



SHINING 3D[®]

EinScan HX User Manual



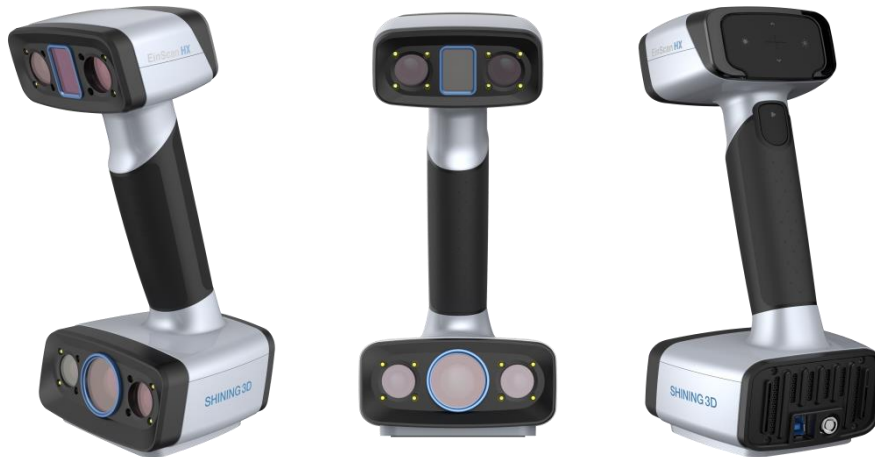
V1.2.0.4

SHINING 3D[®]

Introduction

Thank you for purchasing the EinScan H series 3D Scanner.

EinScan HX is new developed handheld 3d scanner by Shining 3D. Based on combined structure light technology of LED and laser. EinScan HX is with unique performance of scanning common objects as most handheld structure light 3d scanners can at a fast-scanning speed with color texture, and also capable of scanning black and shiny objects that only laser 3d scanning are good at for a better accuracy.



If you need any support for your 3d scanner, please contact your local reseller or the EinScan support team einscan_support@shining3d.com.

Information in this document is subject to change without notice.

Note:

The manual provides important information of the proper operation of the product. Read before use.

Caution:

- Handle the scanner with care. Bumping or dropping off may cause the electronic and optical parts being damaged.
- EinScan HX uses a class I laser when using laser scan mode, which is eye and skin safe under all conditions of normal use, but long time staring at the laser beam directly is not suggested. Please avoid direct eye contact with the laser beam. Keep the laser beam away from children.
- Do not touch the camera lens.

Table of Contents

1. Specification and System Requirements	1
1.1. System Requirements	1
1.2. Scanner Set Up	1
1.2.1. Unpack the Box	2
1.2.2. Scanner Body	3
1.2.3. Connection	3
2. Software Set Up	5
2.1. Download the Software	5
2.2. Install the Software	5
2.3. Firmware Update	5
2.4. Device Activation	6
2.5. Software Update	7
2.6. Interface and Parameters	8
2.6.1. Navigate	8
2.6.2. Device Reconnection	8
2.6.3. Settings	9
2.6.4. EinScan Community	10
2.6.5. Help Mode	10
2.6.6. Alerts	11
3. Software Scan Workflow	13
4. Calibration	14
4.1. Precautions and Use	14
4.2. Preparation for Calibration	14
4.3. How to Calibrate	15
5. Before Scanning	19
5.1. Scanner Buttons	19
5.2. Scan Modes	19
5.3. Preparation	20
5.3.1. Rapid Scan	20
5.3.2. Laser Scan	20
6. Project	22
6.1. New Project Group	22
6.2. Open Project Group	22
6.3. Pre-setting	22
6.3.1. Select Texture	22
6.3.2. Alignments	23
6.3.3. Resolution	24
6.3.4. Global Marker File	24
6.4. Scan Setting	25

6.4.1.	Brightness Adjustment	25
6.4.2.	Optimal Distance Range	26
6.4.3.	Other Settings in Rapid Scan	26
6.4.4.	Other Settings in Laser Scan	27
7.	Scan	29
7.1.	Preview	29
7.2.	Start/Pause/Continue/Stop Scanning	29
7.3.	Resume Scanning After Tracking Lost	29
7.4.	Generate Point Clouds	30
7.5.	Clouds Editing	31
7.6.	Right-click Context Menu	31
7.7.	Cutting Plane	32
8.	Project Group	34
8.1.	Create/Import Projects	34
8.2.	Remove/Delete Projects	34
8.3.	Align Projects	35
9.	Meshing	36
9.1.	Create Mesh (Watertight/Unwater tight)	36
9.1.1.	Mesh	36
9.1.2.	Mesh Optimization	37
9.2.	Mesh Editing	38
9.3.	Texture Adjustment	39
9.4.	Simplification	40
9.5.	Mesh Optimization	40
9.6.	Smooth	41
9.7.	Remove Small Floating Parts	42
9.8.	Auto Hole Filling	42
9.9.	Manual Hole Filling	43
9.10.	Texture Remapping	44
10.	Measurement	45
10.3.1.	Create Feature	45
10.3.2.	Movement	46
10.3.3.	Measuring	48
11.	Export Data	51
11.1.	Data Formats	51
11.2.	Scale Data	52
12.	Share Data	52
13.	Third-party Software	53
14.	Model Preview	54

15.	Device Button	55
16.	Support and Contact.....	56
16.1.	Submit a Ticket.....	56
16.2.	Contact Us.....	57

1. Specification and System Requirements

1.1. System Requirements

Preparing a suitable computer will improve your scanning experience.

One important notice for PC configuration is the **graphic card**. It has to be **Nvidia card** since certain functions from Nvidia are needed for scanning. **GTX series card** is the best for scanning while Quadro series CAD card also works but you need a more expensive model comparing to the GTX series to get a good scan experience.

Components	Recommended Configurations
Graphics card	NVIDIA GTX serial cards higher than GTX1080
USB port	1 of 3.0 port
OS	Win10 64 bits
Video memory	> 8G
RAM	32 GB
CPU	i7-8700 or higher
Screen resolution	1920 × 1080, DPI: 100%; 125% 3840 × 2106, DPI: 100%; 200%

Recommended PC configurations:

Models	Configurations
Dell G3 laptop	Core i7-9750H, NVIDIA GeForce RTX 2060 6GB GDDR6, 2x8GB, DDR4, 2666MHz
Asus ZenBook flip	Core i7, Nvidia MX250 with 2Gb memory, solid state hard drive, 16gb ram
Lenovo Y520	15IKBM i7-7700hq, 16GB, gtx1060
Acer Predator PH317	i7, GTX1060, 16G RAM
MSI – GS63VR	7RF stealth pro RAM 32G
Alien ALW15M-R2726R	—
ASUS ROG STRIX	—

1.2. Scanner Set Up

Unpack and set up your scanner and software before getting started with scanning.

1.2.1. Unpack the Box

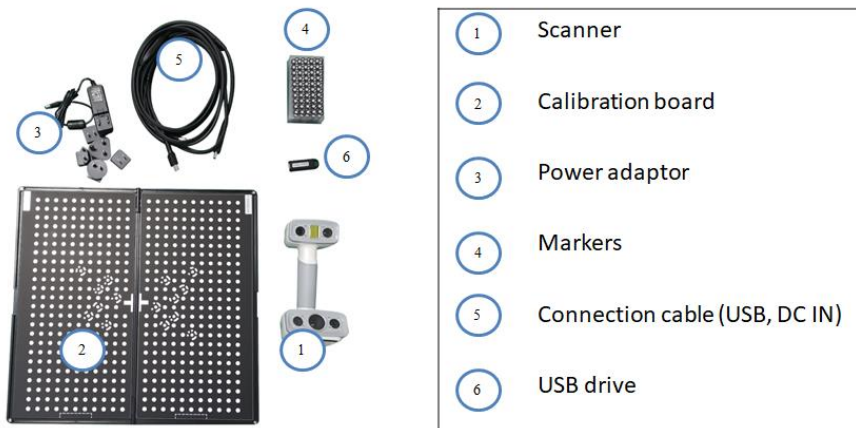
Package



Note:

The case is optional. Contact your supplier if you want to buy one.

Packing list



The items listed in the packing list refer to the components and material that should be included in the package. The components may be different as listed when you purchase other accessories or change any item with your supplier. Please check carefully when opening the package.

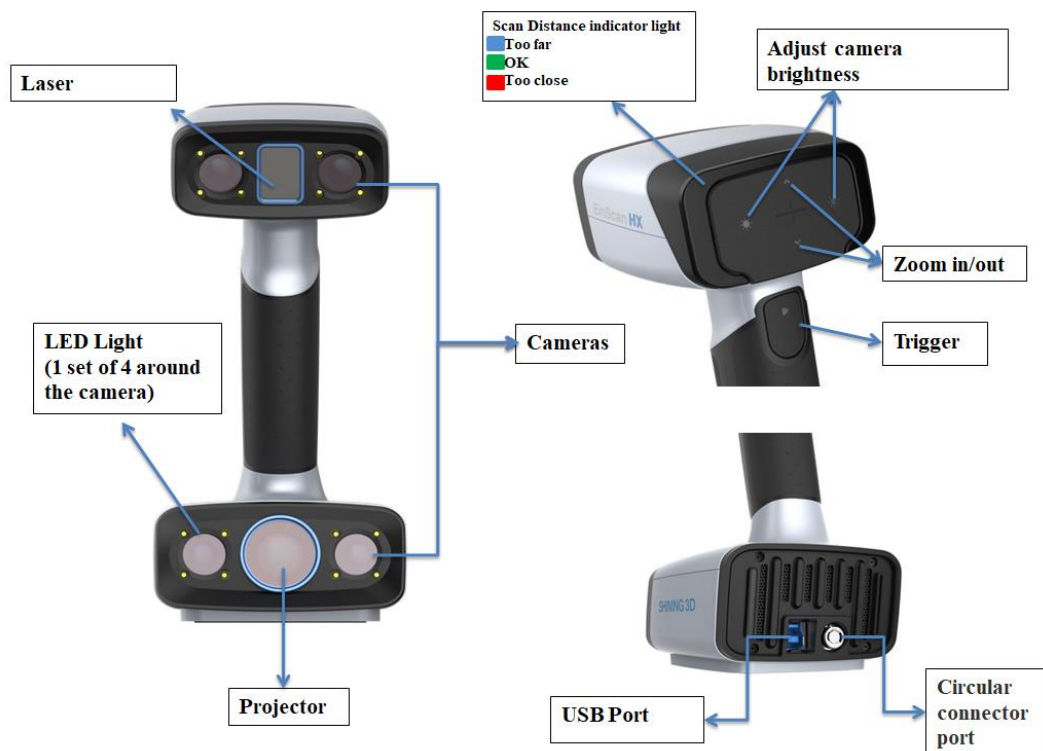
Note:

Each scanner has its own serial number, label is placed at the bottom of the scanner. It will be required for maintenance. Do not remove it.

Serial number

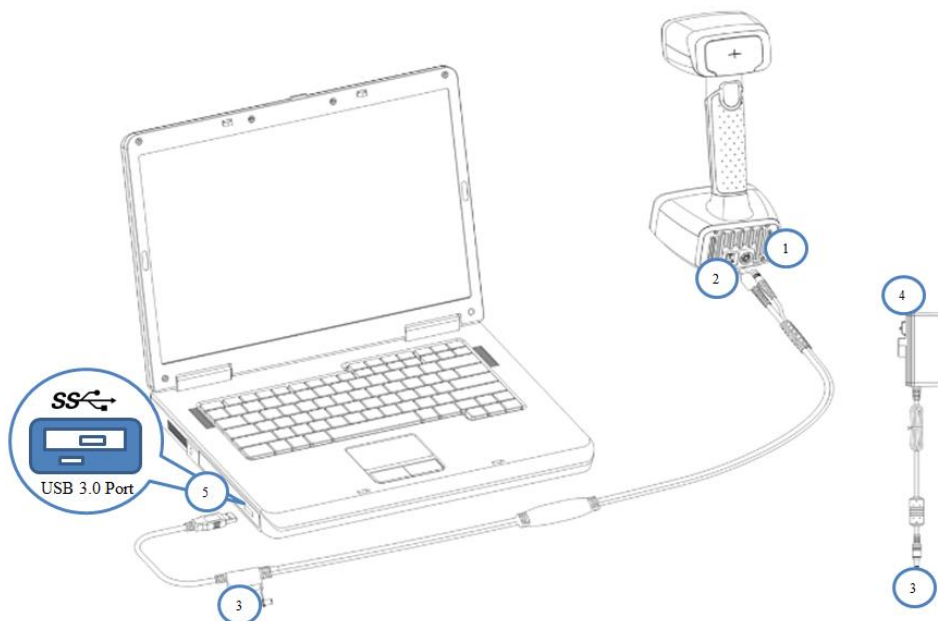


1.2.2. Scanner Body



1.2.3. Connection

Hardware set-up



Step 1: Take out the connection cable.

Step 2: Insert the pin plug into the scanner's circular connector port.

Step 3: Plug the other one to scanner's USB port.

Step 4: Plug the power adaptor into the connection cable DC in port.

Step 5: Plug the power cable another end into a power outlet.

Step 6: Connect the other end of the connection cable to a USB 3.0 port on your computer.

2. Software Set Up

2.1. Download the Software

Step 1: Go to <https://www.einscan.com/support/download/>.

Step 2: Select your scanner model.

Step 3: Download the software to your operating computer.

Note:

You are required to register before downloading.

2.2. Install the Software

Note:

- Administrator rights are required for the installation of the software.
- Do not install EXScan under directory of Program Files and Program Files (x86) in local disk. Permission issue might result in EXScan error.
- You are not suggested to put task bar on the interface edge when using EXScan.

Step 1: Double click installation package, accept the modification on your computer.

Step 2: Follow the instructions to complete the software installation.

Step 3: After the software is installed, a shortcut  will be created on your desktop.

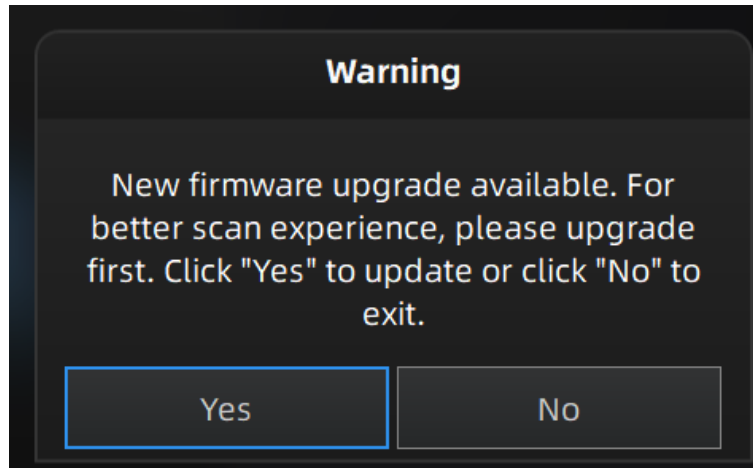
Double-click to open the software.

2.3. Firmware Update

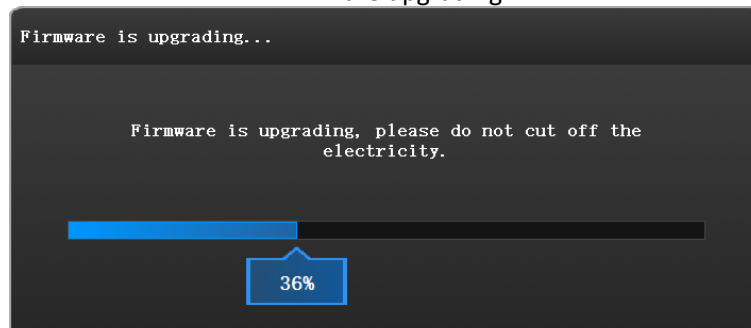
When the scanner firmware is incompatible, a message will appear when software is open. Click Upgrade and follow the instruction to update the device firmware.

- Firmware updating will take around 6 mins.
- Power off the device after upgrading successfully.
- Reconnect the device, and open the software again, the device is running under the latest firmware.

Firmware doesn't match



Firmware upgrading



Note:

- Do not disconnect the scanner, or unplug the power during the upgrade.
- Recovery will start from a failed upgrade. You can restart the firmware update after successful recovery.
- If recovery fails, turn off the power of the scanner and reconnect the scanner to restart the software for upgrading.

