



SHINING 3D



EINSCAN LIBRE

1.0.1

User Manual

Table of Contents

Overview

- **Device of introduction**
 - Scanner Front
 - Scanner Back
- **Getting Started**
 - About EinScan Libre
 - About EXScan Libre
- **Packing List**

First Use

- **First Time of Use**
- **Power on Libre**
 - Charging Methods
 - Charging Safety
- **Connect to Wi-Fi**
- **Activate Scanner**
- **Interface**
 - Home Page Overview
 - Settings
 - Icon Guide

Calibration

- **Calibration**
 - White Balance Calibration
- **Calibration Notices**

Scan

- **Scanning Workflow**
- Pre-scanning
 - **Before Scanning**
 - How to scan less geometric feature objects?
 - How to scan highly reflective/transparent objects?

- **Scan Interface**
 - Create a Project Group
- **Scan Mode**
- Scanning
 - **Scan Settings**
 - **Start Scanning**
 - **Pause and Resume Scan**
- **Data Editing**
- **Gesture Interaction**
- Meshing
 - **Meshing**
 - **Mapping**
 - **Optimization**
 - **Export Mesh**

Data Transfer

- **Transfer via USB Flash Driver**
- **Transfer via Cable**
- **Transfer via Wi-Fi**

Data Processing on PC

- **Install and Run EXScan Libre**
 - Installation package
 - Software installation
- **Open a Project Group**
- **Software Interface**
 - ① Home Page/ Open Project
 - ② Project List
 - ③ Mesh Data List
 - ④ Toolbar
 - ⑤ Data Editing
 - ⑥ View

- **Data Editing**
 - Context Menu for the Project List
 - Context Menu
 - Shortcut
- Data
 - **Generate Point Clouds**
 - **Adjust Point Distance**
 - **Alignment**
 - **Mesh Model**
 - Mesh Optimization
- **Mesh Optimization**
 - Data Editing Panel
- Measurement Tools
 - **Create feature**
 - **Align**
 - **Measurement tools**
- **Export Data**
 - Save Mesh Locally
 - Share Model
 - Export Mesh Model

Safety Information

- **Safety Information**
 - Symbol conventions
 - The Declaration of Intellectual Property and Disclaimer
- **Laser Information**
 - Labels
- **Regulations**
 - FCC Regulations
 - IC Regulations
 - RF Exposure Regulations (FCC IC)

Technical Support

- [Follow Us](#)

Overview

Device of introduction

The EinScan Libre delivers a fully wireless, standalone 3D scanning experience with its built-in screen and powerful NVIDIA processor. Offering the ideal combination of freedom and efficiency, it ensures reliable results through versatile, user-friendly operation.

Equipped with 5 3D cameras of 5MP, a color camera of 48MP, delivering 3 multi light sources of blue laser lines, laser lines and infrared speckle, it adapts to a wide range of scenarios and materials, indoors or outdoors in direct sunlight. It is designed to accurately and efficiently scan medium to large-sized workpieces, providing a truly cable-free and computer-free 3D scanning experience, meeting high requirements for applications of digital archiving, reverse engineering, maintenance and repair in versatile industries like archaeology and heritage, CGI, forensic, architecture, manufacturing, and so on.



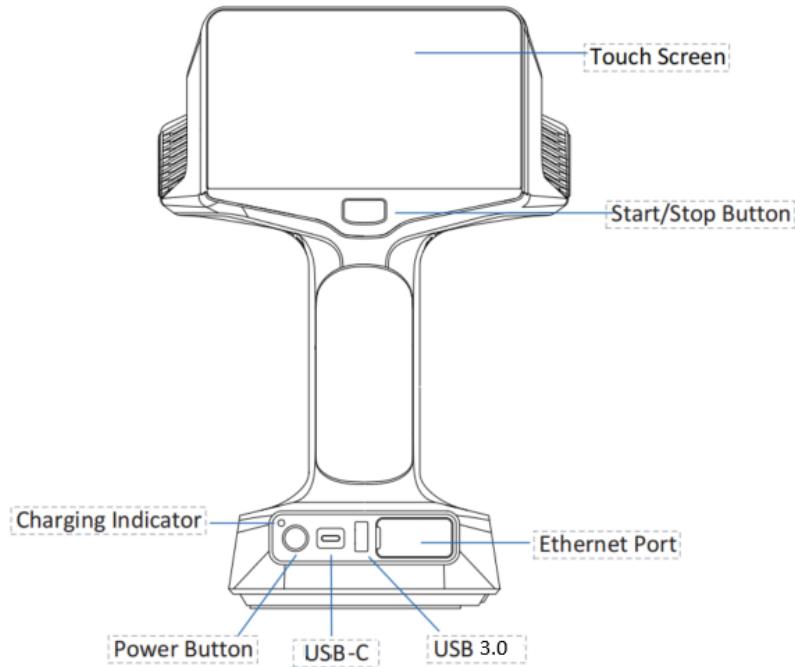
Scanner Front

EinScan Libre combines IR Speckle, IR Laser, and 101 Blue Laser line, utilizing three different light sources. It provides 3 scanning modes to suit large and small object scanning, and can adapt to different material surfaces in black or reflective. EinScan Libre also features a build-in 48 MP texture camera that can capture full-color data and generate vivid mesh.



Scanner Back

The EinScan Libre is equipped with a built-in screen and replaceable battery, allowing for easy scanning various objects.



- **Touch Screen:**

Display and interact UI

- **Start/Stop Button:**

By continuously tapping, you will sequentially enter the following stages, preview > scan > pause

- **Power Button:**

Press 2 seconds to turn on

Press and hold for 3 seconds or more to turn off

Press and hold for 6 seconds or more to force shutdown

- **Battery Indicator:**

Green: scanner is fully charged

Blue: scanner is charging

Getting Started

This chapter provides an overview guide for EinScan Libre handheld 3D scanner and its accompanying desktop post-processing software EXScan Libre.

In addition to this manual, you can scan the code to get User Manual for EinScan Libre.



About EinScan Libre

This section describes scanner components, specifications and scanning modes.

- [What light sources does EinScan Libre support?](#)
- [Introduction to the scanner](#)
- [Introduction to interface icons](#)
- [What scan mode are supported?](#)
- [How to connect Wi-Fi?](#)
- [How to charge the battery?](#)
- [How to activate the scanner?](#)

After activation, follow the steps below to use the scanner.

[1] Calibrate the Scanner

Calibration ensures the accuracy of the scanner and improves the scanning quality.

→ [How to prepare for calibration?](#)

→ [Quick Calibration](#)

[2] Select Scan Mode

Before scanning, you need to select the scanning mode.

According to the different objects being scanned, you can select **IR Rapid Mode**, **IR Adaptive Mode** or **Laser HD Mode**.

→ [Introduction to scan mode](#)

→ [Introduction to scan interface](#)

[3] Create Multiple Projects

→ [How to create a project?](#)

[4] Preparation

→ [Scan workflow](#)

→ [Prepare object and surroundings](#)

→ [How to set scanning parameters?](#)

[5] Scanning

After creating multiple projects, you can start scanning and set scanning parameters to scan.

→ [Preview](#)

→ [Setting Parameters](#)

→ [Scan](#)

→ [What to do when tracking is lost?](#)

[6] Edit Data

You can obtain accurate data by editing scan data in or after scanning.

→ [How to edit scan data?](#)

→ [How to generate a mesh?](#)

[7] Transfer Data

After completing the scan, you can transfer the scanned data from the scanner to the software on PC for further data processing.

→ [How to export data from scanner to PC using a USB flash drive?](#)

→ [How to transfer data over Wi-Fi?](#)

→ [How to transfer data in wired?](#)

About EXScan Libre

You can learn about the PC running software EXScan Libre, including its function list and interface overview.

1 Running Environment

Please install the software according to the recommended operating environment.

- [Running Environment and Installation](#)
- [Introduction to the EXScan Libre software interface](#)

2 Open Project File

After opening a project file, you can edit and post-process scan data.

- [How to open a project file?](#)

3 Edit the Data

- [How to edit the data?](#)
- [How to adjust distance?](#)
- [Alignment](#)
- [Meshing](#)

4 Mesh Optimization

- [Mesh Optimization](#)

5 Measurement

After editing data, you can post-processing or measurements on the data.

- [How to create features?](#)
- [How to align models?](#)
- [How to measure model?](#)

6 Share

Supports sharing with third-party design software.

- [How to share a model?](#)

Packing List

Check the carry box for the following items. If any item is missing or damaged, contact the distributor or service provider immediately.



EinScan Libre



Battery*2



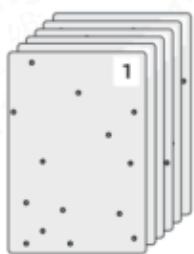
Battery Charging Dock



Markers



Power Adapter



Calibration Board*6



Marker Remover



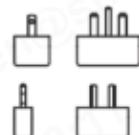
Scale Bar



Documentation



Ethernet Cable



World Travel Adapter Kit



USB Drive

Charging Dock Power Line
USB-C to C Cable

 **Note**

Each scanner has a unique serial number, which can be used for future services such as device warranty and technical support. You can find the serial number at the bottom of the scanner.

First Use

First Time of Use

Once the scanner is turned on, it will show the greeting screen with the **License Agreement**. Follow the steps below:

Install
Battery

Install Battery

Please insert the attached battery into the scanner.

Power On

Power On

Press the power button for 2 seconds until the scanner screen displays the startup screen. The startup process takes about 30 seconds, please be patient.

Language

Select Language

Please choose your preferred language.

User
License

Read the License Agreement

Please read it carefully and check **I have read and agreed to the terms**, then choose whether to participate in the **User Experience Program**.

Time Zone

Set Time Zone

Choose the time zone according to your actual location.

Network
Connection

● Connect to Wi-Fi Network

Connect to an available Wi-Fi network. Alternatively, you can skip this step. If you want to connect to a network later, refer to [Connect to Wi-Fi](#).

Account
Login

● Log into SHINING 3D Passport

You can sign in using a verification code, password. For detailed instructions, please refer to [Activation Scanner](#). You can also skip this step.

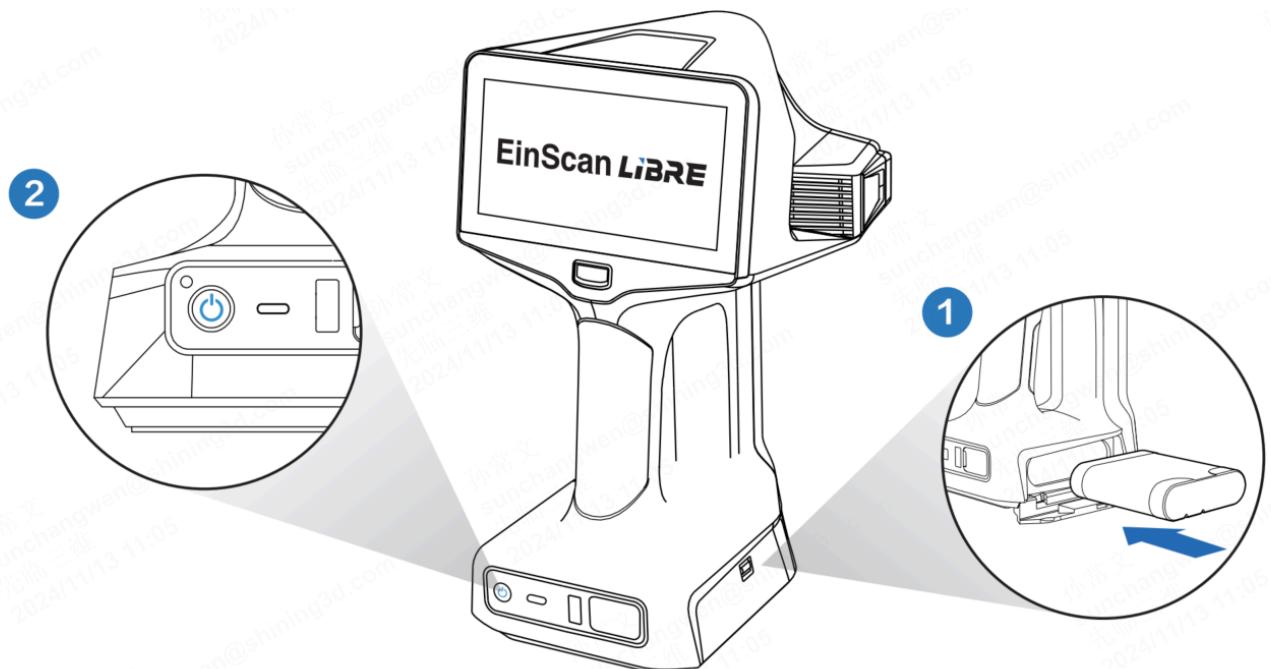
Operation
Guide

● New User Guide

Provides guidance on common operations, including power on/off, sleep mode, and scanning.

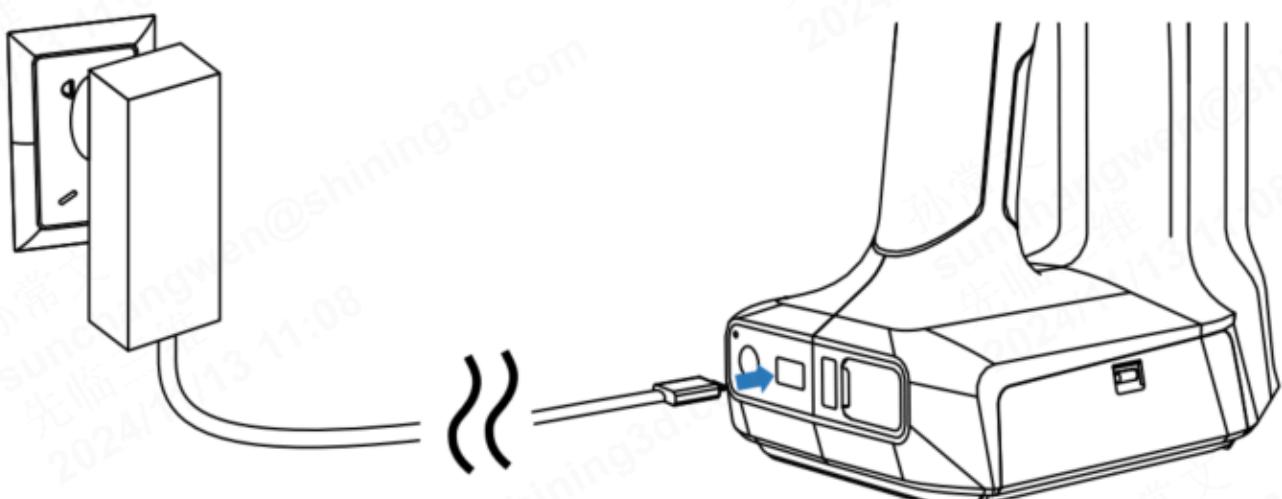
Power on Libre

Please insert the attached battery into the scanner, press the power button for 2 seconds until the scanner screen displays the startup screen. The startup process takes about 30 seconds, please be patient. It is recommended that you fully charge the battery before use.

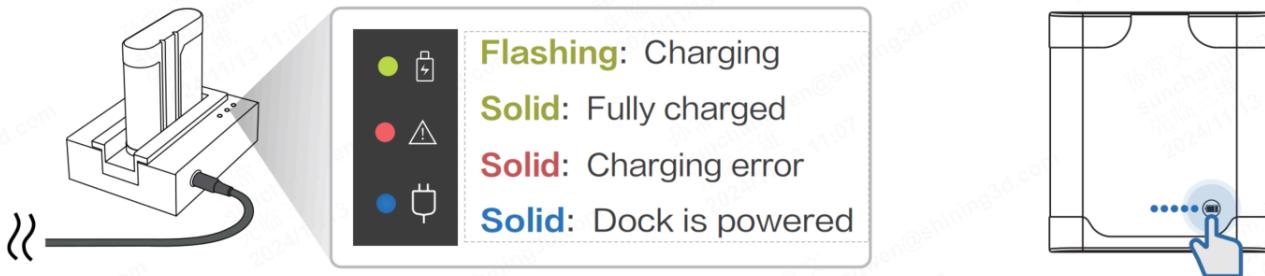


Charging Methods

- A world travel adaptor kit is included in the package for you to choose if the default one is not applicable in your country.
- Charge the scanner by using the USB-C to C cable.



- Attach the power cable to the power adapter, and then connect to the battery charging dock to charge the battery. The charging status can be checked through the indicator light on the battery dock.
- Press the **PUSH** button on the battery to check the remaining battery level.



After installing the battery, connect the power adapter for charging. Or use the battery charging dock.

Charging Safety

Caution

- Use only batteries, cables and charging devices intended for EinScan Libre.
- Avoid leaving the charging dock connected to the power source for an extended period. After using the charging dock, disconnect the power supply.
- If the battery emits an odor, heats up, deforms, changes color, or shows any other abnormal signs, it must not be used. If any abnormal phenomena occur during battery use or charging, remove it from the device or charging dock immediately and stop using it.

Note

- Please keep the battery away from fire or other inflammable and explosive materials.
- Do not impact, throw, or vibrate the battery.
- Please keep the battery in a cool and dry place.

Connect to Wi-Fi

To activate your scanner, first connect to a stable Wi-Fi network. After a successful connection, you can click  to login page.

Caution

After successfully connecting to the network, you can log into the SHINING 3D Passport. For detailed instructions, please refer to [Device Activation](#).

Steps

1. Go to **Settings > Network Settings**.
2. Enable **Wi-Fi**, all available Wi-Fi will be displayed.
3. Select your Wi-Fi and follow the instructions.

Note

- Tap  to refresh the available Wi-Fi list.
- Long press the network to forget the network and disconnect from it.

Activate Scanner

After entering the login page, choose to log in with an SHINING 3D account or by verification code. If you have not registered for a SHINING 3D account, it is recommended to register one on passport.shining3d.com 

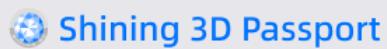
Caution

- The device can only be bond to the SHINING 3D Passport after successfully connected to the network.
- If the account is not registered, you need to log in via the verification code.
- If no network is available at the moment, activation can be skipped. You can activate again later after connecting to the network in the settings.
- Exporting any scan data from the scanner will not be supported if the scanner is not activated.
- You can visit passport.shining3d.com  for more account-related information.

Follow the instructions provided to complete the login process for the SHINING 3D Passport.

Steps:

1. Go to **Settings** > **My Libre**.
2. Tap **Log in**.
3. Enter a valid email or mobile phone number to receive the verification code (or you can use password to log in).
4. Please read and agree the **Privacy Policy** and **Terms of Use**.
5. Tap **Login**.



Skip

Use Password Use Pin Code

Enter phone number or email

please enter the verification code

Get Code

Unregistered mobile phone number/mailbox verification will automatically register

Sign In

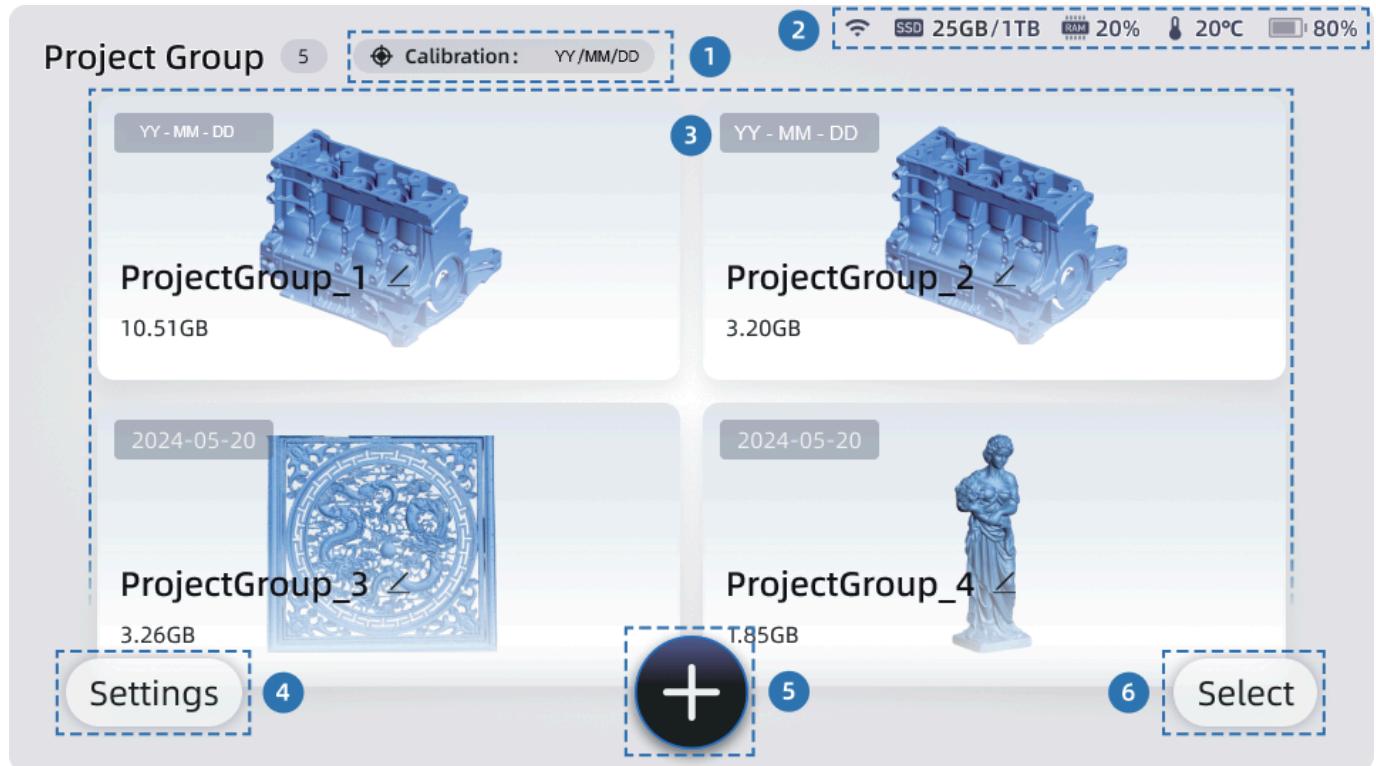
Read and agree [Privacy policy](#) [Terms of use](#)



Interface

After completing the setup, the home page of the scanner will be displayed. Here, you can view all the data stored in the scanner and the current status of the device.

