AccuFab-L4D & L4K

User Manual
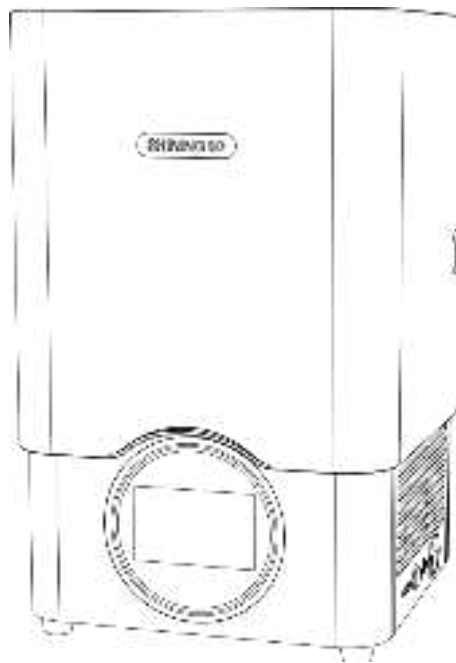
V3.2.20

Foreword

General

The Manual introduces functions, installation, usage and maintenance of the printer (hereinafter referred to as "the Printer").

Safety Instructions

Signal	Meaning
	Additional information for particular situation.
	Improper actions or conditions that may damage the product or injury, and consequently void your warranty or service contract or lose the patient data or system data.
	The safety instructions that you must precisely follow to avoid injury. Failure to observe can cause damages to your product, or result in personal injuries, or even death.

Revision History

No.	Version	Revision Content	Release Date
1	V3.2.20	First release.	June, 2021

FCC Regulations

Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

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

RF exposure statement

- This equipment complies with radio frequency exposure limits set forth by the FCC for an uncontrolled environment.
- This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.
- This device must not be co-located or operating in conjunction with any other antenna or transmitter.

To Users

Dear users:

Thank you for choosing SHINING 3D AccuFab 3D printer (hereinafter referred to as the "Printer") and for your support of SHINING 3D brand. We will adhere to the enterprise tenet of "Creating Value for Customers" to bring better service for every user of this product. We declare that the AccuFab 3D printer is independently developed by SHINING 3D TECH CO., LTD. with imported projection device, independently designed software, and hardware systems, which provides reliable technical solutions for the application of the dental industry.

Supporting high-quality digital model printing, the Product is designed to assist clinics and dental Labs to quickly complete digital printing of dentistry, with a wide application range and high printing precision. It also supports unattended offline printing and online transmission control printing to fully meet users' needs for convenient operation and high accuracy of 3D printing.

This User Manual mainly introduces the installation, use, and maintenance of this Product for your quick understanding of AccuFab. Read the User Manual carefully before using, and keep it properly for future reference.

Table of Contents

1. Safety

1.1. Printing Material

The printing material of AccuFab printer is a photo-polymerized resin material independently developed by SHINING 3D. The resin solution is stable, safe, and no substances harmful to the human body were found in the test, but direct contact with skin may cause adverse irritating reactions. During use, operators should strictly follow of the Material Safety Data Sheet (MSDS) instructions for each material.

1.2. Emergency Measures

Direct skin contact may cause skin irritation dermatitis. During use, operators should wear rubber oil-resistant disposable gloves.

- Skin contact: Take off contaminated clothing and wash skin thoroughly with soap and clean water.
- Eye contact: Open the upper and lower eyelids immediately, rinse with running clean water or normal saline for at least 15 minutes, and seek medical attention.
- Ingestion: Rinse mouth and drink water immediately, induce vomiting, perform lavage and seek medical attention.

Note:

For resin material contact and leakage hazard treatment, please refer to the latest Material Safety Data Sheet (MSDS) or call the National Chemical Accident Emergency Response Hotline.

Warning:

No smoking, eating, or drinking in the workplace. Keep the resin solvent properly and keep it away from children.

1.3. Light Source

- During the printer and post-curing box device operation, the light source emits light with a wavelength of 405 nm, which is harmful to your eyes. Please avoid direct contact.
- Do not open the chamber door during printing.

1.4. Alcohol (Ethanol) Solvent

- Alcohol solvent is a flammable and explosive chemical. Please store in a cool and ventilated environment, and keep the bottle cap of the container closed. Keep away from children.
- Alcohol solvent is used as the recommended solution to clean the liquid resin (the recommended concentration is 95% or above) for post-processing of the printed parts of AccuFab.
- Wear disposable gloves when treating parts and surfaces with alcohol or uncured resin. Avoid direct skin contact.

1.5. Sharp Accessories

AccuFab 3D printer accessories include sharp tools such as flat-headed tweezers, cleaning shovels, and utility knives. Personal safety protection is required when using these tools for model stripping and support removal.

1.6. Electromagnetic Interference

Electromagnetic, produced by AccuFab 3D printer and Fab Cure post-curing box products during operation, has passed CE/FCC standard test and is complied with Class A digital device limits, and will not cause harm to the human body.

2. Instructions for Operation Environment

2.1. Site Requirements

AccuFab 3D Printer	
Power Supply	100-240V/360W
Temperature	20°C-30°C
Humidity	40%-60%
Printing Environment	The working platform shall be clean and smooth, avoid direct sunlight and strong light, and keep away from the dust-borne device.
Frequency Range	2400–2483.5MHz
Maximum Output Power	18dBm

Fab Cure Post-Curing Box	
Power Supply	100-240V
Temperature	20°C-30°C
Humidity	40%-60%
Working Environment	The working platform shall be clean and level, avoid direct sunlight and strong light, and keep away from the dust-borne device.

2.2. Computer Recommended Configuration

AccuWare	
Operation System	Win10 (Recommended)
CPU	E3-1230 3.30GHz and above (Recommended configuration: I5 8500)
Memory	8G and above (Recommended configuration: 16G)
Graphics Card	GTX 750 Ti and above (Recommended configuration: GTX1050)

2.3. Material Storage

Resin Materials	
Temperature	10°C-30°C
Storage Conditions	Storage conditions: Store in a cool and ventilated room and avoid direct sunlight. Other instructions: The storage container shall be kept closed at all times to avoid contact with fire sources. The resin material is a mixture, and it is easy to form a small amount of sediment after standing for a while. It is recommended to shake the storage container before use to reduce the probability of sediment formation.

2.4. Others

● Ensure that the AccuFab 3D printer only uses the original consumables and accessories. Any change to the printer without the manufacturer's permission will result in device failure, which will invalidate your warranty.

● Ensure that the AccuFab 3D printer works in the recommended printing environment, and the incongruent

printing environment will affect the printing accuracy and printing success rate.
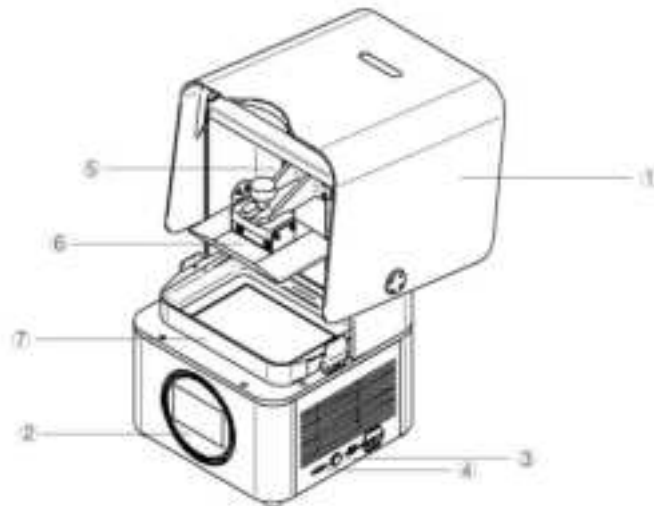
● To guarantee the printing quality of the model, keep the chamber door closed during operation or just finished the operation, and do not touch the model, resin tank, platform, or other parts of the device by hand.

3. Product Introduction

3.1. AccuFab Printer

3.1.1. Structure Preview

Front view

Printer components

No.	Name	No.	Name
1	Light shield	2	Touch screen
3	Power button	4	USB port
5	Build platform bracket	6	Build platform
7	Resin tank	—	—

Note:

Take proper protective measures as the surfaces of the build platform and resin tank is easy to wear. Slight dirt and scratches on the surfaces will not cause printing failure.

