RaiseTouch E2 User Manual

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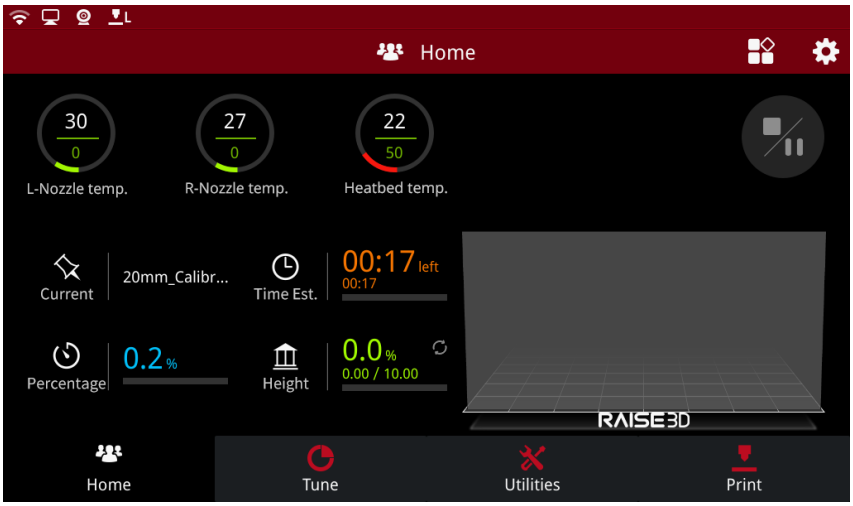
1.User Interface

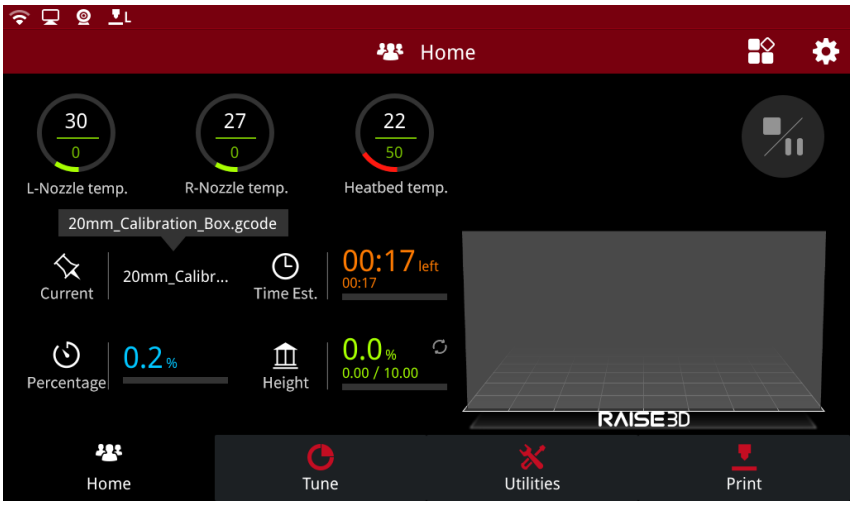
1.1 Home

The Home interface mainly introduces the relevant parameters of the printing file. Including:
L-Nozzle temp: The temperature of the left nozzle. Upper one is current temperature. Below one is target temperature.
R-Nozzle temp: The temperature of the right nozzle. Upper one is current temperature. Below one is target temperature.
Heatbed temperature: The temperature of the heatbed. Upper one is current temperature. Below one is target temperature.



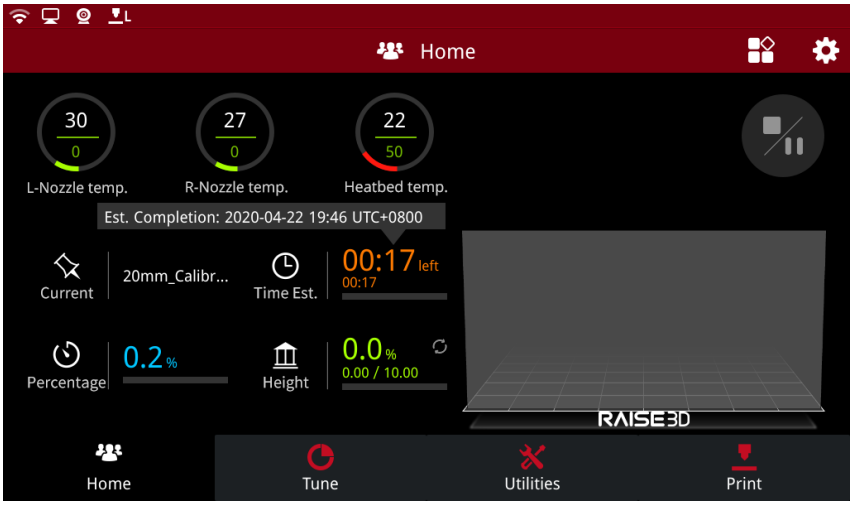
Home

Current: Click to read the name of the printing model.



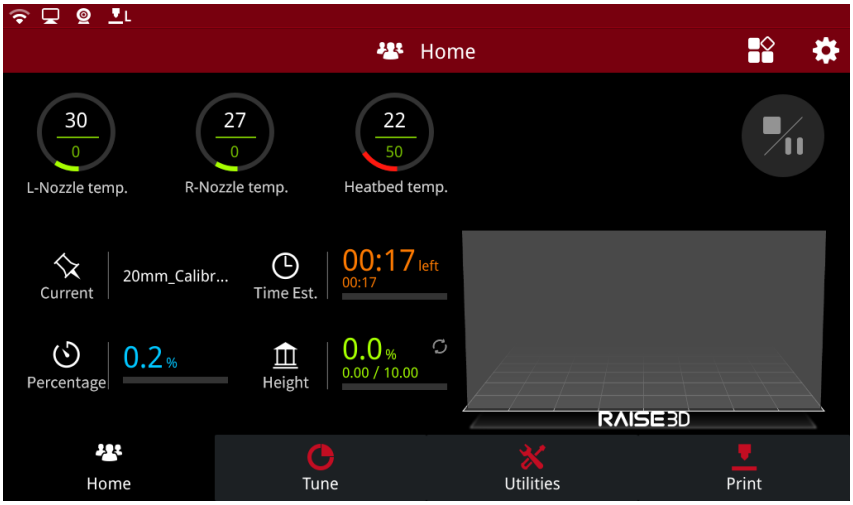
Current

Time Est.: The total time and the remaining time of the printing model. The bigger one refers to the remaining time. The small one below refers to the total time. Click the **"Time Est."** to read the estimated time.



Time Estimated

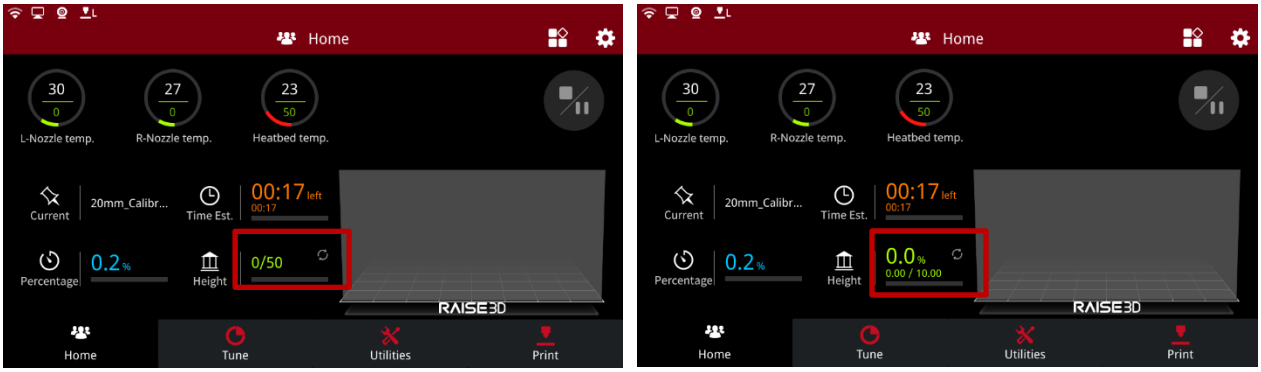
Percentage: The percentage of completed model.



Percentage

Height: The height of the completed model.

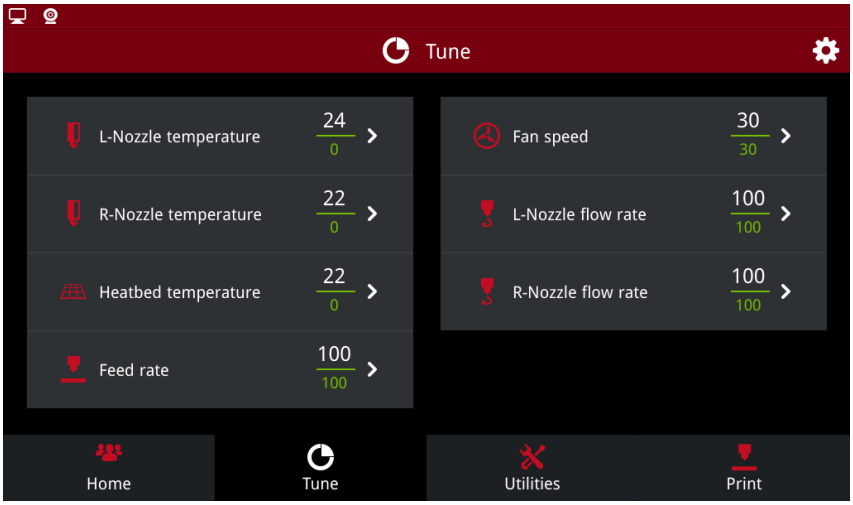
Press icon in the "**Home**" tab to switch the displayed information from completion percentage based on total layers and layer count.



Height

1.2 Tune

The Tune interface shows the parameters associated with the movement of the printer. Including:

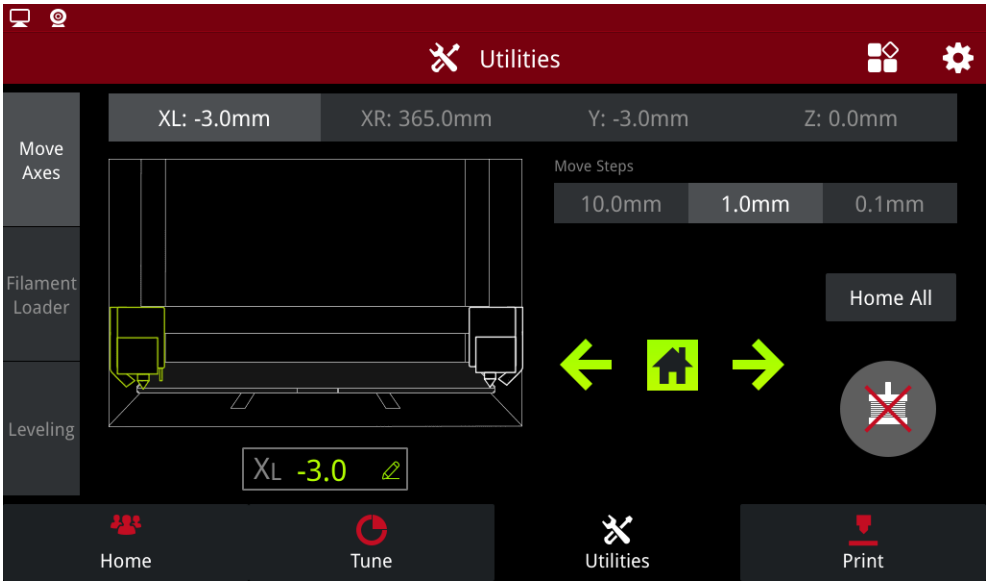


Tune

L-Nozzle temperature: The temperature of the left nozzle.
R-Nozzle temperature: The temperature of the right nozzle.
Heatbed temperature: The temperature of the heat bed.
Feed rate: Speed factor override percentage.
Fan speed: The speed of the fan which in controlled slot.
Note: Only the right lower fan on single-extruder machine can be controlled.
L-Nozzle flow rate: The flow rate of the left nozzle.
R-Nozzle flow rate: The flow rate of the right nozzle.

1.3 Utilities

"The Utilities" page is divided into three functional modules, Move Axes, Filament Loader and Levelling. The position of the nozzle and heat bed can be adjusted on the Move Axes page. In the Filament Loader page, you can Load/Unload filaments for left and right extruders. You can carry out the flatness detection of the heat bed on the Levelling page.



Utilities

1.3.1 Move Axes

Nozzle selection: Select the nozzle that needs to be adjusted. **"XL"** represents for left nozzle; **"XR"** represents for right nozzle; **"Y"** represents for hot bed; **"Z"** represents for screw rod fixing nozzles.

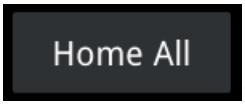
Unit Settings: The distance that the currently selected component moves each step. It can be set to 10 mm,1mm or 0.1 mm per step.

Travel range: XL travel range [-3,330mm], XR travel range [32,365], Y travel range [-3,240], Z travel range [-3,240]

Click on the **"XL"**, a dialog box will pop up, asking you to enter the **"XL absolute coordinates"**. Enter the value, XL will be automatically adjusted to the corresponding position. XR, Y and Z can be adjusted the same way.

: Nozzle homing or Y axis homing (depending on whether the nozzle or Y axis is currently selected).

: Z axis homing.



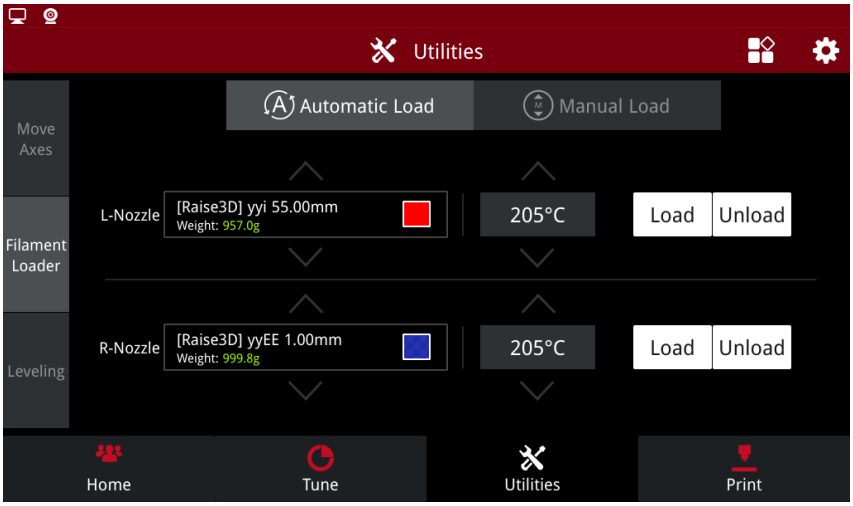
: Homing nozzles, heat bed and Z axis.

: Unlocking all motors. This sign is not a warning sign, If the X axis and Y axis are homed, the extruders cannot be moved manually. Click the button to unlock the motor to remove the extruders.

1.3.2 Filament Loader

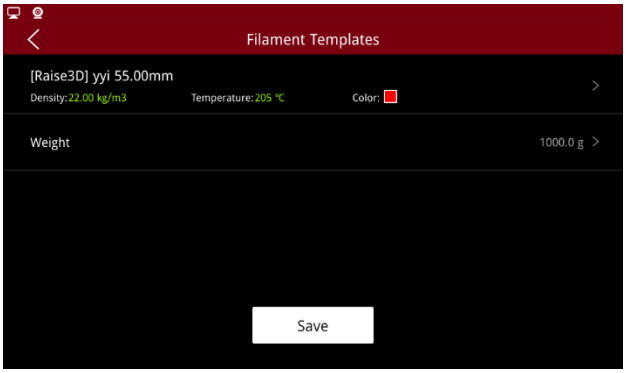
1.3.2.1 Automatic Load

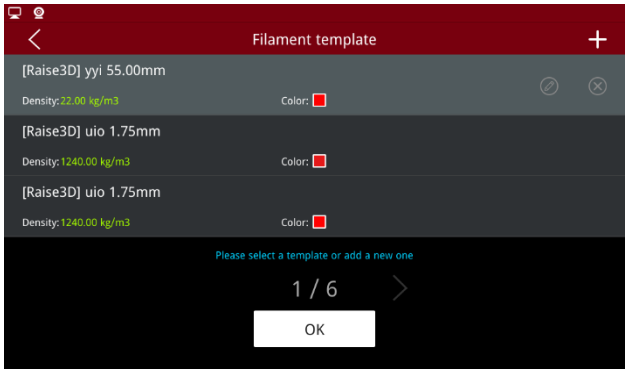
Click **"Filament Loader"** on the left to enter the Filament Loader page, the Automatic Load page will be displayed by default.



Automatic Load

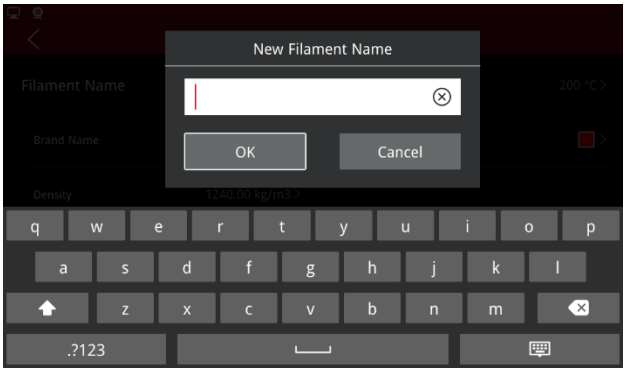
Click on the red box area to enter the Filament Templates list. Please select the filaments template that needs to be loaded or unloaded.

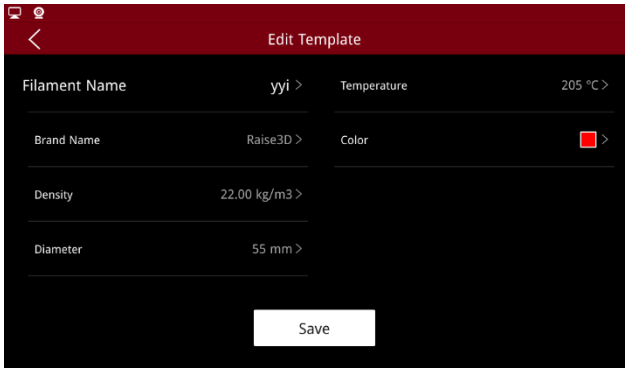




Template List

Click **"+"** icon on the top right corner of the interface to enter the filament template page. By default, the system provides the template for Raise3D Premium PLA filaments, please modify the template parameters as needed. Click **"Save"** to save template information.



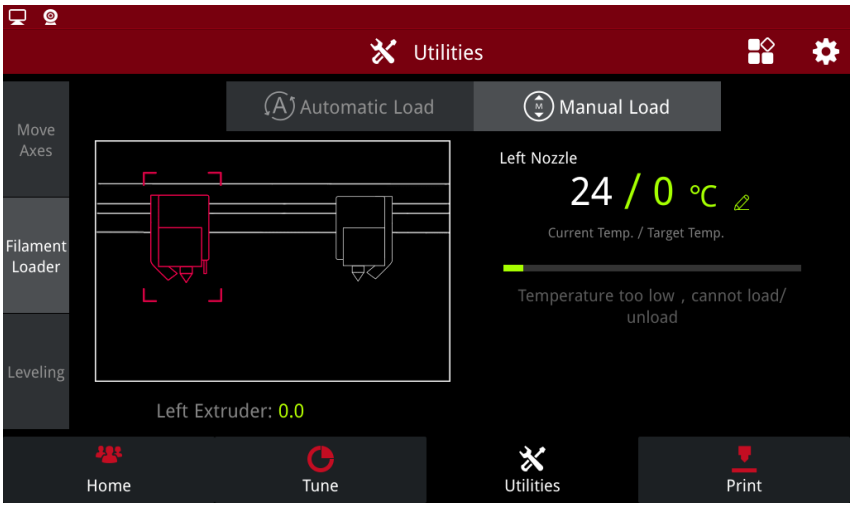


New Template

1.3.2.2 Manual Load

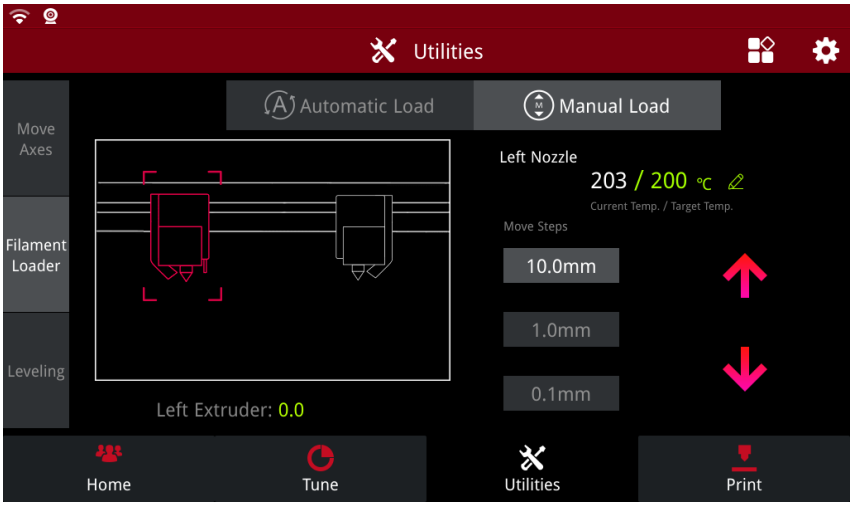
Click the button to enter **“Manual Load”** page.

Click on the modify icon in the lower right corner of the temperature to modify the target temperature and wait.



Manual Load 1

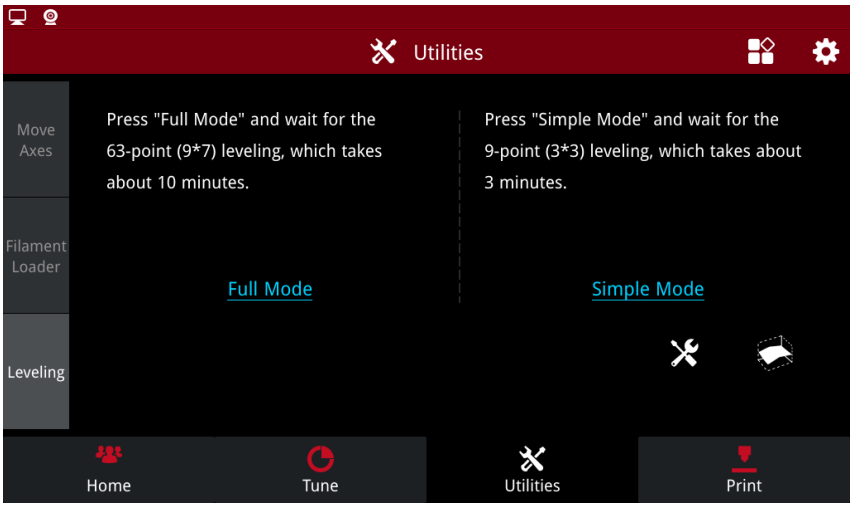
When the current temperature heats up to the target temperature, select the amount range that needs to be extruded, and click the **“Up”** or **“Down”** button for extrusion or back pumping.



Manual Load 2

1.3.3 Levelling

Click **“Levelling”** to enter the levelling page, you can choose the Full Mode -63 points (9*7) levelling as needed, or the Simple Mode -9 points (3*3) levelling.

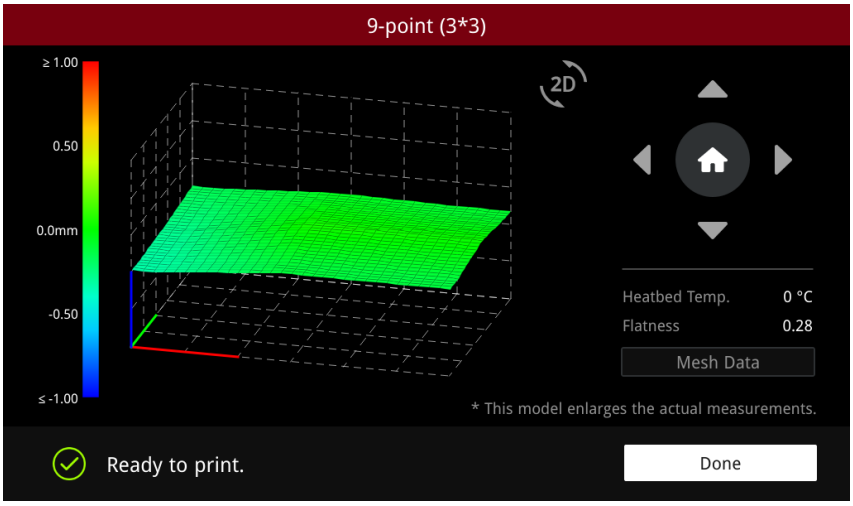


Leveling

Select **“Simply Mode”**, the printer will automatically carry out 9-point levelling.

Simple Mode

Click to see the levelling results.

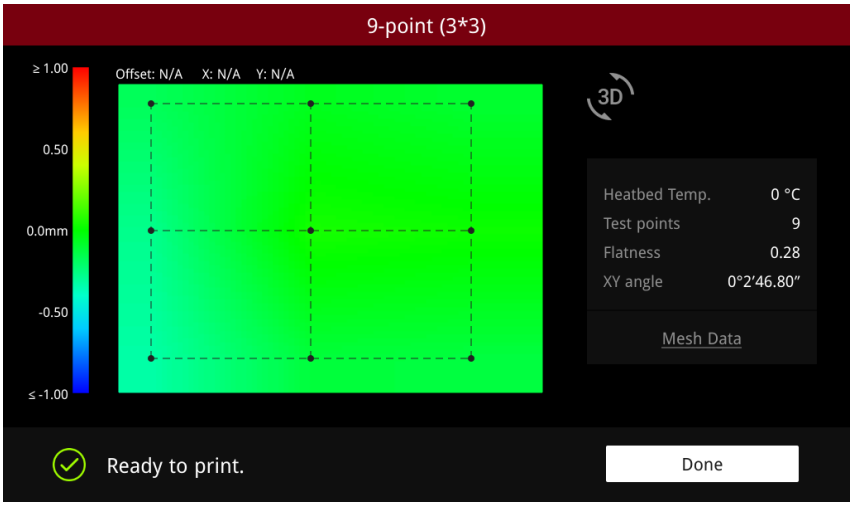


Leveling Results (3D)

indicates that the flatness of the heat bed is in the normal range and the printer can print directly.

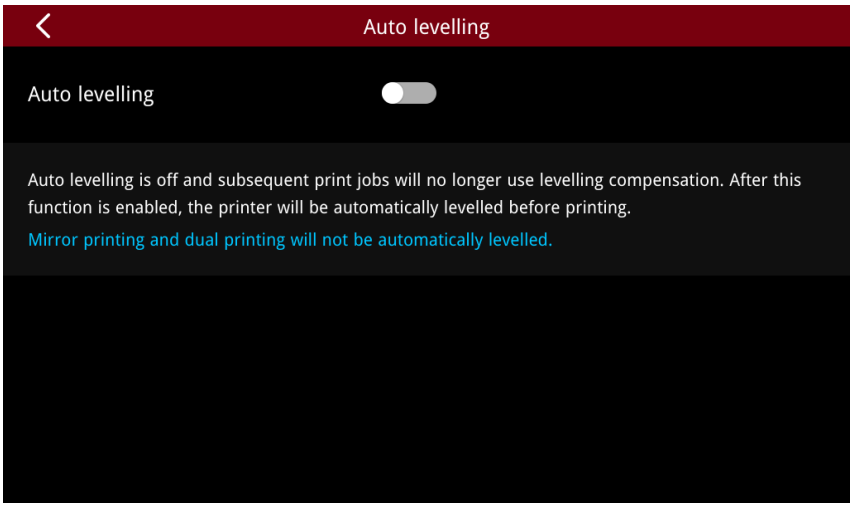
indicates that the flatness of the hot bed exceeded the normal range, which is needed to be manually leveled first. (you can perform manual levelling according to the file *How to Level the Bed.pdf*)

Click on the **"2D"** icon to switch to flat view to view levelling results.
Click on the green area coordinates below to show the height difference at the coordinates.



Leveling Results (2D)

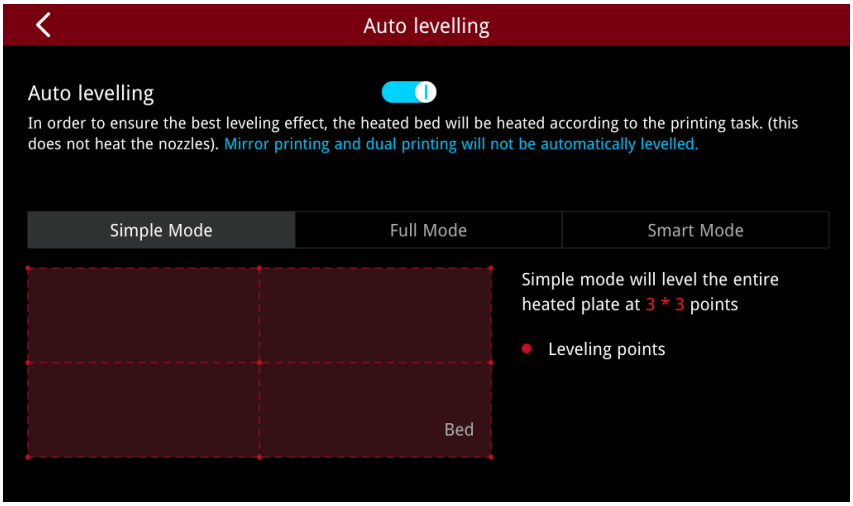
Click to access the Auto levelling page.



Auto levelling

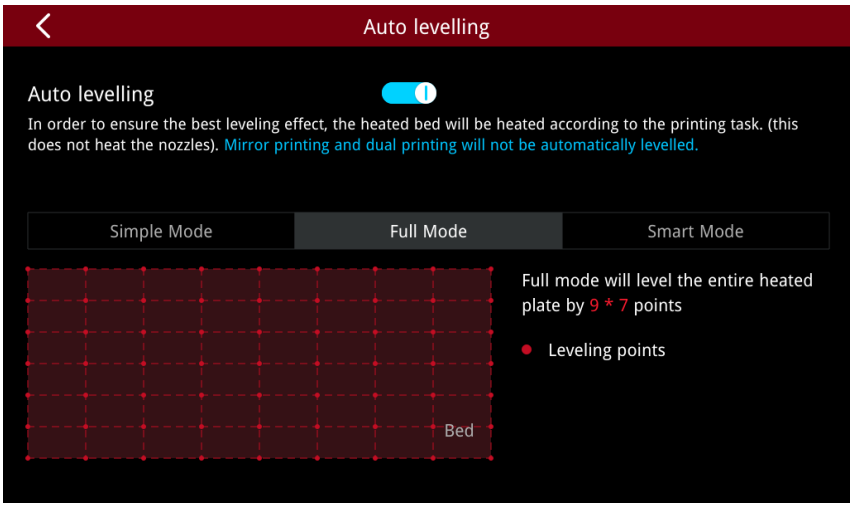
Turn on the Auto levelling, the printer will make automatic levelling before each printing.

Simple mode: In Simple Mode, the printer will flatten the whole printing plate by 9 points before each printing.