Home Page Overview



Modules	Description
Calibration	Display the calibration date.
Scanner Status	Display the current scanner information, including network, temperature, battery usage, and more. For more details, refer to icon guide .
Project Group List	Display the number of project group.
Settings	The settings allows you to perform calibration , network settings , and general device settings .
Create New Project Group	Create new project group, a new project will be created within this project group.
Select Projects for Editing	Select to delete or export project.

Swipe down from the top of the screen to display the control center panel. Here, you can quickly access and adjust common settings.



Modules	Description
Your SHINING 3D Account	Display your account.
Settings / Power	You can quickly access the settings.
Quick Settings	You can adjust common settings, including calibration, Wi-Fi, screen cast and dark mode.

Settings

My Libre

Tap **Settings** > **My Libre** to view related device information, device serial number, scale bar SN, the last calibration date and authentication information.

Network Settings

Tap **Settings** > **Network Settings** to connect Wi-Fi. For detailed instructions, please refer to [connect to Wi-Fi](#).

General Settings

Tap **Settings** > **General Settings** to set the software language, time zone, auto sleep, cast, volume and dark mode.

- Language: tap > to select preferred display language.
- Time Zone: the time zone automatically set after network connected. To manually set the time zone, tap > , find the most appropriate city and tap **Confirm**.
- Auto Sleep: when the device is not actively running or being used, it will enter sleep mode. In sleep mode, the screen turns off and the scanner stops projecting light. To wake up the device, simply press the power button.
- Cast: projecting scanner screen onto an external screen.

Caution

To avoid connection issues and ensure multiple devices can cast screens simultaneously, connect all devices to a stable 5 GHz network.

- Volume: adjusting the volume of the scanner.
- Dark Mode: when enabled, it switches to a dark UI for low ambient light environment use.

Help

Tap **Settings > Help**.

Tap User Manual to show the QR code and scan it by your phone to view the user manual. Also can check support contact information here.

Storage

Tap **Settings > Storage**.

- Storage: displays the current storage used and available on the device.
- Cache: displays the storage occupied by the cache. Tap **Clear** will permanently delete cache. Clearing the cache will not lead to scanner abnormal.

Cache Type	Cleaned Data Range
Logs	Keep only the logs for the current day and delete other logs.
Images from failed calibration	All

Factory Default

Tap **Settings > Factory Default**.

- **Restore Scan Settings**: all scan settings and project parameters will be restored to default.
- **Factory Default**: the scanner will display an initialization progress bar, once it is complete, you will be taken back to the startup interface. All project group files will not be deleted only if you check **Delete all project group**.

Caution

All settings can be restored to the initial settings, please proceed with caution.

If you check **Delete all project group**, all project files will be deleted and cannot be recovered. Please proceed with caution!

About

Tap **Settings > About**.

- You can view related scanner information, software version and firmware version, and check for updates if the scanner is connected to internet, etc.

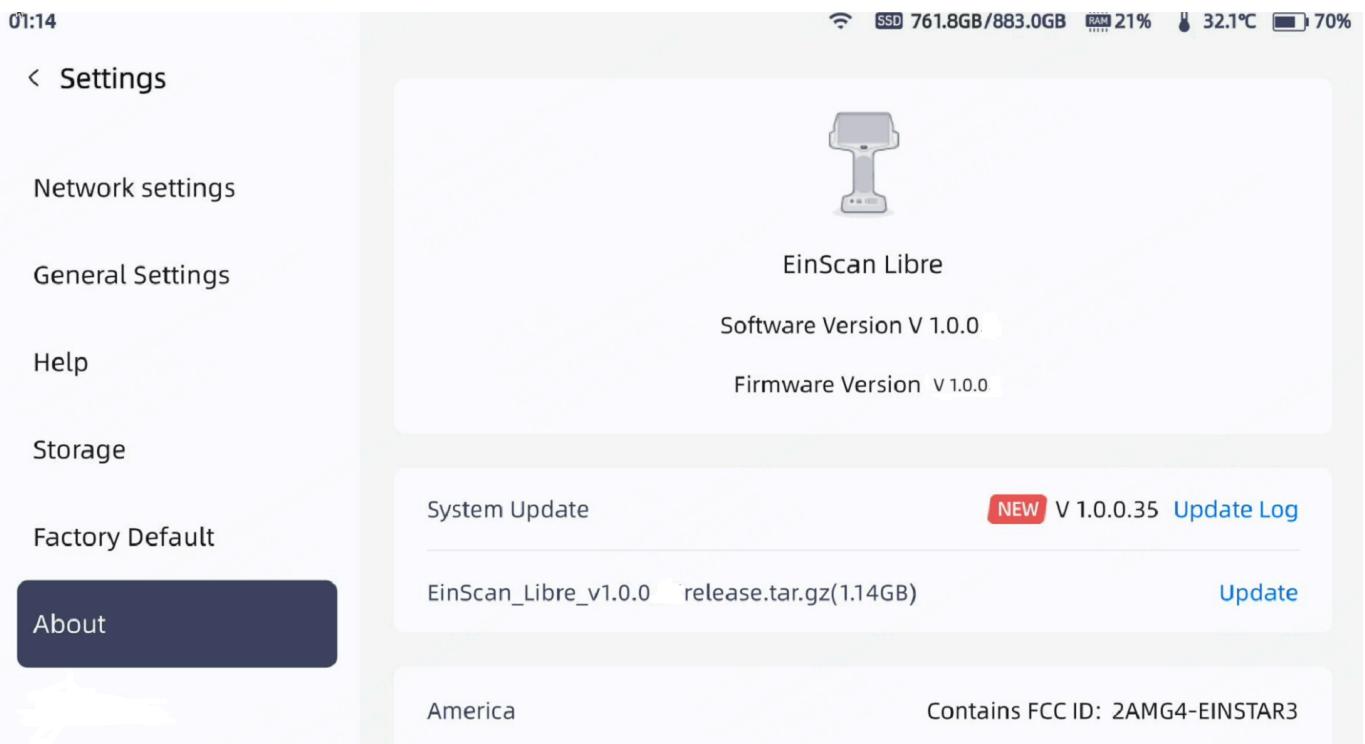
- You can tap **Privacy Policy** or **User Experience** to view the detailed information.
- Software upgrade is to optimize software performance, add new functions or bug fixing. Please save your projects properly before upgrading.

Note

When prompted with **New**, it indicates that there is new software waiting to be updated. You can tap **Update Log** to view the update instructions, and then tap **Update** to update the software.

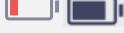
Caution

If you are upgrading the software on the scanner, please ensure that it is successfully connected to the network and battery power (battery level > 20%).



Icon Guide

In the upper-right corner of the screen, you can view the scanner's current status.

Icon	Name	Description
	USB flash drive detected	/
	Wi-Fi connection status	When the Wi-Fi unstable connection, it can impact wireless transmission speed.
	SSD usage percentage	If the remaining space is less than 10 GB, it will be displayed in red, suggesting to clean up local project files or clear the cache in the settings.
	RAM usage percentage	If the usage is greater than 95%, it will be displayed in red, indicating that processing requires a significant amount of memory. It is recommended to create a new project for scanning.
	Display scanner temperature	Red indicates high temperature, it is recommended to pause scanning to cool down; For accuracy measurement, it is suggested to heat the scanner to 31°C - 33°C before calibration and scanning.
	Battery charge level	Red indicates battery level is $\leq 20\%$, it is recommended to charge or replace the battery.
	Power-saving mode	When the CPU temperature is too high, it will enter power-saving mode. Clicking on the icon can exit the mode. The scanner at reduced frame rate and processing speed.
	Calibrate	Red indicates that calibration is required as a reminder.

Calibration

Calibration

Calibration is a key step to ensure the accuracy and tracking of the device. It helps calibrate the system to improve scanning accuracy and data quality.

Access Calibration

- Swipe down from the top of the screen to display the control center panel. Here, you can tap **calibration** to access the calibration page.
- Tap **Settings > My Libre > Calibrate** to access the calibration page.
- You can click the calibration icon  on the home page to enter the calibration process.

Caution

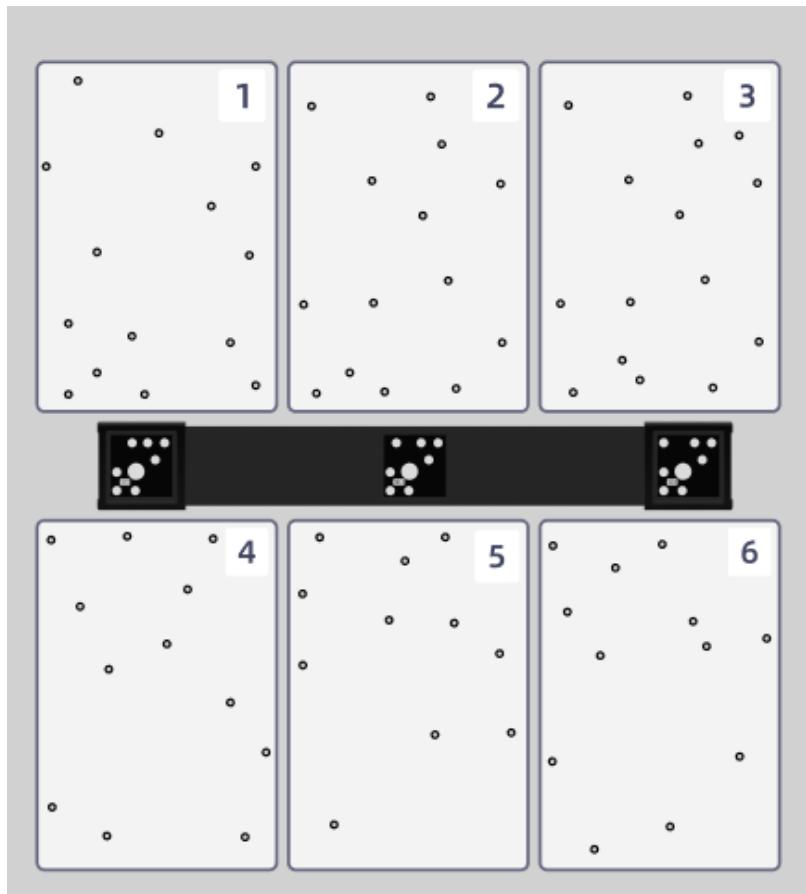
- Do not move the calibration board and scale bar during the calibration.
- Due to factors like shipping, accuracy may decrease, so it is recommended to perform a calibration at the first use.
- If you notice a drop in accuracy during scanning, or frequent scanning errors or tracking lost, it is recommended to recalibrate.
- To ensure the performance, it is recommended to calibrate the scanner at least every 14 days. If more than 14 days have passed since the last calibration, the calibration icon will be displayed in .

Steps

1. After taking out the calibration boards and scale bar, place them on a flat surface in the sequence indicated in the diagram below.

Note

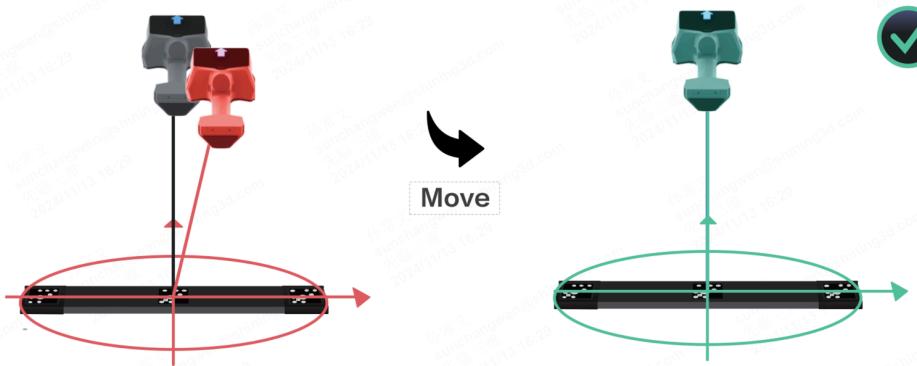
- Place the scale bar in the middle as shown in the diagram, with three calibration boards placed on each side. Make sure to arrange the calibration boards in the order of 1 to 6.
- Match the scale bar with the scanner and verify the scale bar's serial number in **Settings > My Libre**. Ensure that the scale bar's serial number matches the scanner to successfully calibrate.
- Calibration can be done in IR mode and HD mode. If only one mode is needed, calibrate only that specific mode, you can tap **Skip** upper-right corner of screen.
- You can tap **Help** in the lower-right corner of the screen to view the calibration guide to help you with the calibration process.



2. Tap  to start calibration, during the calibration process, slowly move the scanner according to the 3D guide until it aligns with the target position.

 **Caution**

- If the scanner model displayed in red, it means the distance to the target position is too far. Please move closer to the target until the color turns green. When it is green, keep the scanner stable.
- Ensure there are no other markers around the calibration environment, and avoid calibrating on a highly reflective floor.
- According to the guide, ensure that the height, horizontal position, and scan projection range of the scanner align with the illustrated instructions. Once all three position indicators satisfy the prompts, the software will automatically proceed to calibration.



3. Complete all calibration steps until the system indicates successful calibration. After calibration, promptly store the calibration board properly.

 **Note**

- The tilt angle should be at 30°.
- After completing the rapid calibration, tap **Next** in the lower-right corner of the screen to proceed to **HD Calibration**.
- Please calibrate again if the calibration fails.
- Please contact technical support if the calibration still fails after several attempts.

White Balance Calibration

When the texture camera is turned on, it is recommended that you complete the white balance calibration after setting the proper texture brightness. For more details, refer to [Brightness](#).

Calibration Notices

Through calibration, all the parameters are recalculated to ensure the accuracy of the device and the quality of scan data.

Caution

- Use the calibration tool supplied with the scanner. A mismatched calibration tool will lead to scanned data generation failure or a low accuracy.
- The device cannot be calibrated if the temperature is below -10 °C or above 50 °C.
- Always make sure that both sides of the calibration tool are clean and free of scratches.
- Do not place heavy objects or sundries on the calibration tool.
- Keep the calibration tool away from corrosives, metals or sharp objects to avoid corrosion or damage.
- It is better not to wipe the calibration tool. Do not wipe it with any chemical liquid. If need be, gently wipe it with a clean wet cloth.
- After using the calibration tool, put it back to the box.

Note

Calibration is required when:

- The scanner is used for the first time.
- The scanner is severely shaken or jolted, for example, during transport.
- The accuracy drops during scanning, such as frequent alignment failures or frequent indications of tracking lost.
- The scanned data is incomplete or its quality drops.
- The scanner has not been calibrated for more than 14 days. In this situation, the software will prompt you to calibrate the scanner.
- During the calibration process, please ensure that there are not a large number of markers around the calibration board, so as not to affect the calibration accuracy.

Scan

Scanning Workflow

Preparation



Create a Project File

Please select the appropriate [scan mode](#) based on the actual scanned object and scene.

Prepare for scanning



Preview

Check scan quality and adjust scan parameters. Support [brightness adjustment](#), [distance settings](#), [white balance](#) and [scan settings](#).

Data capture



Scanning

Move the scanner to capture a series of frames. During scanning, support [brightness adjustment](#), [distance settings](#).

View results



Pause & Edit

Pause scanning to review the scan results. Support [data editing](#) and [adjustment of point distance](#).

Generate mesh



Mesh

After generating the mesh, you can add [texture mapping](#), [optimize the mesh](#) and [export the files](#).

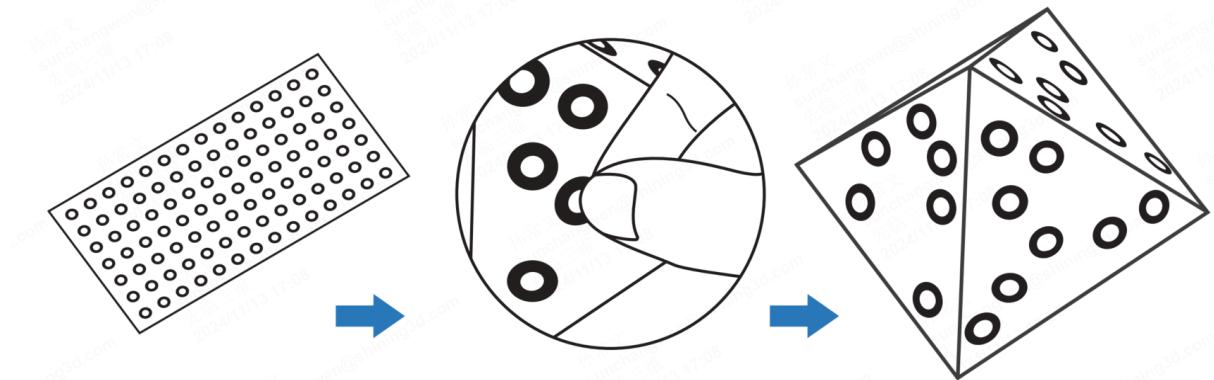
Pre-scanning

Before Scanning

- Ensure the workspace is clean and free of any moving or interfering elements.
- Ensure that the object to be scanned does not deform or move during the scanning.
- Ensure that the scanner has sufficient power, with a recommended battery level of more than 30%.
- For objects without geometric features, or for transparent/ reflective items, please perform pre-processing before scanning as shown in below.

How to scan less geometric feature objects?

If the object to be scanned does not have rich geometric or texture features, it is recommended to apply markers on the surface of the object and use the markers alignment mode.

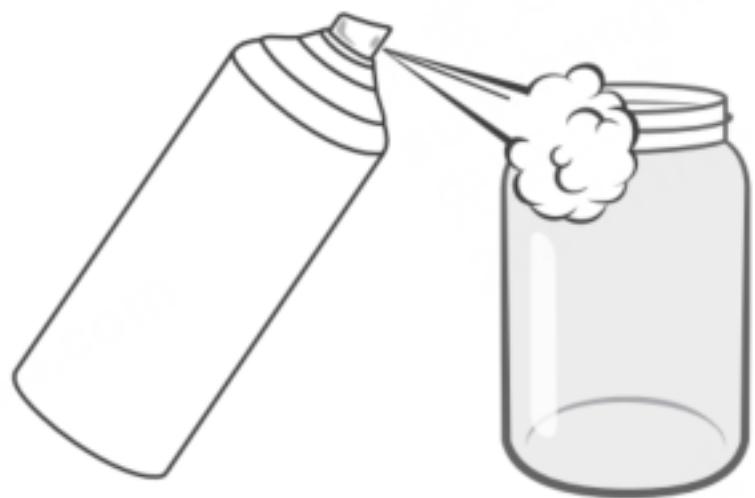


Note

- Apply the markers irregularly on the surface of the scanning object.
- Do not apply markers on edges or sharp corners.
- Ensure the spacing between markers allows the scanner to recognize more than four markers in a single frame during the scanning process.
- If the object to be scanned is too small, you can fix the object on a workbench and apply markers on the workbench.

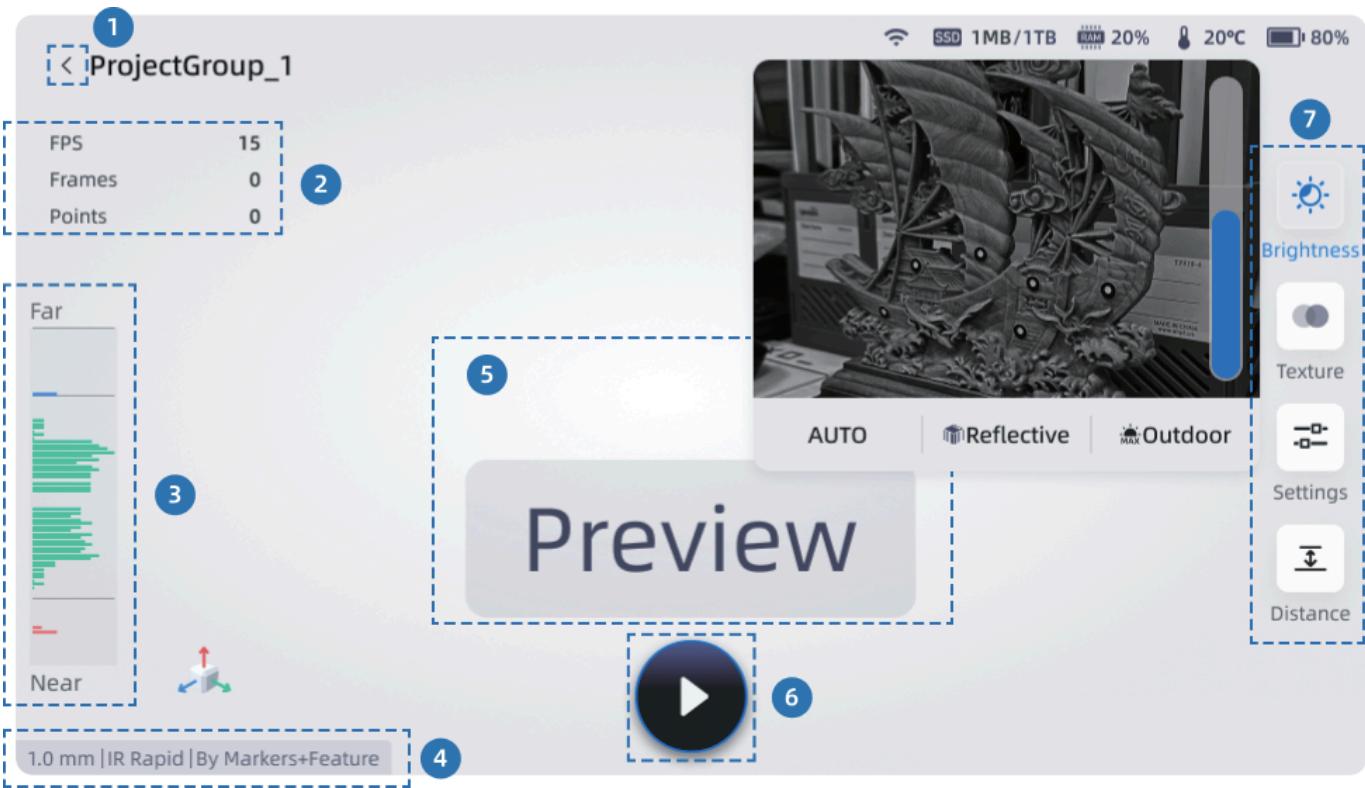
How to scan highly reflective/transparent objects?