Side view
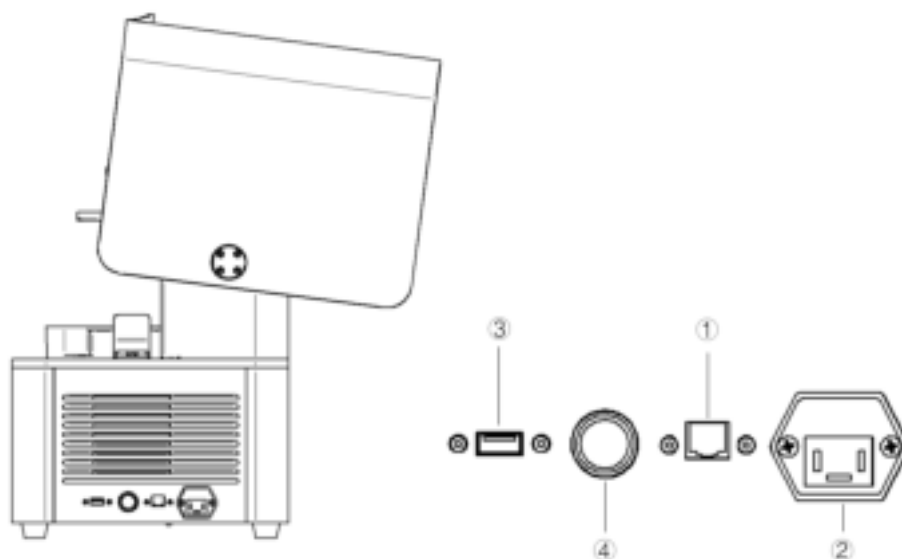
Printer components

No.	Name	No.	Name
1	Network port	2	Power port
3	B-type USB port	4	Power button

3.1.2. Technical Parameters

| Parameter	Description
Model	AccuFab-L4D；AccuFab-L4K
Optics	
Light Engine	Mono LCD
Resolution	3840 × 2400
Pixel Size	0.05 mm
Light Source	LED
Wavelength	405 nm
Light Intensity	>3 mw/cm^2
Print	
Print Volume (W x D x H)	192 mm × 120 mm × 180 mm
Print Speed	10 mm/h-50 mm/h. Print speed varies on materials and layer thickness.
Print Accuracy	±0.05 mm
Layer Thickness	0.025 mm/0.05 mm/0.075 mm/0.1 mm
Material Compatibility	Shining 3D material; certified 3rd party material
Printer	
Printer Dimensions	360 mm × 360 mm × 530 mm
Weight	19 kg
Operating Temperature	20℃-30 ℃
Operating Humidity	40%-60%
Power Requirements	100 V-240V AC; 50/60 Hz; 360 W
Connectivity	USB dongle; Wi-Fi; Ethernet
Printer Control	5" touchscreen
Alerts	Touchscreen alerts; LED status indicators; buzzer alerts
Packing Dimensions	480 mm × 480 mm × 660 mm
Packing Weight	25 kg
Certification	FCC/CE/ROHS

3.2. Standard Accessories

Device Module	Components	Quantity
Printer Host	Printer	1
	220V power adapter	1
	Build platform	1
	Build platform bracket	1
Accessories	Warranty card	1
	Manufacturer certificate	1

	Quick start guide	1
	Silicone scraper	1
	Double-faced velvet mirror cloth	2
	Soft rubber brush	1
	Flat pry knife	1
	Putty knife	1
	Electronic scissors	1
	PET sheet	20
	Disposable gloves	10
	Cleaning box (accessories)	1
	USB flash drive	1
	Harness-network cable (2m)	1
	USB cable	1
	Resin tank	1

3.3. Preview of Curing Box Structure

For more details, refer to *Fab Cure Post-Cure Oven_User Manual_V2.0*.
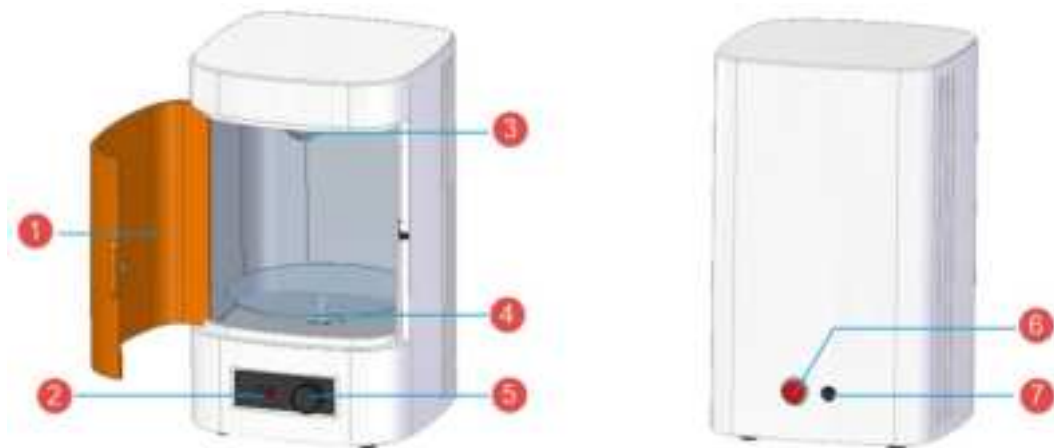
Components

No.	Name	No.	Name
1	Shading door	2	Display screen
3	UV lamp	4	Acrylic turntable
5	Knob	6	Power button
7	Power port	—	—

4. Installation

4.1. Unpack the Package

Step 1: Remove the package and place the printer on the table. Remove the foam ③ inside the printer.
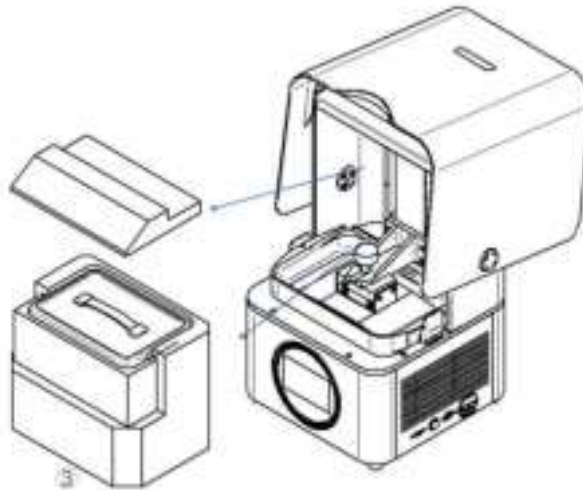
Step 2: Take out accessory box ④ from fixing foam ③ inside the printer.
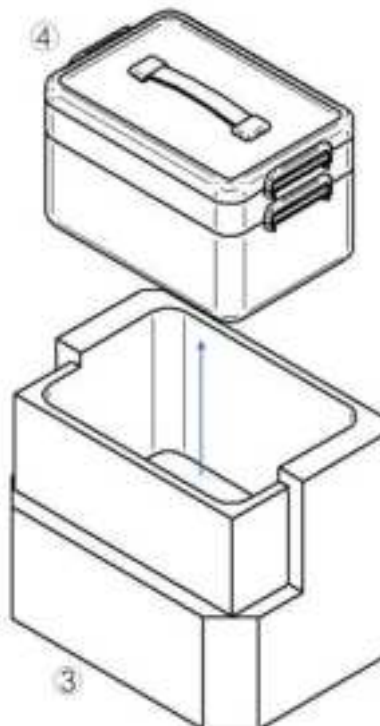
4.2. Install the Printer

Step 1: Insert build platform ⑤ into the guide slot and tighten the screw on the platform.

Step 2: Insert resin tank ⑥ into the position. Lock the buckles ⑦ of the resin tank to lock the resin tank.

Step 3: Connect the power supply as the picture shows, and press the power button on the right side of the printer.
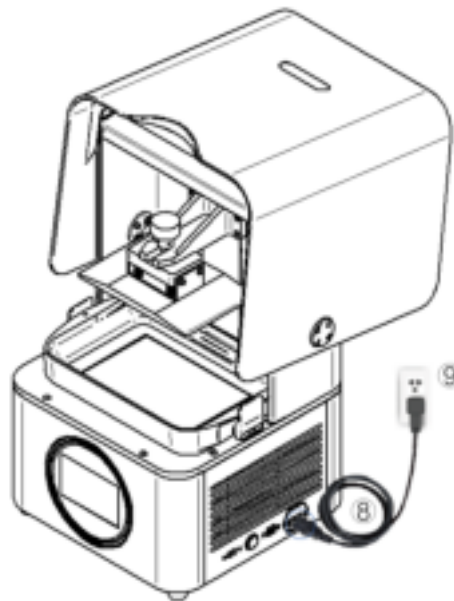
4.3. Add Material

Shake well before pouring material into the resin tank. Note that the resin level should be between the indicator lines of minimum and maximum.
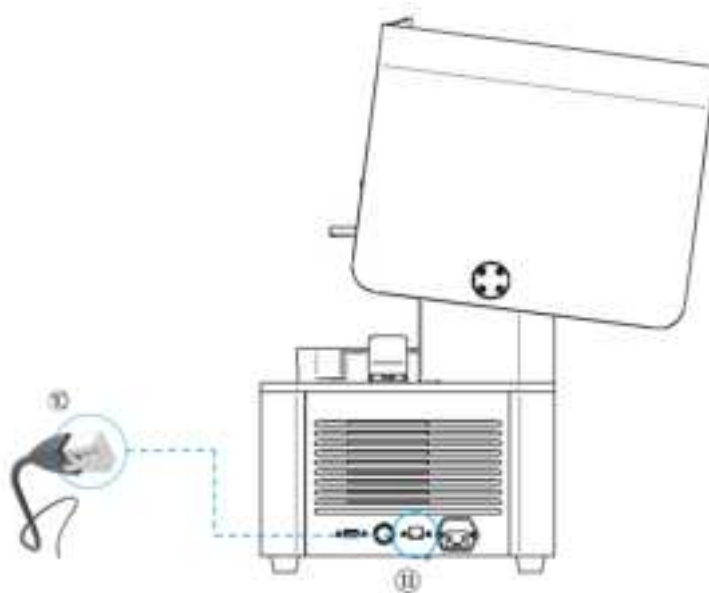
Note:

You can also add resin during printing without pausing.

