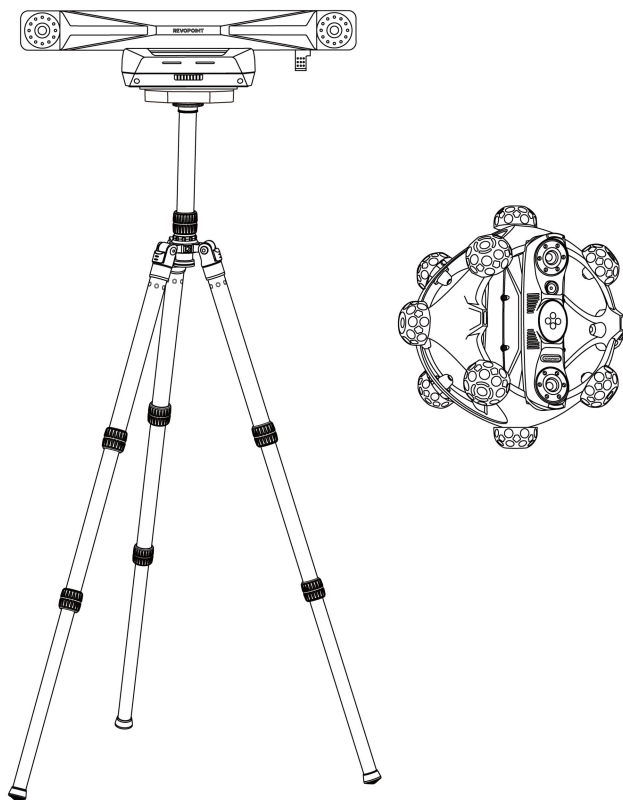


Trackit SR Optical Tracking 3D Scanner

Quick Start Guide

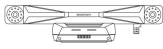
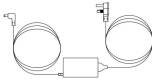
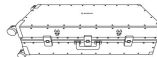
V2.0



Contents

 What's in the Box	1
 Product Profile	2
 System Requirements	3
 Safety Instructions	3
 Installation and Connection	5
Installation	5
Wired Connection	6
Wireless Connection	7
 Calibration	9
Scanner Calibration	10
Tracker Calibration	10
Hand-Eye Calibration	12
 Software Overview	12
IC Warning	14
FCC Warning	14

What's in the Box

1  Tracker	2  Scanner	3  Tripod	4  Quick Release Clamp
5  Auto Calibration Dual-axis Gimbal	6  Calibration Board	7  Calibration Pole	8  Gimbal Adapter Plate
9  Power Adapter	10  Tracker PC Cable	11  Gimbal Cable	12  Scanner PC Cable
13  Scanner Cable	14  Sticky Markers × 200	15  Magnetic Markers × 20	16  Quick Start Guide Certificate & Warranty
17  Scanner Battery	18  Scanner Battery Charger	19  Case with Wheels	20  Ball Plate CMM Edition
21  Battery Grip CMM Edition			

*For Reference Only.

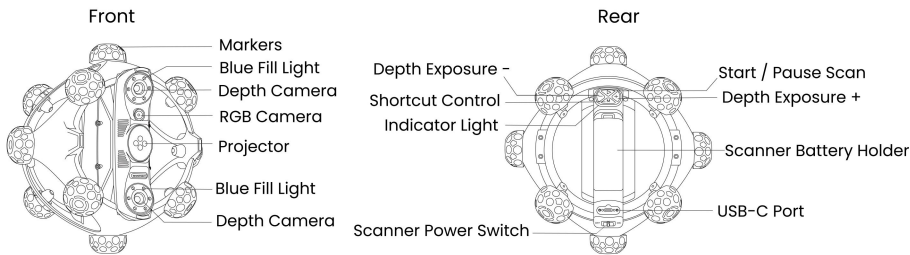
Note: The Power Adapter may vary depending on the country or region.

The CMM Edition comes with a 1-year Revo Measure license.

