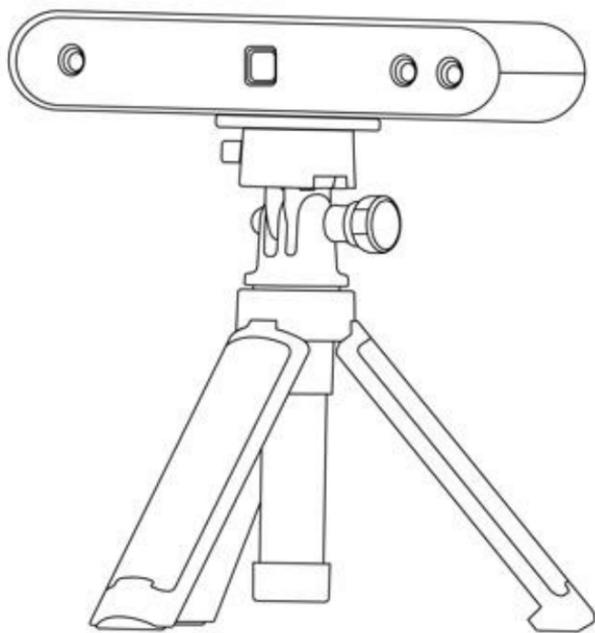# POP 2 3D SCANNER

Guick Start Guide

V 4.0

REVOPOINT

Searching for Keywords

Search for keywords such as"windows" to find a topic. If you are using Adobe Acrobat Reader to read this document, press Ctrl+F on Windows or Command+F on macOS to begin a search.

Navigating to a Topic

View a complete list of topics in the table of contents. Click on a topic to navigate to that section.

Printing this Document

This document supports high-resolution printing.

Table of Content

Read Before Your First Scan
Software Download

To use your POP 2 3D Scanner, you must download the Revo Scan software. It can be found on Revopoint's website https://www.revopoint3d.com/download/ for PC users, and for smartphones, it can also be found by searching for "Revo Scan" in the Google Play or Apple App Store.

Windows V5.2.1	Mac V5.2.1	Android V5.2.0	iOS V5.2.0
Updated 2023-07-24	Updated 2023-07-24	Updated 2023-07-20	Updated 2023-07-20
Download Google Drive	Download Google Drive	Google Play Download	App Store

For the detailed functions of Revo Scan, please refer to the how-to-use guide in Revo Scan.

Scanning Dark, Transparent, or Reflective Objects

Like most 3D scanners, the POP 2 will struggle to scan transparent, reflective, or black objects without first treating the object's surface with scanning spray, baby powder, or dry shampoo. For example, you can cover a transparent or dark object with a scanning spray or dust it with talcum powder.

<div align="center">

**Hard-to-scan Surfaces**

</div>

Surface Features	Possible Solutions
Black or very dark objects	Apply scanning spray or fine powder materials
Shiny or reflective objects	Apply scanning spray or fine powder materials
Metal or electroplated surfaces	Apply scanning spray or fine powder materials
Transparent objects	Apply scanning spray or fine powder materials

Scanning Objects with Plain Surfaces

Scanning objects with simple geometric features, like a football or wine bottle, requires using Marker stickers or marker points and scanning in Marker Mode.

1. Place markers at random distributions on the surface of objects, and it is recommended to place them at a distance of 2~4 cm. Refer to the image below:
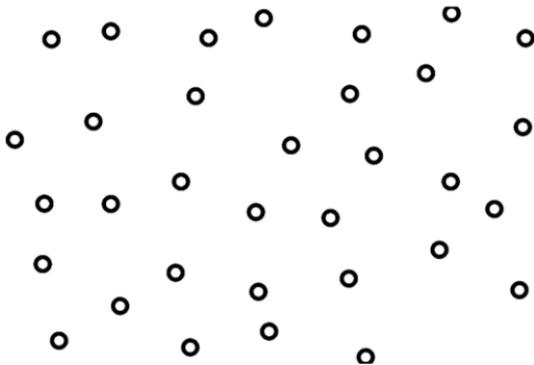
2. Place the Marker stickers on the objects' surface irregularly and ensure that there are at least 5 Marker stickers in the frame for the entire scan, or the scanner will lose track.