For transparent and highly reflective objects, such as glasses, mirrors, and polished metal surfaces, you can apply scan spray or other non-reflective powder on the surface of the object.



Scan Interface

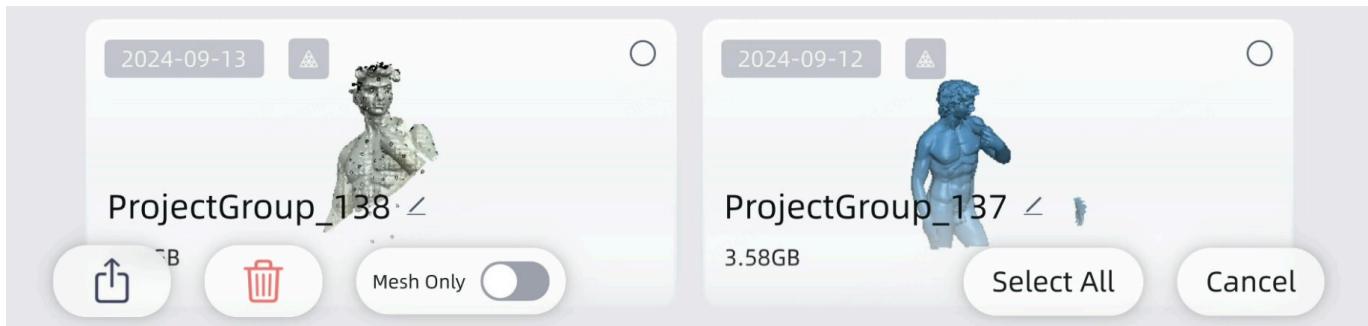
After creating a new project, tap the **Start** icon in the lower-right corner of the screen to enter the scan interface.



Number	Section	Description
1	Back to Home Page	/
2	Real-time Data Count	Display scan frame rate and total number of point cloud in real-time.
3	Scan Distance Indicator	When displayed in green, it indicates an appropriate distance; yellow indicates the distance is too close; blue indicates the distance is too far.
4	Scan Parameters	Display the resolution, scan mode, and alignment method of the current project.
5	View Window	Display the scanned data.
6	Start Scan	Switches between three scan states. The basic sequence is: Preview > Scan > Pause .
7	Scan Settings	For more details, please refer to the scan parameter settings .

Create a Project Group

A project group is a collection of multiple single project files. It allows multiple single projects to be aligned together or merged for mesh processing. It is usually recommended that the projects in a project group come from the same object. You can open the project group and click  to create a new single project within the group.



On the screen, tap  to create a project file. By default, the file name is Project 1. Then, select the scan mode, alignment mode and point distance to prepare for scanning. For more details, refer to [Scan Mode](#).

Note

- When creating a project file, a project group is automatically created, which includes the created project file.
- Multiple project files can be created within a project group, and the project group name can be modified.
- Within a project group, multiple projects utilizing different scan modes can be created; however, only two distinct resolutions are allowed: IR mode and Laser HD mode. If an IR mode project (either IR Rapid or IR Adaptive) already exists within the group, you will not be able to set the resolution when creating a new IR mode project, as it will default to the resolution of the existing IR project. The same rule applies to Laser HD mode.
- If using a project group, please transfer the project group data to the PC software for alignment / mesh processing. For more details, refer to [transfer data](#).

When to use a project group?

- When you need to scan both the front and back sides of an object.
- When the object to be scanned is too large and the software indicates insufficient memory, it's recommended to scan in multiple projects.
- When different parts of the object have different materials, requiring different scanning modes or alignment methods.
- When you need to use two different resolutions on the same object.
- When you need to output mesh data for different parts of the same object.

Note

- **Project group**
 - The screen displays not only the list of project groups, but also other display contents such as thumbnails of scanned models, scan data, project group names, and file sizes.
 - The model is shown as the thumbnails. If there are no project files within the project group, nothing will be displayed.
 - The scan date will reflect the recent date of project file updates.
 - [Modifying the project group name](#) is supported. The name will be displayed up to 10 characters, with "..." displayed if it exceeds the limit.
- **Project**
 - Clicking a project group will display a list of projects within that project group.
 - Each project file will display detailed information about the project, such as its name, [scan mode](#), [alignment mode](#), point distance, etc.
 - After opening a project file, you can continue to scan or edit data.

Related Operations

Rename Project Group

On the right side of the project group name, tap  to rename the project group.

Delete Project Group

On the screen, tap **Select** in lower-right corner to enter the project group editing page. Make selection, tap  to delete selected or all project groups.

Exporting to USB Flash Drive

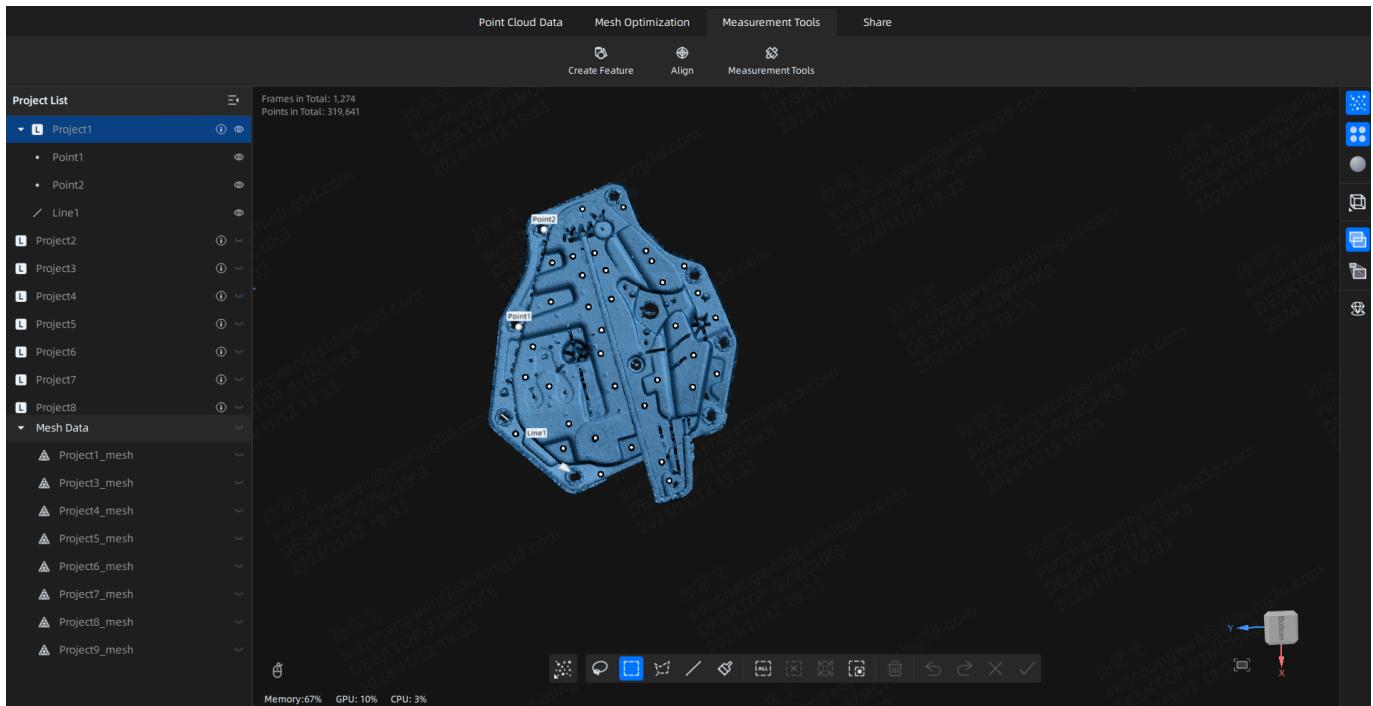
On the screen, tap **Select** in lower-right corner to enter project group editing page. Tap  to export the project to the USB flash drive.

Note

- To export to a USB drive, you need to log in to your SHINING 3D account first.
- The project file can only be exported if there is a USB flash drive connected available.
- If the transmission of the project file is interrupted, the already transferred data will not be cleared, and you can continue transferring the remaining files.

Mesh Only

1. On the screen, tap **Select** in lower-right corner to enter project group editing page.
2. Enable **Mesh Only**.
3. Select the project group with mesh data, then click  to export the project to the USB flash drive.



Note

- The project group containing mesh data is identified by the icon  in the upper-left corner.
- The project group without mesh data can not be selected when the **Mesh Only** is enabled.

Scan Mode

How to choose the right mode?

Material: For black or reflective materials, it is recommended to use the IR Adaptive or Laser HD mode. For regular materials, the IR Rapid mode is recommended.

Details: For objects requiring high detail, the Laser HD mode is recommended.

Size: For objects larger than 1 meter x 1 meter x 1 meter, the IR mode is recommended. For objects smaller than this size, the Laser HD mode is recommended.

Accuracy: For objects requiring high accuracy, the Markers or Global Markers alignment mode is recommended.

	IR Rapid	IR Adaptive	Laser HD
Resolution (mm)	0.5 ~ 10.0	0.5 ~ 10.0	0.05 ~ 3.0
Alignment	Markers, Feature, Global Markers, Texture, Hybrid	Markers, Global Markers	Markers, Feature, Global Markers, Texture, Hybrid
Texture	Support	/	Support

Note

- Texture is applied by default in IR Rapid and Laser HD mode.
- In IR Rapid Mode, if texture is on, Range Indicator Box is not available.
- When using Texture Alignment, it is able to turn off texture in order to save computing recourse. (The final mesh file will not contain texture color).

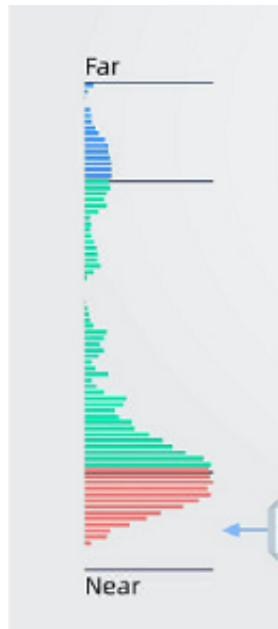
Scanning

Scan Settings

Before, during, and after scanning, you can set different parameters. For detailed information, please refer to [scanning workflow](#).

During the preview, you can check the quality of the scanning data and adjust parameters based on the displayed results.

Distance Indicator



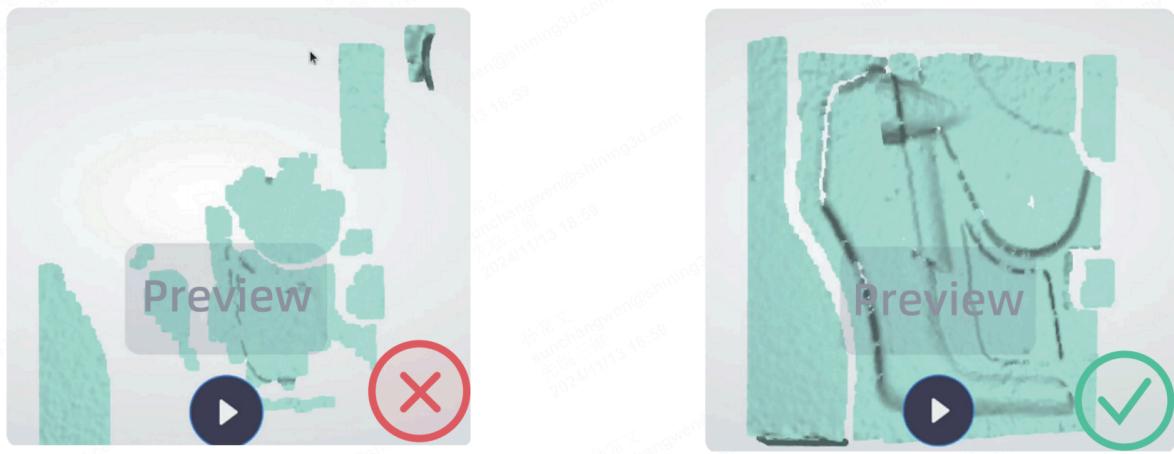
Indicate working distance between the scanner and the object.

- **Green**: proper
- **Red**: too close and the screen border is also displayed in orange color.
- **Blue** : too far and the screen border is also displayed in blue color.



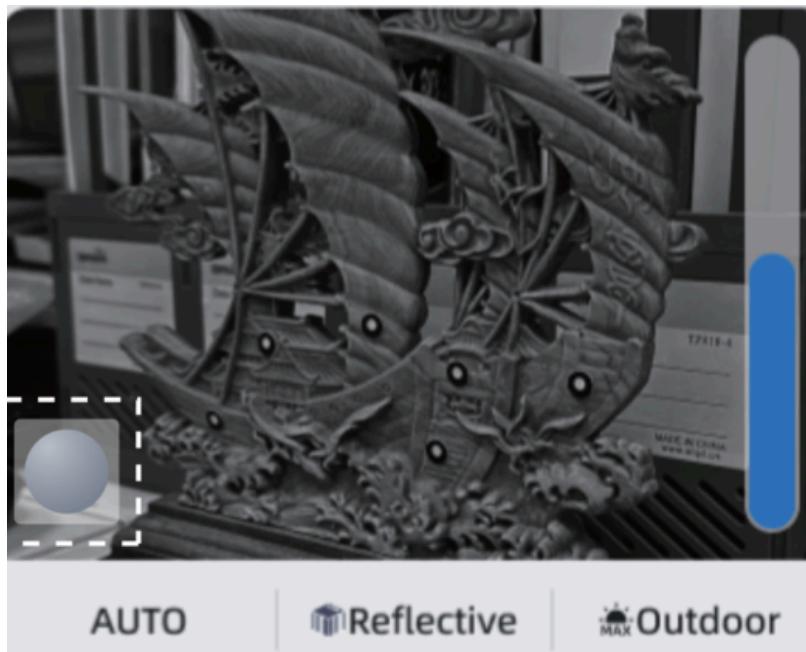
Brightness

Move the scanner to an appropriate distance (Scan Distance Indicator shows most in green), and you can adjust the brightness by sliding the brightness level in the camera window. During the adjustment, you can check if the data in the view window is fully visible.



Note

-  adjusts the brightness of the stereo cameras, this brightness level determines the amount of data that can be scanned. If you want to adjust the brightness of the texture data, you can tap  to switch to adjusting the brightness of the texture camera (available only for texture scanning).
- You can also tap **AUTO** to enable auto exposure, which will automatically adjust according to the object's color.
- If the object to be scanned has a reflective surface, it is recommended to enable **Reflective**. If scanning outdoors, it is recommended to enable **Outdoor**.

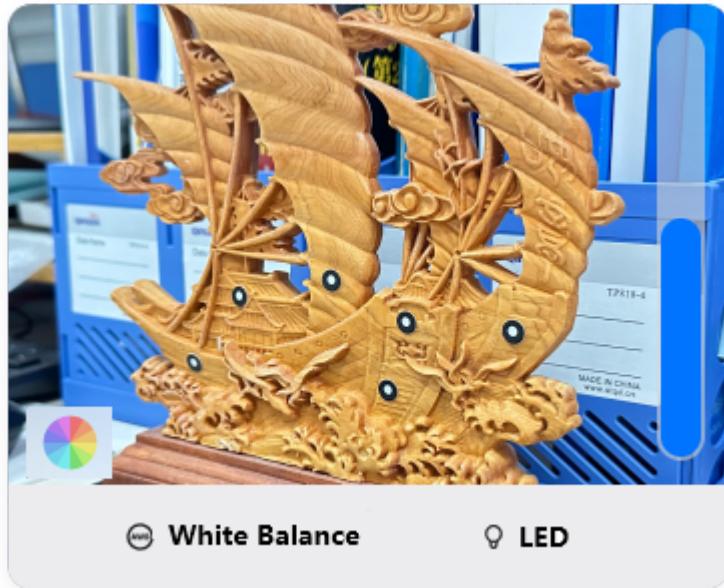


- Only projects with texture enabled support texture camera brightness adjustment. Tap  in the camera preview to show the texture camera preview.

- When the texture camera is turned on, it is recommended that you complete the white balance calibration according to the guide before scanning. You can place the calibration board on a horizontal flat surface with its back site (white) lying towards up or directly scan the white wall for white balance.

Note

When you adjusting the texture brightness or changing the scanning environment, it is recommended to white balance.



- Tap  to show the texture camera. When the outdoor mode is enabled, the LED will be automatically turned off; when the outdoor mode is disabled, the LED will be automatically turned on.
- If the object surface is dark or reflective, increasing the scanning brightness or enable reflective mode recommended.

Settings

Data Quality Indicator

It is used to inspect the quality of the scanned model based on the color map, which is only available before meshing.

Range Indicator Box

When the Range Indicator Box is enabled, the scanner will project a green box and center point onto the objects to show the scan area when using invisible IR light mode.

Plane Detection

Plane detection can reduce the data misalignment. When you choose either **Feature Alignment** or **Hybrid Alignment**, the **Plane Detection** option is enabled by default and displayed on the screen.

Caution

It is not recommended that you enable this feature when scanning objects with minimal texture details, as it may compromise scanning quality.

Alignment Mode

You can change the alignment mode if there is no scanned data.

Marker Size

During the scanning process, only the marker diameters that have been selected can be recognized, while any unselected diameters are ignored. In IR Rapid or IR Adaptive mode, it supports 6 mm and 12 mm. In laser HD mode, it supports 3 mm, 6 mm and 12 mm.

Working Distance

Change data collection distance range to filter out background or get maximum data amount.



1.0 Resolution

Adjusting Resolution

Tap  to open the settings window.

1. You can tap  /  /  to quickly switch between 1.0 mm, 2.0 mm, 3.0 mm resolutions.
2. Tap the screen and slide the arc ruler to accurately adjust the resolution.

Note

- If you modify the resolution of a project file in a project group, all project files within the same scanning mode (Rapid/HD mode) of the project group will have their resolution adjusted accordingly.
- If you increase the resolution, please ensure that the available memory space is greater than 15 GB.
- During the scanning, you can adjust the resolution. However, once the mesh generation are completed, you cannot adjust the resolution anymore. You can tap **Scan** in the lower-left corner or  of the screen to go back to scan, and change the resolution and generate the mesh again, which will overwrite the previous mesh data.
- The project file stores the latest scan data and mesh data.

Cutting Plane

Create cutting plane

Tap  to open the create cutting plane window.

1. You can switch selection between **Point Cloud** and **Markers**.

Note

Require 3 or more markers to create a cutting plane.

2. Tap **Select** to enable, and slice model data to select data.

3. Tap **Create** to create a cutting plane.

- Tap **Exit** to undo the operations and return to the scan page.
- Data underneath the plane will be shown in red. Tap **Apply** to delete the red area data.

Edit Cutting Plane

Tap on the created clipping plane to enter the editing mode. Tap on any other area to exit the clipping plane editing mode.

Task Objective	Operation
Move Cutting Plane	Move the cutting plane by operating the active bar and dragging the arrow.
Rotate Cutting Plane	Cutting plane can be rotated around the axis by dragging the small ball.
Delete Clipping Plane	Tap  to delete the created clipping plane.



Texture

When texture is enabled, you can view the real colors of the scanned object.



Note

When using texture alignment, texture is enabled by default.

Start Scanning

The point cloud is a collection of data in a 3D coordinate system (xyz), representing the external surface of an object or environment. Imagine each point as a tiny dot floating in space. You can obtain a large amount of point cloud data by scanning objects using a 3D scanner, which can be used for subsequent model rendering and measurements.

During scanning, it is important to direct the scanner at the object. Follow the software prompts to maintain an appropriate working distance and smoothly cover the entire surface of the scanned object to complete the scan.

If you are using global markers alignment, it will increase the accuracy in general and it's useful for scanning thin objects. When using global markers alignment, you will need to scan twice. The scanner only captures markers in the first scan, after optimizing all markers, the scanner captures point clouds.

Caution

- When scanning global markers, the projector is off which will not affect markers' recognition and accuracy.
- If high precision is required, it is recommended to apply the scale bar when scanning global markers to optimize the accuracy.
- Please make sure to properly place the scale bar before scanning.
- It is recommended to position the scale bar above the object, slightly off-center, to avoid obstructing the markers.
- Match the scale bar with the scanner and verify the scale bar's serial number in *Settings > My Libre*. Ensure that the scale bar's serial number matches the scanner to successfully calibrate.

1. Face the object directly for scanning

Click  to start scanning. During scanning, keep the scanner's cameras facing the object.