2.4. Device Activation

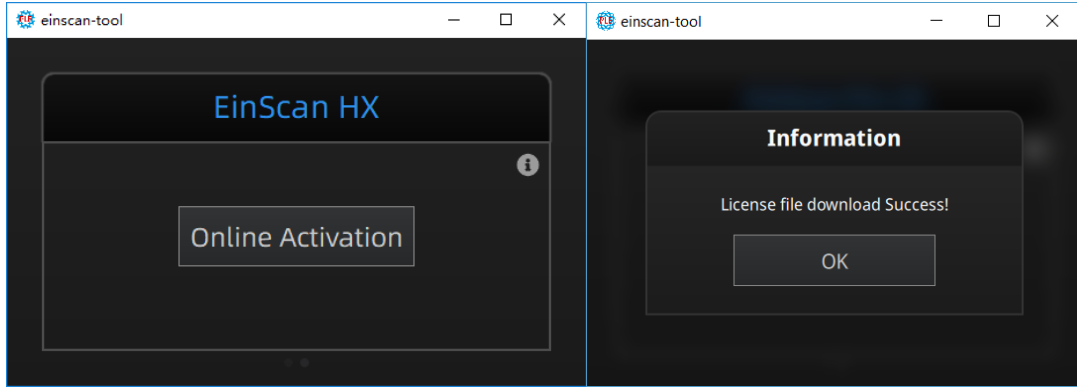
Device activation is required in your initial use. There are 2 ways:

- **Online activation** is recommended if your computer is connected to the internet.
- If there is an issue with network connection, choose **Local activation** to save the .ple license file on your computer, under the activation menu. (.ple file can be found in the USB drive.)

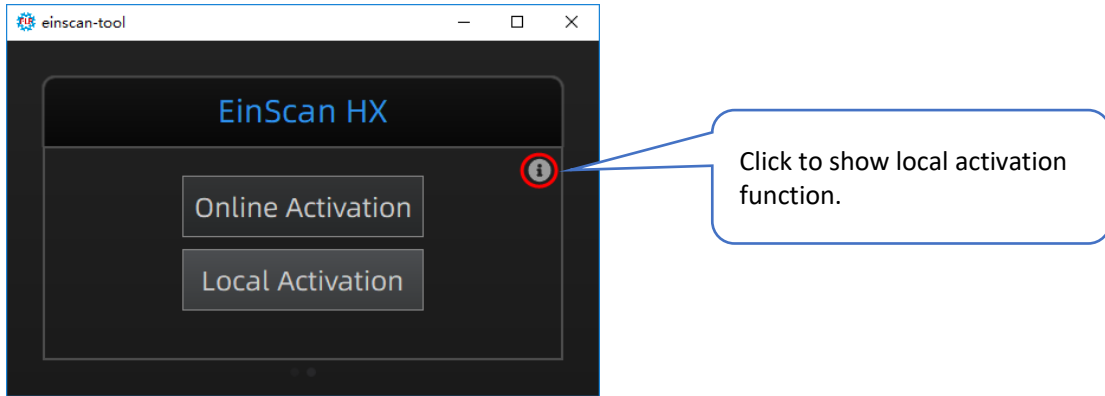
Note:

If the activation fails, send a request for activation file to einscan_support@shining3d.com with your serial number.

Online activation



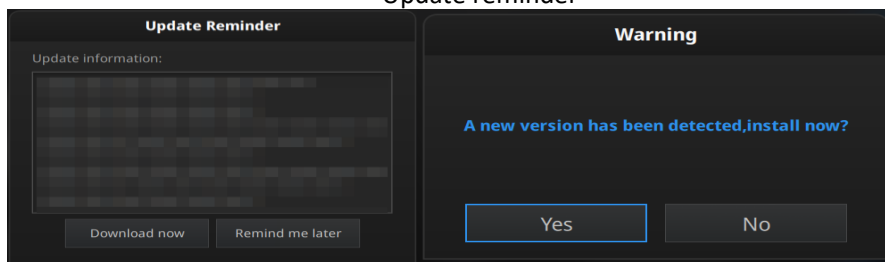
Local activation



2.5. Software Update

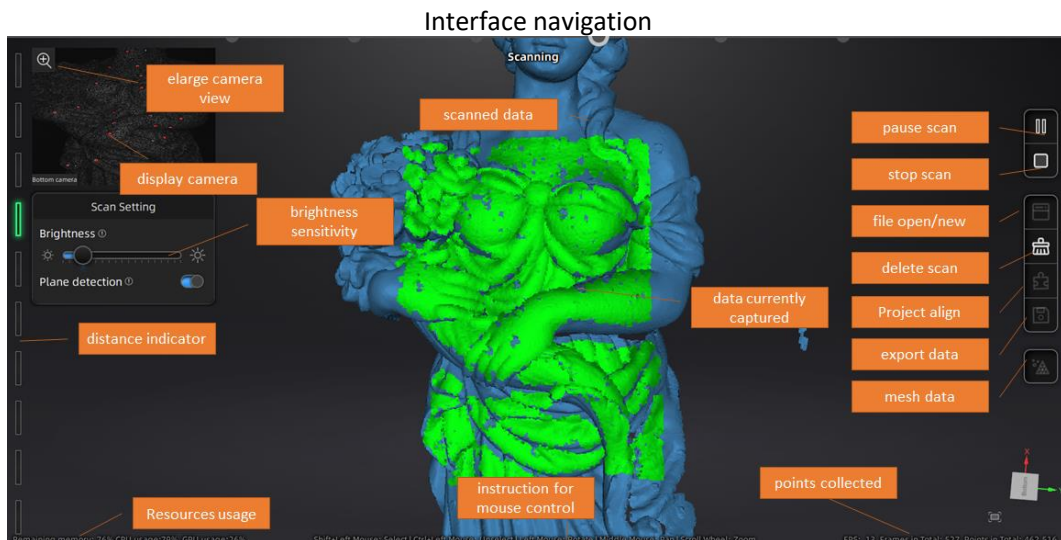
When a new version is available, a pop-up will show when you start the software to remind you update your software to the latest version. You are recommended to click **Yes** for new feature experience.

Update reminder



2.6. Interface and Parameters

2.6.1. Navigate



Left mouse: Rotate.

Middle mouse: Move the data.

Scroll up and down: Zoom in or out.

Keyboard:

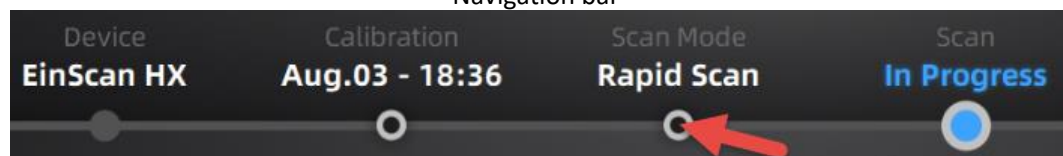
Spacebar to scan again or restart the scan & validate.

Delete key to delete selected data.

Esc key to exit current pop-up.

Navigate between different menu by click on the circle.

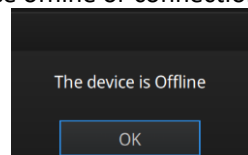
Navigation bar



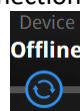
2.6.2. Device Reconnection

When the device is offline, meaning the scanner is not connected to PC, please check the connection and click on the refresh connection button to reconnect.


Device offline or connection loose



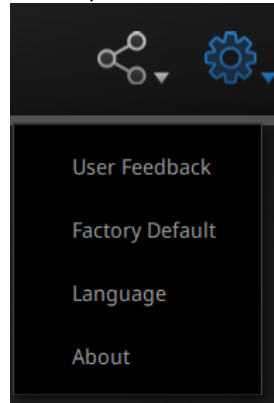
Refresh the connection on the status bar



2.6.3. Settings

Click  from the upper right to open the drop-down menu.

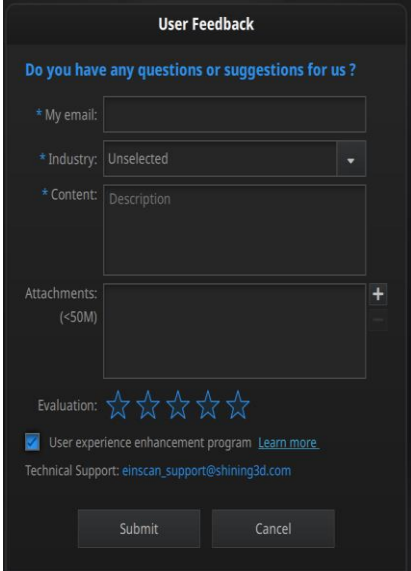
Drop-down menu



Feedback

If you have any questions or suggestions, please share with us by clicking “Feedback”. Leave your email in “My E-mail.”

Feedback window

A "User Feedback" window is shown. It has a title bar "User Feedback" and a question "Do you have any questions or suggestions for us?". Below the question are several input fields: "* My email:" with a text box; "* Industry:" with a dropdown menu showing "Unselected"; "* Content:" with a large text area containing the word "Description"; "Attachments:" with a text box and a plus sign icon, with "(<50M)" below it; and "Evaluation:" with five star icons. At the bottom, there is a checked checkbox for "User experience enhancement program" with a "Learn more" link, the text "Technical Support: einscan_support@shining3d.com", and two buttons: "Submit" and "Cancel".

User Experience Enhancement Program

To help us improve the quality and user experience of EinScan, we hope to be allowed to collect usage experience information. This information will not contain your personal information or scanned data, and will not be accessible to any third party. This checkbox is selected by default, and we strongly recommend you keep it checked. As a reward, the User Experience Enhancement Program will continuously keep you informed with the newest software update information, to assure you get free software updates and enjoy the latest improvements based on your collective feedback. If you close the User Experience Enhancement Program, you might not be informed with software updates automatically.

Factory Default

All settings modifications will go back to the original settings.

Language

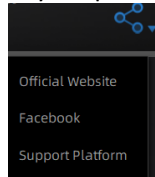
Select the language for the interface, click apply to change, restarting the software is not needed.

About

For version information and support, email: einscan_support@shining3d.com.

2.6.4. EinScan Community

Community drop-down menu



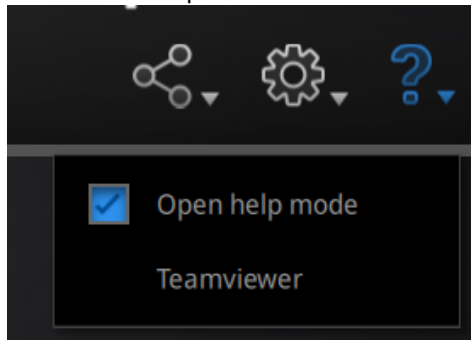
- **Official Website** (<http://www.einscan.com/>) refers to SHINING3D's official website for EinScan product and information.
- **Facebook** (EinScan) refers to facebook "EinScan Expert" for EinScan users to discuss and share the ideas, achievements and experience.
- **Support Platform** refers to the platform for EinScan users to validate the warranty and submit support ticket when necessary. Service live software updates, manual, video download can be accessed in support platform. Register your EinScan at support.shining3d.com.

2.6.5. Help Mode

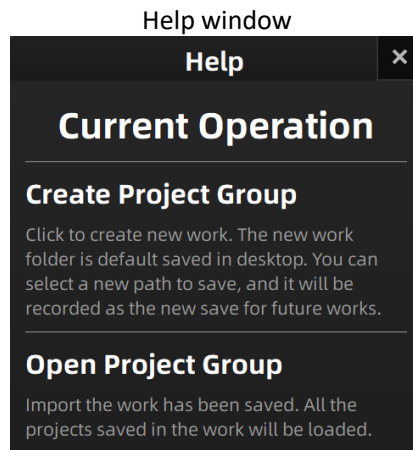
Open Help Mode

Click the question mark in the upper right bar, and open the help mode from the drop-down menu.

Drop down menu



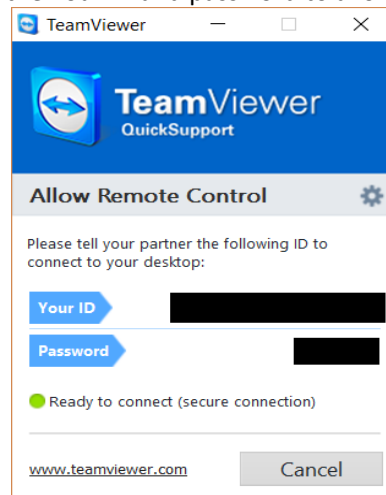
Display the help tool related to the current interface.



TeamViewer

It opens S3D_teamviewer.exe, for online customer support access or display to other screens or portable screens. Share your ID and password to allow our technicians to remote control of your computer during online technical support.

Share the Your ID and password to allow access



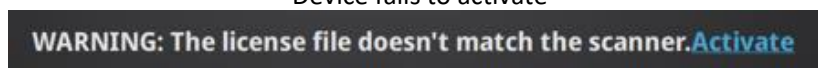
2.6.6. Alerts

A pop-up alert will notify the user of a hardware or configuration issue. Check and restart the software. If the error persists, contact support by emailing einscan_support@shining3d.com.

Fail to Activate

For activation failure, make sure the scanner is well connected. Redo the activation.

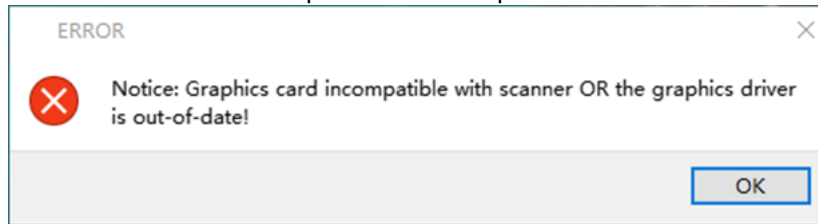
Device fails to activate



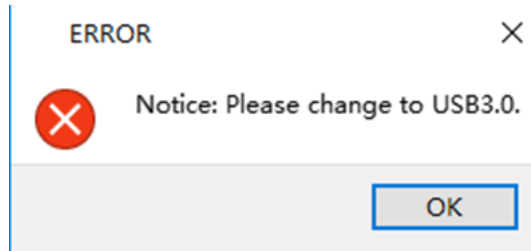
Incorrect Configuration

Try another USB port and update your graphics card drivers and restart the software.

Graphics card incompatible

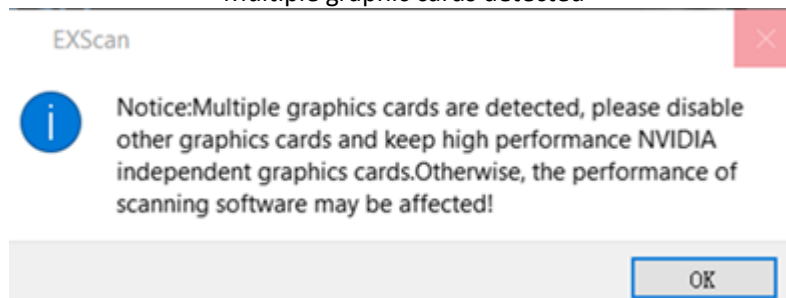


USB not 3.0

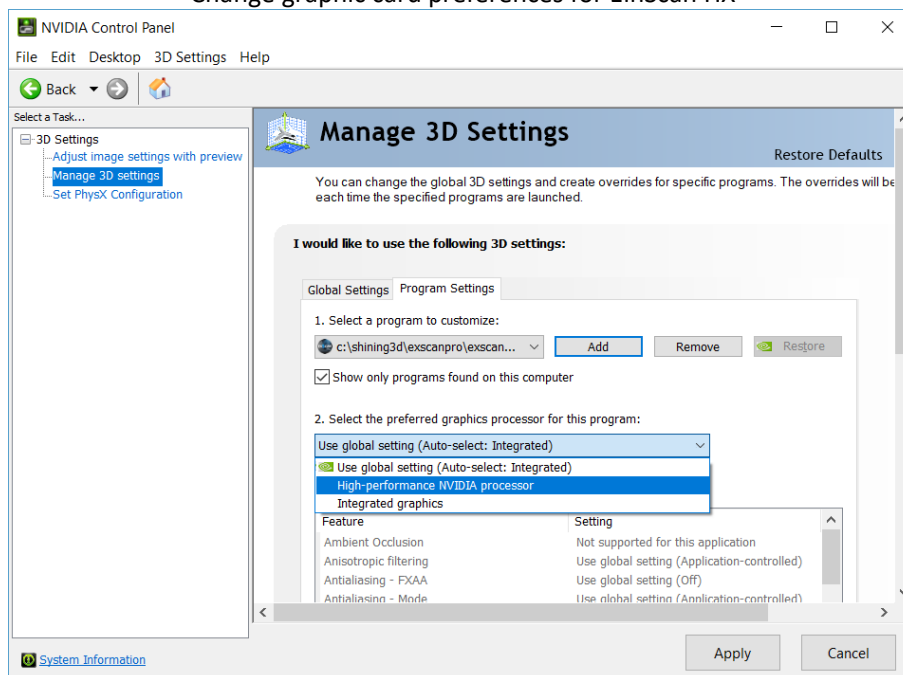


If the computer has multiple graphic cards, access to the NVIDIA Control Panel (right click on the desktop). In Manage 3D Settings > Program Settings, Add EXScan software. Then change the preferred graphic processor for this program. Select NVIDIA processor. Click Apply to save the settings.