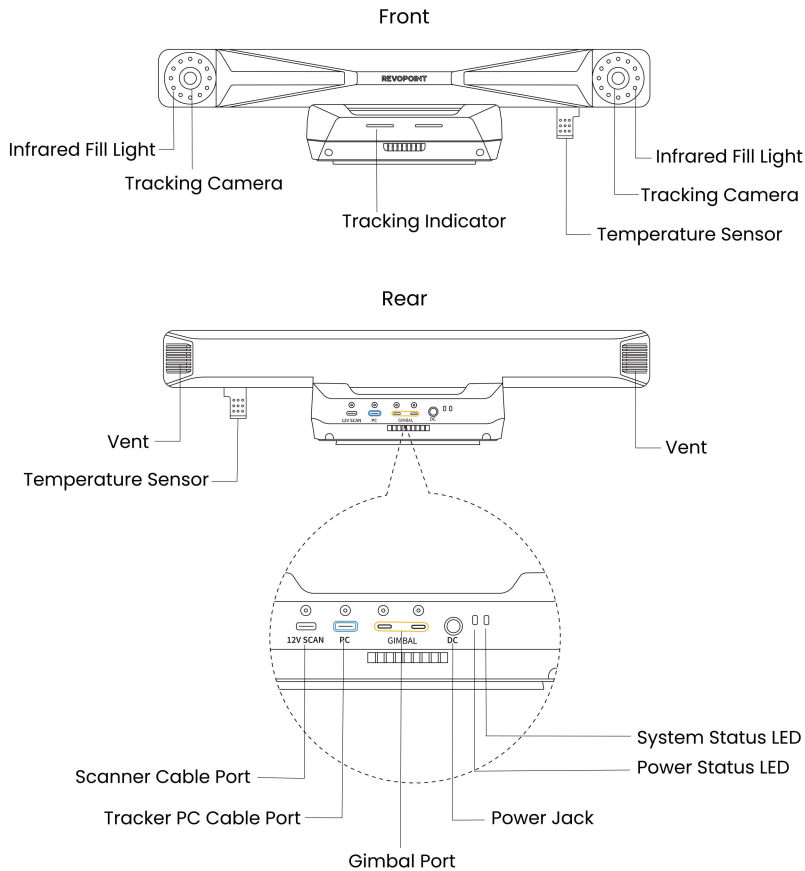
Please store the product and all the accessories properly. Damaged components need to be sent back to Revopoint for repair.

Product Profile

Scanner



Tracker



System Requirements

Before your first scan, please download the Revo Track software from the Support - Download section on Revopoint's website at global.revopoint3d.com. The system requirements are as follows: (Refer to the official website for the latest requirements.)

System	Minimum	Recommended
Windows	System Version: Windows 10/11 (64-bit) RAM: ≥ 32 GB CPU: Intel i7 13th Gen or better/AMD Ryzen 7 above the 7000 series GPU: NVIDIA GeForce RTX 3060 (8 GB)	System Version: Windows 10/11 (64-bit) RAM: ≥ 64 GB CPU: Intel i9 12th Gen or better GPU: NVIDIA RTX 4060 (8 GB) or better
macOS	System Version: macOS 11.0 or better CPU: M2 Pro RAM: ≥ 16 GB	System Version: macOS 11.0 or better CPU: M4 Pro or better RAM: ≥ 24 GB

Note: On Windows systems, the software supports only the x86_64 architecture. If you're unsure about the CPU settings, please ensure that the CPU has cores ≥ 8, threads ≥ 16, and a base frequency ≥ 2.4GHz. Please ensure the USB port on your PC is USB 3.0 or above.

Safety Instructions

1. Product Laser Specifications

It is classified as a CLASS 2 LASER PRODUCT.



2. Laser Safety

- The product uses a Class 2 laser projector. Avoid looking directly at it at close range! Please refer to the Class 2 laser standard document for details.
- Do not observe the laser beam through optical instruments (such as telescopes or camera lenses), as the magnified laser beam may cause retinal damage.
- To prevent laser reflection, avoid placing reflective surfaces like mirrors or glass in the path of the laser beam.

