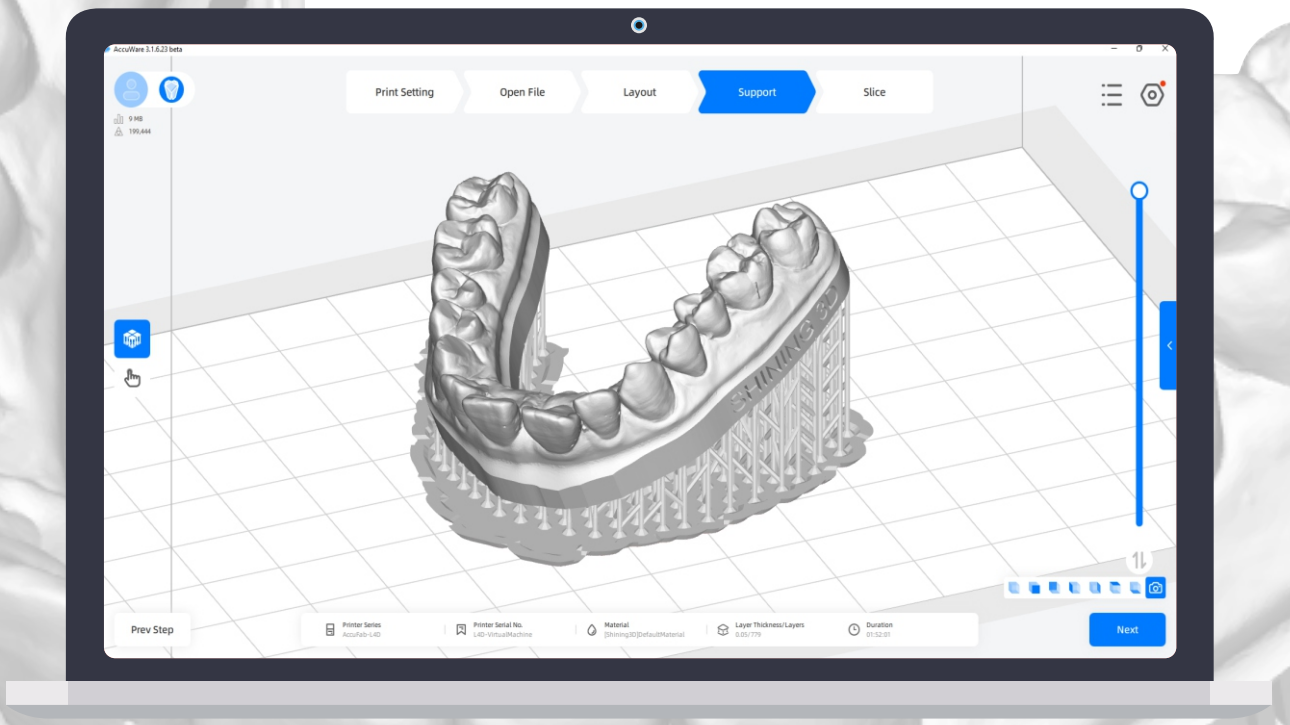
SHINING 3D®

AccuWare

Data Preparation Software for AccuFab printers



User Manual

V3.1.6

RF exposure statement

The user manual (hereinafter referred to as "the manual") introduces the functions, installation, operation of the AccuWare (hereinafter referred to as "the software").

Additional information

Improper actions or conditions that may damage the product or result in personal injuries, and consequently void your warranty or service contract or lose the data.

About the User Manual

The Manual is related to your safety, lawful rights and responsibilities. Please read it carefully before installing and using the product.

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CONTENT

SHINING 3D®

1 Installation

AccuWare is the data preparation software for AccuFab Printers. Which is independently developed by SHINING 3D. You can manipulate the model with positioning and orientation. And after that you can generate support structure for printing. Finally you can slice the model and send to printer. AccuWare is compatible with all AccuFab-Printers. The only difference is the sliced file format.

AccuDesign is a built-in model creator. Which allows you to create model based on the scan data. You can add attachments such as text and frame, also you can create drain holes for the hollow model to save material for printing.

1.1 PC Recommended Configuration

Minimum requirement

Operation System	Win10
CPU	Intel Xeon Processor E3-1230 (8M Cache, 3.20 Ghz)
Memory	8G
Graphics Card	NVIDIA GTX 750 Ti

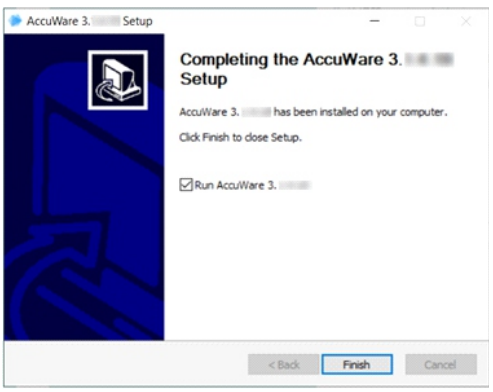
Suggested requirement

Operation System	Win10
CPU	Intel Core i5-8500 Processor (9M Cache, up to 4.10 Ghz)
Memory	16G and above
Graphics Card	NVIDIA GTX 1050 Ti and above

Note: PC performance will affect software performance. Especially for the support generation and slicing.

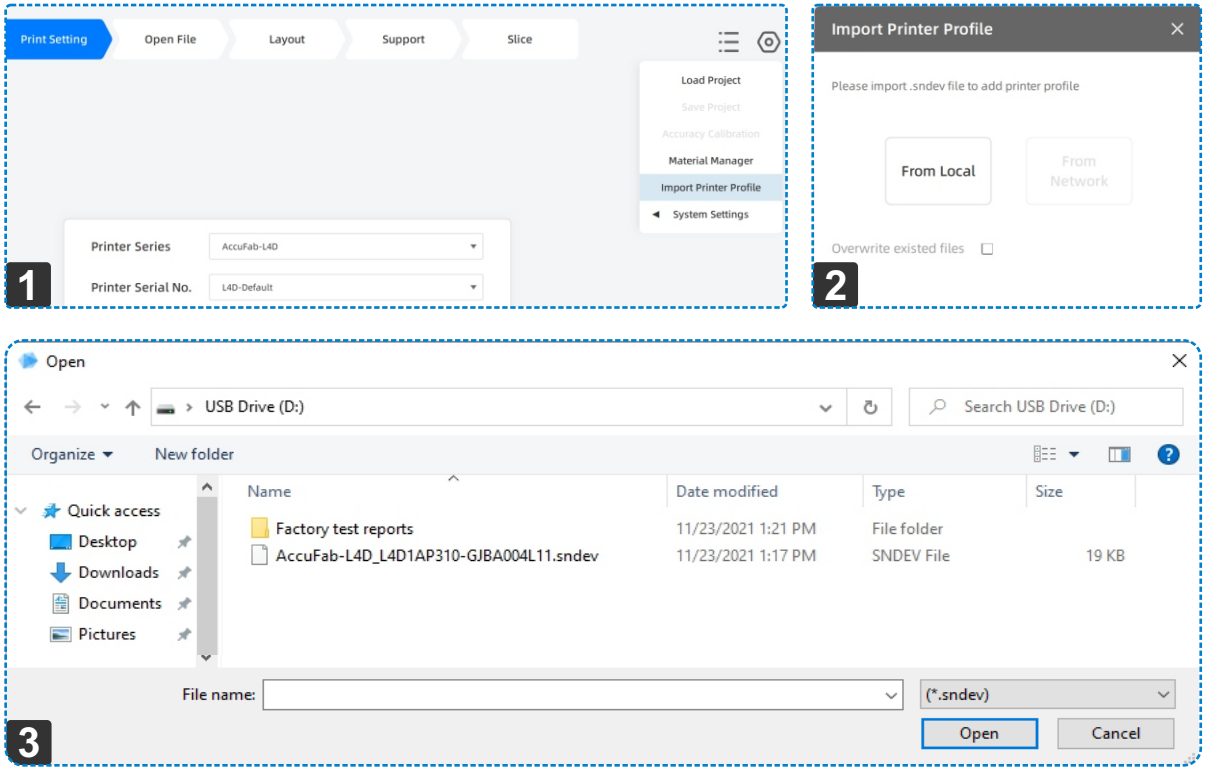
1.2 Installation

1. Insert the flash drive came with printer into the PC, Copy the installation file to the PC. And run it.
2. Install the software following the installation wizard.
3. Click Finish to finish and run the software.