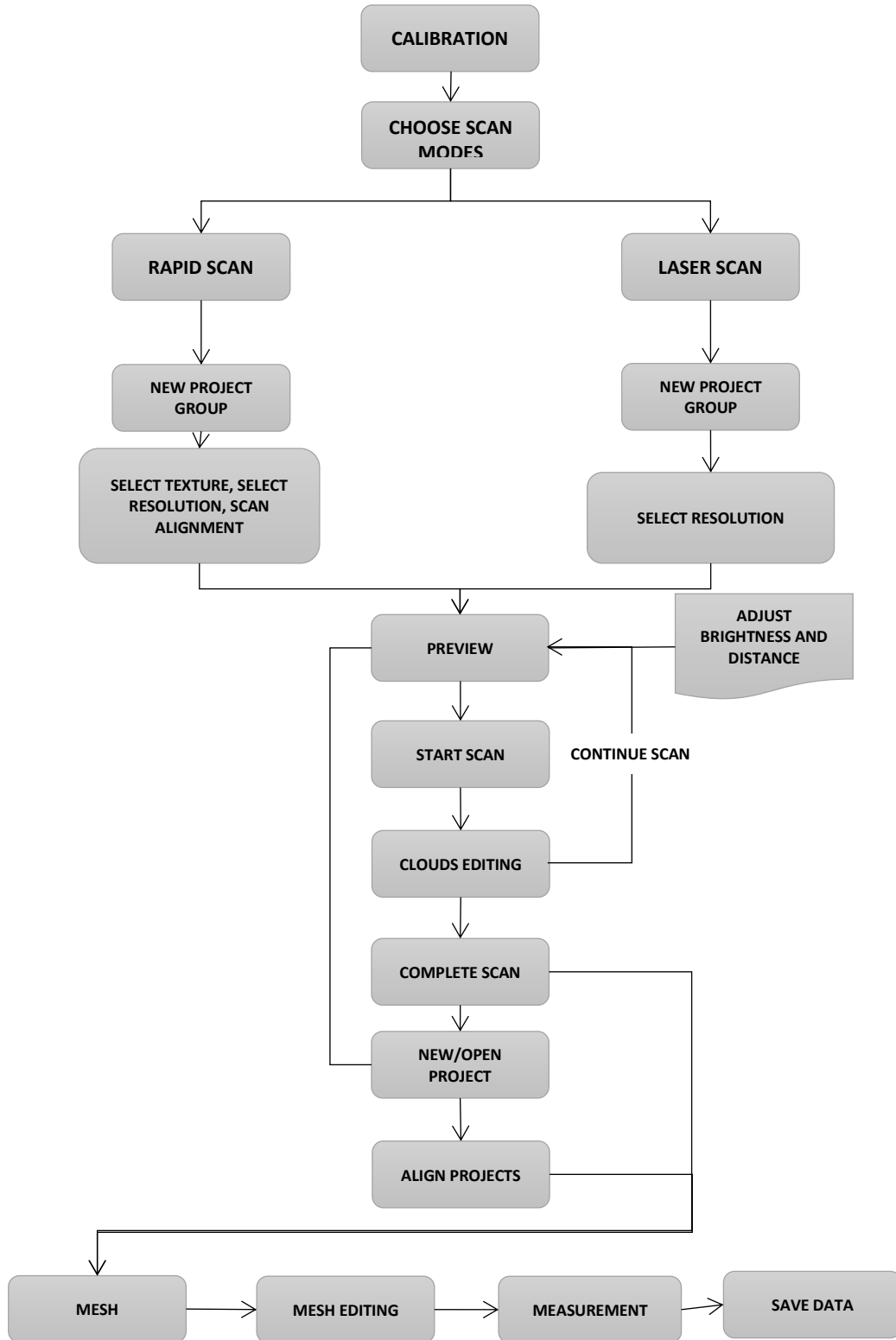
Multiple graphics cards detected



Change graphic card preferences for EinScan HX



3. Software Scan Workflow



4. Calibration

4.1. Precautions and Use

Calibration is the process to ensure the device will scan with the optimal accuracy and scan quality. Each EinScan 3d scanner was factory-tested and achieved, at least, the listed accuracy from the technical specification according to VDI/VDE 2634 standards.

Besides factory tested guarantee of accuracy, to assure high scanning accuracy, each EinScan is also coming with a calibration board for customer calibration. This customer calibration is not required daily often. Only when the first time after scanner and software are installed. Or, when you are in the following situations, you should calibrate the device:

- Device change.
- After device enduring bumpy transportation.
- After device accuracy decreases.
- When data misaligned very often.

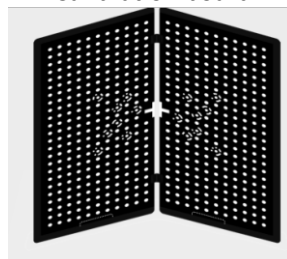
Note:

- Customer calibration is recommended to do twice a week for daily use.
- Make sure to protect the calibration board and keep it clean, no scratches or stains on the black surface with white circles.
- The Calibration board is matched to the Device with same Serial Number. Doing the calibration with an incorrect calibration board will fail to generate good scan data or optimum accuracy.
- Clean with clear water only, do not use alcohol or chemical liquid to clean the calibration board.

4.2. Preparation for Calibration

Take out the calibration board, and the position paper.

Calibration board



Position paper



4.3. How to Calibrate

Calibration includes:


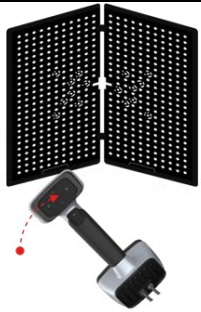

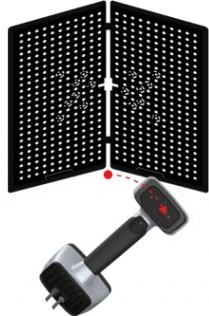
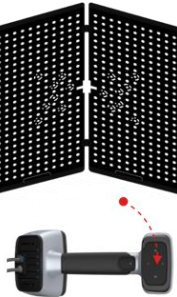
- **STANDARD CALIBRATION**
- **LASER CALIBRATION**
- **WHITE BALANCE**
- **QUICK CALIBRATION**

In the initial use, you will be guided to **STANDARD CALIBRATION** directly.

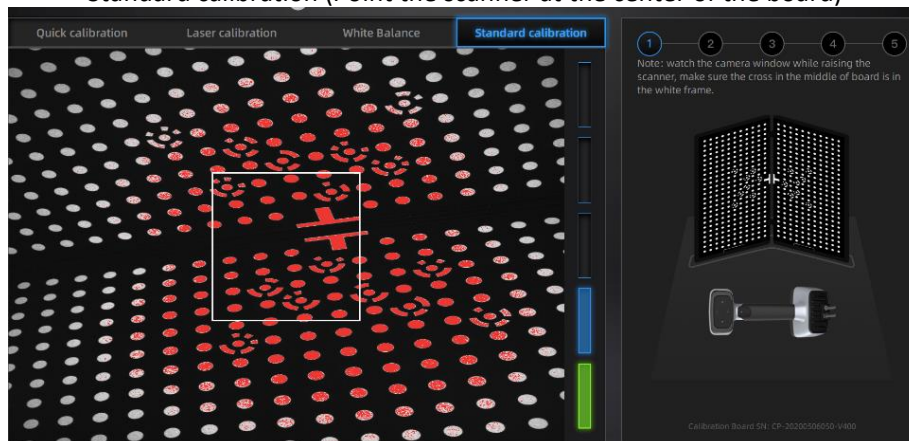
Step 1: Put the calibration board vertically onto the paper position.

Step 2: Follow the instructions from the software to finish 5 positions.

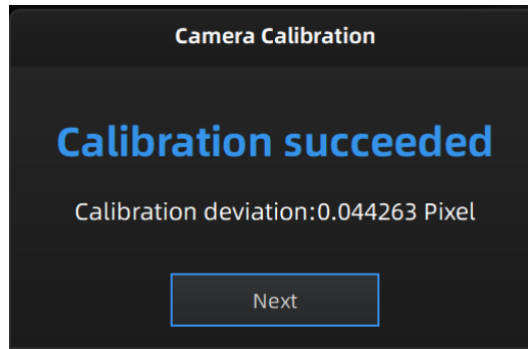
Step 3: While holding the scanner, make sure it is upright to the center of the board. Bring the scanner closer or farther to the board till all the required distance captured.

Standard Calibration		
Position 1	Position 2	Position 3
		
Position 4	Position 5	—
		—

Standard calibration (Point the scanner at the center of the board)

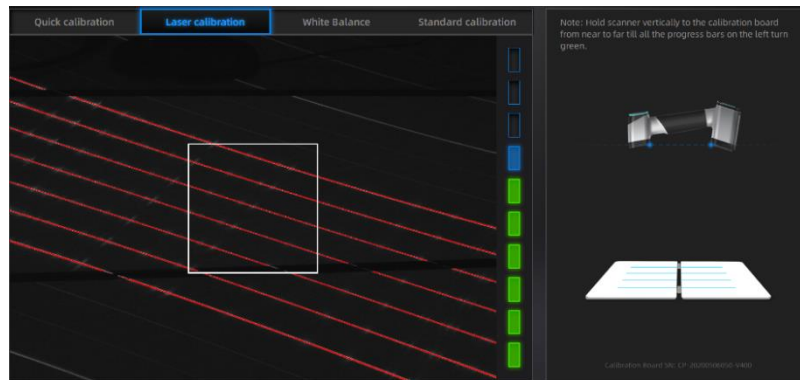


Calibration succeeded

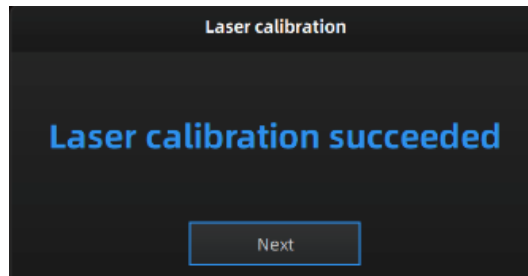


A pop-up of **Calibration Succeeded** will appear. Click Next on the pop-up, software will take you to the next step: laser calibration. Put the back side of the board on a stable and level table, and point the scanner upright to the board. Move the scanner up and down till all the required distance captured in green.

Laser calibration



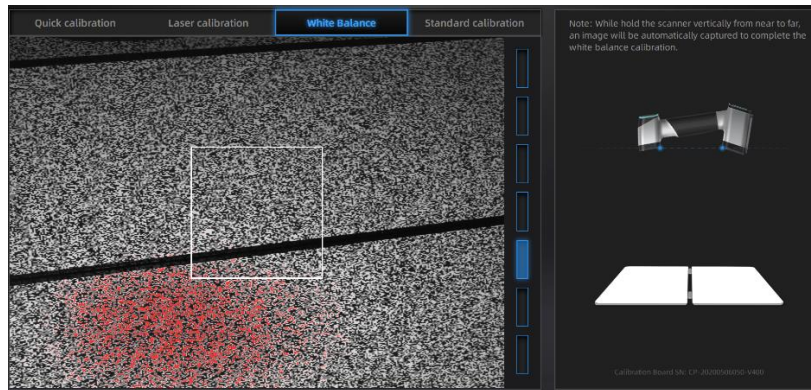
Laser calibration succeeded



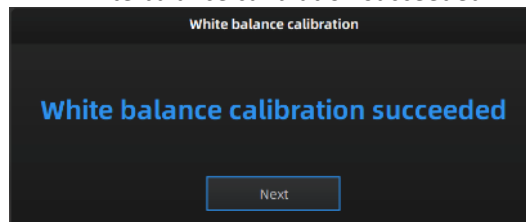
A pop-up of **Calibration Succeeded** will appear. Click Next on the pop-up, software will take you to the next step: WHITE BALANCE. Put the back side of the board on a stable and level table, and point the scanner upright to the board. Move the scanner up and down till a photo taken at a right distance.

A pop-up of white balance calibration succeeded will appear. Click Next on the pop-up, you will enter to scan mode.

White balance

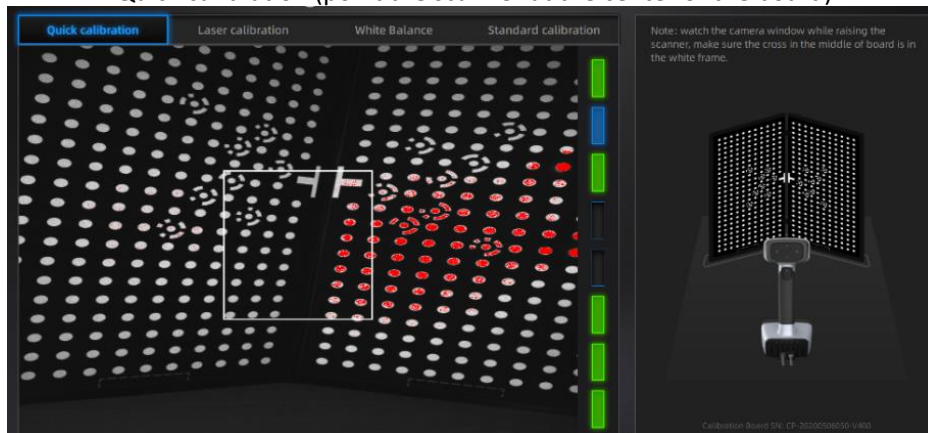


White balance calibration succeeded

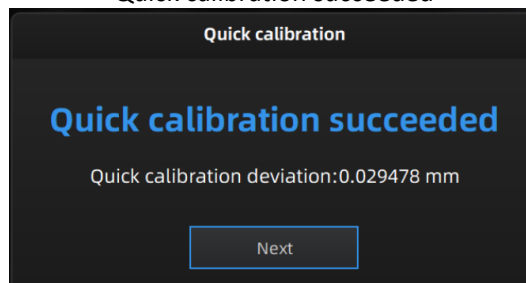


QUICK CALIBRATION is recommended when recalibration is required. Only one position is required. A pop-up of Calibration succeeded will appear. And then go to next step to finish **LASER CALIBRATION** and **WHITE BALANCE**.

Quick calibration (point the scanner at the center of the board)



Quick calibration succeeded



Note:

- Customer calibration is recommended to do twice a week for daily use.
- Move the scanner at a steady and slow speed.
- Make sure to protect the calibration board and keep it clean, no scratches or stains on the black surface with white circles.

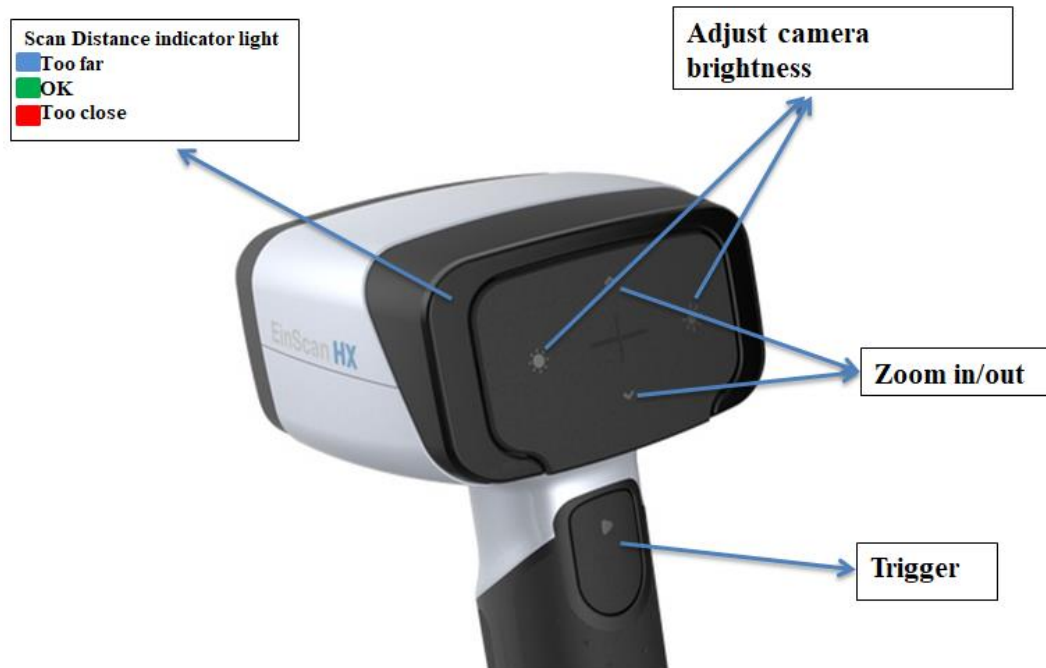
- The Calibration board is matched to the Device with same Serial Number. Doing the calibration with an incorrect calibration board will fail to generate good scan data or optimum accuracy.
- Clean with clear water only, do not use alcohol or chemical liquid to clean the calibration board.