4.4. Network Connection

Connect the printer with a network cable or Wi-Fi.

4.4.1. Network Cable Connection

● Select "harness-network cable (2m)" in the accessories list. Plug one end of Ethernet cable 18 into RJ-45 interface 19 on the back panel of AccuFab, and insert the other end to the Internet.

● Enter the "Settings-Network Settings" interface of the device, and set the Wired Network so that the Status is "On" and the Automatic Acquisition status is "Yes."

- After the device accesses the network, the acquired IP address is the LAN sending address.

4.4.2. Wi-Fi Connection

- Start the device to enter the "Settings-Network Settings" interface of the device, and set it in the Wireless Network so that the Status is "On" and the Automatic Acquisition status is "Yes."

- Select the network to display the connected WIFI signal. If no WIFI is connected, it will display "None." When accessing the network for the first time, click "Select Network" status, and the device will display the connectable WIFI signal. Select the same WIFI as the computer where the software is located, enter the WIFI password and click "OK" to confirm.
- After the WIFI connection is successful, return to the "Settings-Network Settings" interface, and the acquired IP address in the wireless network interface is the LAN sending address.

4.5. Software Update Function

● Network update function: Enter interface - "About" through Device Connecting Network, and long-press Network Update button. When there is a new system or software, the Update Reminder interface pops up. Click Confirm to download the latest version. After the download is completed, follow the steps shown in the prompt interface (if there is a system update, turn on the device manually after shutdown). If there is no new version, the screen will prompt that it is the latest version at present, and no update is needed.

● USB flash disk update function: Insert the USB flash disk with version/system into the device, and select the software to be updated. Follow the steps displayed in the prompt interface (if there is a system update, turn on the device manually after shutdown).

4.6. AccuWare Software

The matched slicing software of AccuFab 3D printer is AccuWare model processing software independently developed by SHINING 3D (hereinafter referred to as "software"), which has the Office interface style and is easy to use and operate.

AccuFab 3D printer only supports "*.slp4" format model printing files. Before printing, the 3D model file in STL format shall be arranged and sliced with AccuWare software, and the sliced "*.slp4" file can be provided to AccuFab printer to be printed into 3D objects. Here is a description of the installation steps of AccuWare software in the Windows system.
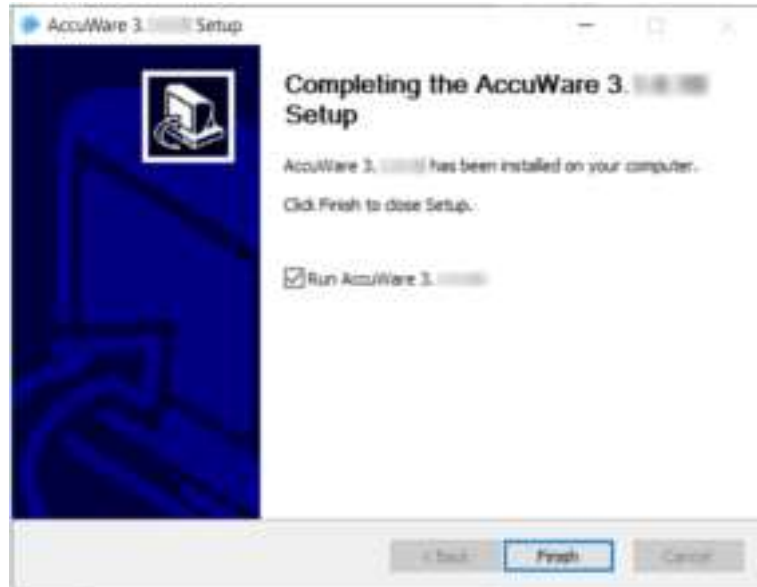
4.6.1. Installation

Step 1: Insert the USB flash disk as shown on the accessories list into the computer, find the installation file (.exe) in the USB flash disk file list, and double click to run it.

Step 2: Enter the software installation wizard, click **Next** to enter the License Agreement interface, and click **I Agree**.

Step 3: Select the software installation path and click "Install" to automatically install the software.

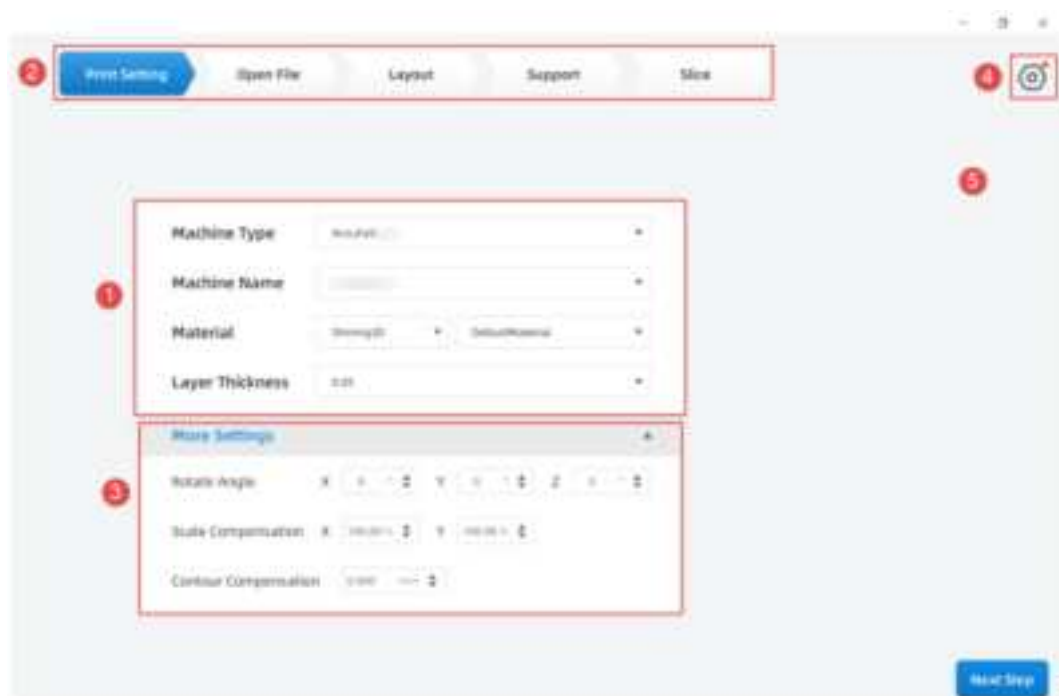Step 4: Click **Finish** to exit the installation wizard and finish the installation of AccuWare.

Step 5: After installation, double-click the desktop software icon (shown in the figure) to open the software.

Note:

For first-time software start, all machine types are selected by default.

4.6.2. Interface

Parameter description

No.	Parameter	Description
1	Printer information	Machine type: current device type. Machine name: current device name. Material: current printing material. Layer thickness: layer thickness of printing material.
2	Top menu	Printing settings, open file, layout, support, slice.
3	More settings	Click the expandable list button to set relevant parameters.
4	Settings	Loading project, saving project, machine list, layer preview, change language, remote assistance, dongle, material management, import to machine, software update, About. Note: Selected devices are displayed by default on the machine list.
5	View	Model display from different perspectives.
6	Main display area	Model display preview.
7	Printer information	Device name, model printing layer thickness, and time estimation information.
8	Import STL	Open file, a record of recently imported files, drag STL.
9	Model list	Displays name of imported model.

4.6.3. Function Description

| No.	Function Module	Function Name	Icon	Function Description
1	File	Open File		Insert STL file selected by the user in the current file.
2		Recent File		Link to the recently used STL model, and click it to load the model into the software.

