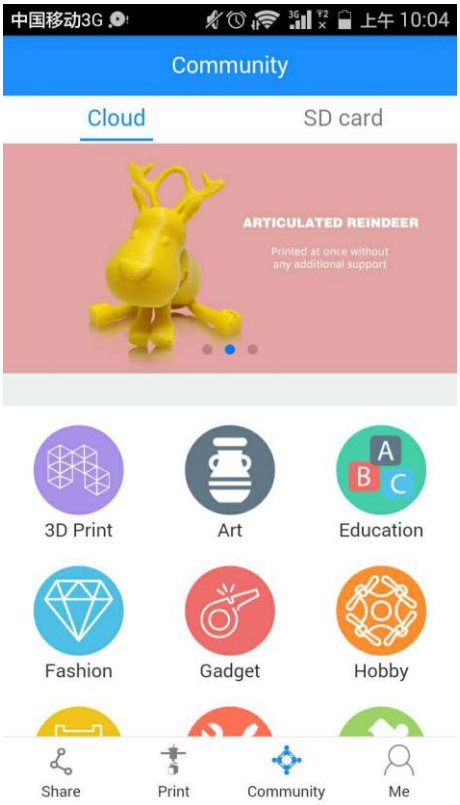
4.3.4 Printing from Cloud Library

As above, once the configuration between APP and the printer is successful, you can start to print.

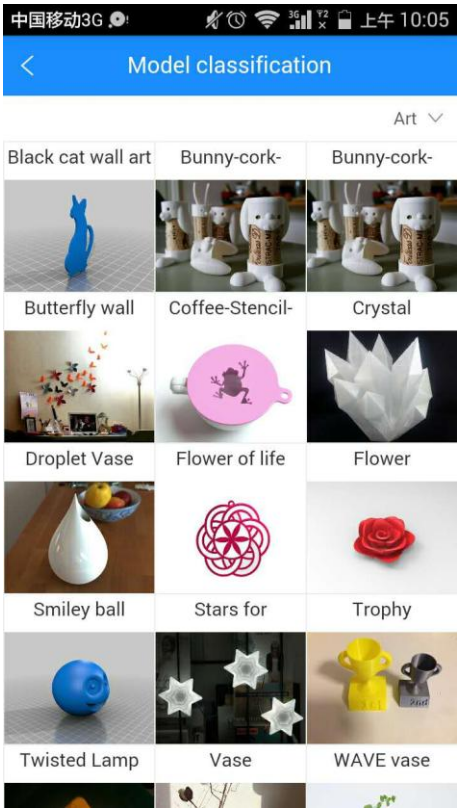
Note: A TF card is still needed when print via Wi-Fi to save the files.

4.3.4.1 Printing from Cloud Gallery

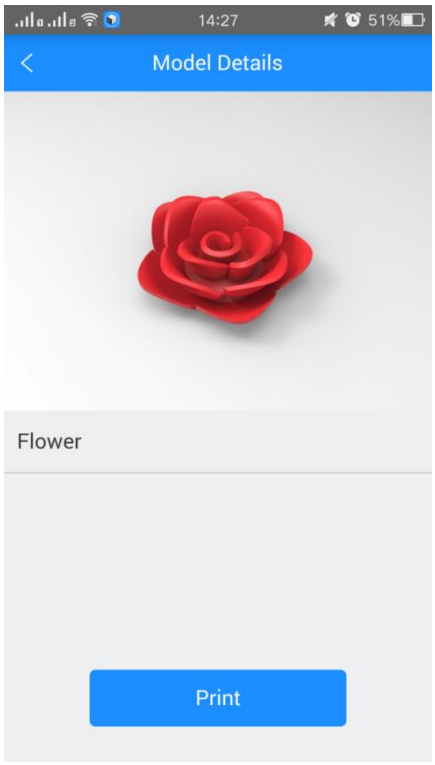
Step 1.Click ***Community*** —— ***Cloud***, choose the type of models



Enter the model page; choose your favorite model, let's take the "Rose" as an example:

