SHINING 3D®

For More Shining Ideas

EinScan **HX**

Blue Laser & LED Hybrid Light Source
Handheld 3D Scanner
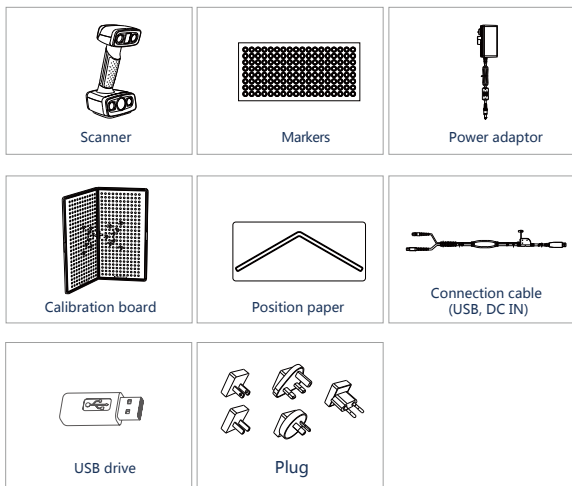

Quick Start Guide

Getting Started with EinScan HX

Preparation

Device List

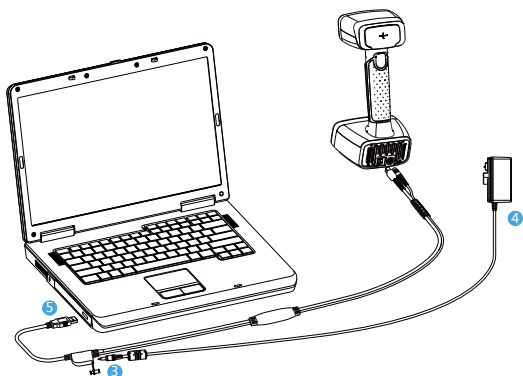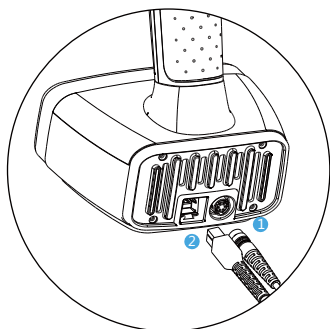|		
Scanner	Markers	Power adaptor
Calibration board	Position paper	Connection cable (USB, DC IN)
USB drive	Plug	

Preparation

Recommended

Graphics Card	NVIDIA GTX1080 and higher
Video Memory	≥4G
Processor	I7-8700
Memory	≥32G
Interface	high-speed USB 3.0

Required

Graphics Card	Quadro card P1000 and higher or NVIDIA GTX660 and higher
Processor	Intel (R) xeon E3-1230, Intel (R) I5-3470, Intel (R) I7-3770
Memory	8G
Interface	high-speed USB 3.0

Hardware Installation

❶ Insert the pin plug into the scanner's circular connector port
❷ Plug the other one to scanner's USB port
❸ Plug the power adaptor into the connection cable DC in port
❹ Plug the power cable another end into a power outlet
❺ Connect the other end of the connection cable to a USB 3.0 port on your computer

Software Installation

Software Download

Download the software and user manual from
www.einscan.com/support/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. Online
activation is recommended if
your computer is connected to
the internet.

Online Activation

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

Local Activation

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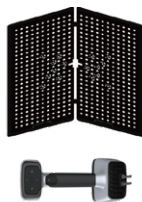the software will automatically notify users to activate this device.

Online Activation

Local Activation

Calibration

Standard Calibration

1. Put the calibration board vertically onto the paper position.
2. Follow the instructions from the software to finish 5 positions.
3. While holding the scanner, make sure it is upright to the center of the board. Bring the scanner closer or farther to the board till all the required distance captured.
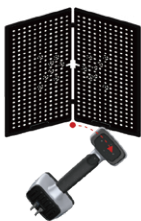
Calibration