3. Maintenance and Operation

- Please keep the scanner away from water and other liquids. Use the product in a dry and dust-free environment.
- This device is a precision optical instrument. Do not drop or subject it to impact.
- To ensure accuracy, follow the environmental requirements below when operating the product:
 - ① Temperature: 20–25°C
 - ② Humidity: 30–60%
 - ③ Airflow: Avoid air turbulence, such as from air conditioning vents, fans, or strong convective air currents.
 - ④ Vibration: Avoid vibrations from activities like jumping, walking frequently, or heavy objects falling.
- To achieve optimal scanning accuracy, the ambient temperature fluctuation during scanning **must be within $\pm 2^{\circ}\text{C}$ of the temperature at the last calibration.**
- After the device is connected, the system will automatically start warming up the Tracker. **For best scanning accuracy, warm up the device for approximately 2 minutes before scanning or calibration.**
- Don't disassemble the product or its components.
- Avoid holding or rubbing the markers on the device and accessories when using the product.
- Ensure the computer is connected to a power supply when using the product.
- Be sure to place the product and accessories in the case when transporting them. It's recommended that all unused products and accessories be stored in their case.
- Keep this product out of the reach of children.

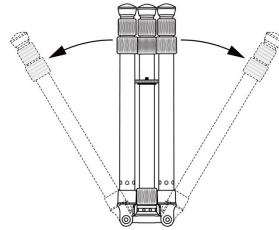
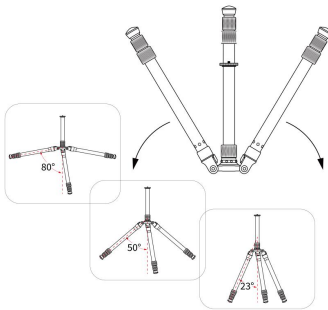
4. Security and Updates

- If you discover a security vulnerability in our product, please report it immediately to customer@revopoint3d.com. We will respond within 7 business days.
- We provide 5 years of security updates. The product automatically checks for and notifies you of available security updates, in compliance with the requirements of the EU Cyber Resilience Act (CRA).

Installation and Connection

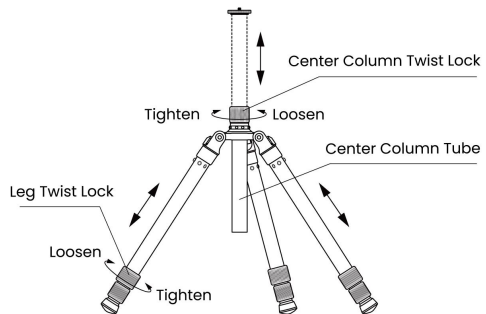
Installation

Step 1: Pull the legs outwards to unfold the tripod.

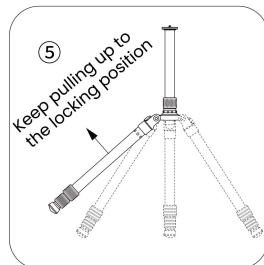
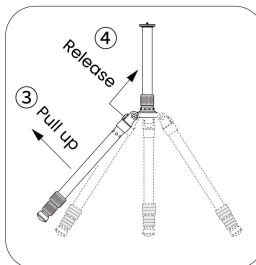
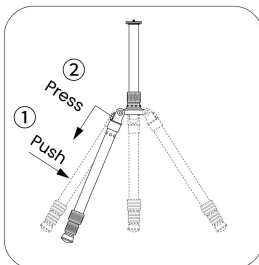


Step 2: Continue pulling the legs down until they lock into place. (A click sound indicates it has locked into one of the three preset positions shown in descending order.)

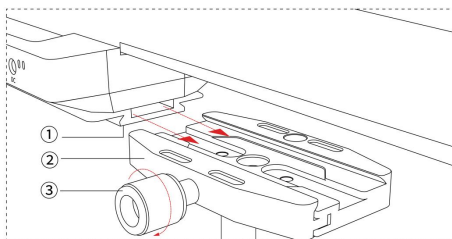
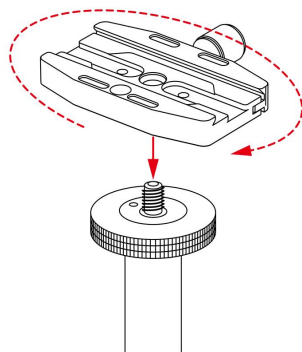
Step 3: Adjust the center column and the legs to your required height as shown in the diagram.