If the calibration failed, check:

- If there are any reflective object or strong light nearby, recalibrate to avoid the reflective and strong light.
- If the positions were followed as suggested, recalibrate according to the suggested steps.
- If the board is clear and clean without scratches or stains.

5. Before Scanning

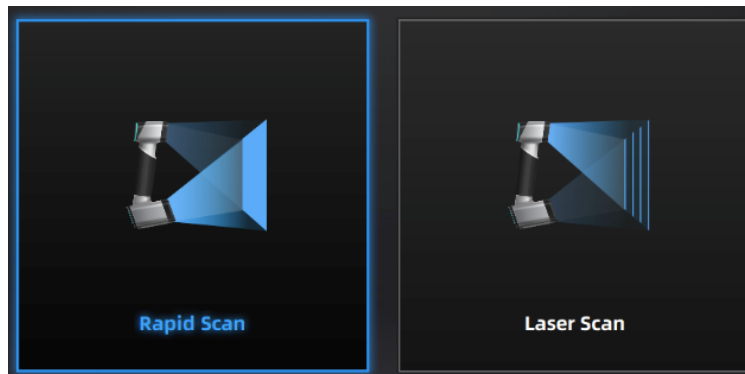
5.1. Scanner Buttons



5.2. Scan Modes

Now you can start to scan. Use EinScan HX, you can use Rapid Scan by structure light scanning for a fast scan, or use Laser scan by laser triangulation to scan some difficult.

Scan modes



	Laser Scan	Rapid Scan
What to scan?	300mm - 4m objects	
Light source	Laser	LED

Accuracy	0.04mm	0.05mm
Resolution	0.05mm-3mm	0.25-3mm
Alignment	Markers	Markers/features/ hybrid/texture
Scanning speed	50FPS	15fps (non-texture); 10fps (texture)
Texture Scan	No	Yes

5.3. Preparation

5.3.1. Rapid Scan

We do not recommend scanning:

- Moving or vibrating objects, which cause the shape of object changed during scanning process.
- Soft material object.
- Lattice structures with many small deep holes.

The objects, which has good geometry or texture features will get scanned very easily and fast with good quality.

If you have to scan the items like below, do preparations before scanning and notes during scanning.

	Preparation	Notes while scanning
Black, transparent, shiny, reflective surface objects	Use washable or vanishing scanning spray.	Scan as normal.
Objects with less features or repetitive features	Place markers on the objects.	Select marker alignment.
	Mark/draw on the surface to add features.	Select texture alignment.
Thin wall objects	Place markers on and around the objects.	Choose global marker alignment.

5.3.2. Laser Scan

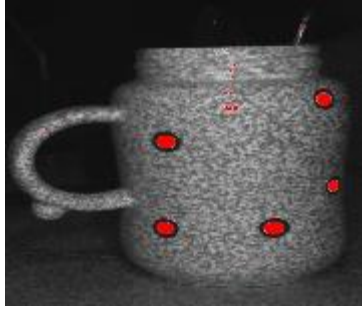
When you stick markers on the surface of the object, you need to follow the following rules:

- Make sure sticking at least 3 markers in each frame (one scanning field of view).
- Control the number of markers seen on the camera view.
- Stick markers in a random, non-linear pattern.
- Markers should be stuck on the flat surface area and keep the marker surface flat.
- Use the markers provided with the device only. Other markers can result in bad accuracy or not to be seen.
- Spraying powder is not necessary for scanning black, transparent or shiny surface.

Note:

Laser line will not be projected when markers are not recognized.

Object with markers



Warning:

EinScan HX uses a class I laser when using laser scan mode, which is eye and skin safe under all conditions of normal use, but long time staring at the laser beam directly is not suggested. Avoid direct eye contact with the laser beam. Keep the laser beam away from children.

6. Project

You can start with a new project or open an existing project to continue the scanning.

6.1. New Project Group

To create a new project, select the File, and name the project. The default project is saved to the desktop. You can change the saving path, and then the newly created Work will be saved to the new location you chose.

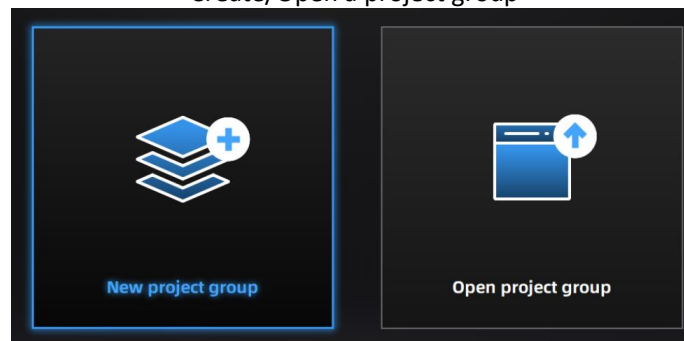
6.2. Open Project Group

To open an existing project, select the file, and choose the project has been saved.

Note:

The projects should be scanned under the same scan mode.

Create/Open a project group



6.3. Pre-setting

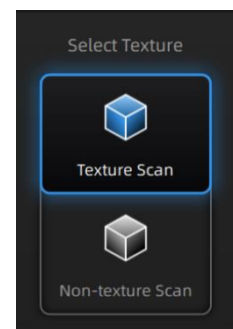
6.3.1. Select Texture

TEXTURE SCAN: The scan will be with color, and it also allows texture alignment. It is only available in Rapid Scan mode.

NON-TEXTURE SCAN: The scan will be without color.

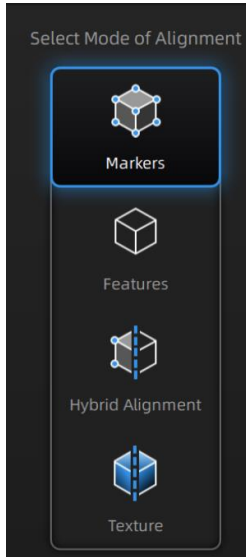
Note:

Texture scan requires the objects to have colorful texture surface, and it takes longer time for data processing when meshing.



6.3.2. Alignments

RAPID SCAN allows 4 alignments by markers/features/ hybrid/texture. While **LASER SCAN** is default setting of marker alignment, no other options of alignments, so markers on objects need to be prepared in advanced.

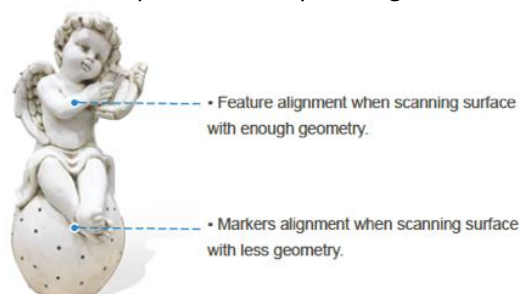
<p>FEATURE ALIGNMENT uses object geometric features for auto aligning during scanning. Rich features on the object are required for this mode.</p>	
<p>MARKER ALIGNMENT uses markers to align the scans. It will help tracking for some object with non-feature regions like flat, spherical surface or objects with repetitive features. Preparation of marker on the object is required before scanning.</p>	
<p>HYBRID ALIGNMENT uses features and markers to align the scans. By this alignment, we don't need to place the markers all over the part, but only on the region where has less geometry.</p>	
<p>TEXTURE ALIGNMENT uses objects surface texture to align the scans. Texture Scan is required to select if you want to use texture align.</p>	
<p>Global markers alignment: Select marker alignment or hybrid alignment, and then import global marker to implement global markers scan.</p>	

Note:

Marker alignment:

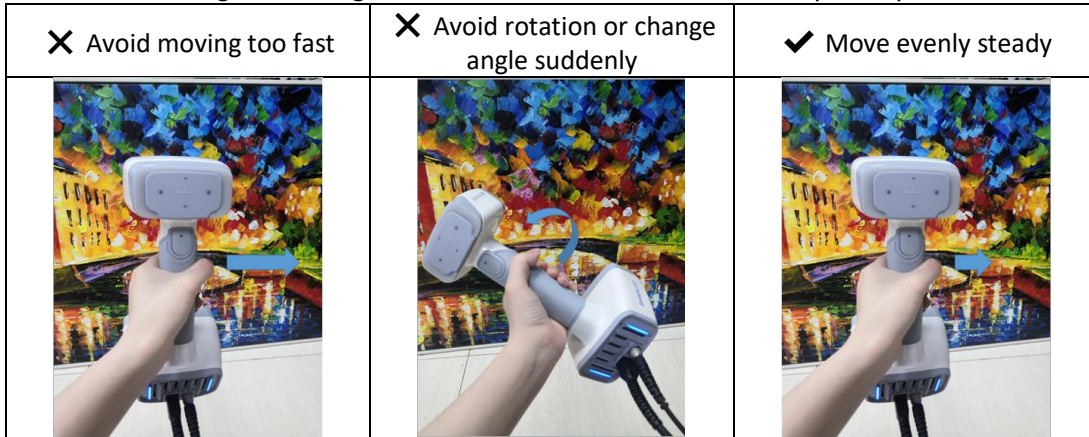
1. Place on flat regions.
2. Avoid the geometric regions.
3. Stick the markers in a random, non-linear pattern.
4. Some cases like small objects, we suggest distributing the markers on a black surface around the object.
5. Use the markers coming with your device. Other markers can result bad accuracy or not be able to be detected for scanning.
6. While scanning, make sure at least 4 markers in each frame can be taken.

Example of use of hybrid alignment





When selecting texture alignment, hold the scanner to move evenly steady.

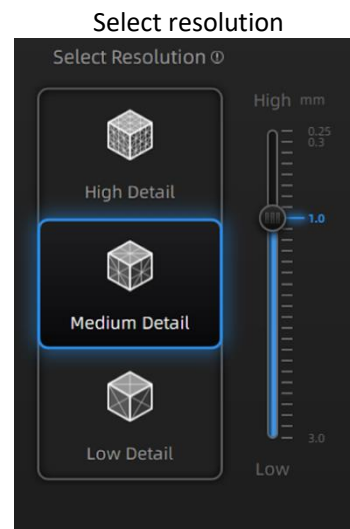


6.3.3. Resolution

Select a resolution for the project. The higher the resolution, the better the details, but this may lead to larger files and processing times.

Choose High, Medium or Low or drag the cursor to choose another point-distance setting from the bar.

Resolution	Laser Scan	Rapid Scan
Scope	0.05~3.0mm	0.25~3.0mm
High Detail	0.2mm	0.7mm
Medium Detail	0.5mm	1.0mm
Low Detail	1.0mm	1.5mm



6.3.4. Global Marker File

Note:

For global marker operations under laser scan mode, you can still follow the following steps (Step 1—Step 6).

When selecting marker alignment in Rapid Scan, you will find an option of “**open global markers file**”. It allows you to import .asc, .p3 marker files by using a combination of marker

frame or photogrammetry measurements. By this method, we can scan large scale objects for a better accuracy. It will also help scan thin-wall objects to merge the front and the back side more accurately.

Step 1: Follow your photogrammetry system operation; you can also set up a marker frame on the object, scan it by marker alignment.

Step 2: Save the point model in .asc or .p3 file.

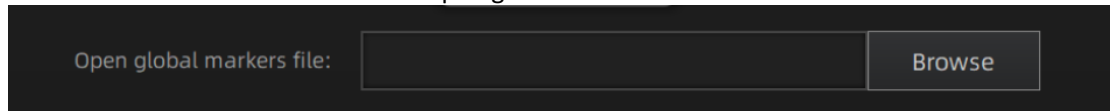
Step 3: Open new project group and marker alignment.

Step 4: Import the saved .asc or .p3 file.

Step 5: Scan the object.

Step 6: The scans will all aligned according to the global marker file.

Open global markers file



Note:

- Under rapid scan mode, global marker file is only available when selecting marker or hybrid alignment.
- Under laser scan mode, global marker file is always available.

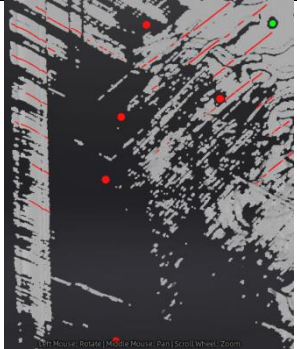
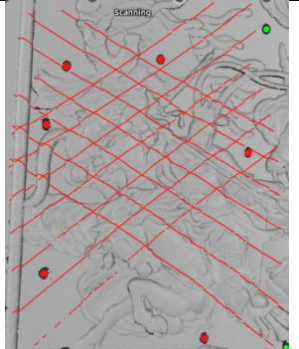

6.4. Scan Setting

Entering to SCAN interface, there are some settings to be noticed before scanning:

6.4.1. Brightness Adjustment

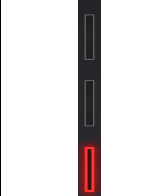

You can adjust the brightness by clicking “☀” or “☁” on the scanner, or drag the cursor under the camera preview to left (-) or right (+).

Rapid scan	Too bright (X)	Good (V)	Too dark (X)
Camera window			
Preview display			

Laser scan	Too bright or too Dark (X)	Good (√)	Brightness setting
Camera window			
Note: Brightness setting will be selected after object selected. When the laser traces and markers are not detected, the data will not be captured much.			

6.4.2. Optimal Distance Range

When the scanner is too close or too far from the object, it will lose tracking. An optimal distance is important. You can observe the distance color on the scanner or color bar on the software. If tracking is lost, reposition the scanner to the scanned area at a proper distance.

Distance color bar			Distance color on scanner		
Red Too close	Green Optimal	Blue Too Far	Red Too close	Green Optimal	Blue Too Far
					

Scan mode	Resolution	Minimum distance	Optimal distance	Maximum distance
Rapid scan	0.25~0.5mm	200mm	300mm	400mm
	0.5~0.7mm	200mm	325mm	450mm
	0.7~3.0mm	200mm	470mm	600mm
Laser scan	0.05~3.0mm	370mm	470mm	570mm

6.4.3. Other Settings in Rapid Scan

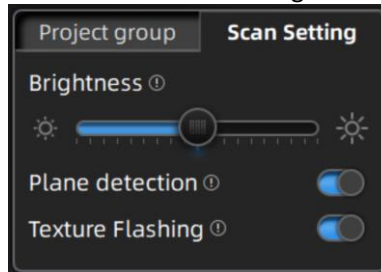
TEXTURE FLASHING: LED on/off. Suggest to always on for texture uniformity. When OFF must be chosen, make sure your ambient light is well distributed Only available when selecting scanning with texture.

PLANE DETECTION: Enable to detect the surface flatness. Suggest ON when selecting feature or hybrid alignment. When there is less geometry, software will remind “not enough features to align”. If you do not choose the plane detection, you could still scan flat surface, but the misalignment will happen.

Plane detection on when not enough features to align

Not enough features to align

Scan other setting



Marker recognition enhancement: The function is available only when selecting marker and hybrid alignment. More sensitive marker recognition when scanning dark targets but with low scan accuracy.

6.4.4. Other Settings in Laser Scan



Scan mode: There are options of scan point cloud and scan markers.

- Add global markers: When scanning markers in the specific area, you might also scan markers around the specific area (simply to say, surrounding global markers). To add surrounding global markers into the original global markers, import global markers, switch to point cloud scanning and select **Add global markers**.
- Scan global markers: Only scan markers. Acquire marker data fast. There is no laser line in the scanning process. Markers can be scanned to supplement in the global marker file generated before.
- Scan point cloud: Acquire the data as point cloud. It could be switched to scan point cloud mode after scanning markers. It is also feasible to import the generated global marker file and then scan the point cloud.

Note:

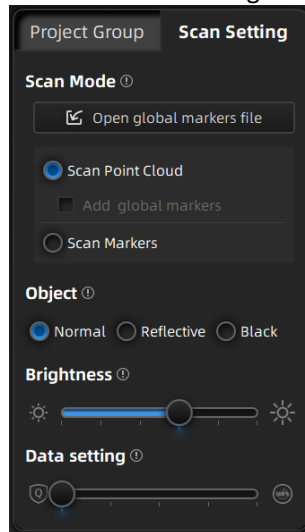
- After scan point cloud data, if it is switched to scan markers mode or imported GMF, the current point cloud will be deleted.
- Only after new project, generating point cloud or optimizing markers, you can switch between scan point cloud and scan markers.

Object: Choose the object surface material accordingly: Reflective, Normal, Black.

Data setting: Scanning some black glossy object, when brightness is already set to its limits, but still very less data is captured. Turn the data setting cursor from left  to right . It will help scanning, but with noise.

Global markers scan. After creating a new project, select Scan Point Cloud or Scan Markers. See "5.3.2 Laser Scan."


Scan other settings



7. Scan

7.1. Preview

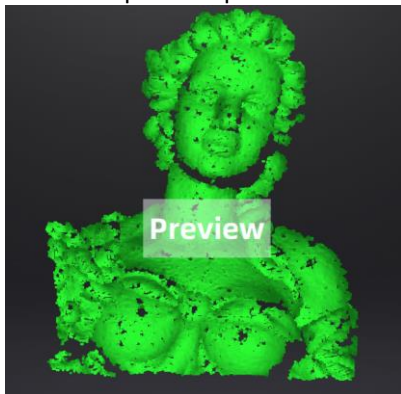


Click the trigger on the scanner or  in the software, you will enter the Preview mode. In this mode, it will start to show data for preview, but not record this data.