3		Exit		Close the software and exit the program directly.
4	Edition	Select All	—	Select all models.
5		Copy	—	Copy the selected model.
6		Hide	—	Hide the selected model.
7		Delete	—	Delete the selected model.
8		Details	—	Display the name, path, dimensions, occupied space, triangle patch of the model, and whether any problem with the model.
9		Move Model		Move the model in XYZ axial directions.
10		Rotate Model		Rotate the model in XYZ axial directions.
11		Scale Model		Scale the model in XYZ axial or equal scale.
12		Automatic Layout		Intelligent layout of the loaded model in XY plane.
13		Automatic Support		Set support parameters for the model file and automatically generate support.
14		Manual Support		Set support parameters for the model file and manually generate the support.
15		Slice		Generate a "*.slp4" path file for the data whose printing parameters have been set, and set the path of exportation.
16	View	Default View		View the model selection area from "upper front."
17		Front View		View the model selection area from "front."
18		Back View		View the model selection area from "back."
19		Left View		View the model selection area from "left."
20		Right View		View the model selection area from "right."
21		Top View		View the model selection area from "top."
22		Bottom View		View the model selection area from "bottom."
23	Settings	Settings		Contains some file contents and tools in the software. Click this button in the upper right corner to view for operation.

| 24		Loading Engineering	—	Import the saved *.accu file order into the software.	
25		Storage Engineering	—	Save the current order locally.	
26		Machine List	—	Display the name of the printer for connection.	
27		Layer Preview	—	View the current model by layer.	
28		Accuracy Calibration	—	Calibration settings for the accuracy of printed models.	
29		Material Management	—	Display local material information.	
30		Import to Machine	—	Import new machine parameters from PC/LAN.	
31		System Settings	—	Change Language	Chinese/English system language conversion settings.
				Remote Assistance	TeamViewer technical support remote assistance shortcut entrance.
				Dongle	Dongle driver installation and registration access.
				Software Update	Accept update push, and prompt update when connecting with dongle.
				About	Enter/exit administrator rights, display dongle information, etc.

4.6.4. Use Description

Printing Settings

Open AccuWare software to display the printing setting interface, which can select the machine type, machine name, material and layer thickness of the printer to be printed, and set the rotation angle, scaling offset and contour offset of the imported model.
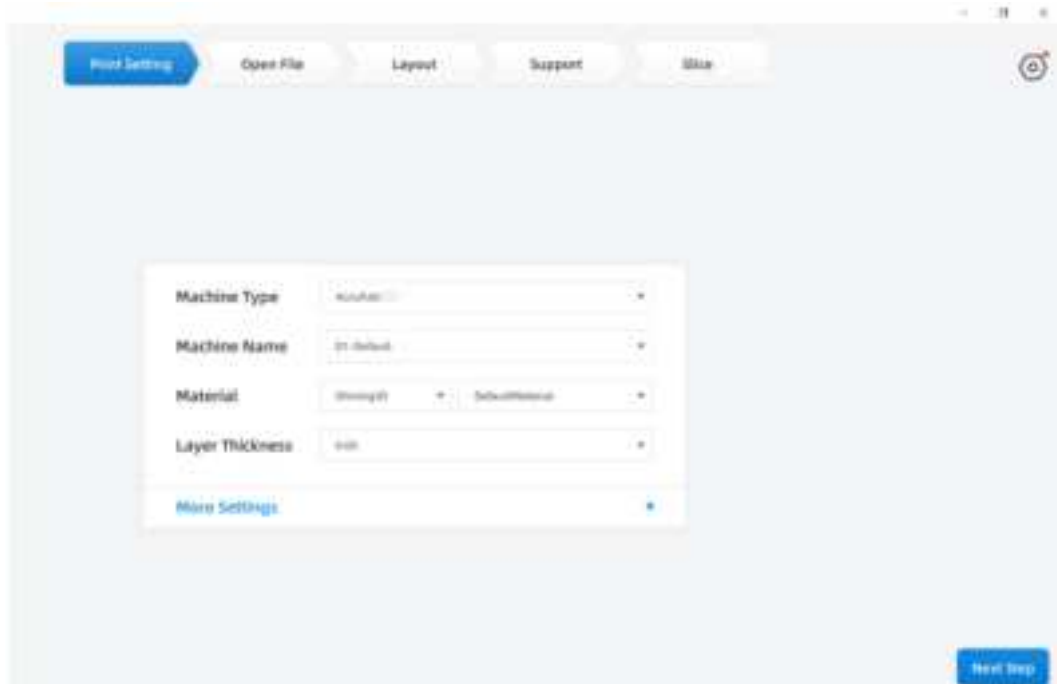
Open File

AccuWare software can only carry out subsequent edition and slice data generation after loading the target model. Users can open the model root folder by clicking the menu bar on the left side of the software: "Open File

 /Recent ", select the model to be loaded, and then click the "Open" button to load the target model. or

click "recent". If it is the first time to use a model that has not been imported before, this option will display without records. If the model has been imported, the model name will be displayed. Double-click the model name to import the model into the software ". "*.stl" can also be dragged into the software.
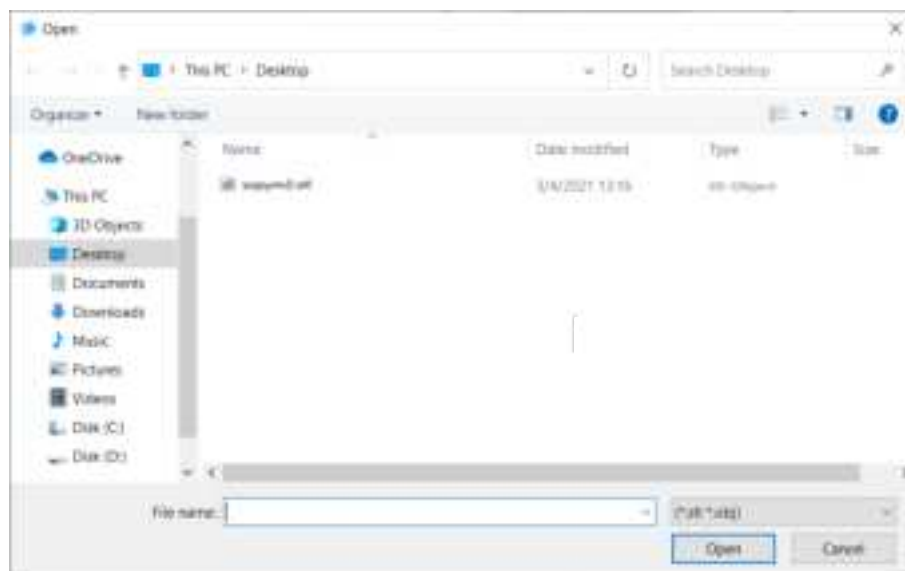
Observe Model

After the model is successfully imported into AccuWare software, users can use the mouse to rotate the platform to view the model status from different angles, or use the software panel "Perspective Selection Button" to

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realize quickly. The following shows the preview effect of the sample model from different perspectives.

Note:

When in 6 positive views, only circles rotated along the normal axis in the view are displayed.
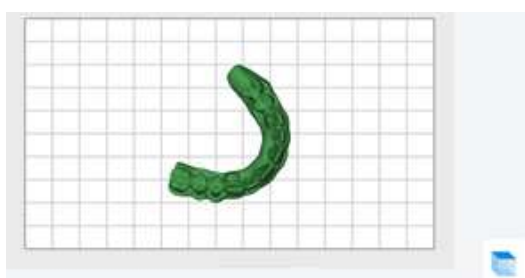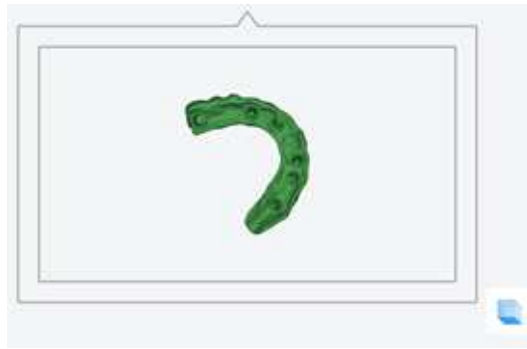
Default direction