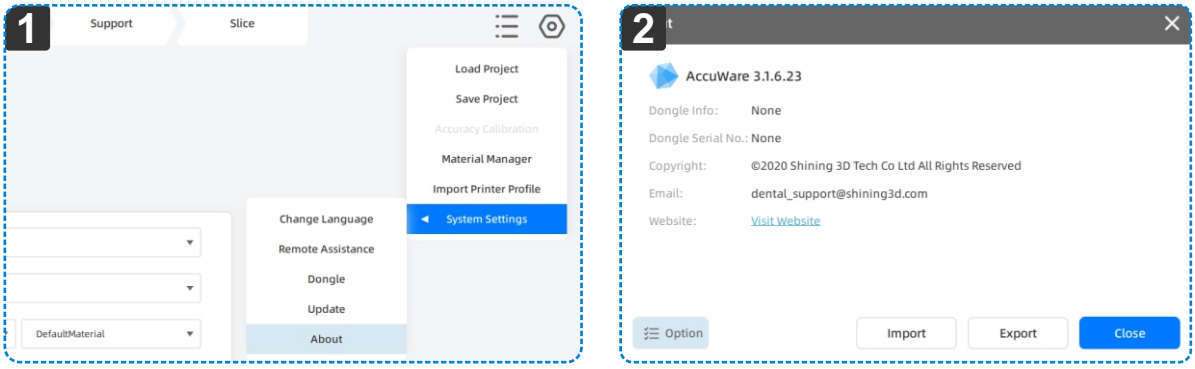
1.3 Import printer profile

The printer profile is stored in flash drive came with the printer. Open setting and choose “Import Printer Profile”, and choose the profile file to complete the import process.

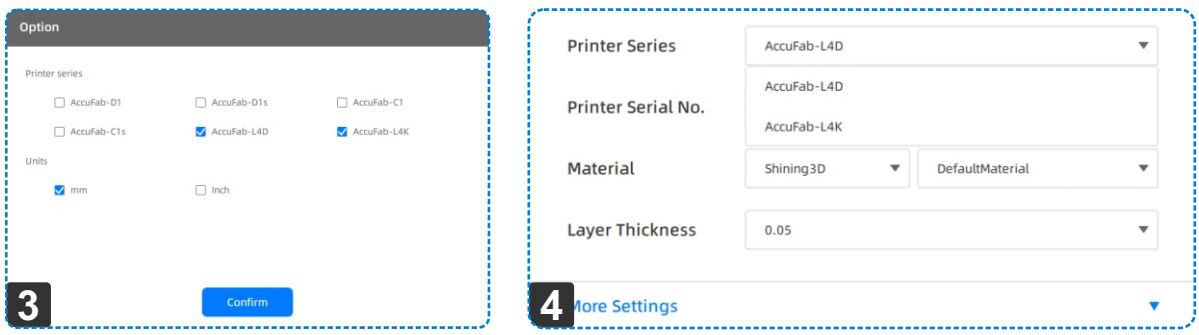


1.4 Print series and units

Click **Option** to select your **Print Series** and **Units**.

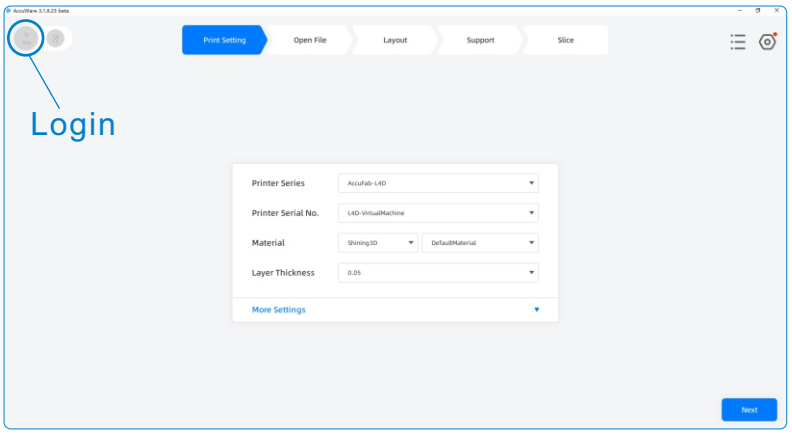


The **Printer Series** pull-down list only show the selected **Printer Series**.



2.1 Login

Login and you can use AccuDesign for free.

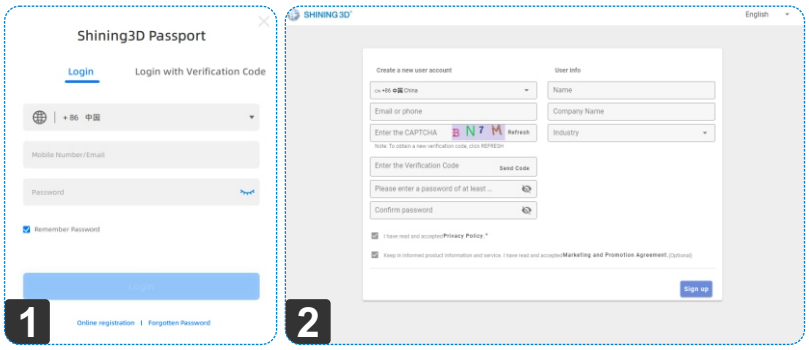


Note: Excluding the AccuDesign, other functions of AccuWare can be used normally without login.

Register Your Account

1 Click , a login pop-up dialog box about login will appear.

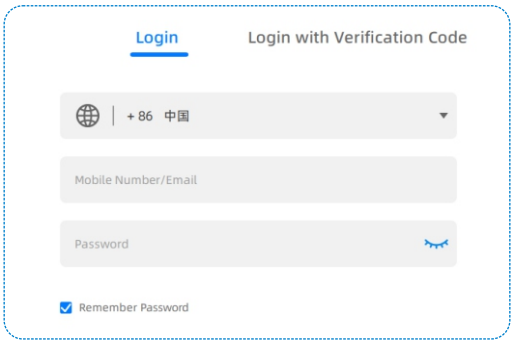
Click **Online Registration** to the registration pop-up dialog.



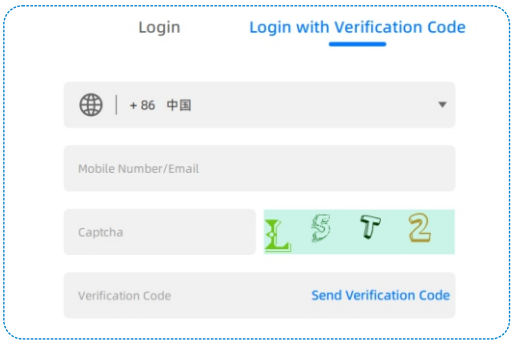
2 Enter the account information and user information. Read and check "Privacy Policy" and “Marketing Agreement". Click **Register** to finish.

Login

Please following the prompts to login with your account or verification code.



Login with your account



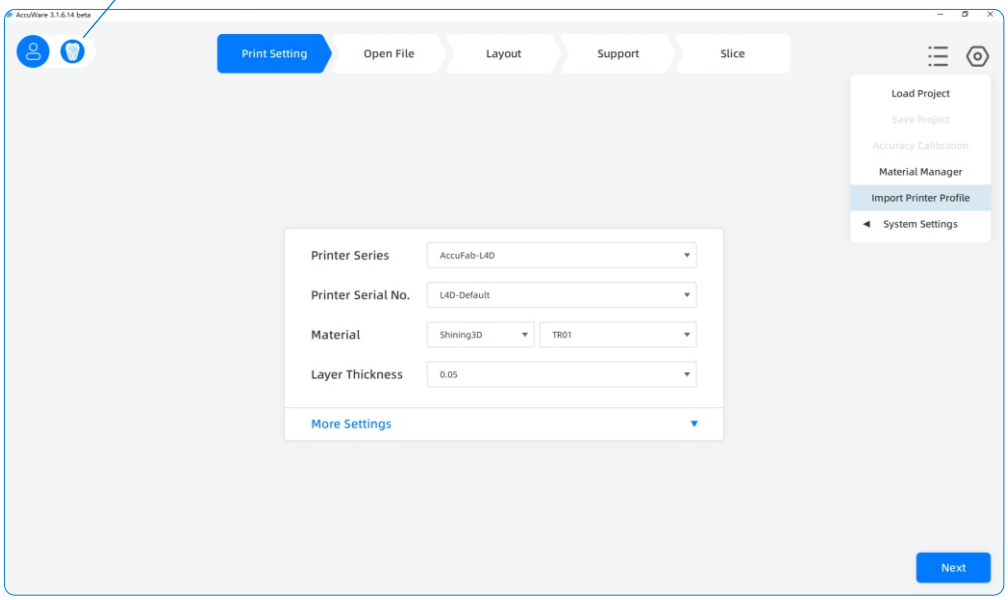
Login with verification code

After successfully login, the icons will turn blue. The AccuDesign feature can be used normally.