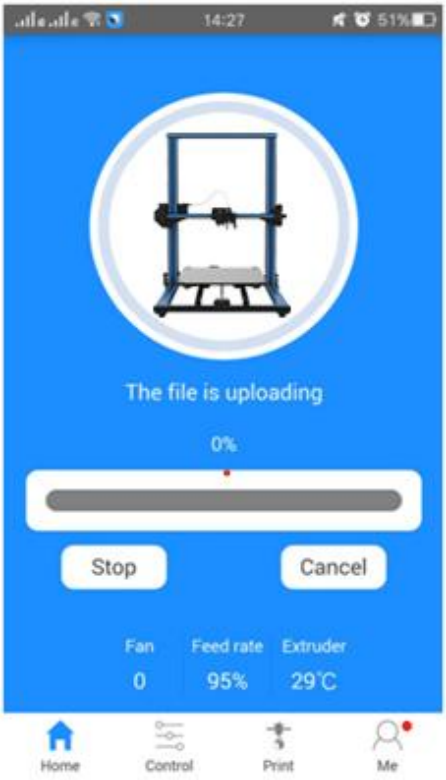


Enter the [Model details] page, click the button “Print” here, you can preview to the model



You can make some simple operations to the model on the screen with fingers, such as, zooming, rotating or moving.

Click the “Print” button to start print. This will take a while to transfer the file from the cloud server to your printer. Please keep your wireless networks unimpeded.

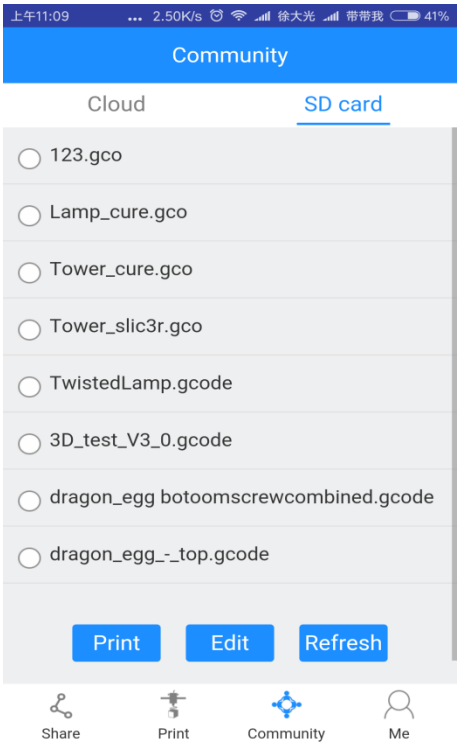


During the uploading, you can pause the uploading or give it up.

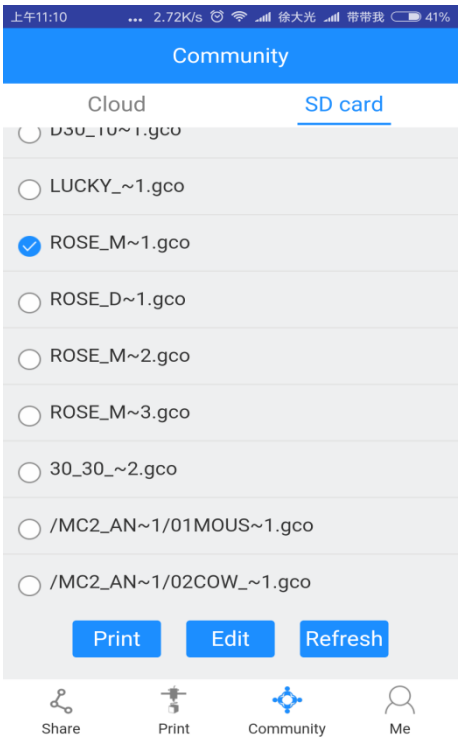
Upon uploading, it will start printing after a while.

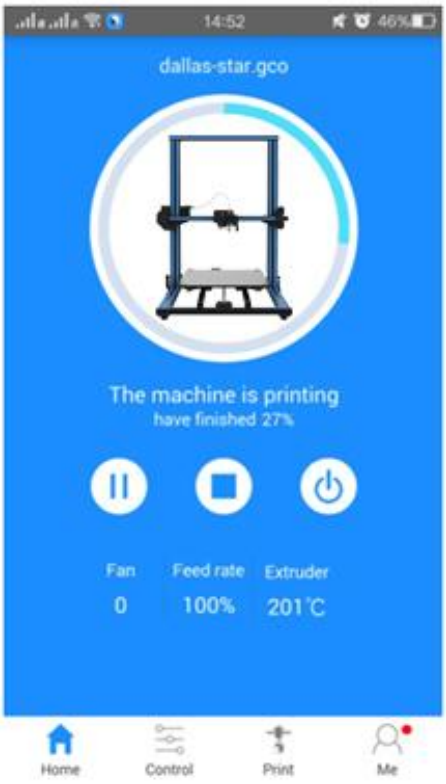
4.3.4.2 Printing from TF card

Step 1. Click [Community] to choose [SD card]. The interface will show the G.code files from A30 TF card. [Refresh] the interface, if there is no response.