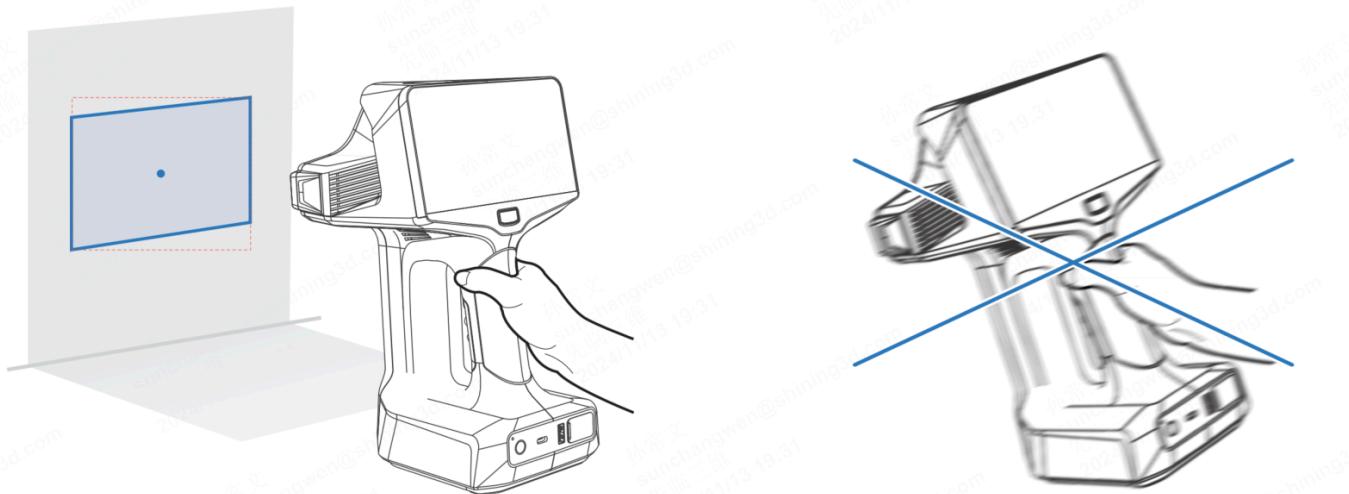
Note

When scanning global markers, it is recommended to first position the scale bar above the object.



2. Movement

During the scanning process, please monitor the data on the screen in real time, and move the scanner gently and steadily until fully capture the object.



Caution

- When selecting the global markers alignment, you can tap the start scan button on the screen or press the scan button on the device to capture markers that has been placed on the object.
- After creating a new project file and selecting the scan mode and alignment, they cannot be changed later if there is scanned data.

Note

- When scanning, make the scanner directly facing the object and keep it at a proper distance, ensure the histogram shows most green.
- When scanning, you can adjust the brightness according to the environment brightness or color of the object.
- During scanning, you can use gestures  to zoom in or out of the data display.
- After starting the scan, you will not be able to switch the scanning or alignment mode, so make your selection before scanning. If a  'tracking lost' prompt appears, move the scanner to a scanned area, re-establish tracking, and then continue.

Losing and Resuming Tracking

As you move the scanner, it captures a series of frames per second with overlapping areas. Which are used to track the object. If the scanner fails to capture enough overlapping areas, it may lose tracking.

Tracking lost may happen

- Moving the scanner too fast.
- Scanner moves away from the existing scanned part and there is no enough common area can be used for alignment.

The Scanning Process



Start Scan

After [previewing](#), tap the Start Scan icon on the screen or press the scan button on the scanner to begin capturing the point cloud data of the object. Tap the start button again to pause the scan.

Data Editing

When scanning, you can edit or delete data and rescan if needed. For more details, refer to [data editing](#).

Meshing

Meshing is to convert the point cloud into a triangular mesh surface. The meshed data can be directly used for rendering, measurement or printing. For more details, refer to [meshing](#).

Import Data

Supports export the mesh data. For more details, refer to [data transmission](#). You can select one or multiple file format (.stl, .obj, .ply, .3mf, .asc and .las) to transfer it to your PC.

Pause and Resume Scan

After the scan is sufficient, click  to pause the current scan.

While paused, you can edit the scan data, continue scanning, or start a new project.

Resume Scanning

- Realign the scanner to the previously captured area and maintaining the original scanner orientation toward this area.
- Once recognized, the scanner will automatically resume scanning.

Data Editing

After entering the editing mode, unnecessary point cloud or markers can be deleted.

Icon	Name	Description
	Rotate / Select	Tap to switch between single-finger drag for rotation/ lasso selection
	Markers/ Point Cloud / Point Cloud + Markers	Switch the data type selection to Point Cloud/ Markers/ Point Cloud + Markers
	Expand	Perform connected selection based on the selected point cloud data.
	Invert	Select all the unselected data.
	Unselect	Cancel all selection.
	Undo	Revert the most recent deletion action and restores the last deleted data.
	Redo	Revert to the data before the last edit.
	Delete	Delete the selected data.

Caution

Deleting all markers is not supported. You must keep at least 3 markers.

Gesture Interaction

Gesture interaction enables natural and convenient manipulation with 3D models.

Caution

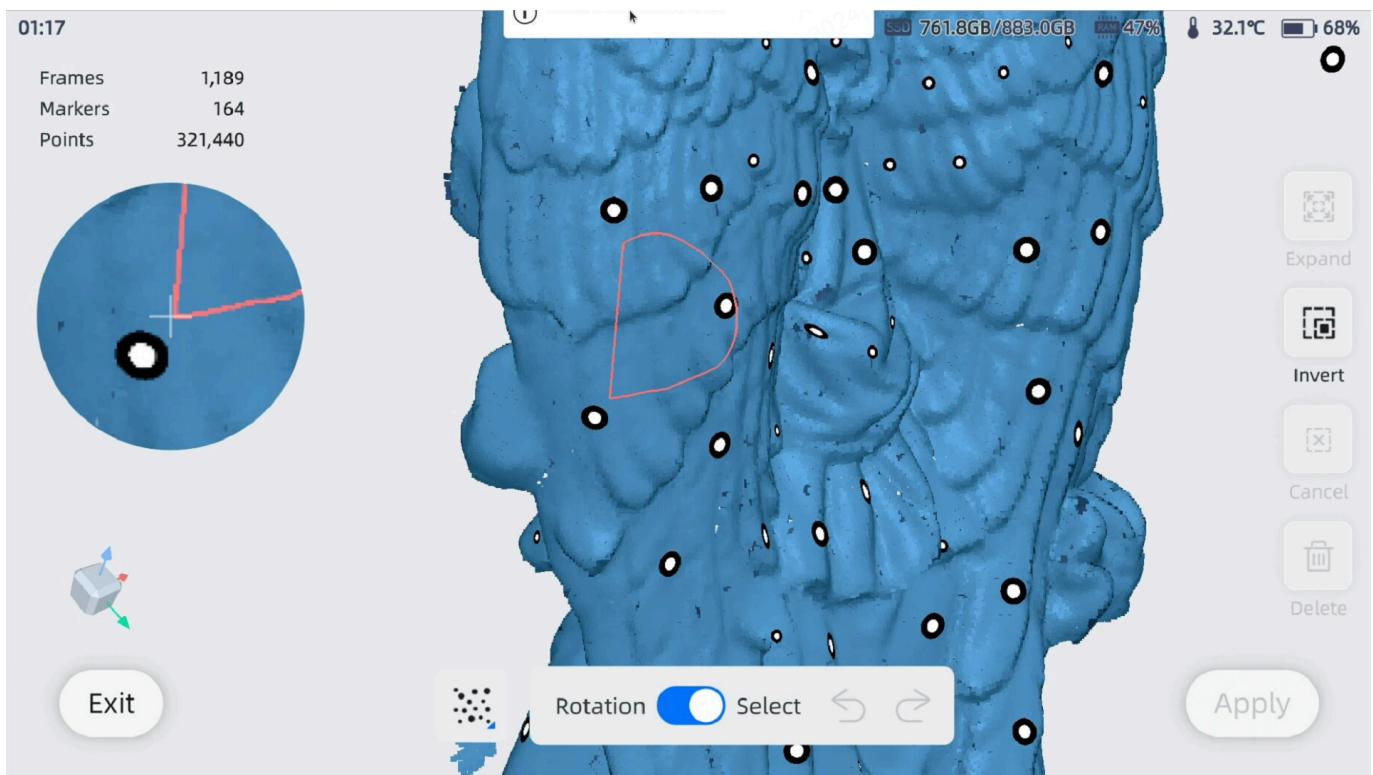
Gesture interaction is not supported during preview or scanning process.

Gesture Interaction Description

Operation	Command
 Single-finger drag  Rotate  Select	<ul style="list-style-type: none">• Rotate 3D Model• Lasso selection (only in editing)
 Two-finger pinch	Zoom in/ out 3D model
 Two-finger drag	Pan 3D Model

Magnifying Circle

When pausing or editing, you can press and hold a specific area of data with a single finger to display a zoom effect to make precise selection.



Meshing

Meshing

Meshing is the process of converting the point cloud into a surface composed of interconnected triangles. The resulting mesh data can be utilized for various purposes, such as rendering, measurements, or 3D printing.

Note

- When the texture is turned off, the default export format is .stl; when the texture is turn on, the default export format is .obj. Multiple formats can be selected simultaneously.
- Files can be renamed when export.

Mapping

Note

Only projects with texture enabled support texture mapping function.

Texture mapping involves applying colors and textures to the surfaces of 3D models, giving them their base appearance. Diffuse maps are used to add basic colors, patterns, and textures to surfaces, making objects look more realistic by mimicking their real-world appearance.

Click  to do texture mapping.

Caution

- When exporting files without applying texture mapping, the exported files will not contain texture image information.
- Before exporting to OBJ, PLY, 3MF, LAS format, it is recommended to perform mapping.

Optimization

Click  **Mesh Optimization** on the right side of the screen to optimize the mesh data.

Function	Description
Watertight	<ul style="list-style-type: none">• Unwatertight: unclosed model stays the way it is scanned. Its processing time is shorter than that of the watertight model.• Watertight: all holes will be filled automatically. This type of data can be directly used for 3D printing. <p>⚠ Caution</p> <ul style="list-style-type: none">• Only in watertight mesh can set model quality.• The watertight mode automatically fill the open area on the model surface to create a geometrically enclosed 3D model.
Optimization	<ul style="list-style-type: none">• None: no optimization.• Standard: optimize data slightly and preserves data characteristics.• Medium: reduce the noise on the surface of the scan data.• High: reduce the noise on the surface of the scan data and optimize scan details. <p>⚠ Caution</p> <p>When the optimization option is set to "High", some details in the data may be lost.</p>
Smooth	Smooth noise on the surface of the scan data.
Remove Small Floating Parts	Delete any small floating parts that is not connected to the main data. The higher the value, the more isolated faces will be removed. Tap the screen and move the slider to adjust the value for removing isolated faces. <p>⚠ Caution</p> <p>A value of 0 indicates that isolated faces will not be removed.</p>
Max Triangles	Generate the mesh whose number of triangles is under the setting value. Once enabled, it will limit the maximum number of triangles. Tap the screen and move the slider to adjust the value for removing isolated faces. <p>⚠ Caution</p> <p>Please set a reasonable value for the maximum number of triangles to avoid excessive simplification that may result in a decrease in data quality.</p>

Function	Description
Fill Small Hole	<p>Auto fill the small hole with a perimeter less than or equal to 10 mm (by default). You can set the hole-filling perimeter.</p> <p>⚠ Caution</p> <p>When the mesh mode is set to "watertight", the screen will not display the "Fill Small Holes" option.</p>
Marker Hole Filling	<p>Fill the surface holes that were not scanned due to being occluded by markers.</p> <p>⚠ Caution</p> <p>When the mesh mode is set to "watertight", the screen will not display the "Marker Hole Filling" option.</p>
Remove Spike	<p>Remove spike-like data on the surface.</p>
Recommended Parameters	<p>When turning on, it will automatically use the recommended parameters for meshing.</p>

Export Mesh

You can export the mesh data to a USB flash drive by following these steps:

1. Insert the USB flash drive into the device.
2. Click  **Export** to export the current mesh.
3. Select the desired format, including .stl, .obj, .ply, .3mf, .asc and .las.
4. Rename the mesh file (optional).

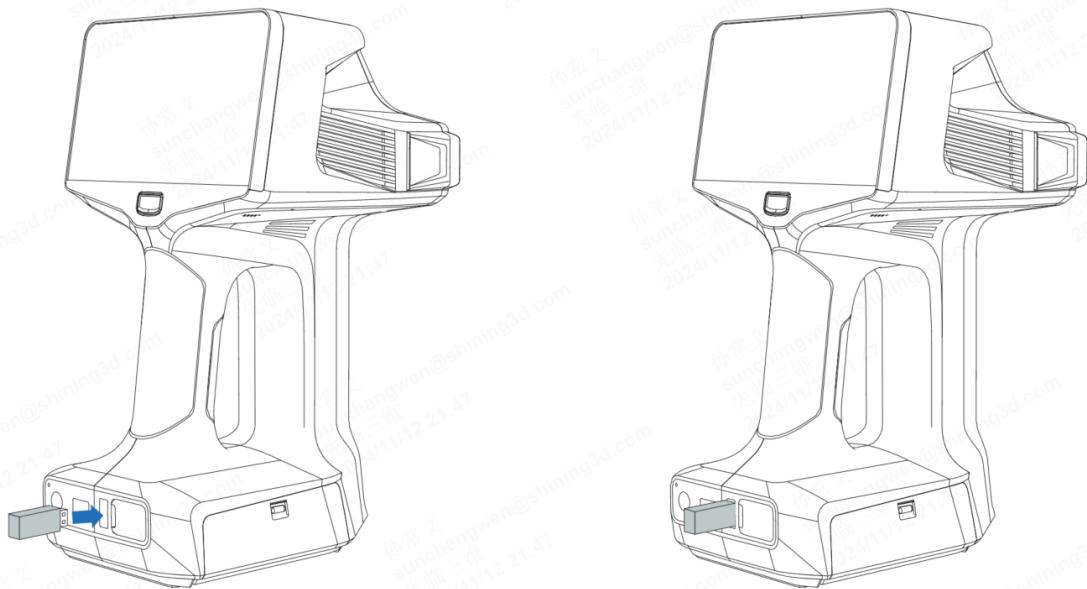
Note

- To export mesh data, you need to log into your SHINING 3D account first.
- By default, the .stl format is selected for non-textured models, while the .obj format is selected for models with textures. You can choose multiple formats simultaneously.

Data Transfer

Transfer via USB Flash Driver

Project group can be exported to a USB flash drive.



Insert a USB flash drive, it will show  on the screen when it's connected.

Select the project groups, then tap  to export them to the USB flash drive.

Note

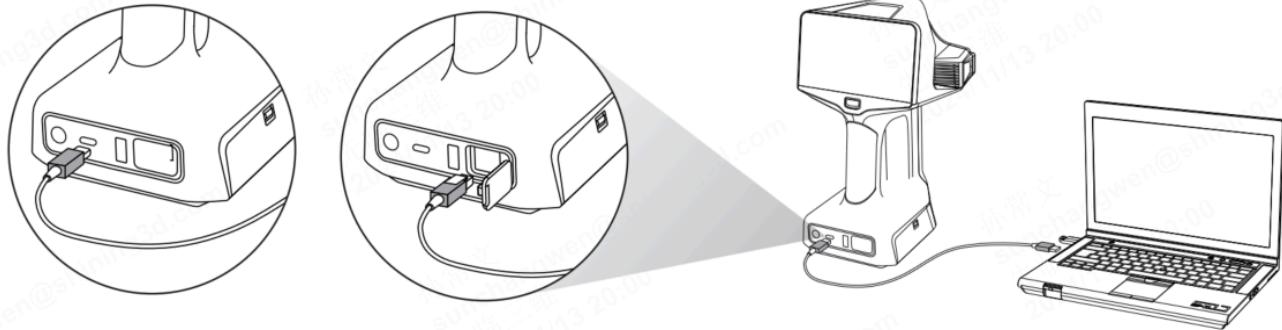
- The transfer time depends on the size of the project file, so please remain patient.
- Project file transfer may be interrupted due to poor connection or other reasons.
- Scanning cannot be continued while data transfer is in progress.

Transfer via Cable

Use the included USB-C to C cable to connect the scanner and your PC, or use the ethernet cable. The USB-C to C cable can provide faster data transfer speeds.

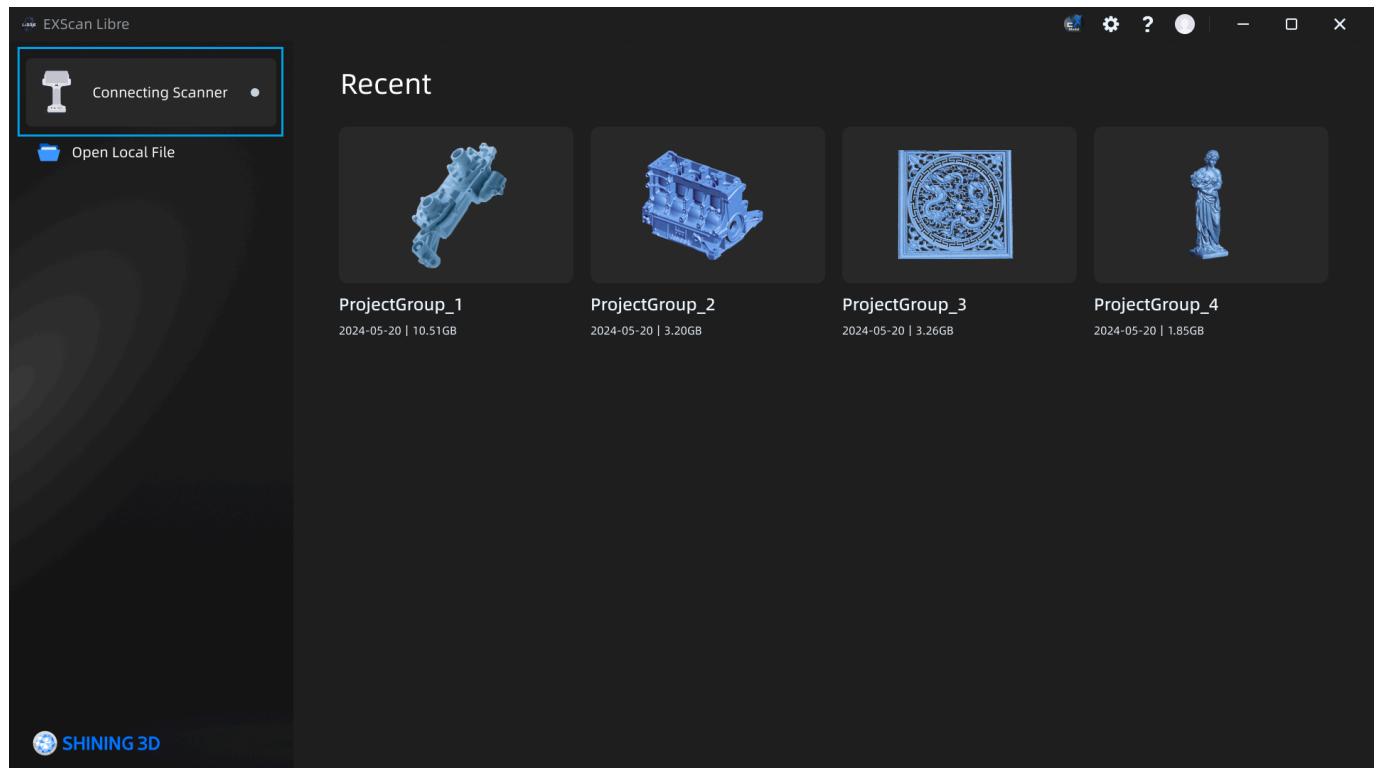
Note

- RJ45 cable is 1.5 meters.
- The Ethernet port is not supported to connect to the public network.

