Contents

Help Contents for Dreamer Series

1. Software Installation

1.1 Download

A. Insert SD card sent with Dreamer into a computer, we have already prepare the latest driver installation package in the SD card.

B. Open below link to download the installation package:
http://www.ff3dp.com/#!sup/c1df1

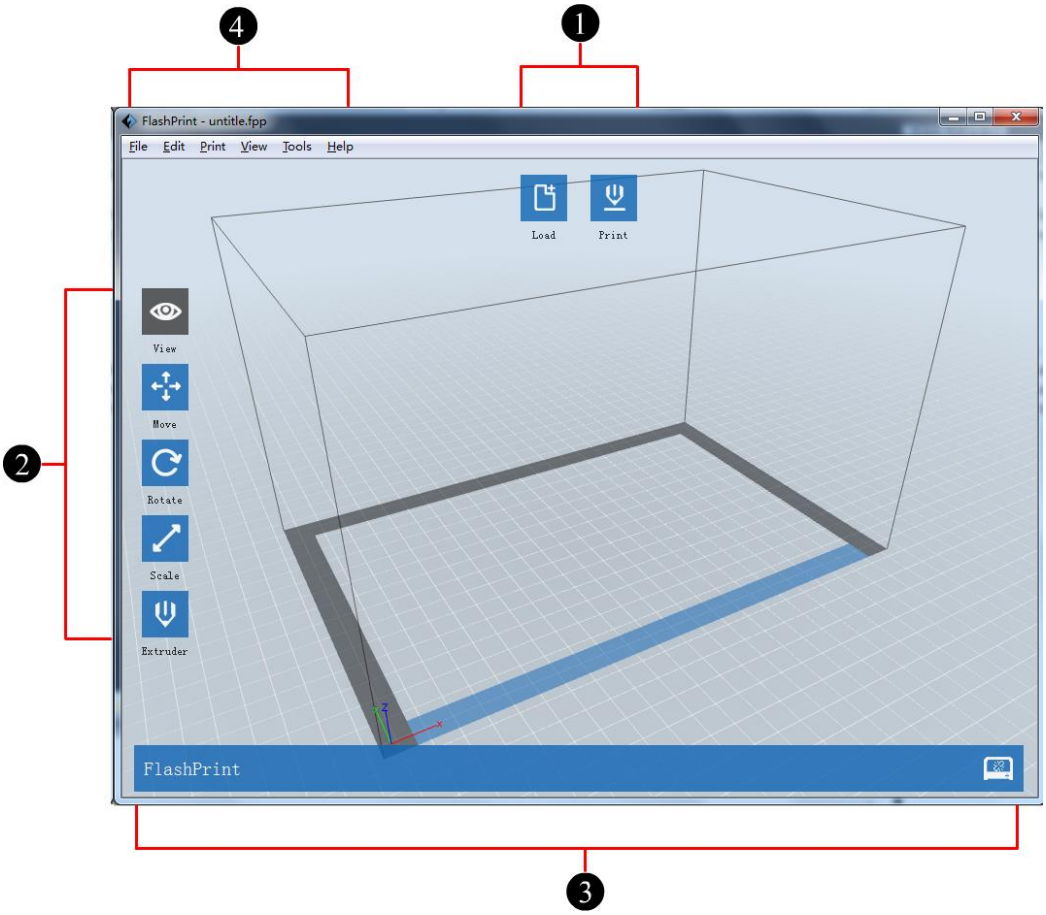
1.2 Installation & Start

A. Uncompress the downloaded RAR, and complete installation according to the instruction.

B. Connect your Dreamer desktop 3D printer with USB cable and make sure that the printer is connected to the computer successfully. Start the software with the shortcut on computer desktop or in the Start Menu.

Note: This software supports Windows XP/Win 7 32-bit and 64 bit/ Win 8 and Mac operating system.

2. Software Operating Instructions



 Load into one or multiple files.

 View FlashPrint home screen from one of six viewing angles.

 Move model around on xy-plane; shift+click to move along z axis

 Turn and rotate your model

 Scale the size of your model

 Select right or left extruder you want to print with

 Print it directly with your Dreamer or export to your SD card.

You can use Flashprint software to control Dreamer and perform printing tasks.

2.1 Load File

You can load a model file or Gcode file into the software by following six methods:

A. Click the “Load” button on top of the software interface. Then select the file which is needed for loading.

B. Select the file which is needed for loading, and then drag the file to the interface of the software.

C. Click the “File -> Load File” menu. Then select the file which is needed for loading.

D. Click the “File -> Examples” menu. Then select the file which is needed for loading.

E. Click the “File -> Recent Files” menu. Then select the file which is needed for loading.

F. Select the file which is needed for loading, and then drag the file to the icon of the software.

You can load into .stl, .obj, or .fpp model files which are editable in the software. Please refer to Chapter 2.2~2.5 and you can find instructions of that modification, such as operations of mouse, changes of view from different angles and how to edit and save the file. After modification, please refer to Chapter 2.6 if you want to slice the model file , generate Gcode file and Print it.

Important Note: Gcode file can not be edited any more, but you can directly start the printing after loading it into the software. Please refer to the Chapter 2.6.1 and 2.6.2.2 which tells you how to connect to Dreamer and how to print the Gcode file.

2.2 Mouse Operations

2.2.1 Left click

A. Select a model by moving the mouse to it and just left click it.
B. Select multiple models by holding the **Ctrl** key and left click models you want.
C. Model looks brighter when selected.
D. Model can be edited when selected.
E. Left click blank space to undo the selection of model.

2.2.2 Left click and hold the left button

When changing the viewing angles or editing models, different effects appears by left-clicking and holding the left button. Please refer to Chapter 2.3.1~2.3.2 & 2.4.

2.2.3 Right click and hold the right button

Same results in any operations when right clicking and holding the right button. Please refer to the Chapter 2.3.1 & 2.3.2.

2.2.4 Scroll the mouse wheel

Same effects in any operations when scrolling the mouse wheel. Please refer to the Chapter 2.3.3.

2.3 Change Views

Change your view of the model by moving, rotating, scaling the view and so on.

2.3.1 Move

You can move the view of printing frame in the software interface by following three ways:
A. Long-press the left button of mouse and drag.
B. Press and hold the middle button of mouse, and then drag the mouse.
C. Hold the **Shift** key, long-press the right button of mouse and drag.

2.3.2 Rotate

You can rotate the view of printing frame in the software interface by following two ways,
A. Long-press the right button of mouse and drag.
B. Hold the **Shift** key, long-press the left button of mouse and drag.

2.3.3 Scale

You can scale the view of printing frame in the software interface by scrolling the mouse wheel in any condition.

2.3.4 Set

You can set the view of printing frame in the software interface from six angels by following two ways to observe the model.(**Top/Bottom/Front/Back/Left/Right View**) .
A. Click the **View** menu, and then select the view you need to observe the model.
B. Click the **Look** button on the left of the software interface, and select the view you need.

2.3.5 Reset

A. Click the **View** menu, and then select **Home view** to reset the view.
B. Click the **Look** button on the left of the software interface, and then click **Reset** button to reset it.