In this mode, you can:

- Adjust the brightness sensitivity, refer to BRIGHTNESS ADJUSTMENT.
- Check the working distance, refer to OPTIMAL DISTANCE.
- Inspect markers recognition, refer to MARKER ALIGNMENT.

Rapid scan preview



Laser scan preview



7.2. Start/Pause/Continue/Stop Scanning

Click the trigger again, scan will start, and data is recorded. During scanning make sure to keep the scanner perpendicular to the surface, keep a proper distance from the object, and adjust the brightness depending on the ambient light and texture of the object.

Click Start in software or press the Play button to exit the preview mode and start the scan.

Note:

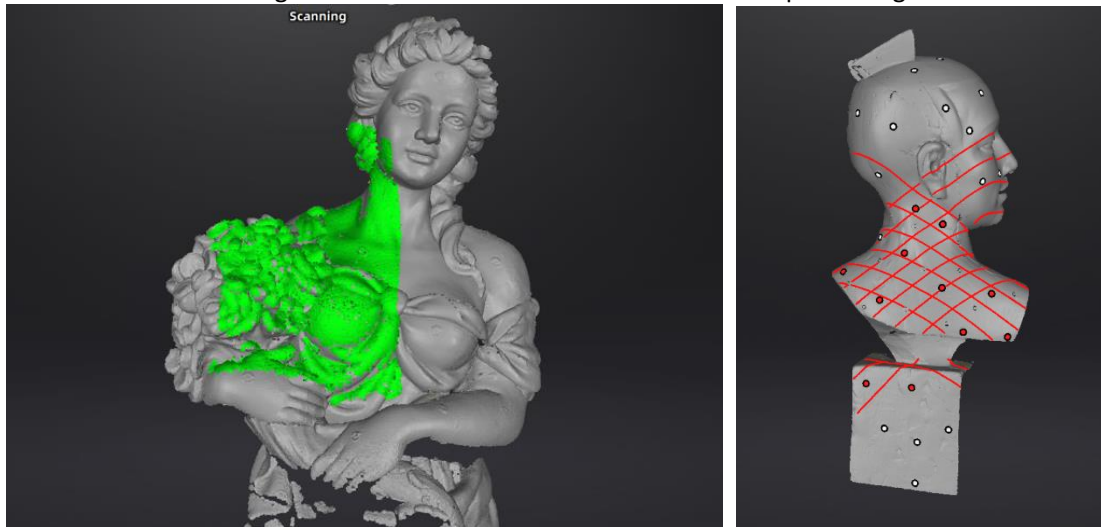
- Preview mode will start every time a new project is built, or an existing project is imported, or continue scanning after each pause.
- Click Start in software or press the Play button to exit the preview mode and start the scan.

7.3. Resume Scanning After Tracking Lost

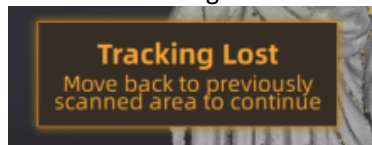
If the scanner can't capture common features (when feature alignment is selected), miss enough markers (when marker alignment is selected or under laser scan), or with unclear texture (when texture alignment is selected), it will stop data capturing. The software will remind tracking lost on the interface with sound. You can point the scanner at any scanned regions, and the scanning will be resumed.

Besides of the above alignment requirements, moving too fast, scanning distance, and the object surface too dark or shiny will also cause the tracking lost. Refer to PREPARATION, DISTANCE, BRIGHTNESS ADJUSTMENT for more tips.

The green color on the data shows the current captured region




Tracking lost



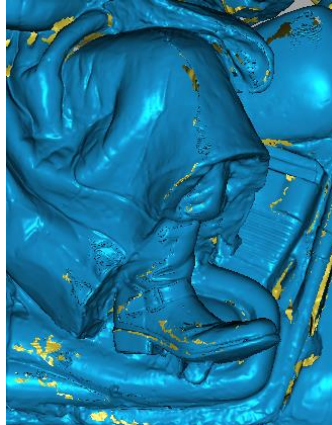
7.4. Generate Point Clouds



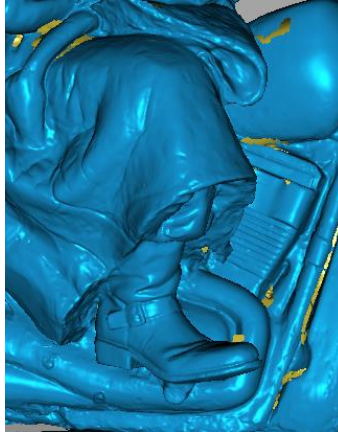
Click  to generate point cloud: an optimized 3d point clouds will be generated. The optimization includes a realignment of the data.

Then you can select, delete data to use the edit tools.

Before generating point cloud



After generating point cloud

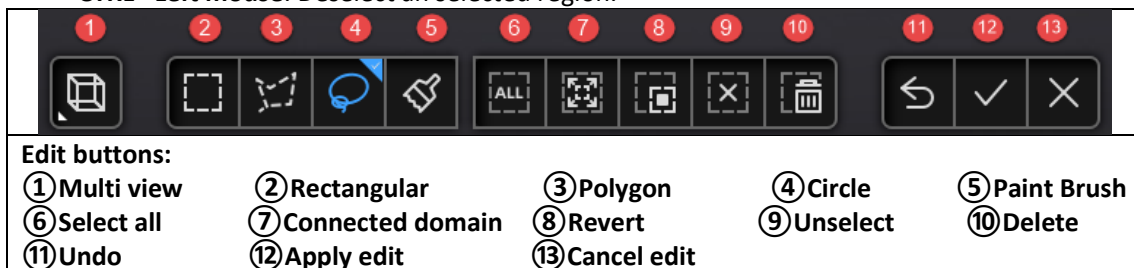


7.5. Clouds Editing

CLOUDS SELECT/DELETE

SHIFT + Left mouse: Select unwanted data, the selected section will be displayed in red, as shown below.

CTRL+ Left mouse: Deselect an selected region.



	Paint Brush Mouse scrolling wheel to adjust the paint brush size.
	Connected domain Click the button after select the data, all connected region to the selected data will be picked.
	Delete selected data Click the button or "DELETE" on the keyboard to delete selected data.
	Undo You can only undo the most recently deleted data.
	Apply edit Click the button or space bar to apply the edition, and exit edit mode.
	Cancel edit Undo all editors, and exit edit mode.

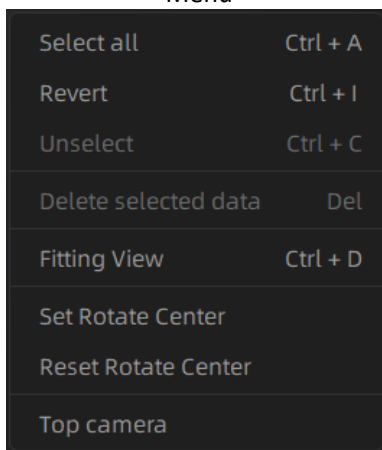
Note:

Don't support markers editing.

7.6. Right-click Context Menu

Right click, and there will be the context menu as below.

Menu



Function	Explanation
Select all, Reverse, Deselect all, Delete	The same function as Edit. Available with shortcut key.
Fitting view	Make the data show in the middle and in a proper size.
Rotation center	Set the rotation center in the data by left click. Quit by ESC key.
Reset rotation center	After reset, the rotation center is in the middle of the data.
Top camera, Texture camera	Click to show the corresponding camera view in the top left.

7.7. Cutting Plane

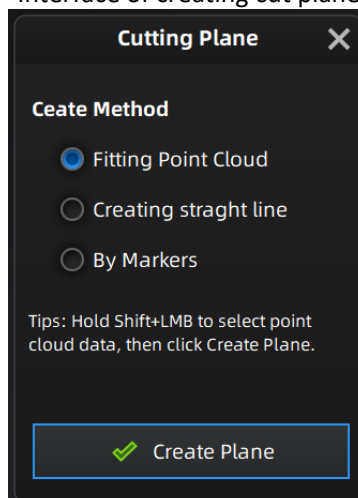
Cutting plane is very useful when a base need to be removed during scanning. You can orient the plane around X,Y, Z axes. The plane can be rotated, zoom, move.

After setting cut plane, there will be no more data scanned below the cut plane during the scanning process, preventing irrelevant data getting scanned.

- **Create Cut Plane**

Cut Plane
Click this button to enter the cut plane mode.

Interface of creating cut plane



Fitting Point cloud: Press Shift + left-click to select data, then click the button “Generate plane”. The cut plane will be created by point cloud fitting. The direction of the plane will be calculated by the software according to the direction of point cloud.

Creating straight line: Press Shift + left-click to draw a line, and generate the cut plane according to the line.

By Marker: Press Shift + left-click to select markers. 3 markers or more are required to generate the cut plane.

- **Cut Plane setting**

Rotation axis: Cut plane can be rotated around the axis by operating the active bar, editing the text box or placing the cursor on the edge of the cut plane and dragging.

Translation increment: Translate the cut plane by operating the active bar, editing the text box or placing the cursor in the center of the cut plane and dragging. After translation, the increment value will be reset to 0.

Delete: click this option, data in the reverse direction will be shown in red. Apply this, and the red data will be deleted.

Reverse: Reverse the normal direction of the cut plane.

Delete plane: Delete the created cut plane.

- **Other operation**

Mouse operation: Double click the cut pane to enter the cut plane setting after quitting the cut plane interface.

Hide/Show cut plane: After creating the cut plane, hide or show the cut plane by right click.



Notes:

- Cutting Plane Operations: Create a new cutting plane, remove cutting plane, reverse normal, delete data (Markers can't be deleted).
- Cutting plane operation is only workable under the current project.
- Scan with Cutting plane: Only one side from the cutting plane can be scanned. Cutting plane is very useful when a base need to be removed during scanning.

8. Project Group

8.1. Create/Import Projects

When the scan data is saved, you can create new projects with more scans, or import the saved projects and manage all projects on the project tree.

	Create a new project.
	Import the saved projects.



Note:

Only projects from the same scan mode and with the same resolution can be imported.

Right click menu



8.2. Remove/Delete Projects

	Remove the project.
	Delete the selected project(s).

Select one or multiple projects by click remove to remove the project(s) from the project tree, but not from the local folder. It can be imported when it is needed.

Click Delete or right click and delete to delete the selected project(s) from the project tree and the local folder.

8.3. Align Projects



Click  to open the Manual Alignment interface. There are two ways to align:

- **Feature Alignment**

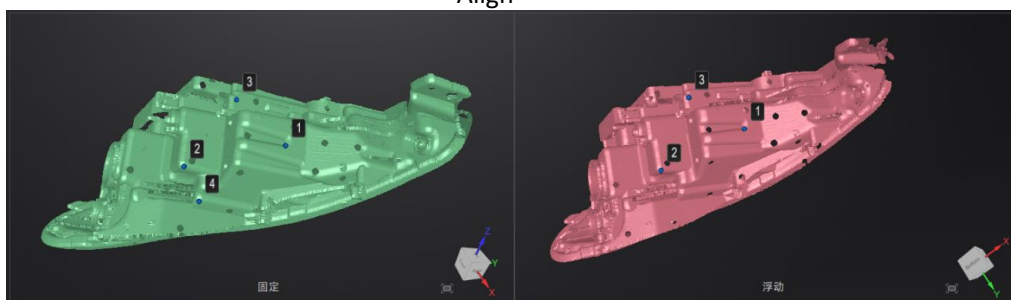
Select feature align, click “apply” button, software will align the scans based on the features automatically.

- **Manually Alignment**

Press SHIFT and left click mouse to choose not less than three common but nonlinear points in the fixed and floating views, click “apply” to merge.

Press Ctrl + Z or ESC button to cancel the point selection by order.

Align



Working Principal: Calculate the best match of the selected points, merge the scans according to the best fit of the points in the fixed and floating views.

- **Marker Alignment**

You could choose marker alignment if the projectors are with markers. There shall be at least 3 common markers in two projects, otherwise the alignment will fail. Software will align the projects according to the positions of those markers automatically.

Click “Apply” to align.

Click “Next”, the aligned projects will merge to a group, you could continue further alignment.

Click “Cancel” to recall the alignment.

Click “Exit” to exit project alignment interface.

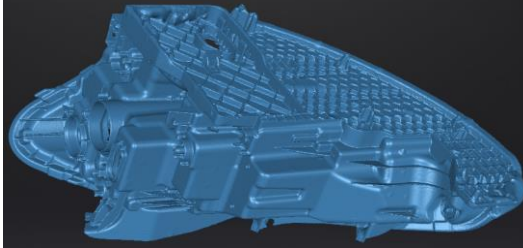
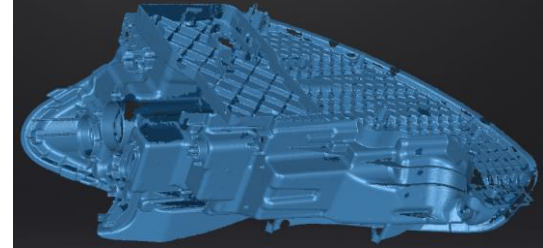
9. Meshing

9.1. Create Mesh (Watertight/Unwater tight)

When scanning and editing are completed, click  to create mesh.

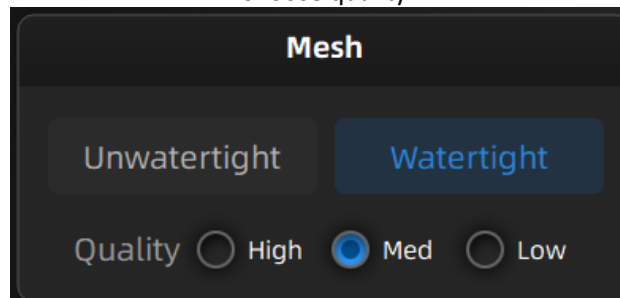
9.1.1. Mesh

There are 2 types of mesh are available: Watertight and Unwater tight.

Watertight	Unwater tight
	
All holes will be filled automatically. The data can directly be 3D printed.	Unclosed model stays the way it is scanned. Processing time is quicker than Watertight.

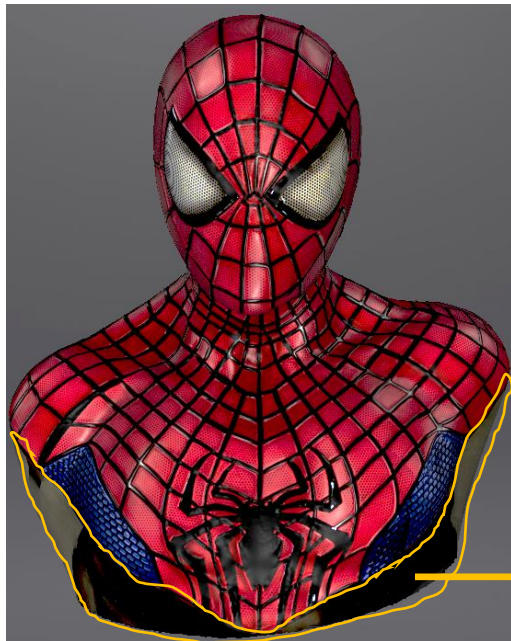
Watertight quality:

Choose quality



TEXTURE WATERTIGHT

The texture capture is separate from the 3d data capture. If the texture has been captured, it will still be displayed on areas where holes are filled in the mesh processing. If the texture is missing, the corresponding mesh data will be in black.



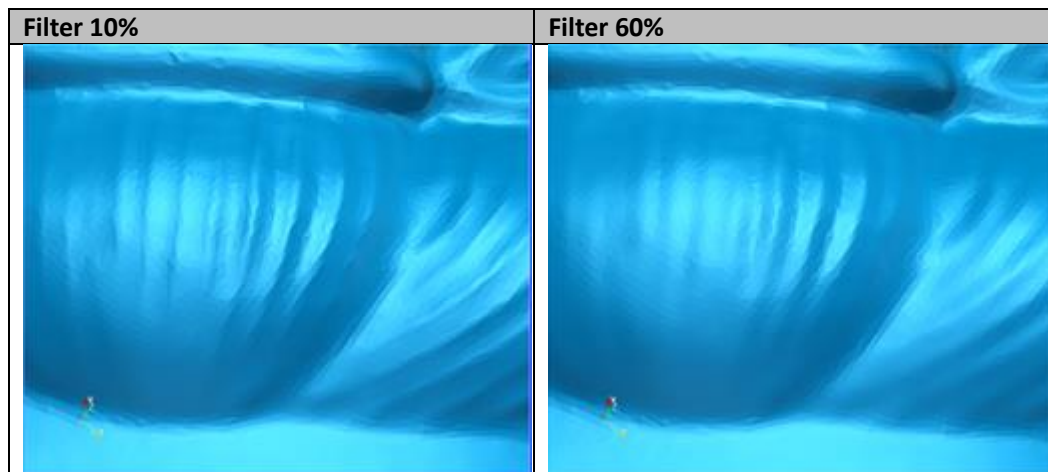
This region was missing in the scanning, and the texture can't match the original texture.