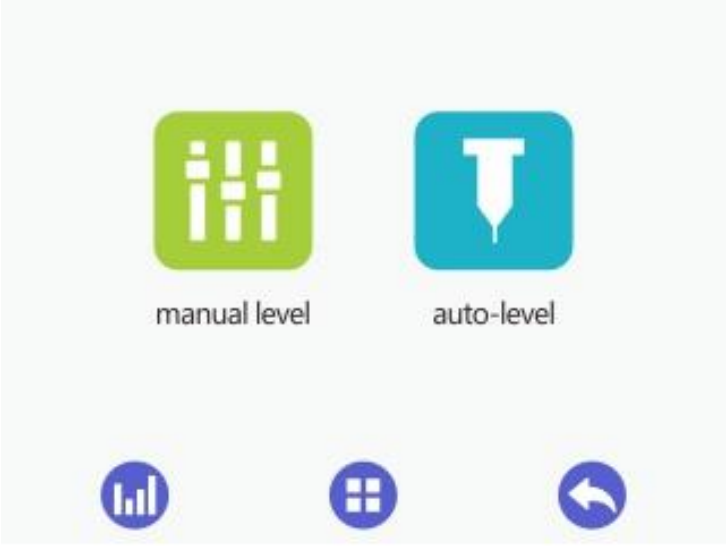


Step 2. Choose a model file and click [Print]. The interface will show the printing progress. After the extruder reaches its target temperature, the printer will start to run.





5. Optional Add-on --- 3D Touch Auto-leveling



1) When the printer is running with a TF card or connected with a computer via a USB cable, the auto-leveling function is unavailable. This situation also applies to the [Disable] status of the stepper motors or moving the position of the extruder when

the stepper motors are enabled.

2) When the printer is idle, you can use 3D touch to finish the auto-leveling process.

   If you have changed the nozzle or fix 3D touch for the first time, it's necessary to measure the offset between the nozzle and the 3D touch probe, before auto leveling the heatbed.

3) After the auto-leveling, the distance between the nozzle and the hotbed remains identical as the extruder moves to other points. When you don't need the auto-leveling function, please turn off the corresponding button.

Detailed operation steps

Choose the Auto leveling icon to start the auto-leveling process.

Before your auto-leveling operation, please make sure that the auto-leveling switch is on and the probe and nozzle are clean.

When you turn on A30 and the switch for auto-leveling is on, the printer will be homed. Subsequently, the extruder moves down to the middle of the printing platform. The 3D Touch will test the Z coordinate of this position. After that, the printer will be homed again.

Note: When you turn on A30 and the switch for auto-leveling is off, the printer will be homed at first. Under this condition, you need to turn on the auto-leveling switch.

1. Click the Nozzle button and the extruder will be homed. Then it moves down to the default test point. Adjust the nozzle's position in the Z axis by clicking the buttons to ensure appropriate distance between the nozzle and hotbed. Please choose small moving distance, for instance, 0.1mm and 1mm. To test the distance, it is recommended to slide an A4 paper between the nozzle and hotbed. Slide the paper back and forth. Stop when you feel the nozzle just start to grab a little bit. The Z axis coordinate of the nozzle will appear in the textbox Nozzle Z:.

2. The Z offset value, the same with that of the nozzle, will appear in the textbox Z offset .

That's the whole auto-leveling process.

Choose a model file. Then the printer will be homed and move down to the 9 points of the building platform. At each point, 3D Touch will read the Z coordinate. After this testing process, the extruder will be located at the 9th point.

When the extruder reaches its target temperature, you can start to print.

Note: 1. If necessary, please give 3D Touch a self-test. Click the Push-pin up Push-pin down buttons to test if 3D touch could work normally. Whenever there is any obstruction, fault or even dirt on 3D touch, it will release an alarm. In this case, please click the Alarm Release button to stop it.

2. If the probe can't be pushed down or the LED light keeps flickering, please click the Push-pin up / Push-pin down / Alarm Release button to make a modification. When the LED light keeps flickering, it is necessary to disable the alarm.