2.3.6 Show Model Outline

Click the **View -> Show Model Outline**, it will highlight the outer surfaces of your model file with gray and white color.

2.3.7 Show Steep Overhang

Click the **View -> Show Steep Overhang** menu. When the intersection angle between the model surface and horizontal line is within the overhang threshold value, we say the surface has steep overhang and it becomes red in the software. Overhang threshold value could be set as needed. The default value is 45 degree.

2.4 Edit Models

You can edit the models by moving, rotating, scaling the model and so on.

2.4.1 Move

When the model is selected, you can change model location on the build platform by the following two ways:
A. Click **Move** button on the left of the software interface. Long-press the left button of mouse and drag, you could adjust the location of the model in XY direction. Hold the **shift** key, and long-press the left button of mouse and drag, you can adjust the location of the model in Z direction. You can see the distance and direction of the movement which refers to the relative distance between present and former location.
B. Click **Move** button on the left of the software interface and then enter the distance value you want to move on X/Y/Z axes positioning. Click **Reset** button to reset distance values.

Note: Generally, we suggest you to click the **Center** and **On Platform** buttons after adjusting location of the model to make sure the model within the printing scope and sticking to HBP. Only click **On Platform** button if you want to print the model in a specified position.

2.4.2 Rotate

When the model is selected, you can change the orientation of your model on the build platform by following two ways:
A. Click **Rotate** button on the left of the software interface and you can find three mutually perpendicular rings whose color is red, green and blue. Click one ring and rotate on the present axis, you will see the rotation angle and direction in the center of circle. In this way, you could make the model rotate on X/Y/Z axis.
B. Click the **Rotate** button on the left of the software interface, and then enter into rotating angel values in X/Y/Z axes positioning. Click **Reset** button to reset rotating angel values.

2.4.3 Scale

When the model is selected, you could change the size of the model on the build platform by the following two ways.

A. Click **Scale** button on the left of the software interface, then press the left button and move the mouse to adjust the size of the model. You will see corresponding values of different axes near the borders.
B. Click **Scale** button on the left of the software interface, and then enter into scale values in X/Y/Z axes positioning. Click **Maximum** button to get largest size possible for building. Click **Reset** button to reset the size of model.
Note: Select **Uniform Scaling** option, it will scale the model in equal proportion when changing value in any positioning of the model. Not select this option, it will only change the value of the corresponding positioning.

2.4.4 Set

When the model is selected, click **Extruder** button on the left of the software interface and select the extruder you want to print with. The model will turn purple if you choose left extruder or gray if right extruder.

If a model can be printed with dual extruders or the support is needed to complete the printing, you can use dual extruders to print it with different color filaments or even different kinds of filament. However, dual extrusion printing is not available when the model can only be printed with one extruder. You need to know whether the model diagraph has single or dual colors when selecting the model. Dual-color model is combined with two single color models.
Note: When setting the extruder, mouse operations are same as those of changing views. Please refer to the Chapter 2.3.1~2.3.2.

2.4.5 Others

2.4.5.1 Undo

Undo the most recent edit you made to your model file by following two ways:
A. Click **Edit-> Undo** menu.
B. Use the shortcut **Ctrl+Z**.
Note: Selecting this option multiple times will continue to undo edits in reverse order in Which they were performed.

2.4.5.2 Redo

Redo the most recent edit you have undone to your model file by following two ways:
A. Click **Edit-> Redo** menu.
B. Use the shortcut **Ctrl+Y**.
Note: Selecting this option multiple times will continue to redo edits in reverse order in which they were removed.

2.4.5.3 Select ALL

By the following two methods, you could select all models in the scene.
A. Click **Edit-> Select ALL** menu.
B. Use the shortcut **Ctrl+A**.
Note: When models are too small to be seen or out of viewing scope, please click **Center** and **On Platform** buttons after selecting all models to bring them to the printing scope.

2.4.5.4 Duplicate

After model is selected, you can duplicate it by the following two methods:

A. Click the **Edit-> Duplicate** menu.

B. Use the shortcut **Ctrl+D**.

2.4.5.5 Delete

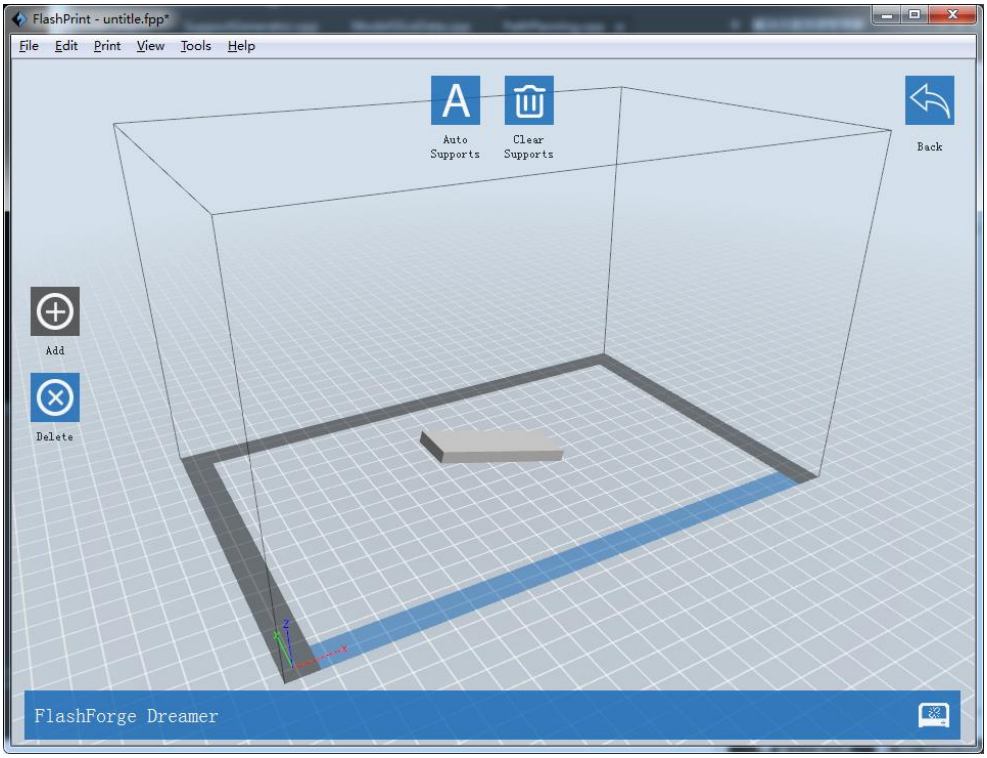
After model is selected, you can delete it by the following two methods:

A. Click the **Edit-> Delete** menu.

B. Use the shortcut **Del**.

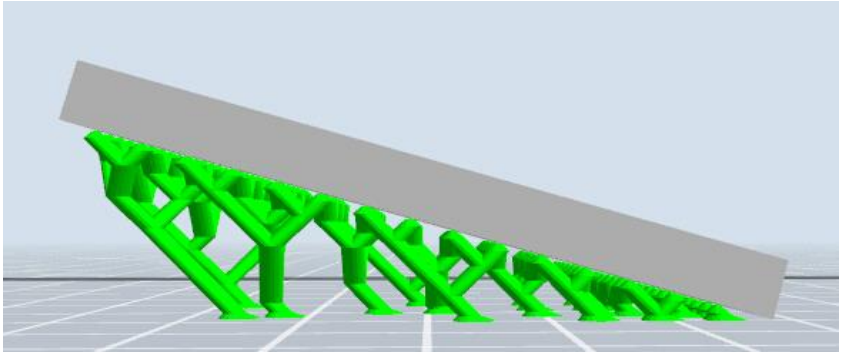
2.5 Edit Supports

After model file is loaded, click **Edit->Supports** in the top menu, you can edit the support structures of your model. Click **Back** on the top-right corner to exit when finishing the edits.