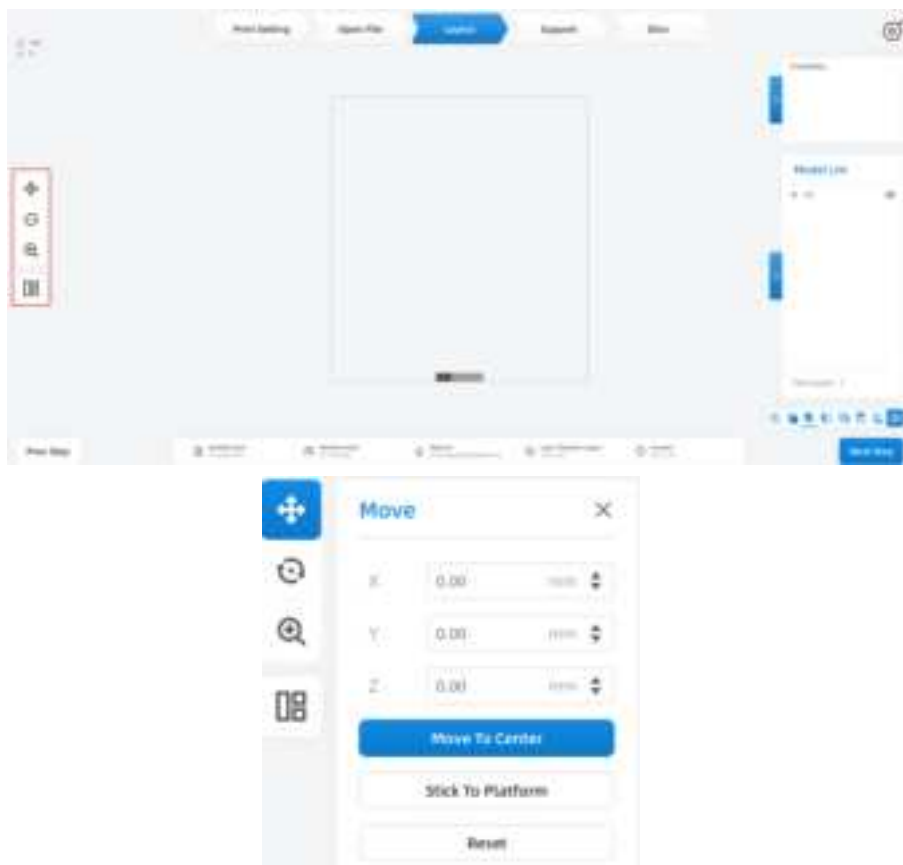Front

Back

Left

Right

Top

Bottom

> ⚠️ **Note:**
> The model view function can help users to view the position of the model on the printing platform from different angles, which is helpful to adjust the printing position of the model.

Layout

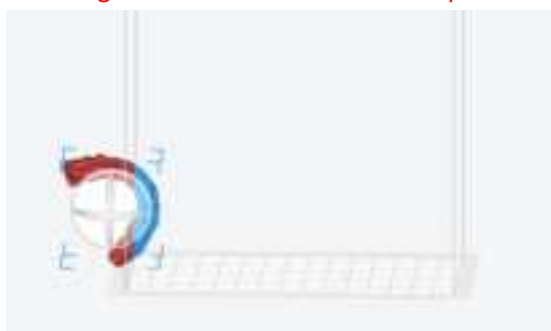- ⊕ : Function trigger. Display the spatial position coordinates of the model on the current build platform, and the value in use changes with the change of position.
  - ➢ **XYZ coordinate values (0, 0, 0) when the model is in the center of the platform.**
  - ➢ **Enter other values in the box of XYZ axis coordinate values, and hit the "Enter" key to move the model position accordingly.**

- **Stick To Platform** : Return the Z axis coordinate of the selected model to zero after triggering.

- **Move To Center** : The selected model can return to the center position of the platform after triggering, and the XYZ coordinate value will return to zero.

- **Reset** : The selected model can be reset and return to the platform center position after triggering, with XYZ coordinate values returning to zero.

> ⚠ **Note:**
> After the model is imported into the software, if the preview color is red, it indicates that it is beyond the printing range. Therefore it needs to be moved to a suitable position on the printing platform by using the 'move' function until the preview color is blue after moving, as shown in the figure:
>
>
>
> Before adjustment   After adjustment

Rotate the Model
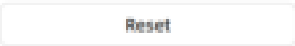
- ⟲ : Function trigger. Display the spatial angle coordinates of the model in the current build platform, and the value changes with the change of angle in use.
    - ➤ The XYZ coordinate values are based on the initial loading position of the model, and the initial values are (0.00°,0.00°,0.00°).
    - ➤ Input other angle values on the XYZ axis coordinate value box, and press the "ENTER" key to change the model angle accordingly.

- **Reset** : It can reset the selected model's rotation operation after triggering and

restoring the XYZ angle to the initial value when loading when the coordinate value is zero.

Scaling the Model

- : Function triggering.
  - ➤ The value of XYZ axis reflects the dimension of the model and the value varies with the size.
  - ➤ The percentage value is the scaling percentage of the model, 100% is the current dimension of the model. If the value > 100%, it means that it is larger than the current model, and if the value < 100%, it means that it is smaller than the current model. Use percentage scaling under any model state.

  - ➤ Unified scaling, enter the value XYZ axis after activating this option, and the model will be scaled proportionally.

- : Reset the scaling operation of the selected model after triggering, and restore
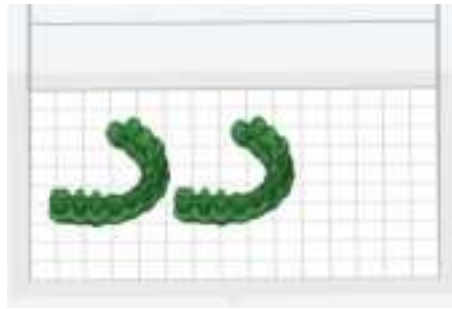XYZ dimension to the initial value.

Automatic Layout
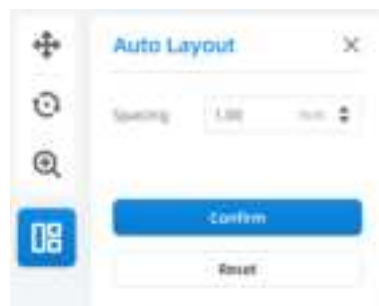
- Automatic layout: Intelligently arranges the imported model on XY plane.
- Spacing: The shortest distance difference of models.
The graph shows the display of normal layout and automatic layout.

Result of normal layout

Results of automatic layout

Support Interface


AccuWare supports Auto support and Manual support. User can add support Manually or generate Automatically by the support settings.

- Function trigger: Support interface or , button.
- Support type: Inner support, reinforced support.
- Base type: No base, bounding box, orthographic projection, outer contour.
- Reset Parameters : The selected model can be restored to the initial position.
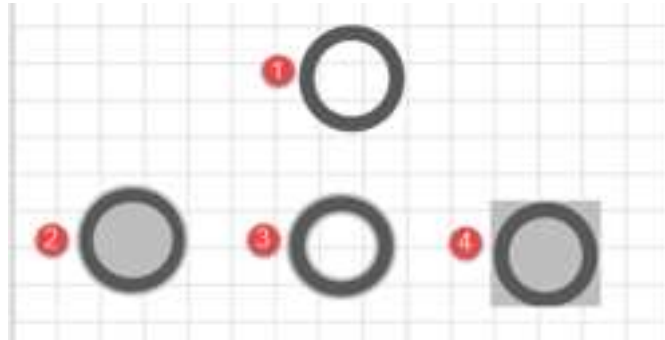
Parameter description

No.	Description	No.	Description
①	No base	②	Outer contour
③	Orthographic projection	④	Bounding box

- Setting Parameters of Other Supports
  - ➤ Base height: The thickness between the base and the build platform.
  - ➤ Top radius: The radius of the circular support at the top.
  - ➤ Bottom radius: The radius of circular support where the support contacts the platform.
  - ➤ Lifting height: The lowest height for generating supports.
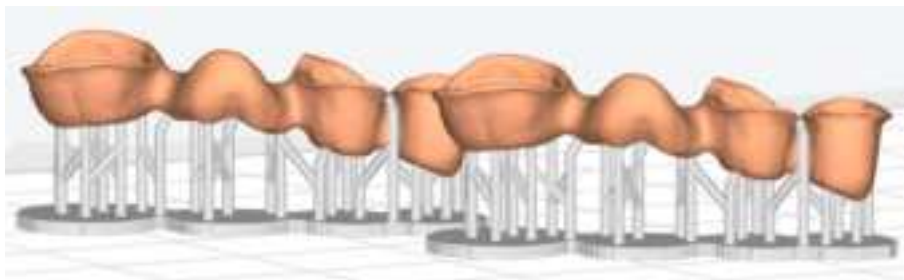
  - ➤ Spacing: The distance between adjacent supports.
  - ➤ Insert depth: The depth at which the support is inserted into the model.
  - ➤ Inner support: If checked, the generated support contains inner support, which is generally used for printing hollow parts such as jewelry.
  - ➤ Reinforced support: If checked, tree-shaped reinforced support will be generated intelligently.
  - ➤ Base only: Only generate the base at the bottom without support.

Hide

Auto Support

Clear Support

Delete

Details

  - ➤ Auto support: Supports are automatically generated with set size and shape.
  - ➤ Clear support: Abandon the current editing of supports.

> ➢ Delete: Delete the model.
>   ● **Edit Support**

Enter the corresponding value to generate new support. Click the support parameter library to add a new support option.

>   ● **Add quick support for the current machine**

Callout the current setting options, select material management, click the selected material in the material interface, and right-click the mouse to select "Add Support."