2.2 AccuDesign

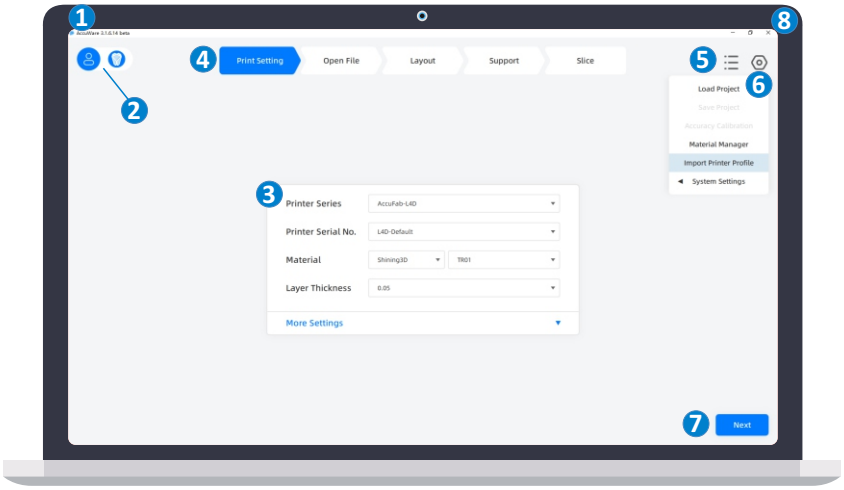
AccuDesign is a built in model creator. Which allows you to create model based on the scan data. You can add attachments such as text and frame, also you can create drain holes for the hollow model to save material for printing.

Click  to enter the AccuDesign.



Click  to get back to the AccuWare.

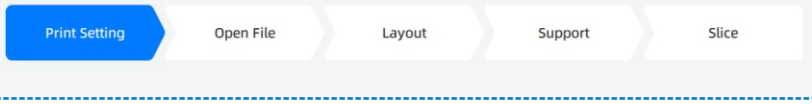
3.1 Interface Introduction

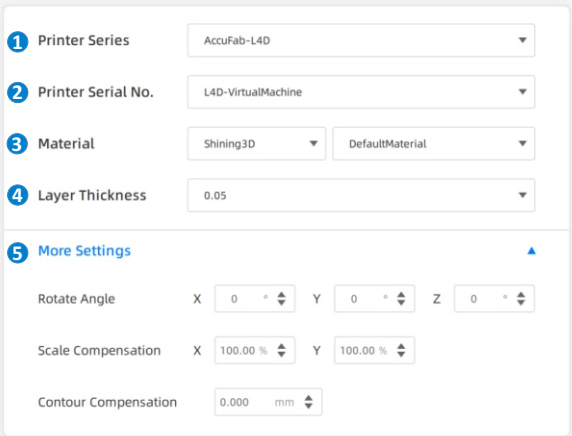


1. Software info
2. AccuDesin/Shining Pass button
3. Printer Setting: Choose printer, material, and layer thickness
4. Step by step workflow
5. Printer list: Connected Printers
6. Settings: Settings of the software
7. Next step: Proceed to next step

3.2 Print Setings

In this step user are able to choose the printer and as well asthe material type and layer thickness.





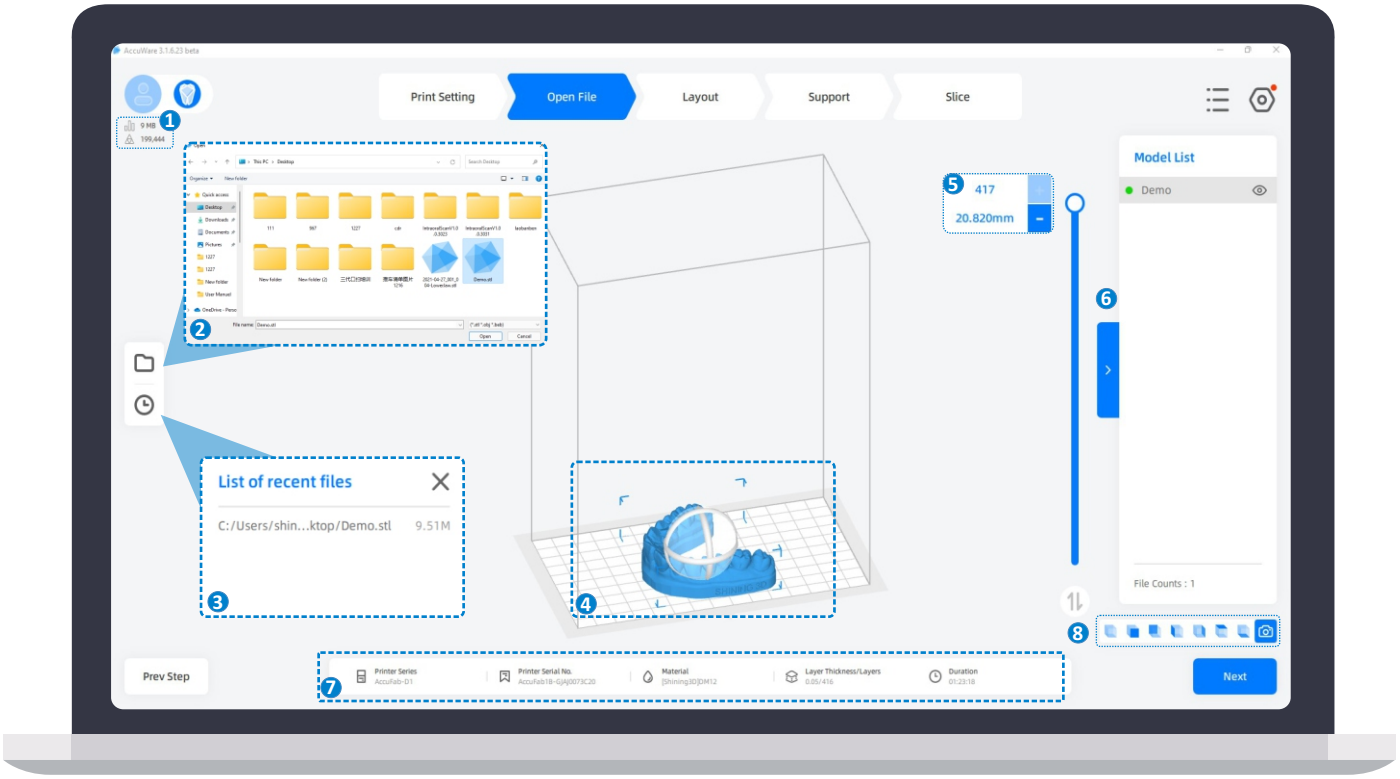
1. Select printer series for the printer to receive printing file.
2. Select serial number for the printer to print the model.
3. Select material for printing.
4. Thickness of each layer after slicing the model.
5. Please check **Accuracy Calibration** for detailed information.

Note:

- Please choose the printer serial number. Which should be the same as the serial number on the printer label.
- Please choose the printer in ready status for sending and printing the files automatically.
- The printer in status of Finish, Printing, Off-line or Alarm can only be sent files and not Remote printing.

3.3 Open File

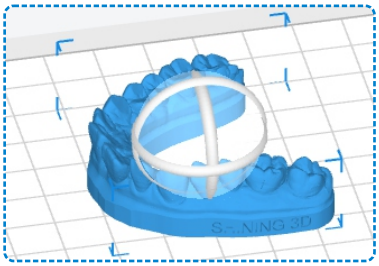
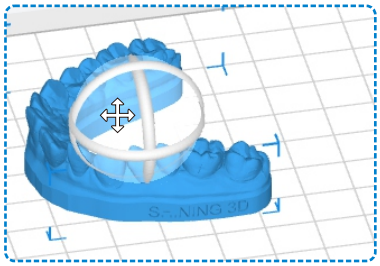
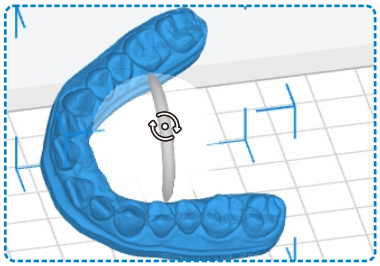
Click and choose the STL files and click “open”.