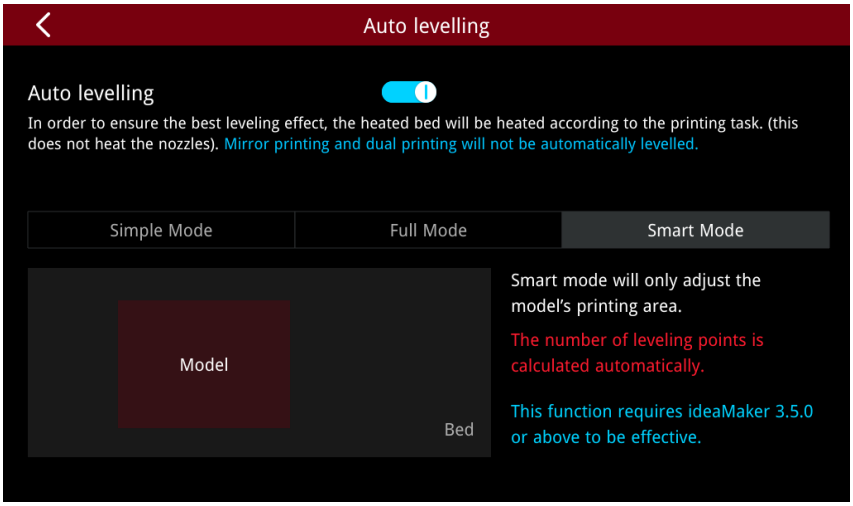
Simple mode

Full Mode: In Full Mode, the printer will carry out 63-point levelling of the whole printing plate before each printing.



Full Mode

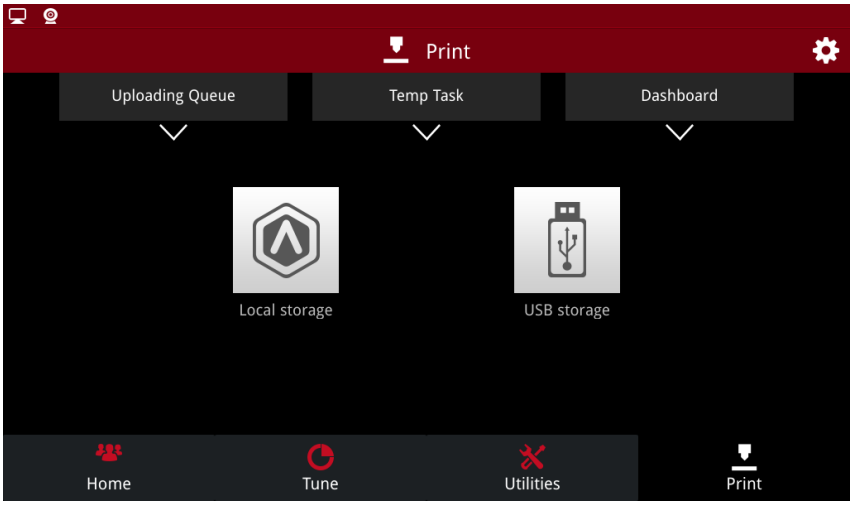
Smart Mode: In Smart Mode, the printer will only level the area where the model is located before each print.



Smart Mode

1.4 Print

On this page, you can view history print records, Uploading queue, and print model information.

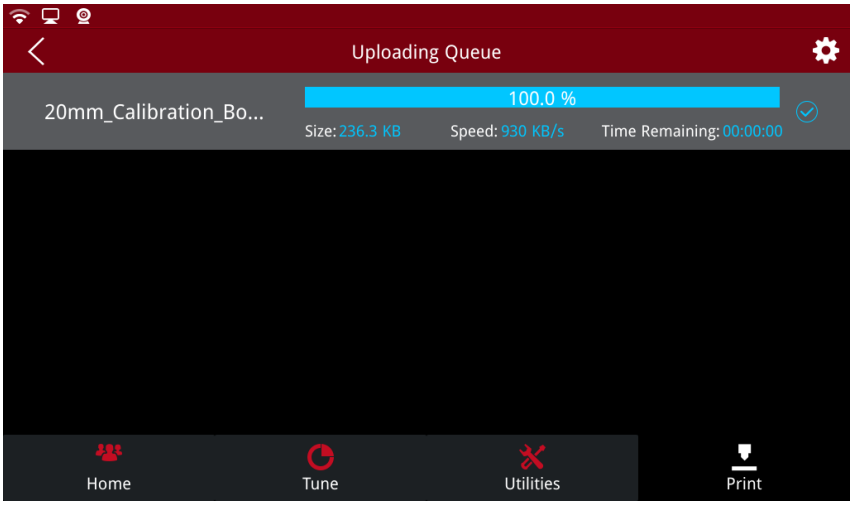


Print

You can print in three ways below: Local Storage, SD card and USB.

1.4.1 Uploading Queue

Click on the **"Uploading Queue"** to view files uploaded through WLAN and Ethernet. Printing files can be uploaded remotely from ideaMaker to the printer. Click the **"Uploading Queue"** to see the upload file size, transmission speed, remaining time and upload percentage.



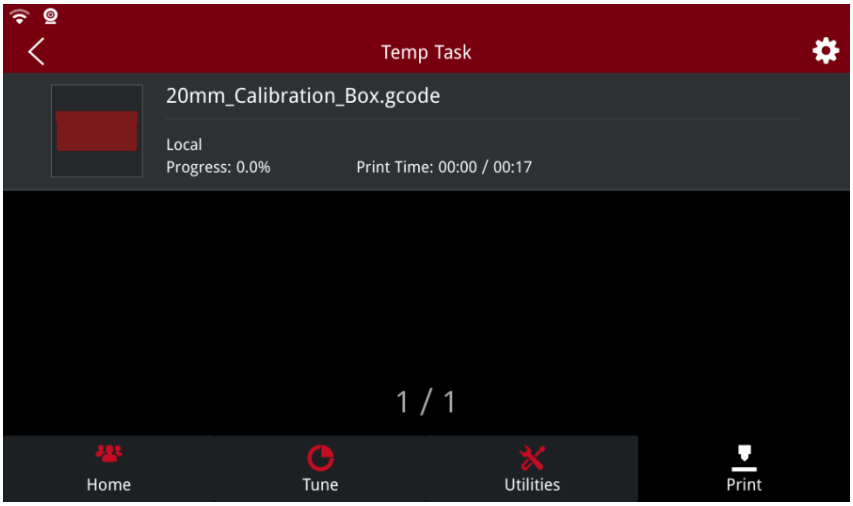
Uploading queue

Note: the file will be saved in local storage after uploading. Click the print file to enter the model related information interface, where the parameter information of the model can be viewed.

Print Model Information

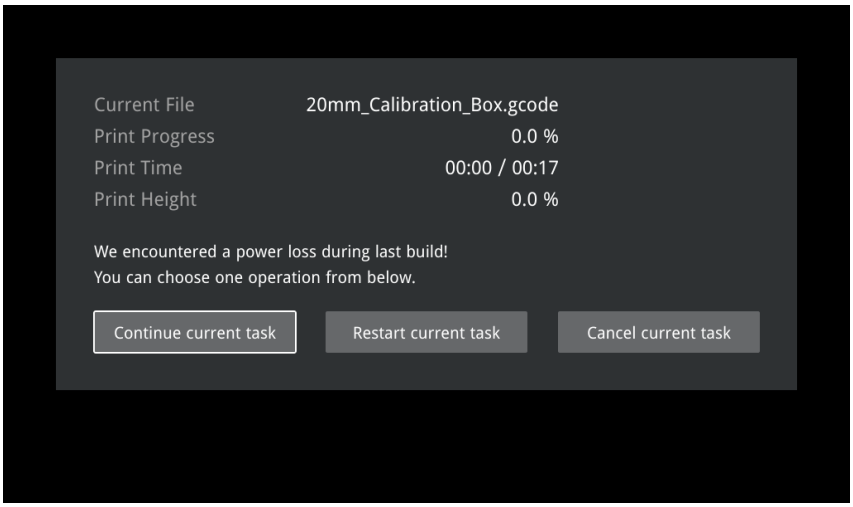
1.4.2 Temp Task

The temporary task interface allows to view the interrupted print task, where you can select the unfinished print task to continue printing or reprint the file.



Temp Task

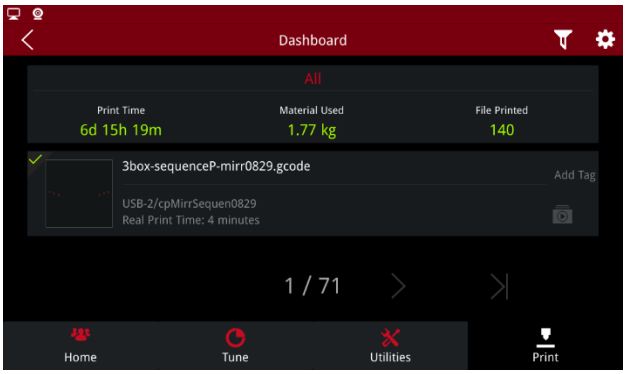
Power loss: when the printer is restarted or the serial port is reconnected, if the interrupted printing task is detected, the print interface will pop up automatically to resume. Click **"Recover current task"** to resume the printing Task. Click **"Restart current task"** to reprint the task. Click **"Cancel current task"** to exit the interface. You can also continue the task through the Temp task after exiting.

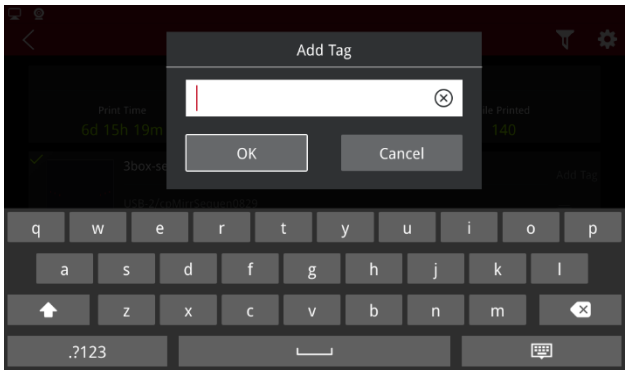


Power loss

1.4.3 Dashboard

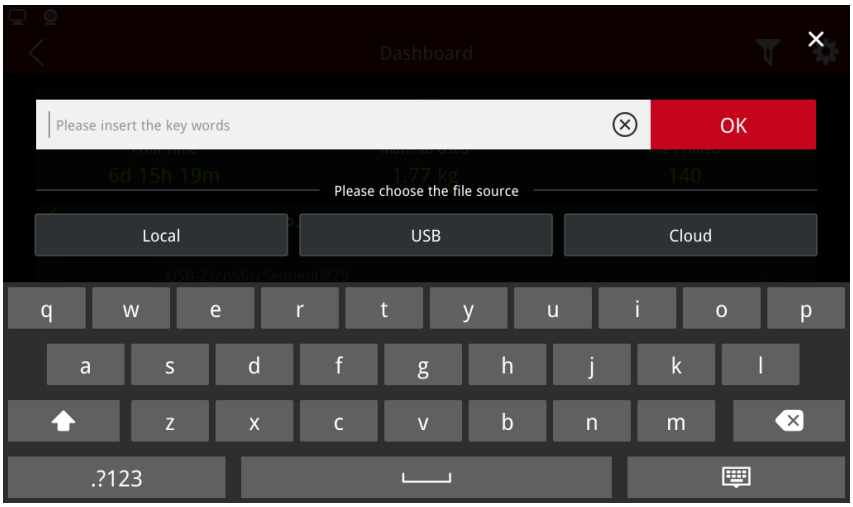
You can view all printed models on Dashboard. Click **"Add Tag"**, you can add labels for printed tasks. The icon in the upper left corner of the print file queue shows the success or failure information.





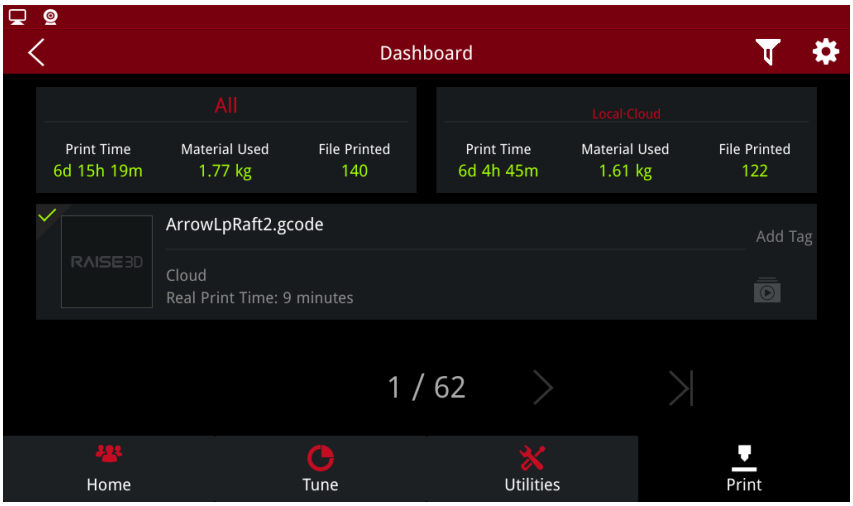
Add Tag

Click on the top right corner, a box will pop up as shown in the figure:



Filter

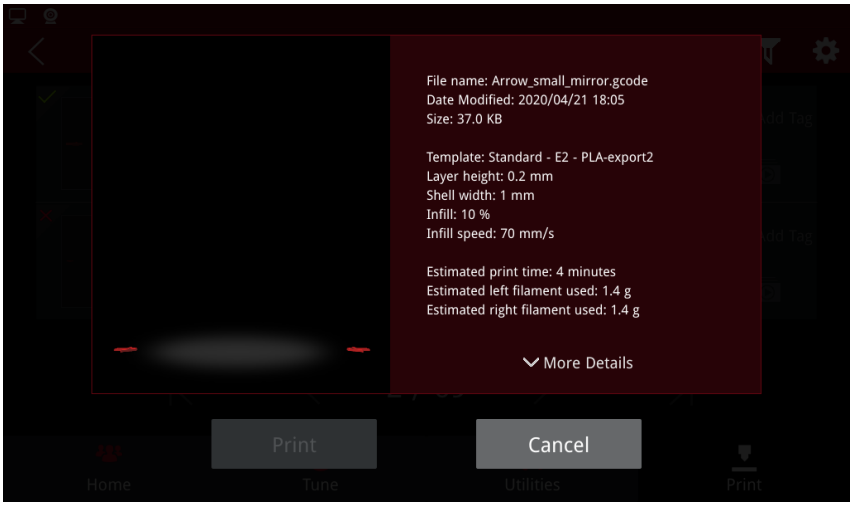
You can filter printing task records by clicking on the **"Cloud"**, **"Local Storage"**, **"USB"** according to the file source, while you can enter manually added labels for secondary screening. The screening results are shown below:



Filter Results

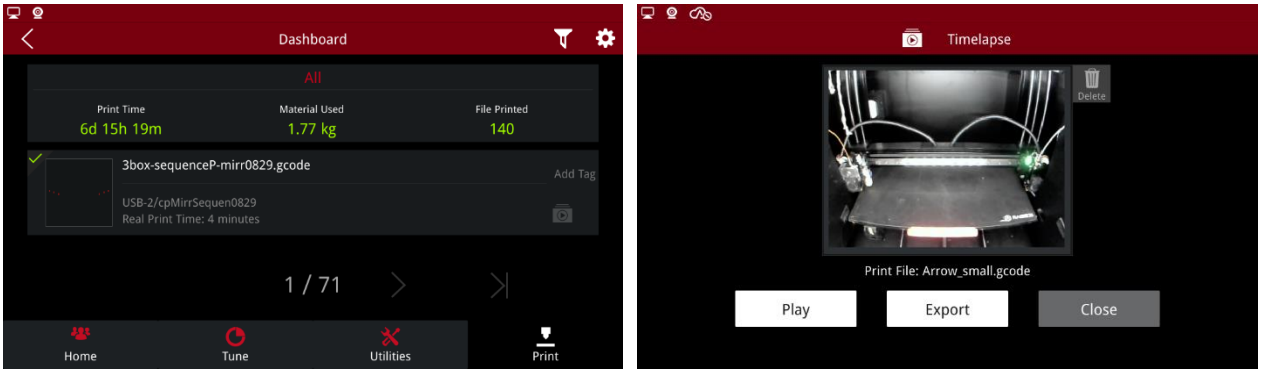
Select the files in the list and print them if they are in readable format.

Printable files



Non-printable files

Timelapse: click the wrench icon in the "**Setting>Camera**" to enter the camera advanced settings page. Turn on Timelapse, you can click video icon on the lower right corner of the Dashboard to view the Timelapse video. Turn on the "**Enable Exporting Local Files to External Storage**" in **Settings > Security and Privacy**, you can use USB devices to export Timelapse files. Export format is MP4 format.



Export Timelapse files

1.4.4 Files management

Click "**Local Storage**" to enter the print file interface, and click the "**Edit**" button in the upper right corner to manage files.

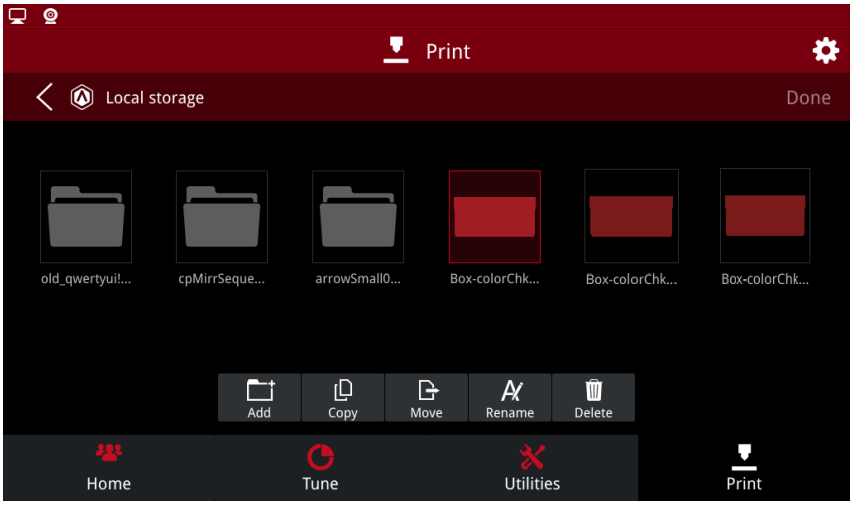
Add: Click Add to create a new folder.

Copy: Select a file to be copied and click Copy to copy the file to another folder.

Move: Select a file you want to move and click Move to move the file to another folder.

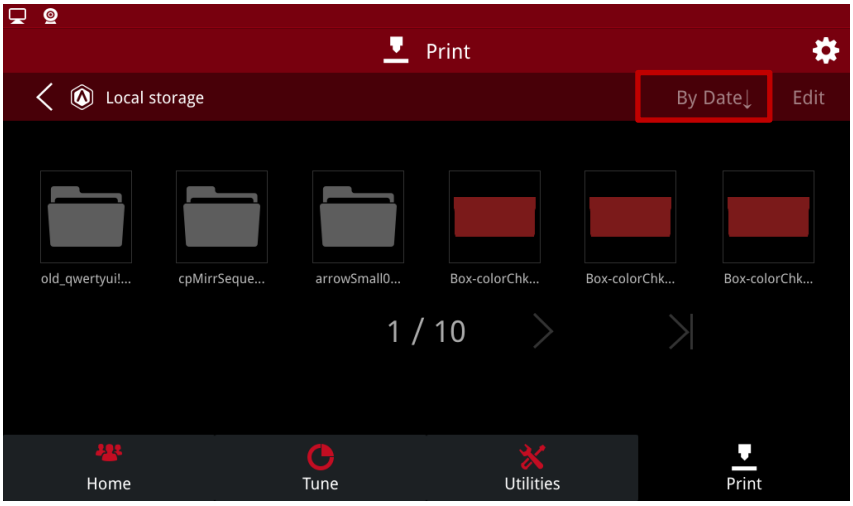
Rename: Rename the selected file.

Delete: Delete the selected file.

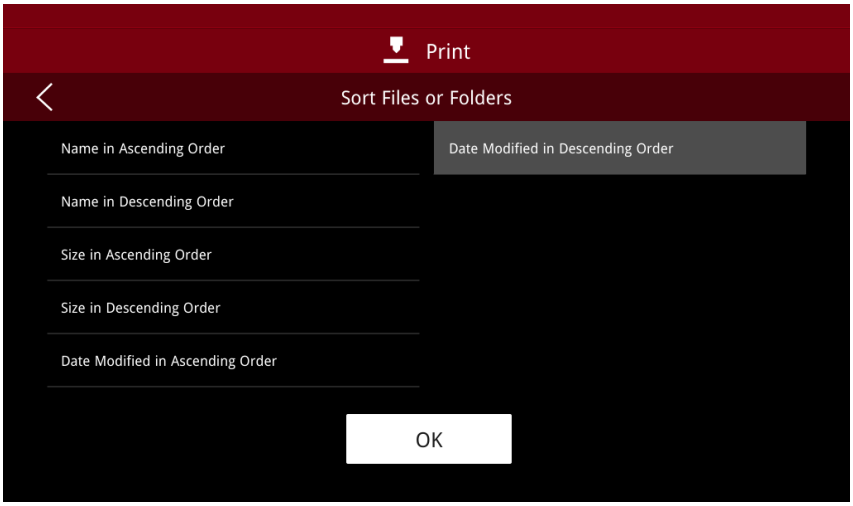


Files Management

File Sort: click the sort button in the upper right corner to sort the printed files in the following ways.

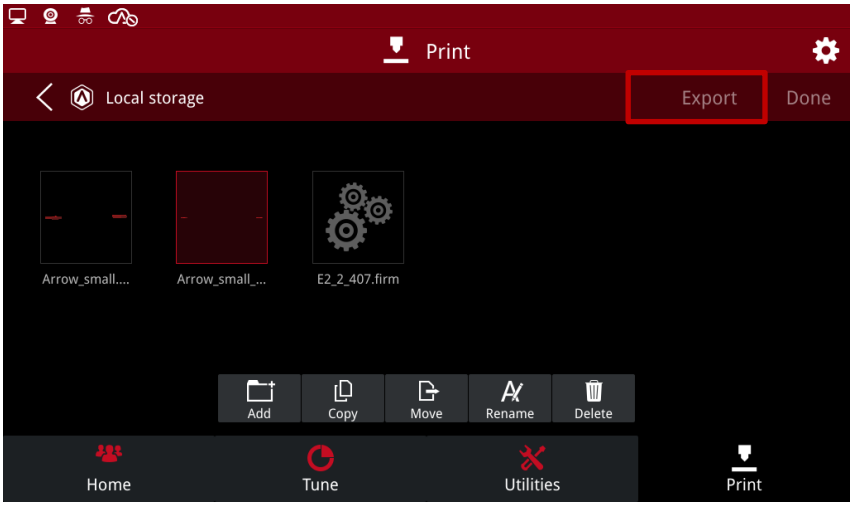


File Sort



Sort Files or Folders

File Export: select the file and click export to export the file.

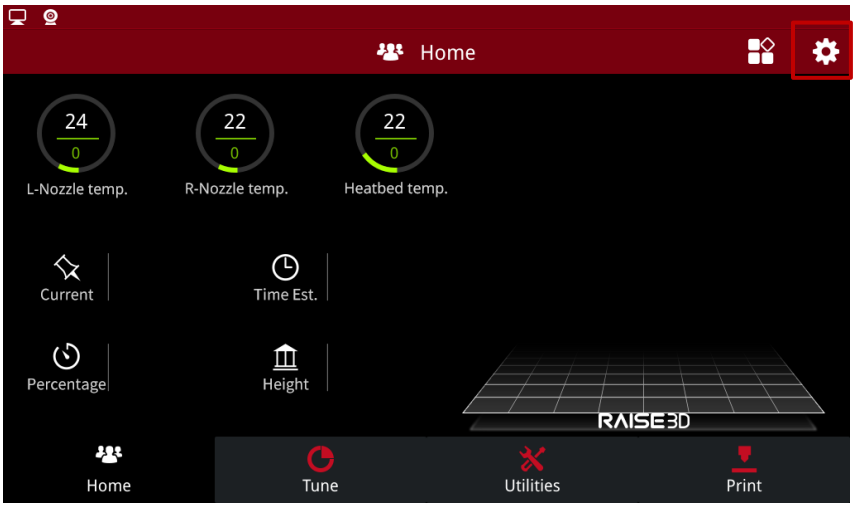


File Export

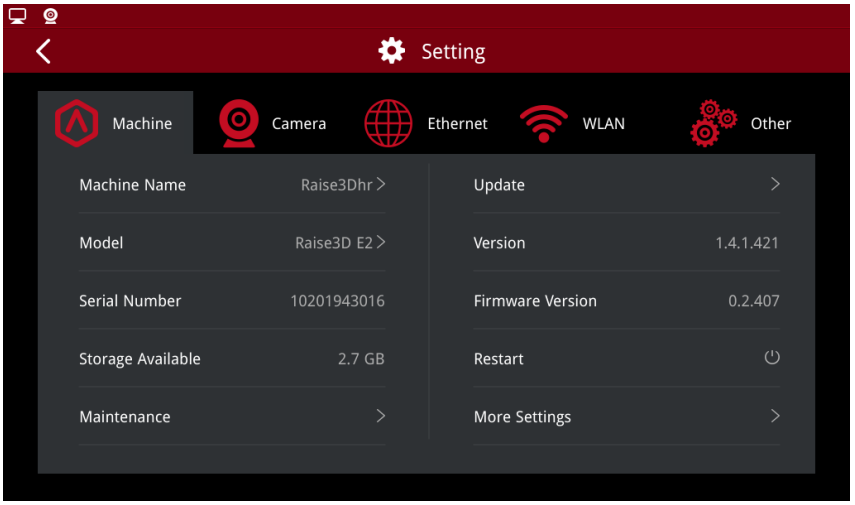
Note: this function needs to be enabled under **"Setting > Privacy and Security > Enable Exporting Local Files to External Storage"**.

1.5 Setting

Click the gear button in the upper right corner of the screen to enter the setting interface.



Settings Entrance



Settings

1.5.1 Machine

The interface shows the printer parameters such as machine name, model, serial number, version number and other printer parameters.

Machine Name: The name of machine which can be edit manually.

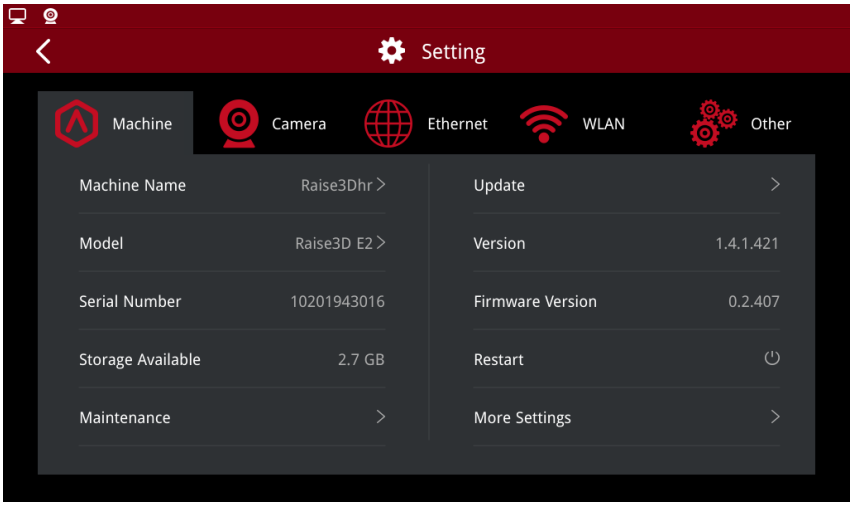
Model: Type of machine.

Serial Number: Serial Number of the machine.

Storage Available: The available storage space of the machine.

Maintenance: Maintenance settings for the printer.

Update: Update news.
Version: Current version of RaiseTouch.
Firmware Version: Current version of firmware.
Restart: Restart the machine.
More Settings: More settings about machine.

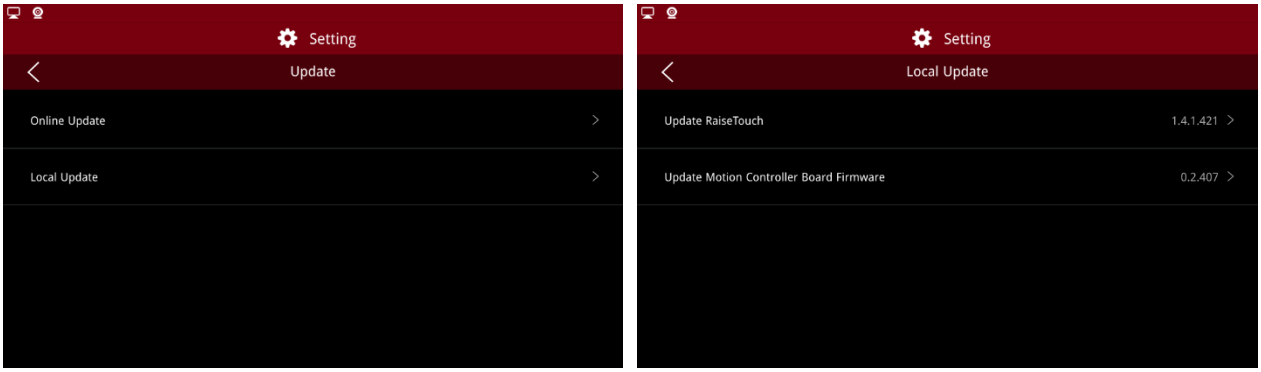


Machine

1.5.1.1 Update

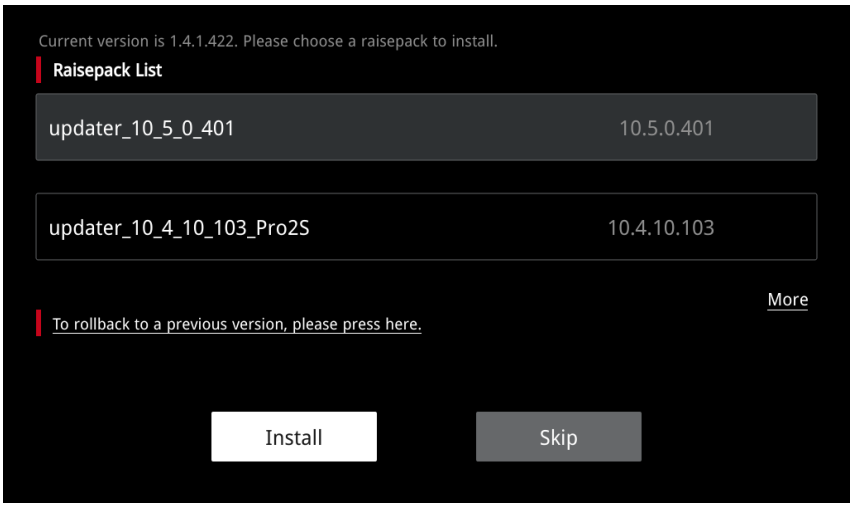
(1) Local Update

Click **"Update >Local Update"**, to enter local update. Insert a U disk with the installation package, the system will automatically detect whether the U disk contains a valid installation package. Then you can follow the wizard to update.