Note: If you need a wider leg spread, follow the steps in the diagram.



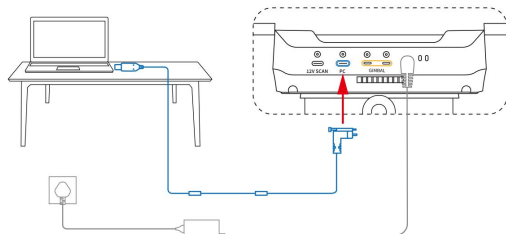
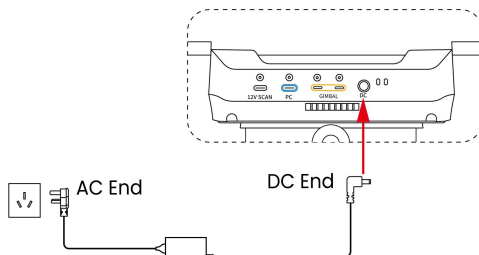
Step 4: Align the central screw hole of the Quick Release Clamp with the screw on the tripod, and rotate the clamp until it's tightened.



Step 5: Slide the Quick Release Plate^① on the bottom of the Tracker into the groove of the Quick Release Clamp^②, and ensure the white lines on the front are aligned. Then, tighten the locking knob^③ clockwise.

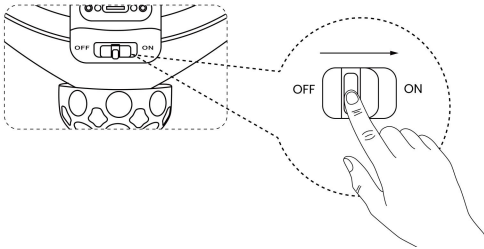
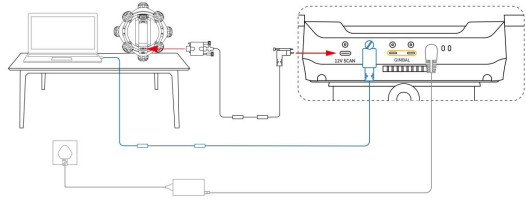
Wired Connection

Step 1: Connect the Power Adapter's DC end to the Tracker's "DC" port, and AC end to a power supply.



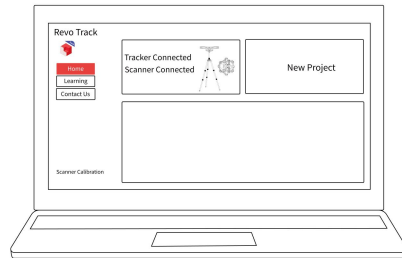
Step 2: Connect the Tracker PC Cable's L-shaped end to the Tracker's "PC" port and tighten the screws. Insert the straight end into a USB-C port on your PC.

Step 3: Connect the Scanner Cable's L-shaped end to the Tracker's "12V SCAN" port and tighten the screws. Connect the straight end to the USB-C port on the Scanner and tighten the screws.



Step 4: Turn on the power switch on the Scanner. Wait a few seconds until the Scanner's indicator light turns solid green.

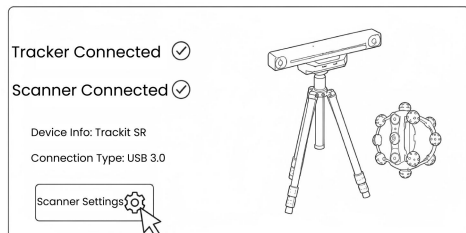
Step 5: Open Revo Track. When both the Scanner and Tracker appear as connected in the software, the system is ready.



Wireless Connection

Before using the device wirelessly for the first time, connect it via a wired connection and complete the Wi-Fi configuration in the software.

Step 1: Follow the steps in "Wired Connection" to connect the device. Then open the software and go to Scanner Settings > Wi-Fi Settings.