1. Dispaly size and triangular patch numbers for current file。
2. Click to import local model files to print.
3. Click to select model files in “List of recent files”.
4. Model preview :Click the model, a controlling ball with 3 rings will appear.

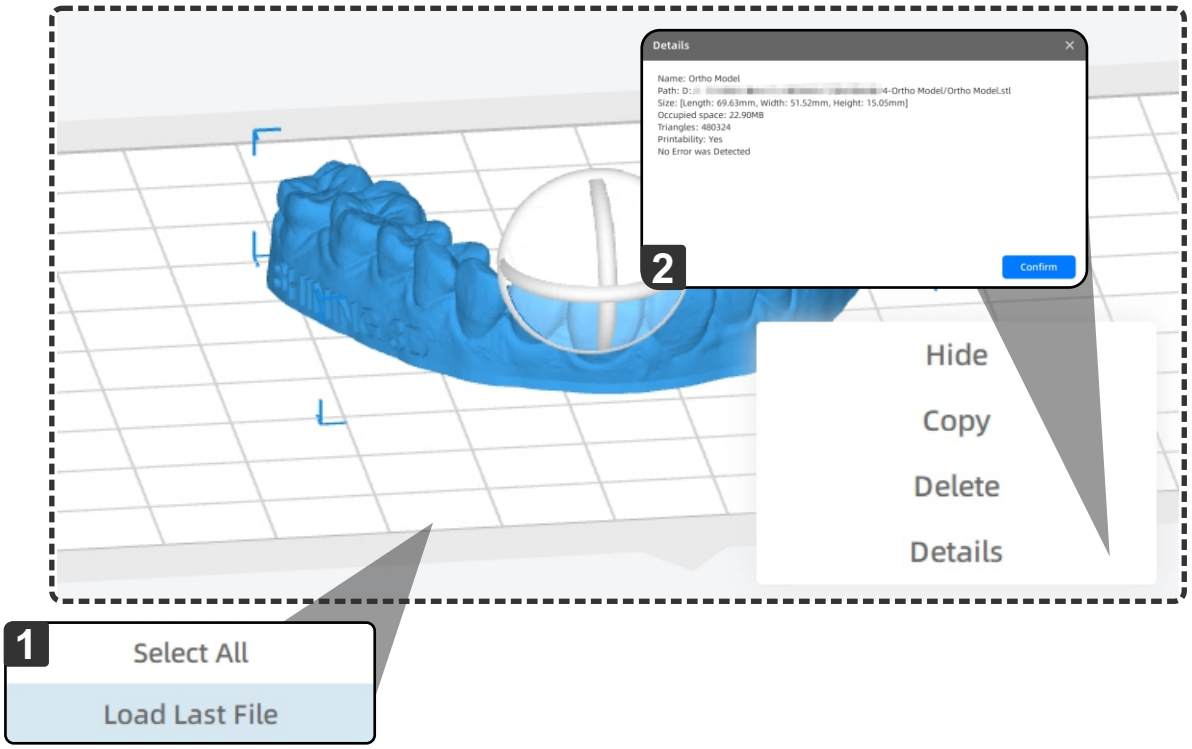
   Move the cursor onto the ball and turning it into . Holding down the left mouse button to move the model on horizontal plane.

   Move the cursor onto ring and turning it into . Holding down the left mouse button to rotate the model about the axis through the selected circular ring.

   Rotate mouse wheel for zooming.
   Holding down the right mouse button for rotating the view.
5. Use the scroll bar to view each layer of the model. It displays the height and the number of layers from current layer to the first layer.
6. Model list shows all the models opened already.
7. Display printer information, printing material and time needed.
8. Check different views of the model.

3.3 Open File



Shortcut key

Shortcut key:

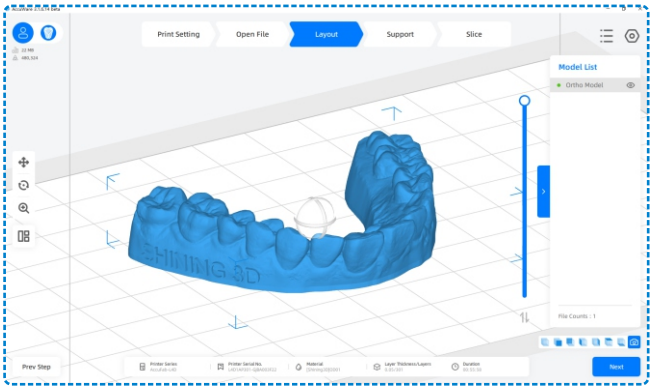
1 Right click on the window to bring up the shortcut key to load previous model.

2 Right click on the model and select 'Details' to view model details.

3.4 Layout

In this step, we can move, rotate, and scale the model. And for multiple models. We can apply auto-layout to speed up the part arrangement.

User can click the function tab on the left or to select the model and move the mouse to the dragger and operate directly.



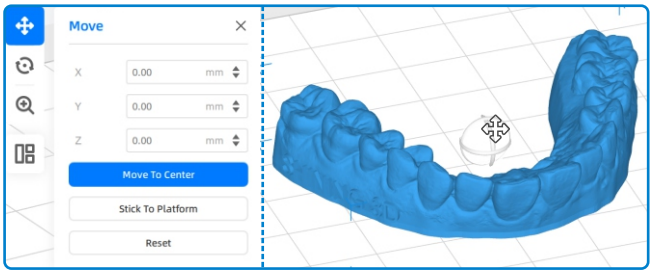
Move the model

X,Y,Z: Move the model by coordinate value.

Move To Center: Move the model to center position of platform

Stick To Platform: Move the model down to the platform(Z=0mm)

Reset: Reset the move operations



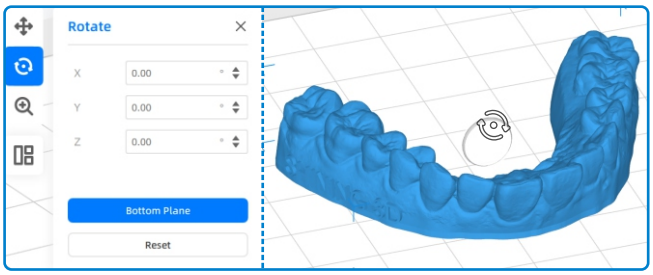
Note: The model placed outside of the build platform will be displayed in red.

Rotate the Model

X,Y,Z: Rotate the model with angle setting

Bottom Plane: Choose the bottom plane for the model

Reset: Reset the rotate operations

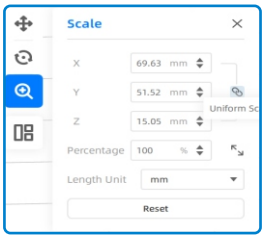


Scale

X,Y,Z: Scale the model by setting changing one axis or 3 axes together with “Uniform Scale” .

Scale: Scale the model by setting a factor

Reset: Reset the Scale operations

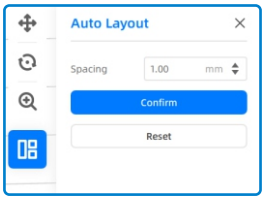


Auto Layout

Spacing: The distance difference of adjacent models.