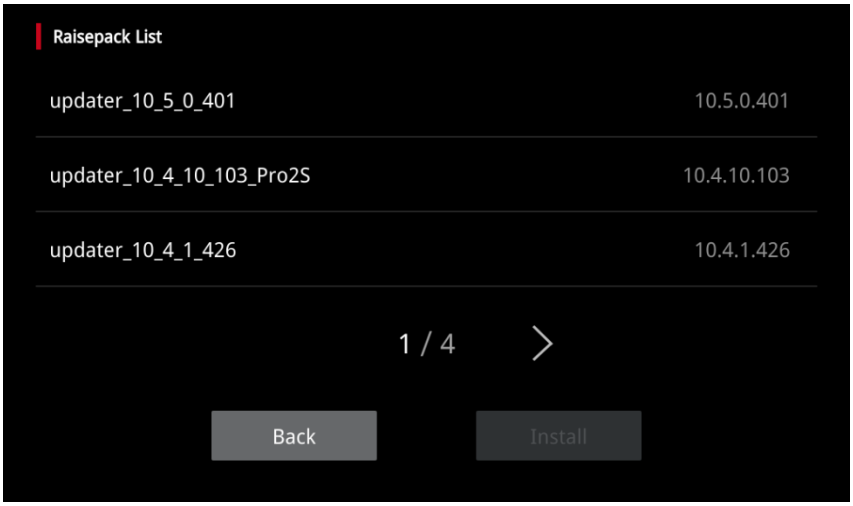
Update

Or you can insert a U disk and click **"Setting >Restart"**. System will automatically detect the installation package in the USB device and display the packages in the form of a list, as shown below:



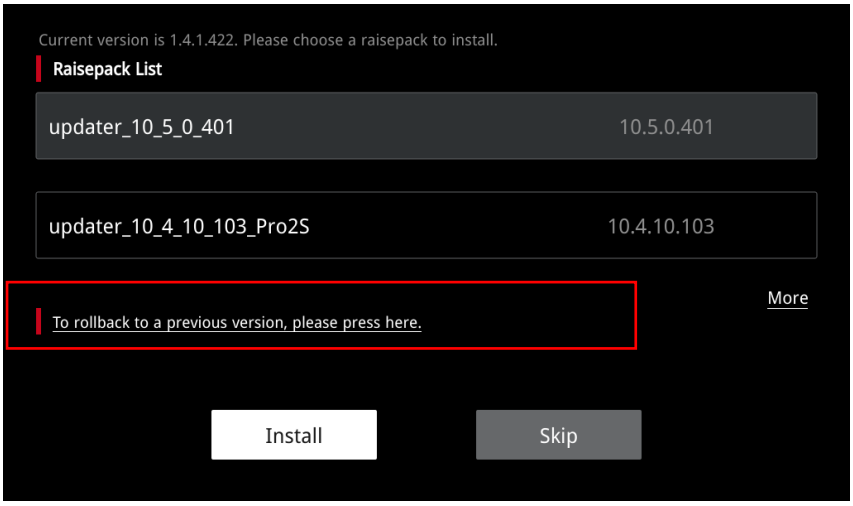
Install

Choose the installation package you want to install, and click **"Install"**. Click **"More"** to enter the installation package list page.



Raisepack List

If you want to install a previous version, click on the red box below to roll back the version.

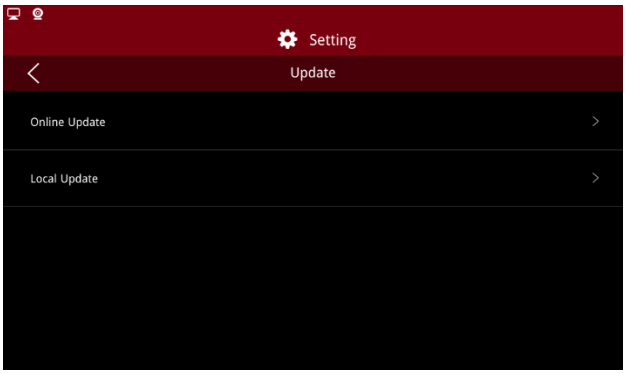


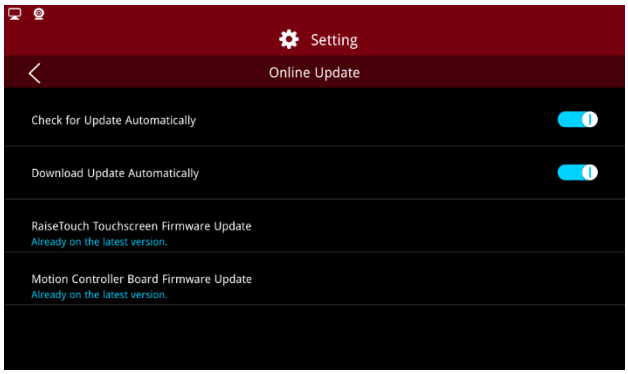
Rollback

Note: when a power-off restart or local update occurs, if a USB device containing the installation package is detected, the system will also enter the installation package selection page.

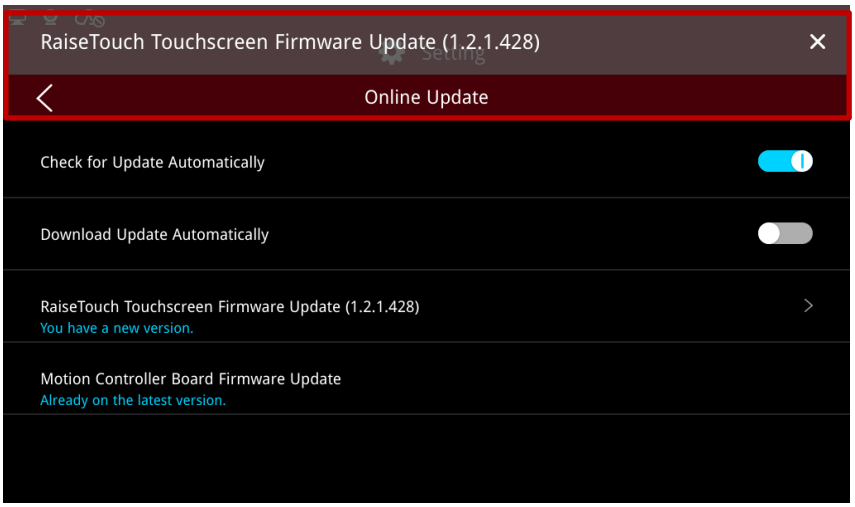
(2) Online Update

Click on **"Update >Online Update"**, to choose whether to turn on the automatic detection update.



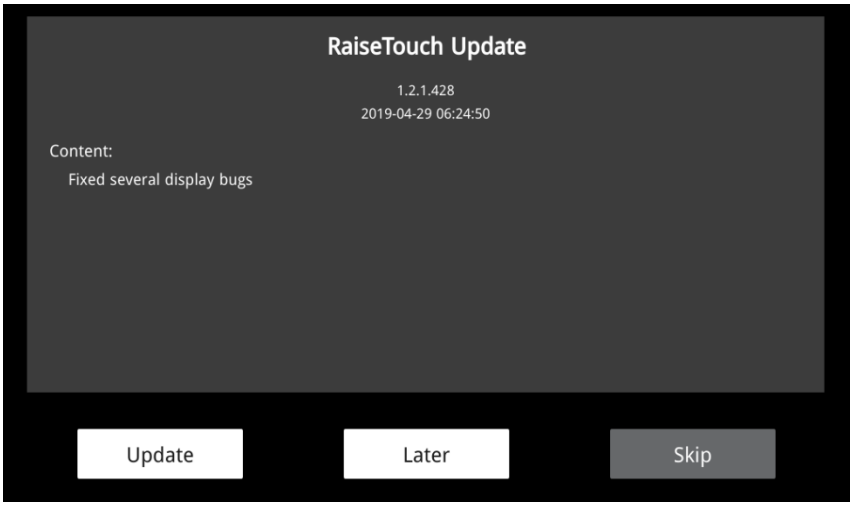


Click to turn on **“Check for Update Automatically”**, when the new update is detected, the touch screen will receive an update reminder, the location is shown in the following figure.



Update Message Floating Window

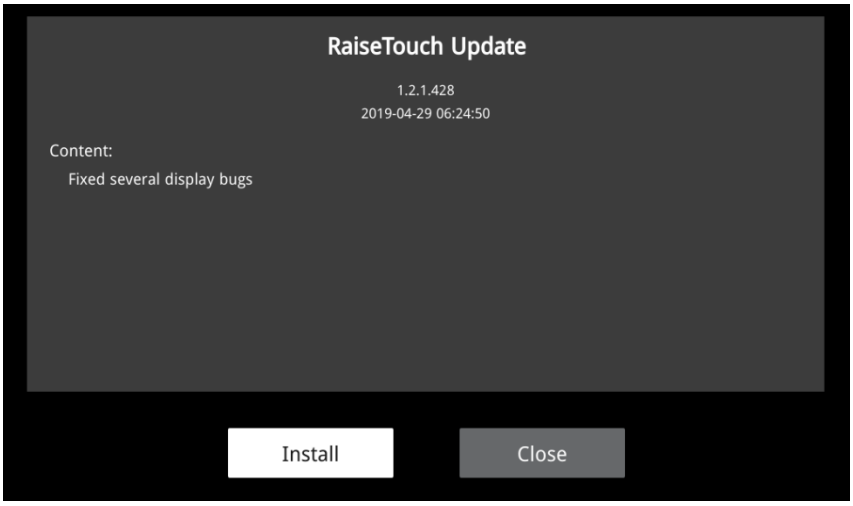
Click the floating window to view the update content in the update details box.



Update Details

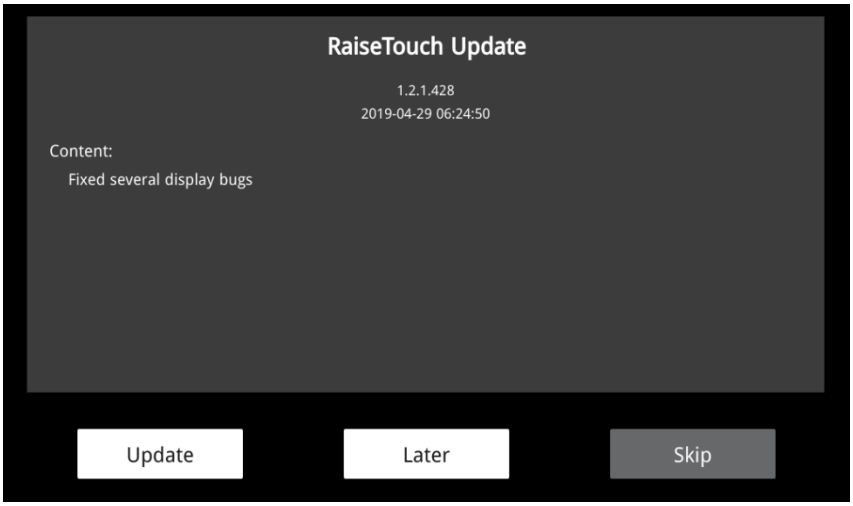
Sets the updateable option in the **“Online Update”**.

If automatic download is turned on, the update details button will display install and close. Click **“Install”**, the installation interface will pop up. Click **“Confirm”** to confirm the installation. If you click **“Cancel”**, please install the package in your free time in the update page.



Update Details (Open Automatic Download)

If the auto download is not turned on, the update details buttons will display **“Update”, “Later"** and **“Skip”**. Click on **“Update”**, the update package will start downloading. After the download is complete, a dialogue box will pop-up. Select **“Yes”** for installation and select **“No”** to exit installation.



Update Details (Turn Off Automatic Download)

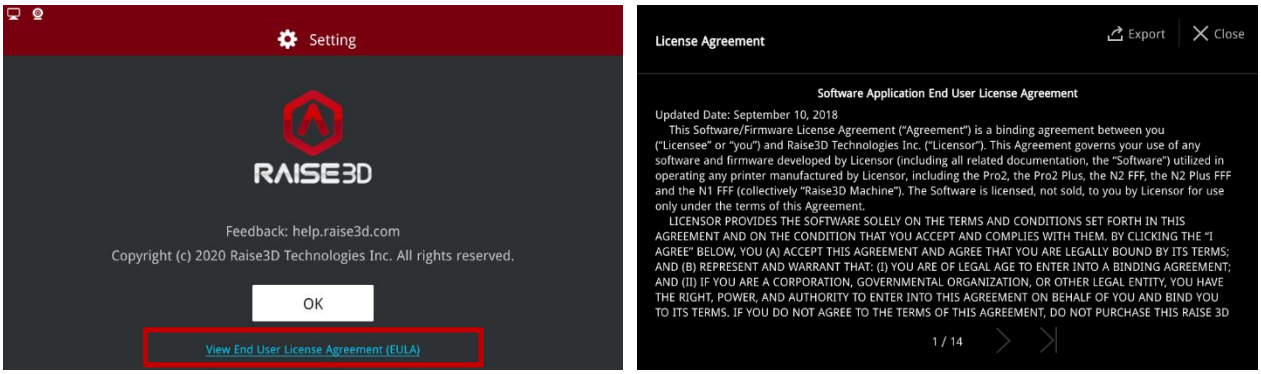
Click on **“Later”**, the touch screen will pop up a floating window after 5 minutes with the updating information.

Click **“Skip”**, update message will no longer be prompted.
If the download failed all the time, please visit www.raise3d.com to download the latest update package manually.

1.5.1.2 About

Click More Settings to enter the printer interface for more details.
Click on EULA to view the user license agreement.

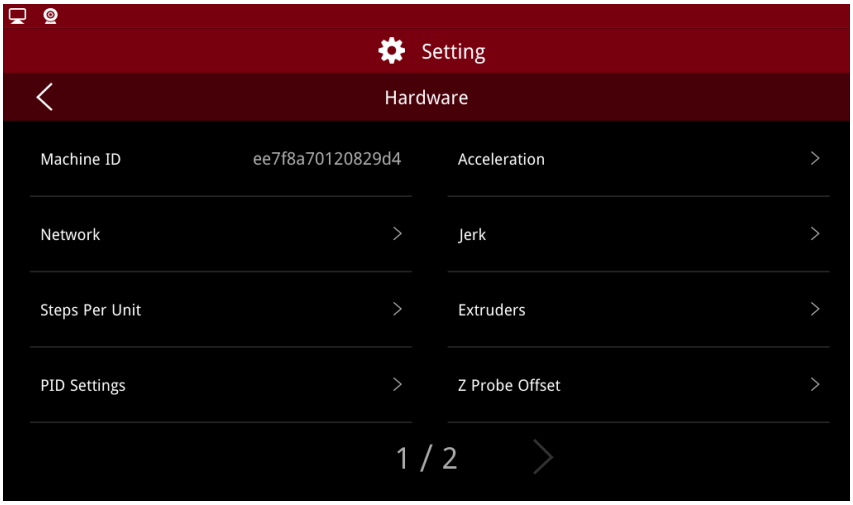
Click **Export** to export the license.



EULA License

1.5.1.3 Hardware

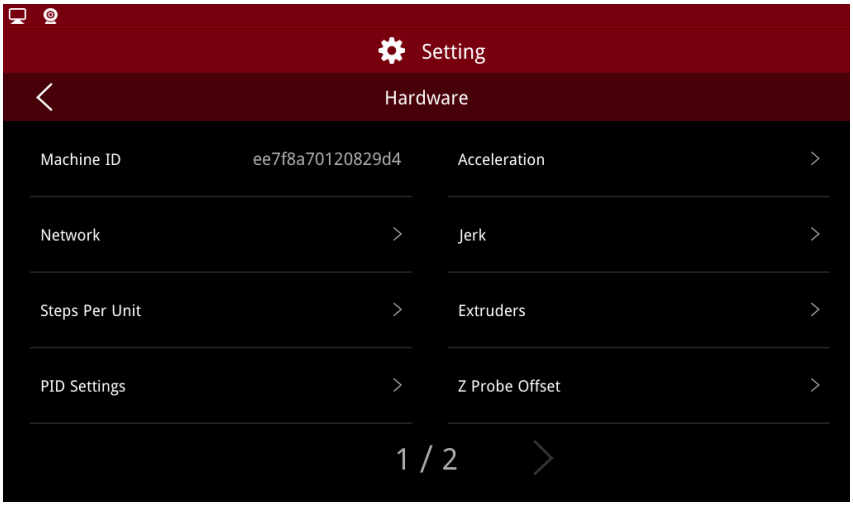
The hardware interface displays the parameters of the printer hardware.



Hardware

(1) Machine ID

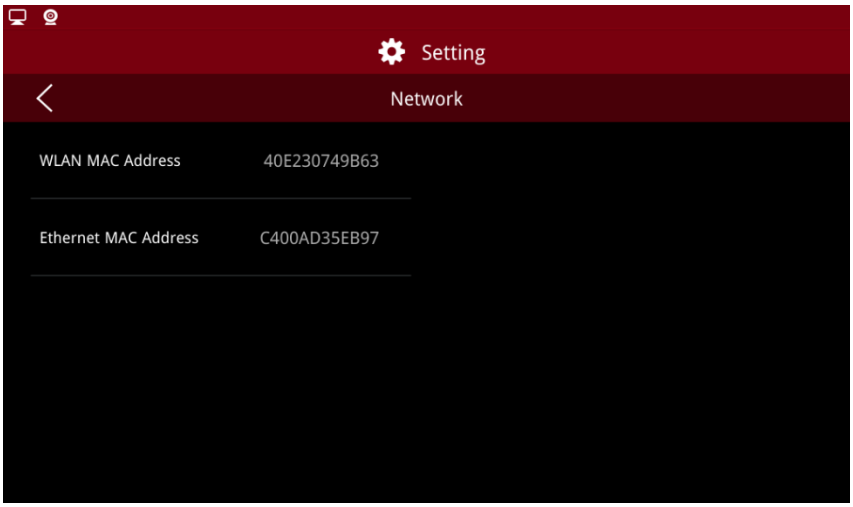
The ID of the printer.



Machine ID

(2) Network

The Mac Address



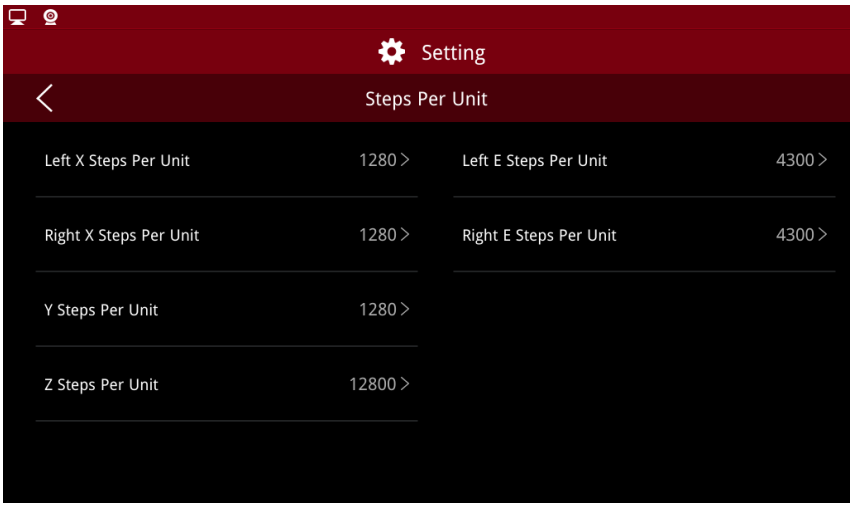
WLAN MAC Address

(3) Steps Per Unit

Steps Per Unit is the number of signals that the stepping motor receives if it moves 1 mm forward. The unit is step.

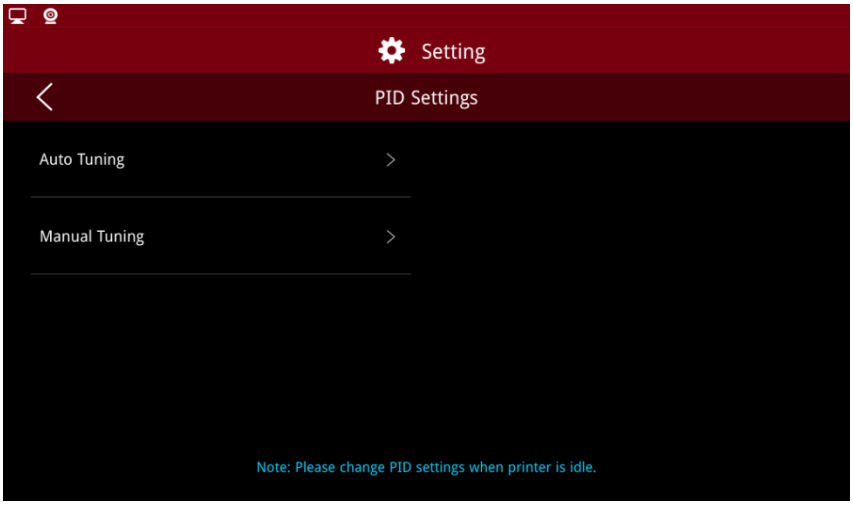
For example, if the X Step Per Unit is 80, it means that the stepping motor that controls the X axis to move forward by 1 mm requires receiving 80 signals, that is ,80 steps.

At the same, Users can manually set the number of steps of the stepping motor which controls Y and Z axes as well as E extruder, if the stepping motor advances 1 mm.



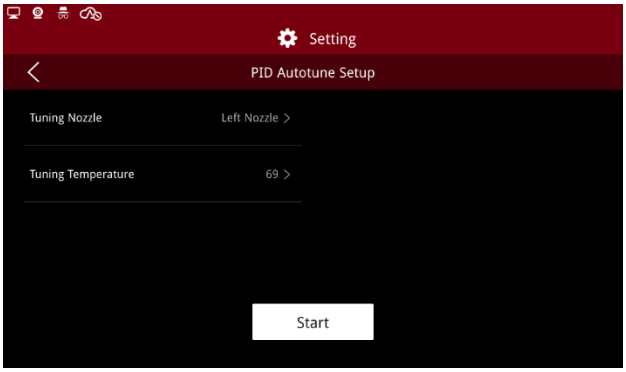
Steps Per Unit

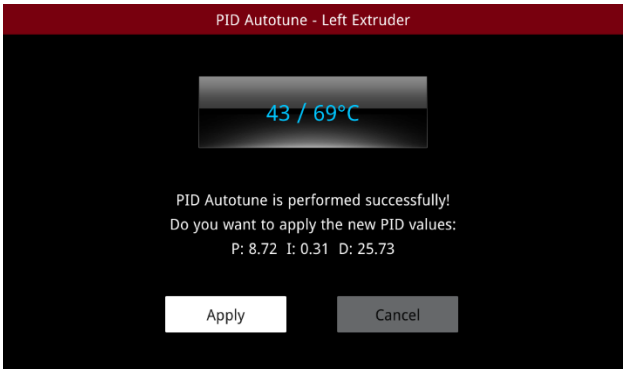
(4) PID Settings



PID Settings

Click to enter the Auto Tuning interface, to select nozzle to be adjusted, set the required temperature and adjustment times, then click **"Start"**. When the nozzle temperature is heated to the set temperature, select **"Apply"**, the PID values will be applied to the screen.

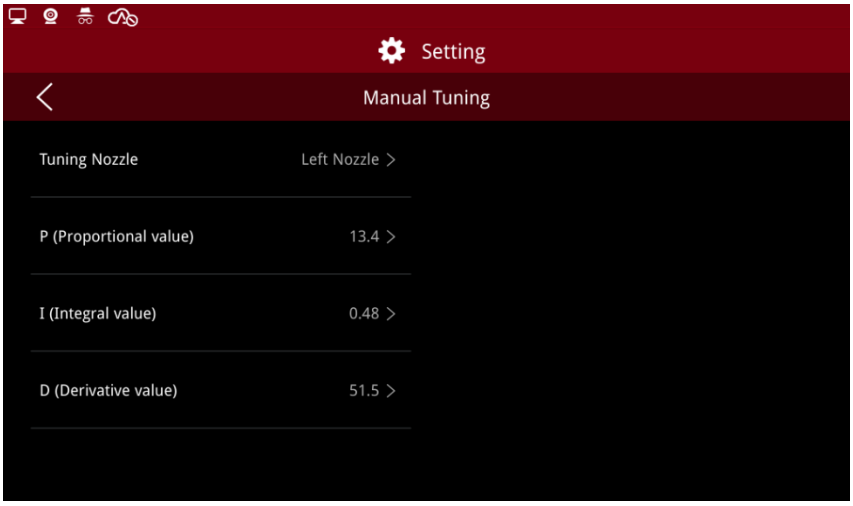




PID Autotune

Note: make sure the nozzle is cold when tuning the PID automatically. Otherwise, the adjusted PID may be inaccurate.

Click to enter the Manual Tuning interface to set the following parameters:



Manual Tuning

Choose the nozzle to tune and set PID.

P (Proportional value): the output of the controller is proportional to the input error signal.

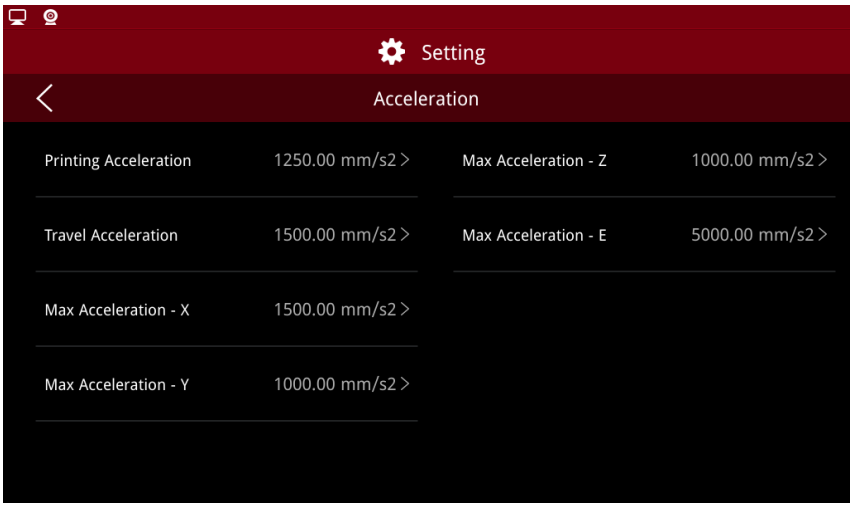
I (Integral value): control the steady state error of the system.

D (Derivative value): speed up the reaction of the system.

(5) Acceleration

You can define acceleration values on this page.

Note: The value will affect the print quality, do not change optionally.

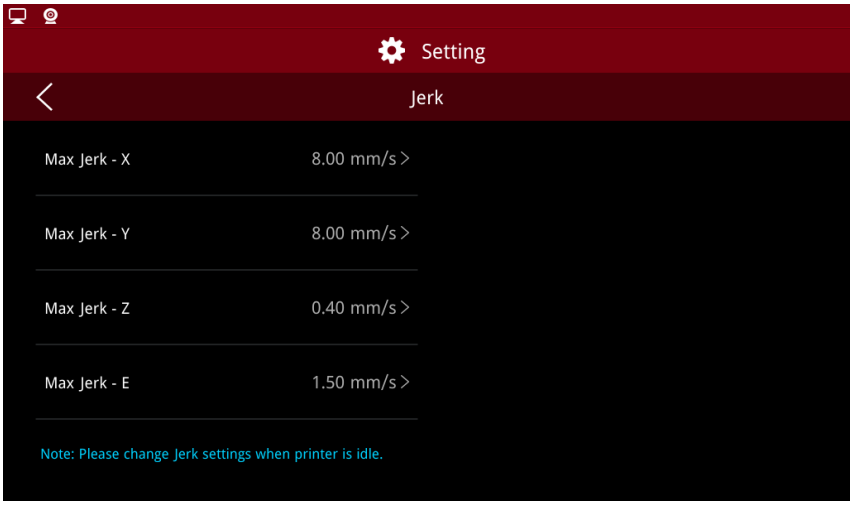


Acceleration

(6) Jerk

You can adjust the Jerk settings on this page.

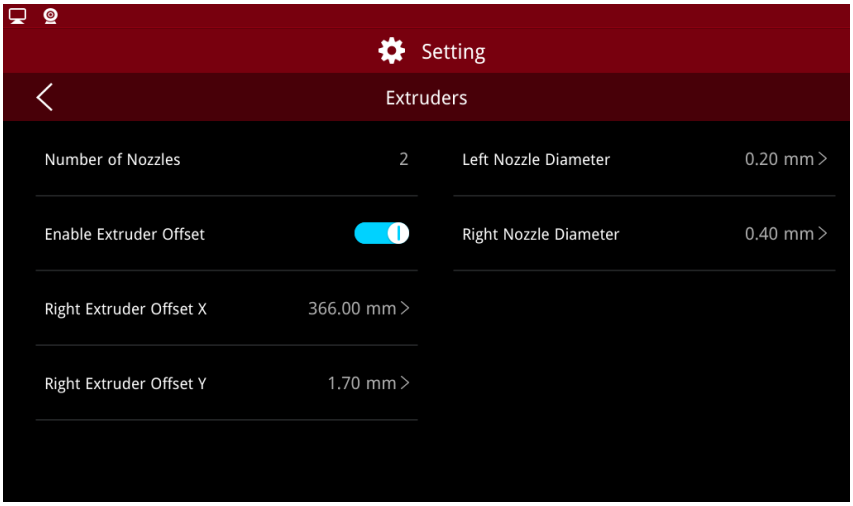
Note: The value will affect the print quality, do not change optionally.



Jerk

(7) Extruders

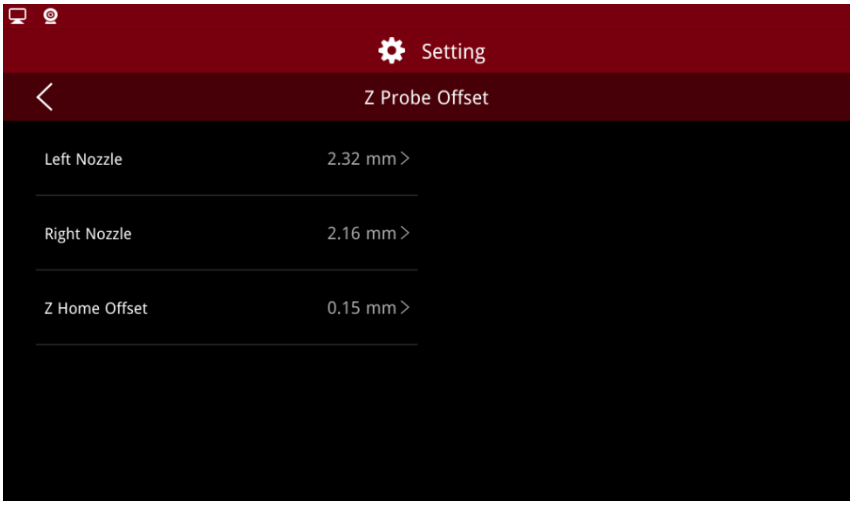
Click to enter the extruder interface, select "**Enable Extruder Offset**" and set nozzle spacing. Click "**Apply**" to complete extruder offset.



Extruders Settings

(8) Z Probe Offset

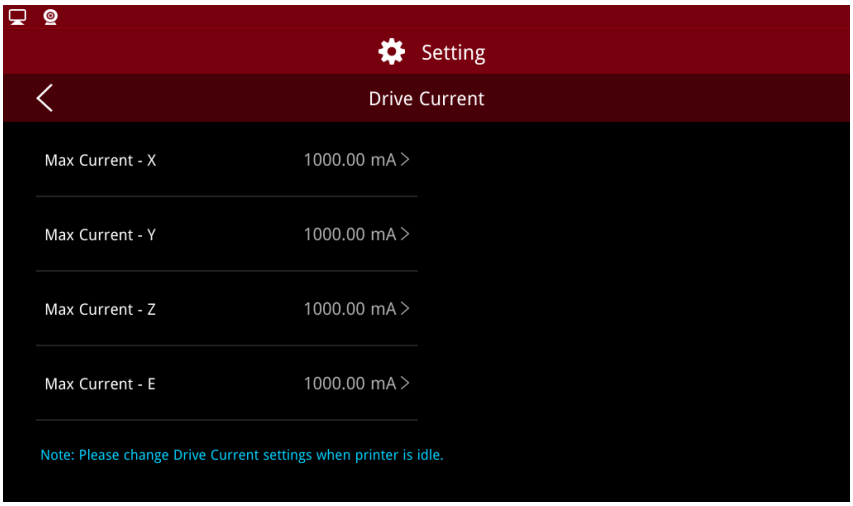
Z Probe Offset refers to the distance of the nozzle from the printing plate when the probe is triggered. On this page, you can set the probe Z directional offset value.