2.5.1 Auto Supports

Select this option to have your model build with support structures. FlashPrint software will automatically generate supports for any overhanging sections of your model, and it will generate new support structures to replace original ones included in your model file.



2.5.2 Clear Supports

Select this option to empty all the supports of your model. Click **Edit->Undo** in the menu or **Ctrl+Z** to undo this operation.

2.5.3 Add

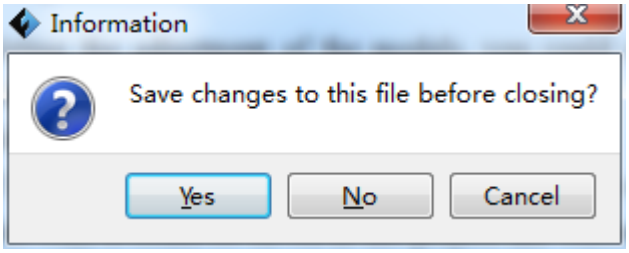
Select this option to add supports. After selecting this option, move the mouse to where you want to add the support, and then left-click the mouse to select the start point of support structure. Press and hold the left mouse button down, drag the mouse, and then you can preview the support structure you will add (If the support surface does not need to support or the angle of support column is too large, the previewed support structure will be highlighted.) Release the left button of mouse to add this support, the support structure will be generated according to the start and the end position. But if the support column intersects with the model or the previewed support structure is highlighted, support structure will not be generated.

2.5.4 Delete

Select this option to delete supports. After selecting this option, move the mouse to the supports you want to delete, then left-click the mouse to delete it.

2.6 New Project

Click **File -> New Project** to create a new project. If your current project hasn't been saved with changes, it will pop up a dialog to prompt you to save them. Click **Yes** button to save those changes, click **No** button to discard them, Click **Cancel** button to close this dialog and it will not create a new project.



2.7 Saving File

You can save changes of your model files by following two ways:

A. Click **File -> Save Project** to save your file only with .fpp format. All the models(including supports) in a .fpp format file are independent and they can be edited again when reloading the file. Besides, extruders' configuration and models' locations remain same as saving the file.

B. Click **File -> Save As** to save your file with .stl, .obj, or .fpp format. All the models (including supports) in a .stl or .obj format file are not independent, but combined to a new model. Models' locations remain same as saving the file, while extruders' configuration becomes different when reloading the file.

2.8 Printing Process

2.8.1 Choose Machine Type

Click Print-> Machine Type to choose the machine type you have before connecting to the printer, or the FlashPrint will automatically recognize the machine type after connecting, in this case you can not manual switch to other machine type(s). Different machine types have different machine frames which will affect sliced file(s).

2.8.2 Connect Machine

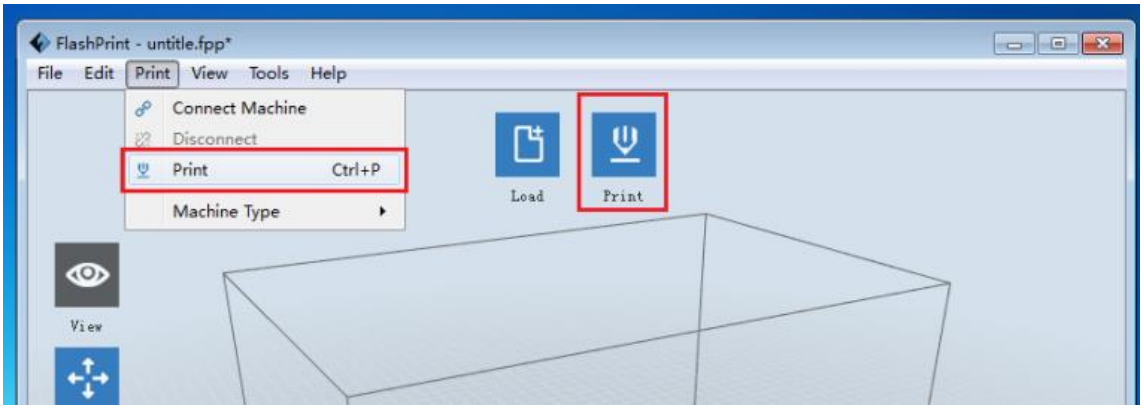
Please refer to Chapter 2.9.1.1 for configurations of connecting to Dreamer 3D printer.

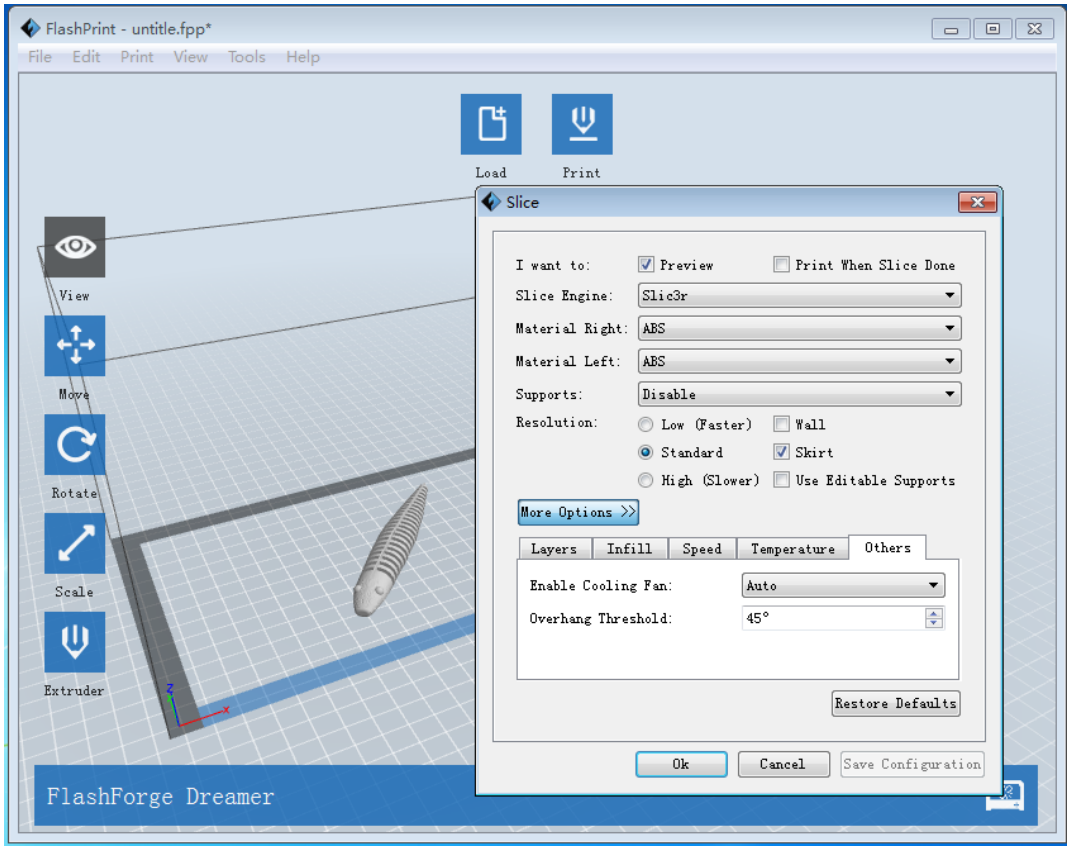
2.8.3 Print

2.8.3.1 Generate Gcode File

In order to print, you need to slice the model file to generate gcode file firstly through following steps:

