SHINING 3D®

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EinScan Pro 2X

Multifunctional Handheld 3D Scanner

Quick Start Guide

Getting Started with EinScan Pro 2X

Preparation

Device List

Standard Pack


Scanner body


Power adapter


Power cable


Calibration board


Calibration board support


Markers


USB drive


Markers remover / Module port cap lifter


Phone screen mount


Cable clip

Industrial Pack (optional)


Turntable


Tripod


Scanner tray

USB cable

Power adapter

Power cable

Color Pack (optional)


Texture camera

Preparation

PC Requirement

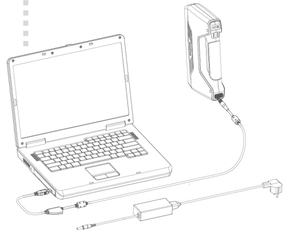
OS	Win7,Win8,Win10 (64bit)
USB Port	Two USB Ports, at least one is USB 3.0
RAM	16GB or more
Graphics Card	NVIDIA GTX770 or higher
Graphics Memory	4G or more
CPU	i7 or higher

Installation

Hardware Installation

1. Standard Pack

STEP 01 Turn on the device and connect it to the computer through USB 3.0 port.



Installation

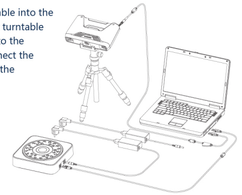
Hardware Installation

2. Industrial Pack

Fasten the scanner tray onto the tripod and place the scanner on the tray. **STEP 01**

STEP 02

Plug the USB cable into the USB port of the turntable and connect it to the computer. Connect the power cable to the turntable.

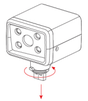


3. Color Pack

Hold the device upright and remove the USB port cover. The cover is located near the logo on the right side of the device. **STEP 01**

Insert the Color Pack and lock it with a rotary lever.

STEP 02



4. Operation Environment

Avoid direct sunlight or too bright of light indoors.
Make sure the scanned object and table are stable. (For Fixed Scan)

Software Installation

Software Download

Download the software and user manual from community.shining3d.com or www.einscan.com/software-download

Run the installer **STEP 01**

Double click software installation icon to install the software.

License Activation **STEP 02**

After successful installation, when the device is correctly connected, double-click to open the software and activate the device. The format of activation is "online activation" . Make sure your computer is connected to the Internet.

Online Activation

Or do local activation and find the license in the USB drive.

Local Activation

Attention: If you install another device of different serial number, the software will automatically notify users to activate this device.

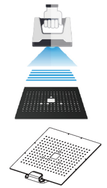
Online Activation

Local Activation

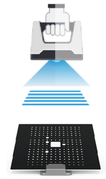
Calibration

Camera Calibration **STEP 01**

Follow the instruction on the software to place the calibration board in 5 different positions. Hold the scanner vertically and cover the screen range.



STEP 02



STEP 03

STEP 04

STEP 05

Calibration

HD Calibration

Only required for Handheld HD Scan
Hold the scanner vertically to the back side of calibration board (white) and adjust the distance until you find the proper distance.

White Balance Calibration

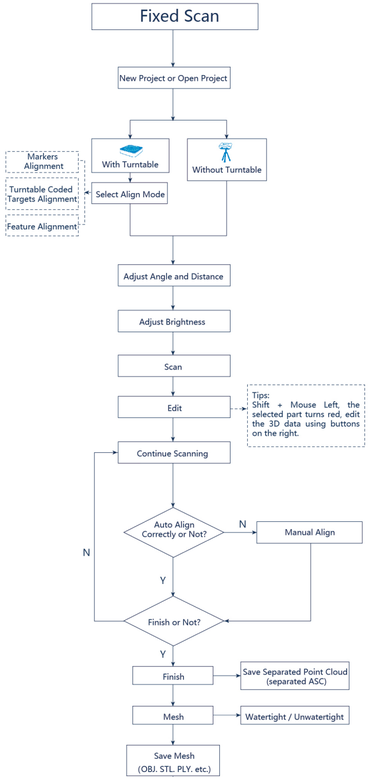
Only required for Color Pack

Hold the scanner vertically to the back side of calibration board (white) and adjust the distance until you find the proper distance.