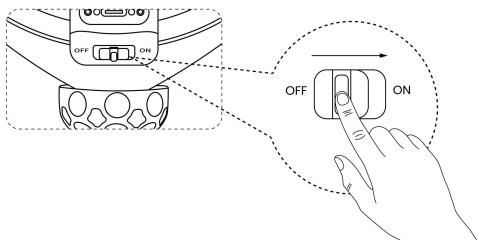
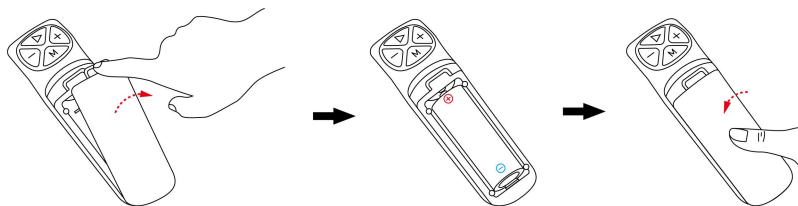


The screenshot shows the 'Scanner Settings' dialog box with the 'Wi-Fi Settings' tab selected. The 'Wi-Fi Mode' section contains the following settings: 'Connection Mode' is set to 'Host' (indicated by a selected radio button), 'Region' is set to 'AUTO' in a dropdown menu, 'Enable Password' is a toggle switch that is currently turned off, 'SSID' is 'TrackitSR-Scanner-REVO-D2663033', 'Password' is 'Revopoint3d', and 'Sync Signal' is set to 'Channel 2' in a dropdown menu. At the bottom of the dialog are 'Cancel' and 'Confirm' buttons.

Step 2: Ensure "Host" is selected, then click "Confirm". The software will send the Wi-Fi configuration to the Tracker and Scanner.

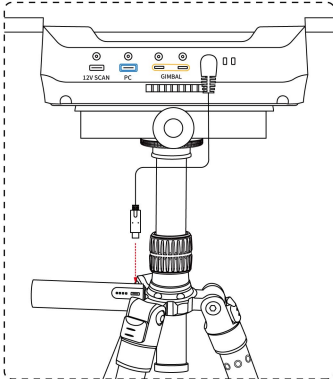
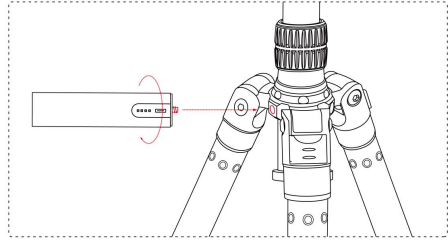
- Wi-Fi configuration is required only before the first wireless connection.
- Once the Wi-Fi configuration is complete, disconnect all wired connections between the device and the PC, then follow the steps below to connect the device wirelessly.

Step 3: Open the Scanner's battery holder cover, insert the battery according to the indicated polarity, and close the cover.



Step 4: Turn on the power switch on the Scanner. Wait a few seconds until the Scanner's indicator light turns solid green.

Step 5: Align the screw on top of the Battery Grip with the threaded hole on the side of the tripod, then turn the Battery Grip clockwise until securely tightened.

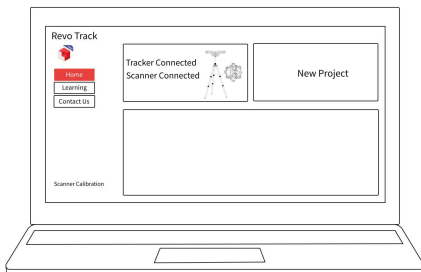
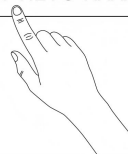


Step 6: Connect the Battery Grip to the "DC" port on the back of the Tracker using the Battery Grip Cable.

Step 7: Open your computer's Wi-Fi list, search for the Wi-Fi network named "TrackitSR-Scanner-REVO-XXXXXXX", enter the default password "Revopoint3d", and connect.



TrackitSR-Scanner-REVO-XXXXXXX



Step 8 Open Revo Track. When both the Scanner and Tracker appear as connected in the software, the system is ready.