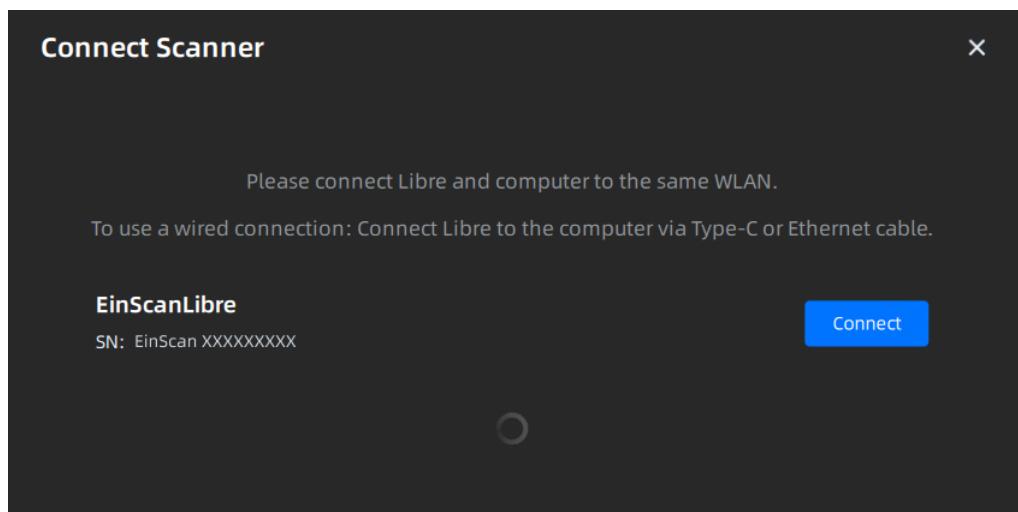
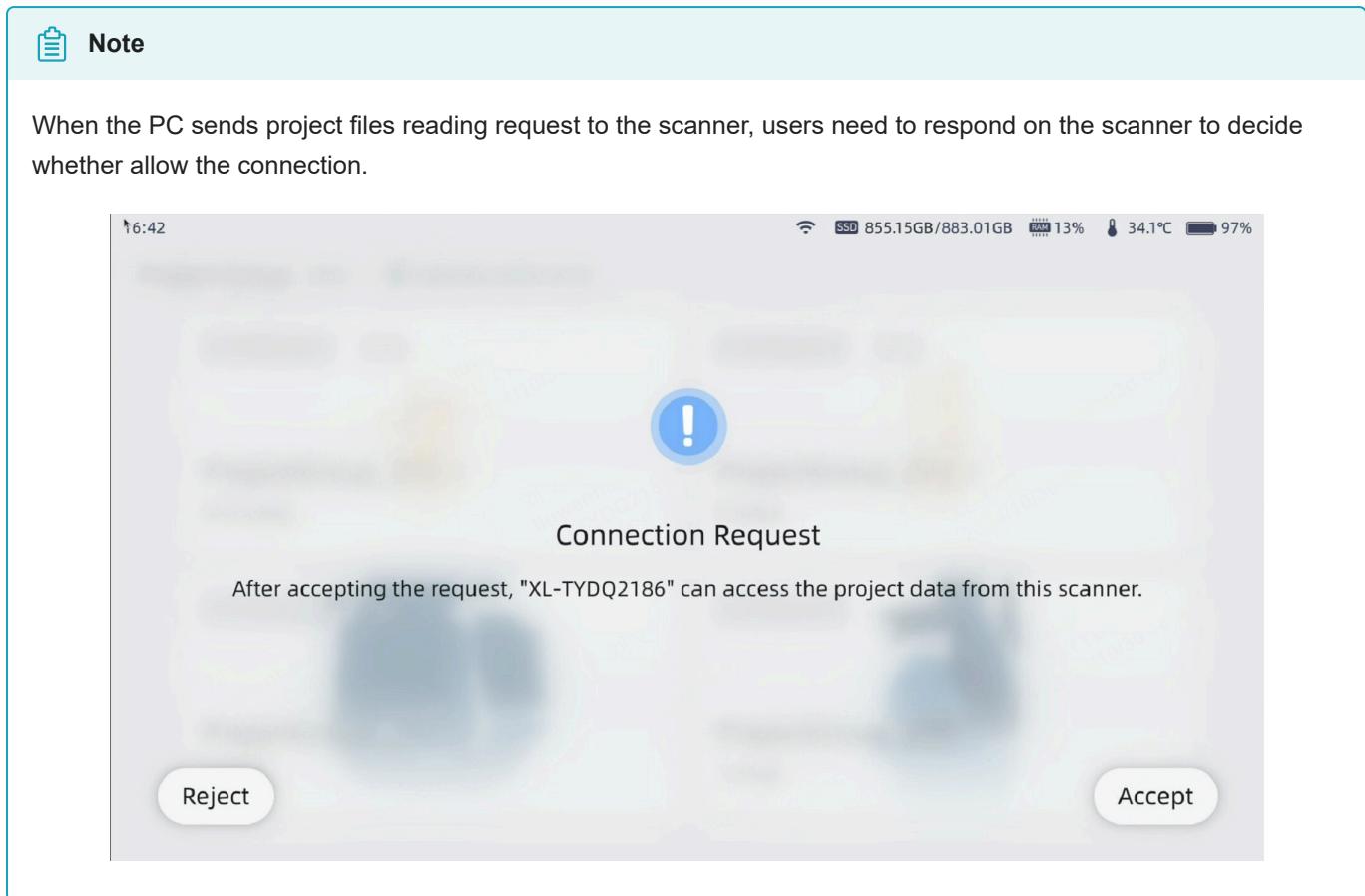


Steps

1. After a wired / wireless connection is made, you can click **Connect Scanner** on the home page of the EXScan Libre. This will display all available scanners online. Select your scanner and click the button **Connect**.



2. After the PC sends a request, click **Accept** on EinScan Libre to successfully establish the connection.

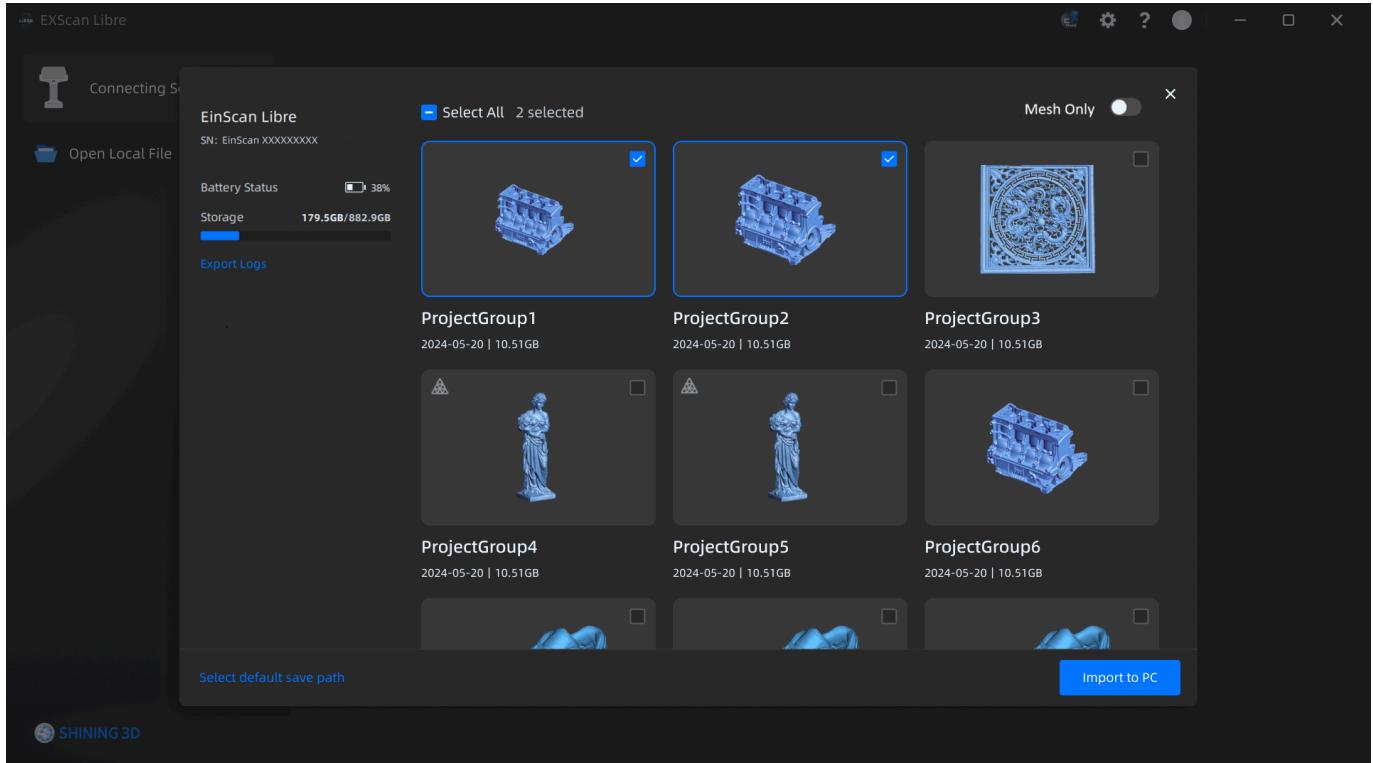


3. Once the connection is successful, the EXScan Libre will display the list of project groups.
4. Check the project groups that need to be imported to the local computer.

Note

- The project group containing mesh data is identified by the icon  in the top left corner.
- The project group without mesh data can not be selected when the **Mesh Only** is enabled.

5. Click **Import to PC** to start the data transfer.



Device Status

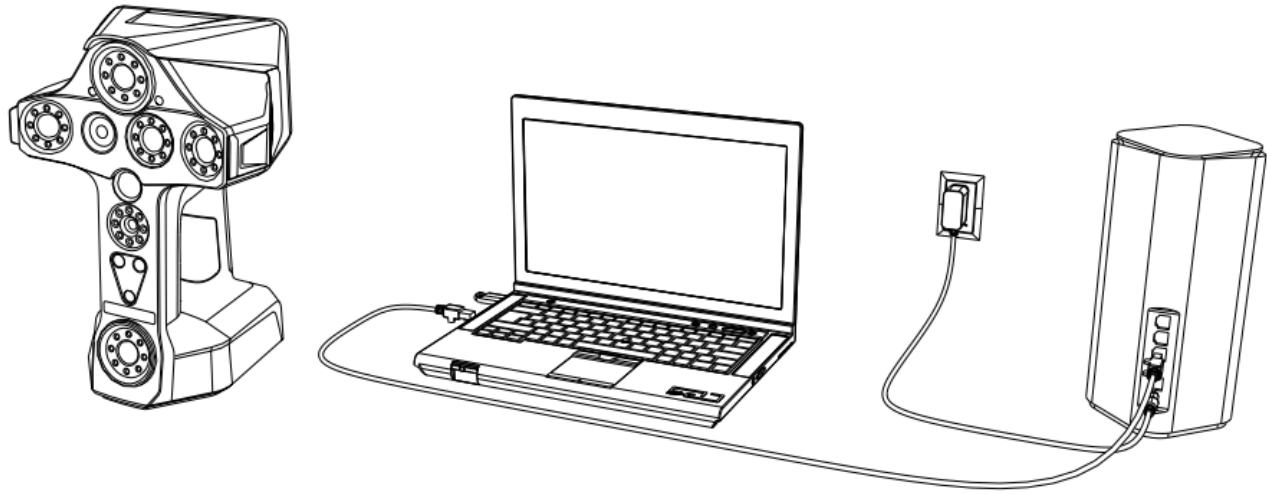
- Disconnected: a gray dot on the right side indicates a disconnected scanner.
- Connected: a green dot on the right side indicates a connected scanner.
- Data Transfer: the transfer progress is displayed on the right side.

Caution

- Support transferring up to 30 project groups each time.
- When scanner disconnected, the ongoing transfer of project files will be automatically canceled.
- Scanning cannot be continued while data transfer is in progress.

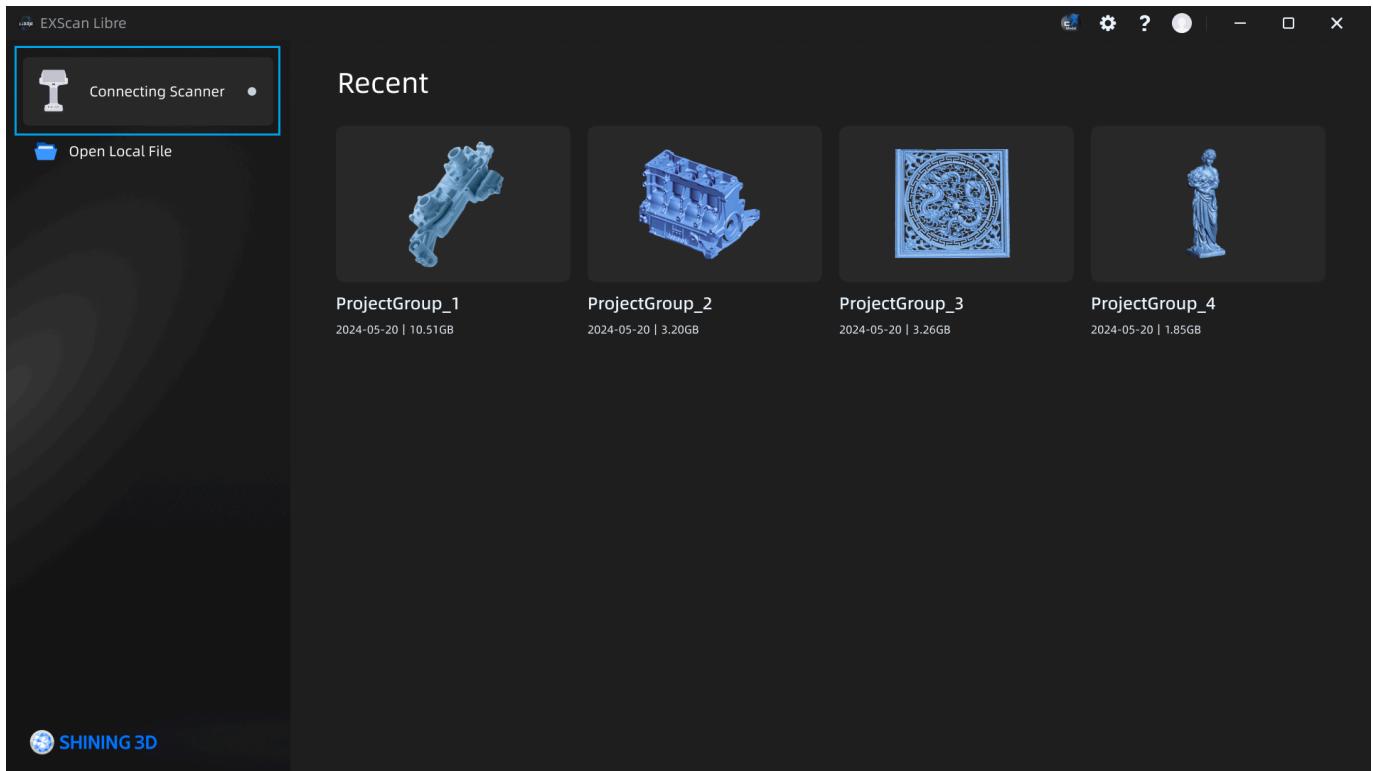
Transfer via Wi-Fi

Connect both the scanner and the computer to the same Wi-Fi (LAN). On the scanner, go to **Home > Settings > Network Settings** to select Wi-Fi.



Steps

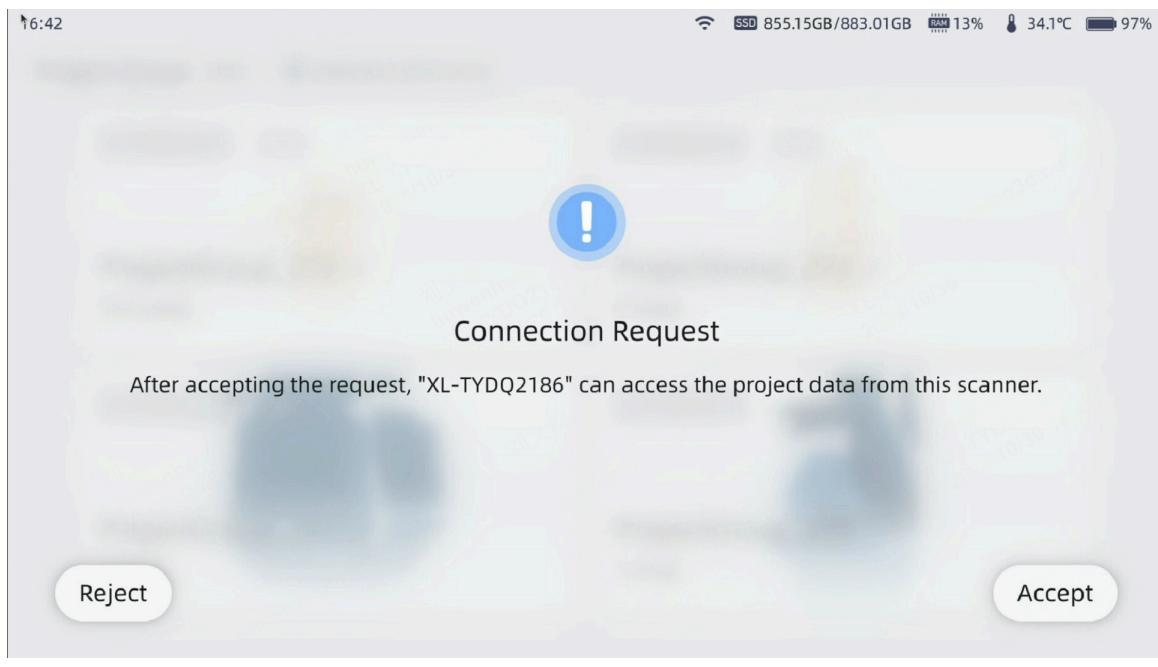
1. After a wired / wireless connection is made, you can click **Connect Scanner** on the home page of the EXScan Libre. This will display all available scanners online. Select your scanner and click the button **Connect**.

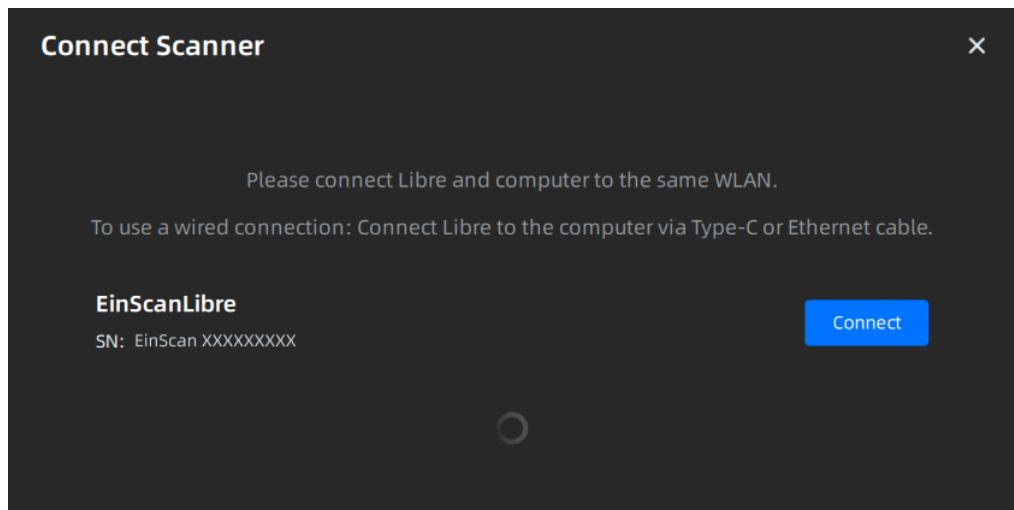


2. After the PC sends a request, click **Accept** on EinScan Libre to successfully establish the connection.

Note

When the PC sends project files reading request to the scanner, users need to respond on the scanner to decide whether allow the connection.





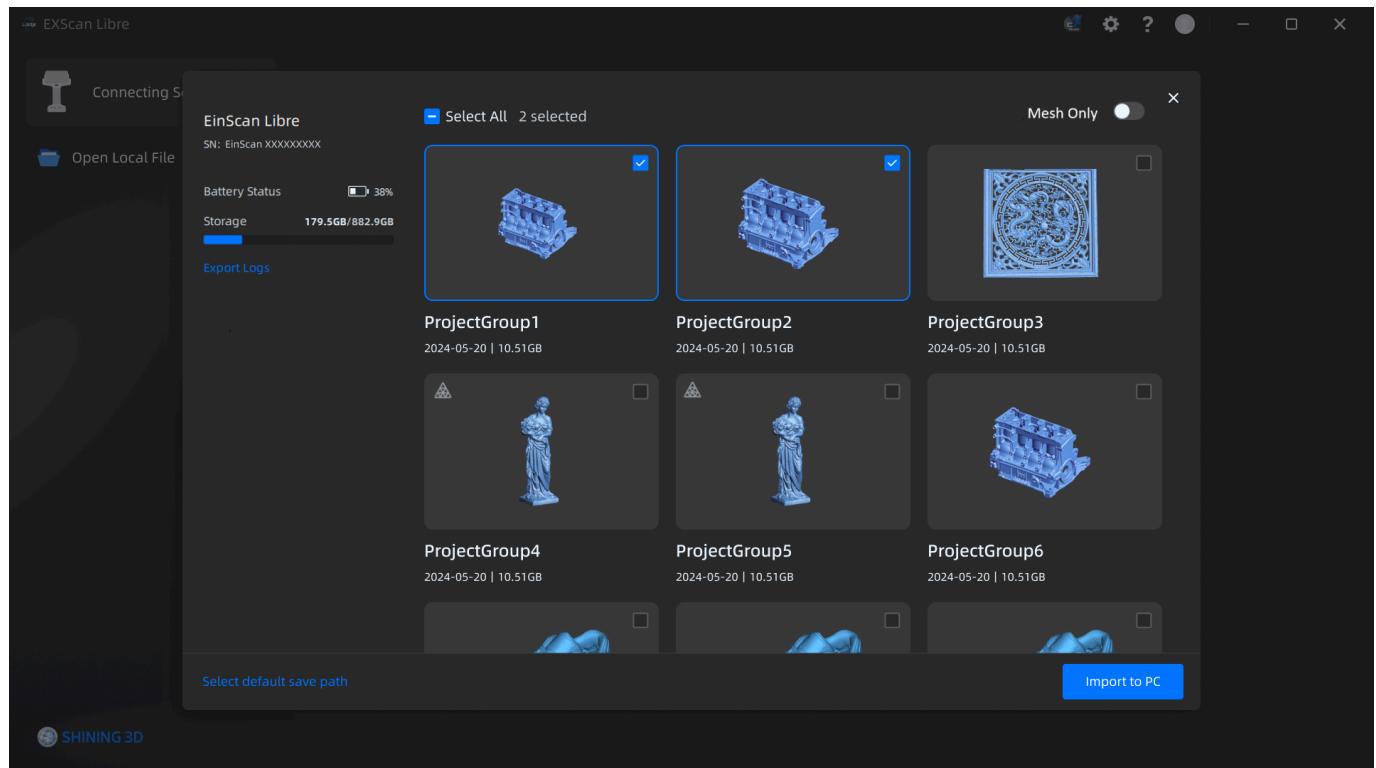
3. Once the connection is successful, the EXScan Libre will display the list of project groups.

4. Check the project groups that need to be imported to the local computer.

Note

- The project group containing mesh data is identified by the icon  in the top left corner.
- The project group without mesh data can not be selected when the **Mesh Only** is enabled.

5. Click **Import to PC** to start the data transfer.



Device Status

- Disconnected: a gray dot on the right side indicates a disconnected scanner.
- Connected: a green dot on the right side indicates a connected scanner.
- Data Transfer: the transfer progress is displayed on the right side.

Caution

- Support transferring up to 30 project groups each time.
- When scanner disconnected, the ongoing transfer of project files will be automatically canceled.
- Scanning cannot be continued while data transfer is in progress.

Data Processing on PC

Install and Run EXScan Libre

 EXScan Libre is computer based software to Libre, providing more comprehensive post-processing and measurement capabilities.