Z Probe Offset

(9) Drive Current

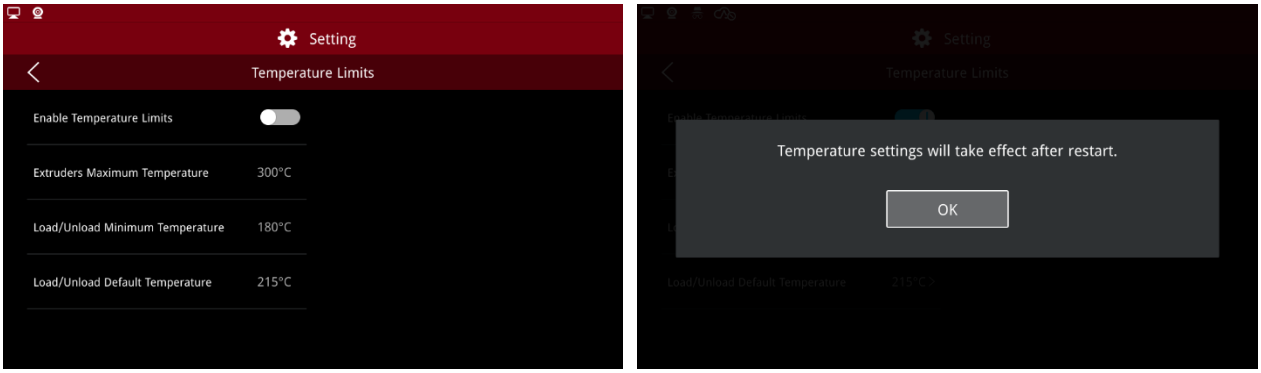
On this page you can modify the maximum current of the motor that controls each nozzle and axis.



Drive Current

(10) Temperature Limits

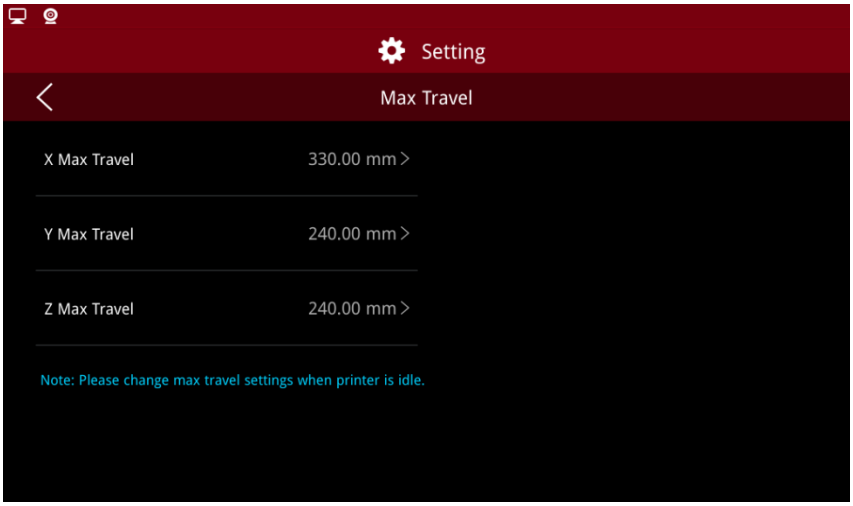
Enable the temperature limit to set the minimum temperature of the nozzle, the minimum temperature of the load/unload and the default temperature. Click **"Apply"**. The system will automatically apply the set temperature value to the relevant interface and function after restarting the screen.



Temperature Limits

(11) Max Travel

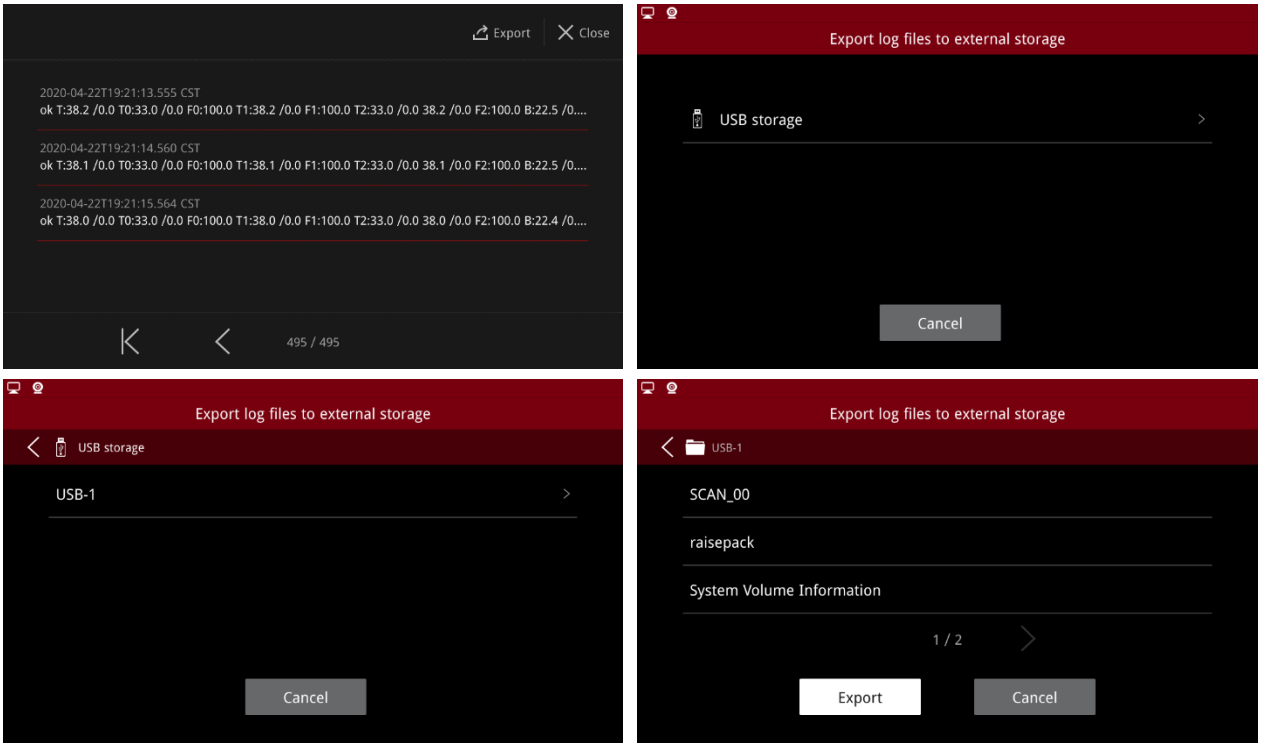
On this page you can modify the maximum travel of X, Y and Z directions.



Max Travel

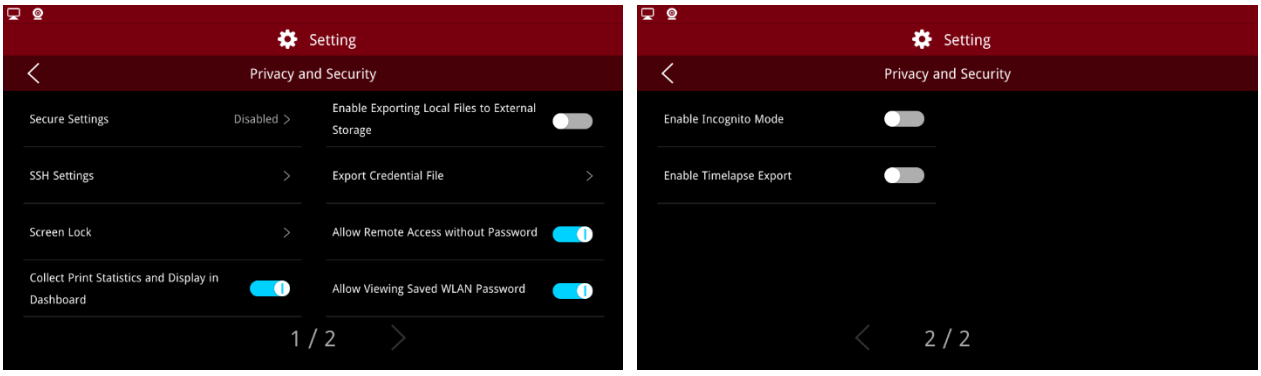
1.5.1.4 Serial Port Log

Click the export button to export all printed logs.



Export Log Files

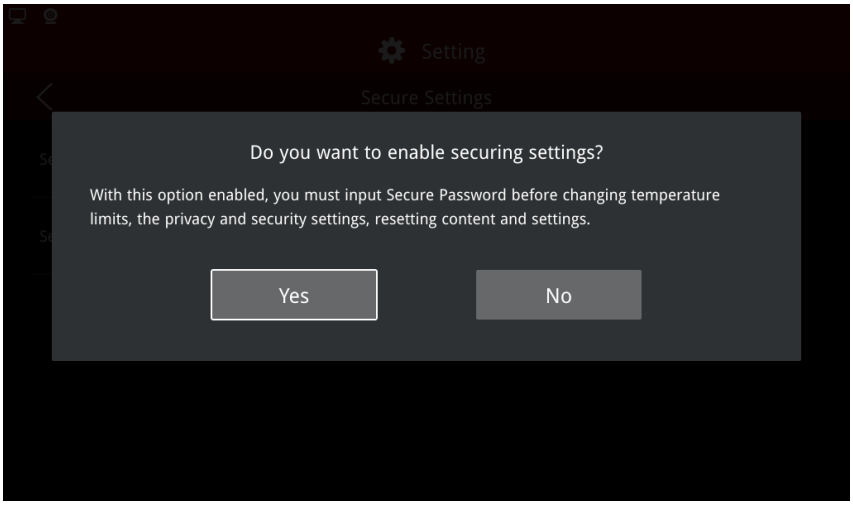
1.5.1.5 Privacy and Security



Privacy and Security

(1) Secure Settings using Secure Password

When enabled, you will need to input your secure password when editing the settings under Privacy and Security, including reset settings and temperature limit settings.

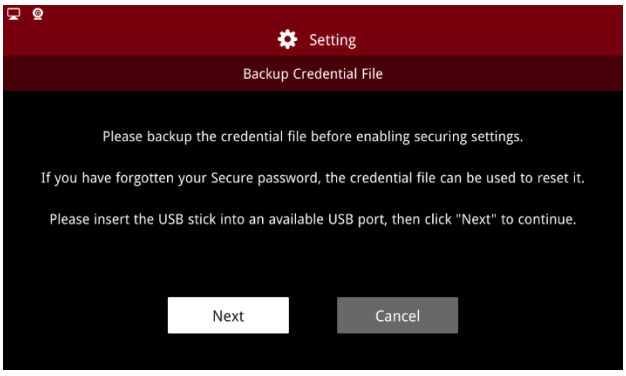


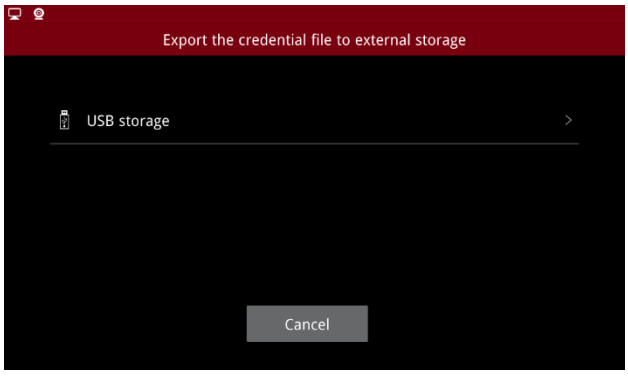
Enable Secure Settings

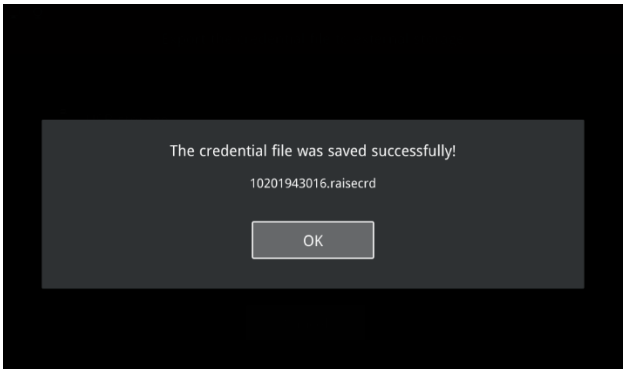
When enabling the SSH server for the first time, the secure password is a random number which can be set.

When the SSH server has been previously enabled, the current security password defaults to the SSH password.

In case you forget your secure password after enabling "**Secure Settings**", the credential file will be backed up automatically.

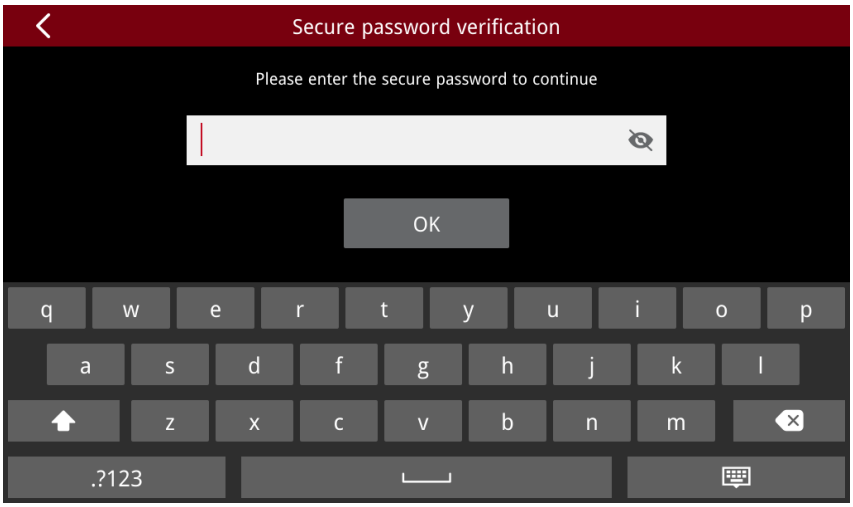






Export the Credential Files

As the security service is turned on, each time you enter the SSH password, lock screen password and other security and privacy related passwords, you need to check the security password first.

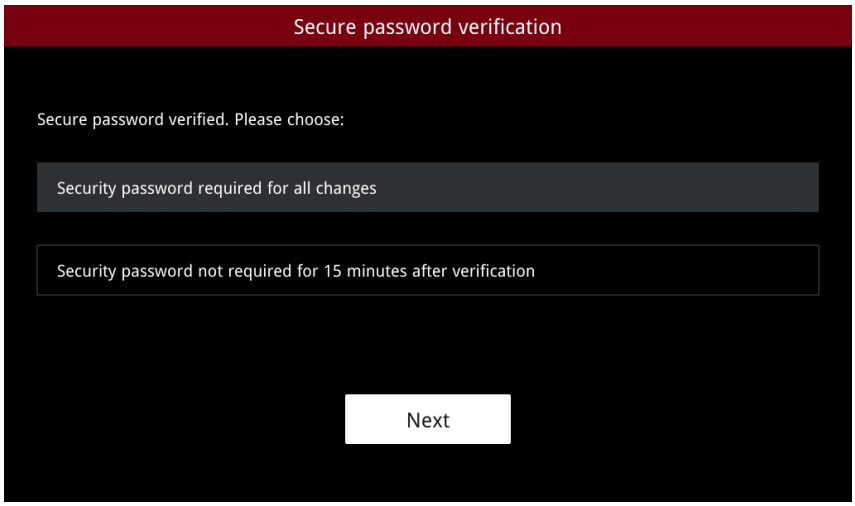


Security Password Verification 1

After the security password is successfully verified, you can choose:

a. Security password required for all changes;

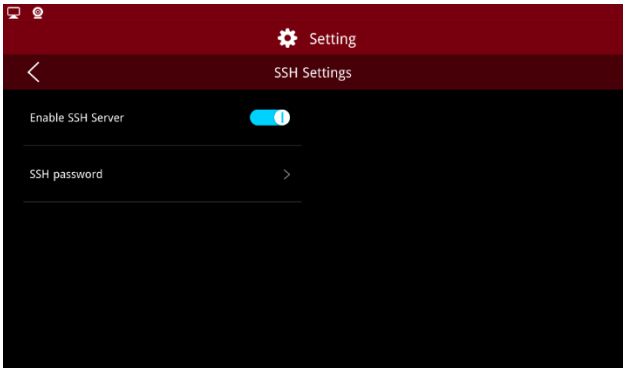
b. Security password not required for 15 minutes after verification.

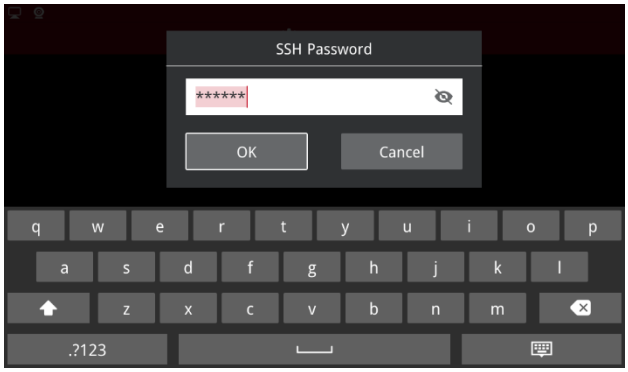


Security Password Verification 2

(2) SSH Settings

After enabling "**SSH Settings**", you will need to set the SSH password which allows secure access to the server.



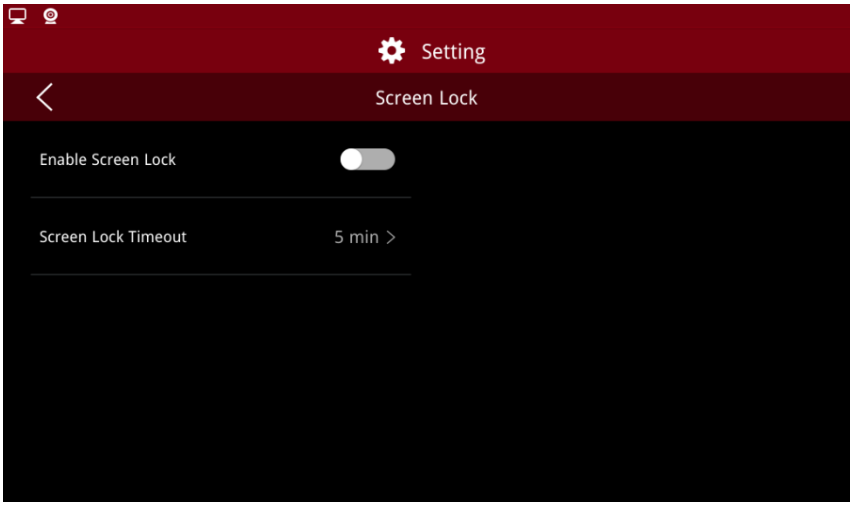


Enter SSH Password

Note: You will need to input Security Password to enable SSH settings.

(3) Screen Lock

Enable **"Screen Lock"** and set the lock time as required, by default, is 5 minutes.

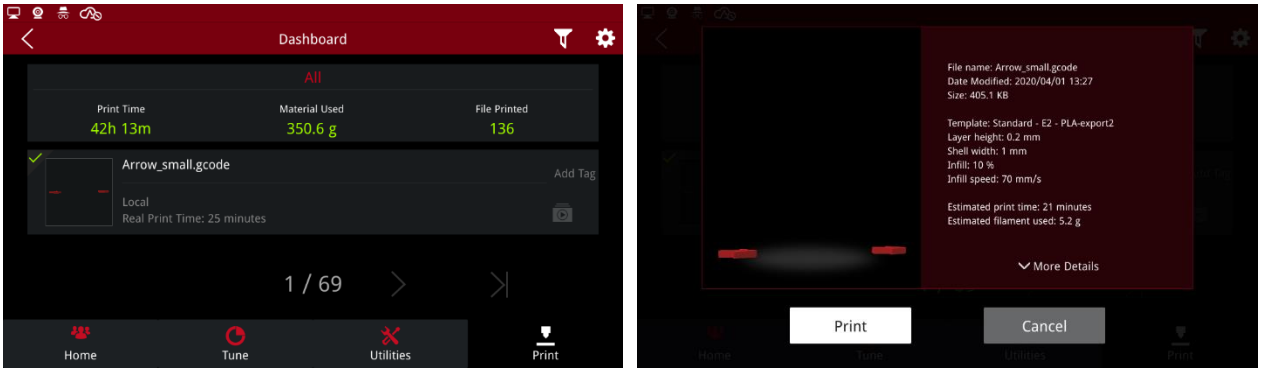


Screen Lock

Note: The lock screen password can be empty. You need to enter a security password before opening /closing the lock screen function.

(4) Collect Print Statistics and Display in Dashboard

Under this function, the print information will be recorded. The print information can be viewed at the print interface.

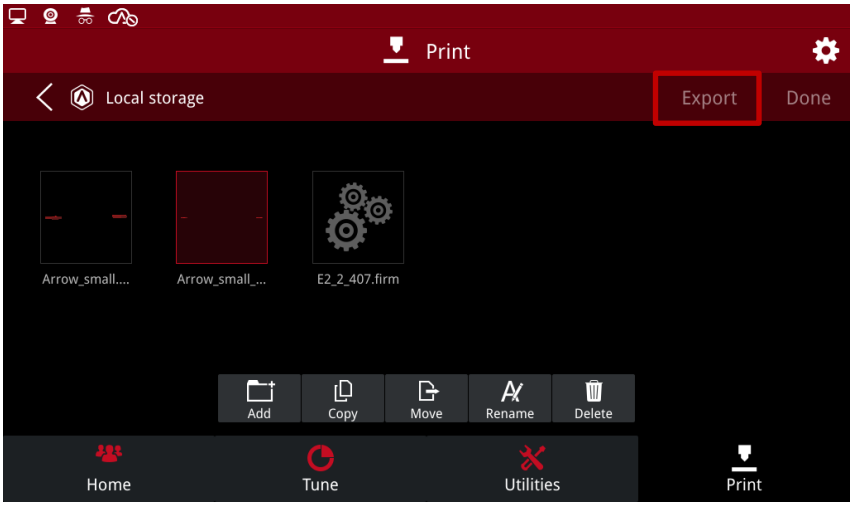


Print Information

(5) Enable Exporting Local Files to External Storage

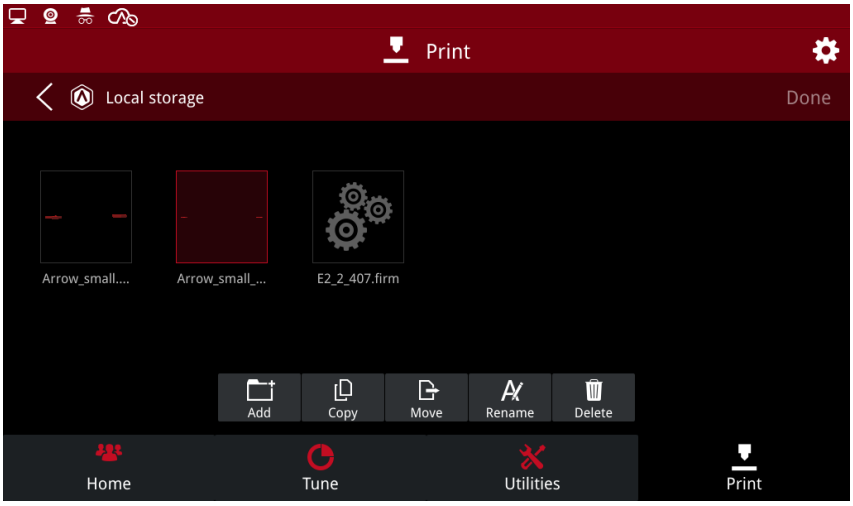
For this function, local print files can be exported to external storage such as U disk.

Enable this function:



Enable Exporting Local Files to External Storage

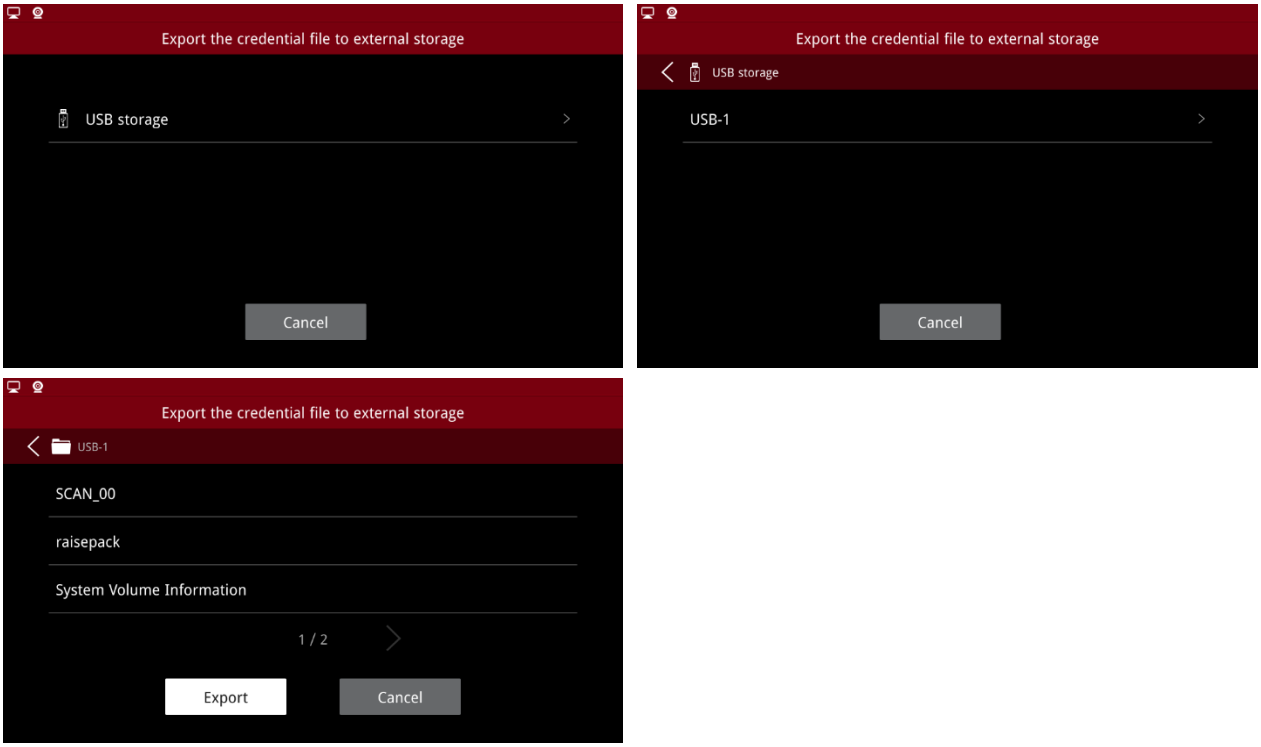
Turn off this Function:



Disable Exporting Local Files to External Storage

(6) Export Credential File

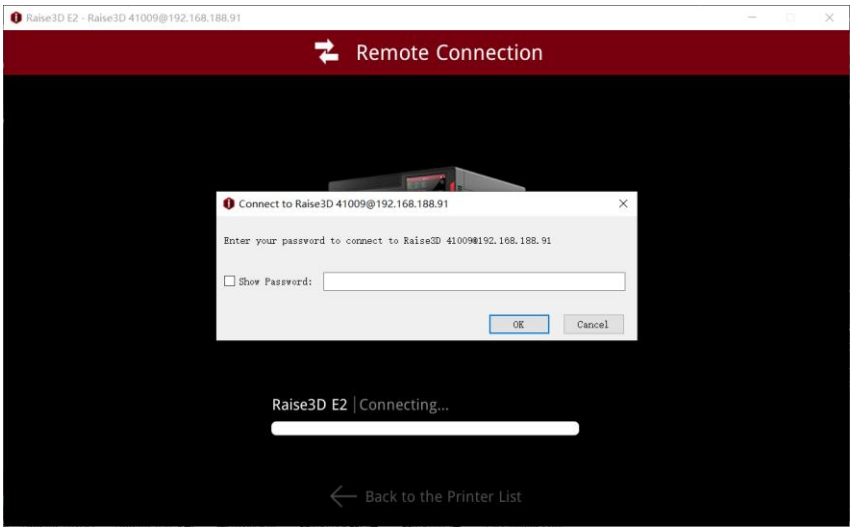
This function can enable you to export credential files and send them to Raise3D after-sales personnel for modifying printer model, serial number and other key information.



Export Credential File

(7) Allow Remote Access without Password

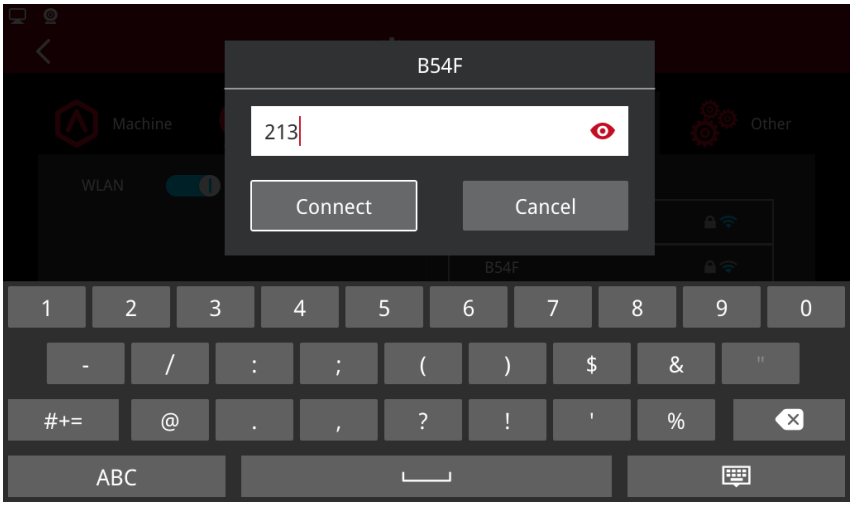
In this function, you do not need a password to connect the printer remotely. If this function is disabled, you need a password when connecting this printer.



Allow Remote Access with Password

(8) Allow Viewing Saved WLAN Password

For this function, the password of the connected WLAN is visible.