Click the "Value" selection area on the right of the interface, and the user can manually set the support parameters, then click "OK" to complete the saving.
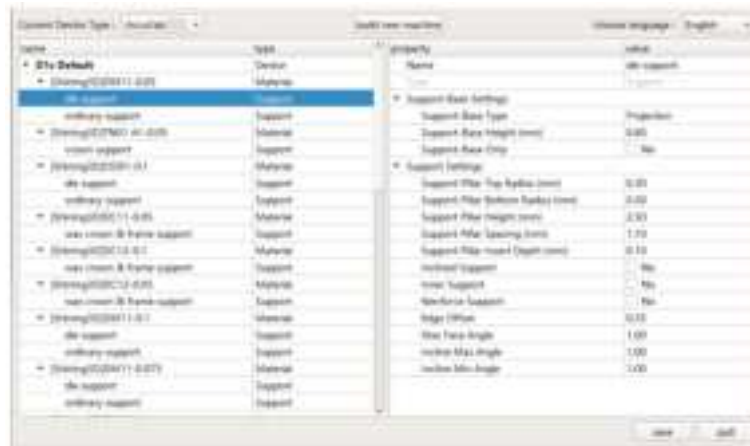
After finishing common supports setting, they can be directly applied to the printing device, printing mode and support type.

Slice

After the users adjust the printing parameters (printing position/angle/dimension/support parameters), click "Slice" button to generate "*.slp4" printing files.


Step 1   Click the slice icon to pop up the slice preview interface.

> Note:
>   ● AccuWare supports GPU accelerate for the slicing function. With a graphic card of GTX 750 or

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higher. The slicing time will be greatly shortened. For example: slicing time for a model of 500 layers will be 5 – 24 s.

- 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 switching conditions are not met.
- If the CUDA version shows "undefined," it means the driver version is not the latest version. Please update.
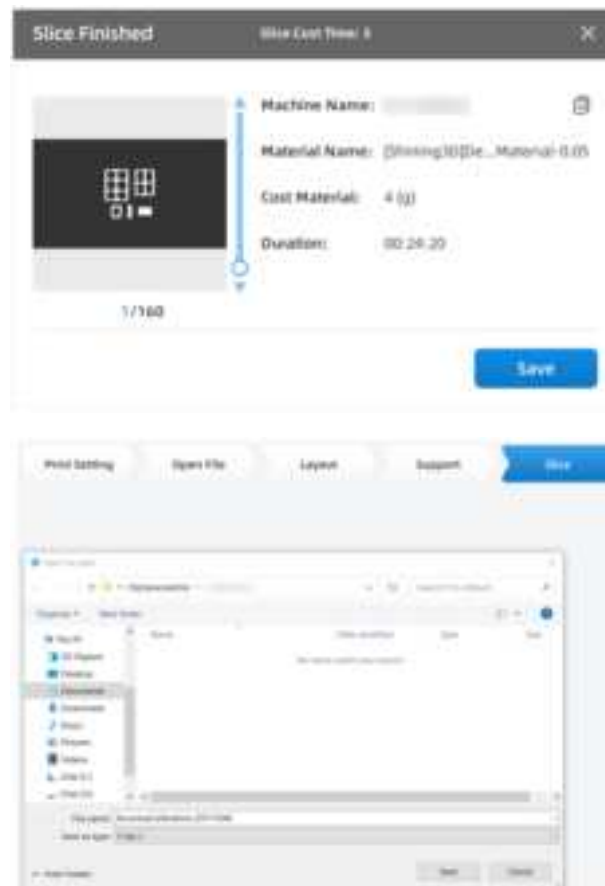
Step 2   Click "Save" of the software the interface of the computer system file pop up. Select the destination folder and click "save" to complete the slicing of the model and export sliced files.

Note:

- After slicing is complete, click Send to enter the machine list, automatically send the current file to the corresponding device, while showing the sending progress. No secondary confirmation and selection of files is implemented.
- If the current device is offline or busy, it will indicate in red "The printer is offline and cannot be sent" or "The printer is busy and cannot be sent".

Step 3   It is also possible to click "cancel" after generating slices, and re-slice by clicking the slice button on the interface's left.

The exported model file can be saved locally or directly to USB devices.

> ⚠️ **Note:**
> Users shall slice STL files into "*.slp4" format files through AccuWare software, and send them to the device. Then they can be identified and printed by the device.

Software Upgrade
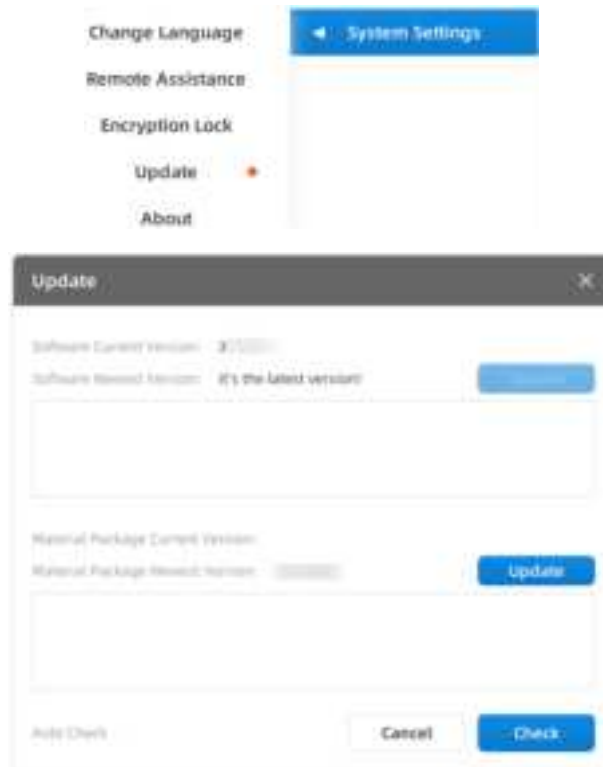
Users are recommended to check "Settings - System Settings - Software Update -Auto Update". After checking, the setting module will be marked with a red dot when a new version of the software is available and the network is in normal condition.

Remote Assistance
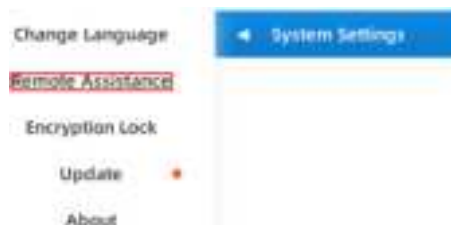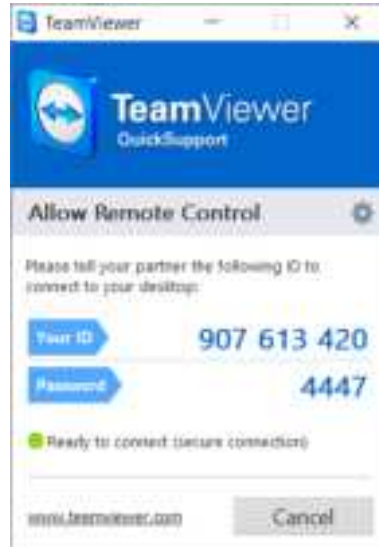
Click "Settings - System Settings - Remote Assistance", inform the technical support of the ID/ password on the page to obtain real-time remote assistance.

Install "TeamViewer" software on your computer before remote assistance.

Accuracy Calibration
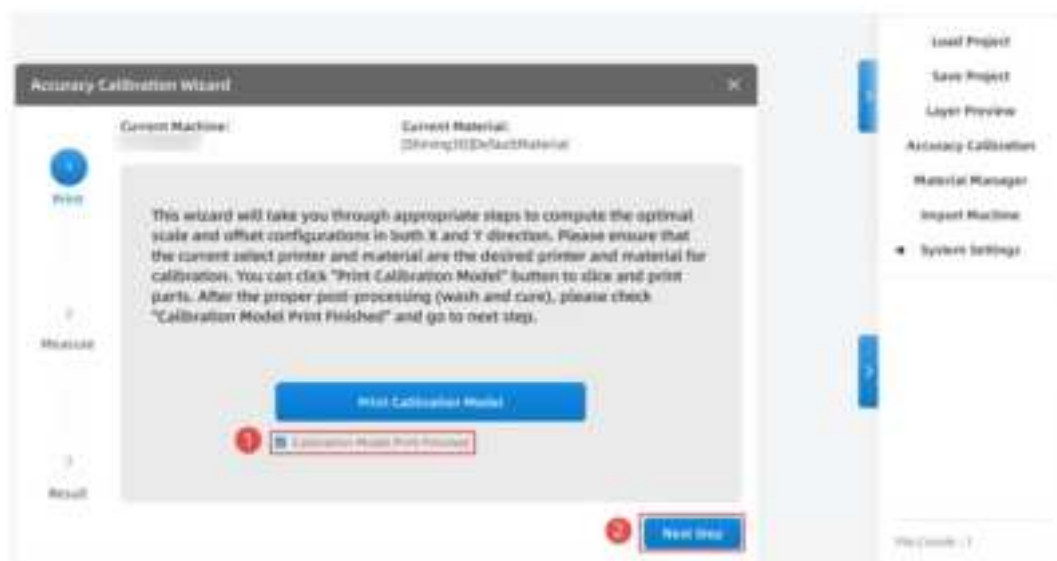
Click **Print Calibration Model**, and the platform displays the calibration model for slicing.