9.1.2. Mesh Optimization

Through the toolbar on the left, you can simplify, optimize, remove small floating parts, remove spike and marker hole filling.

Use recommended parameters: To get EXScan HX help you optimize a specific model, enable the function. To customize parameters, disable the function.

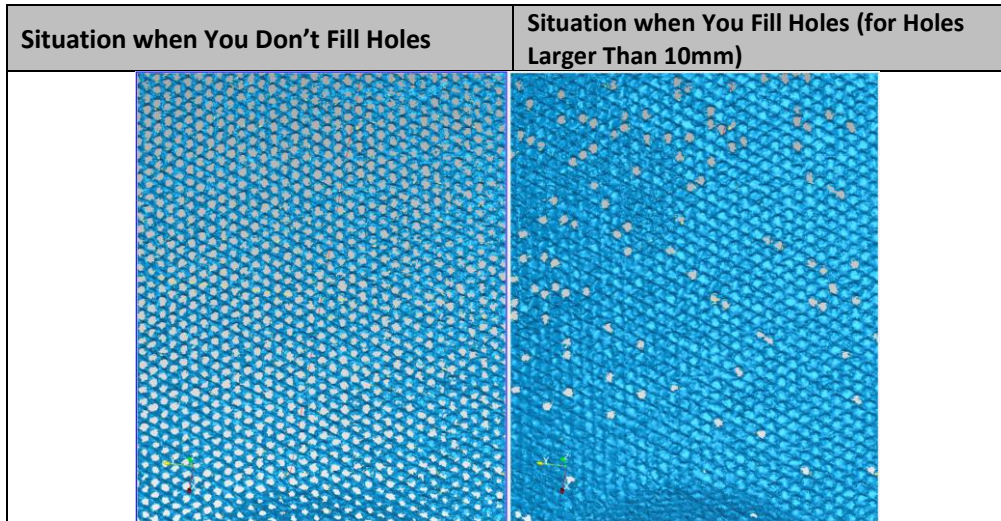
Filter: Optimize data.



Remove small floating parts: See "9.2 Mesh Editing"—"9.10 Texture Remapping."

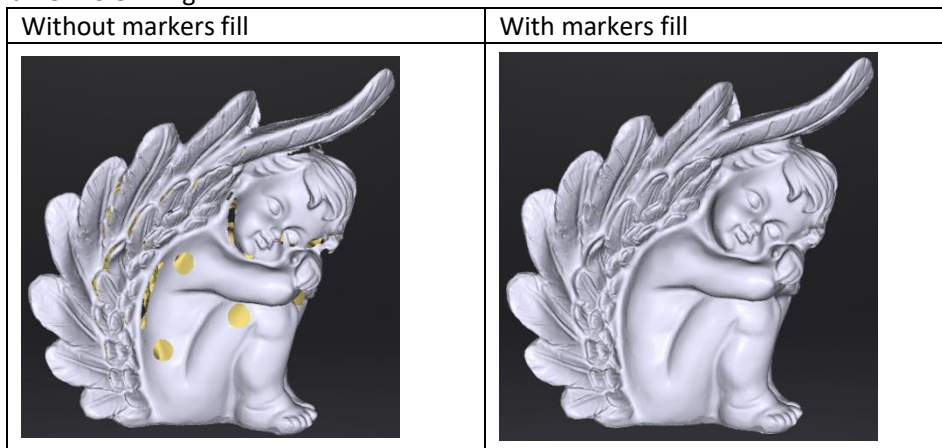
Max triangles: Set max. plate number to get mesh model's triangle plate number is within configured plate number.

Fill small hole: For objects with tiny holes (larger than 10 mm), use the function to fill tiny hole to make the scanned image look better. For objects with holes (smaller than 10 mm), you are not recommended to use the function or you can set the function parameter value to a smaller one.



Remove spikes: Remove spike-like data on the image edge.

Marker hole filling:



9.2. Mesh Editing

The mesh can be edited: Select/delete, Hole filling, Sharpen, Smooth, Simplification, Multiview.

MESH SELECT/DELETE


Press **Shift + Left mouse** to select data and enter the selection menu.

CTRL+ Left mouse: Deselect a selected region.









CLOUDS SELECT/DELETE

SHIFT + Left mouse: Select unwanted data, the selected section will be displayed in red, as shown below.

CTRL+ Left mouse: Deselect a selected region.

														
Edit buttons:														
① Multi view	② Select Visible	③ Select Through	④ Rectangular											
⑤ Polygon	⑥ Circle	⑦ Paint Brush	⑧ Select all											


⑨ Connected domain	⑩ Revert	⑪ Unselect	⑫ Delete
⑬ Undo	⑭ Apply edit	⑮ Cancel edit	

	Select Visible to select data on the front view only
	Select Through to select data all though
	Paint Brush Mouse scrolling wheel to adjust the paint brush size.
	Connected domain Click the button after select the data, all connected region to the selected data will be picked.
	Delete selected data Click the button or “DELETE” on the keyboard to delete selected data.
	Undo You can only undo the most recently deleted data.
	Apply edit Click the button or space bar to apply the edition, and exit edit mode.
	Cancel edit Undo all editors, and exit edit mode.

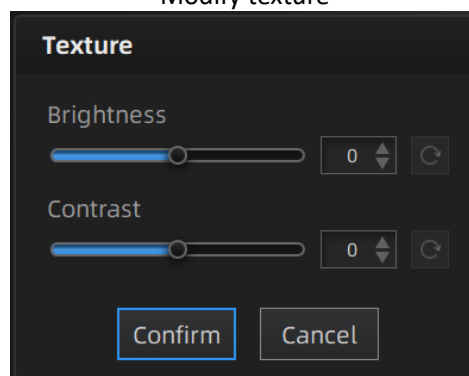
9.3. Texture Adjustment

When the mesh model has been generated, use the cursors to change the Brightness and/or contrast of the texture from -100 to +100. The default value is 0 for both.

- Brightness (-100-100): indicates the brightness of the picture. The larger the value is, the higher the brightness is.
- Contrast (-100-100): indicates the degree of contrast between colors. The larger the value is, the more obvious the color difference is.

: Click Reset to return to 0.

Modify texture

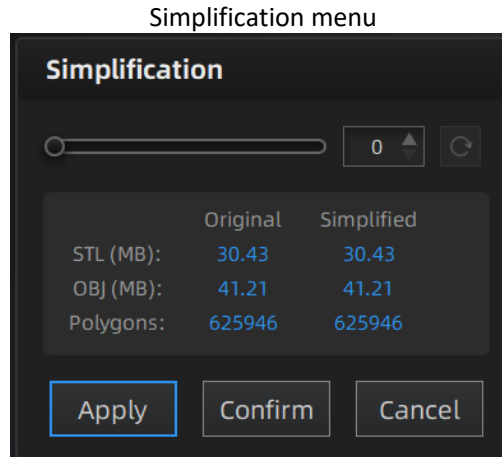


This modification is not saved in the project file. Export the data to save the texture editing.

9.4. Simplification

After simplification, the polygon numbers, file size and level of detail of data will be reduced accordingly. Set the ratio from 1 to 100, the default is 0.

The comparison of detail between before simplification and after simplification (at 70% simplify proportion).

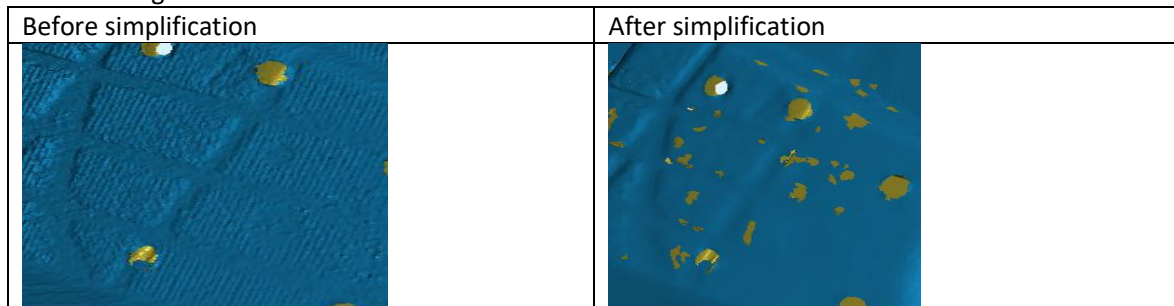


Click **“Apply”** button to simplify data, preview the result of current setting.

Click **“Confirm”** button to apply the **“Simplification”** setting.

Click **“Cancel”** button to quit, and go back to the original data.

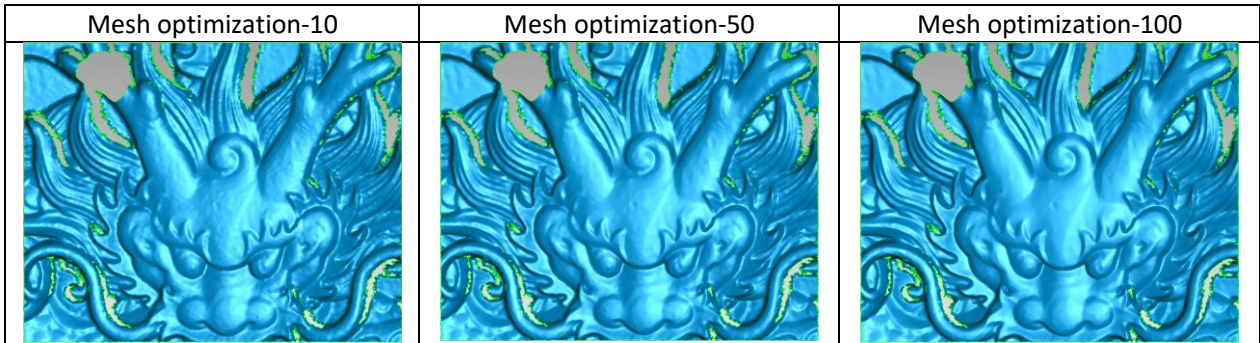
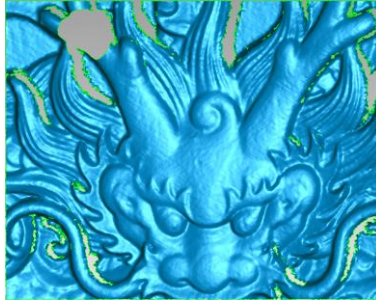
Multiple operations on **“Simplification”**, the result will not be added. It will always operate on the original data.



9.5. Mesh Optimization

Mesh optimization can optimize the quality of the data. There are 3 ratio options of mesh optimization. Processing time will be different. Below shows the result of 3 different ratios.

Original



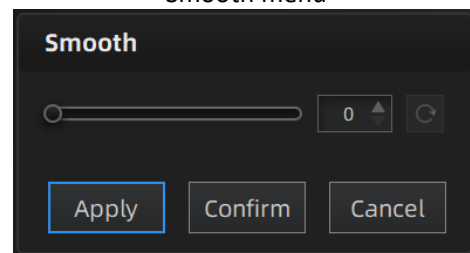
Click **“Apply”** button to optimize data, preview the result of current setting.
Click **“Confirm”** button to apply the “Mesh Optimization” setting.
Click **“Cancel”** button to quit, and go back to the original data.

Multiple operations on “Mesh Optimization”, the result will not be added. It will always operate on the original data.

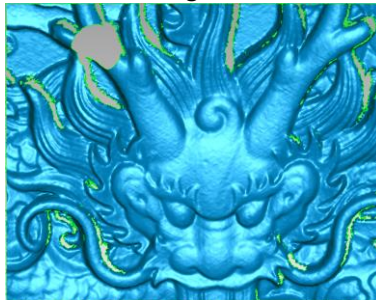
9.6. Smooth

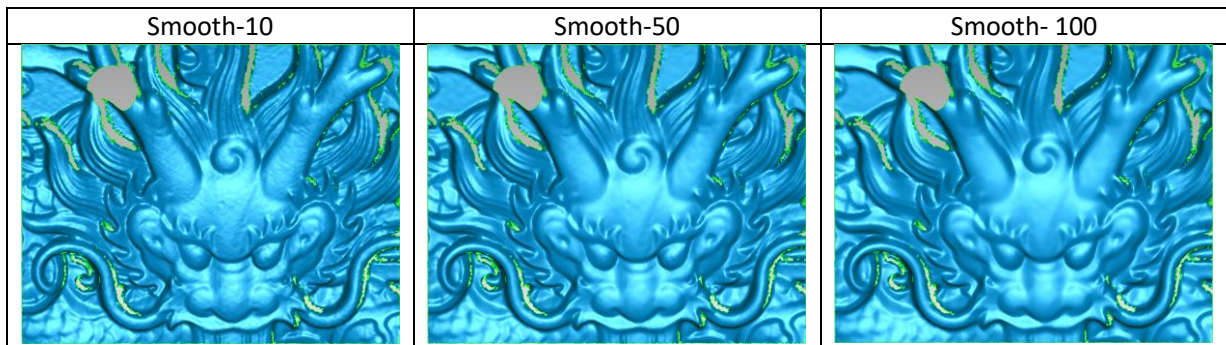
Smooth the possible noise on the surface of the scan data. It might remove some small details or smooth some sharp edges at the same time. The example of before and after smoothing is shown below. Run 2 times, data will be smoothed twice.

Smooth menu



Original





Click **“Apply”** button to smooth data, preview the result of current setting.

Click **“Confirm”** button to apply the “Smooth” setting.

Click **“Cancel”** button to quit, and go back to the original data.

Multiple operations on “Smooth”, the result will not be added. It will always operate on the original data.

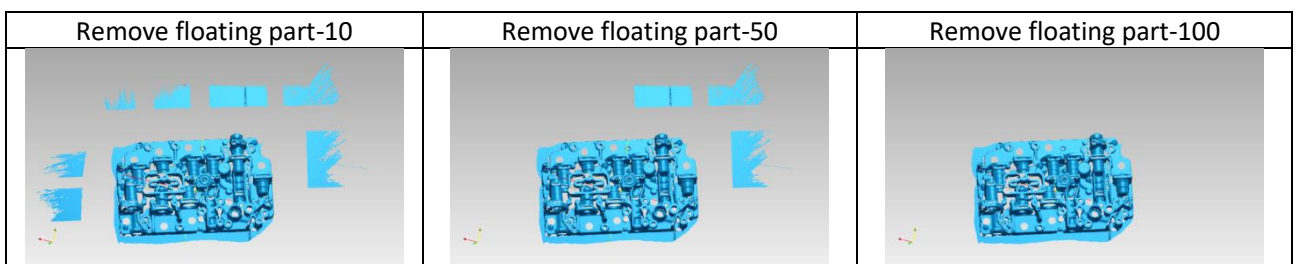
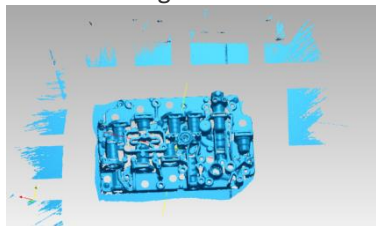
9.7. Remove Small Floating Parts

Remove small floating parts in the scan data.

0 means no operation, 100 is the maximum. The maximum value is the square of the diagonal length of the floating part/10, $MAX=(L/10)^2$.

Diagram of removing floating parts shows as below:

Original data



Click **“Apply”** button to remove floating part, preview the result of current settings.

Click **“Confirm”** button to apply the “remove floating part” setting.

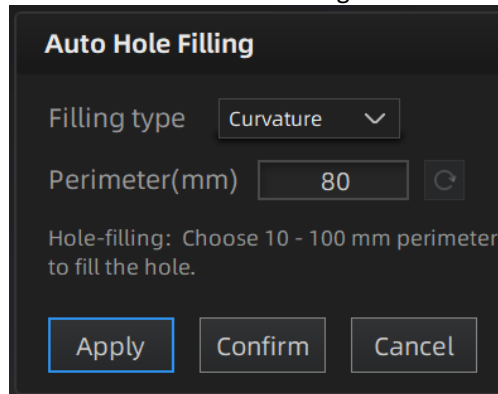
Click **“Cancel”** button to quit, and go back to the original data.

Multiple operations on “Remove floating part”, the result will not be added. It will always operate on the original data.

9.8. Auto Hole Filling

Input the perimeter of the biggest hole to be filled. Less than 100mm is recommended. This function will fill every hole with a smaller perimeter than the number input.