3. Alternatively, reference objects (these are any objects with distinct features that can be easily tracked) can be used. Place 1 to 3 reference objects around the item you are scanning for the 3D scanner to track. If doing this, you can use the scanner in Feature tracking mode for the scan.

Color Scanning

If you want to accurately capture an object's color during a scan, please ensure that the object is evenly lit with soft light and that there are no dark or hard shadows.

About the Scanner

The newly developed POP 2 3D scanner has gathered functions of a handheld 3D scanner and a desktop 3D scanner, bringing together the company's latest scientific research results. It adopts self-developed 3D camera hardware technology and high-speed intelligent chip, which contributes to a higher performance and directly outputs accurate depth information of an object.

The core hardware of POP 2 applies the principle of binocular & Micro-structured light, and with the help of the proprietary micro projecting chip, POP 2 ensures fast acquiring high-accuracy (up to 0.05mm) 3D point cloud data. And it supports texture scanning to directly generate vivid 3D models for color 3D printing. As of intelligent algorithms, POP 2's built-in high-performance 3D calculation chip can effectively ensure smoothly scanning without stalling even if it is used with an ordinary computer.
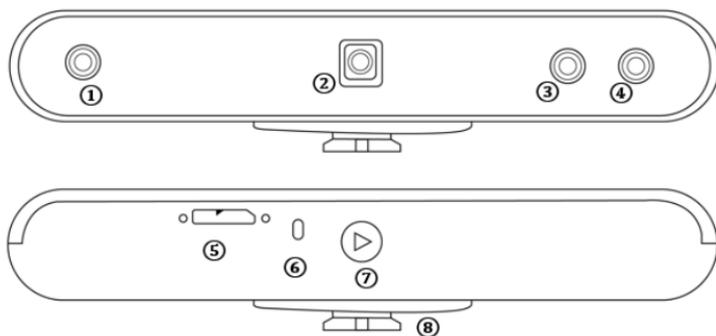
1. Depth Camera
2. Projector
3. RGB Camera
4. Depth Camera
5. Micro-B USB Port
6. LED Indicator
7. Start/Pause Scan Button
8. Quick Setup Board

What's in the Box?
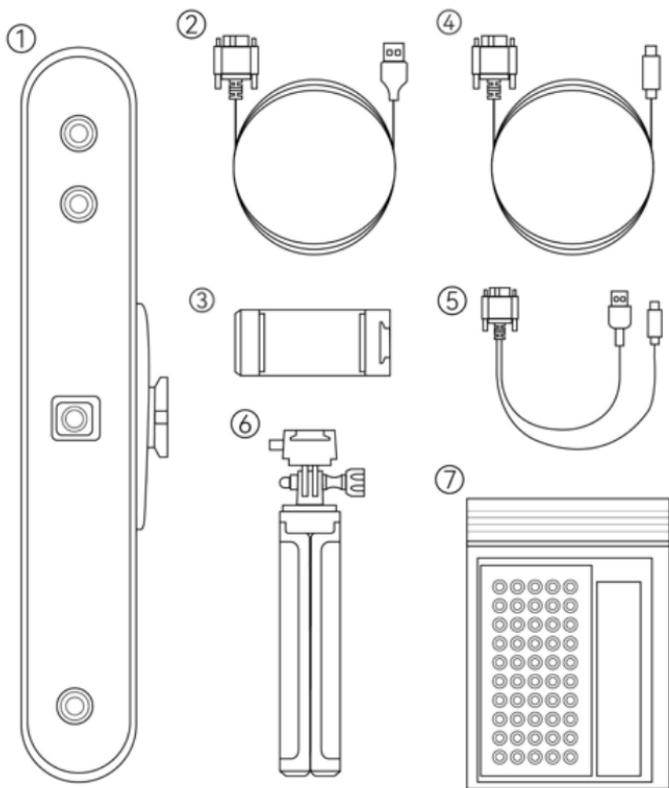
1. POP 2 3D Scanner
2. USB Cable(Micro B – Type A)
3. Phone Holder
4. USB Cable(Micro B – Type C)
5. 2-in-1 Mobile Cable
6. Tripod
7. Gifts (Markers, Glue Tack, Black Sheet)

Note: The list above concludes all in Standard Package. Refer to sales page for the Premium Package.

POP 2 on a Windows or Mac Device

Both Windows and macOS computers are compatible.