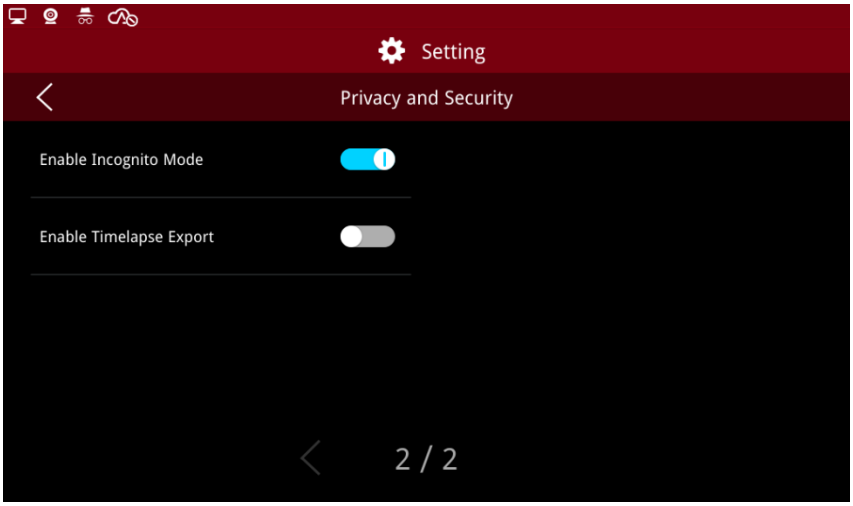
Check WLAN Password

(9) Incognito Mode

After the Incognito Mode is enabled:

a. A new icon will be displayed in the upper left corner

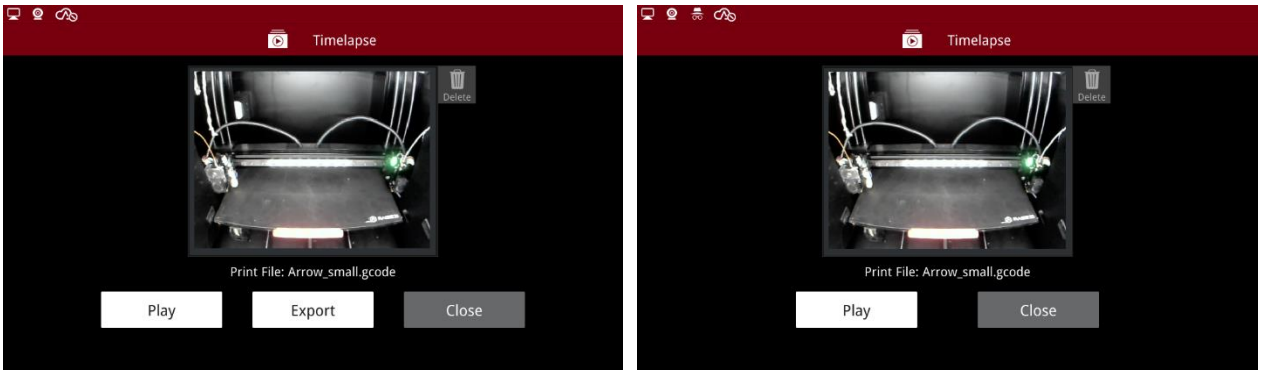
b. All relevant information of the print task will be deleted when print is finished. If the print is local, then the local file will be deleted and Dashboard will not record the print task.



Enable Incognito Mode

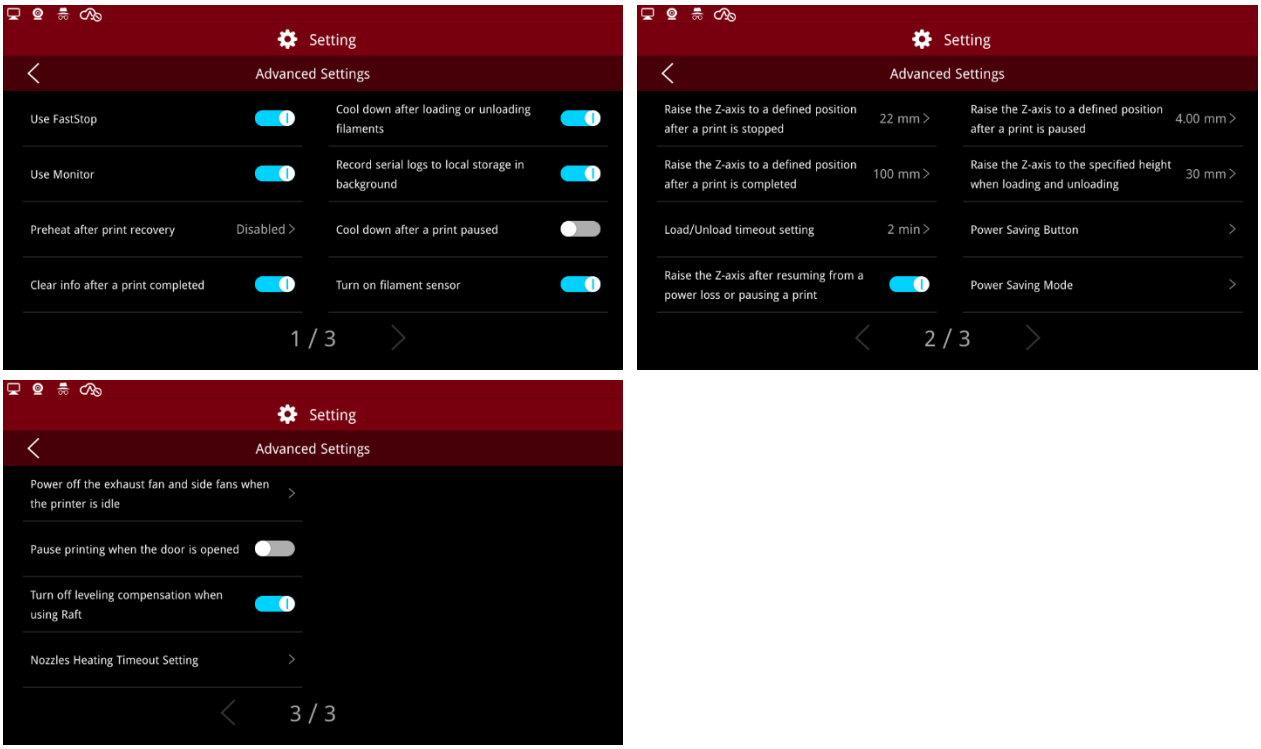
(10) Export function for Timelapse files in dashboard

In this function, you can export the Timelapse photos to external storage such as a U disk. This function is disabled by default.



Turn on and off Timelapse Photos Export

1.5.1.6 Advanced Settings



Advanced Settings

(1) Use Monitor

Enable the **"Use Monitor"** function to monitor the printer's running time and other states, in order to facilitate the analysis of the reasons when problems occur.

(2) Preheat After Print Recovery

After a power loss if you want to recover or restart the print job, the nozzle will heat up automatically first, then move to avoid the nozzle sticking to the model (which may cause model floating).

(3) Clear info after a print completed

Enable Clear info after the print is completed allowing the information about the last model to be cleared.

(4) Cool down after loading or unloading filaments

Enable Cool down after loading or unloading filaments and the nozzles will cool down automatically.

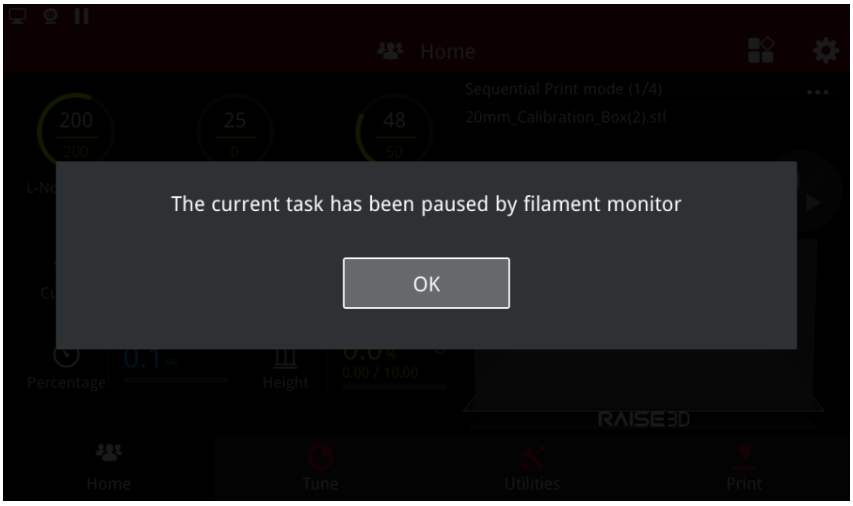
(5) Record serial logs to local storage in background

Serial logs can be recorded to local storage when enabling this function.

(6) Cool down after a print paused

In this function, after the printing is suspended, the nozzle will cool automatically.

(7) Turn on filament sensor
In this function, the detection sensor will be activated, and the printing will be suspended after the shortage of filaments is detected, and the following window will appear:

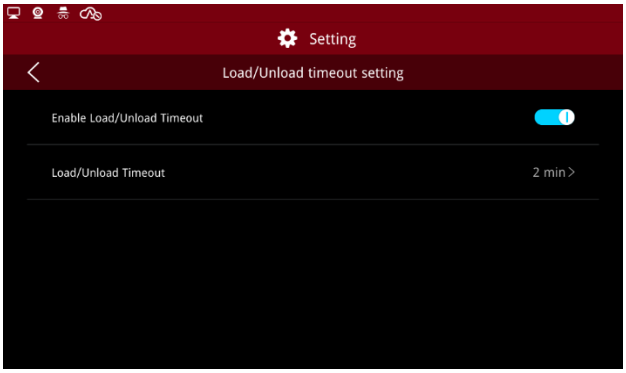


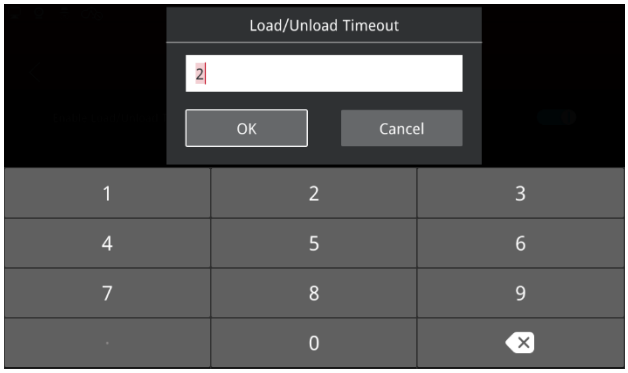
Fractured Filament Detected

(8) Lift nozzle to specified Z axis height after printing stops
As the print is stopped, the nozzle will be lifted to the specified Z axis height.

(9) Lift nozzle to specified Z axis height upon completion of printing.
As the print is completed, the nozzle will be lifted to the specified z axis height.

(10) Load/Unload Timeout
Turn on the **Load/Unload Timeout**, If the Load/Unload continues, the printer will automatically stop the Load/Unload after the specified timeout. The **Load/Unload Timeout** setting is closed by default. The default time after opening is 10 minutes.





Load/Unload Timeout

(11) Raise the Z-axis after resuming from a power loss or pausing a print
Lift Z axis 2 mm during power loss, pause and printing restart to prevent scraping down model.

(12) Raise the Z-axis to a defined position after a print is paused
After this function is turned on, when the print is suspended, the printer will lift the Z axis to the specified position to facilitate the load/unload or picking up parts.

(13) Raise the Z-axis to the specified height when loading and unloading
Lift the nozzle when loading and unloading the filaments to facilitate the reloading.

(14) Power Saving Button
Click to enter the power saving interface, select the function controlled by the power saving button.
Short Press to Turn off the Screen: Press the button to turn off the screen;
Short Press to Turn off the LED lights: Click to turn off the LED lights;
Press and Hold for 10 Seconds to Restart the Printer: Press and hold the power saving button for 10 seconds, the machine will restart automatically.

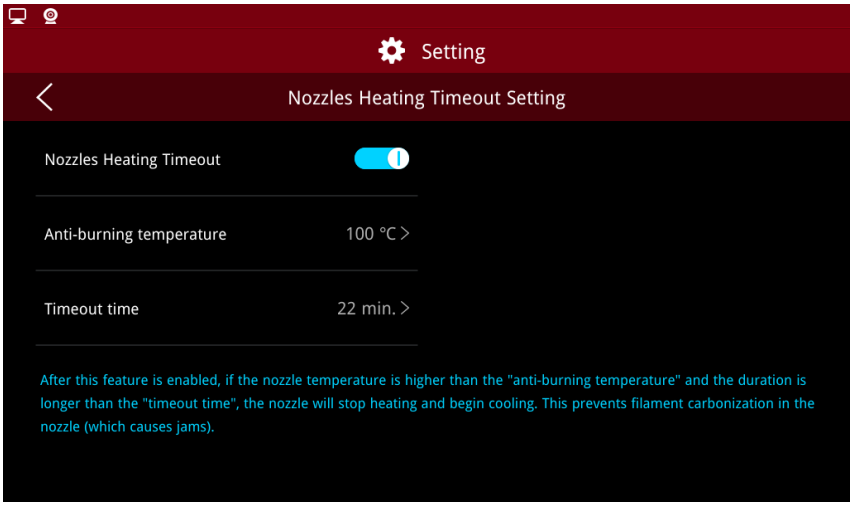
(15) Power Saving Mode
Turn on power saving mode, you can select time. when the print is in idle state, the power saving operation set by the energy saving button will be triggered after holding the set time, and the LED lighting and the screen will be turned off by default.

(16) Power off the exhaust fan and side fans when the printer is idle
Turn on this function, in the idle state, after a configured timeout, the printer will turn off the filter fan.

(17) Pause Printing when the door is opened
After turning on this function, the printer will pause the printing task when the top cover or front door is opened during printing. When the door is closed, the print task is automatically restored.
Note: this feature is closed by default.

(18) Turn off levelling compensation when using Raft
if the print file is detected to contain Raft file when printing, levelling compensation will not be used in printing.

(19) Nozzle Heating Timeout Setting



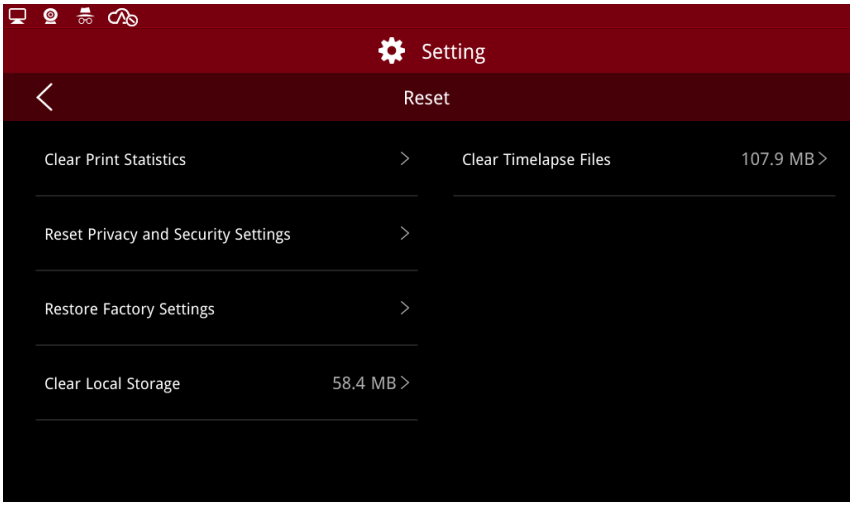
Nozzle Heating Timeout Setting

After opening this function, when the printer is in idle state, if the nozzle temperature continues to become higher than the anti-dry burning temperature, after exceeding the set time-out time, the

nozzle will stop heating and cool down to prevent the filament carbonization in the nozzle from causing the jam.

1.5.1.7 Reset

In this page, you can restore the printer's relevant information and parameters.



Reset

(1) Clear Print Statistics

Under this function, the printer will remove all print information.

(2) Reset Privacy and Security Settings

Under this function, the printer will reset privacy and security to the default settings.

(3) Restore Factory Settings:

a. The following settings will be affected after restore factory settings:
b. Reset network settings, including Ethernet and WIFI config.
c. Clear all the personal settings, including machine name, language, number of nozzles, screen brightness, time zone & time and settings under More settings - Hardware, More Settings - Advanced settings.
d. Clear all the print records in Dashboard.
e. Reset all the information inside privacy security as mentioned above.
f. Clear all the files inside local storage.
g. Clear all the dump files saved for power loss.

(4) Clear Local Storage

To empty the local files, please clear all the local files under **Settings >Machine >Reset**.

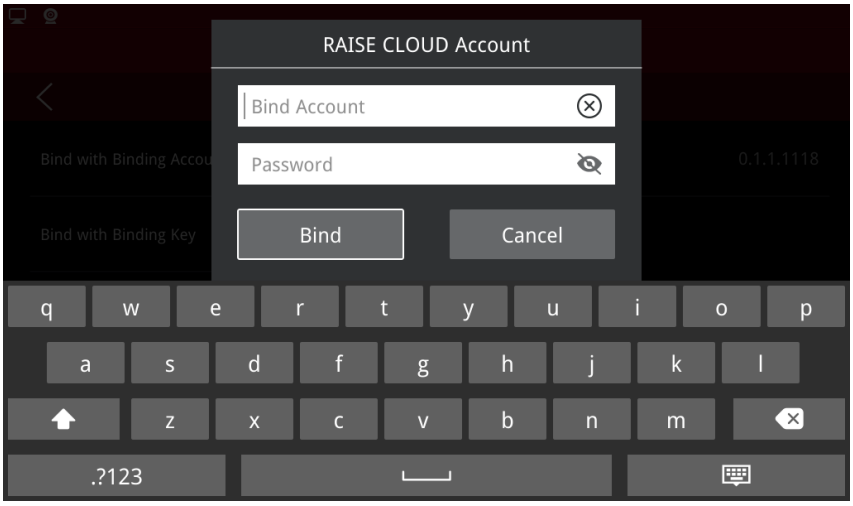
(5) Clear Time-lapse Files

To clear the Time-lapse files, please click **Settings >Machine>Reset** to clear Time-lapse files.

1.5.1.8 RaiseCloud

(1) Binding Account and Password

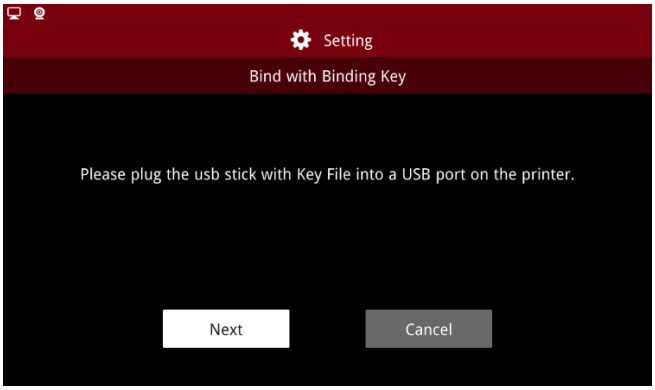
Enter RaiseCloud account and password, click **"Bind"**.

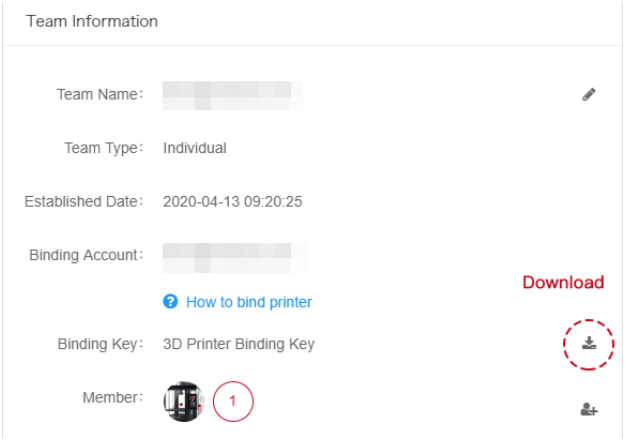


Binding Account and Password

(2) Binding with an Encrypted Binding File

You need to download the binding Key file on RaiseCloud website to the USB device. Insert the device on the touch screen, and follow the wizard to complete the printer binding.



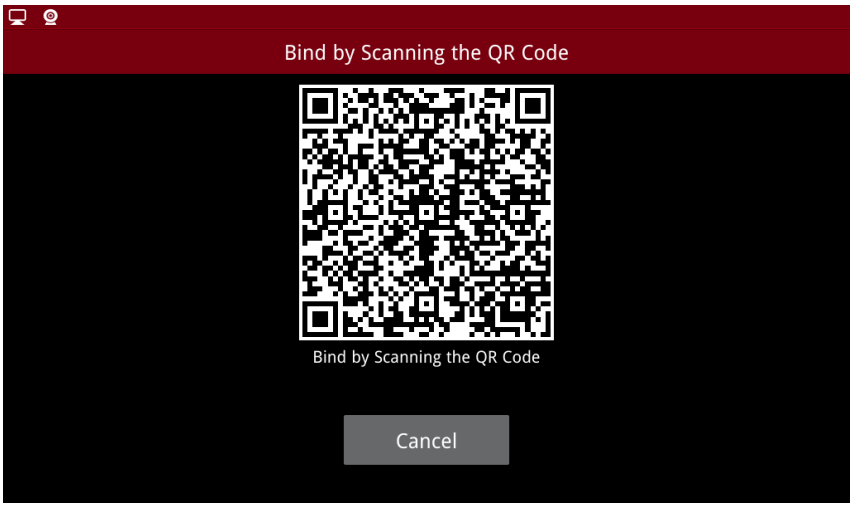


Binding by Encrypted File

Note: you need to create a team before downloading the encrypted binding file, otherwise RaiseCloud will not provide the encrypted binding file.

(1) Binding by Scanning QR code

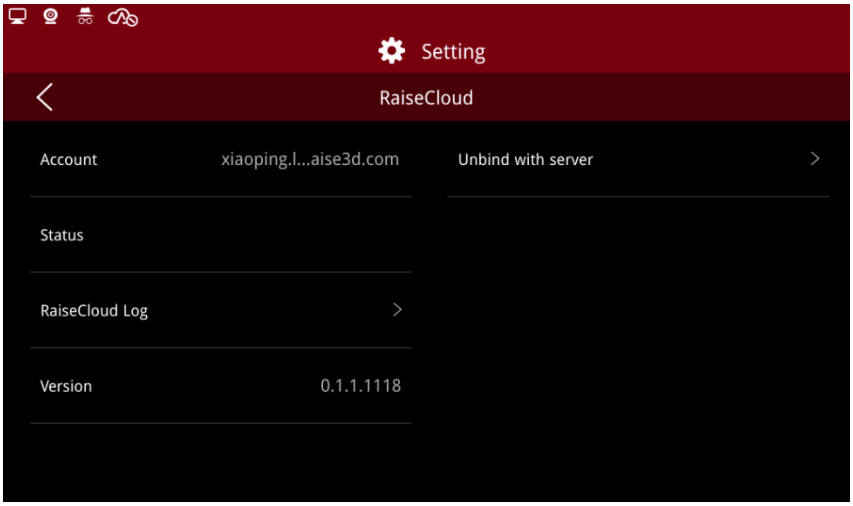
Open RaiseCloud APP, click scan code for QR code scanning.



Binding by Scanning QR Code

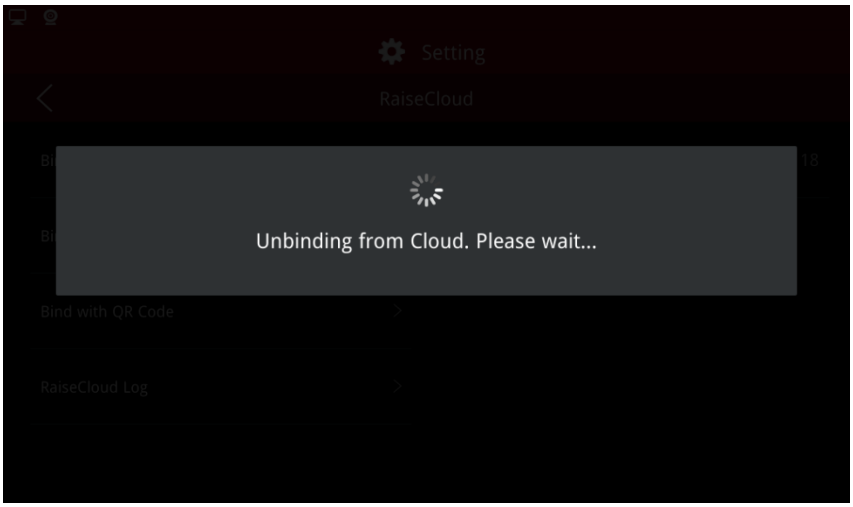
If you don't have a RaiseCloud account, please go to Cloud.raise3d.com to register. For more information about RaiseCloud, please visit website: Cloud.raise3d.com.

After successful login, the page appears as follows:



Binding Success Page

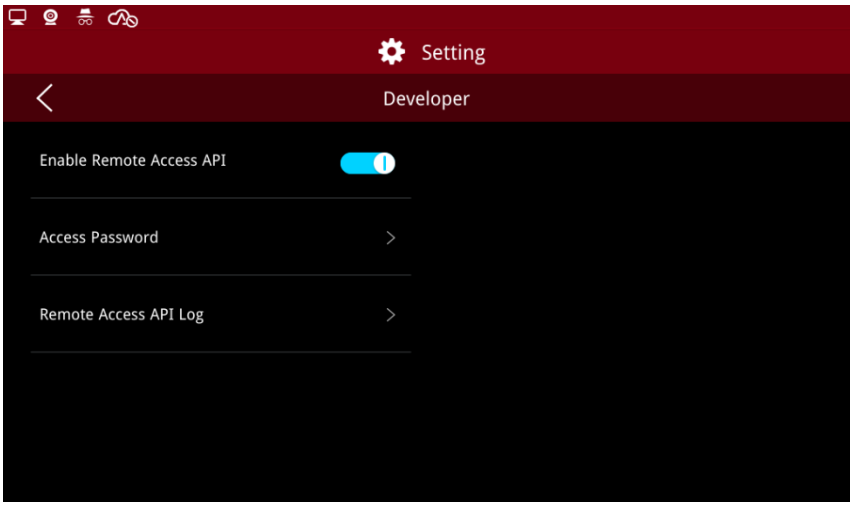
You can export RaiseCloud logs using USB devices.
If you need to unbind the printer, please click on **“Unbind with server”** to unbind your printer.



Unbind RaiseCloud

1.5.1.9 Developer

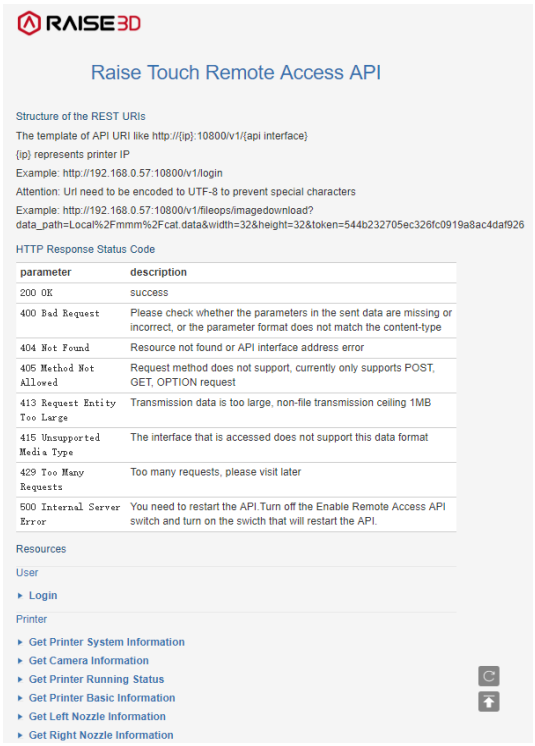
You can remote access API with this function.



Developer

Note: if you turn on **“Use security password to protect security settings”**, you need to enter a security password before opening this function,

You can browse the API documentation by visiting http://xxx.xxx.xxx.xxx:10800 (on behalf of the printer IP address) to see how to use the API.



WEB API Page

(1) Access password

Enter the SSH password to set the Remote Access API password.

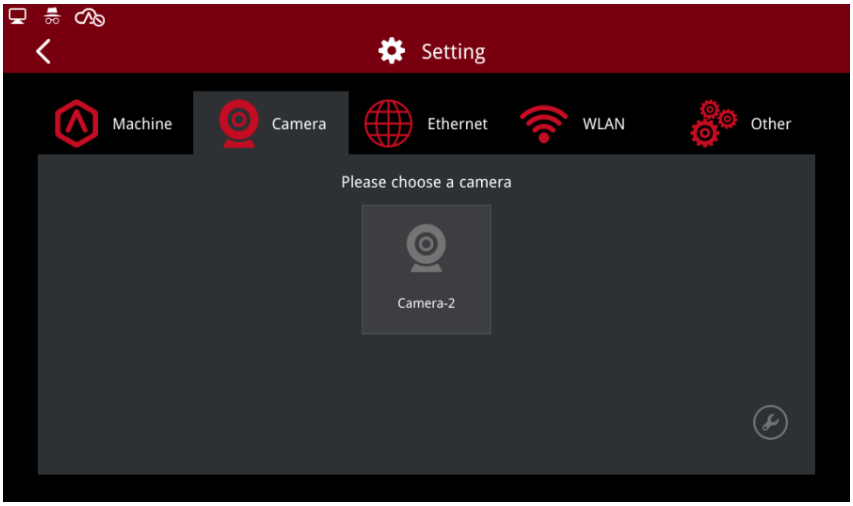
(2) Export remote access API log

For this function, you can export API logs to external storage.

1.5.2 Camera

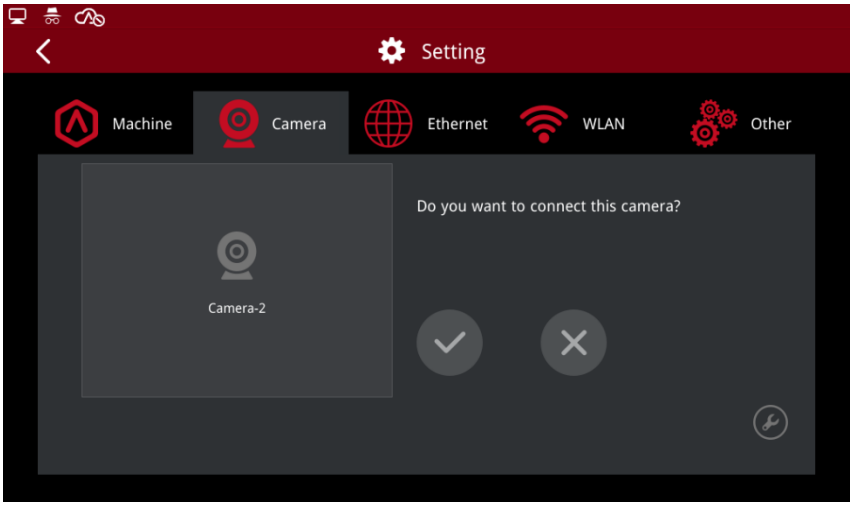
1.5.2.1 Camera Use

Select the camera and wait for the connection. Pictures can be viewed on RaiseTouch and ideaMaker after successfully connected.

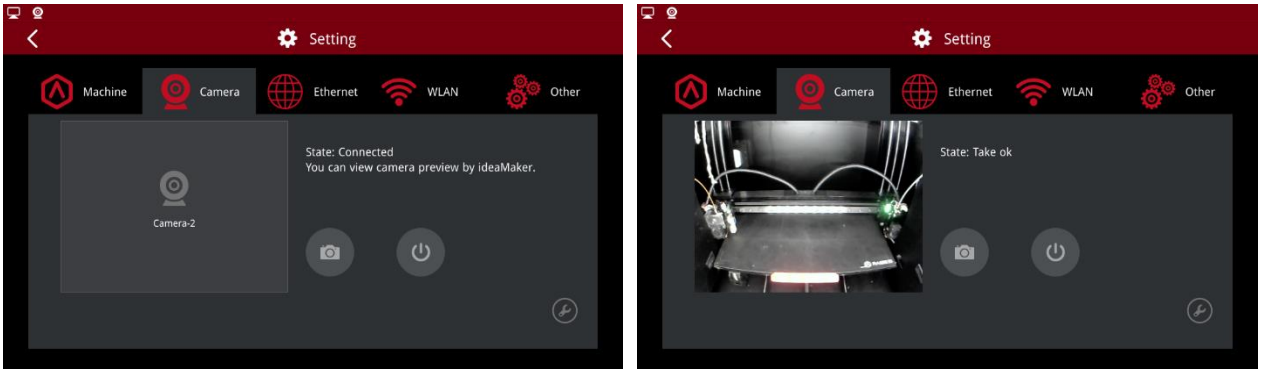


Camera Interface

Select the camera and click "**OK**" to connect to the selected camera.