Note

- EXScan Libre only supports opening project files from the EinScan Libre. The following is the recommended system requirement for running EXScan Libre scanner and does not support files from other scanners.
- You can find the installation package for the EXScan Libre software on the included USB drive or on our support center support.einscan.com  > Download Center.

Item	Description
Intel CPU	Intel® Core™ i7-11700 or above
Graphic Card	NVIDIA GTX 1070 series or above
VRAM	6 GB or above
RAM	32 GB or above
Operating System	Windows 10/11 (64-bit)
Interface	Gigabit Ethernet / USB 3.0 / USB-C

Note

The software supports running environment detection. In the upper-right corner of the software interface, click  > **System Diagnose** to automatically check if the PC is fulfilled requirement.

Installation package

Go to [Download link](#)  or [contact support](#)  and get the package.

Software installation

Please follow the installation wizard to install the desktop software.

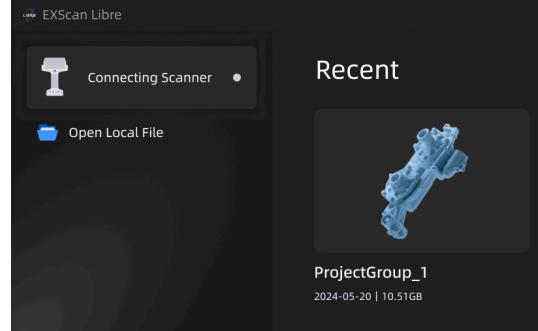
Open a Project Group

To edit and post-process the scanning data within the desktop software, open the project group file.

⚠ Caution

- Importing mesh files in STL, OBJ, PLY, 3MF.
- Importing project groups in *.sln_wl.
- Importing project files in *.wl_prj.
- In the same scanning mode, only project files with the same point distance can be imported.

- In the recent project group list, select a project group and click to open it. In the desktop software interface, each project group displays snapshot images of scanned models, the project group name, file size, and date.
- Alternatively, you can click **Open Local File** on the left side to display the file list window and select a project group from there.

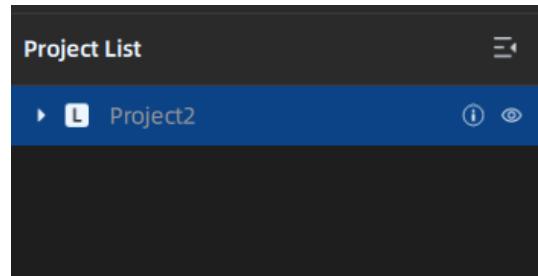


>Note

You can only open one project group at a time.

Related Operations

- **Edit Project Group:** you can right click to delete or rename project files in the left project files list.
- **Show/Hide scanned data:** click  to show scanned data, click again  to hide scanned data.
- **Information:** hover over  to display the project information, including the scanning mode, resolution and texture.

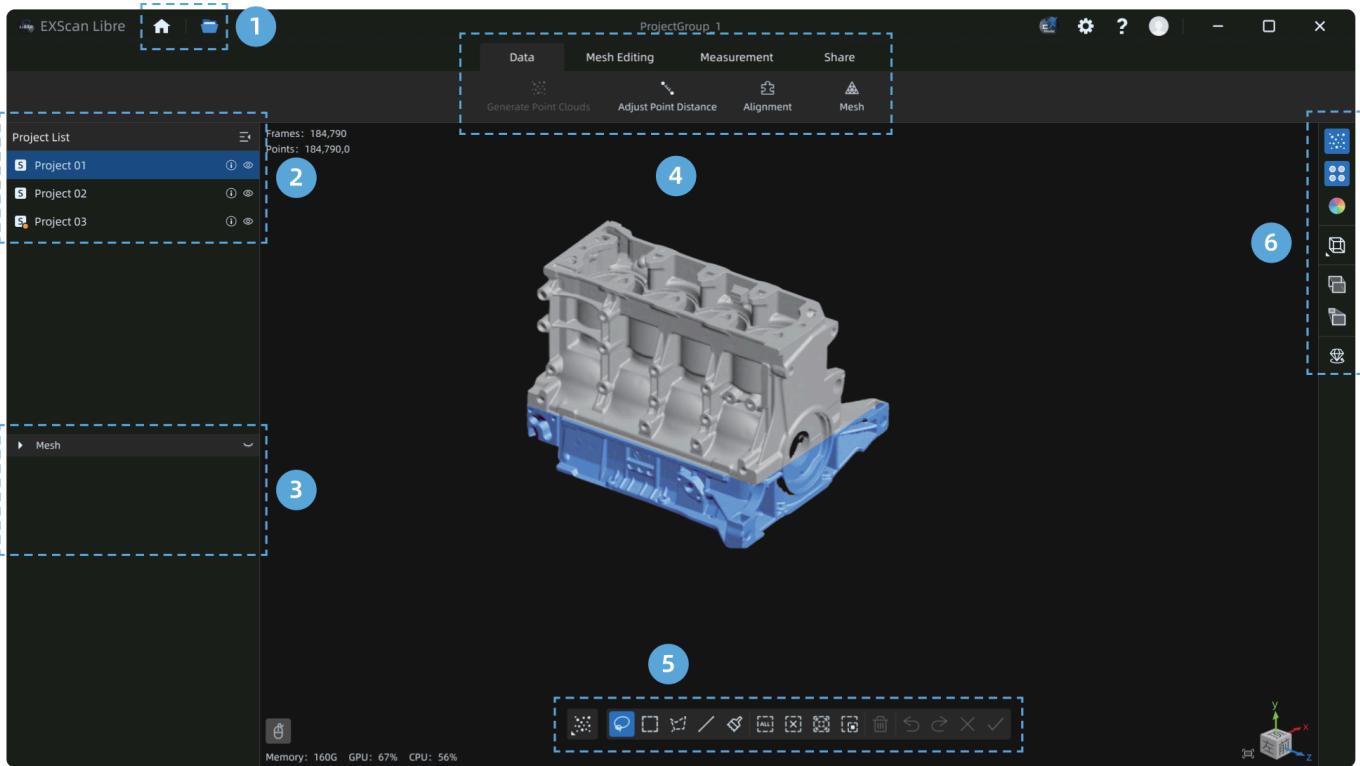


 **Note**

When opening a project file, the current project will be automatically saved.

Software Interface

After opening the project file, you will enter the data processing interface.



① Home Page/ Open Project

Click to back to home page.

click Open Local File on the left side to display the file list window and select a project group from there.

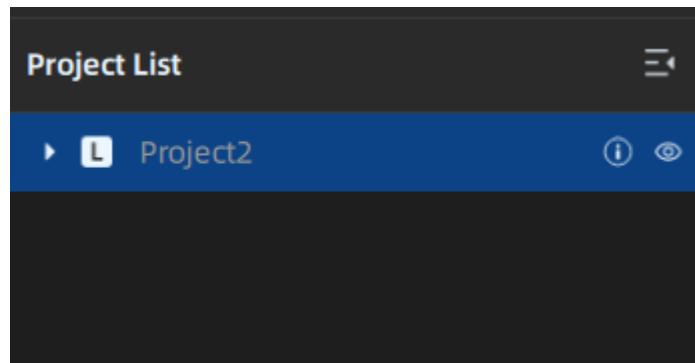
② Project List

Display all project files in the currently opened project group, including aligned projects and meshed projects.

- Delete/Rename: right click a project file to delete or rename it.
- Show/Hide scanned data: click to show scanned data, click again to hide it.
- Show/Hide project list and mesh data panel: click to hide the project list.

Note

- The icon on the left side of the project name in the project list represents the scanning modes. **L** indicates the rapid scanning mode, **S** indicates the HD scanning mode, and a yellow dot indicates that the project has not generated a point cloud.
- The total number of frames and points in the selected project is displayed in the upper-left corner; the total number of triangles and vertexes in the selected mesh data is displayed in the upper-left corner when you select the mesh data.
- The function of creating a project group is not supported on the desktop client.



③ Mesh Data List

Display all mesh data files within the project group.

Note

- The software supports meshing multiple projects separately and mesh data will be save separately.
- Supports editing the mesh data.
- Supports hiding all the mesh data by one-click.
- The created features are displayed under the corresponding mesh.

④ Toolbar

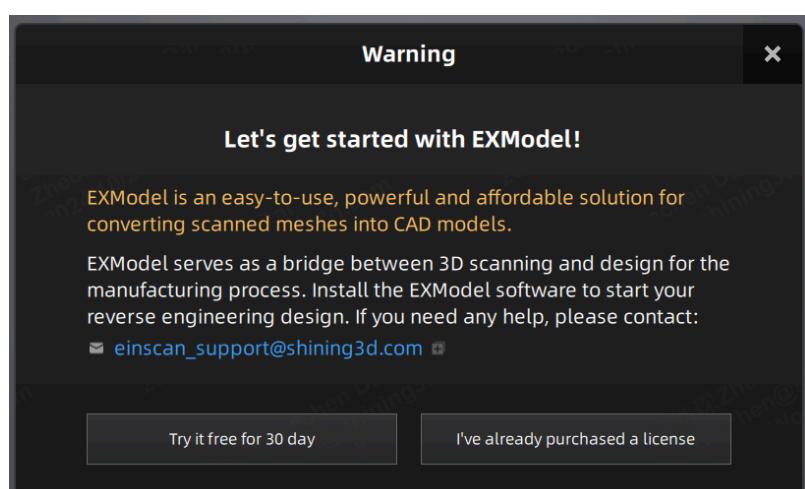
Function	Description
Import Mesh/ Project or Open Project Group	Click  to import mesh/project file or open a project group.
Point Cloud Data	You can edit project data and adjust the distance, align multiple projects and mesh point cloud.  Caution If you adjust the distance of a project file, the distance of other project files within the same project group and with the same scanning mode will also be updated accordingly.
Mesh Optimization	After meshing, you can edit the mesh data .
Measurement Tools	In the measurement interface, you can perform measurements, coordinate adjustments, and other operations.
Share	In the sharing interface, you can save the processed data locally or share the data to third-party software.

Settings and Feedback



EXModel is an easy-to-use, powerful and affordable solution for converting scanned meshes into CAD models. EXModel serves as a bridge between 3D scanning and design for the manufacturing process.

Whether you click  from the guide bar or click **Export to EXModel to design** in the post-processing interface, EXScan will ask you to download and install EXModel and activate it.



Clicking **Try it free for 30 days** or **I've already purchased license** will direct you to the application form webpage. Once you finish the form and click submit, the page will provide the download link and a specific trial license code will be generated for you (do not share this code with others). For more information, refer to our [support page](#).



Supports selecting a language and modifying the default project file storage paths.



Function	Description
About	<ul style="list-style-type: none">• View related software release information, contact information, etc.• To help us improve the quality and user experience of the device, 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.
System Diagnose	Check whether computer configuration meet the operating conditions. If it shows  , it means that the configuration meets the operation requirements. If not, please repair the problem according to the interface prompts. Click Refresh to diagnose again.
Support	<ul style="list-style-type: none">• Help: open a browser to show user manual.• Remote Assistance: the quick access to remote assistance. Send the ID and password in the pop-up window to the technical supporters for remote assistance.• Technical Support: you can check contact information of technical support here.



Function	Description
Reverse Engineering Service	By sending us the scanned project files and specific information, you can get our assistance in the reverse engineering.
My SHINING 3D Account	Click to enter the personal center.
Official Website	Click to visit the SHINING 3D official website <small>↗</small> for more products and information.
Facebook	Join our EinScan Expert Facebook group to share and discuss with other EinScan users.

⑤ Data Editing

Data editing tool bar provides various editing tools for data editing. For details, refer to [data editing](#).

⑥ View

To preview the model and check the scanned model.

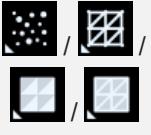
Note

The information on system resource usage, including remaining memory, GPU, and CPU, is displayed in the lower-left corner of the screen.

Data Editing

You can edit the imported data in the EXScan Libre. The editing toolbar is in the right side of the interface.

View Data

Icon	Function	Description
	Multi View	There are six different view angles for you to check data.
	Point Cloud Data / Wireframe / Triangles / Triangles and Wireframe	There are four different styles of data for you to check mesh data.
	Perspective	The object appears larger when closer, and smaller when farther away, which is consistent with the rule of normal human eyes to observe the 3D world.
	Orthogonal	The object does not appear larger when closer, and smaller when farther away; Also known as "isometric view", the size of the object displayed in the view is independent of the current viewpoint distance.
	Show / Hide texture	Only projects with textures allow you to enable the display of textures.

Model Display

 Click  to enable the 360° rotation display of the 3D model. You can also adjust the rotation speed as need. You can press the **F12** and **Esc** to enter or exit model display mode.

Data Editing

Icon	Function	Description
	Edit Point Cloud	<p>Edit the selected data. Click again will toggle the editing markers mode.</p> <p> Note</p> <p>In editing point cloud mode, if you delete the selected data, only the point cloud data will be deleted, not the markers.</p>
	Edit Markers	<p>Select the data area and the markers in this area will be shown in red. The red markers can be edited at this time.</p> <p> Note</p> <ul style="list-style-type: none"> • This feature is only supported by markers, global markers and hybrid alignment with markers. • In editing marker mode, if you delete the selected data, only the markers will be deleted, not the point cloud data. • At least three marker points must be retained.
	Edit All Data	Edit the selected markers and point cloud data.
	Select Through / Select Visible	<p>Select Through causes the current selection tool to affect all areas within the selection boundary, not just those visible on screen, allowing you to select the surface data and the interior data simultaneously; Select Visible causes the selection tools to operate only on visible data in the current view, obscured data will not be selected.</p>

Select Data

Icon	Function	Description
	Lasso	Hold down <code>Shift</code> and move the cursor select the area by using the lasso tool. The selected area is displayed in red.
	Rectangular	Hold down <code>Shift</code> and move the cursor select a rectangular area. The selected area is displayed in red.
	Polygon	Hold down <code>Shift</code> and move the cursor select a polygon area. The selected area is displayed in red.
	Line	Hold down <code>Shift</code> and move the cursor to draw a straight line to select the area. The selected area is displayed in red.
	Paint Brush	Hold down <code>Shift</code> or <code>Ctrl</code> and a red circle will appear. At this time, rotate wheel will zoom in and out of the circle. Move the red circle to select/deselect the area to be edited. The selected area is displayed in red.
	Select All	Select all the data.
	Unselect	Cancel all selected areas.
	Expand	Click the button after selecting a patch of data and all connected region to the selected data will be picked.
	Invert	Revert the selection.

Apply

Icon	Function	Description
	Delete Selected Data	Delete selected data.
	Undo	The last deletion will be undone. You can click multiple times to undo multiple deleted data.
	Redo	Redo the previous action. You can click multiple times to redo multiple actions.
	Cancel Edit	Undo all edits, and exit the edit mode.
	Apply Edit	Click the button or press the space bar to apply the edit, and exit the edit mode.

Context Menu

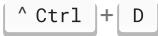
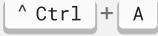
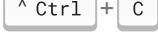
Context Menu for the Project List

Function	Description
Rename	Supports renaming projects and meshes.
Save	After saving, a dialog box for renaming will appear.
Delete	Supports deleting one or multiple files from the project list panel. If you check Delete Original Files , the file is deleted and cannot be restored.
Group Selected Projects	It can group multiple files into one group or split files within a group into separate entities.
Select all / Unselect all / Reverse selection	Select all, deselect all, or reverse the selected projects data.
Show all / Hide all	You can hide or show the currently opened projects/mesh data.

Context Menu

Function	Description
Select All / Invert / Unselect / Delete Selected Data	The function is the same as the function on editing bar, and can be operated by shortcut keys.
Connect Domain	Click the button after selecting a patch of data and all connected region to the selected data will be picked.
Zoom to Fit	The data on the interface is displayed in the center according to the appropriate size.
Set Rotate Center	Click the desired position to set it as the rotation center.
Reset Rotate Center	After reset, the center of rotation is at the data center.
Select Through	Clicking the select through icon causes the current selection tool to affect all areas within the selection boundary, not just those visible on the screen. The surface data and the interior data can be selected at the same time.
Select Visible	Select Visible causes the selection tools to operate only on visible data in the current view, obscured data will not be selected.

Shortcut

Shortcut	Function
 ^ Ctrl + D	Zoom to fit
Rotate Wheel	Zoom in / Zoom out the data
Hold the wheel button and move the cursor	Pan the model
 ^ Ctrl + F	Set the rotating center
Move and drag cursor	Rotate the data
 ↑ Shift + primary	Select the area of data
 ^ Ctrl + primary	Deselect the area of data
 ^ Ctrl + A	Select all data
 ^ Ctrl + C	Deselect all selected data
 ^ Ctrl + I	Reverse selected / unselected data
 ⌘ Del	Delete the selected data

Data

Generate Point Clouds

If the imported project file hasn't generated point clouds yet, please generate point clouds first.

Note

- The time it takes to generate point cloud depends on the data size of your project and the hardware configuration of your PC.
- If you are performing deletion or other editing operations on the scan data, please complete the editing before generating the point cloud.

After completing the [data editing](#), click **Generate Point Clouds** to generate point clouds.

Related Operations

- While generating the point cloud, you can [adjust point distance](#), [align projects](#), and [perform meshing](#).
- Edit data: for details, refer to [data editing](#).

Adjust Point Distance

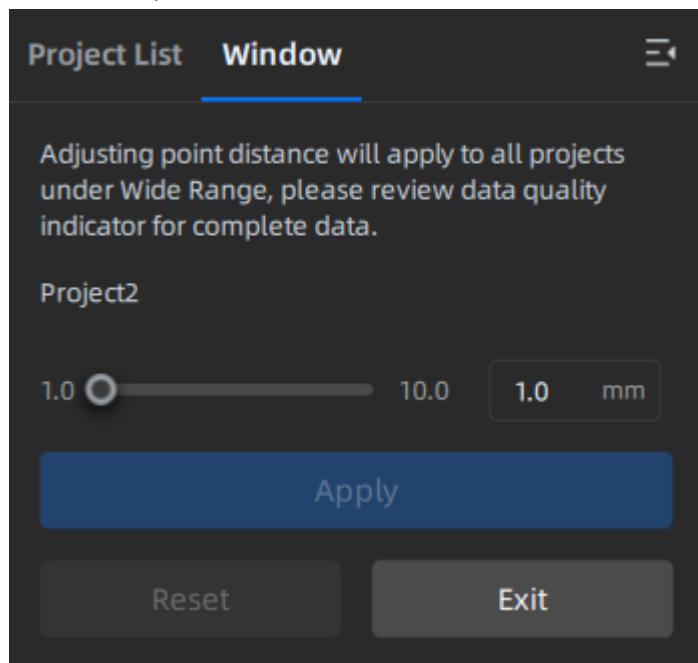
By adjusting the point distance, you can observe the scanning effect of the 3D model. Smaller point distances allow for more details. For models with less prominent features, increasing the point distance can help to reduce the file size.

Caution

If you adjust the distance of a project file, the distance of other project files within the same project group and with the same scanning mode will also be updated accordingly.

Steps

1. Click **Adjust Point Distance** at the top of interface.



2. Adjust the specific point distance value in the left window by sliding or entering a value.
3. Click **Apply** to check the result.
4. Click **Exit** to save the modified point distance and optimize the point clouds.

Note

- When adjusting the point distance, you can use the **data quality indicator** to assess the data quality of the model at different point distances. Blue indicates high-quality scanning data, while yellow indicates low-quality scanning data, indicating insufficient scanning.
- The more yellow there is, the higher the probability of data loss or abnormally display after adjusting the point distance.

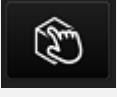
Alignment

You can use the alignment function to combine scan data from multiple projects into a complete 3D model to enhance the integrity of the scan data.

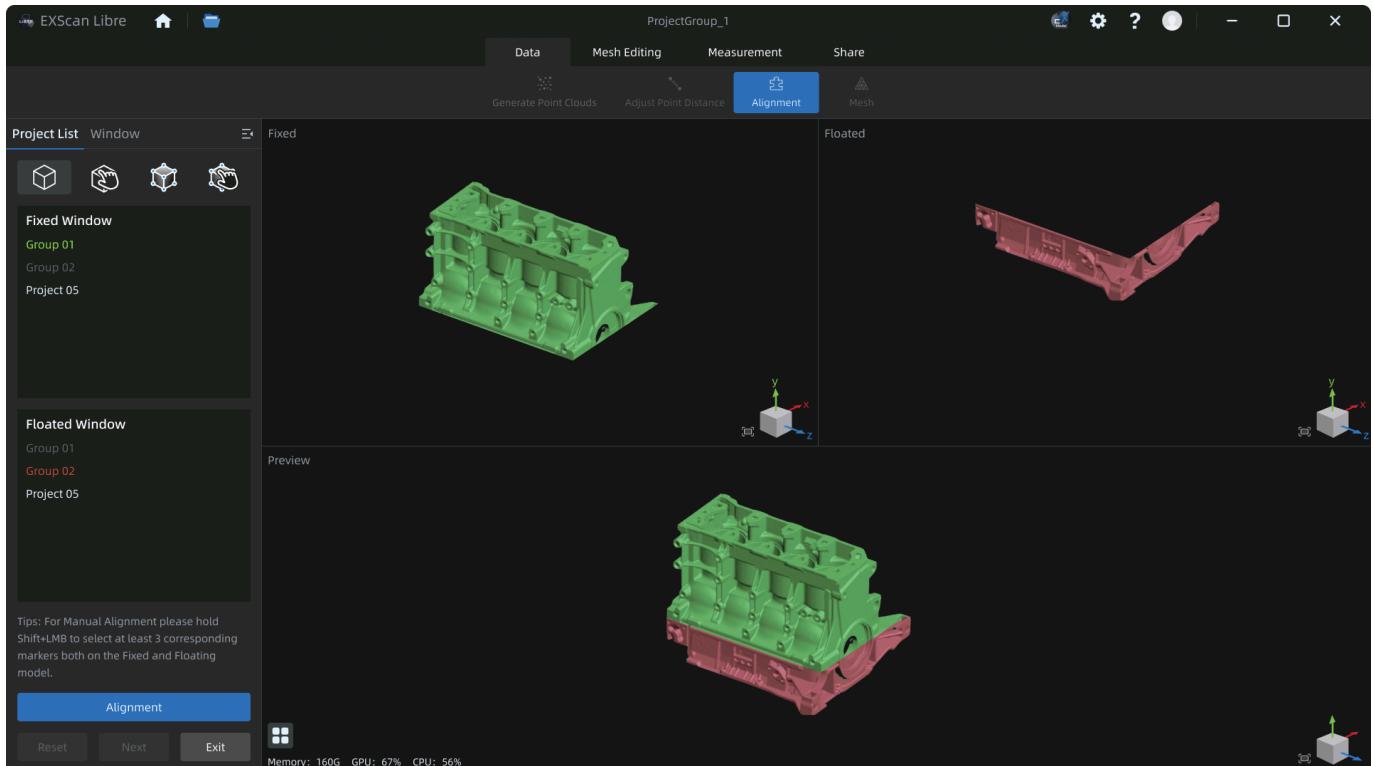
Click  on the top panel to enter the alignment interface.