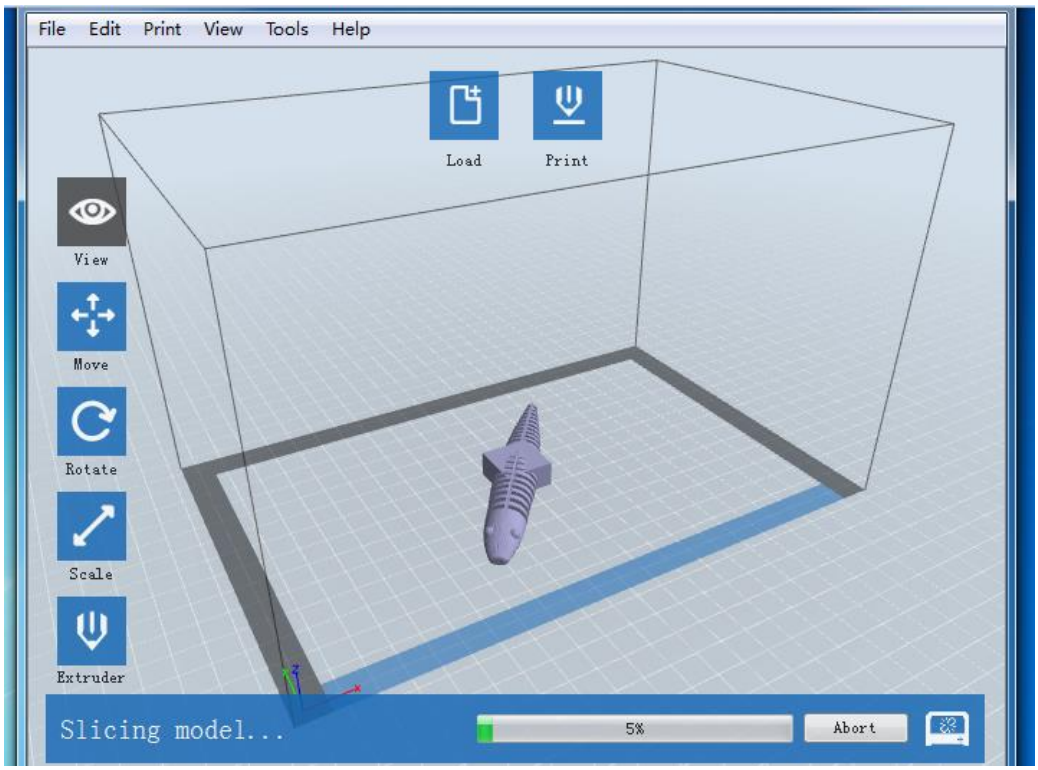
1. Click **Print -> Print** menu or **Print** button on top of the software interface, it will pop up a dialog box for slicing.