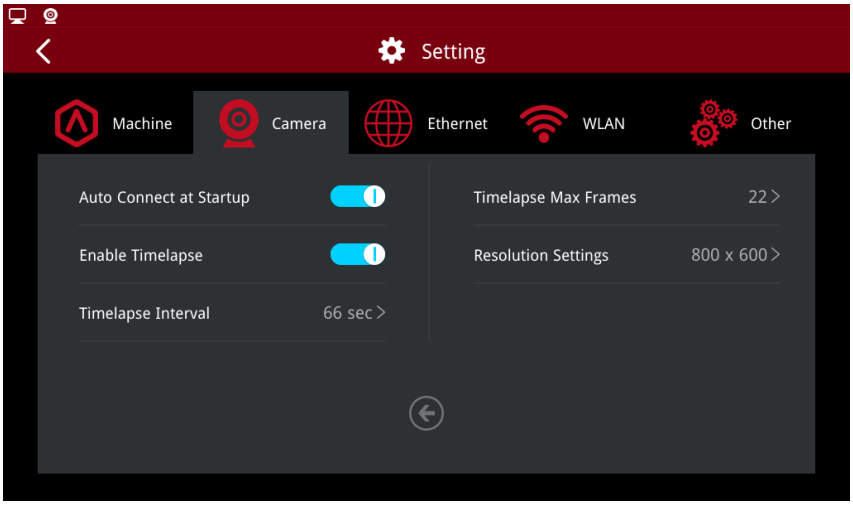


Click the camera button to view the picture taken on the RaiseTouch. Click the close button to turn off the camera function.



Connect Camera Interface

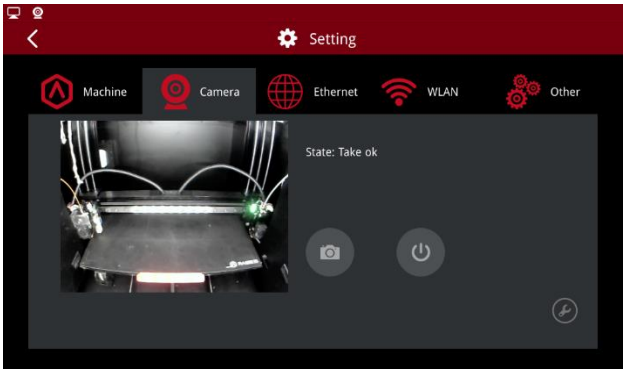
Note: 1. Camera is not accessible from your computer unless you are using ideaMaker version 3.1.7 or newer. 2. In the advanced settings, you can set **"Auto Connect at Startup"** to enable this function, after booting up, the machine will automatically connect the camera.

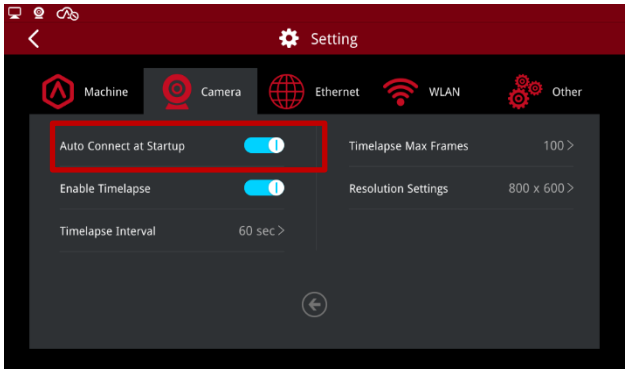


Camera Advanced Settings

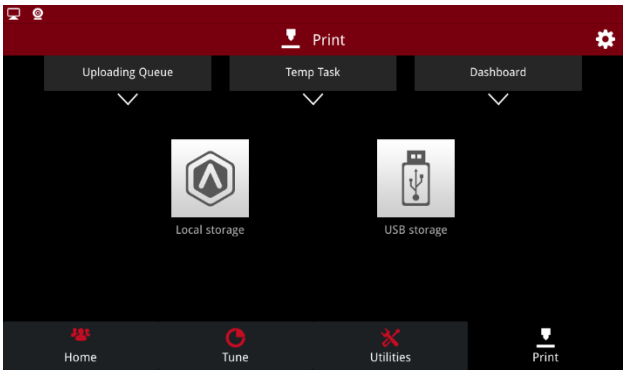
1.5.2.2 Time lapse

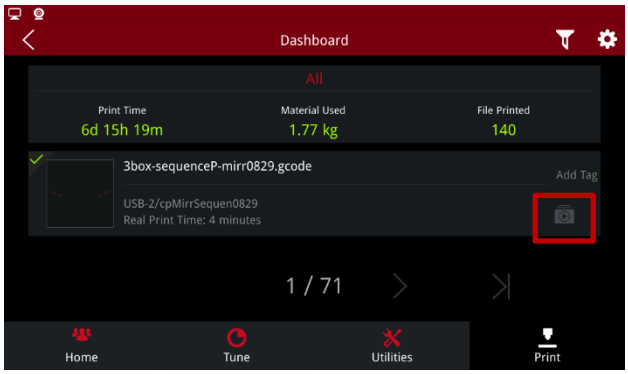
In camera advanced settings, you can set **“Enable Timelapse”**.





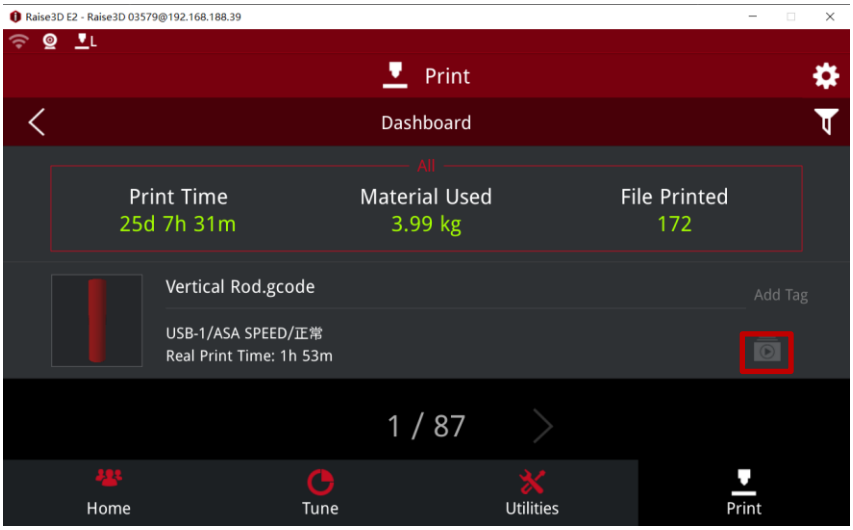
The Timelapse can be viewed on the touch screen under “**Print > Dashboard**”.





Check Timelapse

You can check Timelapse on ideaMaker 3.2 and above version.



Check Timelapse on ideaMaker 3.2

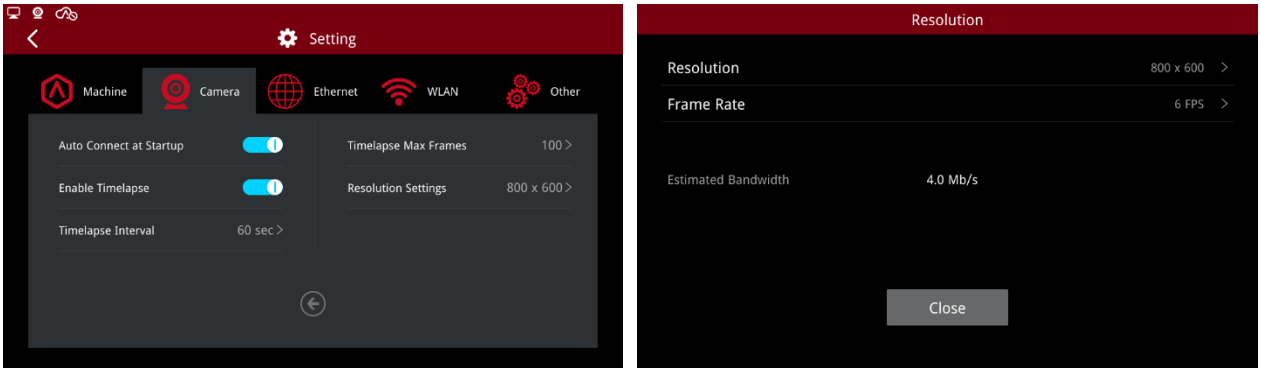
Note: 1. Timelapse can be viewed only when the print is finished.

2. Make sure the Timelapse setting was turned on at the touch screen.

3. RaiseTouch and ideaMaker need to be upgraded to the latest version at the same time.

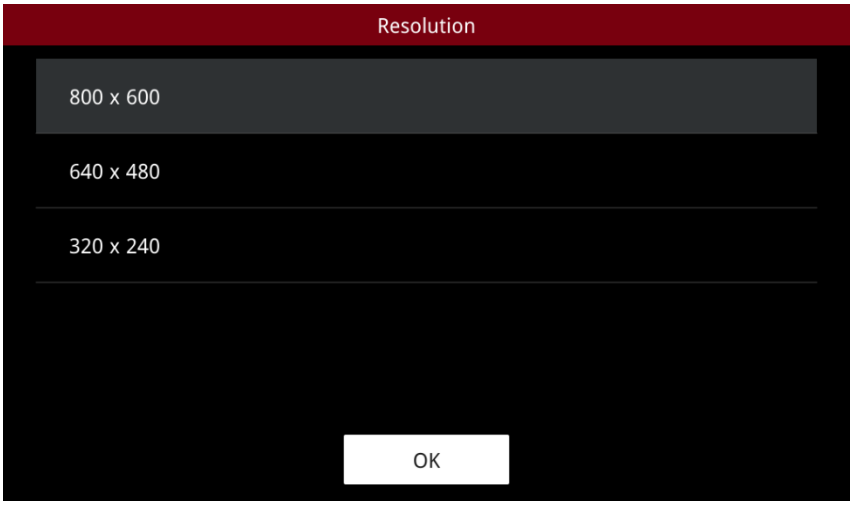
1.5.2.3 Resolution and Frame Rate settings

Click **"Settings"** to enter the camera parameter setting interface, click **"Resolution Settings"** to enter the resolution parameter setting interface.



Resolution Settings

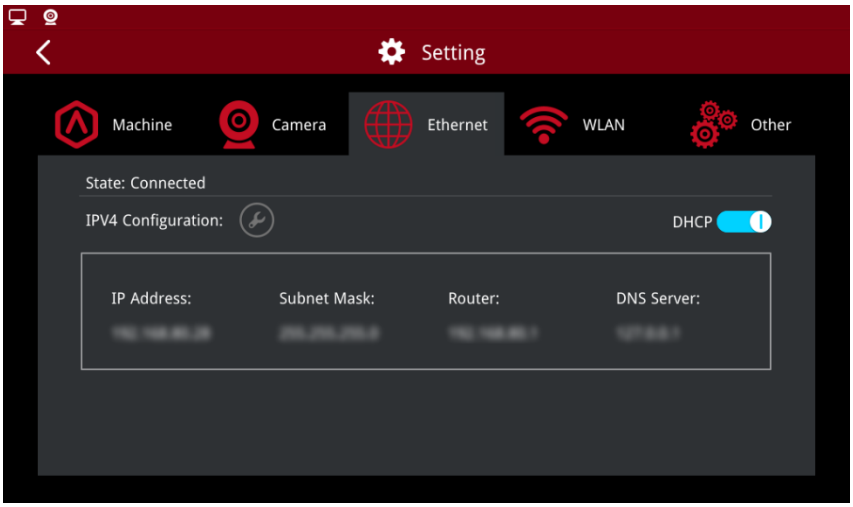
Click on **"Resolution"** to enter the resolution list and select the appropriate resolution as needed.
Click on **"Frame Rate"** to modify the number of frames.



Select Resolution

Note: In order not to affect the use and printing effect of other network devices, the maximum frame rate is not allowed to exceed 10 fps.

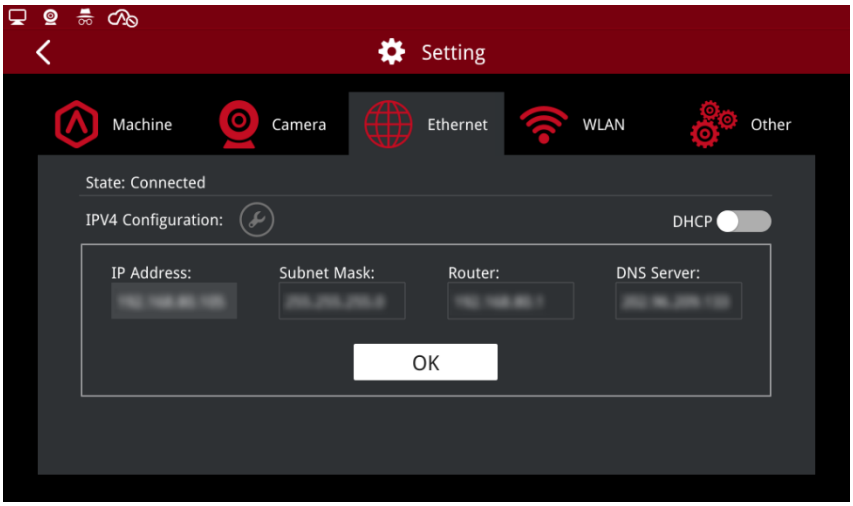
1.5.3 Ethernet



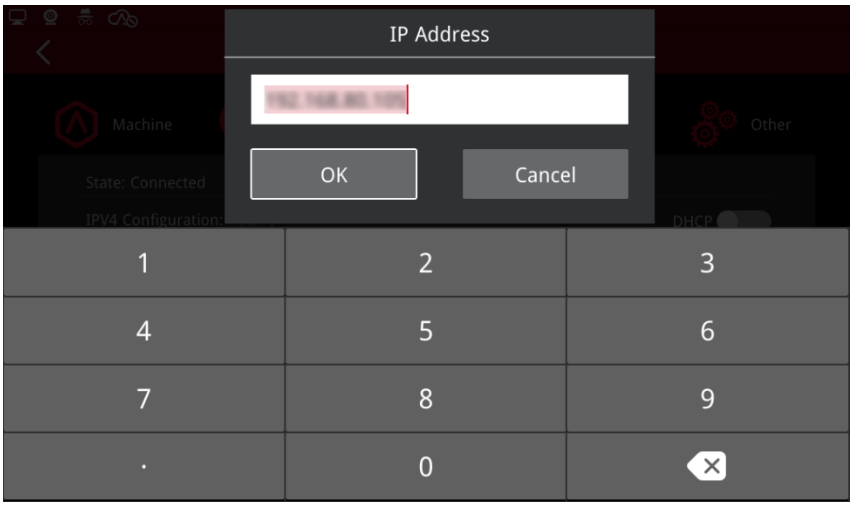
DHCP Opened

You can upload the file by the cable connection according to the IP Address of the printer and ensure the printer and your computer are in same WLAN.

To set the detail information such as IP address, disable the DHCP. Input the information and press OK to apply.

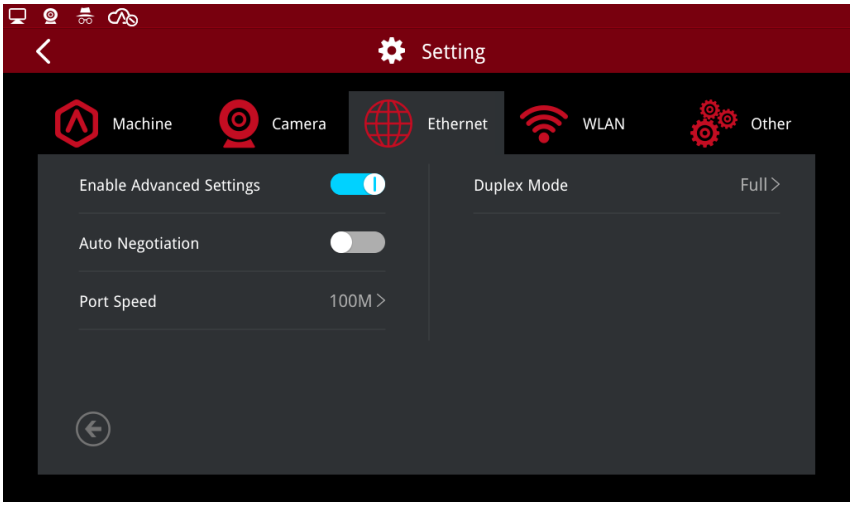


DHCP Closed



Input Dynamic IP Address

If the network speed is too slow, click the tool icon to enter the advanced setting interface. Relevant parameters can be set in this interface. After setting, the printer or network connection needs to be restarted before it can take effect.



Ethernet Advanced Settings

If you meet super slow file uploading speed from ideaMaker to printer via LAN, please refer to the settings below:

1. Edit settings in RaiseTouch only:
Enable Advanced Settings: Enabled.
Auto Negotiation: Disabled.
Port Speed: 100M.
Duplex Mode: Half.

Upload Bandwidth: 39.7 Mbits/sec.
Download Bandwidth: 68.4 Mbits/sec.

2. Edit setting in Managed Switch only:

Two options:
a. Auto Negotiation: Disable, Port Speed: 100M, Duplex Mode: Half.
Upload Bandwidth: 32.5 Mbits/sec.
Download Bandwidth: 68.3 Mbits/sec.

b. Auto Negotiation: Enable, Auto Advertisement: 100 Full.
Upload Bandwidth: 89.4 Mbits/sec.
Download Bandwidth: 94.5 Mbits/sec.

3. Edit settings in both RaiseTouch and Managed Switch:

Two options:
a. Switch: Auto Negotiation: Disable, Port Speed: 100M, Duplex Mode: Full.
RaiseTouch: Enable Advanced Settings: Enabled.
Auto Negotiation: Disabled.
Port Speed: 100M.
Duplex Mode: Half.

Upload Bandwidth: 94.9 Mbits/sec.
Download Bandwidth: 94.2 Mbits/sec.

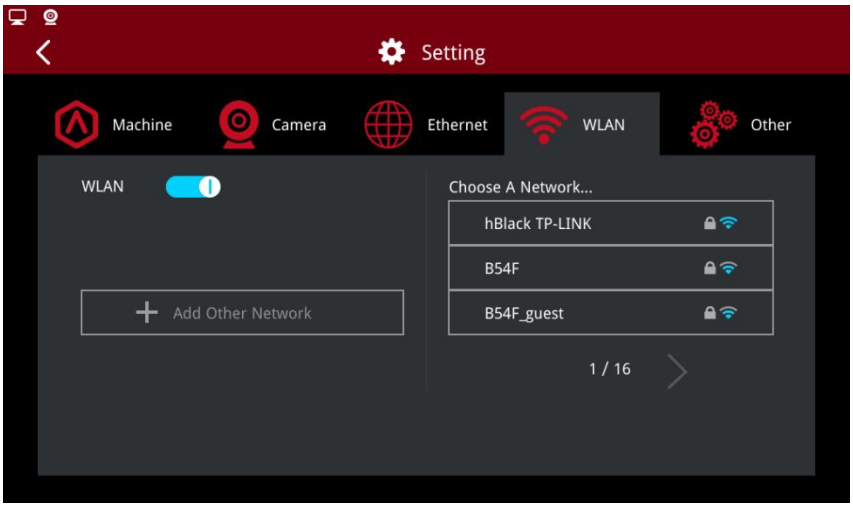
b. Switch: Auto Negotiation: Disable, Port Speed: 100M, Duplex Mode: Half.
RaiseTouch: Enable Advanced Settings: Enabled.
Auto Negotiation: Disabled.
Port Speed: 100M.
Duplex Mode: Half.

Upload Bandwidth: 47.2 Mbits/sec.
Download Bandwidth: 68.5 Mbits/sec.

Once the Enable Advanced Settings under Ethernet tab being disabled, the Advanced Settings of Ethernet will be set back to default values.
Please reboot your printer after adjusting the settings here to let the screen to update the data, The option 1 and 3 listed above can take effect once after reboot the printer.

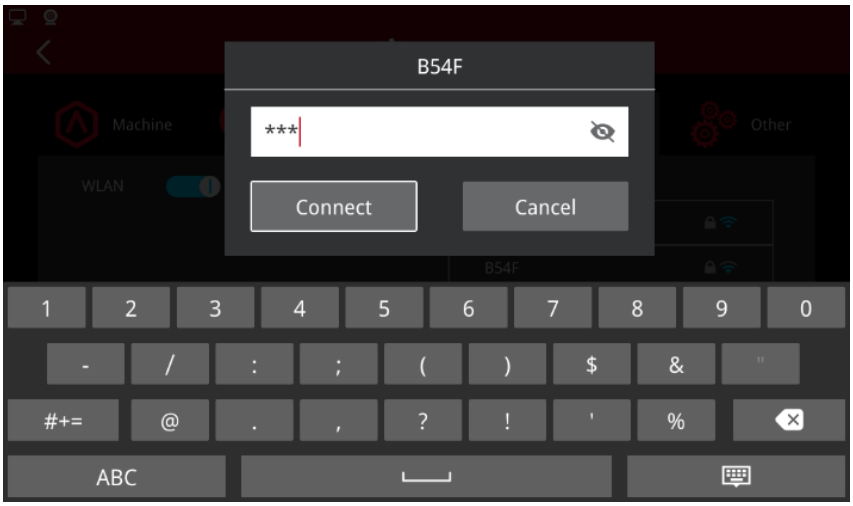
1.5.4 WLAN

You can add a network by inputting the password. Click **“Add Other Network”**, input network name and password and then click **“Add”**. Click the eye icon to control whether to display the password.

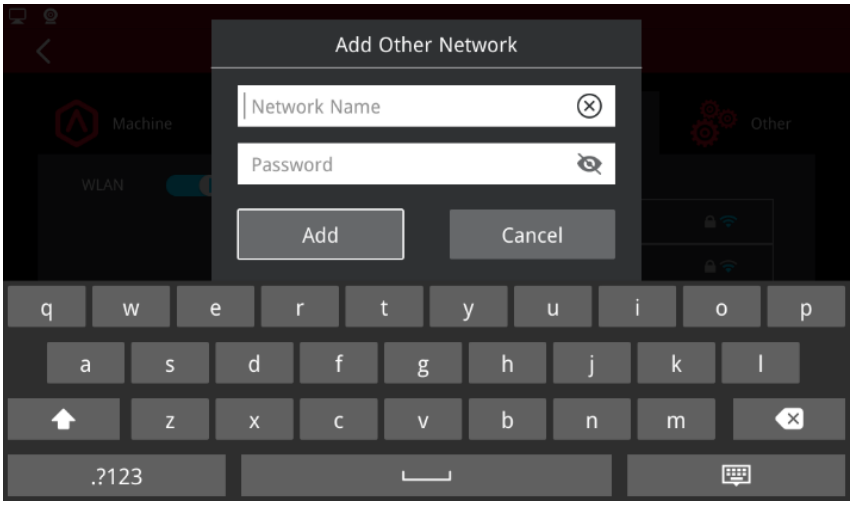


WLAN

Input the password of the WLAN you want to join and press **“Connect”**.

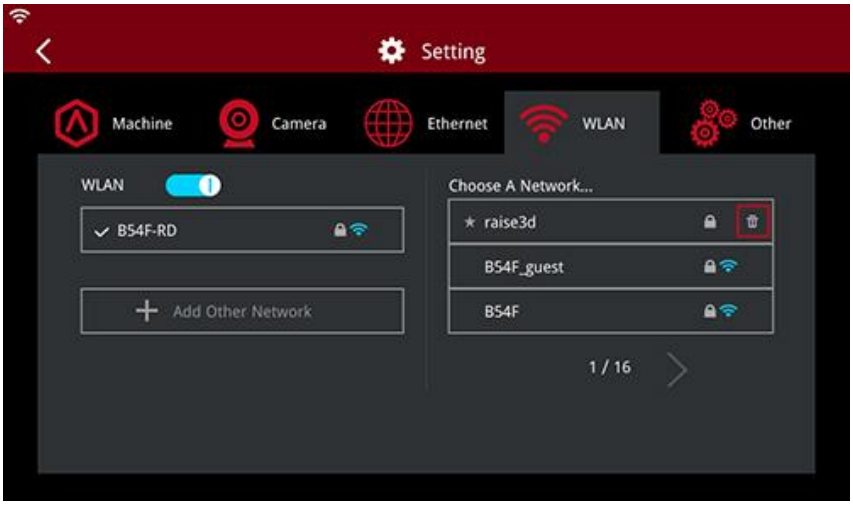


Click **“Add other Network”**, enter the network name and password, and click **“Add”** to connect.

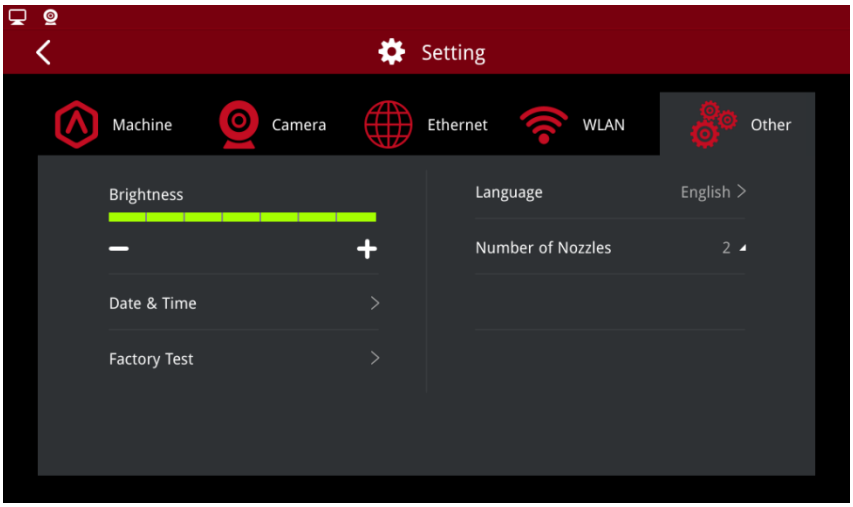


Connect Network

Click delete icon to delete the added network.



1.5.5 Other



Other Pages

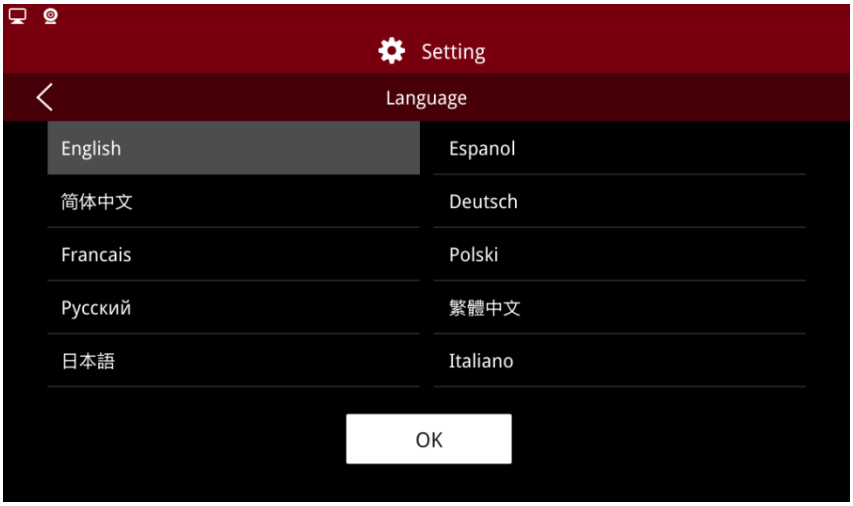
1.5.5.1 Brightness

To control the brightness of the screen, adjust by pressing the **"+"** or **"-"** button.

1.5.5.2 Language

Choose the language applied to your printer. Options are available in English, simplified Chinese, French, Russian, Japanese, Spanish, Polish, Traditional Chinese and Italian.

After you set the language, the changes will take effect after rebooting.

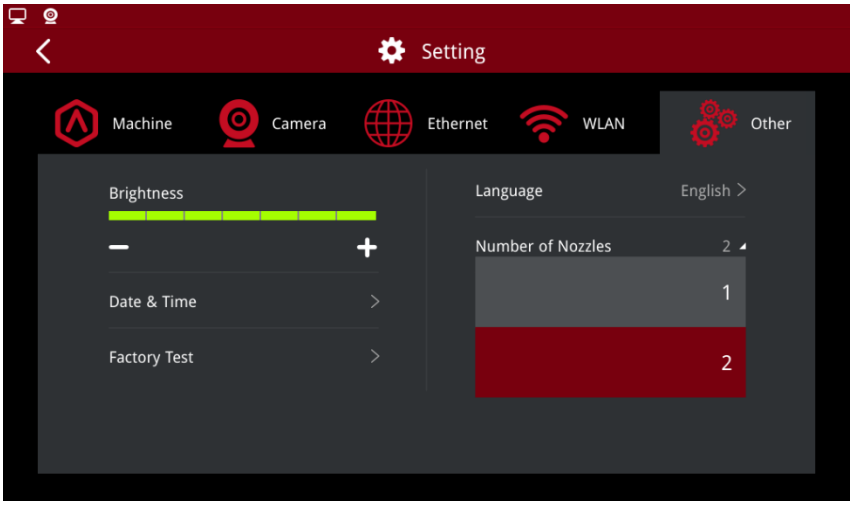


Language Options

1.5.5.3 Number of Nozzles

Display the number of the nozzle.

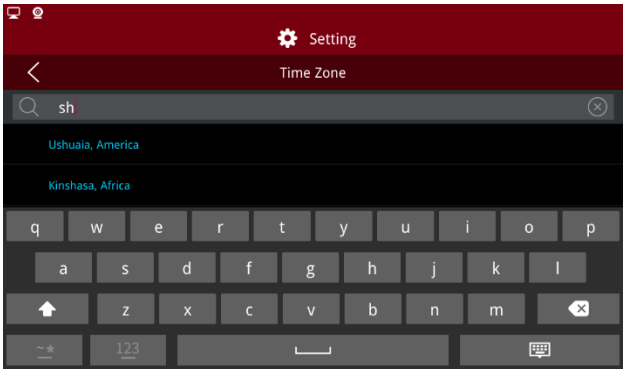
Note: This parameter needs to be consistent with the version of the motion control version.

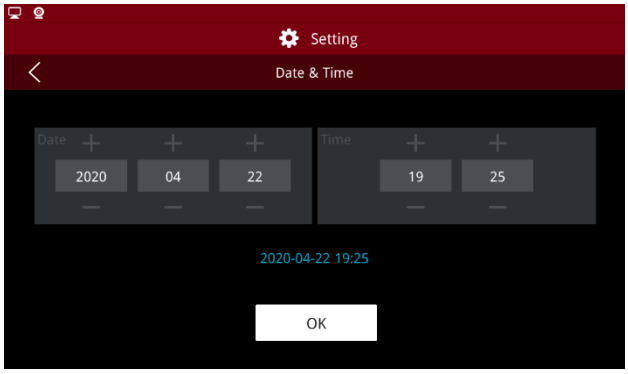


Select Number of Nozzles

1.5.5.4 Date and Time

Set the date and time of printer.