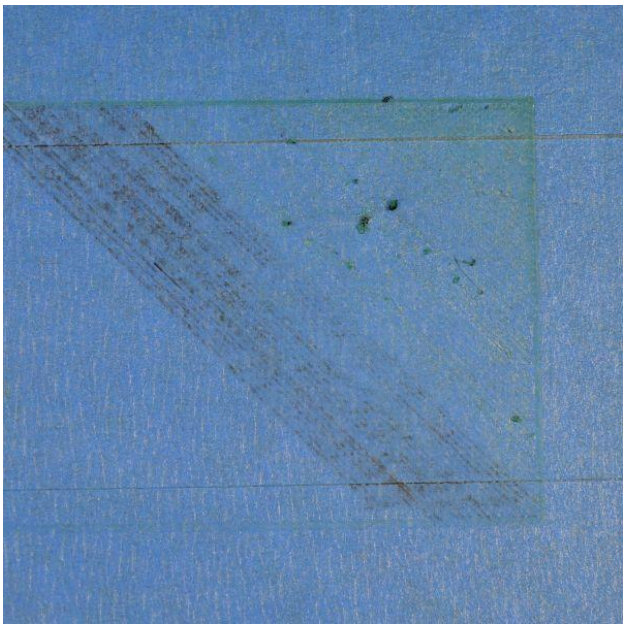
3. If the first layer is unsatisfactory, please adjust the Z offset in an appropriate way.

6. FAQ

As your deepening acquaintance with Geeetech A30 3D printer, you may meet different problems during the printing. The following are simple guidelines to help you easily solve some issues. If you need more helps, please visit https://www.geeetech.com/wiki/index.php/Print_Quality_Troubleshooting_Guide.

6.1 About Printing Problem

6.1.1 Not Extruding at the Beginning of Print



This issue is a very common one for new 3D printer owners, but thankfully, it is also very easy to resolve! If your extruder is not extruding plastic at the beginning of your print, there are four possible causes. We will walk through each one below and explain what settings can be used to solve the problem.

Troubleshooting

1. Extruder was not primed before beginning the print

Most extruders have a bad habit of leaking plastic when they are sitting idle at a high temperature. The hot plastic inside the nozzle tends to ooze out of the tip, which creates a void inside the nozzle where the plastic has drained out. This idle oozing can occur at the beginning of a print when you are first preheating your extruder, and also at the end of the print while the extruder is slowly cooling. If your extruder has lost some plastic due to oozing, the next time you try to extrude, it is likely that it will take a few seconds before plastic starts to come out of the nozzle again. If you are trying to start a print after you nozzle has been oozing, you may notice the same delayed extrusion. To solve this issue, make sure that you prime your extruder right before beginning a print so that the nozzle is full of plastic and ready to extrude. A common way to do this in EasyPrint 3D is by including something called **skirt**. The skirt will draw a circle around your part, and in the process, it will prime the extruder with plastic. If you need extra priming, you can increase the number of skirt outlines on the in EasyPrint 3D.

2. Nozzle is too close to the bed

If the nozzle is too close to the build platform, there will not be enough room for plastic to come out of the extruder. The hole in the top of the nozzle is essentially blocked so that no plastic can escape. An easy way to recognize this issue is when the print does not extrude plastic for the first layer or the 2nd, but begins to extrude normally around the 3rd or 4th layers as the platform continues to lower along the Z-axis.

To solve this problem, you can use the very handy G-Code offsets which can be found on the G-Code tab of EasyPrint 3D process settings. This allows you to make very fine adjustments to the Z-axis position without needing to change the hardware. For example, if you enter a value of 0.05mm for the Z-axis G-Code offset, this will move the nozzle 0.05mm further away from the print bed. Keep increasing this value by small increments until there is enough room between the nozzle and the build platform for the plastic to escape.

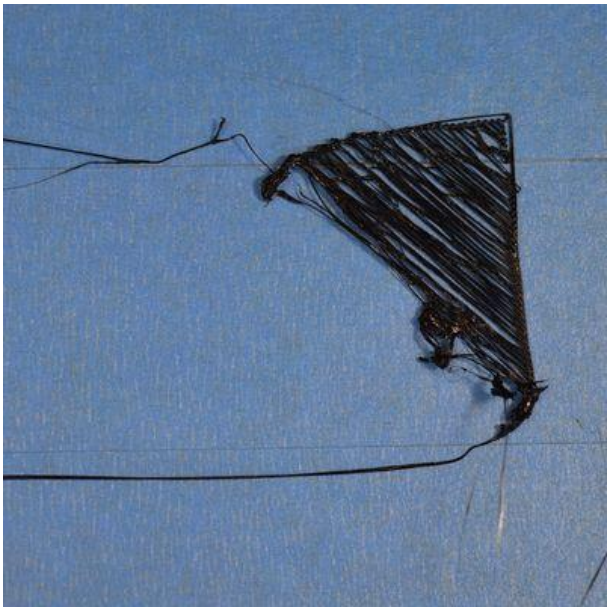
3. The filament has stripped against the drive gear

Most 3D printers use a small gear to push the filament back and forth. The teeth on this gear bite into the filament and allow it to accurately control the position of the filament. However, if you notice lots of plastic shavings or it looks like there is a section missing from your filament, then it's possible that the drive gear has removed too much plastic. Once this happens, the drive gear won't have anything left to grab onto when it tries to move the filament back and forth. Please see the Grinding Filament section for instructions on how to fix this issue.