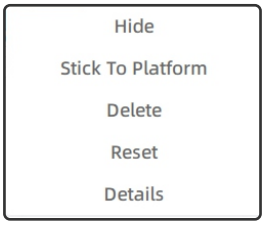
Confirm: Apply the auto layout

Reset: Reset the auto layout operation



Shortcut key

Right click on the model to bring up the shortcut key for Layout

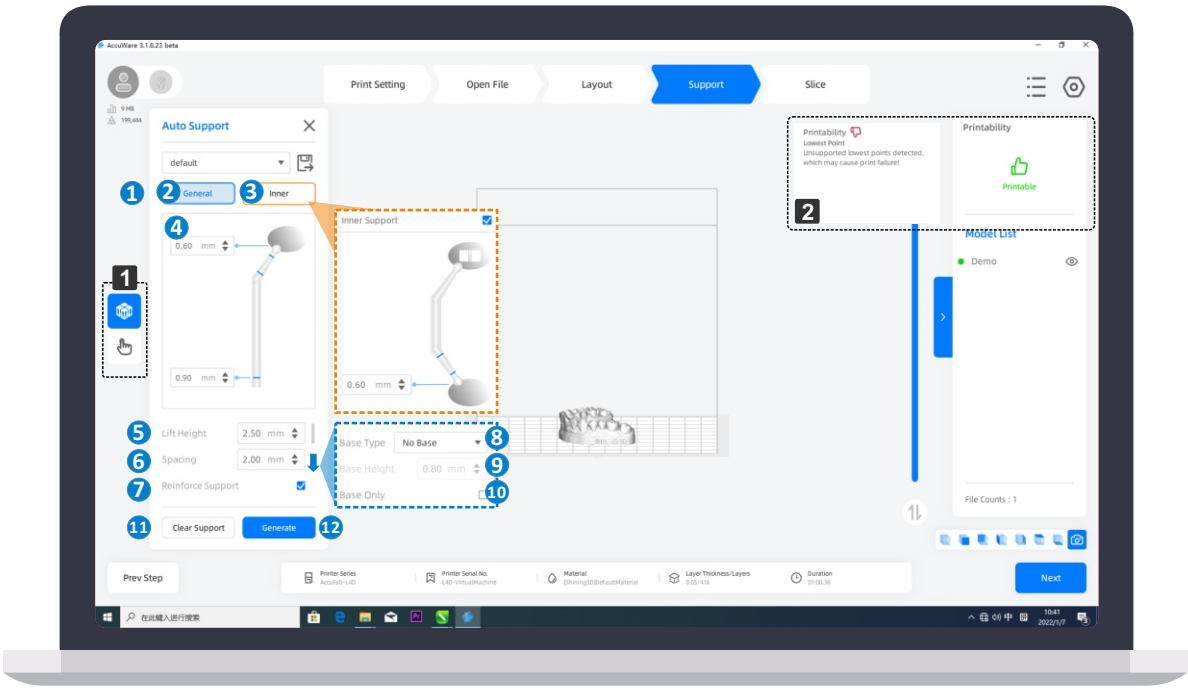


3.5 Support

In support page. User can generate support for the model. Generate automatically by parameter setting or add manually.

1 Support generation options: Auto and Manual

2 Printability tab: Software will check the support for the lowest area of the model. If part is properly supported.It will display thumbs up in green. Otherwise, it will display thumbs down in red.



1 Support style: Choose a support style or save current setting to the library.

2 General: General settings for support

3 Inner: Inner support settings

4 Setting of the diameter of contacting point

5 Lift Height: Move the model up by the setting

6 Spacing: Space between adjacent support

7 Reinforce Support: Enable reinforce support

8 Base Type: Choose base type for the support

9 Base Height: Height of the base for support

10 Base Only: Generate base only.

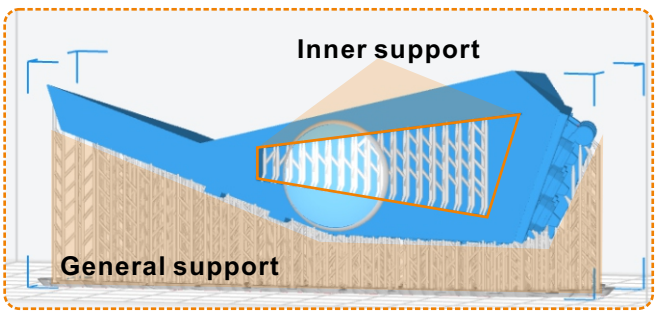
11 Clear Support: Clear the current support

12 Generate: Generate support based on the settings above.

Auto Support

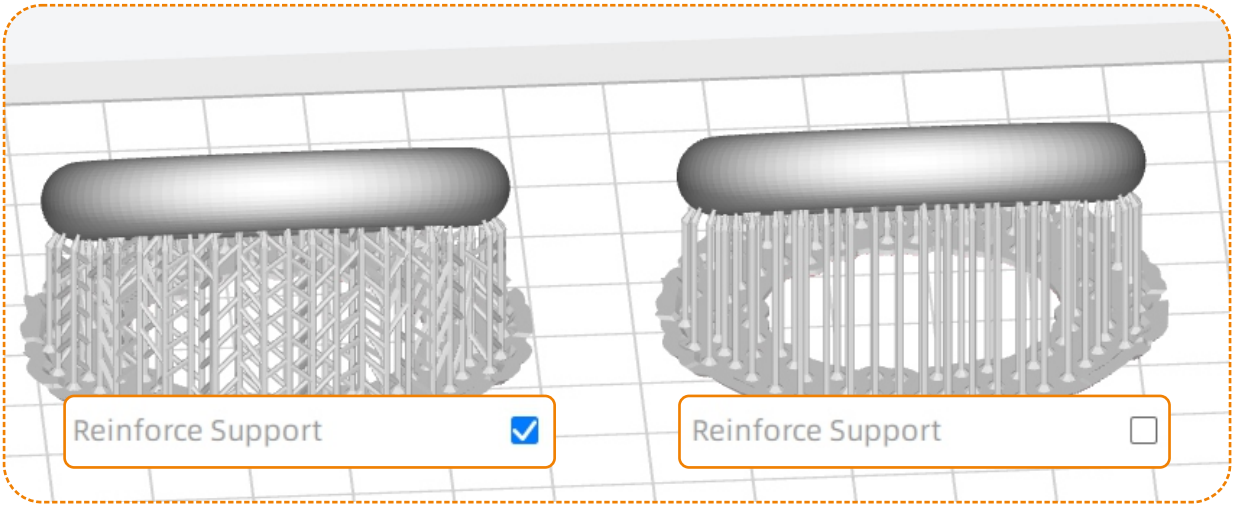
1 Click  .

2 Select support style. （**General** or **Inner**）



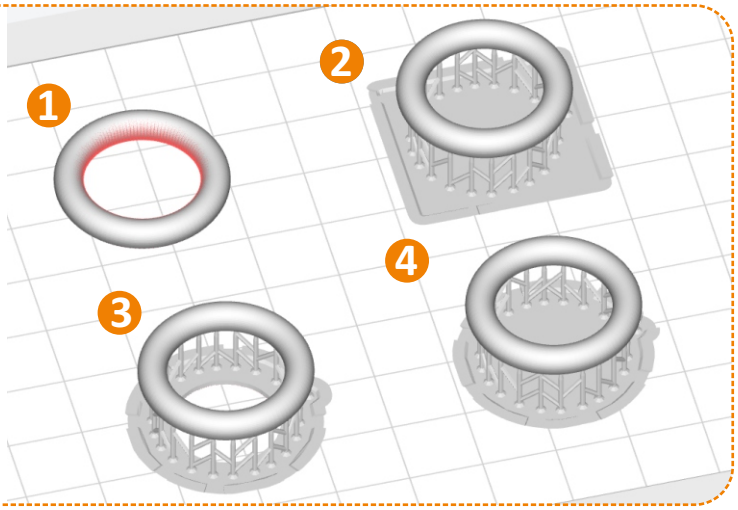
3.5 Support

3 Set up the parameters and then click **Generate**.



Base Type

1. No base
2. Bounding box
3. Projection
4. Outer contour

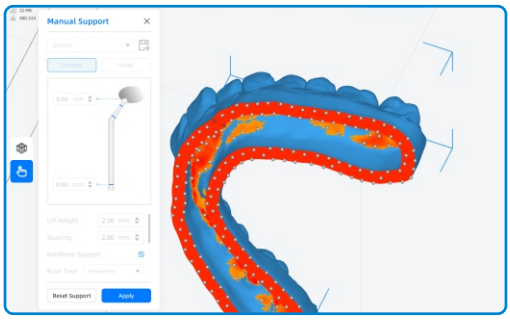


Manual Support

Manual enables the manual adding or deleting of the support. User can modify the auto supports or add the support manually.

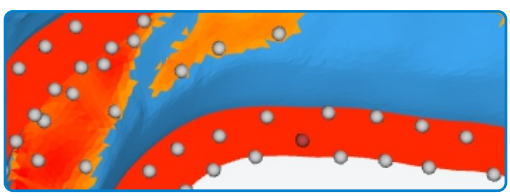
Reset Support: Reset the support back to the original state.

Apply: Apply the manual support editing.