Time and Time Zone

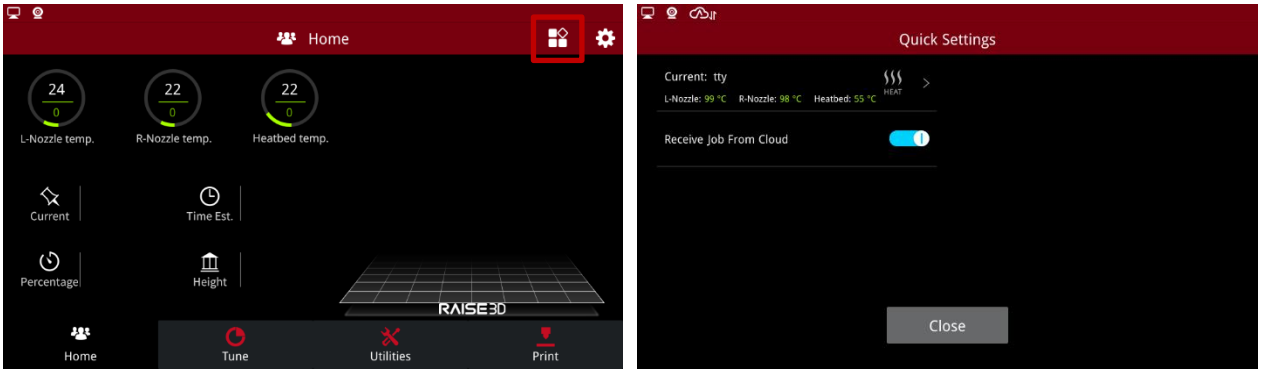
Time zone can be added by entering the city name, and the time and date will be set automatically if there is a web connection.

2. Operation

2.1 Quick Settings

2.1.1 Enter from Home Interface

Enter the interface of temperature template management from "**Home > Quick Settings**".

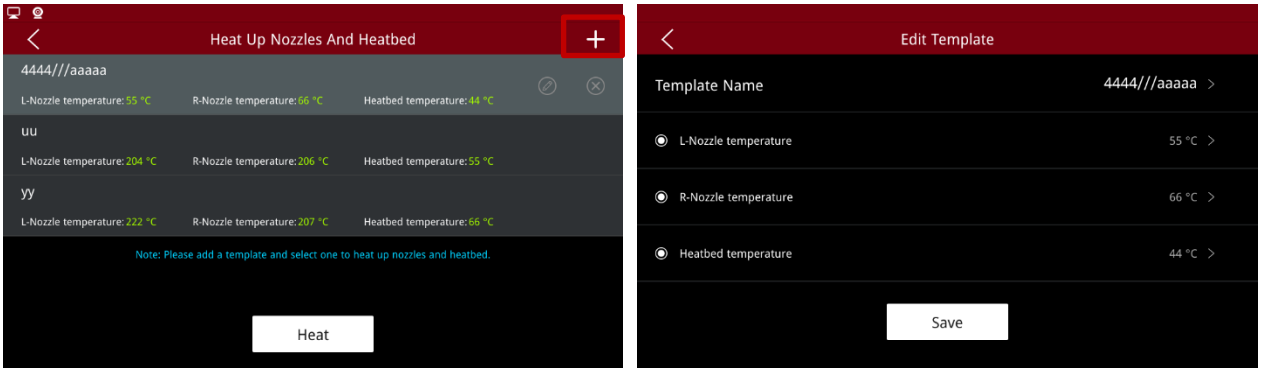


Quick Setting Entry on the Home Page

Click

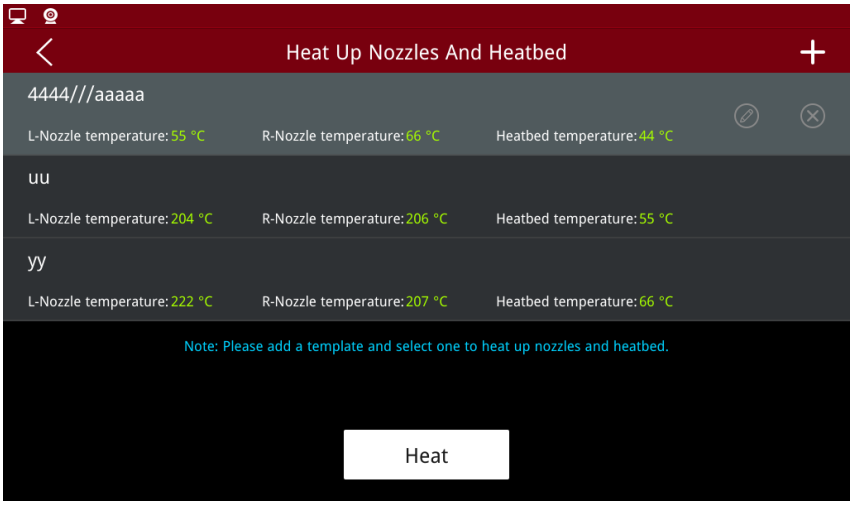
button to automatically execute the template and heat.

Add a new template by clicking the upper right button.



Add Heating Template

Click the template to modify the template parameters. Click delete button to delete the template. After the template is selected, the "**Heat**" button will be displayed. Click the "**Heat**" button and the printer will set the temperature according to the template to heat each part.

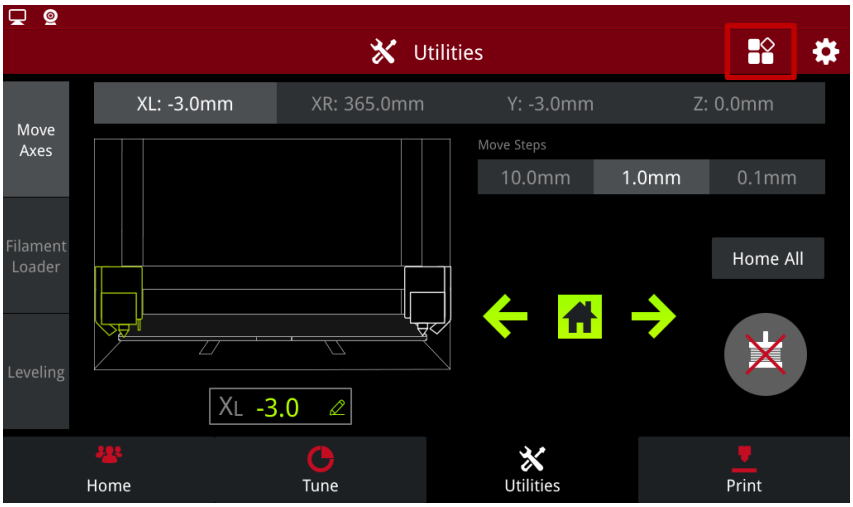


Select Heating Template to Heat

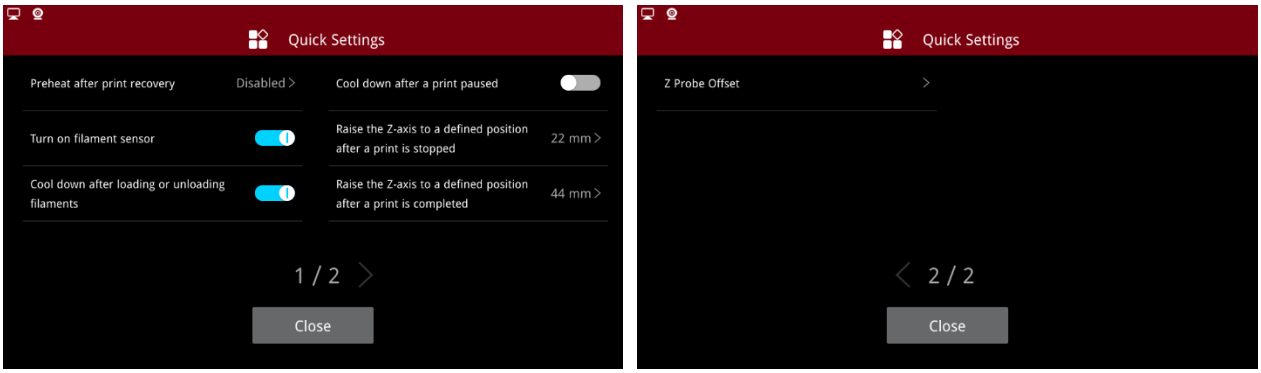
Receiving cloud tasks: After this function is turned on, the printer will start to receive printing tasks from RaiseCloud. This function will only take effect after the printer is bound to Cloud.

2.1.2 Enter from Utilities interface

Click the Quick Settings button located in the top right of the Utilities tab to enter the Quick Settings interface.



Utilities Quick Settings Entry



Quick Settings Options

Preheat after recovery: Under this function, if you want to resume or restart the print job after power off, the nozzles will automatically heat up, and then extruder head will move to avoid the nozzle sticking to the model and causing the model to move.

Turn on filament sensor: In this function, the printer will activate the sensor to detect whether there is a shortage of filaments.

Cool down after loading or unloading filaments: In this function, the nozzle will automatically cool down after loading or unloading filaments.

Cool down after a print paused: In this function, the nozzle will automatically cool down after pausing printing.

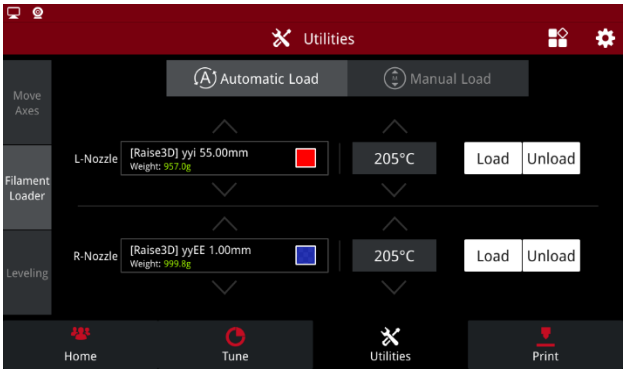
Raise the Z-axis to a defined position after a print is stopped: In this function, when printing is stopped, the Z axis will be raised to the specified position.

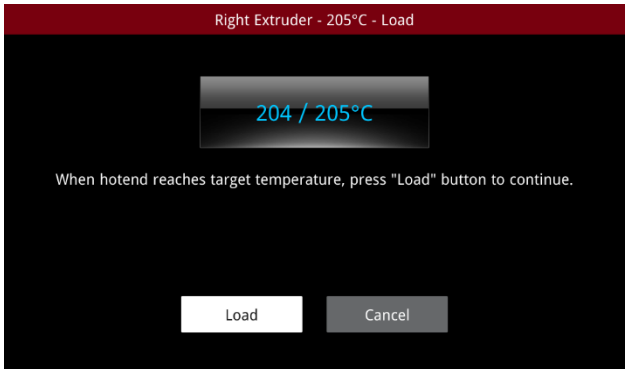
Raise the Z-axis to a defined position after a print is completed: In this function, when a print is completed, the Z axis will be raised to the specified position.

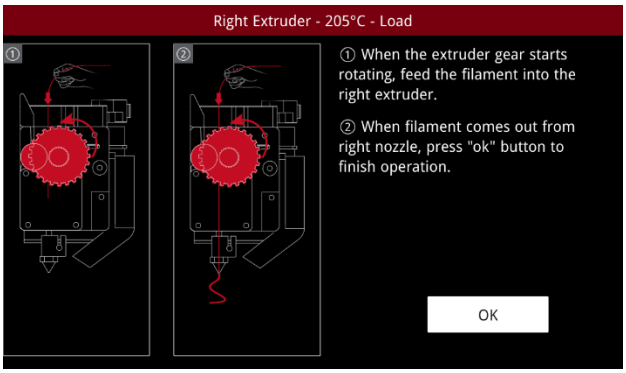
Z Probe Offset: Set the probe offset in the z direction.

2.2 Load

Before you print for the first time, please load the filaments. Taking the left nozzle as an example, click **"Load"** on the **"Utilities"** page. When the target temperature is reached, click **"Load".** Click **"OK"**.



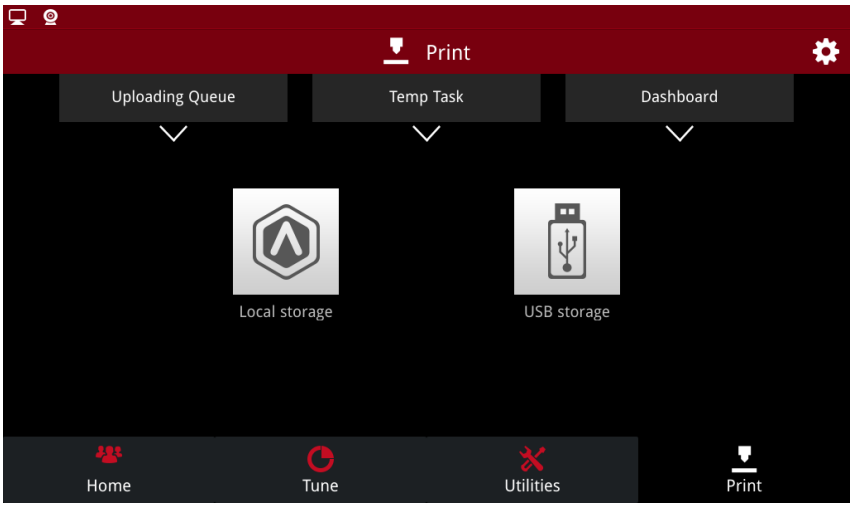




Load

2.3 Choose a file to print

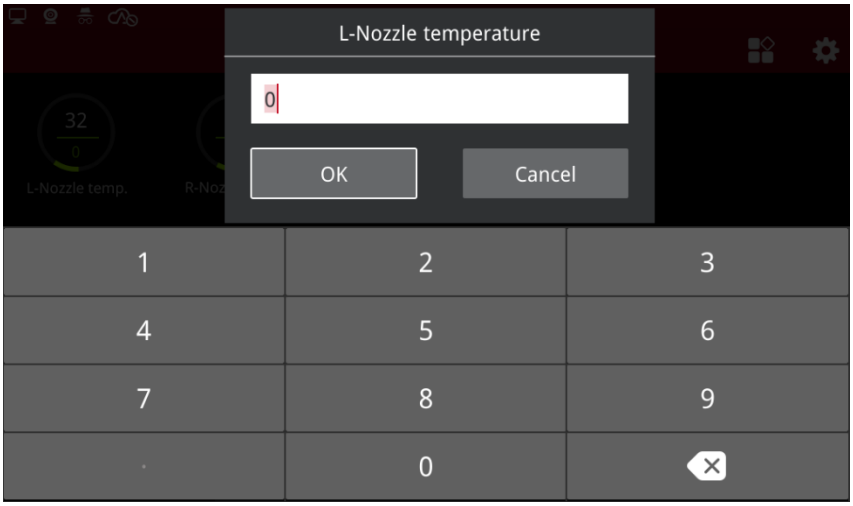
When you want to start a print, open "**Print**" page, choose a file in Local storage or plug in a USB disk/SD card, then choose the desired file. Click Print to start the print task.



Select Print File

2.4 Heat up extruder to profile temperature

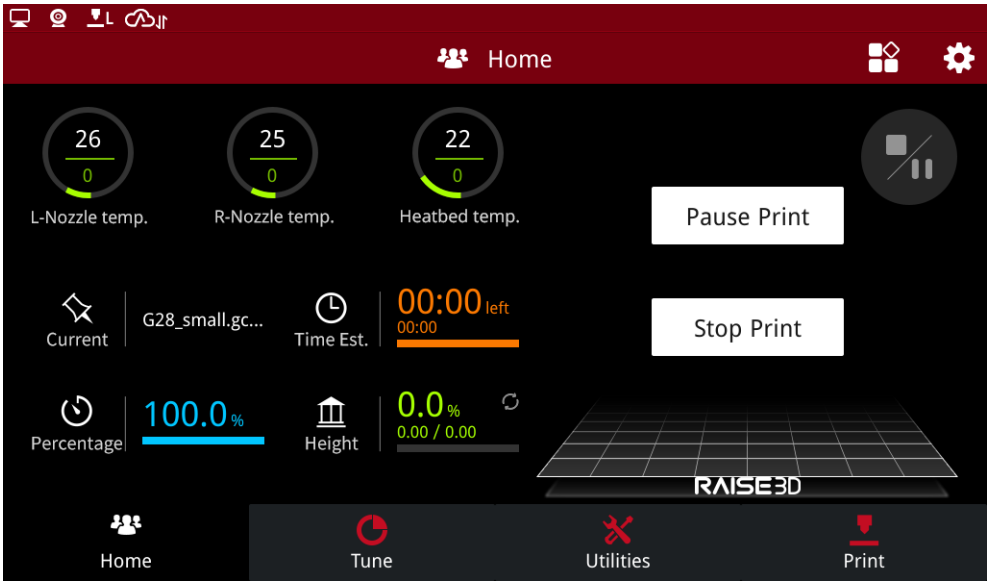
When starting a print task, it is possible to set the temperature in ideaMaker or set it on the touch screen.



Set the Nozzle Temperature

2.5 Pause and Stop

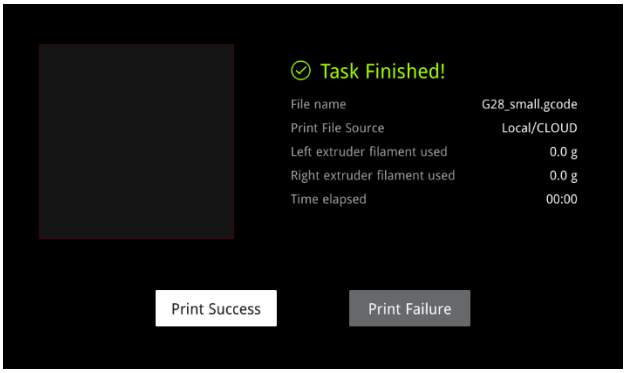
Pause Print: pause print during printing.
Stop Print: stop the printing.

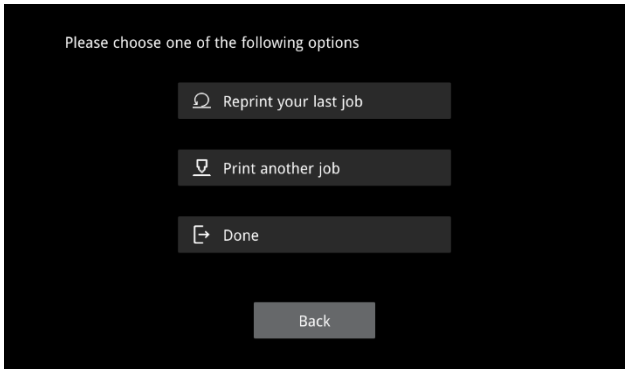


Pause/Stop Print

2.6 Finish the printing

Reprint: Reprint the Model.
Print Another Job: Jump to the file page and select a new print model.
Done: Return to the home page.

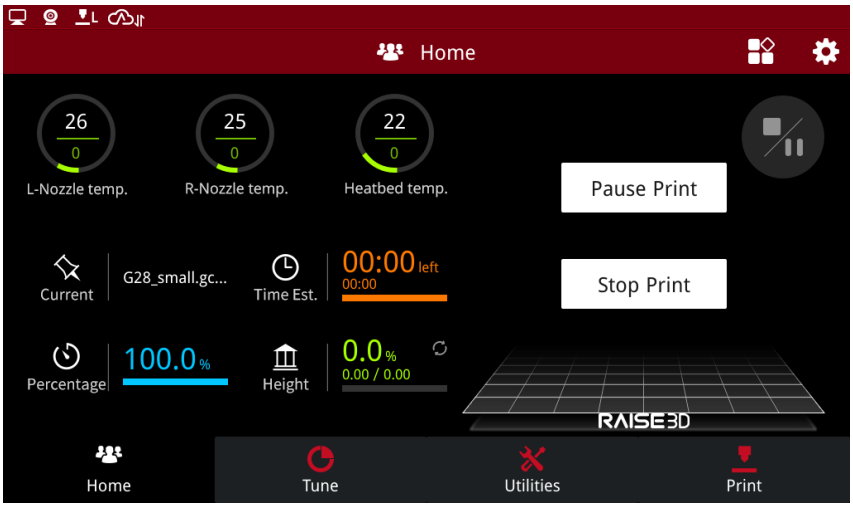




Task Finished

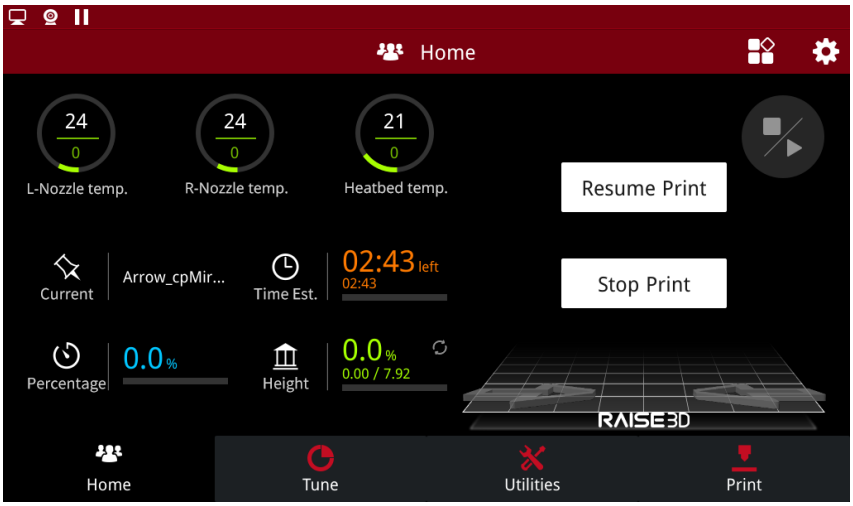
2.7 Changing filament

When the filament runs out during printing, replace with new filament, by pressing the pause button on the home interface.



Pause to Replace Filaments

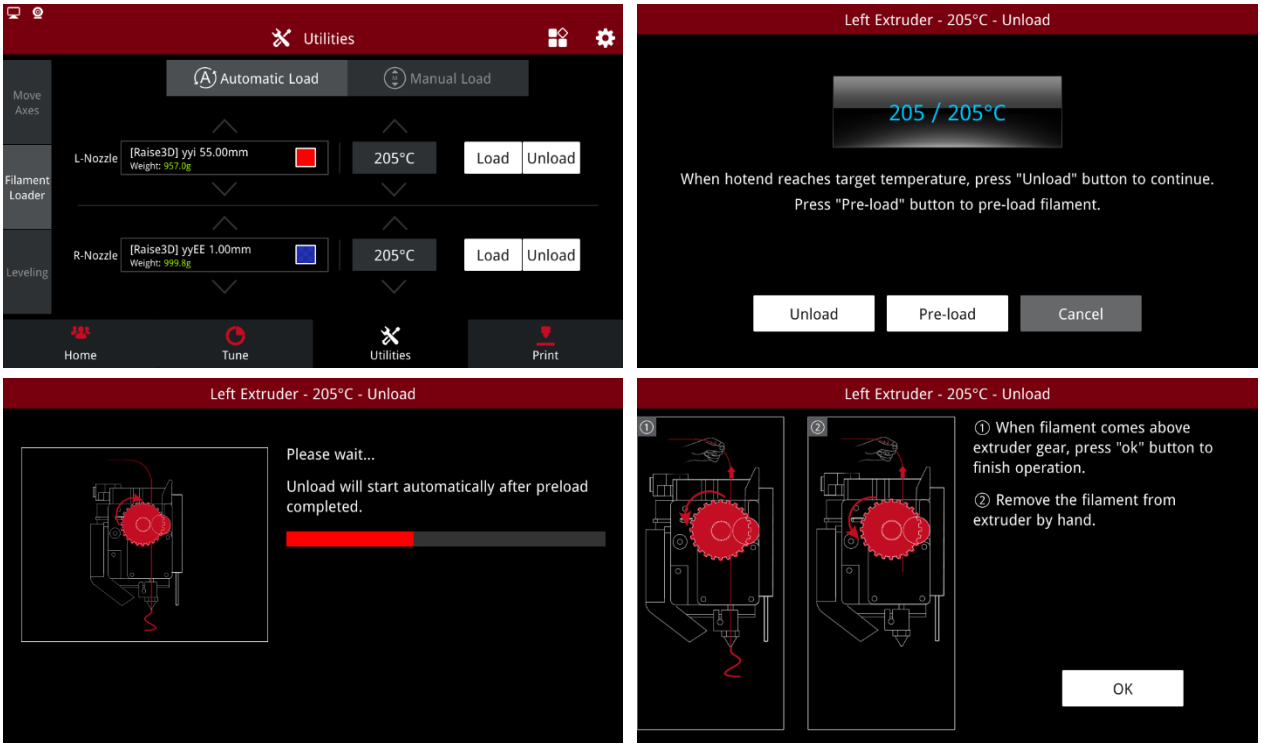
Press "**Resume print**" after changing the filament. Print will resume.



Resume Print

2.8 Unload

On the Utilities page, click **“Unload”**.



Unload

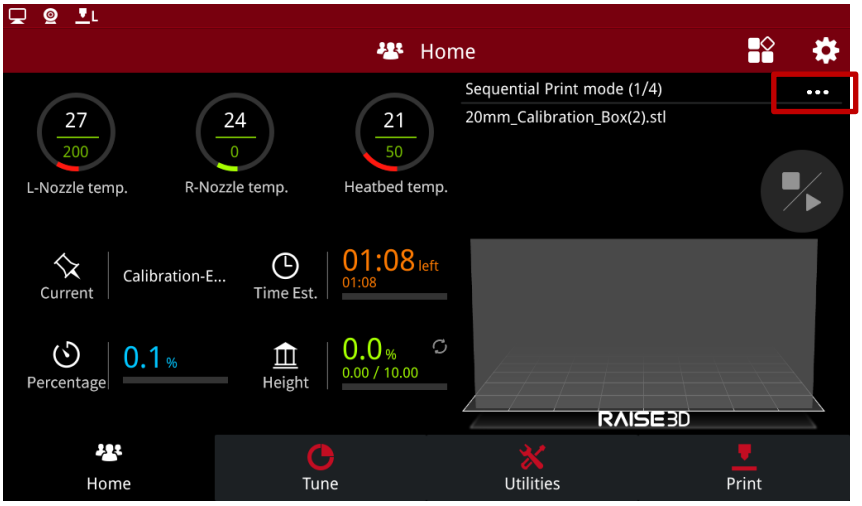
2.9 Sequential Print Mode

Sequential print mode allows the printing of multiple objects individually in a particular order.
In Sequential mode, the Home tab will display:

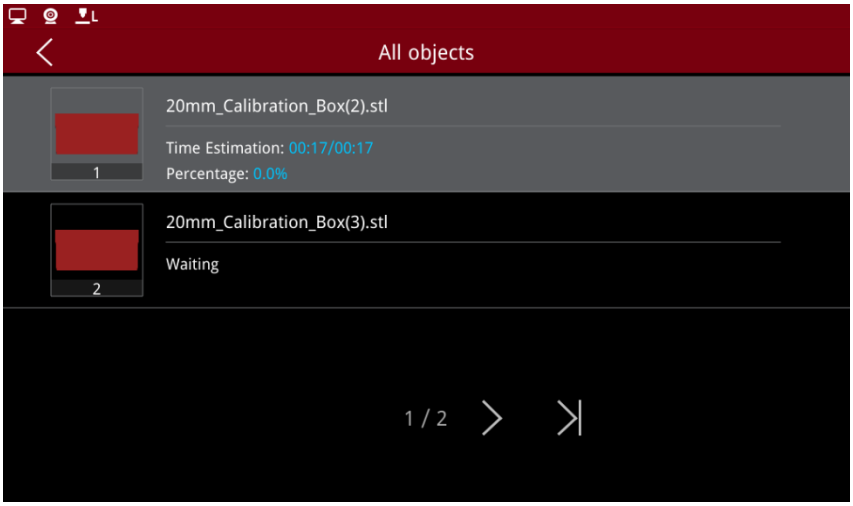
The name of the print file, the total print time for the task (all objects on the bed), the current completion percentage of the total print task, and the layer height for the current model.

Press “**...**” in the centre of the Home menu to open the “**All Objects**” list and view the progress for each object.

Note: Sequential Print can only be enabled when slicing with ideaMaker 3.4.0 or higher.



Sequential Print Mode

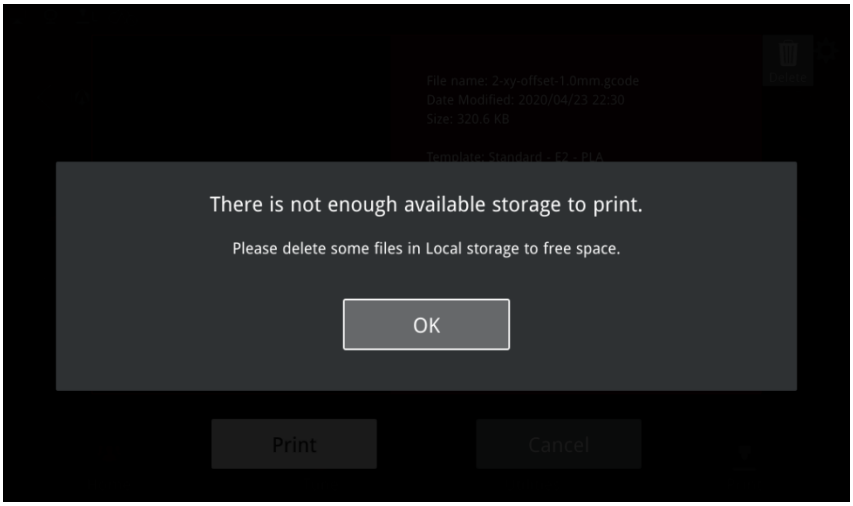


Print Model List

3. Printer Maintenance

3.1 Check Storage Space Before Operation

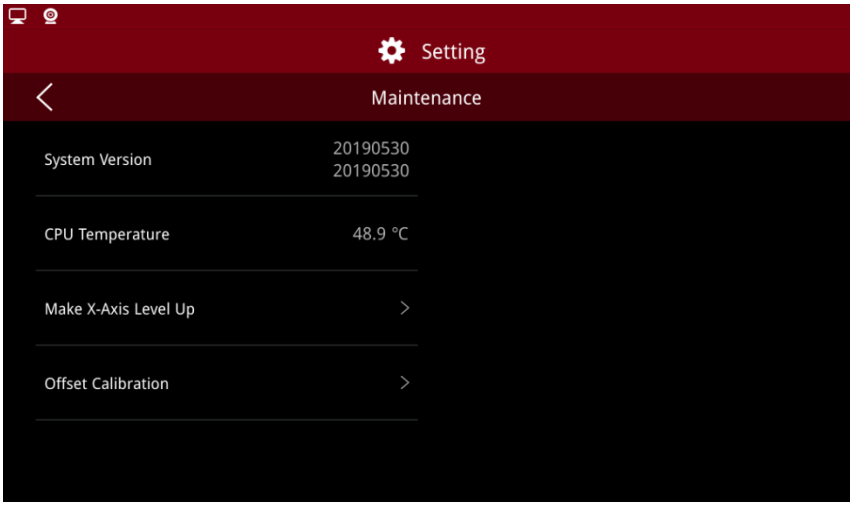
If internal storage space is insufficient, the system will prompt an error message.