4. The extruder is clogged

If none of the above suggestions are able to resolve the issue, then it is likely that your extruder is clogged. This can happen if foreign debris is trapped inside the nozzle, when hot plastic sits inside the extruder too long, or if the thermal cooling for the extruder is not sufficient and the filament begins to soften outside of the desired melt zone. Fixing a clogged extruder may require disassembling the extruder, so please contact your printer manufacturer before you proceed. We have had great success using the "E" string on a guitar to unclog extruders by feeding it into the nozzle tip; however, your manufacturer should also be able to provide recommendations.

6.1.2 Print Not Sticking to the Platform



It is very important that the first layer of your print is strongly connected to the printer's build platform so that the remainder of your part can be built on this foundation. If the first layer is not sticking to the build platform, it will create problems later on. There are many different ways to cope with these first layer adhesion problems, so we will examine several typical causes below and explain how to address each one.

Troubleshooting

1. Build platform is not level

Many printers include an adjustable bed with several screws or knobs that control the position of the bed. If your printer has an adjustable platform and you're having trouble getting your first layer to stick to the platform, the first thing you will want to verify is that your printer's platform is flat and level. If the platform is not level, one side of your platform may be too close to the nozzle, while the other side is too far away. Achieving a perfect first layer requires a level build platform. EasyPrint 3D already includes a useful platform leveling wizard that you guide you through the leveling process. You can find this wizard by going to **Tools > Bed Leveling Wizard**, and following the on-screen instructions.

2. First layer is printing too fast

As you extrude the first layer of plastic on top of the build platform, you want to make

sure that plastic can be properly attached to the surface before starting the next layer. If you print the first layer too fast, the plastic may not have time to stick to the build platform. To solve this problem, it is typically very useful to print the first layer at a slower speed. EasyPrint 3D provides a setting for this exact feature. Go to the speed tab; you will see a setting labeled “First Layer Speed”. For example, if you set a first layer speed of 50%, it means that your first layer will print 50% slower than the rest of your part. If you feel that your printer is moving too fast on the first layer, try reducing this setting.

6.1.3 Stringing or Oozing

Stringing (otherwise known as oozing, whiskers, or “hairy” prints) occurs when small strings of plastic are left behind on a 3D printed model. This is typically due to plastic oozing out of the nozzle while the extruder is moving to a new location. Thankfully, there are several settings within EasyPrint 3D that can help with this issue. The most common setting used to combat excessive stringing is known as **retraction**.

If retraction is enabled, when the extruder finishes printing one section of your model, the filament will be pulled backwards into the nozzle to act as a countermeasure against oozing. When it is time to begin printing again, the filament will be pushed back into the nozzle so that plastic once again begins extruding from the tip. To ensure retraction is enabled, click “Settings”, choose [custom] mode and click on Retraction tab. In the sections below, we will discuss the important retraction settings as well as several other settings that can be used to combat stringing, such as the extruder temperature settings.

Troubleshooting

1. Retraction distance

The most important retraction setting is the retraction distance. This determines how much plastic is pulled out of the nozzle. In general, the more plastic that is retracted from the nozzle, the less likely the nozzle is to ooze while moving. Most direct-drive extruders only require a retraction distance of 0.5-2.0mm, while some Bowden extruders may require a retraction distance as high as 15mm due to the longer distance between the extruder drive gear and the heated nozzle. If you encounter stringing with your prints, try increasing the retraction distance by 1mm and test again to see if the performance improves.

2. Retraction speed

The next retraction setting that you should check is the retraction speed. This determines how fast the filament is retracted from the nozzle. If you retract too slowly, the plastic will slowly ooze down through the nozzle and may start leaking before the extruder is done moving to its new destination. If you retract too quickly, the filament may separate from the hot plastic inside the nozzle, or the quick movement of the drive gear may even grind away pieces of your filament. There is usually a sweet spot somewhere between 1200-6000 mm/min (20-100 mm/s) where retraction performs best. Thankfully, EasyPrint has already provided many pre-configured profiles that can give you a starting point for what retraction speed works best, but the ideal value can vary depending on the material that you are using, so you may want to experiment to see if different speeds decrease the amount of stringing that you see.