Check the option "Calibration Model Print Finished" to highlight the button of "Next Step", and click "Next Step" to enter the measurement interface.

	Axis	Standard	Average	Measure 1	Measure 2	Measure 3
	X	18	17.897	17.900	17.900	17.890
	Y	24	23.847	23.860	23.840	23.840
	X	15	14.877	14.880	14.870	14.880
	Y	20	19.857	19.840	19.850	19.880
	X	8	7.940	7.930	7.940	7.950
	Y	10	9.930	9.940	9.920	9.930
	X	1	0.967	0.970	0.960	0.970
	Y	2	1.970	1.960	1.970	1.980

* Measure and record data according to the diagram
* When "Average" is red color, please check measure procedures and completeness of calibration parts

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.

4.7. Printing Flow Chart
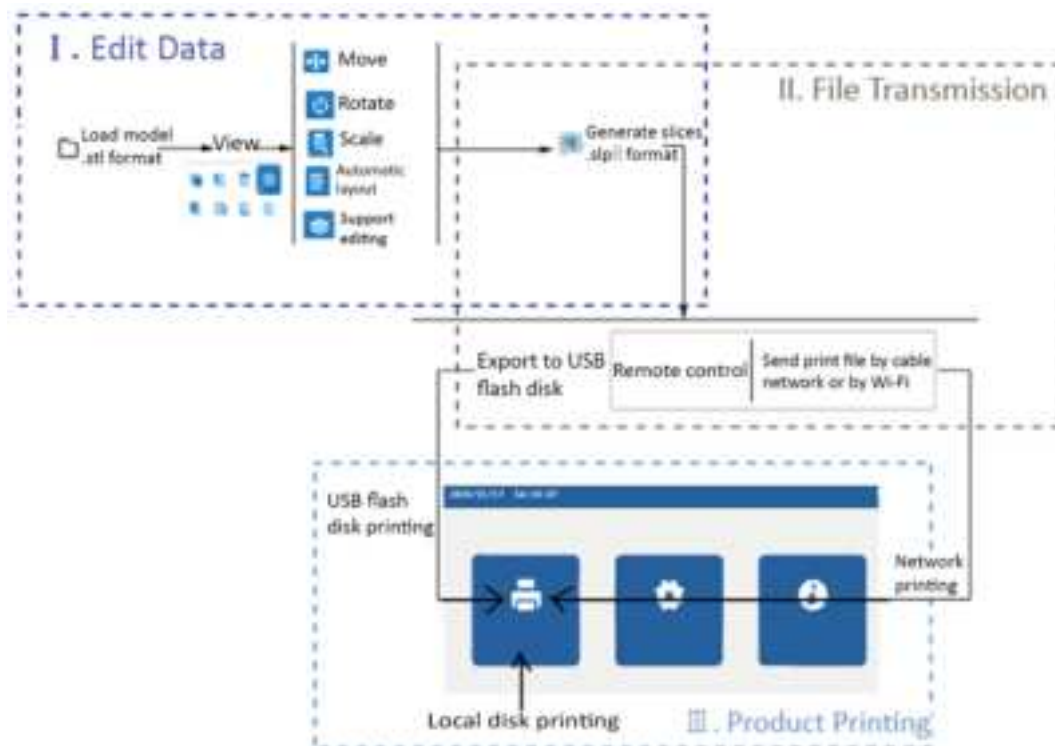
4.8. Local Disk Printing

Local disk printing is the "*.slp4" model file equipped with the printing device.

Step 1: Turn on the printer power and click **Print**.

Step 2: Select an object model to print.

4.9. USB Flash Drive Printing

USB flash drive printing prints the "*.slp4" model file loaded into the USB flash drive.

Step 1: Copy the slice file of slp4 format generated by AccuWare software to the USB flash drive.
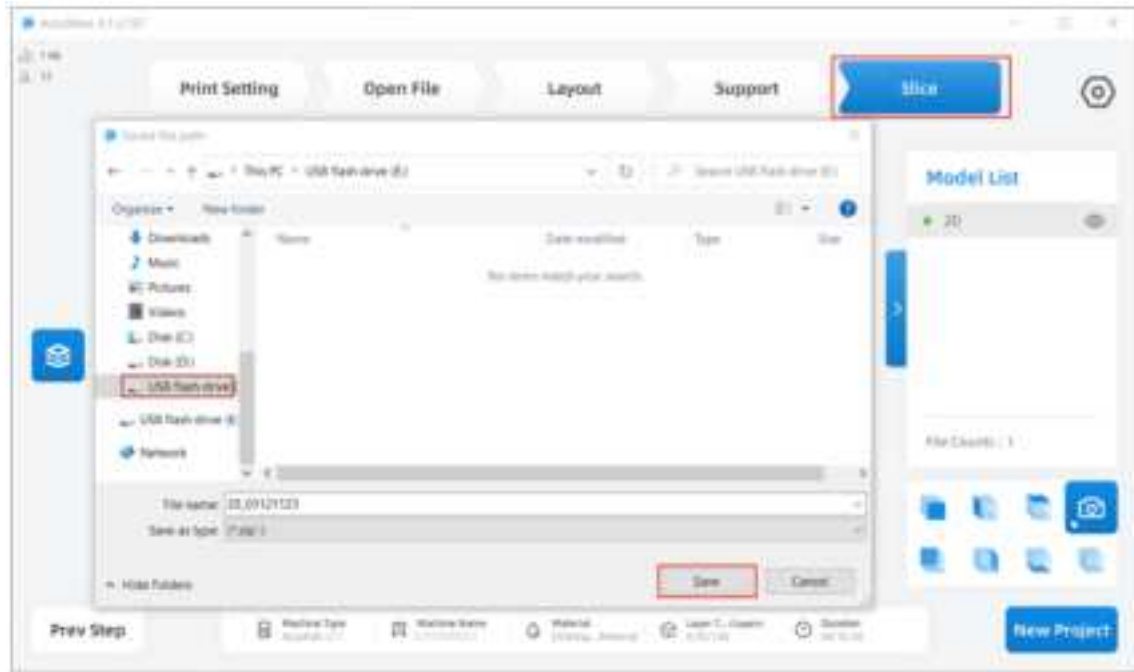
Step 2: Insert the USB flash drive and click "print -USB Flash Drive" from the home screen.

Step 3: Click to select the model to be printed in the USB flash drive file list. After parsing, click "Print" to print automatically.

> ⚠ **Note**:
> - AccuFab printer only recognizes USB flash drive data in FAT32 format.
> - In addition to the slice file save path selected by the user, the default storage location of sliced data is under the folder of computer/document/3DDlpDocuments3/DlpGenerateOut/corresponding printer serial number.

4.10. Printing Status View and Control

After the device starts printing, users can view and control the printing status in the operation panel.

- Print: Start the printing process.

- Pause: Pause the printing process and can be recovered.
- Stop: Stop the printing process and cannot be recovered.
- Back: Cancel before printing.
- Print progress bar: Display the printing progress and printing status of the current layer.
- Detail Info: View the information of the model slice parameter.
- Print preview area: Display the cross-sectional view of the current layer.

5. Process Model

5.1. Take Out Model

Note:

For appearance, AccuFab-L4D and AccuFab-L4K differ only in sunshield colors. This chapter takes AccuFab-L4K as an example.

Step 1   After the model printing finishes, lift and suspend the build platform for 5 minutes. Thus, the residual resin material attached to the model's surface drops back to the resin tank.
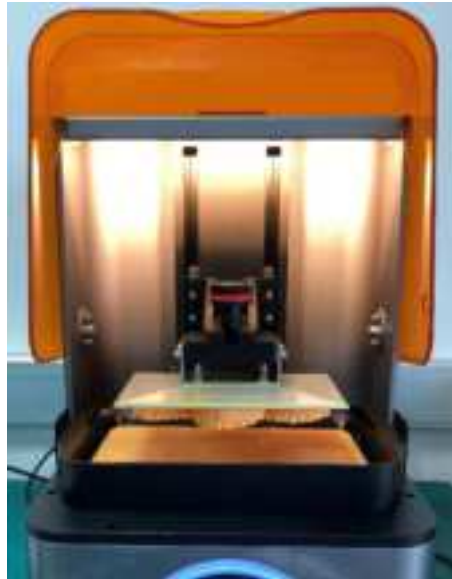
Step 2   Use silicon scraper provided in accessories to scrap off the resin material on the build platform obliquely. Release the tongue depressor, take out the build platform, and place the platform sideways on the bench.

Step 3   Select "Flat Pry Knife" in the accessories list to take the printed model from the platform. Mind that flat pry knife direction cannot be towards any human body part.

5.2. Clean

5.2.1. Model

Step 1   Select the "Cleaning Box" in the accessories, and pour in alcohol (concentration of 95% or above).