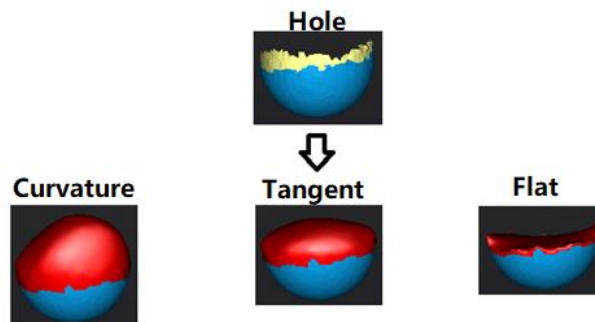
Auto hole filling



Choose Curvature, Tangent or Flat before filling hole.

- **FLAT** calculates the solution for the hole filling considering the point position on the boundary.
- **TANGENT** calculates the solution considering the point position and the normal of the last row of triangles forming the boundary.
- **CURVATURE** calculates the solution considering the point position and the normal of the 2 last rows of triangles forming the boundary.

Effect of Curvature, Tangent or Flat



Click **“Apply”** button to auto fill hole, preview the result of current setting.

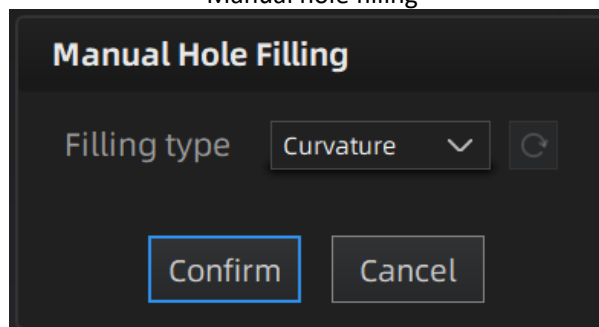
Click **“Confirm”** button to apply the “Auto hole filling” setting.

Click **“Cancel”** button to quit, and go back to the original data.


9.9. Manual Hole Filling

The hole edges are displayed green, and get red after picking. The number of the holes and the number of holes filled will be displayed on the interface. Choose Curvature, Tangent or Flat before picking a hole.

Manual hole filling



Click the edge of the hole to fill it.

Click , according to the order of filling holes, from the last hole to cancel hole filling. Ctrl + Z can also cancel hole filling.

Click “**Confirm**” button to apply current setting and exit the manual hole filling.

Click “**Cancel**” button to quit, and go back to the original data.

9.10. Texture Remapping



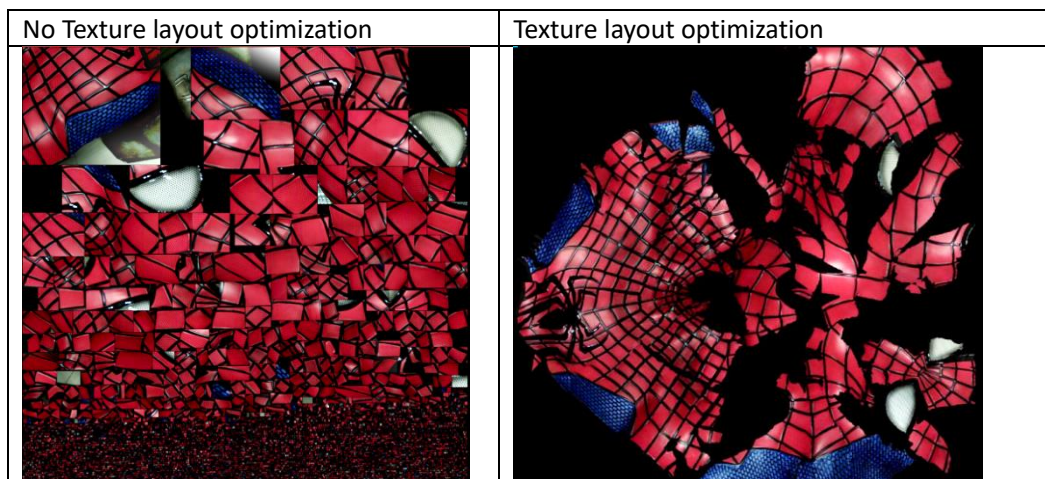
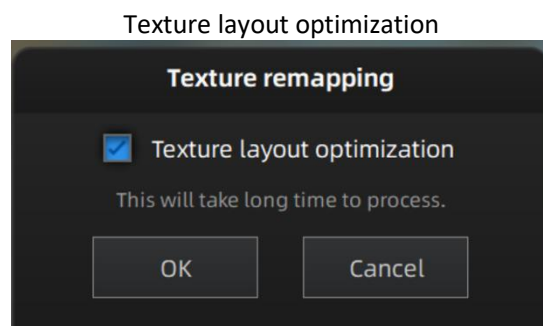
Click  Texture Remapping to display the Texture menu.

Mesh edition of simplification, hole filling on texture scanned data will affect the texture render. By doing the texture remapping, the texture information will be reapplied on the mesh.

Texture remapping is accessible before saving the data.

Choose “**Texture Layout Optimization**” (TLO) to create an optimized arrangement for the texture file. It will make the texture manual editing much more convenient if you are going to process the texture in a 3rd party software.

This option has no effect on the texture itself.

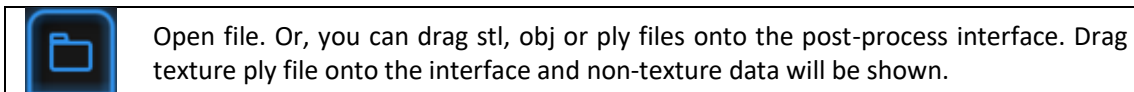
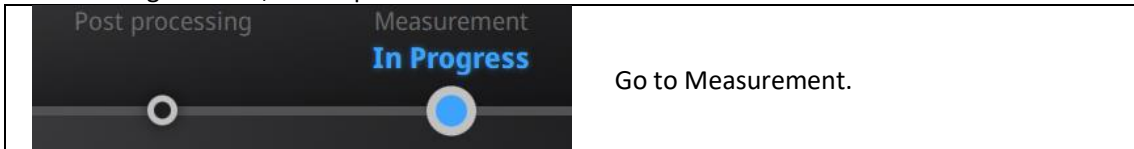


Note:

- TLO requires a longer time to compute.
- TLO is used only with OBJ output.
- TLO result is more convenient for texture manual editing.

10. Measurement

After meshing, the Measurement menu will be available on the top. Or click Measurement on the navigation bar, and import data.

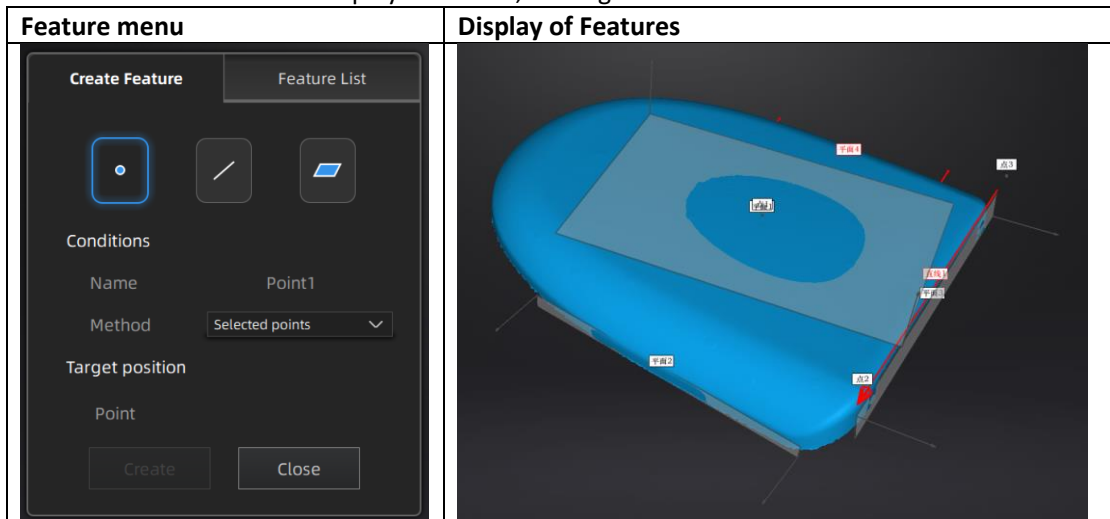


Click **Open file**, a STL or OBJ file can be imported to edit.

10.3.1. Create Feature




Click the Feature button to display the menu, click again to close the menu.





Click on the corresponding icon to create points, lines, planes.

Then select the creation method and follow the instructions, click “Create” to generate, or “Close” to cancel and close the window.

The features created displaying in gray, the selected feature is in Red. In the feature list, click “delete button” to remove (Delete action cannot undo).

Feature	Creation Method	Requirement	Description
	Selected Points	—	<ul style="list-style-type: none"> Click on the data to select a point. Click create to create a point.
	Line-Plane Interface	Line and Plane should	<ul style="list-style-type: none"> Click on the created line, or select it on the dropdown.

		be created in advanced	<ul style="list-style-type: none"> ● Click on the created plane, or select it on the dropdown. <p>The point generated is the intersection between the non-parallel line and plane.</p> <p>Feature creation failed! Error code 9: the line is parallel to the plane.</p>
<p>Line</p> 	Point-Point	—	<ul style="list-style-type: none"> ● Pick 2 points. ● Click on the data to select a point or click on a feature point previously created. <p>In the Choice list select one of the point to redo it.</p> <p>The line generated is define as point from to point to point.</p>
	Plane-Plane Intersection	2 Planes should be created in advanced	<ul style="list-style-type: none"> ● Click on the plane previously created, or select it on the dropdown, repeat for the second plane. ● The created line is the intersection between the 2 non-parallel planes. <p>Feature creation failed! Error code 1: the planes are parallel.</p>
<p>Plane</p> 	3 Points Fit	—	<ul style="list-style-type: none"> ● The plane is generated by 3 points not co-linear. ● Click on the data to select one point or click on a previous created feature point. ● In the Choice list select one of the point to reselect it. <p>Feature creation failed! Error code 6= the points selected are co-linear.</p>
	Point-Line Fit	Line should be created in advanced	<ul style="list-style-type: none"> ● The plane generated includes the point and the line (The line should be created in advanced). ● Click on the line previously created, or select it from the drop-down. ● Click on the data to select a point or click on a feature point previously created. ● In the Choice list select one of the element to reselect it. <p>Feature creation failed! Error code 6= the point selected belongs to the line</p>
	Best Fit	—	<ul style="list-style-type: none"> ● Press Shift+ LMB to select an area, press ctrl+ LMB to unselect. ● The plane generated is the position with the smallest deviation from the selected area.

10.3.2. Movement

Use this mode to modify the alignment of the data to the global coordinate. This action is useful for post processing or reverse engineering.

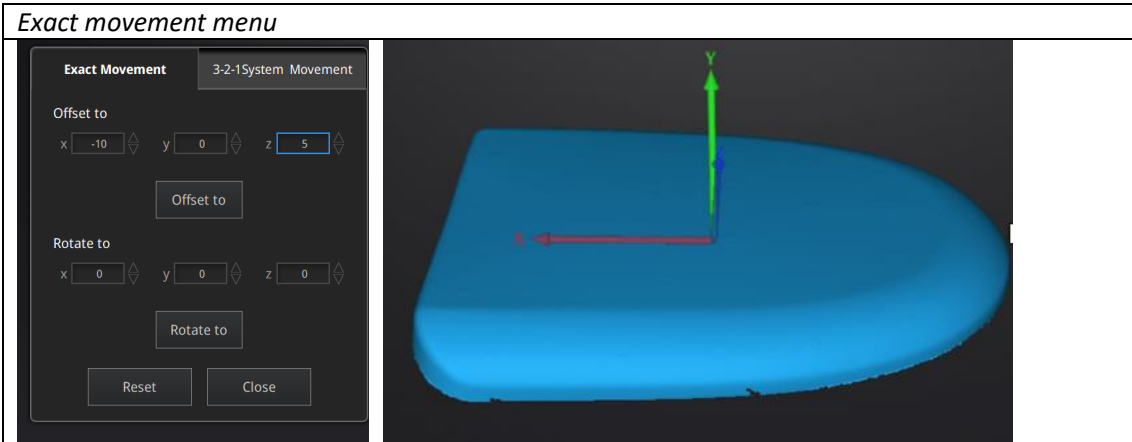
The transformations do not affect the shape and size.



Enter/Exit the Movement menu.

Click the Movement button to display the menu, click again to close the menu.

Exact movement



Enter the value in mm and degrees, click **Apply** to match the data origin to the input coordinate and orientation.

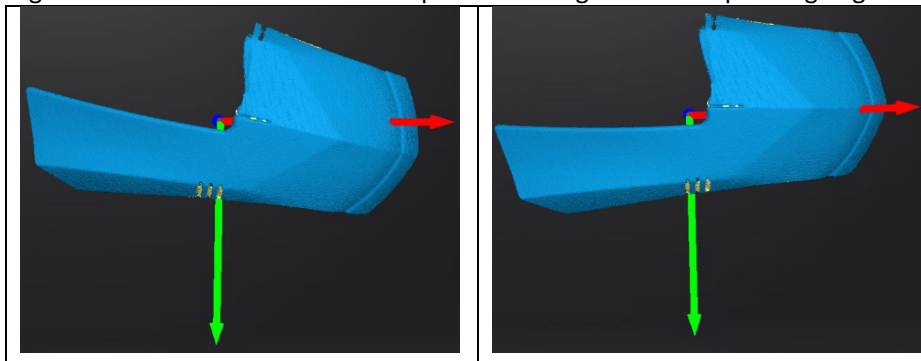
The arrows represent the global coordinate system, Red=X+, Green=Y+, Blue=Z+.

Click **Reset** to cancel the transformation to original position.

Click **OK** to confirm the transformation.

Tips:

- Start from data reposition (offset to 0,0,0)
- Edit rotations prior to transformation
- Change the view normal to a reference plane to change the corresponding angle



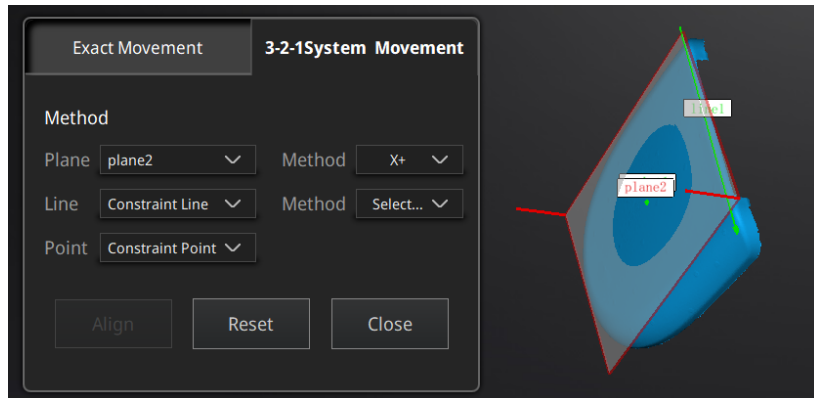
3-2-1 Movement

Prior to 3-2-1 movement, the creation of a plane, line not normal to the plane and point are required.

3-2-1 movement (plane-line-point alignment) aligns the data by deletion of the Degrees of Freedom.

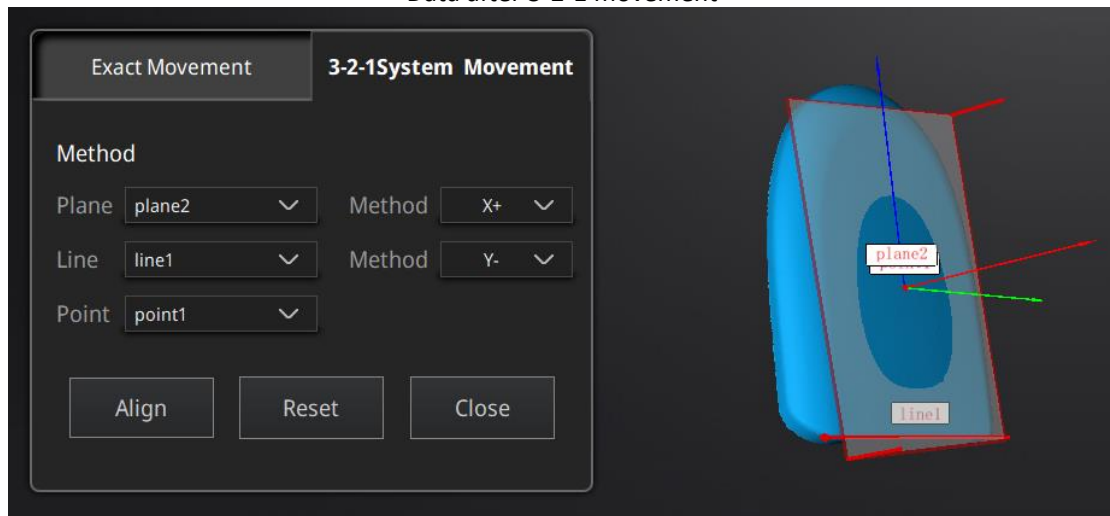
The arrows represent the global coordinate system, Red=X+, Green=Y+, Blue=Z+.