3. Temperature is too high

Once you have checked your retraction settings, the next most common cause for excessive stringing is the extruder temperature. If the temperature is too high, the plastic inside the nozzle will become extremely viscous and will leak out of the nozzle much more easily. However, if the temperature is too low, the plastic will still be somewhat solid and will have difficulty extruding from the nozzle. If you feel you have the correct retraction settings, but you are still encountering these issues, try decreasing your extruder temperature by 5-10 degrees. This can have a significant impact on the final print quality. You can adjust these settings by clicking “Edit Process Settings” and selecting the Temperature tab. Select your

extruder from the list on the left, and then double-click on the temperature set point you wish to edit.

6.2 How to Upgrade the Firmware?

EasyPrint 3D provides all the users with online service of upgrading firmware to guarantee perfect printing performance.

The specific method is as follows:

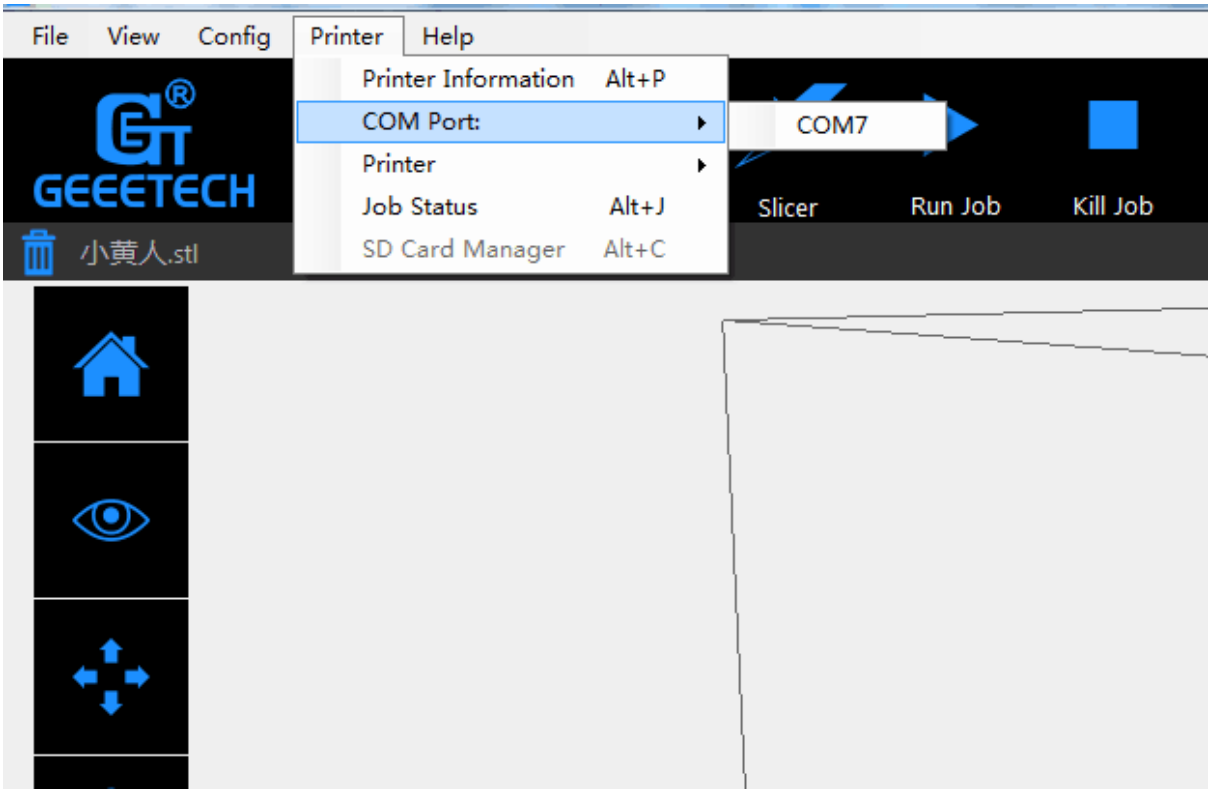
1. Connect your Geeetech A30 to the computer with the USB cable.

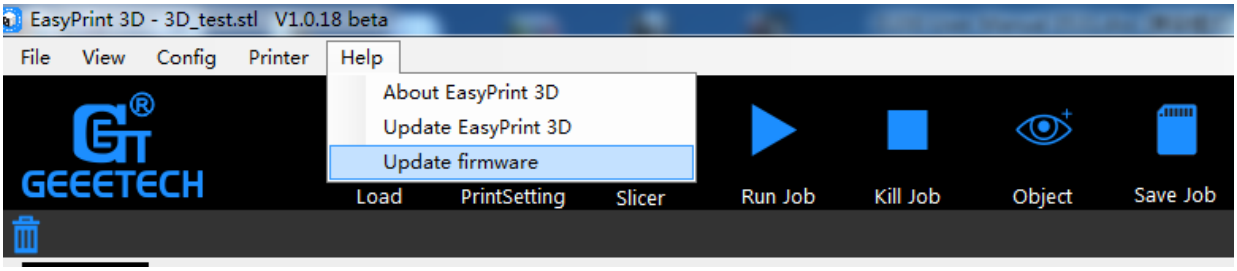
2. Turn the printer on.