Delete single support

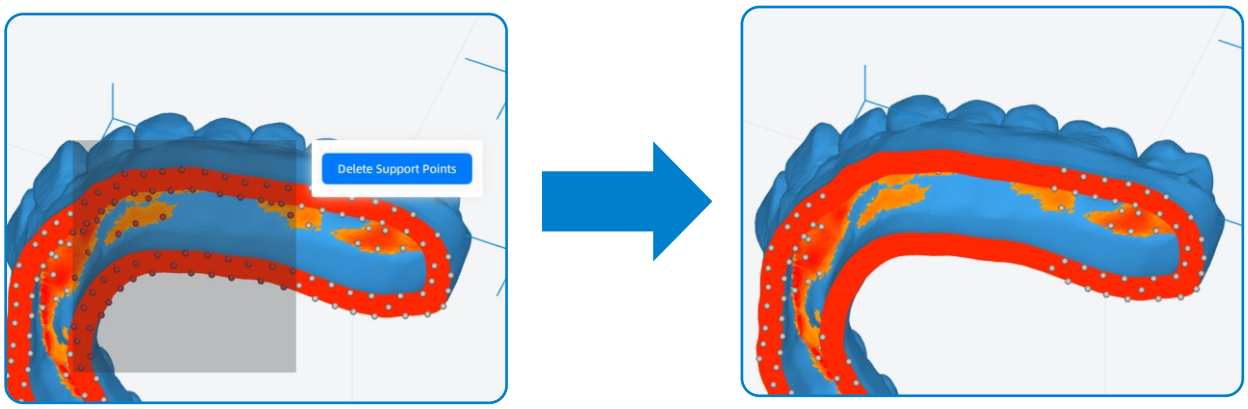
Move the mouse to the existing support. Click when it turns to red.



3.5 Support

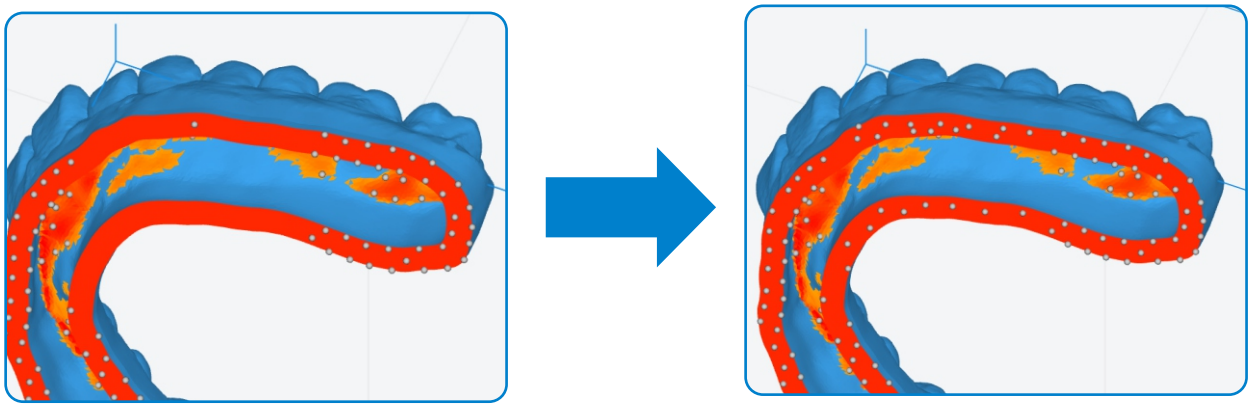
Delete multiple supports

Select multiple supports by pressing the left key and drag. And choose" delete support points."



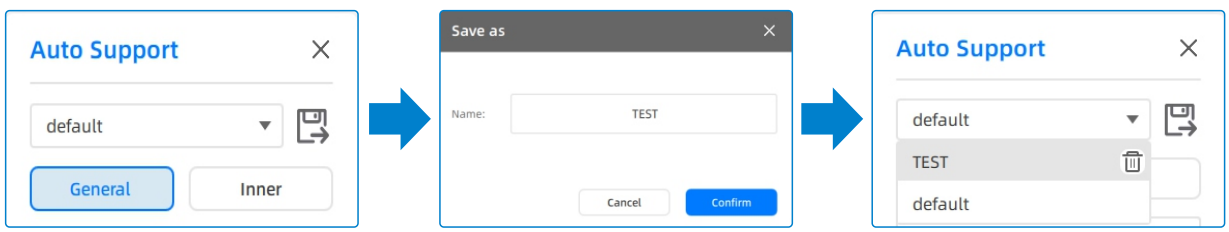
Add support

Left click on the area you want to add a support.
Click Apply when finished



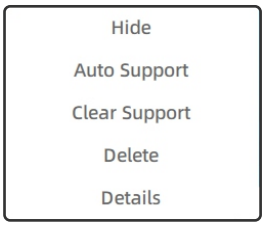
Add to support list

Click the save button to save the current setting with a new name. And it can be a support style to choose from.



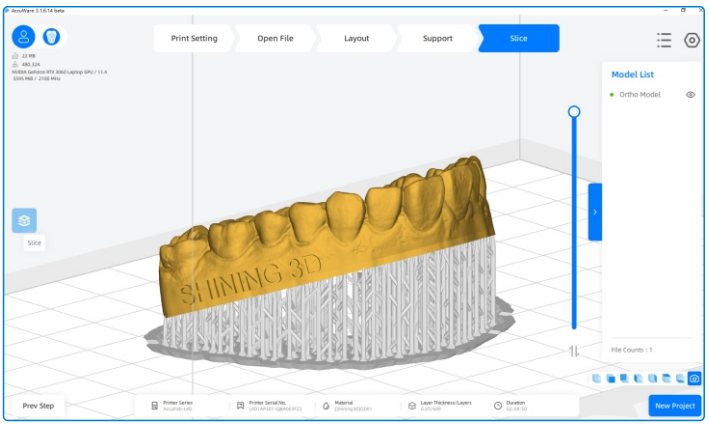
Shortcut key

Right click on the model to bring up the shortcut keys.



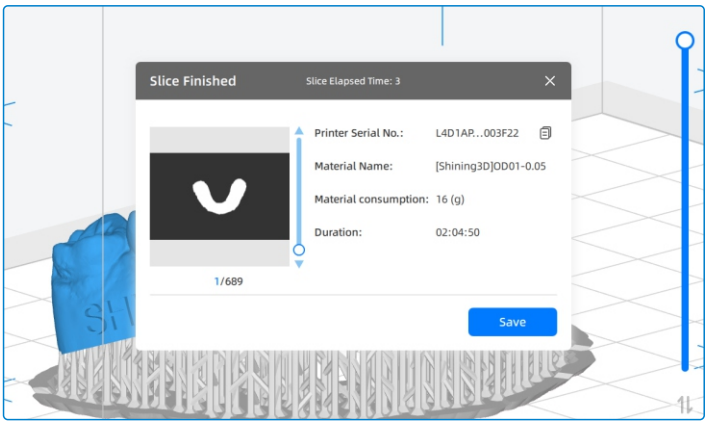
3.6 Slice

In this step. We can slice the model with current setting. Click ‘Slice’ to slice the model.

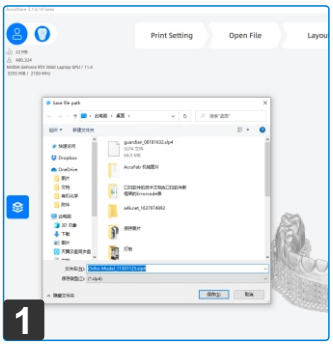


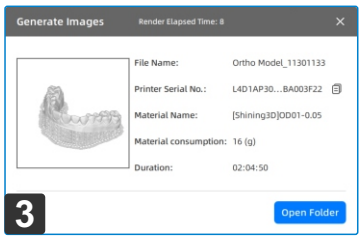
Basic information will be displayed such as estimated material consumption and print duration.

Also, in this window, user can view the sliced images by dragging the bar on the right of the layer display.



1. Click Save to choose the save path for “*.slp4” file. And click ‘save’.
2. Software will generate slice file according to the slice setting.
3. Slice Finished.