System Requirements

Windows: Win 8/10/11 (64-bit)
Windows 7 is not supported.
Memory: ≥ 8GB
Processor: Intel Core i5 or better

Mac with Intel × 86 chip: mac OS 10.15 and models after
Mac with Apple M1 chip: mac OS 11.0 and models after
Memory: ≥ 8GB

* Minimum PC Display Screen Resolution: 1344×768 (1920×1080 is recommended).
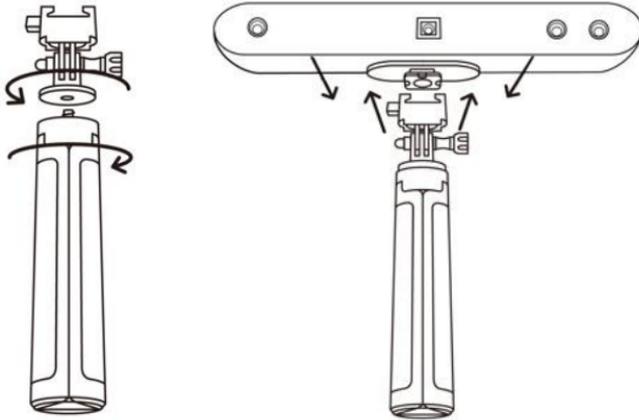
Connection Methods

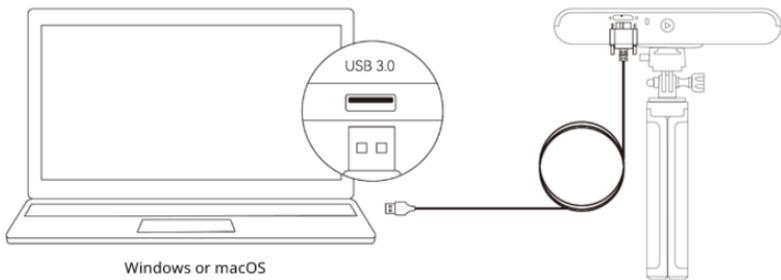|	Windows	macOS
USB Mode	√	√
Wi-Fi Mode	√	√

Connect the POP 2 to a PC Via USB

Step 1: Screw the Quick Mount Kit onto the Tripod.

Step 2: Clip the POP 2 to the top.

Step 3: Connect the Micro-B end of the cable to the back of your POP 2.
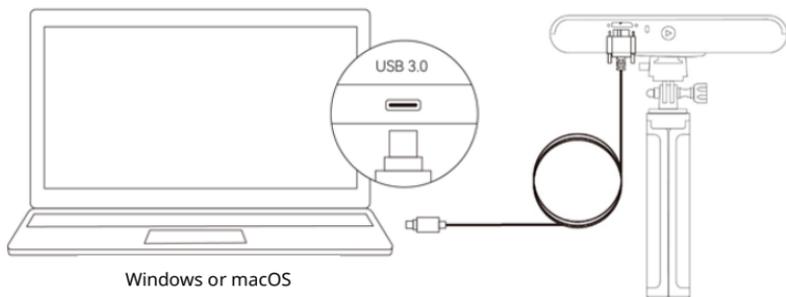
Step 4: Plug the Type-A into your computer.

Step 5: Open Revo Scan on your computer.

Note:

1) Connect the POP 2 to a USB 3.0 port or above, as USB 2.0 will not supply sufficient operating power. Ensure your USB 3.0 port is not damaged or worn out.

2) If there is no Type-A port on your laptop, please find the other cable (Micro B -Type C) to connect your PC.

Windows or macOS
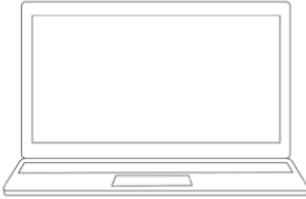
Connect the POP 2 to a PC Via Wi-Fi

Step 1: Power the POP 2 on with a **power bank** or an **AC adapter**.
(Note: Do not plug it into your PC, or it will be in USB mode by default.)
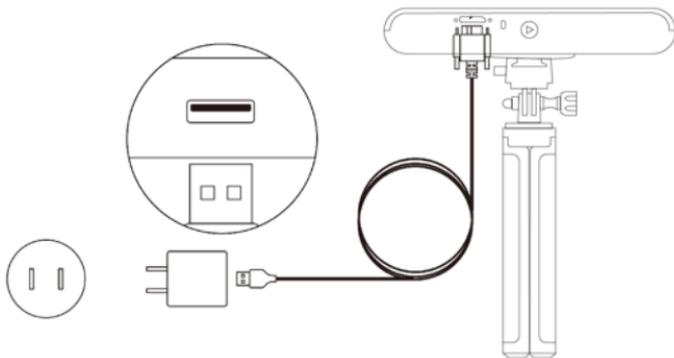
Step 2: Connect the PC to the POP 2.