3. In Easy Print 3D, choose the COM port and the printer type.

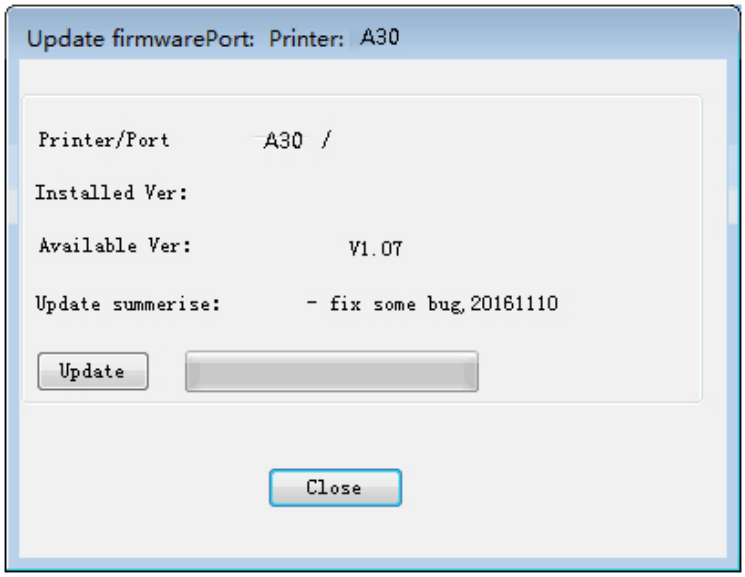
4. Click ’help’> 'Update firmware'.

*Don’t connect the printer to EasyPrint when upgrading firmware.

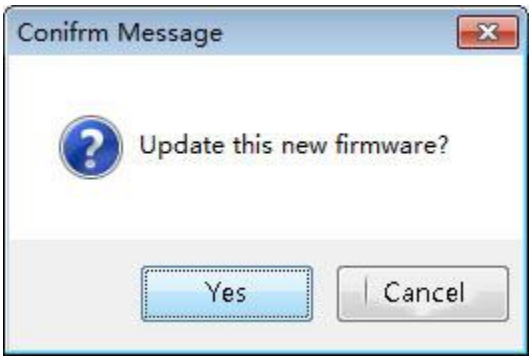




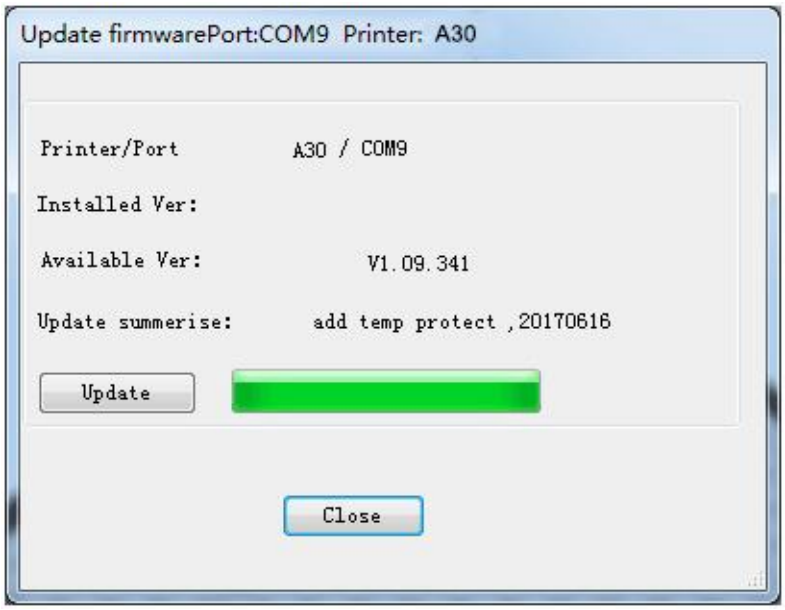
After clicking the [upgrade firmware] tab, a window will pop up with the information of printer type and port, the current firmware version installed, the available version and the update summary of the latest firmware.