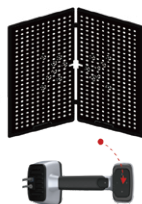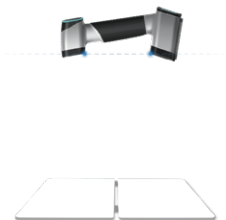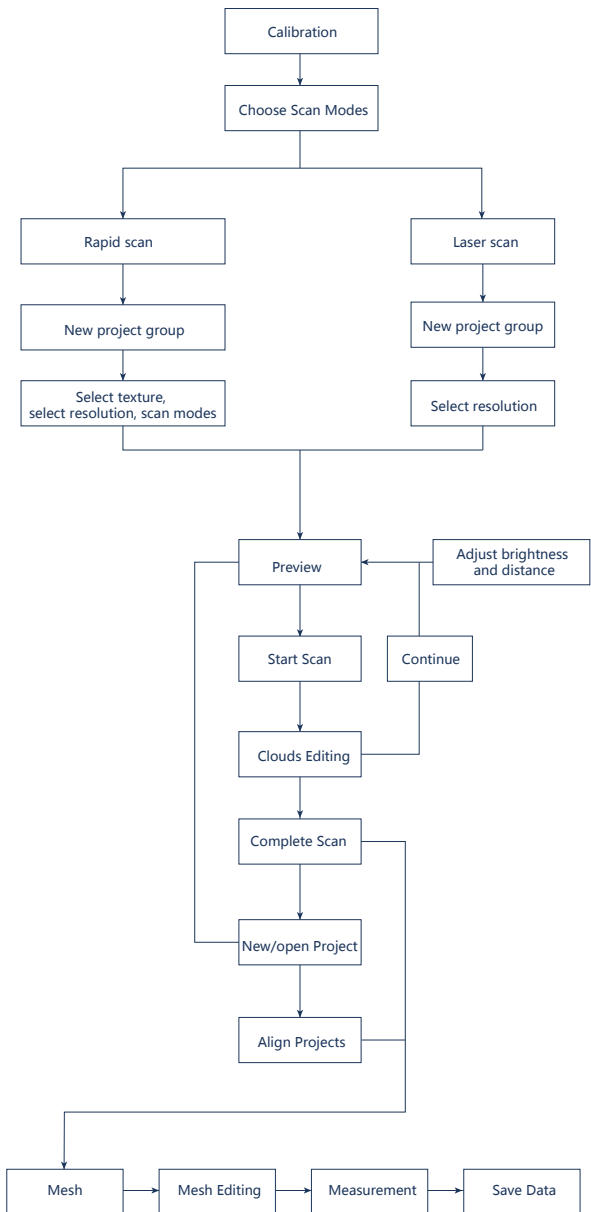### White Balance Calibration

Hold the scanner vertically to the back side of calibration board (white). Move the scanner up and down till a photo taken at a right distance.

The first time installing the software , standard calibration is required by default.

Note:

1. Customer calibration is recommended to do twice a week for daily use.

2. Move the scanner at a steady and slow speed.

3. Make sure to protect the calibration board and keep it clean, no scratches or stains on the black surface with white circles.

4. The Calibration board is matched to the Device with same Serial Number. Doing the calibration with an incorrect calibration board will fail to generate good scan data or optimum accuracy.

5. Clean with clear water only, do not use alcohol or chemical liquid to clean the calibration board.

Software
Scan Work Flow

```
Calibration
    ↓
Choose Scan Modes
    ↓
   ┌────────────┴────────────┐
   ↓                         ↓
Rapid scan              Laser scan
   ↓                         ↓
New project group       New project group
   ↓                         ↓
Select texture,         Select resolution
select resolution,
scan modes
   └───────────┬─────────────┘
               ↓
            Preview  ←  Adjust brightness
               ↓          and distance
            Start Scan   Continue
               ↓
            Clouds Editing
               ↓
            Complete Scan
               ↓
            New/open Project
               ↓
            Align Projects
               ↓
Mesh → Mesh Editing → Measurement → Save Data
```

Scanning Tips

Scan Mode Selection

Use Rapid Scan mode when:
A fast scanning experience is needed;
Objects with good geometry for feature alignment;

Use Laser Scan mode when:
High accruracy and fine details are needed; marker points are
accepted for markers alignment; scanning objects are with shiny
and black surface.

Summary

	Laser Scan	Rapid Scan
What to scan?	300mm - 4m objects	
Light source	Laser	LED
Accuracy	Up to 0.04mm	Up to 0.05mm
Resolution	0.05mm-3mm	0.25~3mm
Alignment	Markers	Markers/features/ hybrid/texture
Scanning speed	480,000 points/s 55FPS	1,200,000 points/s 20FPS
Texture Scan	No	Yes

Difficult to Scan
- Transparent objects like glasses
- Shining or highly reflective objects like mirrors

Solution
- Spray with white powder

Not Recommended
- Moving objects or vibrating objects
- Lattice structure with many small deep holes
- Soft material objects

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