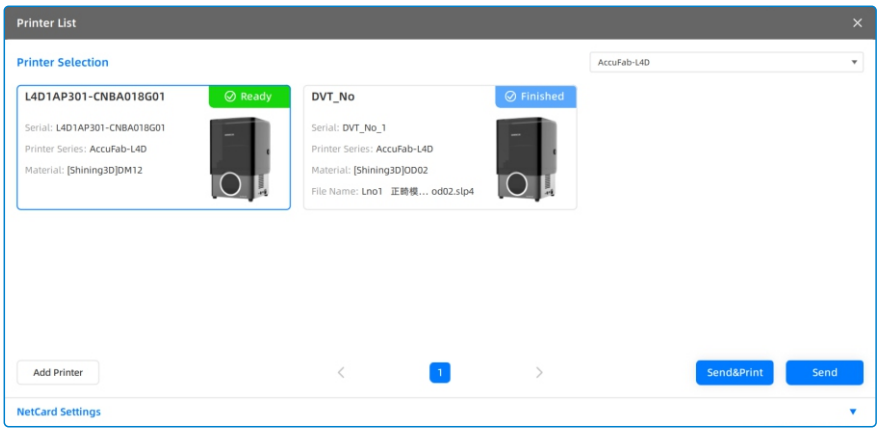
Note:Slicing time much depending on the performance of the PC.

- AccuWare supports GPU accelerate for the slicing function with a graphic card of GTX 750 or higher.
- Software will show the info of the graphic card and CUDA version. Check the upper left corner of the slicing interface. The information displayed in red indicates that the GPU is not on
- If the CUDA version shows "undefined," it means the driver version is not the latest version. Please update.
- Please change the setting for AccuWare if you don’t see the info of the independent graphic card displayed.

3.7 Send print job

Open “Printer list”

The connected printer will be displayed.



Online sending:

In the printer list. User can check the status of printer. And be able to choose the printer to select the sliced “.slp4” file to ‘send’ or to “send and print”.

Note: The serial no. in print setting should be matched with the printer you choose. Or there will be error opening file on printer.

Offline sending:

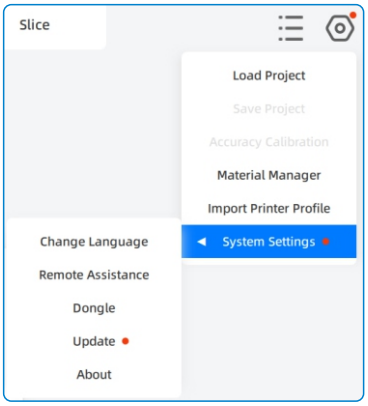
Copy the file to the flash drive and insert to the printer.

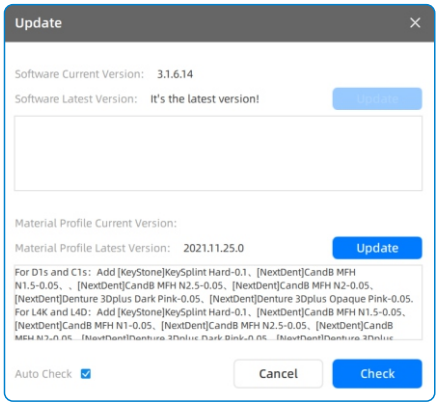
Module	Name	Icon	Function Description
File	Open File		Insert STL file selected by the user in the current file.
	Recent File		Link to the recently used STL model, and click it to load the model into the software.
Layout	Select All		Select all models.
	Copy		Copy the selected model.
	Hide		Hide the selected model.
	Delete		Delete the selected model.
	Details		Display the name, path, dimensions, occupied space, triangle patch of the model, and whether any problem with the model.
	Move Model		Move the model in XYZ axial directions.
	Rotate Model		Rotate the model in XYZ axial directions.
	Scale Model		Secale the model in XYZ axial or equal scale.
	Automatic Layout		Intelligent layout of the loaded model in XY plane.
	Automatic Support		Set support parameters for the model file and automatically generate support.
	Manual Support		Set support parameters for the model file and manually generate the support.
	Slice		Generate a "*.slp4" path file for the data whose printing parameters have been set, and set the path of exportationon.
View	Default View		View the model selection area from "upper front."
	Front View		View the model selection area from "front."
	Back View		View the model selection area from "back."
	Left View		View the model selection area from "left."
	Right View		View the model selection area from "right."

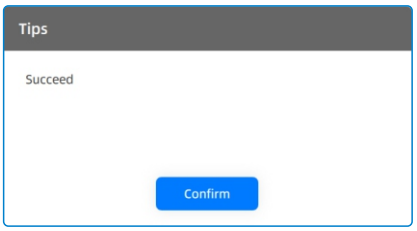
Module	Name	Icon	Function Description
View	Top View		View the model selection area from "top."
	Bottom View		View the model selection area from "bottom."
Settings	Setttings		Contains some file contents and tools in the software. Click this button in the upper right corner to view for operation.
	Priner List		Display the name of the printer for connection.
	Load Project	—	Import the saved *.accu file order into the software.
	Save Project	—	Save the current order locally.
	Layer Preview	—	View the current model by layer.
	Accuracy Calibration	—	Calibration settings for the accuracy of printed models.
	Material Manager	—	Display local material information.
	Import to Machine	—	Import new machine parameters from PC/LAN.
System Settings	Change Language	—	Display local material information.
	Remote Assistance	—	Import new machine parameters from PC/LAN.
	Dongle	—	Dongle driver installation and registration access.
	Update	—	Accept update push, and prompt update when connecting with dongle.
	About	—	Enter/exit administrator rights, display dongle information, etc.

5.1 Update software and material profile

Open “Printer list”
The connected printer will be displayed.







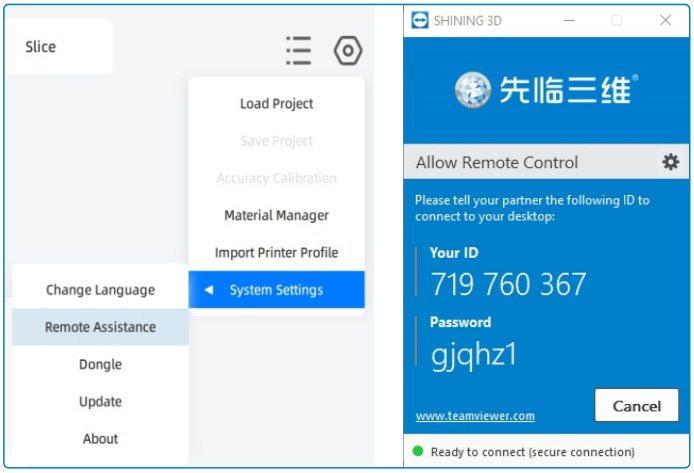
Open the ‘Update’ page. User can check the update manually or check the “Auto Check”option to reveive the update notice. So that A red dot will be displayed on ‘Settings’ when there is new update of software or material profile. And by click on the ‘Update’ button.Update process will take place.

The material profiles are uplode by the test department of Shining3D. User can then choose the material in “print setting”.

5.2 Remote Assistance

AccuWare has built in TeamViewer program. User can go to “Settings-System Settings-Remote Assistance” to open.

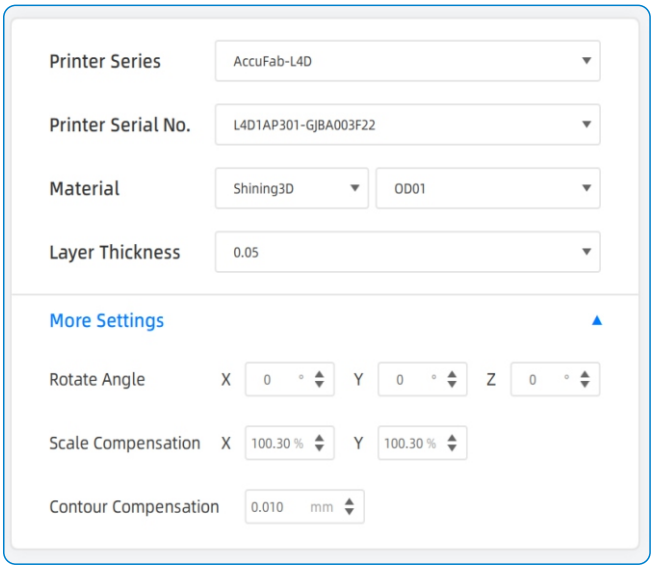
When help is needed. User can contact support and offer the remote info as requested by the support engineer.