Step 2   Put the printed model in the cleaning box, shake slightly for 30 seconds (choose ultrasonic cleaning if there is an ultrasonic cleaner), cover the cleaning box and soak for 2-3 minutes. This operation can remove the residual resin from the surface of the printed model.

Note:

If it is still not cleaned, use a high-pressure air gun.

For smaller parts, reduce the soaking time accordingly, because over-soaking will cause the model to soften.

Step 3   Take out the printed model from the cleaning box, dry the resin and alcohol on the surface, and standing to dry the model.

5.2.2. Build Platform

Step 1   Use a putty knife to clean up the model residue on the build platform.

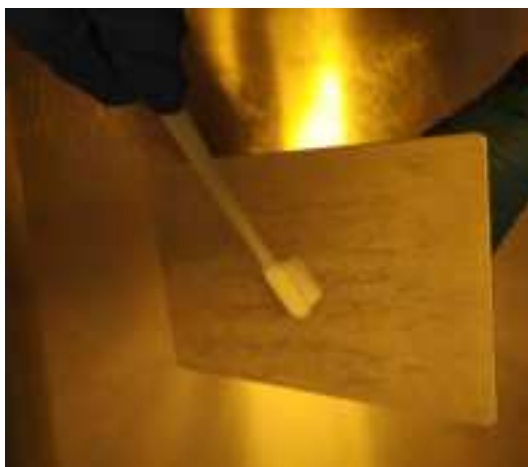Cleaning platform with a putty knife

Wear disposable gloves and judge whether the residue is clean
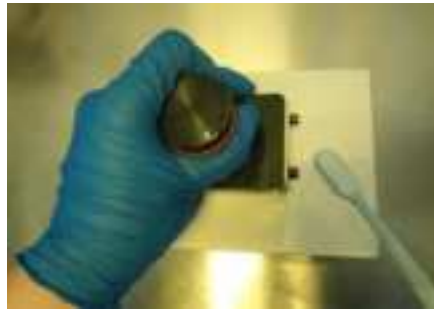

Step 2   Use the soft glue brush with wet alcohol to clean up the residual resin on the surface of the build platform.

Clean the front of the build platform

Clean the back of the build platform

Step 3   Dry the surface of the build platform with a paper towel, and dry in a ventilated place before reuse.

Wipe the front of the build platform
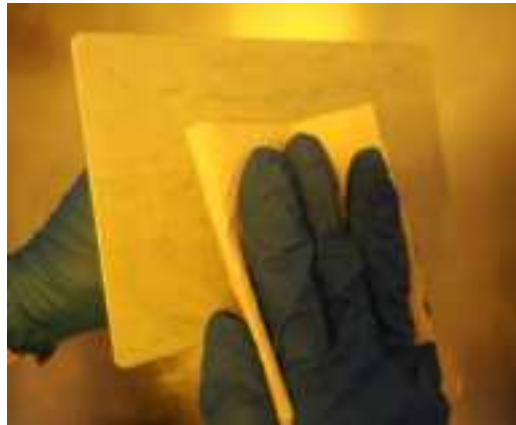
Wipe the back of the build platform

5.3. Cure Model

Use Fab Cure post-processing machine for the secondary curing treatment of the model. This machine uses the principle that the photosensitive resin material will be cured and molded under the irradiation of a UV lamp with a specific light wavelength.

Models after secondary curing can be stored for a long time without irritating human skin, and the model's overall performance (smoothness, hardness, etc.) is better than ordinary models.

Step 1   Place the model into the curing box.

Wear disposable gloves, open the shading door of the curing box, uniformly place the cleaned model on the center of the acrylic turntable of the curing box, close the shading door after placing.
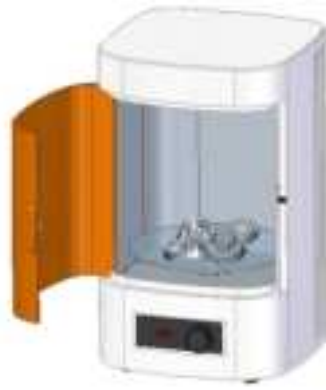
Step 2   Set curing time.

Press the power button of the curing box, and the time will display on the screen. Turn the prepositive preposition time knob of the curing box according to the *"Recommended Curing Schedule of Resin Materials"* to set the curing time, and press the knob for confirmation.
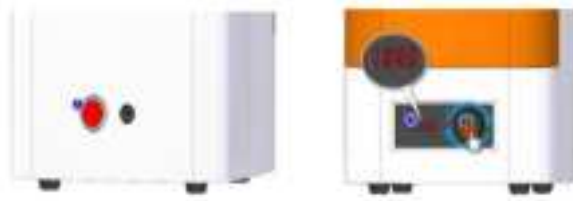
Step 3   Waiting for curing.

After the time is confirmed, the UV lamp of the curing box turns on lights up and the acrylic tray rotates to enter

the curing working mode. shows the Printer is under cursing. Do not touch it.

Note:

Opening the acrylic door during the curing process will cause the UV lamp to go off, the turntable to stop rotating and the curing process to stop.

Step 4   Take out the model.

After curing, the buzzer of the curing box will ring to prompt. Then the shading door can be opened to take out the model.

Note:

Clean the foreign matter on the acrylic turntable and curing box after curing. Keep the curing box clean for future use.

5.4. Striping Support

The cured model support is easy to be peeled off and not easy to destroy the model surface. Select tools such as a putty knife, utility knife to peel off the support on the model, or peel manually.

Operation description

No.	Description	No.	Description
①	Before support stripping.	②	Remove support manually.
③	Support stripping finished.	—	—

Note:

- Be careful to prevent scratches when using sharp tools such as utility knives.
- Remove the build platform before replacing the resin tank to avoid the resin polluting the optical lens.
- The exposure time parameters of different printing materials are different.
- Adhere the utility knife to the build platform to avoid the deformation of the model when taking off the model, and clean the platform with paper towels after cutting.

6. Product Care and Maintenance

Maintenance Content	Maintenance Requirements	Maintenance Cycle	Note
Appearance	Keep clean and neat.	Once/per day	Wipe it with alcohol immediately and keep it clean when splashing resin on the guide rail or on the cover.
Alcohol in cleaning box	Keep clean.	Once/every two days (during operation)	The wax pattern cannot be soaked in alcohol for too long, which will cause the wax pattern to soften.
LCD panel	Confirm whether it works normally.	Once/per week	—
Build platform leveling	Confirm the leveling state.	Once/every 30 days	—
Guide rail and screw rod	Keep lubricant.	Once/every 3 months	Maintain lubrication with lubricating oil.

7. FAQs and Troubleshooting

AccuFab problems

No.	Phenomenon	Possible Reason	Solution
1	The model drops when printing.	Inaccurate zero position.	Level the Printer manually.
2	Improper height of the model.	Overpressure of the build platform.	Level the Printer manually.
3	Residue found in the resin tank.	Last print was not successful.	Follow the resin tank clean procedure to cure the bottom layer and remove it.
4	Disorder of printing interface during printing.	Program error.	Restart the printer after printing if not affecting the operation.
5	The build platform can print on one side but not on the other side.	Inaccurate zero position	Reset zero adjustment.
6	Grainy screen.	USB flash drive might contain a virus.	Carry out antivirus or formatting process to the USB flash disk (into FAT32 format).
7	Printer display screen crashed.	Program crashed.	Restart printer.
8	Printing error.	Having error when printing slp4 file on the device.	Reprint/restart the device.

AccuWare problems

No.	Phenomenon	Possible Reason	Solution
1	Model shows red!	File size exceeds the build platform/model needs recovery.	Adjust the model into the range of the platform/repair the model with error.
2	No selected model!	No selected model currently.	Click the model to select one model at least before performing the operations.
3	No response of target device!	The network of the device is interrupted.	Recheck the network connection before performing other operations.
4	Unknown interruption!	File transfer suddenly stops.	—
5	Sending failed!	Failed to acquire slp4 file at the device.	Resend.
6	Password incorrect!	Password incorrect.	Reenter password.
7	STL slice failed.	Failure of slicing because of too many holes on the model surface.	Slice after recovery.
8	No device or material.	No device or materials selected before operation.	Select device or materials before performing other operations.

9	Model incorrect. Please use repair function!	There are holes on the loaded model surface.	Select "Cancel"/"Repair."
10	Repair failed. Open the model interface, and the model still displays red.	Failure of repair for too many holes on the surface of the model.	Multiple recoveries after saving.

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Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

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FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Disclaimer

This User Manual is a guide to installation, operation, and maintenance, not a product warranty. Shining 3D Tech. Co., Ltd endeavors to ensure the accuracy and completeness of the manual materials but do not assume any responsibility for errors or omissions in the documents. At the same time, we reserve the right to interpret and modify the layout, errors and the like of this User Manual. The documentation is subject to change without notice.