1) Go to your Wi-Fi setting, search for a network called POP2-XXXXXX and connect. (No password is required.)

2) Wait a few seconds for the scanner to be connected.

Windows or macOS
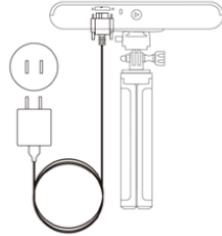
Step 3: Open Revo Scan on your computer.

POP 2 on Smartphones

Android devices can connect via either USB or Wi-Fi. However, iOS devices only support Wi-Fi mode.

System Requirements

Android: ⩾ Android 9.0
Harmony OS is supported.
RAM: ⩾ 6GB

iPhone: iPhone 8 Plus or models after
iPad: 6th generation iPad or models after
System Version: ⩾ iOS 13.0

Connection Methods

	Android	iOS/iPadOS
USB Mode	√	×
Wi-Fi Mode	√	√

Connect the POP 2 to an Android Phone via USB

Step 1: Screw the Phone Holder onto the Power Bank.

Step 2: Clip the POP 2 to the top of the Phone Holder.

(Note: The following power bank handle is included in POP 2 Premium package, if you bought a Standard Package, please prepare a power bank yourself to power the scanner.)
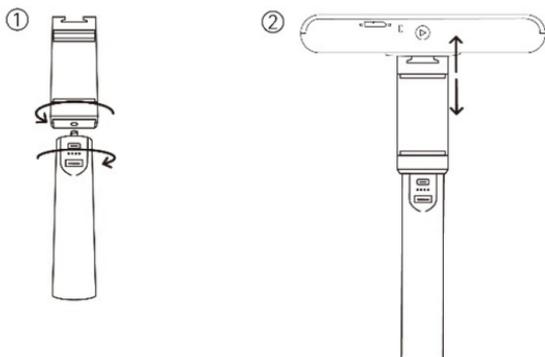
Step 3: Pull open the Phone Holder's clamps and fit your smartphone.

Step 4: Connect the Micro-B end of the 2-in-1 Mobile Cable to the POP 2's port, Type-A to the Power Bank, and Type-C to an Android smartphone.
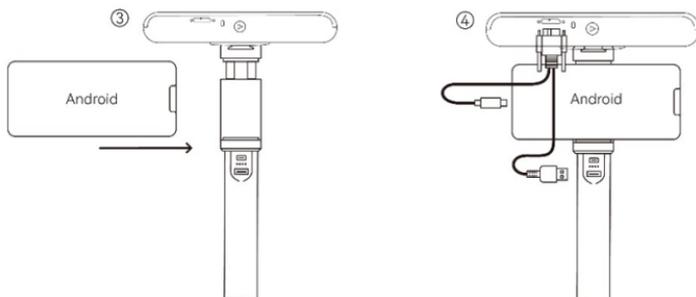
Connect the POP 2 to a Phone Via Wi-Fi

Both Android and iOS Phones are compatible.

Step 1: Power the POP 2 on via the Power Bank Handle or a Socket. (Note: The following power bank handle is included in POP 2 Premium package, if you bought a Standard Package, please prepare a power bank yourself to power the scanner.)
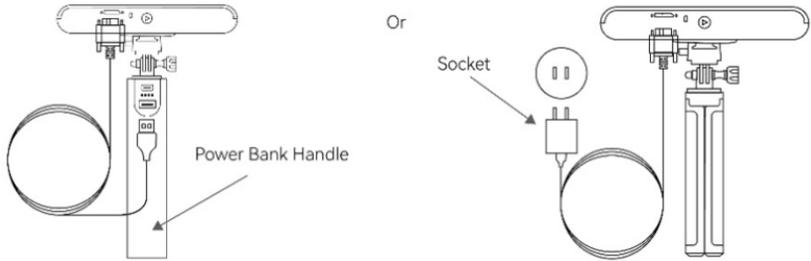
Step 2: Connect the Smartphone to the POP 2.