Caution

- The project alignment can only be accessed by project files with generated point clouds.
- At least 2 or more project files need to be selected.
- If a project hasn't been generated point cloud enters the alignment process, a prompt will appear. Please follow the instructions to generate the point cloud first.
- The fixed window means that the object's actual coordinates will not change during alignment, while the floating window means the object's coordinates will change.
- It is recommended to use feature automatic alignment or marker automatic alignment. If you need to use manual alignment, use **Shift + LMB** click to select three common points / markers on the object's surface to perform alignment.
- Projects after alignment will be merged into a Group, and you can choose the Group for meshing.

Alignment	Description	Notes
 Automatic Feature Alignment	<ol style="list-style-type: none"> 1. Select the Auto Feature Alignment mode. 2. Select the projects in the fixed window and floated window for alignment. 3. Click Apply to align based on common features in the project files. 	Regular shaped objects (circular objects and square objects included) or small sized objects are not suitable for this mode.
 Manual Feature Alignment	<ol style="list-style-type: none"> 1. Select the Manual Feature Alignment mode. 2. Select the projects in the fixed window and floated window for alignment. 3. Manually choose at least 3 common points in the fixed window and floated window. 4. Click Apply to align. 	<ul style="list-style-type: none"> • The chosen points should not in a line. • Manual alignment is a supplement to feature alignment, which can solve the problem of feature alignment failures such as some areas with few common areas or extremely similar areas. The data is aligned by the best fit of all points of the data in the floated viewport and the fixed viewport.
 Automatic Markers Alignment	<ol style="list-style-type: none"> 1. Select the By Markers mode. 2. Select the projects in the fixed window and floated window for alignment. 3. Automatically identify common markers on both project files. 4. Click Apply to align. 	The two projects have no less than 3 common markers each other.
 Manual Markers Alignment	<ol style="list-style-type: none"> 1. Select the Manual Markers Alignment mode. 2. Select the projects in the fixed window and floated window for alignment. 3. Manually select at least 3 common markers on each of the project files. 4. Click Apply to align. 	<ul style="list-style-type: none"> • The selection of markers should be as separate and random as possible. • The selected markers will be cleared after aligning.

Button	Function
Next	Select the next project file to continue the alignment.
Cancel	Cancel the current alignment.
Exit	Exit the alignment window.



Mesh Model

Meshing is to convert the point cloud into a triangular mesh surface. The meshed data can be directly used for rendering, measurement or printing.

Function	Description
Unwatertight	All holes on the model remain unclosed. It takes a short time to mesh the unwatertight model.
Semi-watertight	Some of the holes will be filled automatically. Holes with a diameter less than or equal to the resolution $\times 5$ will be filled.
Watertight	All holes on the model will be filled automatically. This model can be used for 3D printing. Only watertight model can set model quality.

Caution

If the scanned data contains disconnected parts, only the larger data will be retained after meshing.

Mesh Optimization

Function	Description	Setting
Optimization	Optimize the data and improve the clarity of the data.	<ul style="list-style-type: none"> None: no optimization. Standard (default): optimizes data slightly and preserves data characteristics. Med: reduce the noise on the surface of the scan data. High: reduce the noise on the surface of the scan data and sharpen it powerfully.
Smooth	To reduce the possible noise on the surface of the scanned data.	You can smooth the data in low, medium or high level.
Remove Small Floating Parts	To remove small floating parts on the model.	<p>Set the isolated data ratio by dragging the slider or clicking the up/down arrow.</p> <p>Default value is 1, with a range of 0 to 100. The value 0 indicates not removing isolated data.</p>
Max triangles	To set a max number of triangles as the upper limit of data simplification.	<p>Input a proper value to avoid over-simplification and consequent poor quality of the scanned data.</p> <p>Avoid a extremely small value.</p>
Fill Small Hole	To fill the small hole automatically.	<ul style="list-style-type: none"> The default perimeter is ≤ 10 mm. Set the value according to your requirements. Optimize hole filling by removing edge clutter data; 0 indicates no deletion of the neighboring areas.
Marker Hole Filling	To fill in the unscanned holes on the surface of the object that are covered by markers.	In the markers alignment mode, this function is enabled as default for unwatertight or semi-watertight models, and can not be disabled for watertight models.
Remove Spike	To remove spike-like data on the image edge.	/

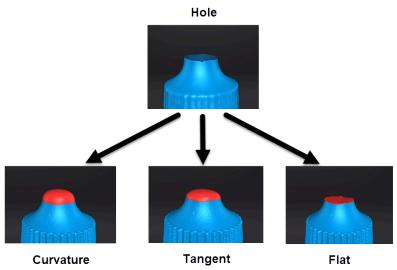
Function	Description	Setting
Texture Mapping	Check Texture Mapping to enable the use of diffuse maps, which add basic colors, patterns, and textures to surfaces. This makes objects look more realistic by simulating their real-world appearance. If not checked, each generated mesh face will be covered with color information.	Textured projects require texture mapping to be enabled.
Recommended Parameters	When turned on, it will automatically use the recommended parameters for meshing.	/

Click **Apply** to confirm the settings and start meshing. When the mesh is generated, you can click **Exit** to save the result, or click **Cancel** to reset the parameters.

Mesh Optimization

Optimizes the mesh data to improve rendering performance.

Function	Description	Note
Texture Adjustment	Brightness and contrast can be adjusted.	Only project files that exclusively contain textures are accessible to this function.
Texture Mapping	When meshing the project with scanned texture, this function can be enabled (by default) to remap the texture; if this function is disabled, you can still remap the texture when editing the mesh.	Only project files that exclusively contain textures are accessible to this function.
Simplification	Reduce the mesh size universally. A high level of simplification may cause loss of detail.	Over-simplification will result in the loss of data details. <ul style="list-style-type: none"> Click Apply to preview. Click Exit confirm and save. Click Cancel save and exit.
Optimization	Restructure the mesh topology based on the mesh curvature and sharpen the surface features of scan data.	The optimization duration varies depending on the amount of data. <ul style="list-style-type: none"> Click Apply to preview. Click Exit confirm and save. Click Cancel save and exit.
Smooth	To reduce the possible noise on the surface of the scanned data. Drag the scrollbar or click the up and down arrows to set the ratio from 1 to 100. The default is 0, indicating no smooth.	<ul style="list-style-type: none"> Click Apply to preview. Click Exit confirm and save. Click Cancel save and exit.
Remove Small Floating Parts	Remove small floating parts in the scan data. Drag the scrollbar or click the up and down arrows to set the ratio from 1 to 100. The default is 0, indicating no removal.	<ul style="list-style-type: none"> Click Apply to preview. Click Exit confirm and save. Click Cancel save and exit.

Function	Description	Note
Auto Hole Filling	After selecting the hole filling type, enter the perimeter. Holes within the specified perimeter will be filled automatically.	Hole filling types:  <p>The diagram illustrates a blue 3D model with a circular hole at the top. Three arrows point from the hole to three smaller images below, each showing a different hole filling result: 'Curvature' (a smooth, rounded fill), 'Tangent' (a fill that meets the hole's perimeter at a sharp angle), and 'Flat' (a flat, horizontal fill).</p>
Manual Hole Filling	After entering the manual hole filling mode, 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.	Select filling types before picking a hole and then click the edges to perform filling actions.
Flip Normal	To redefine the front direction of the scanned data in reversal design. Hold down Shift + primary button to select areas to be flipped.	<ul style="list-style-type: none"> Texture remapping should be performed first as it is not accessible after flip normal. Default is to flip the entire dataset if no flip areas is selected.
Cutting Plane Tool	<p>Define a plane to re-adjust the coordinate system of the scanned data.</p> <ol style="list-style-type: none"> Hold down Shift + primary button to select a plane by drawing a straight line. Click Intersect Plane to add a cutting plane. Select Delete selection and close intersection or Delete Selection to delete the selected data. Click Apply to confirm. 	/
Mirror	<p>Take the front view plane of scan data as the working plane. Draw a straight line as the central axis and perform a symmetrical copy.</p> <p>Hold down Shift + primary button to draw a straight line as the central axis and then check Keep the initial mesh.</p>	Texture remapping should be performed first as it is not accessible after mirror.
Zoom	Adjust the scaling ratio of the model. Enter a value to set the ratio. The default is 100, indicating no zoom.	<ul style="list-style-type: none"> Click Apply to preview. Click Exit confirm and save. Click Cancel save and exit.

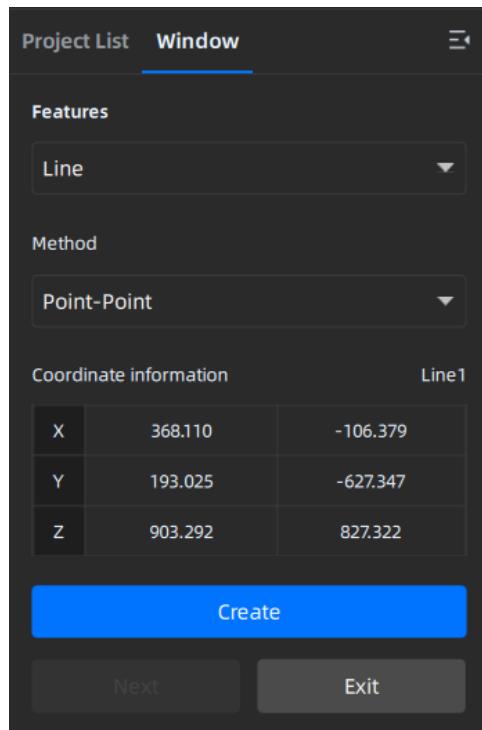
Data Editing Panel

For details about data editing, refer to [data editing](#).

Measurement Tools

Create feature

On the top panel of **Measurement Tools**, click  and a **Create Feature** window will pop up on the left.



Note

You can switch to **Project List** to check the created features.

Feature Point

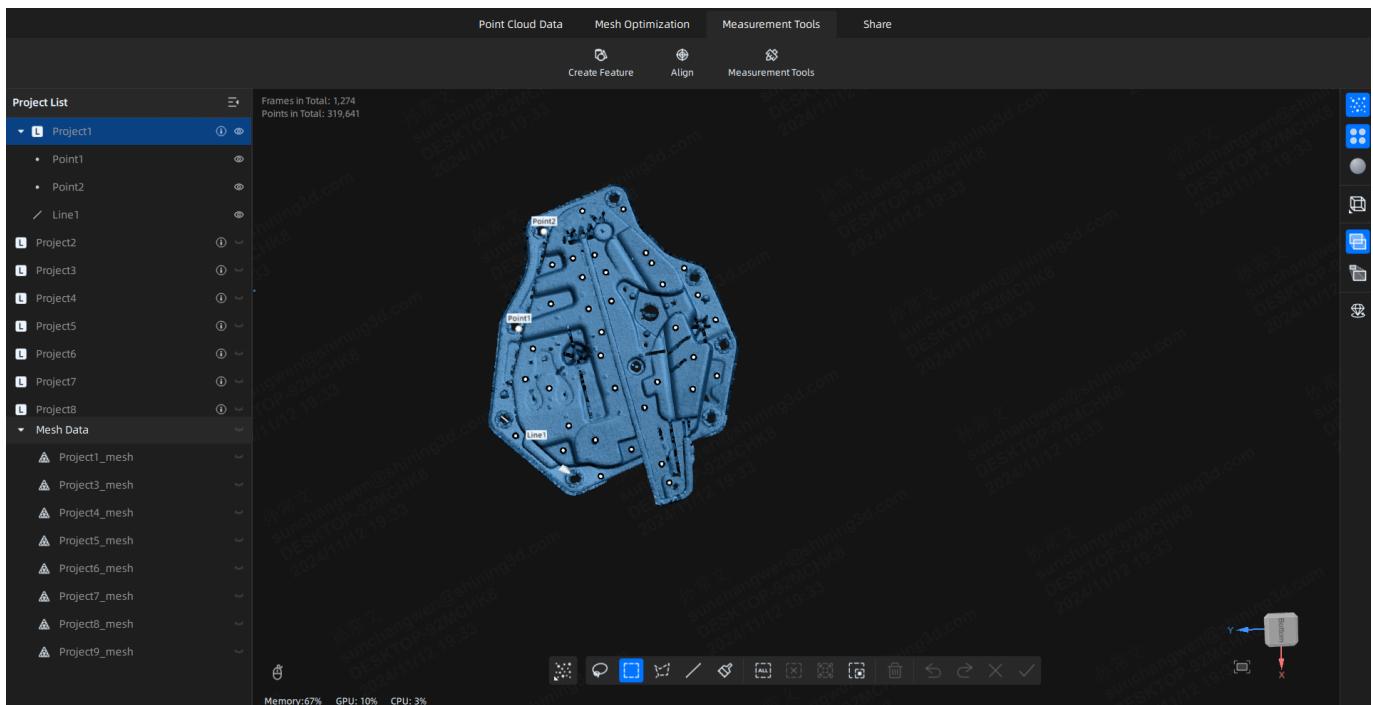
Creation Method	Description	Note
Selected Points	<ol style="list-style-type: none"> 1. Click the data to select the point. 2. Click Create to create a feature point. 	/
Line-Plane Intersection	<ol style="list-style-type: none"> 1. Click the existing feature lines or choose lines in the drop-down list. 2. Click the existing feature planes or choose planes in the drop-down list. 3. Click Create and create feature points. 	<ul style="list-style-type: none"> • The feature line can't be in the feature plane. • The feature line can't be parallel with the feature plane.

Feature Line

Creation Method	Description	Note
Point-Point	<ol style="list-style-type: none"> 1. Click the data or existing feature points to select the point. 2. Click Create and create a line. 	/
Plane-Plane Intersection	<ol style="list-style-type: none"> 1. Click existing feature planes or choose planes in the drop-down list. 2. After selecting two planes, click Create and create an intersection of two non-parallel planes. 	<ul style="list-style-type: none"> • Create two feature planes in advance. • The feature planes can't be parallel to each other.

Feature Plane

Creation Method	Description	Note
3 Points Fit	<ol style="list-style-type: none"> 1. Click the data or existing feature points to select the point. 2. Click Create and create a plane. 	The three points can't be in a line.
Point-Line Fit	<ol style="list-style-type: none"> 1. Choose lines in the drop-down list. 2. Click the data or existing feature points to select the point. 3. Click Create and create a plane. 	The point can't be in the line.
Best Fit	<p>When there are selected data, click Create and create a plane that has the smallest deviation from the selected area.</p> <p> Note</p> <p>You can use editing tools or shortcuts to select the data.</p>	/



Align

On the top panel of **Measurement**, click  and a **Align** window will pop up on the left.

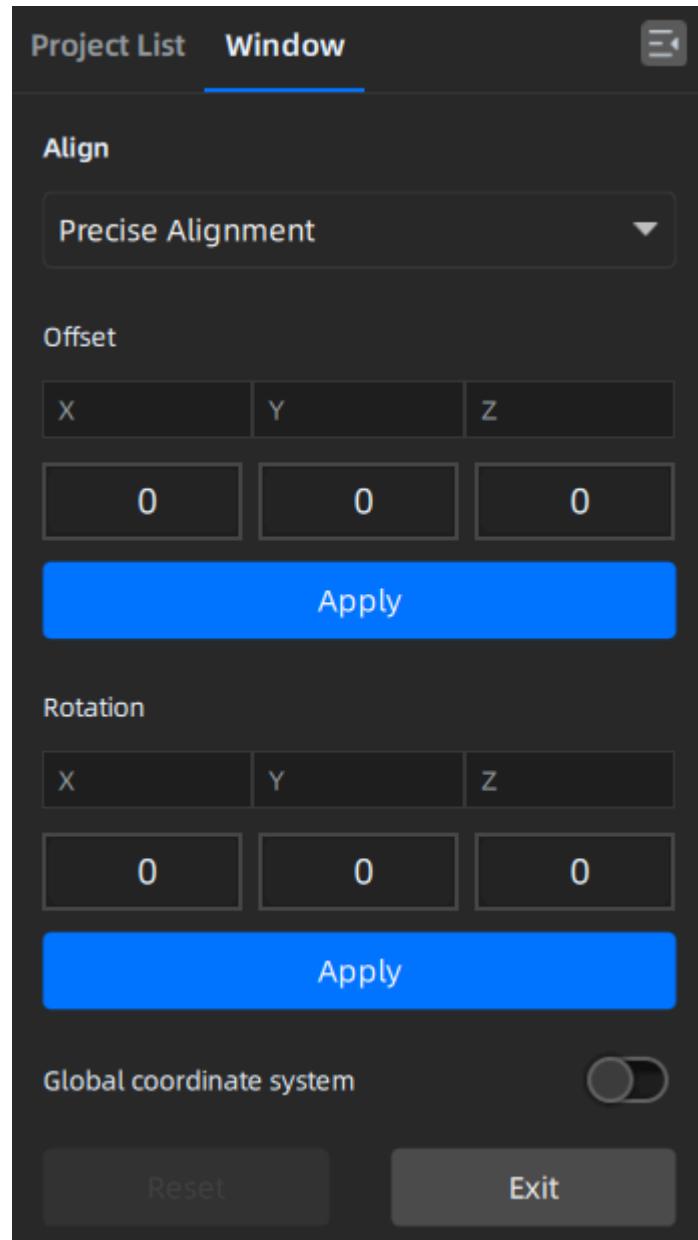
Caution

- Movement will not affect the shape or accuracy of the data.
- Once you align the model to a new position and quit the movement, you have to reload the file to restore previous position.
- Before alignment, it is necessary to create feature points, lines, and planes, where the feature lines are not perpendicular to the plane.

Precise Alignment

Input value and adjust coordinates

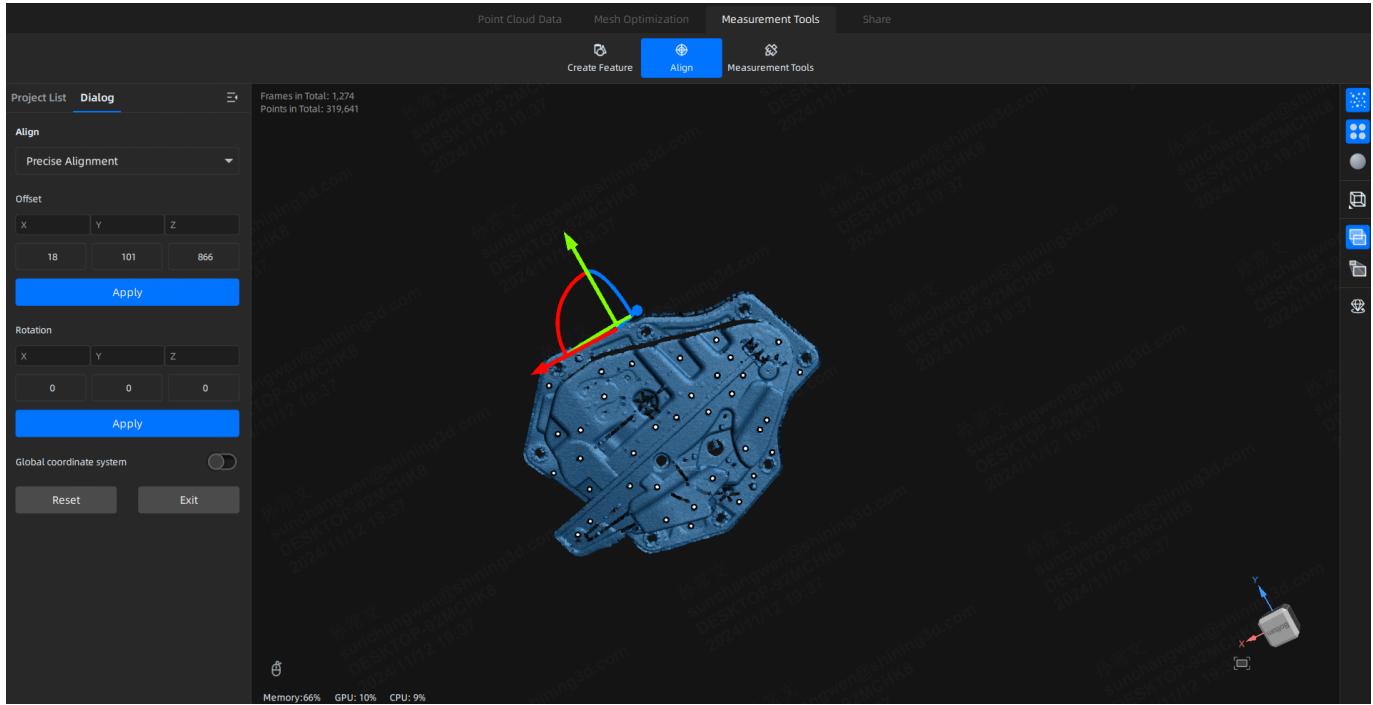
Input values in Offset or Rotation, and click **Apply** to align model center with input coordinates and axis direction with rotation value.