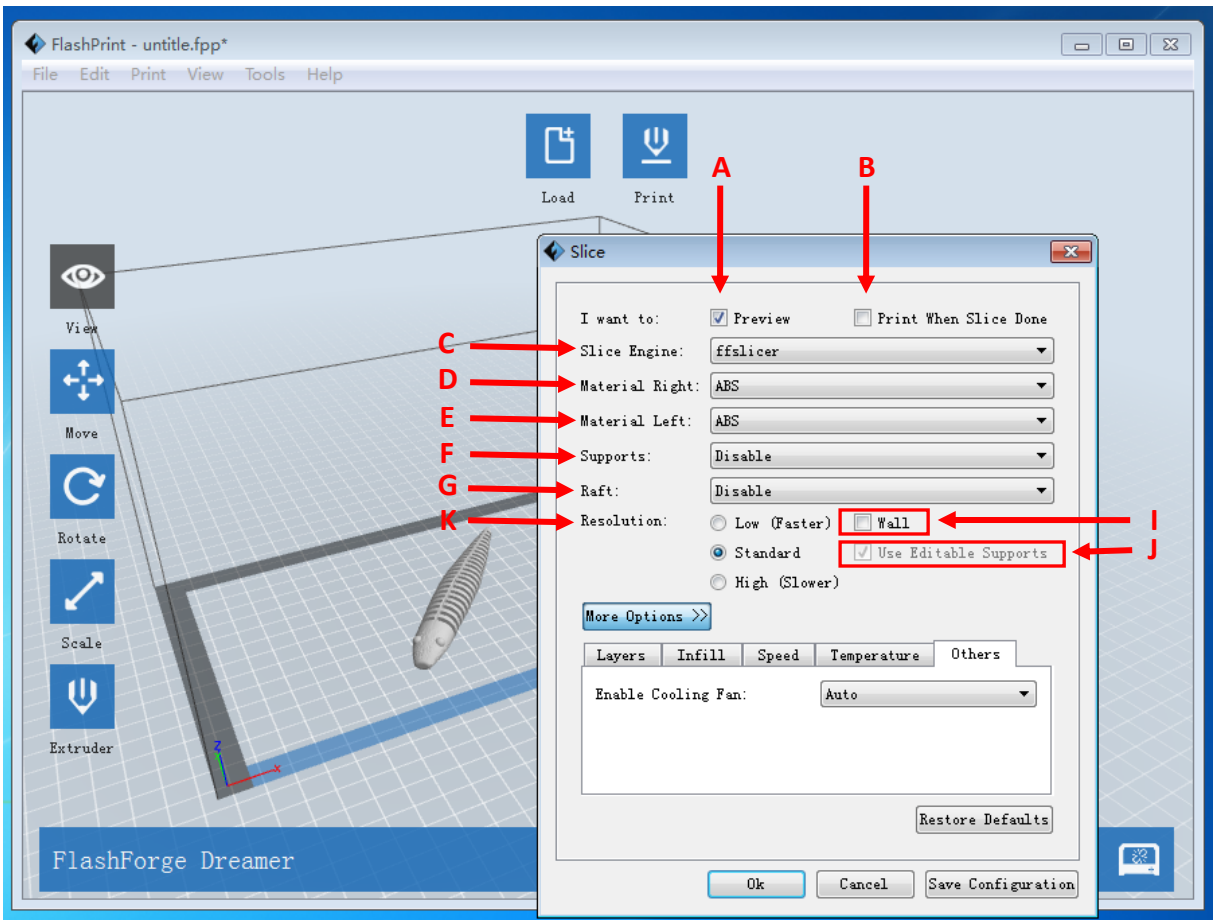


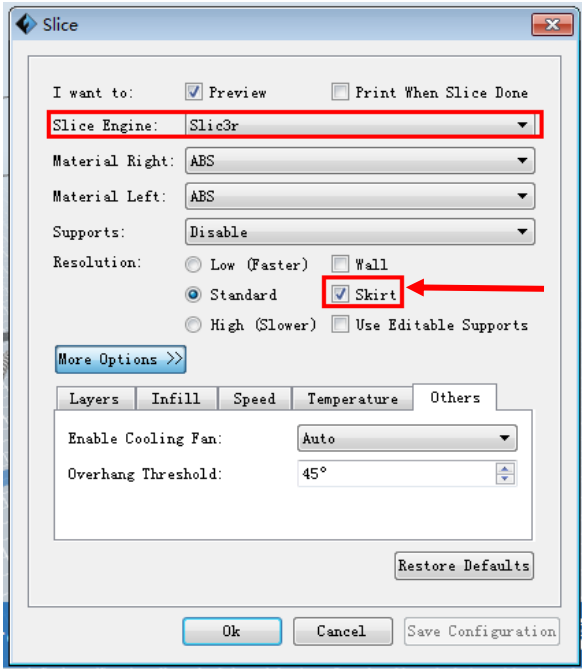
2. Set slicing parameters and click **Ok** button, and it will pop up a dialog box for saving Gcode file.

3. In the **Save as** dialog box, select the path for saving the Gcode file, and then click **Save** button. You can see the bar at the bottom of software interface start to show the completion progress of slicing, which means it is slicing and uploading Gcode file now. Click **Abort** button on the right side of the process bar to give up slicing.



2.8.2.2 Explanation of Slicing settings





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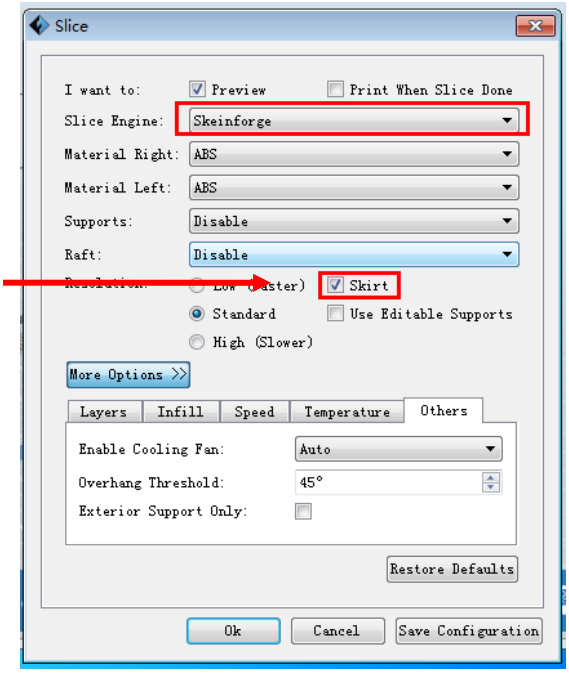


A. Preview: Select this option to preview the Gcode file when slicing finished.

B. Print When Slice Done: Select this option to directly print the model.

C. Slice Engine: Three slice engines are provided: Slic3r, Skeinforge and ffslicer. Different slice engines have different configurations. Recommend users to select Slic3r as it has a better performance.

D. Material Right: Choose filament type you want to print with right extruder.

E. Material Left: Choose filament type you want to print with left extruder.

F. Supports: Choose Left or Right Extruder to print supports when overhang is existing, or Disable when no need.

G. Raft: Choose Left or Right Extruder to print raft which can make the model attach well to the build plate, or Disable when no need. (Note: Slic3r has no this function, while Skeinforge has this function with default extruder to print the raft. You can choose left or right extruder to print the raft when using ffslicer.)

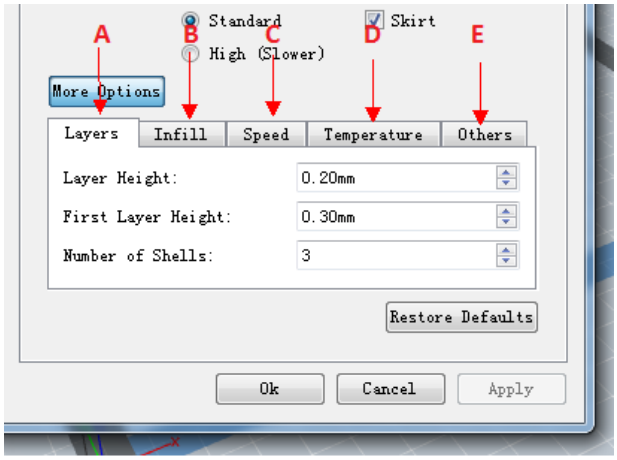
H. Skirt: Select this option to help extruder extrude filament more smoothly. (Note: ffslicer has no this function.)

I. Wall: Select this option to scrape extruded filament from a non-printing extruder during dual extrusion print. (Note: Skeinforge has no this function. This function can't be used with **Skirt** at the same time.)

J. Use Editable Supports: Select this option to disable the built-in supports function in the slice engine and use the support structures generated by FlashPrint software. As ffslicer has no built-in support function, so this function is always enabled.

K. Resolution: When printing right extruder with ABS or dissolvable filament, you can select High option with better print but lower speed, or Standard option, or Low option with normal print but high speed. Each option has its own configured parameter. While printing right extruder with PLA filament, you have the fourth option, which is Hyper with hyperfine print.

Click **More Option** button to set the parameters as you want. Different resolutions have different default parameters. Click **Restore Defaults** to restore it.



A. Layers

a. Layer Height is the height of each layer. The lower value of layer height is, the finer surface of the model will be .

b. First Layer Height exists when users choose Slic3r as the slice engine, and it affects the adhesion degree between model and platform. The max value is 0.4mm. Normally we

recommend you to use default value.

c. Number of Shells is the quantity of shells of each layer. The max value is 10.

B. Infill

a. Fill Density means fill rate.

b. Fill Pattern is the pattern of filling shape which effects printing duration.

C. Speed

a. Print Speed is the moving speed of the extruder. Generally, the lower speed is, the better print you will get. For **ABS printing**, **60** is recommended; for **PLA printing, 80** is recommended.

b. Support Print Speed is needed to set when choosing Slic3r as the slice engine which can control the moving speed of the extruder when printing the supports.

c. Travel Speed is to control the moving speed of the extruder under non-printing status during work. For **ABS printing, 80** is recommended; for **PLA printing, 100** is recommended.

Note: Modify parameters settings to get better prints as different models need different parameters.

D. Temp. Set the temperature for left or right extruder and platform. Set **220** to the **extruder temp** for **ABS and PLA printing**. Set **110** to the **platform temp** for **ABS printing** while **50** for **PLA printin**g. **Adjust the temperature according to the condition in order to get a good print.**

E. Others

a. Turn Fan On is to turn on the back fans to cool the chamber if printing PLA .

b. Overhang Threshold helps to measure whether a support structure is needed or not. If the intersection angle between model surface and horizontal line is within the overhang threshold value, then this surface needs a support.