6 Accuracy Calibaration

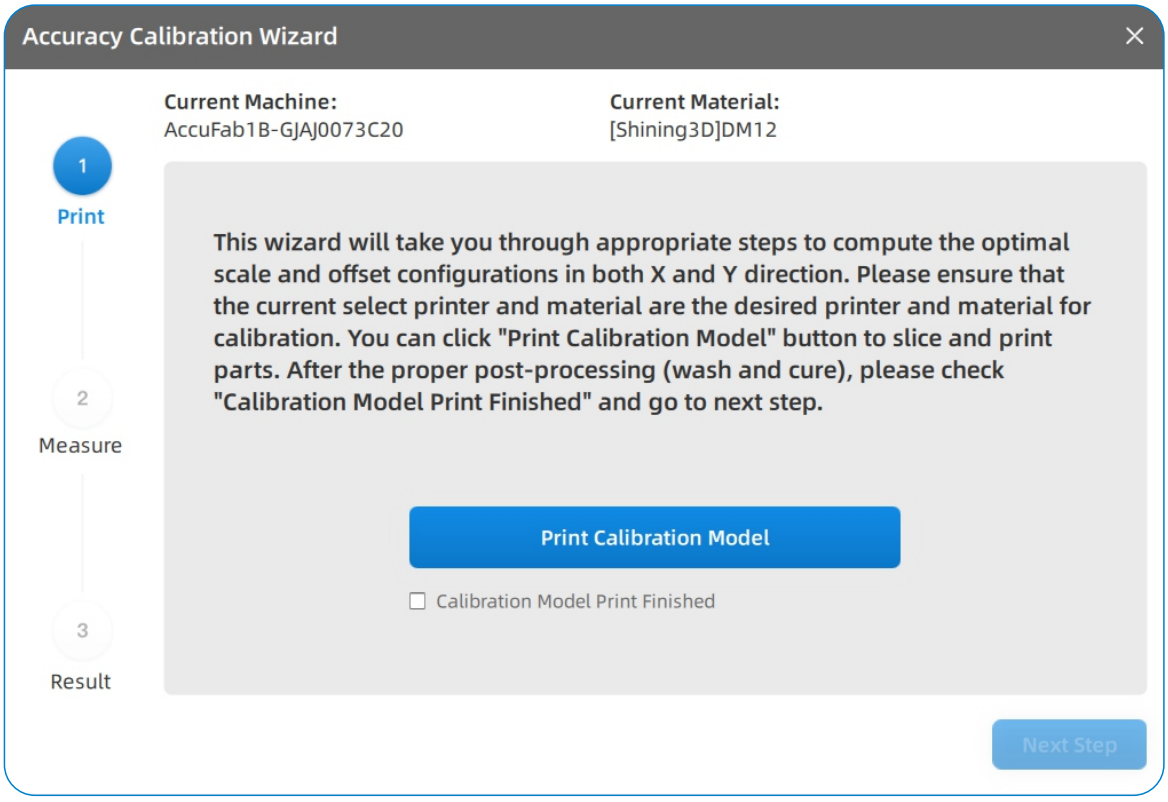
Accuracy calibration is needed when users encounter accuracy or fitting issue. Since the printing material is sensitive to the environment status such as temperature and humidity. Which is causing the change of the sensitivity of the material curing.

Compensation of scale and contour setting with the standard environment may not be perfect for different environment.

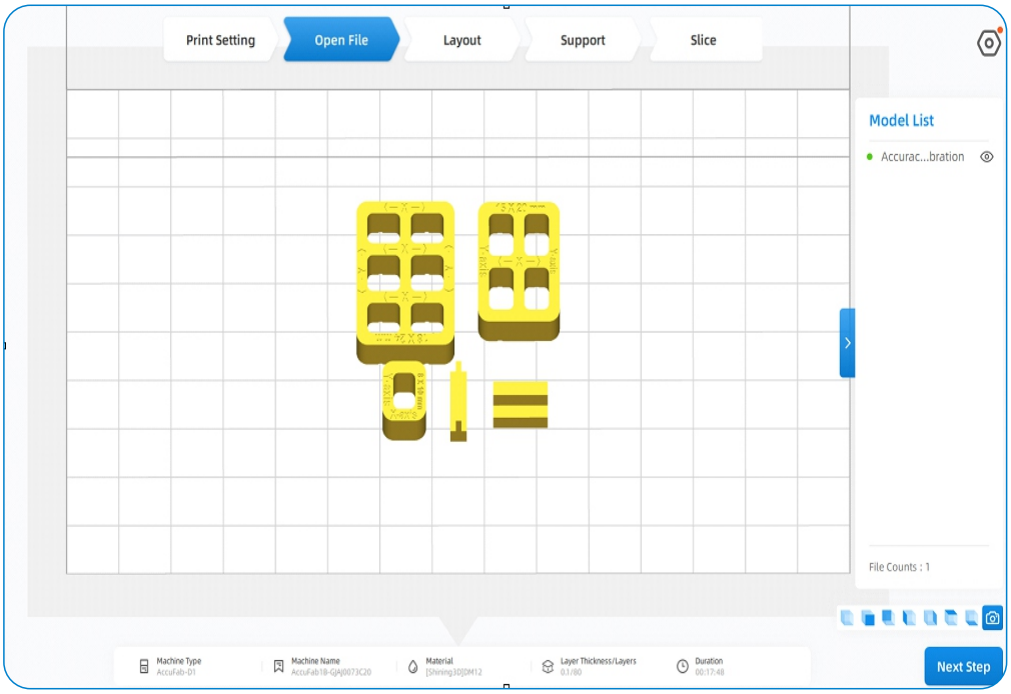


Accuracy Calibration Wizard

By clicking on the “Settings- Accuracy Calibration”, a window of “Accuracy Calibration Wizard ” will be open.

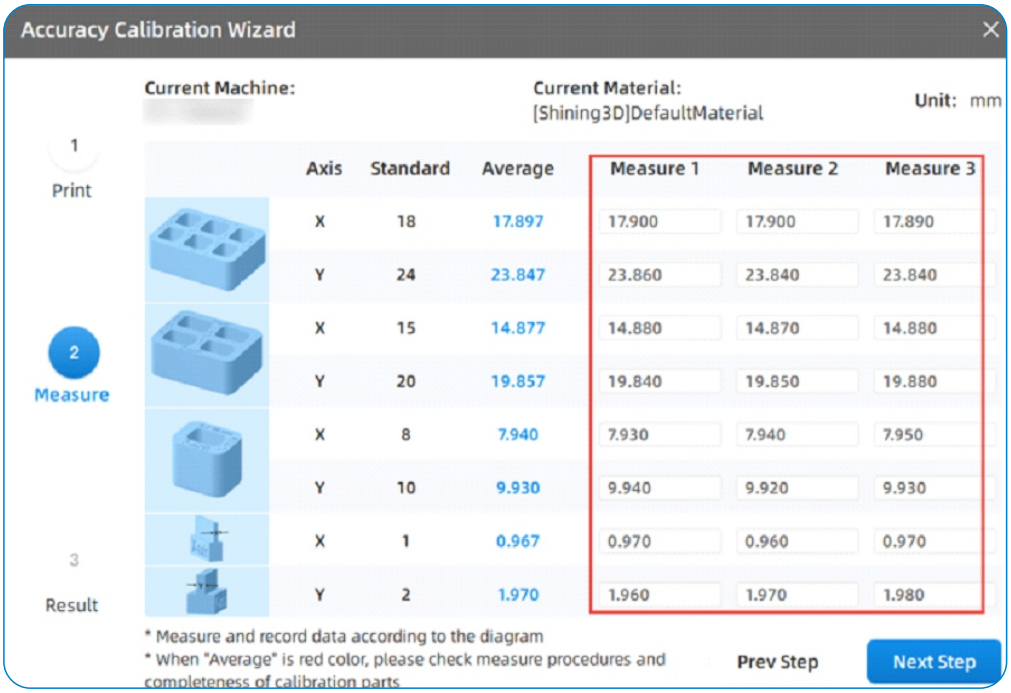


1 Click Print Calibration Model, and the platform displays the calibration model for slicing. User can go to slice directly. And start printing.



2 When print finished, check the option “Calibration Model Print Finished” to highlight the button of “Next Step”, and click “Next Step” to enter the measurement interface.

Enter the measurement value in the measurement interface, and the “Next Step” button will be highlighted, then it will forward to the results page. Click the “Apply” button on the results page, apply the “scale offset” and “contour offset” value to the current material.



Note: For first-time software start, all printer series are selected by default.

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