Note

Global coordinate system (disabled by default and need to be enabled manually) is the coordinate system on the right, in which red points to positive X-axis, green points to positive Y-axis and blue points to positive Z-axis; if the global coordinate system does not appear on the interface, roll the mouse wheel to zoom out the model.

Adjust coordinates by the object mover tool Hover the cursor on object mover tool. Once the object mover tool shines, long press Left Mouse Button or Middle Mouse Button to adjust the position and angle of model.

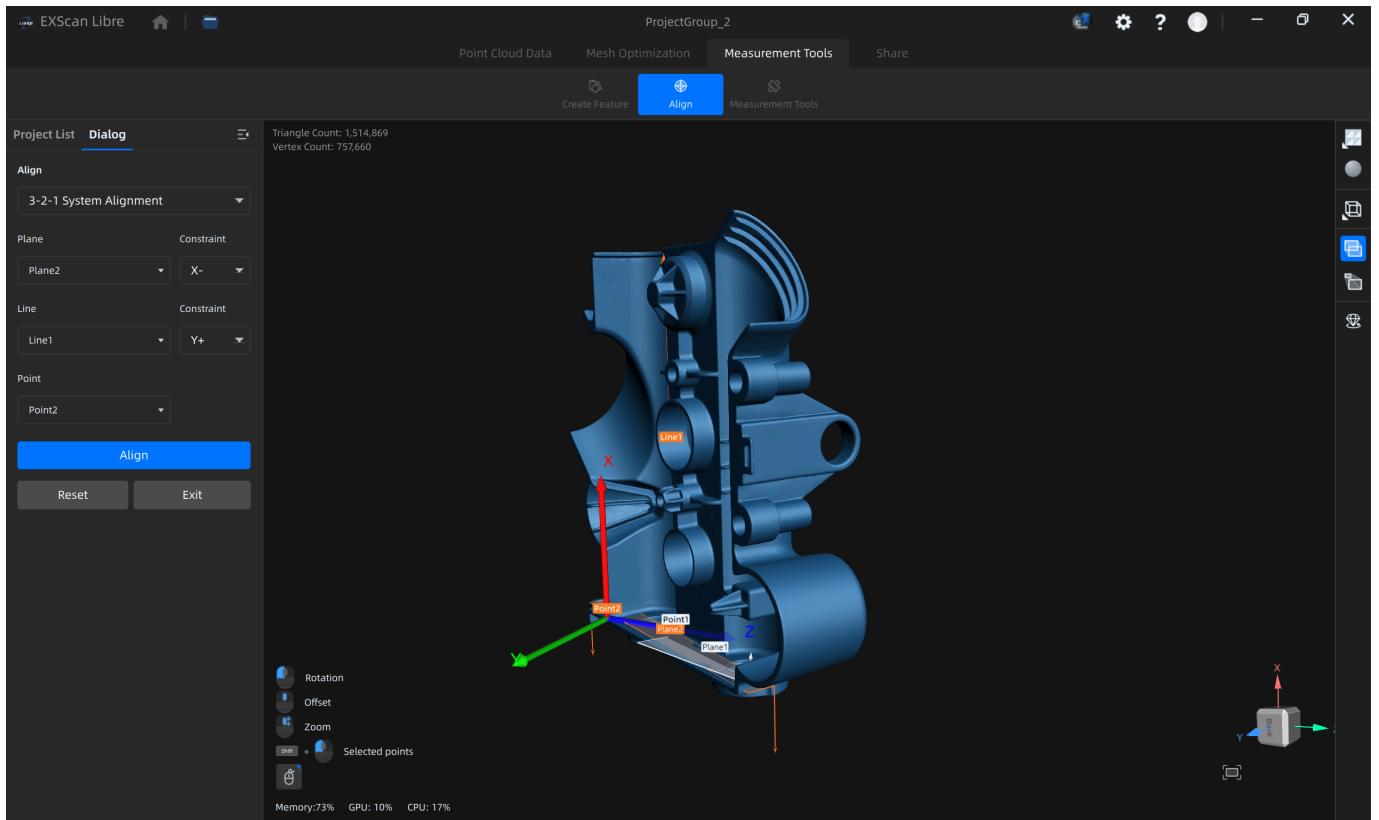


Click **Reset** to cancel all movements in Exact Alignment. Click **Exit** to save the movement and quit the alignment.

3-2-1 System Alignment

3-2-1 System Alignment (Plane-Line-Point Alignment) align data by choosing line and plane constraints. Before alignment, you need to create feature points, lines, and planes, in which the feature line is not perpendicular to the plane.

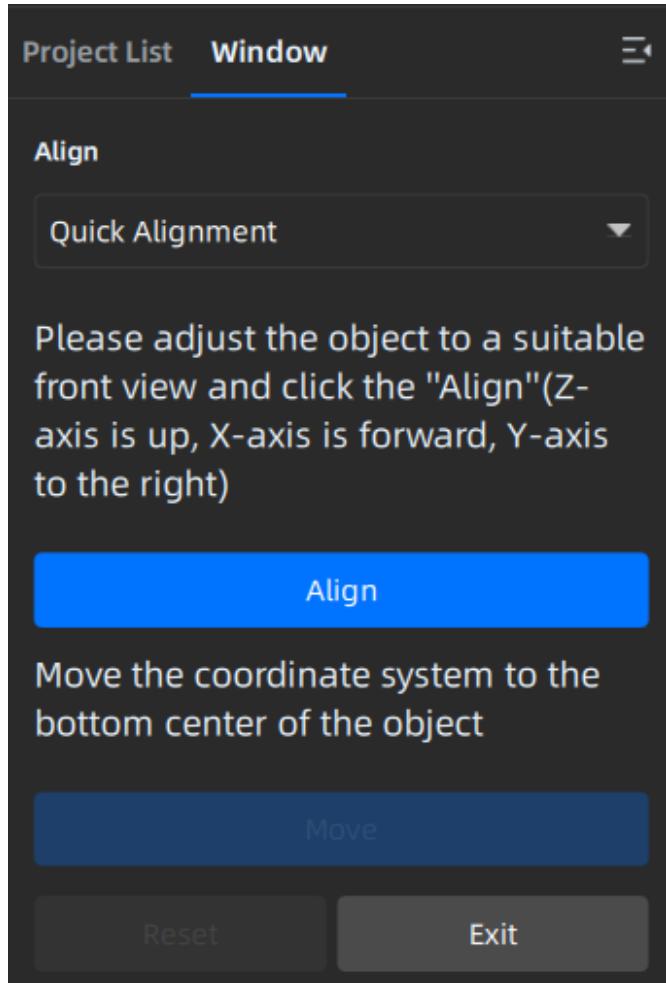
- **Plane:** select a feature surface in the drop-down list, and select an axis in corresponding constraint drop-down list. The arrow on the plane corner indicates the positive direction of the plane, and the selected axis direction will be consistent with the plane direction.
- **Line:** select a feature line in the drop-down list, and select an axis in corresponding constraint drop-down list. The arrow of the line indicates the positive direction of the line, and the direction of the selected axis will be consistent with that of the projection of the line on the selected plane.
- **Point:** select a point in the drop-down list, of which the position is (0, 0, 0).



- Click **Align** to move coordinate axes. When the feature line is perpendicular to the plane, the movement fails and a window pops up prompting failure.
- Click **Reset** to cancel all movements.
- Click **Exit** to save the movement and quit the alignment.

Quick Alignment

You can rotate the model to a wanted posture and a coordinate frame will show up.



- Click **Align** and move the coordinate frame to the center of the object, with its X-axis perpendicular to the screen, Y-axis parallel to the screen and pointing rightward, and Z-axis parallel to the screen and pointing upward. The object remains its position.
- Click **Move** and move the coordinate frame to the bottom center of the object.
- Click **Reset** and restore the frame to its original state (before alignment).
- Click **Exit** to save the model frame and close the dialog box.

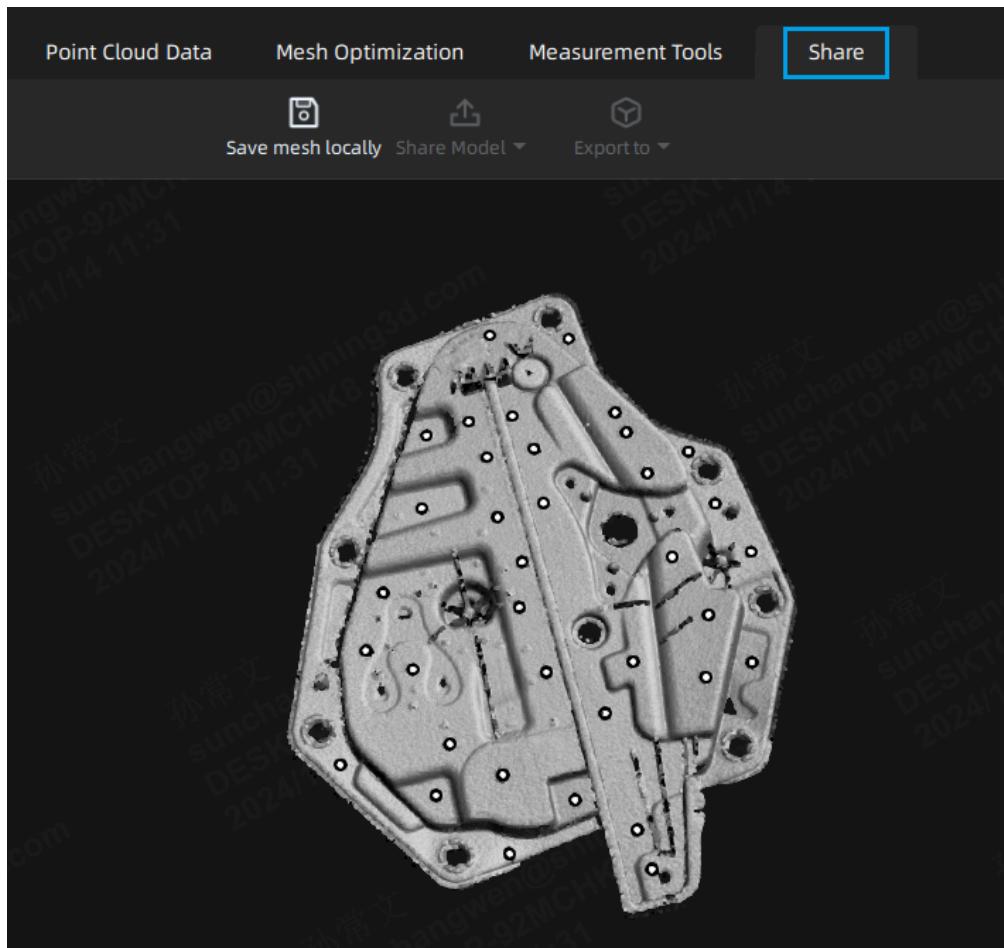
Measurement tools

On the top panel of **Measurement Tools**, click  and a **Measurement** window will pop up on the left.

Measurement Tools	Description	operation
Distance	Calculate the straight-line distance between two points on the surface of the scanned model. Total is the 3D distance; X , Y , and Z are the projection length of the segment to respective planes.	<ul style="list-style-type: none">When you select two points of the model, the distance will show itself at once.You can tick the checkbox before First Point or Second Point and re-select the point.
Surface Area	Calculate selected area of the scanned model.	You can use edition tools , right panel , or shortcuts on the bottom panel to select the area. Click Calculate and the area will show itself with a unit of mm ² . Click Close and close the front window.
Volume	Calculate the volume of meshed data with a unit of mm ³ .	When you switch to Volume , the volume of the scanned model and the coordinates of corresponding bounding box will show themselves.  Note This function is only available for meshed models.

Export Data

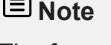
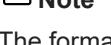
After meshing is complete, you can export the data by clicking **Share**. You can choose to save it locally, export to RE software for model design, or share it on other platforms.



Save Mesh Locally

You can save the scan data.

In the **Share** interface, click  to select the save path and the file format, enter the file name as well.

Format	Data Type	Saved as	Application
ASC (whole piece)	Optimized cloud points or mesh data	Scan.asc	<ul style="list-style-type: none"> Check the data; Quick export and no need for post-operation. Use other software to post-process the data.
STL	Mesh Data	Scan.stl	<ul style="list-style-type: none"> 3D printing and reverse designing; Compatible with most post-processing software.
PLY	Mesh Data	Scan.ply	<ul style="list-style-type: none"> Compact file; Easy for texture editing.
OBJ	Mesh Data	Scan.obj Scan.jpg Scan.mtl	<ul style="list-style-type: none"> Used for artworks; 3D rendering. <p> Note Compatible with most post-processing software.</p>
3MF	Mesh Data	Scan.3mf	<ul style="list-style-type: none"> Compact file; Compatible with Microsoft 3D printing software.
P3	Global Markers	Scan.p3	<ul style="list-style-type: none"> Reuse the markers' position. Can also contain the cutting plane. <p> Note The format is supported only for point cloud data.</p>
LAS	Point Cloud	Scan.las	<ul style="list-style-type: none"> Storing point cloud data. Occupies less memory. <p> Note The format is supported only for point cloud data.</p>

Share Model

You can upload the meshed data to [SketchFab](#)  after meshing.

In the **Share** interface, click  to upload the mesh data to SketchFab, where the file name, user name and password are required to be provided. You can register an account on the [SketchFab](#)  to view the shared models.

Export Mesh Model

After the [mesh](#), you can import scanned mesh data into the third-party software.

In the **Share** interface, click  to select the preferred third-party software.

Icon	Name	Main Application Scenario
	Export data to Geomagic Design X (2023,2022,2020)	Mainly used for reverse design of mesh data. If the GeomagicDesign X has been installed, clicking this button will open the GeomagicDesign X and import the mesh data.
	Export data to EXModel	If the EXModel software has been installed, clicking this button will open the EXModel software and import the mesh data. Mainly used for reverse design of mesh data.

Safety Information

Safety Information

Symbol conventions

Symbol	Meaning
	Note: This symbol is used to inform you of the additional information of the product.
	Caution: This symbol is used to inform you of incorrect operations that may damage the device or result in data loss. Any damages resulting from misuse are not covered by the warranty.
	Warning: This symbol is used to inform you of the potential risks that may result in serious personal injury and other safety incidents.

The Declaration of Intellectual Property and Disclaimer

Thank you for using the products of SHINING 3D TECH CO., LTD. (hereinafter referred to as the "SHINING 3D"). Before you use the products, please carefully read and understand this declaration. Once you use this product, it means that you fully accept this statement and promise to comply with the relevant regulations.

1. The contents of the Product Instruction and User Manual (hereinafter collectively referred to as the "Product Usage Documentation") are critical to your personal safety, legal rights, and liabilities. Before you use the products, Please ensure that you have carefully read the Product Usage Documentation, and use the product correctly in accordance with the requirements of the Product Usage Documentation. We also recommend that the products be operated by trained professional technicians.
2. Please inspect and/or maintain the product before use. If the product is damaged, deformed or in any other abnormal condition, stop using it immediately and contact the after-sales service personnel for maintenance. SHINING 3D will not be responsible for any problems caused by your failure to inspect or maintain the product in a timely manner.
3. SHINING 3D does not guarantee the applicability of the outcomes of your use of the products, and you are responsible for verifying the quality and functionality of the outcomes. You should check and verify thoroughly that any outcomes meet your requirements before using them, for which you bear full responsibility. If any damage arising from using the outcomes of any products, you shall bear the corresponding risk, and SHINING 3D shall not bear any responsibility.
4. SHINING 3D owns complete intellectual property rights for the contents of the for which you bear full responsibility. Without the written consent of SHINING 3D, it is not allowed to copy, transmit, publish, adapt, compile or translate any contents of the Product Usage Documentation in any form for any purpose.

5. The Product Usage Documentation is a guidance for installing, operating, and maintaining the product instead of serving as the quality guaranty for the products. SHINING 3D makes all efforts to ensure the applicability of the Product Usage Documentation, but reserves the right of final interpretation. Images and diagrams in the product documentation are presented to provide convenience to user understanding. In the event that any images or diagrams are inconsistent with the physical products, the later shall prevail. In addition to the mandatory provisions of laws and regulations, the contents of the Product Usage Documentation are subject to changes without further notice.
6. SHINING 3D shall not be held responsible for any damages and/or losses caused by human factors, environmental factors, improper storage and use, or any other factors other than due to the quality of the product. SHINING 3D also shall not be held responsible for any indirect anticipated profit loss, loss of reputation and other indirect economic losses. Except as otherwise expressly provided by laws and regulations, the total liability assumed by SHINING 3D (regardless of cause) shall not exceed the purchase price of the products you paid to SHINING 3D.
7. Disputes arising from this Declaration and the Product Usage Documentation thereof shall be governed by the laws of the People's Republic of China, excluding its conflict of law rules. In the event that certain provisions are in conflict with the applicable law, these provisions will be reinterpreted in full accordance with the law, while other valid provisions will remain in force.
8. All disputes between you and SHINING 3D that arise from, shall first be resolved amicably through negotiation. If a dispute cannot be resolved through friendly negotiation, any party may submit the dispute to the Court of Xiaoshan District, Hangzhou City, Zhejiang Province, People's Republic of China for litigation and settlement.
9. In the event of any questions about the contents of this Declaration and application of Product Usage Documentation, please contact us by the contact information provided in the User Manual. Thank you for your cooperation and support! We hope that our products can bring you a great experience of using.

Laser Information

Class 2 Laser Product

Laser power: < 1mW

Complies with FDA performance standards for laser products except for conformance with IEC 60825-1 Ed.3., as described in Laser Notice No.56, dated May 8,2019.

Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Labels

Identification Label	Warning Label & Laser Label
<p>SHINING 3D</p> <hr/> <p>Type: 3D Scanner Model: EinScan Libre Input: 20V === 4A Manufacturer: Shining 3D Tech Co., Ltd. Address: No.1398 Xiangbin Road, Wenyan, Xiaoshan, Hangzhou, Zhejiang, China</p> <hr/> <p>    6 970163 082370</p>	<p>SHINING 3D</p> <hr/> <p>Type: 3D Scanner Input: 20V === 4A Model: EinScan Libre Manufacturer: Shining 3D Tech Co., Ltd. Address: No.1398 Xiangbin Road, Wenyan, Xiaoshan, Hangzhou, Zhejiang, China</p> <hr/> <p>MADE IN CHINA Serial Number EinScan XXXXXX XXX</p> <p>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. (2) this device must accept any interference received, including interference that may cause undesired operation.</p> <p>  </p> <p>LASER RADIATION DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 2 LASER PRODUCT 440nm <60mW 7ms 520nm <1mW 5ms</p> <p>Complies with FDA performance standards for laser products except for conformance with IEC 60825-1 Ed.3., as described in Laser Notice NO.56, dated May 8, 2019.</p> <p>6 970163 082370</p>

Logo	Description
	<p>LVD/EMC Directive This product complies with the European Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.</p>
	<p>WEEE Directive-2012/19/EU The product this manual refers to is covered by the Waste Electrical&Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.</p>
	<p>Federal Communications Commission Certified.</p>

Regulations

FCC Regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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. Privacy of communications may not be ensured when using this device.

IC Regulations

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) L'appareil ne doit pas produire de brouillage, et (2) L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class A digital apparatus complies with Canadian ICES-003. CAN ICES (A) / NMB (A)

- RESTRICTIONS IN THE 5 GHZ BAND

Within the 5.15 to 5.25 GHz band, UNII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel Mobile Satellite System (MSS) operations.

- RESTRICTIONS DANS LA BANDE DE 5 GHZ

Dans la bande de 5,15 à 5,25 GHz, les appareils UNII seront restreints aux opérations intérieures pour réduire toute possibilité d'interférence pouvant nuire aux opérations du Système satellite mobile dans le même canal(MSS).

RF Exposure Regulations (FCC IC)

The SAR limit of USA/Canada is 1.6 W/kg averaged over one gram of tissue, this device has also been tested against this SAR limit. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements ,and should be avoided.

La limite de das des États-Unis /Canada est de 1,6 W/kg en moyenne sur un gramme de tissu, ce dispositif a également été testé contre ce Limite SAR.L'utilisation de clips de ceinture, de étuis et d'accessoires similaires ne doit pas contenir de composants métalliques dans son assemblage.L' utilisation d'accessoires qui ne satisfont pas à ces exigences peut Ne sont pas conformes aux exigences d'exposition aux RF, et devraient être évités.

Note

Frequency Range (RF)

- Wi-Fi (2.4 GHz):
- 2400-2483.5 MHz (TX/RX)
- 2.4 GHz Wi-Fi: < 20 dBm (eirp)
- Wi-Fi (5 GHz):
- Band 1: 5150-5250 MHz (TX/RX)
- Band 4: 5725-5850 MHz (TX/RX)
- 5 GHz Wi-Fi: < 23 dBm (eirp)

Note

EU Statement

This device is restricted to indoor use when operating in the 5150-5250 MHz frequency range.



BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR
HR	IT	CY	LV	LT	LU	HU	MT	NL	AT
PL	PT	RO	SI	SK	FI	SE	UK(NI)	TR	NO
CH	IS	LI							

 **Note****FCC Statement**

Tap **Settings** > **About** to enter scanner information page, you can view the FCC IC ID and regulatory information.

- Contains FCC ID: 2AMG4-EINSTAR3
- Contains IC: 24652-EINSTAR3

Technical Support

Register at support.einscan.com  to submit and track your ticket and get professional support from our technical experts. You can find all related technical tutorials, latest software, etc. from this support platform.

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Instagram: <https://www.instagram.com/shining3d> 

YouTube: <https://support.einscan.com/en/support/home> 

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