2.8.2.3 Print Gcode File

After finishing slicing, it will load into the generated Gcode file automatically if you select **Preview** option when slicing, or need you manually load into it and then go to preview interface. In the preview interface, there is a vertical scroll bar which shows each layer of the model and you can find **Estimated Material Right** and **Estimated Print Time** it costs on the top right corner. Then click **Print** button on the same location, the machine starts to print while click **Back** button to exit from Preview mode.

2.8.2.4 Pause or Terminate Printing

Once printing starts, click the machine icon on the bottom right corner of the software interface and it will show the process status in a frame. Click **Pause** button to pause printing and then click **Continue** button to resume it. Click **Stop** button to cancel this printing task and you need to restart this print task if you want to print it again.

Note: Please **DO NOT** click **Pause** button unless necessary, for it will affect printing result.

2.9 Printer Operations

2.9.1 Connect / Disconnect

You can connect Dreamer to Flashprint software via USB cable or WIFI. The machine icon on the bottom right corner of the software interface shows a broken chain pattern means disconnected, while shows a unbroken one means connected.

2.9.1.1 Connect

A. USB cable connection

a. Find USB ports on the right-side of machine and computer, plug in and connect.

b. Open Flashprint software and turn on the printer.

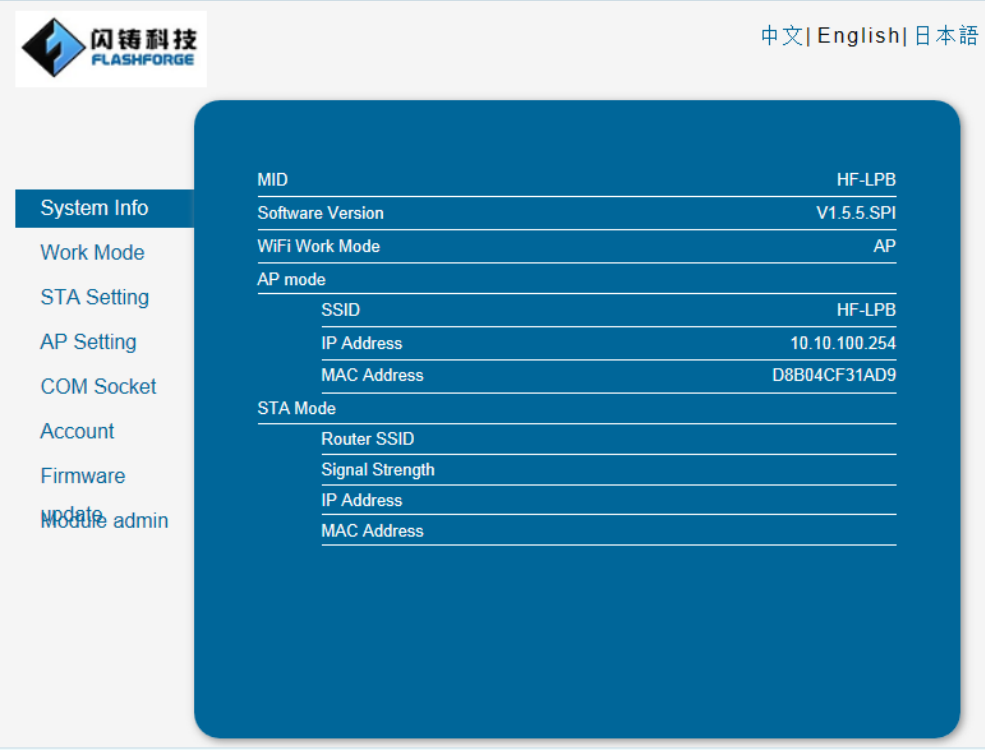
c. Click **Print -> Connect Machine** menu, then select USB in the **Connection Mode** option and select machine you want to connect in **Select Machine** option. If you can not find your machine, click **Rescan** button to scan your machine and select it. Finally click Connect button to connect to the printer. If you still can not find your machine after rescan, which means you haven't installed the driver in the software. You have to install the driver manually, please refer to the Chapter 2.8.3.1. Normally, driver shall be installed automatically along with software.

B. WIFI connection

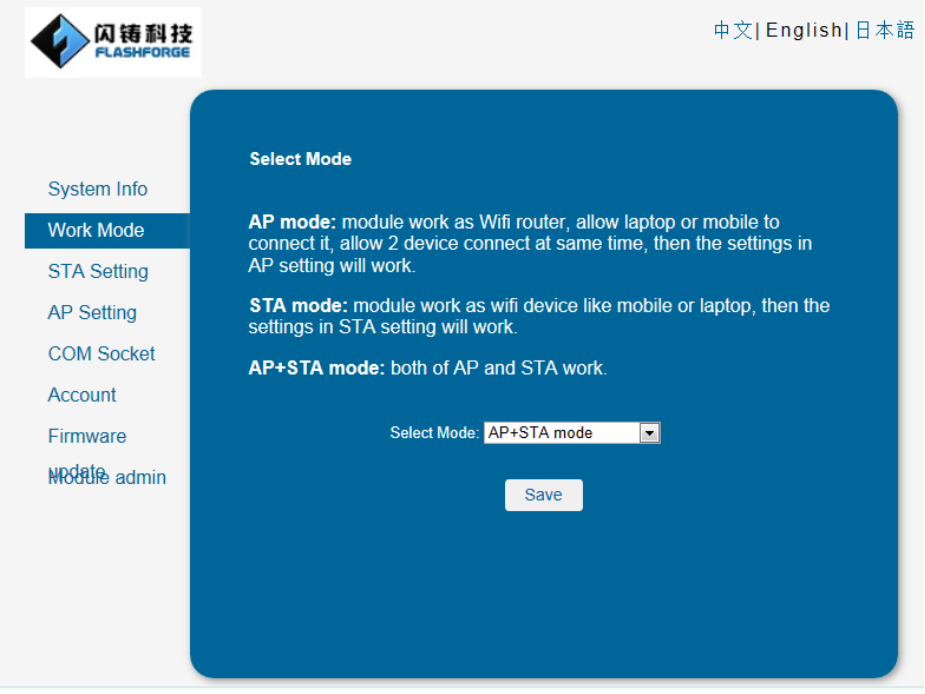
a. Via wireless network

1. Switch on the printer, and make the WIFI available by clicking the menu **Tools ->Set up->WIFI->WIFI ON**.
2. Open the wireless network connection in your computer, and choose .LPB wireless network. It is the default network of the printer, and no password is needed if you haven't changed the settings.