1) Go to your Wi-Fi setting on your smartphone, search for a network called POP 2-XXXXXX and connect. (No password is required.)

2) Wait a few seconds for the scanner to be connected.

Or

Android or iOS
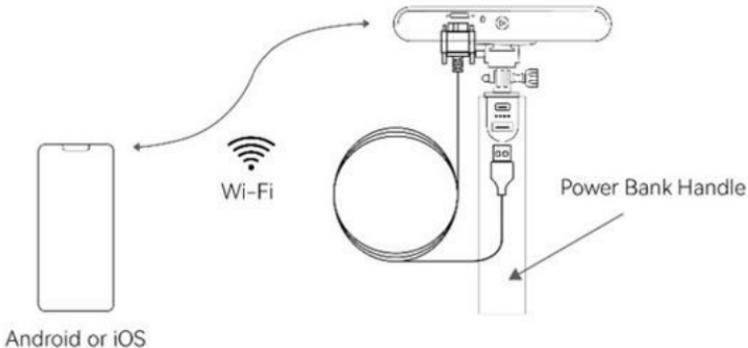
Step 3: Open Revo Scan on your phone.

Note: If you have an iPhone, and want to use the 2-in-1 Mobile Cable to scan, it works like:

Appendix

Specifications

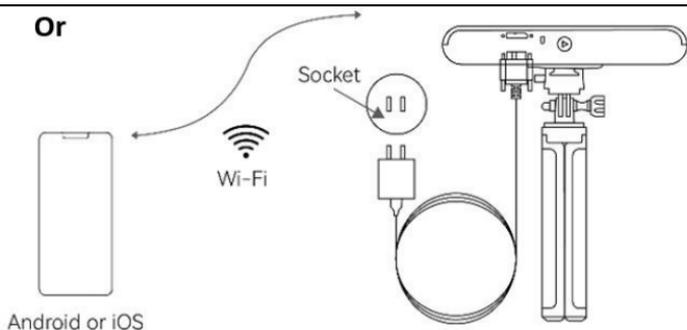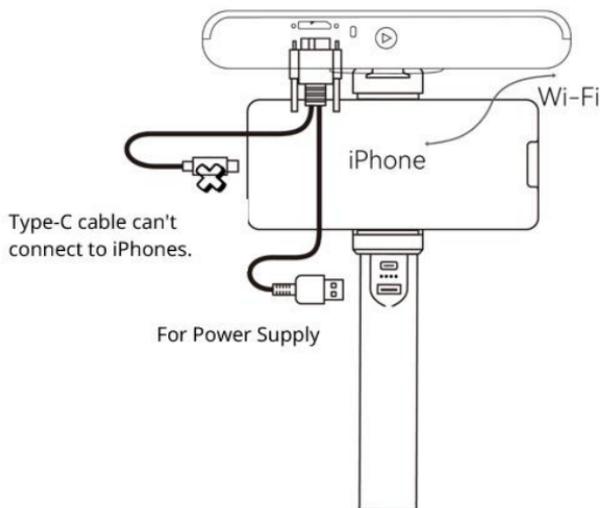|	
Product Name	POP 2 3D Scanner
Technology	Dual Camera Infrared Light
Single-frame Precision	Up to 0.05mm
Single-frame Accuracy	Up to 0.1mm
Single Capture Range	210mm x 130mm
Working Distance	150mm - 400mm
Minimum Scan Volume	20mm x 20mm x 20mm
Scanning Speed	Up to 10fps
Light Source	Class 1 Infrared Light
Alignment	Feature, Marker
Color Scanning	Yes
Output Formats	PLY, OBJ, and STL
Point Distance/Resolution	0.15mm
Special Object Scanning	Use scanning spray for transparent, dark, or highly reflective objects.
Scanning Environment	Indoors and Outdoors
Outdoor Scanning	The POP 2 cannot scan objects well in direct bright sunlight.
Scanner Weight	195g
Scanner Dimensions	154.6mm x 38.2mm x 25.6mm

3D Printing Compatible	Yes
Compatible OS	Windows 10/11 (64-bit), Android, iOS, macOS
PC Display Screen Resolution	>1344x768 (1920×1080 is recommended)
Connection Modes	USB 3.0 or Wi-Fi
Hardware Button	Start/Pause Scan
Note: 1. Accuracy was acquired in a controlled lab environment. Actual results might vary, subject to the operation environment. 2. Class 1 Laser: Avoid direct eye exposure for extended periods! Refer to Standards for Class 1 Lasers for details.	