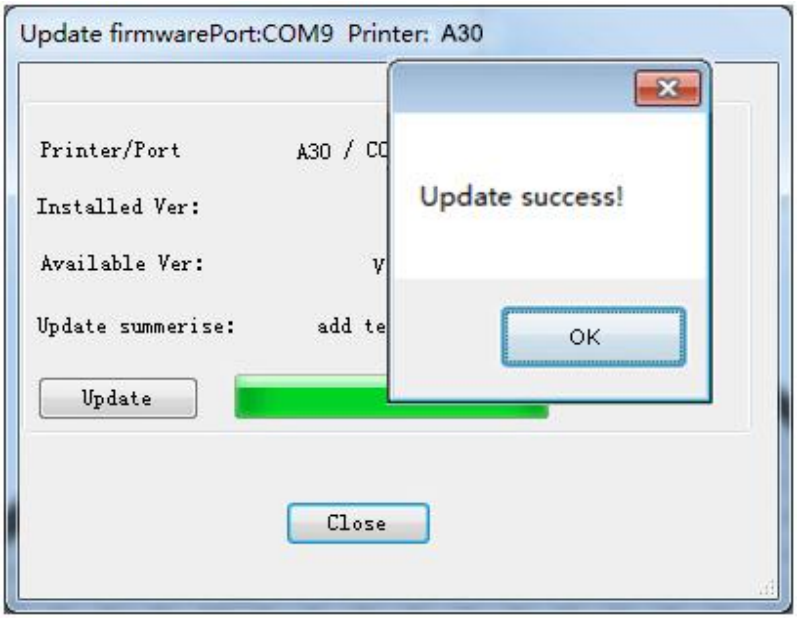


Click **updates** and confirms updating, the progress bar will turn green, and the firmware will be updated automatically. This process may take some time.



When the upload is complete the message ‘update successes will be displayed.





Click ‘ok’ and ‘Close’ on the windows to complete the firmware upgrade.

6.3 Fail to Complete the Wi-Fi Configuration

Tips:

1) At ④, if the Wi-Fi built in the printer could be detected, please exit from Set mode, turn the button Wi-Fi off and turn it on again. Enter the Set mode to continue the configuration.

2) At ⑥, enter the password and click “[OK]”. If a prompt “Not connect with Printer Wi-Fi “pops up, please manually connect with Printer Wi-Fi or again make the configuration.

click“[OK]” and manually make the mobile Wi-Fi switch to Printer Wi-Fi (GT-printer). Then come back to APP and click“[Next]” to redetect or return to the page of Wi-Fi configuration to make the new one.

3) At ⑥, if a prompt of configuration fails to appear, please start again to make the configuration.

4) If you have any questions, please contact with our technical support.

7. Specifications of Geeetech A30

Printing parameters

Printing technology: FDM

Build volume: 320*320*420mm

Printing accuracy: 0.05mm

Positioning precision: X/Y：0.11mm. Z： 0.0025mm

Printing speed: 80-110mm/s recommended

Filament diameter: 1.75mm

Nozzle diameter: 0.4mm

Filament: PLA, ABS, nylon, wood polymers, etc.

Max temp for hotbed: 110℃

Max temp for extruder: 250℃

Software resources

Operating system: Windows, MAC, Linux

Remote App: EasyPrint 3D App

Control software: EasyPrint 3D, Cura，Repetier-Host，Simplify3D

File format: STL，OBJ，Gcode

Electrical

Power supply: DC 12V/41A

Connectivity: Wi-Fi, USB, SD card (support stand-alone printing)

Display screen: 3.2″ full-color touch screen

Mechanical:

Frame: Aluminum profile

Build Platform: Tempered glass + Aluminum plate

XY Rods: Wear-resistant aluminum profile

Z axis: Lead screw

Stepper Motors: 1.8°step angle with 1/16 micro-stepping

Physical Dimensions & Weight

Machine Dimension: 508x615.5x630.5 mm

Shipping box Dimension: 655x540x288 mm

Machine Net weight: 10.12 kg

Machine Gross weight: 12.56 kg

8. Contact us

Technical support	1. There are lots of documents and troubleshooting for GEEETECH A30 on our website. They are good resources if you would like to quickly solve problems by yourself. 2.If you still can not solve problems yourself even with the help of above files, you can send e-mail to technical@geeetech.com,we will reply to you within 24 hours.
Sales	For more products of Geeetech, please visit www.geeetech.com or send e-mail to sales@geeetech.com
Feedback	In order to improve our products to provide better user experience, please send your comments and suggestions to Rita.xiang@geeetech.cn. We will appreciate to hear your valuable suggestions.