3. Open your browser and enter the IP address **10.10.100.254** in the Address Bar. Then enter in **admin** as the account and password . (The above-mentioned IP address /Account /Password are default when the setting haven't been changed)

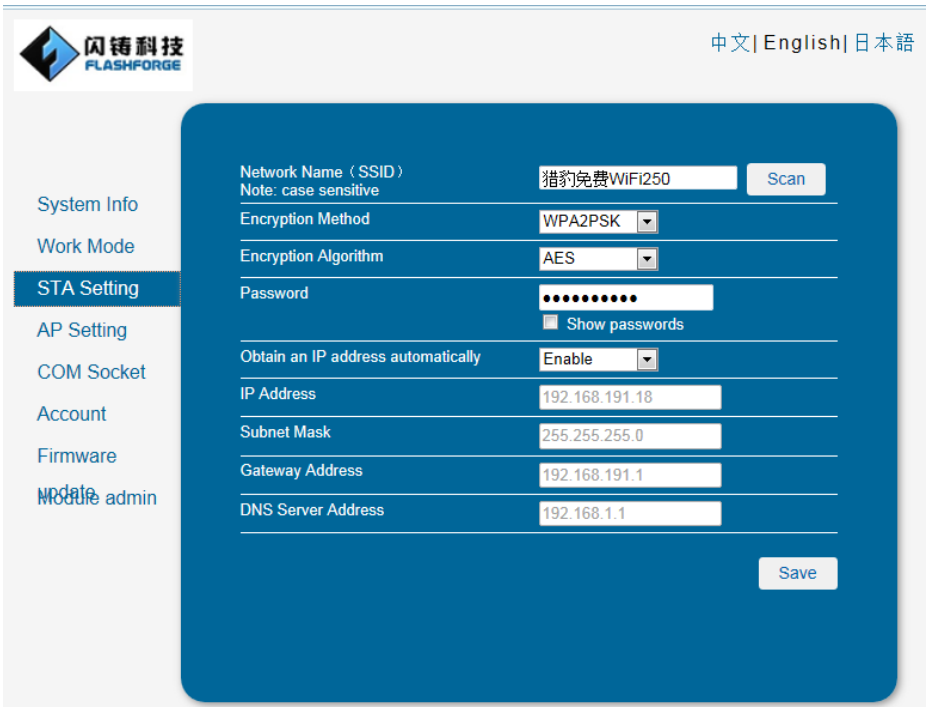


4. Click **Work Mode**, then choose AP+STA mode and save it. Please don't click **Reboot** button yet.



Note: If you choose the STA mode only, the printer may be unable to connect WIFI with the wrong STA setting. In this condition, it has the risk of being unable to connect the WIFI forever.

5. Click STA Setting, and then click Scan button and choose a commonly used network. Type in password, save it, and then click Reboot to the printer.



6. 5 seconds after the reboot, choose disconnect and try to connect WIFI again. Open FlashPrint, click the menu Print->Connect to select WIFI connection, and then enter the network IP address (same as the IP showed on the touchscreen) in the IP port option. Finally click connect to complete it. After this, you do not need to connect WIFI in the future if no WIFI setting is changed. If you want to change WIFI setting, please try the same way.

b. Via wireless source set by the printer

1. Switch on the printer, and make the WIFI available by clicking the menu **Tools ->Set up->WIFI->WIFI ON**".
2. Open the wireless network connection in your computer, and choose .LPB wireless network. It is the default network of the printer, and no password is needed if you haven't changed the settings.
3. menu **Print -> Connect**, and select Wi-Fi in the **Connection Mode** bar. Type in 10.10.100.254:8899 in the **IP Address, Port** bar, then click **Connect** button to complete it.

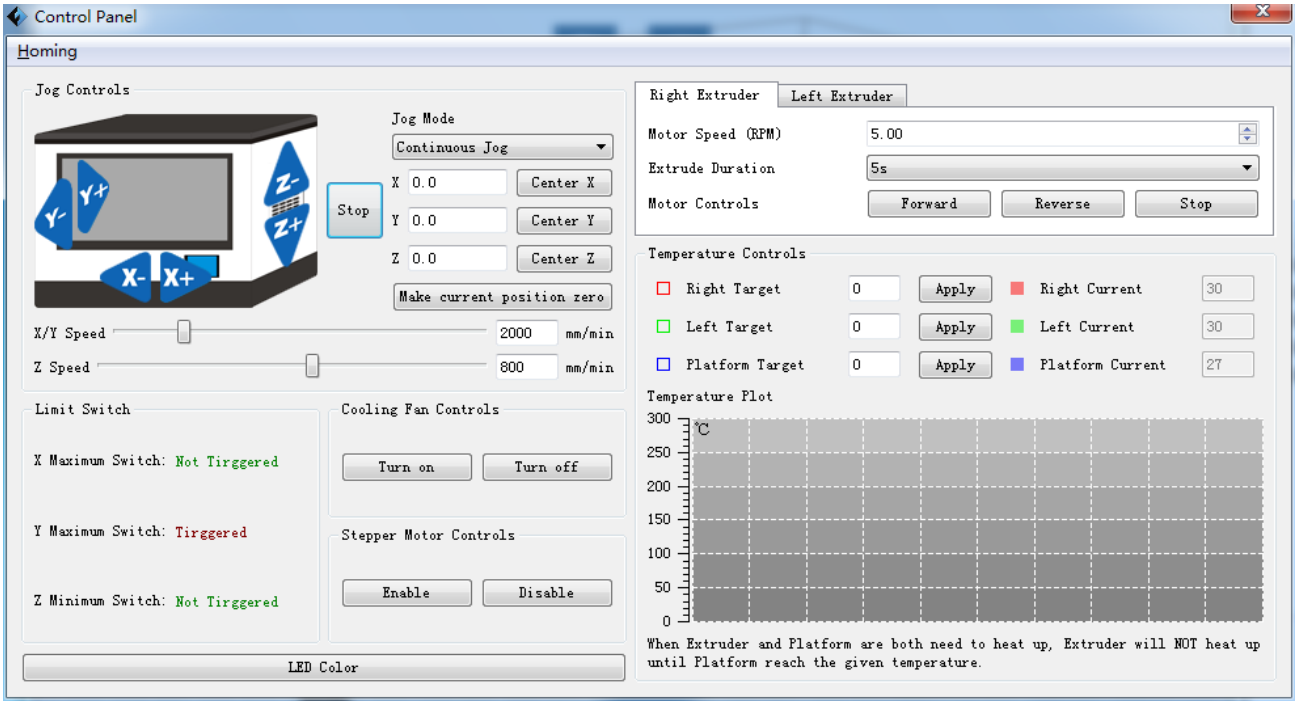
Note: One printer could only have one connection. If printer is operating by another process, connections should be switched off firstly and try to connect again. If AP mode is chosen, the computer will be unable to go online by WIFI.

2.9.1.2 Disconnect from the printer

Click **Print -> Disconnect** menu on top of the software interface, the computer will disconnect from the 3D printer.

2.9.2 Control Panel

After connection between software and 3D printer is built, click **Tools->Control Panel** menu to open the control pane. Following operations are available in the control panel to control the printer.