Lack of Storage Space

3.2 Maintenance

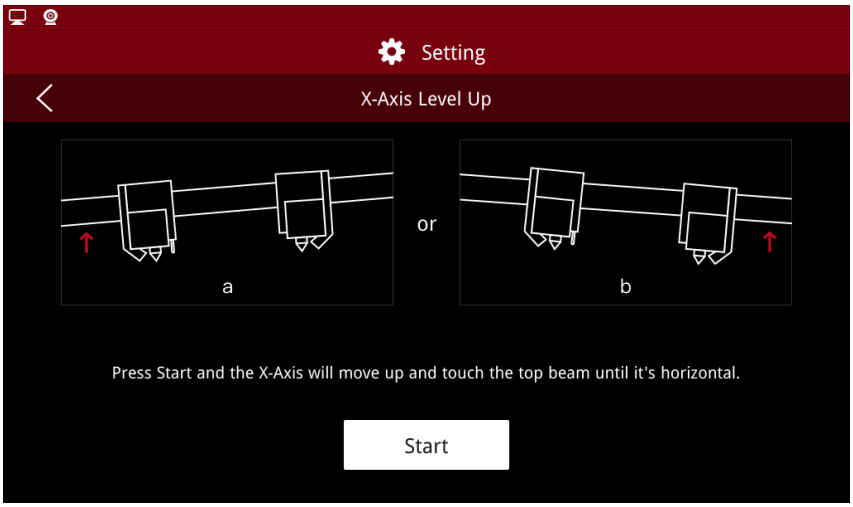
Access the maintenance page through **"Settings > Local Settings > Maintenance"**. You can view the CPU temperature, system version number, X-axis leveling function and offset calibration wizard.



Maintenance

3.2.1 X Axis Level Up

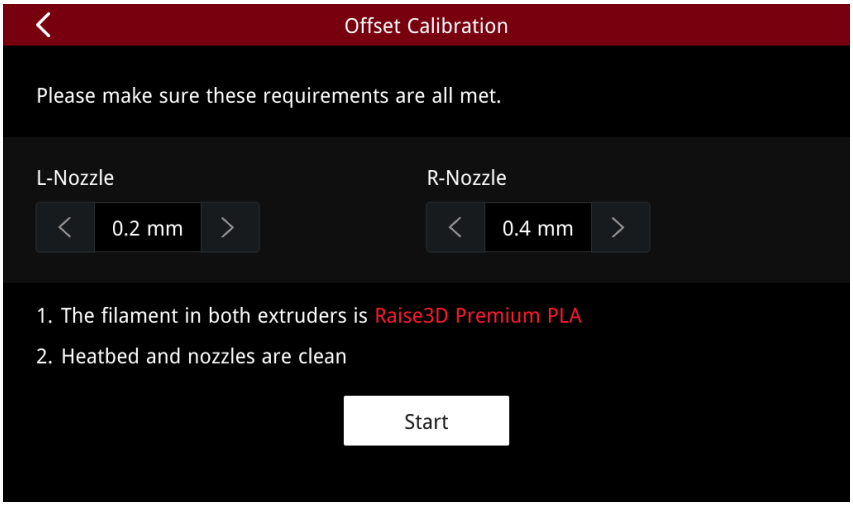
Enable this function to level the X axis when it is tilted. Click **“Start”** to level the X Axis. The grinding sound produced during this process is normal. Do not be panic.



X-Axis Level Up

3.2.2 Offset Calibration

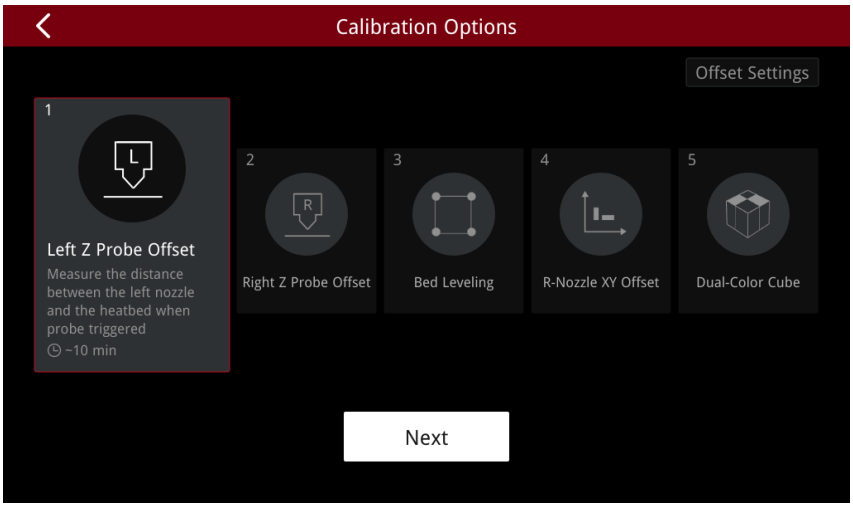
Click **“Offset Calibration”** to enter the calibration wizard. Before executing the wizard, please ensure that the following two conditions are met.



Offset Calibration

(1) The filament used for both extruders is Raise3D Premium PLA;
(2) Both the heat bed and the nozzles are cleaned properly.

Please select your printing nozzle caliber before starting the wizard, the factory default caliber is 0.4mm.



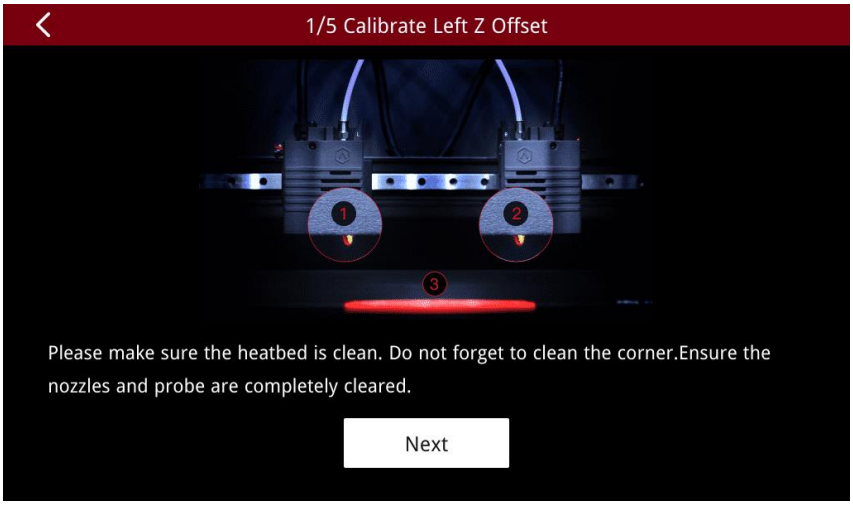
Calibration Options

The wizard is mainly divided into the following five steps. we strongly recommend that you complete all five steps in order.

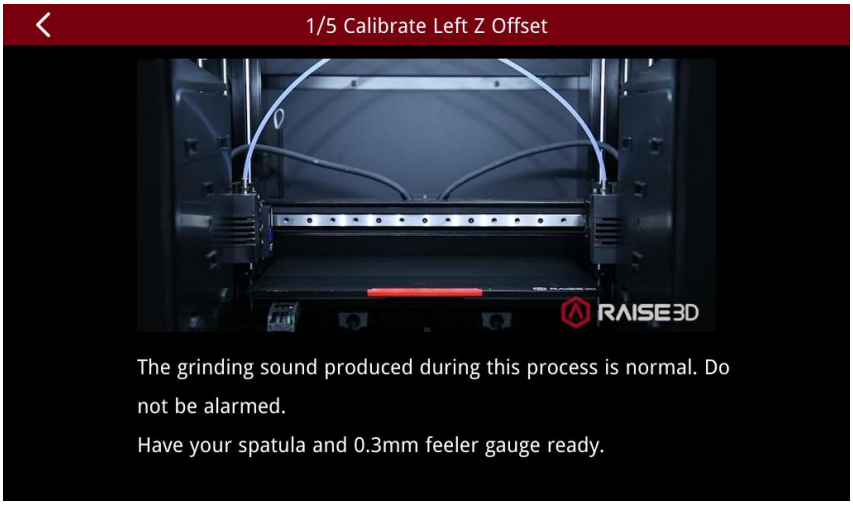
(1) Left Z Probe Offset

Left Z Probe Offset refers to the distance between the nozzle and the heat bed when the probe is triggered. If the distance is too far, it will cause problems such as model not sticking to the building plate and deformation of the printed model; If the distance is too close, the extruder will have too little extrusion, and the nozzle will scratch the building plate.

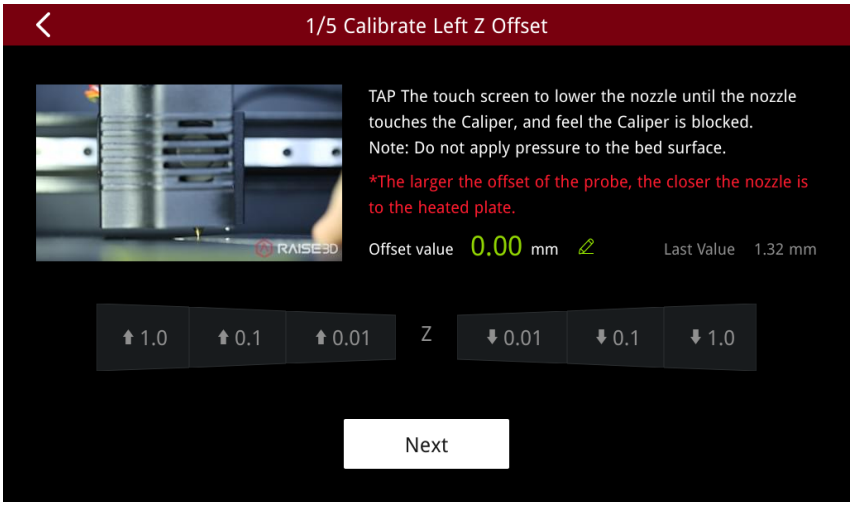
Click **"Next"** to start the measurement. Please clean the nozzle and the building plate before the measurement.



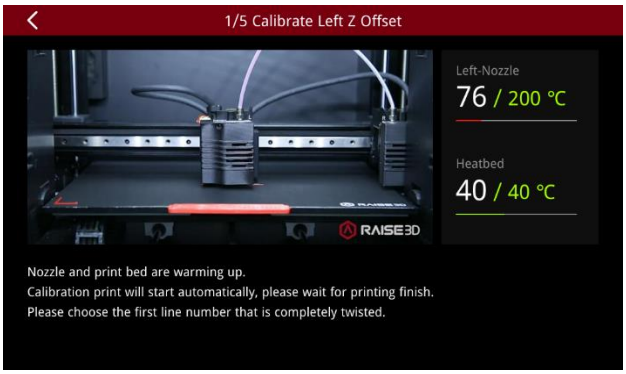
Click **“Next”**. Wait for the extruder to move to the specified location.

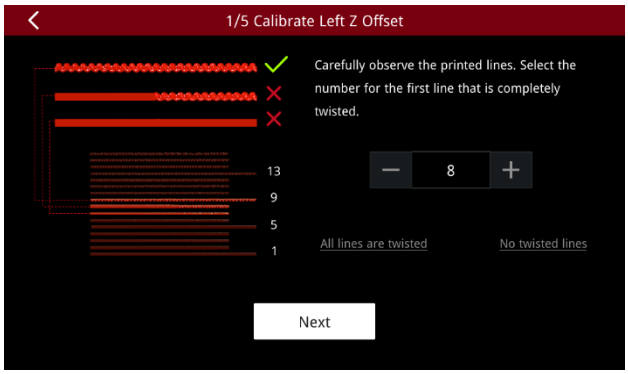


After the nozzle drops to the specified position, according to the wizard, put a feeler gauge between the nozzle and the bottom plate, and choose to lift or lower the nozzle until the nozzle just touches the feeler gauge.

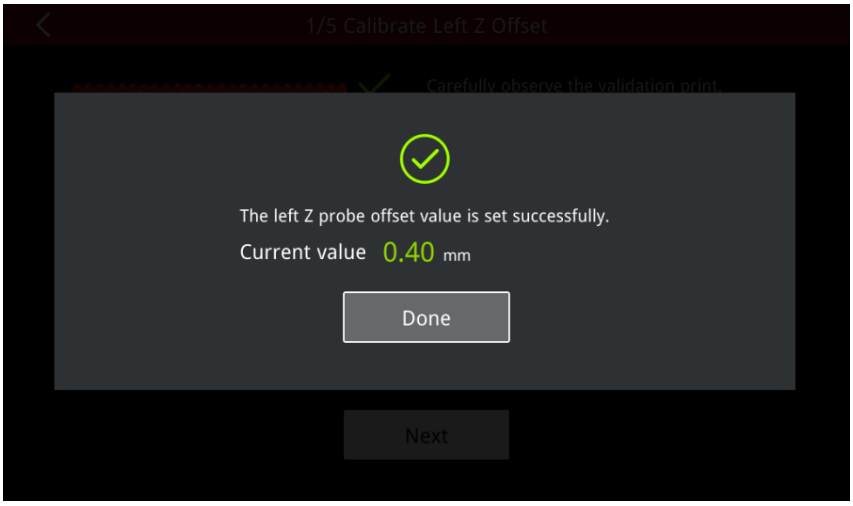


If the nozzle is far away from the feeler gauge, please choose to lower the nozzle downward; if the nozzle and feeler gauge are too close that squeezing the card, please choose to lift the nozzle upward. After adjusting the nozzle position, click **“Next”** and wait for the machine to print the calibration line. After printing is finished, follow the prompts and select the first line that is completely twisted. Then click on **“Next”**.



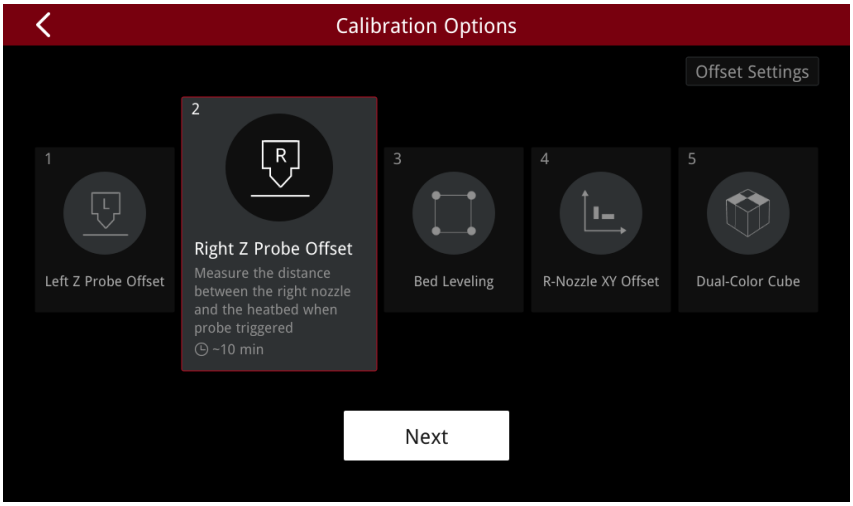


The Offset measurement results are shown in the figure below:



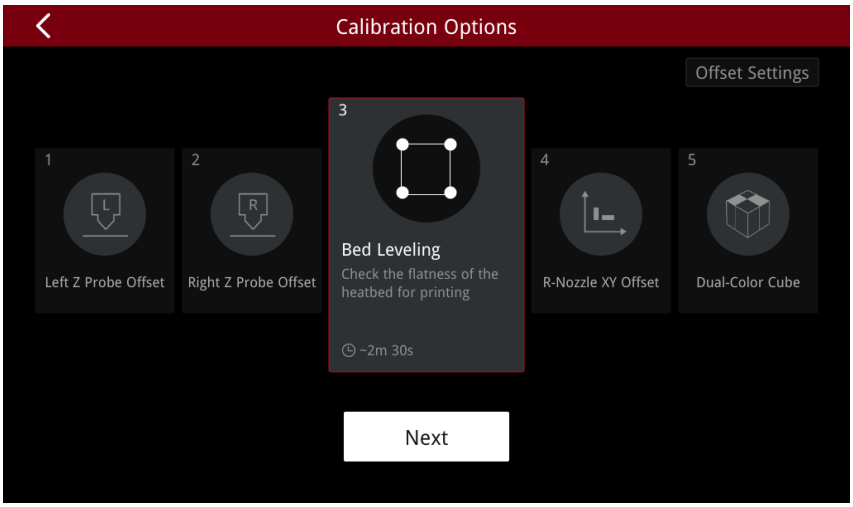
(2) Right Z Probe Offset

The Right Z Probe Offset calibration method is as the same as that of the left nozzle, please follow the instructions of the wizard for measurement.

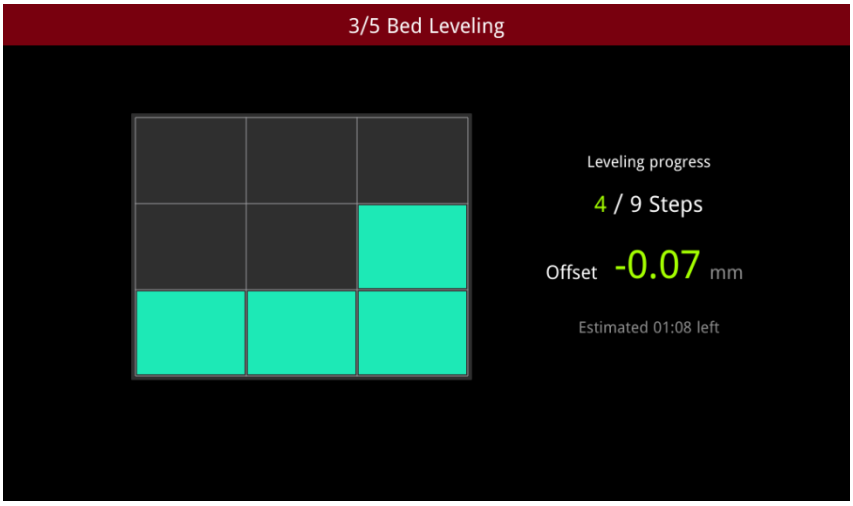


(3) Bed Leveling

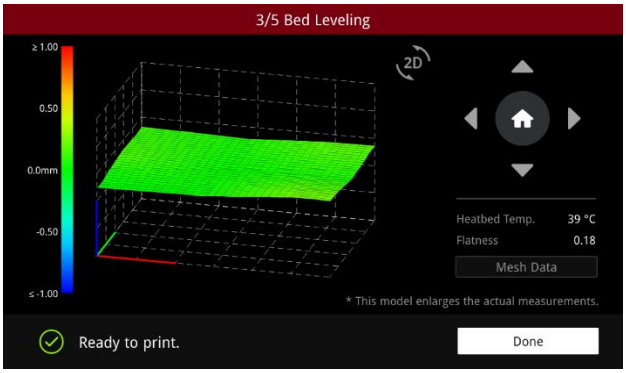
Click **“Next”** and start the **“Bed Leveling”**.

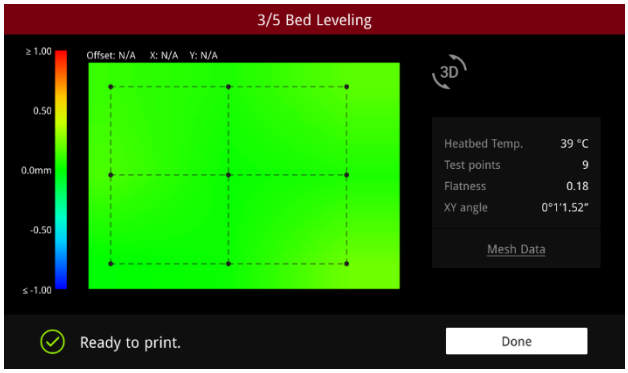


The leveling process takes about 3 minutes, please be patient.



The leveling result page is displayed as a 3D graph, you can click the **“2D”** button to switch.



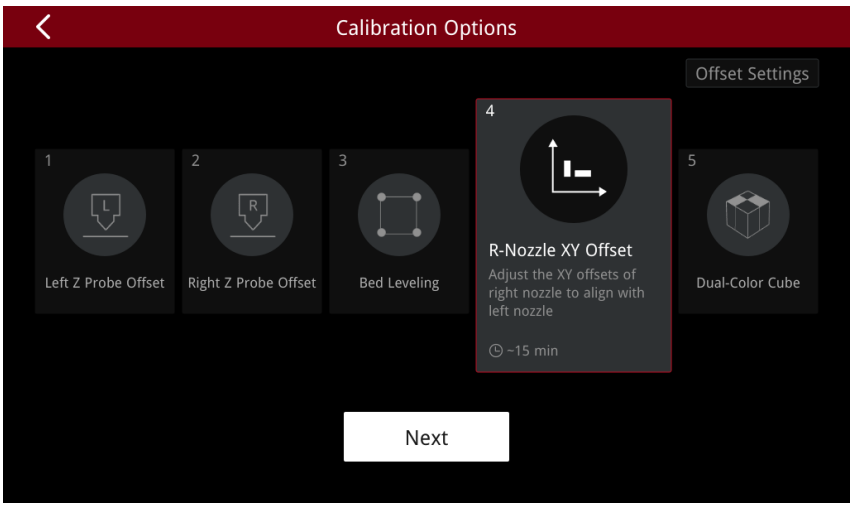


Note: When the prompt text **“Ready to print”** displays on the screen, it means the heatbed flatness is good enough to printed directly. (You can manually level the bed according to the file *How to Level the Bed.pdf*)

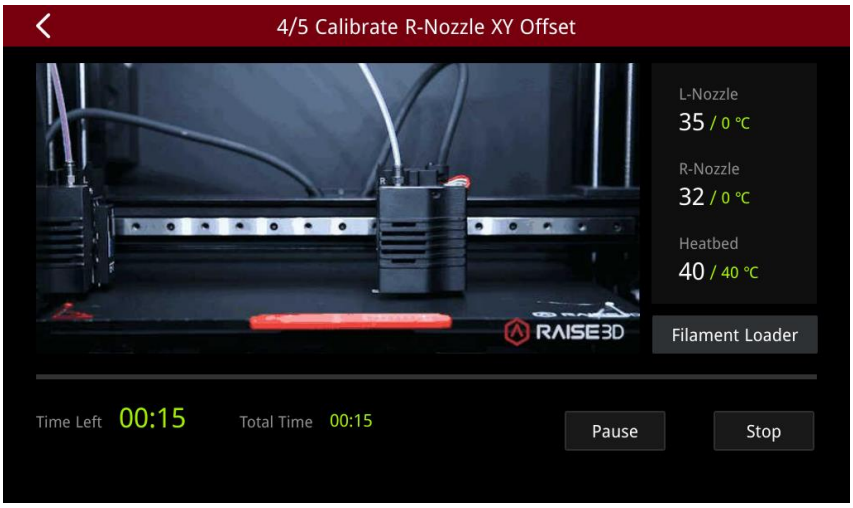
When the prompt text is **“The bottom plate is uneven, which may affect the printing”**, it means you need to manually level the bed before printing.

(4) R-Nozzle X/Y Offset

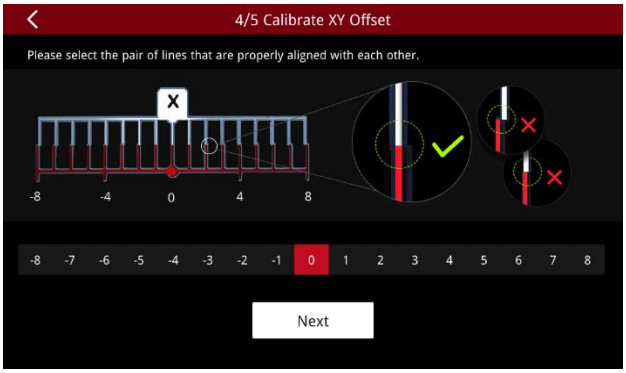
The R-Nozzle X/Y Offset is the right nozzle in the XY direction relative to the left nozzle. Click **“Next”** to start.

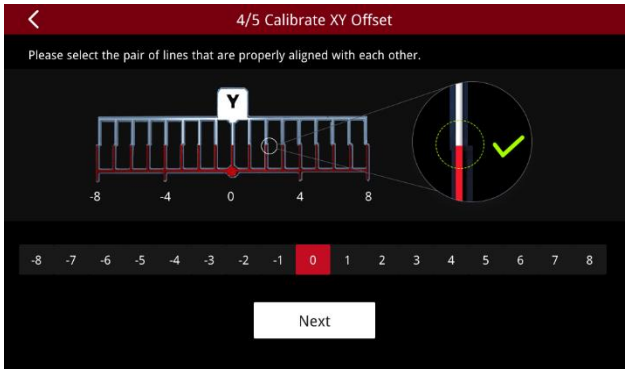


The printer will automatically print the calibration model, the whole process takes about 10 minutes, please be patient and wait for the printing to finish.

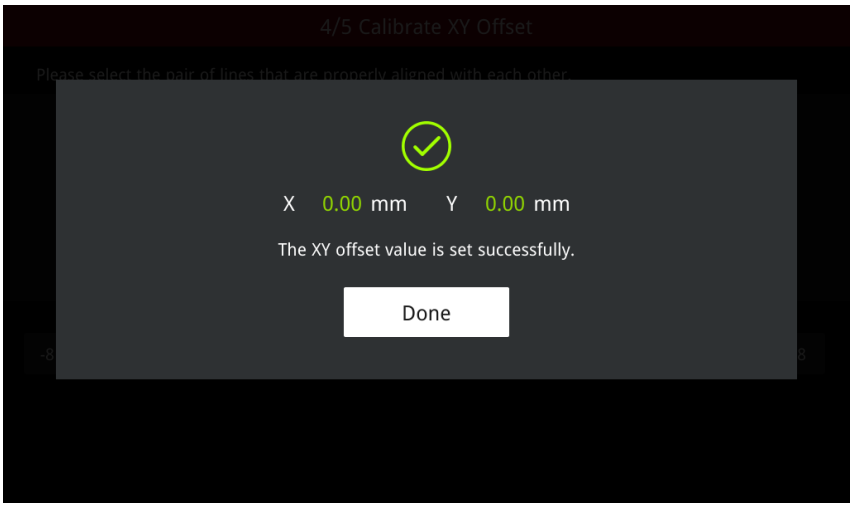


After printing, follow the instructions of the wizard to select a pair of top and bottom aligned lines. Then Click **“Next”.**



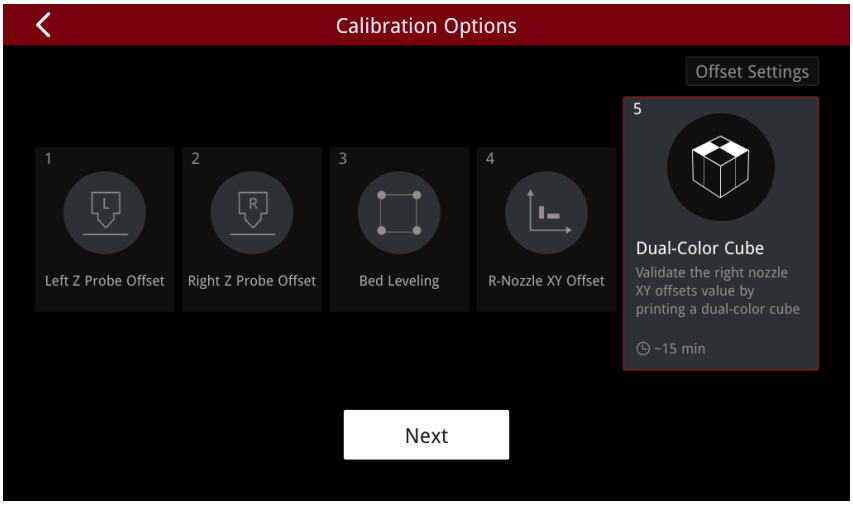


The results are shown in the figure below:

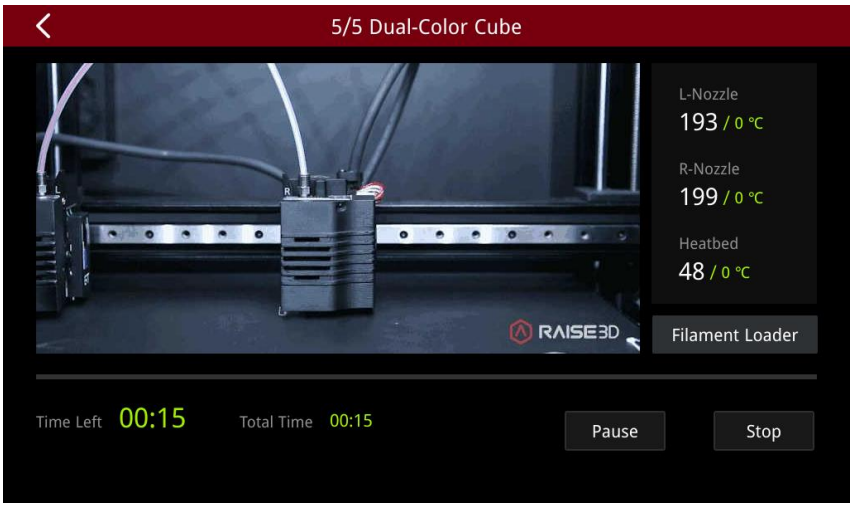


(5) Dual-Color-Cube

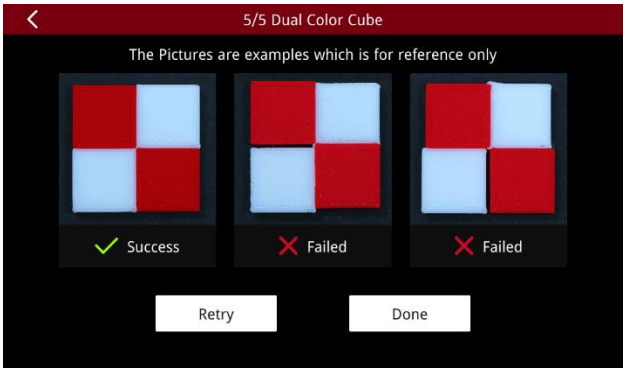
The fifth step is to print a Dual-Color-Cube to verify that if the XY offset of the right nozzle is measured correctly. Click **“Next”** to start.

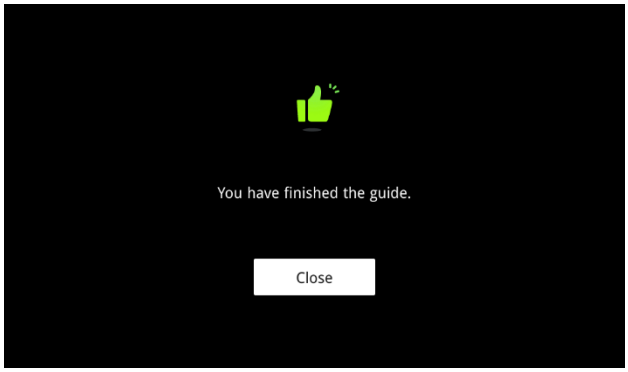


It will take about 15 minutes to print the **"Dual-Color-Cube"**, please be patient and wait for the printing to finish.



After printing, please compare with the pictures in the wizard. If the model shows **"Failed"** as shown in the figure below, please go through the previous step of the calibration wizard for the offset value of the right nozzle in the XY direction.





-END-

America | Asia | Europe

Sale & Business: sale@raise3d.com
Technical Support: help.raise3d.cam
For any other inquiries: inquiry@raise3d.com