LED Indicators
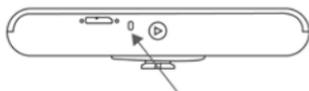
Indicator in Red: Powered on, and starting
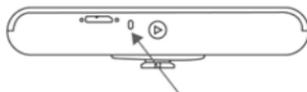
Indicator in Green: Working properly

Update the Firmware

When you connect your POP 2 to Revo Scan, a pop-up will notify you of any firmware updates. If you want to update your firmware, follow the install wizard's prompts and ensure that your POP 2 has a stable power supply.

Scanner Calibration

Your POP 2 3D Scanner was calibrated in the factory and only needs to be recalibrated after a year of use or if the scanned results do not match the specified accuracy.

Safety Maintenance Instructions

1. Small parts, such as markers and USB adapters, are dangerous if swallowed. Keep all components out of reach of children and animals to avoid serious injury to them.

2. Store the scanner and all accessories in a cool, dry place away from direct sunlight.

3. Do not allow the scanner to come into contact with or become immersed in water or other liquids. If it gets wet, wipe them dry with a soft, absorbent cloth. Operating a scanner that has fallen in water may cause permanent component damage.

4. Keep the cameras (the two IR cameras, one RGB camera and a projector) clean. Use 95% isopropyl alcohol and a soft cloth to clean them.

5. Handle the scanner with care to avoid hitting the cameras.

6. The operating temperature POP 2 of this product is 0°C to 40°C (32°F to 104°F).

7. Do not take apart the scanner. If there are any problems or questions, contact the Revopoint customer service team at customer@revopoint3d.com.

Troubleshooting

1. What to do if you get a "check internet connection" error when trying to download a firmware update?

Check your device's Firewall Settings and confirm Revo Scan is not being blocked or the Firewall is off. Try to open https://revopoint.infly3d.com/ in a web browser. If you can access this website, it means Revopoint's server is working correctly.

2. What to do if my POP 2 turns on but its LED never turns solid green, indicating that it's ready to connect?

Connect your POP 2 to a power source, then press the POP 2's Start/Pause scan button ten times to reset the POP 2. If that doesn't resolve the issue, please get in touch with customer support.

3. What to do if the POP 2 always loses tracking when scanning?

Try using scanner spray, dry shampoo, or baby powder to lightly coat any shiny or dark surfaces on the object. If the object has plain surfaces, you'll need to place Marker stickers (place them irregularly and ensure that at least five will always be in the frame when you're scanning) and select Marker mode for the scan.

4. What to do if the object you want to scan isn't clear in the preview window?

Increase the brightness in Revo Scan till the object looks clearly defined and has as few red and blue patches in the preview window as possible.

5. What to do if your scanned model's surfaces lack detail or the details are smeared?

Unfortunately, you'll need to redo the scan, but be careful and ensure you only scan an area once rather than multiple times. Basically, the smaller the number of frames, the better the scan quality. Scanning the same spot twice will only lower the detail.

6. What to do if you keep running out of memory when scanning?

The object you're scanning is too large for your computer or smartphone's amount of RAM. If this happens, pause the scan, fuse the model, and start a new scan from where you had to pause your previous scan. These separate scans can be merged together in Revo Scan V5.0 or you can download Revo Studio on Revopoint Official Website to make a whole model once you've finished scanning the object.

7. What should I do if the firmware upgrade fails and the LED light keeps showing blue?

Connect your POP 2 to a power source, then press the Start/Pause button 10 times continuously to restore the scanner to the normal scanning mode.

Customer Service

If you need any assistance with your scanner, please don't hesitate to contact us at customer@revopoint3d.com or drop us a line at +1 (888) 807-3339 or chat with one of our customer service agents online on our website www.revopoint3d.com. click the speech bubble on the bottom right corner of the screen.

This content is subject to change.

 www.revopoint3d.com

If you have any questions about this document,
Please contact Revopoint by sending a message to
support@revopoint3d.com