A. Jog Controls

a. Jog Mode:

You could set the distance the extruder or the platform moves by a single jog click time.

b. Direction Buttons:

These six blue-arrow buttons are set to control the movements on X/Y/Z directions. Click the direction buttons of x-axes and y-axes to control the horizontal movements of the extruder. Click the direction buttons of z-axes to control the vertical movements of the platform. Click X- button to make the extruder move to the left; click X+ button to make the extruder move to the right. Click Y- button to make the extruder move forward; click Y+ button to make the extruder move backward. Click Z- button to make the platform move upward; click Z+ button to make the platform move downward.The distance of movement will be showed in the X/Y/Z value bar.

c. Stop Button:

Click this button to terminate current movement.

d. Coordinate frame:

It displays the coordinated positions of extruder and platform.

e. Make current position zero button:

Click this button to set the current position of the extruder and platform as the origin of coordinates.

f. Center X/Y/Z button:

Click these buttons to return the extruder or platform to the origin of coordinates automatically.

g. X/Y/Z Speed sliding bar:

Set the moving speed of the extruder and platform by sliding the speed sliding bar.

B. Limit Switch

In order to protect the 3D printer, there are three limit switches on X/Y/Z axes used to control the movement limited position. they have the following two statuses:

a. Open Status:
If the extruder or platform has not reached to the limit position of X/Y/Z direction, the switch won't be triggered and its status is **Open**.

b. Triggered Status:
If the position of extruder or platform has reached to the maximum of X/Y/Z direction, the limit switch will be triggered and its status will be turn into **Triggered**.

C. Fan Controls
Click **Open** button to turn on the cooling the fan, while **Close** button to turn it off.

D. Stepper Motor Control
It is used to control the stepper motor. Click **Open** button to lock the stepper motor and users can not adjust the position of extruder and platform manually, while **Close** button to unlock it and users can do manual adjustment on extruder and platform.

E. LED Color
The printer has a built-in LED, Click **LED Color** button to change its color built in the printer.

F. Extruder Setting
In the interface of extruder setting, you could feed in or withdraw the filament from the left/right extruder. By changing the value of "Motor Speed (RPM)", you could control the speed of feeding in and withdrawing filament. In addition, you could control the time of these actions through changing the value of "Extrude duration". Generally, we suggest you set the extrude duration as **60s**.

Before feeding in or withdrawing the filament, the extruder should reach target temperature to melt the filament before you click **Forward / Reverse** button to start these operations. For ABS filament, target temperature of extruder is 220℃; for PLA filament, target temperature of extruder is 200℃. Click **Stop** button to stop feeding in or withdrawing filaments .

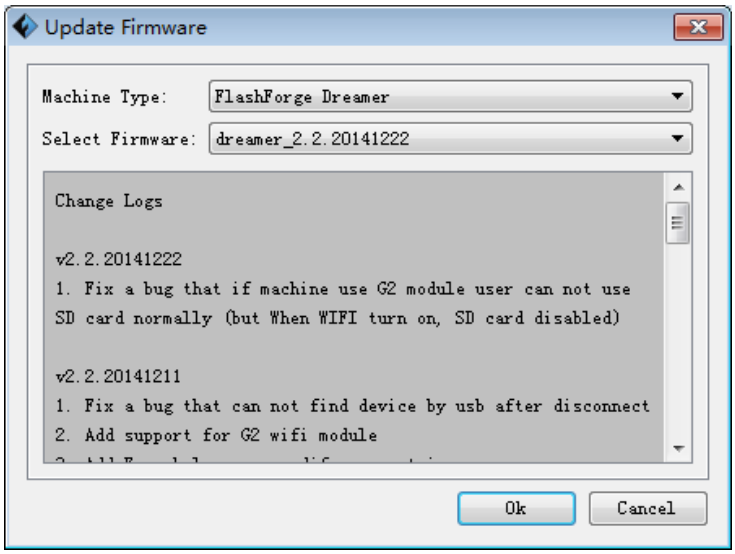
G. Temperature Control
Type in the target temperature in the left blank and click **Apply** button to heat the extruder or platform. The printer starts to heat the extruder or the platform, and you will see the actual temperature the extruder or platform has reached on the right and a temperature changing table with 3 different color curve line below.
Note: The printer will heat platform firstly to reach target temperature and then heat extruders when both are needed to heat.

2.9.3 Firmware Upgrade

The software will check and download updates automatically when users open it, and remind users to upgrade to new version if available. Ways to install firmware as follows:

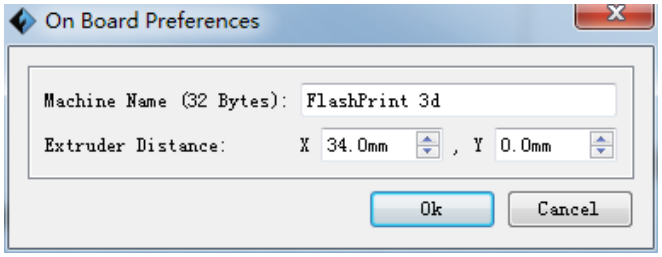
A. Disconnect the computer and printer, or Click **Tools -> Update Firmware** menu and select **Disconnect** option,

B. Select your machine type and corresponding firmware in the popped up dialog and then click **Ok** to upgrade. If the machine is idle, it will start to upgrade to new firmware.



2.9.4 On Board Preferences

When the printer has been connected, click **Tools-> On Board Preferences** menu to review the configuration of mother board including Machine Name, and Extruder count etc. When choosing extruder count as 2, Extruders Distance option is available. Users can modify the X/Y distance between the extruders as need.The X/Y distance refers to the distance of X or Y directions between the two extruders.



2.9.5 Machine Information

When the printer has been connected, click **Tools->Machine Information** menu to review the information about the machine, including MACHINE TYPE, MACHINE NAME, FIRMWARE VERSION, etc.

2.9.6 Driver Installation

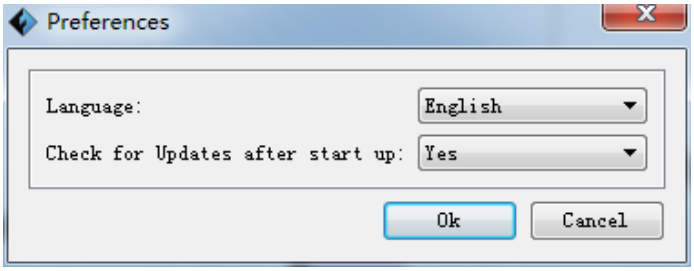
A. Open the root directory of the software. (e.g. C:\Program Files\flashforge\FlashPrint)

B. Open the driver folder which in the root directory and find the driver. There are two driver installation packages, please install one of them according to your computer system. For 64bit edition, please install dpinst_amd64.exe file; while for 32bit edition, please install dpinst_x86.exe file.

2.10 Others

2.10.1 Preferences

Click **File-> Preferences** menu to select the interface language and etc.



A. Language

So far this software supports English, Japanese, Simplified Chinese and Traditional Chinese.

B. Check for Update after Startup

Select **Yes** option to command the software auto-check updates after starting up it. The software will remind you to update to new version when it is available after checking.

2.10.2 Help Contents

Click **Help-> Help Contents** menu to be directed to online user manual.

2.10.3 Check for Updates

A. Automatic Update

Refer to 2.9.1 to set auto update.

B. Manual Update

Click **Help-> Check for Updates** menu to check new version of software online. If a new version is available, it will remind you to download and install the new one. Please refer to the Chapter 1.1~1.2 to install the software.

2.10.4 Software Information

Click **Tools-> About FlashPrint** menu to review information about the software, including software version and copyrights.