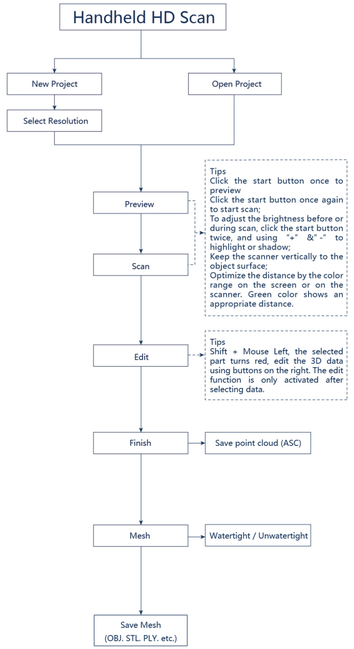
The first time installing the software , calibration is required by default.
Calibration is also required for the following:

1.Device Change
2.After device enduring bumpy transportation
3.After device accuracy decreases
4.Device being uncalibrated for a long time, for example, 15 days.
5.When using the Color Pack, the texture camera's position has been changed.

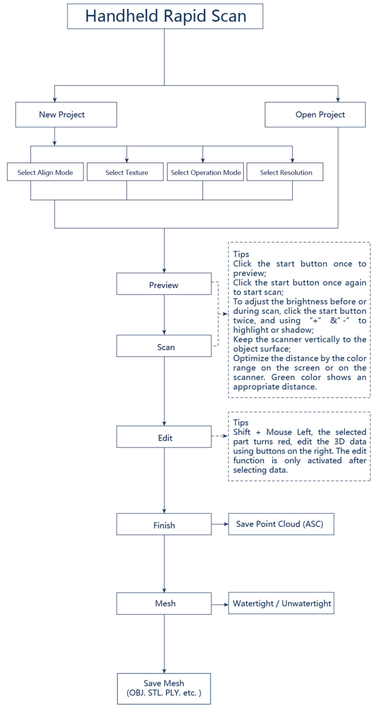
Fixed Scan



Handheld HD Scan



Handheld Rapid Scan



Scanning Tips

Scan Mode Selection

Use Handheld Rapid Scan mode when:
A fast scanning experience is needed;
Color texture is required (with Color Pack installed) ;
Objects with good geometry for feature alignment;
Objects are hard to move or too big to stay on turntable for scanning.
Use Handheld HD Scan mode when:
High accuracy and high resolution by handheld scanning is required;
Objects are allowed to be stuck with markers.
(Note: Texture scan is not available even with Color Pack installed.)
Use Fixed Scan with Turntable mode when:
High accuracy and high resolution is required;
Objects' footprint within ⌀150mm which may not cover most coded targets on turntable;
Weight under 5kg;
Objects' footprint above ⌀150mm with rich geometry features can also work in Auto Scan mode through feature alignment.
Use Fixed Scan without Turntable mode when:
High accuracy and high resolution is required;
Objects is too big or heavy to work on turntable.

Summary

Mode	Accuracy (mm)	Scan Efficiency	Resolution Point distance (mm)	Align Mode
Fixed Scan with Turntable	Single Shot Accuracy 0.04 ☆☆☆☆☆	Single Scan < 1s ☆☆☆☆☆	0.16 ☆☆☆☆☆	Turntable Coded Targets, Feature, Markers, Manual
Fixed Scan without Turntable	Single Shot Accuracy 0.04 ☆☆☆☆☆	Single Scan < 1s ☆☆☆	0.16 ☆☆☆☆☆	Feature, Markers, Manual
Handheld HD Scan	Up to 0.05 +0.3 mm/m (markers alignment) ☆☆☆☆	20 fps 100,000 points/s ☆☆☆	0.2-2 ☆☆☆	Markers
Handheld Rapid Scan	Up to 0.1 +0.3 mm/m (markers alignment) ☆☆☆	30 fps 1,500,000 points/s ☆☆☆	0.2-2 ☆☆☆	Markers, Feature (with rich geometrical features on the surface), Hybrid (Markers and Feature)

Difficult to Scan

- Transparent objects like glasses
- Shining or highly reflective objects like mirrors and varnished metal parts
- Some objects of dark color

Solution

- Spray with white powder

Not Recommended

- Moving objects or vibrating objects
- Lattice structure with many small deep holes
- Hairy objects like human hair and fur

SHINING 3D®

Technical Support

Register at community.shining3d.com for warranty
Or contact us through:
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