3-2-1 Movement menu



- Select a Plane in the drop-down menu, match it to the first axis in the Method drop-down. The arrows on the corners of the plane represent the plane positive direction. The normal vector of the plane will match the axis direction.
- Select a Line in the drop-down menu, match it to the first axis in the Method drop-down. Beware the direction of the line to match it to the + or - axis. The projection of the line to the first plane will be parallel to the corresponding axis.
- Select a Point in the drop-down menu. The data will be translated to match the point with the origin point (coordinate 0,0,0).
Click **Align** to perform the transformation.

Data after 3-2-1 movement



Click **Reset** to cancel.

Click **Apply** to confirm the transformation.

10.3.3. Measuring

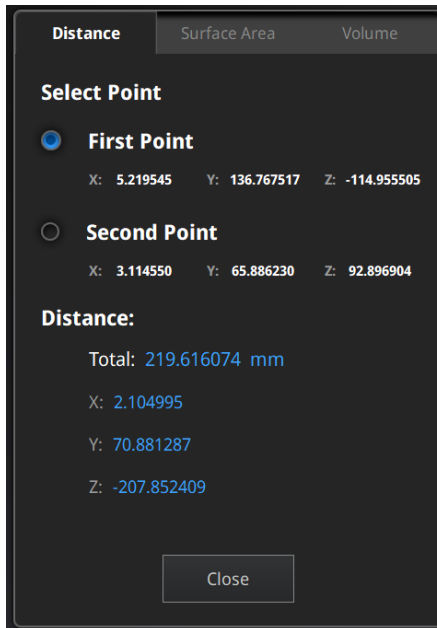


Click  measurement button to display the menu, click again to close the menu.

DISTANCE

This tool calculates the distance between two points belonging to the surface of the data. Click on the data to pick the first and second point, select one of the two points to redo it.

Distance menu



Total is the 3D distance, X, Y and Z are the projection of the segment to the respective planes.

SURFACE AREA

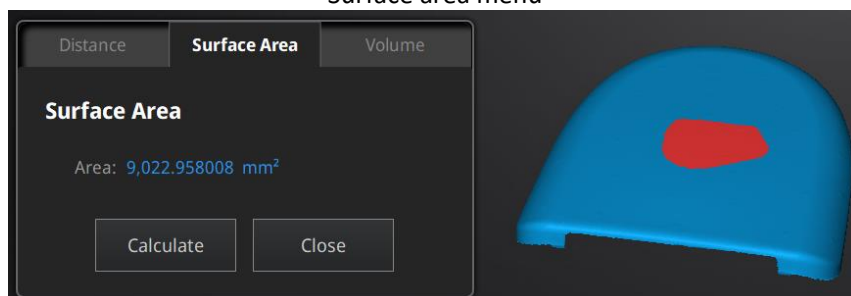
Press **Shift+ LMB** to select an area, press **ctrl + LMB** to unselect.

Ctrl + A to select all.

Click **Calculate** to display the Area value of the selected data in mm²

Redo the selection and click calculate again to update.

Surface area menu

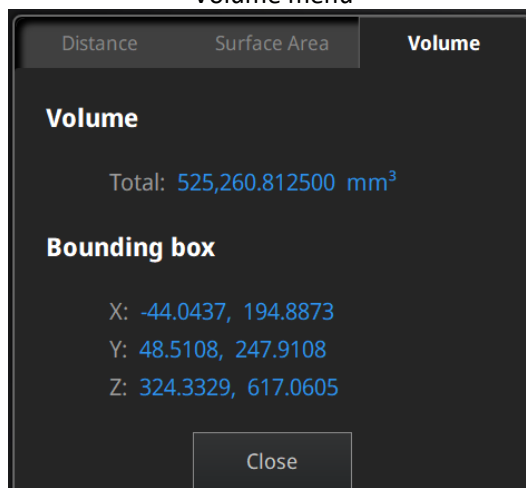


VOLUME

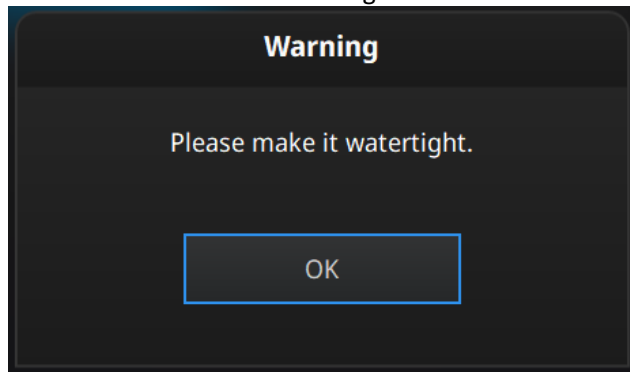
This tool calculates the volume contains in a watertight mesh.

It returns the volume in mm³ and the coordinates of the smallest box, parallel to the global coordinates, containing all the data.

Volume menu




Prior to the calculation make sure the file is watertight (no holes).
File not watertight alert



11. Export Data

11.1. Data Formats



Click  to export the data. Navigate to choose a save folder. And input the file name. Select one of the formats below. By default, the saving path is the project folder, the file name is “Scan data”, and the format is .stl.

Save folder

File name:

Files of type:

.asc(whole)
 .stl
 .ply
 .obj
 .p3
 .3mf

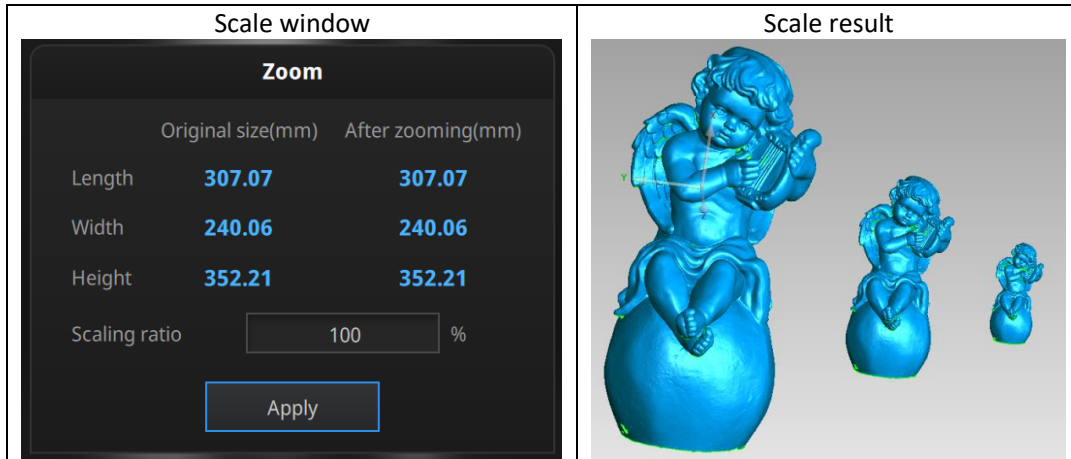
Format	Texture	Data type	Saves as	Recommended For
ASC (separated) (fixed mode only)	No	Separated point-clouds, with calculated alignment	scan_0.asc scan_1.asc scan_2.asc etc...	<ul style="list-style-type: none"> ◆ Inspection ◆ Fast export (no post-processing needed) ◆ Complex data to post process in another software
ASC (whole)	No	optimized point-cloud	scan.asc	<ul style="list-style-type: none"> ◆ Inspection ◆ Fast export (no post-processing needed in hand-held mode) ◆ Large data to post process in another software ◆ Complex data to post process in another software
STL	No	Mesh	scan.stl	<ul style="list-style-type: none"> ◆ 3D printing (watertight mesh data) ◆ Reverse Engineering ◆ Compatibility with most mesh editing software
OBJ	Yes (separated)	Mesh, Texture & Matching file	scan.obj scan.jpg scan.mtl	<ul style="list-style-type: none"> ◆ Artistic applications ◆ 3D rendering ◆ Compatibility with most mesh editing software
PLY	Yes	Mesh	scan.ply	<ul style="list-style-type: none"> ◆ Low storage ◆ Easy texture editing
3MF	Yes	Mesh	scan.3mf	<ul style="list-style-type: none"> ◆ Low storage ◆ Compatibility with Microsoft paint3d
P3	No	Marker position	scan.p3	<ul style="list-style-type: none"> ◆ Global Marker File in EinScan software ◆ Measurement of the marker

11.2. Scale Data


Scaling the volume of scanned data, while the number of triangles, the level of detail of the scan and size of data will not be actually changed.

By default, the scale is 100% and will be exported with millimeters for reference.

The value display represents the dimensions of the smallest box containing the data oriented to the reference axis.



12. Share Data

Click  after mesh to share data to Sketchfab, it will show the dialog as below. A model title, username and user password are required. Register and view the shared model at <http://sketchfab.com>.

Note:

- Sketchfab basic plan accounts can only upload data less than 50M, while Pro plan account can share with a maximum of 200M.
- Data is saved as .STL does NOT contain texture.

Sketchfab Upload

Share the current model to Sketchfab.com.
All fields marked with an * are mandatory.
[Click here to register a free Sketchfab account.](#)

Model Title: * EinScan HX

Description:

Tags (separated by space): EinScan HX

Make models private: PRO account required








Password:

Sketchfab username:*

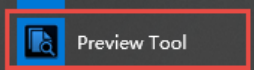
Sketchfab password:*

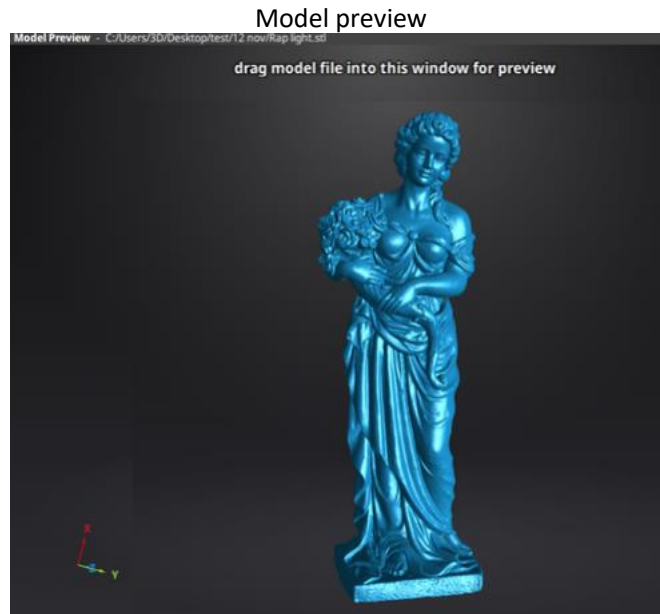
Submit Model Cancel

13. Third-party Software

Install a third-party software ( Geomagic ControlX ,  Verisurf ,  Einsense Q ,  Geomagic Design X ,  Geomagic Essentials and Solid Edge ) first. Then after meshing data, click  to export data to the third-party software.

14. Model Preview

Double click the short-cut  on the desktop. Drag files into the window for preview. Manipulate the data with the same control as EXScan software.



STL, OBJ, PLY, ASC, or 3MF can be loaded, files from 3rd party software might fail to be loaded. In this case we recommend Meshlab, a free mesh software editor, or upload to sketchfab.

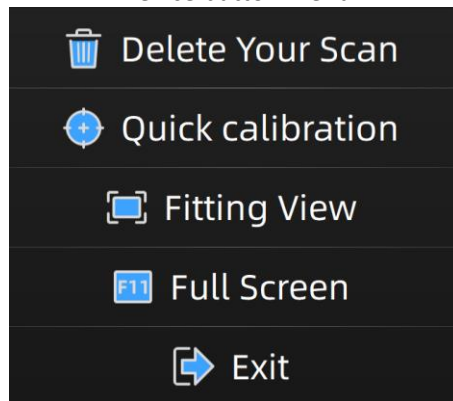
Note:

To load a OBJ textured file make sure to have the MTL and JPG files with the same name and in the same folder than the OBJ.

15. Device Button

Long press the scan button on the device to pop up menu. You could then enter calibration, delete data, and full screen operation directly.

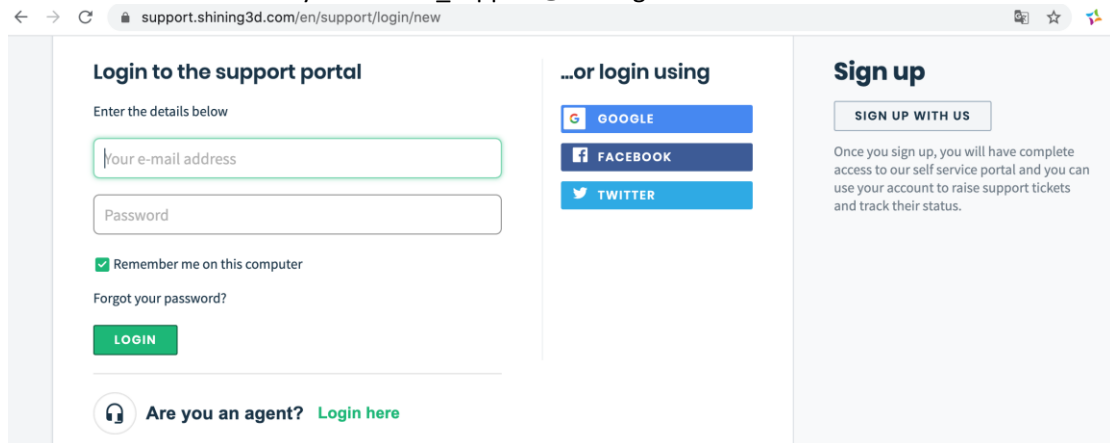
Device button menu



16. Support and Contact

16.1. Submit a Ticket

Sign up in Shining 3D Support Platform support.shining3d.com.
Or send email directly to einscan_support@shining3d.com.

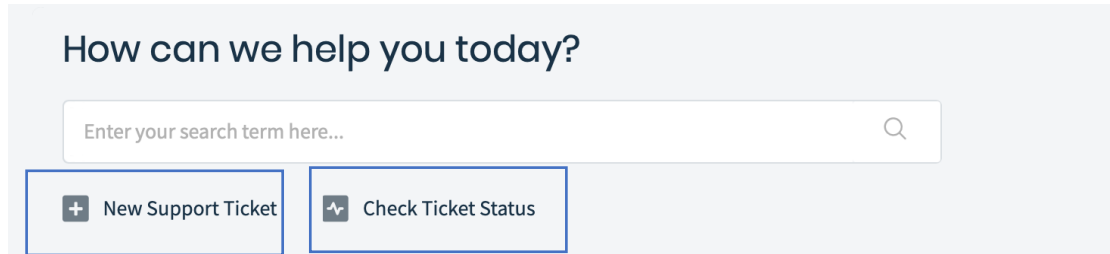


The screenshot shows the login and sign-up interface for the Shining 3D Support Platform. The browser address bar displays support.shining3d.com/en/support/login/new. The page is divided into three main sections:

- Login to the support portal:** This section prompts users to "Enter the details below" and includes a text input field for "your e-mail address", a "Password" field, a checked checkbox for "Remember me on this computer", a "Forgot your password?" link, and a green "LOGIN" button.
- ...or login using:** This section offers social media login options with buttons for "GOOGLE", "FACEBOOK", and "TWITTER".
- Sign up:** This section features a "SIGN UP WITH US" button and a paragraph explaining that signing up provides complete access to the self-service portal for raising and tracking support tickets.

At the bottom left, there is a link for agents: "Are you an agent? [Login here](#)".

Log in with your account. Click New Ticket on the tab bar to submit a ticket and check the status.



The screenshot shows the home page of the Shining 3D Support Platform. The main heading is "How can we help you today?". Below this is a search bar with the placeholder text "Enter your search term here..." and a magnifying glass icon. At the bottom, there are two buttons: "New Support Ticket" (with a plus icon) and "Check Ticket Status" (with a refresh icon).

16.2. Contact Us

By email

einscan_support@shining3d.com

sales@shining3d.com

Facebook Group: EinScanexpert

SHINING 3D Offices:

APAC Region & Headquarters

SHINING 3D Tech. Co., Ltd.

Hangzhou, China

Phone: +86 571 82999050

Add: No. 1398, Xiangbin Road, Wenyan, Xiaoshan, Hangzhou, Zhejiang, China, 311258

EMEA Region

SHINING 3D Technology GmbH.

Stuttgart, Germany

Phone: +49 711 28444089

Add: Breitwiesenstraße 28, 70565, Stuttgart, Germany

Americas Region

SHINING 3D Technology Inc.

San Francisco, United States

Phone: +1 415 259 4787

Add: 1740 Cesar Chavez St. Unit D. San Francisco, CA 94124