Calibration

Calibration Cautions:

- Calibrate your Trackit SR before your first use, after ambient temperature changes, or when a high-accuracy scan is required.
- Trackit SR calibration supports wired connection only.
- Ensure the Tracker and Scanner's cameras are not blocked during the whole process.
- Ensure that no other objects are in the Tracker's field of view throughout the calibration process.
- Don't move the device while calibration is in progress.
- Ensure the computer is connected to a power supply during calibration.

- 1) **Enter the Calibration Program:** Open the software and click "Scanner Calibration" in the lower-left corner to enter the calibration program. Then, the software will automatically warm up the device.
- 2) **Import SN Info:** Follow the on-screen prompts to scan the QR codes on the Calibration Pole and the Calibration Board, then click "Download and Import Online" to import their SN info.

Scanner Calibration

Place the Calibration Board flat on the table with the white side facing up. Hold the Scanner with its cameras facing the board. Follow the on-screen prompts to adjust the Scanner's tilt, pitch and height until calibration in all directions is completed.

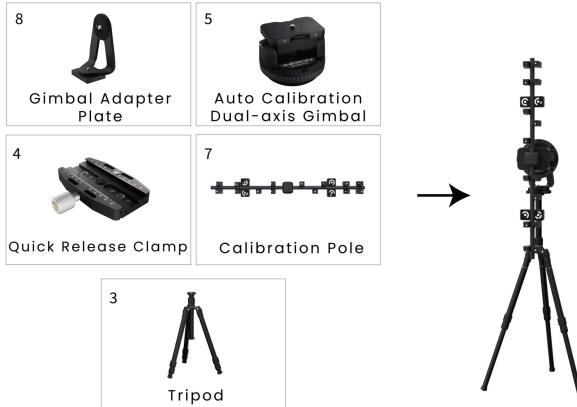


Tracker Calibration

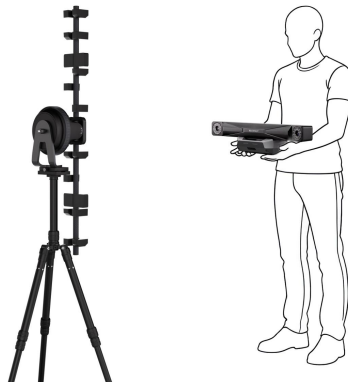
- 1) **Install the Quick Release Clamp:** Extend the tripod's center column to its maximum height. Align the central screw hole of the Quick Release Clamp with the screw on the tripod, and rotate the clamp until it's

tightened.

- 2) **Install the Gimbal Adapter Plate:** Slide the Gimbal Adapter Plate into the groove of the Quick Release Clamp, then tighten the locking knob.
- 3) **Install the gimbal:** Keep the gimbal's USB-C port facing upward, and secure the gimbal to the adapter plate using the supplied screw.
- 4) **Install the Calibration Pole:** Keep the Calibration Pole's Up arrow facing upward. Align the pole's screw hole with the screw on the gimbal, then tighten the thumbwheel until the pole is securely fastened.



- 5) **Connect the gimbal to the Tracker:** Connect the gimbal to the gimbal port on the back of the Tracker using the gimbal cable (yellow cable) and tighten the screws.
- 6) **Start Calibration:** Hold the Tracker with its cameras facing the Calibration Pole. Then move the Tracker according to the software prompts until it is aligned with the indicator frame on the interface. Perform the Tracker calibration at different distances.



Hand-Eye Calibration

- 1) **Install the Tracker:** Remove the Calibration Pole, Dual-axis gimbal, and Gimbal Adapter Plate from the tripod, and mount the Tracker onto the Quick Release Clamp.
- 2) **Place the Calibration Board:** Place the Calibration Board flat on the table with the black side facing up and the marker side facing the Tracker. Move the Tracker according to the on-screen prompts until the board is aligned with the indicator frame on the interface.
- 3) **Start Calibration:** Hold the Scanner and rotate it to the designated angles as instructed on the screen. Perform calibration for each pose in the left-right and front-back directions. Repeat the above steps until the hand-eye calibration is completed for all required angles.

Note: Do not block the Tracker's FOV when holding the Scanner. Ensure that the Tracker can see both the Scanner and the Calibration Board.



Software Overview

Trackit SR optical tracking 3D scanner supports three scanning modes:

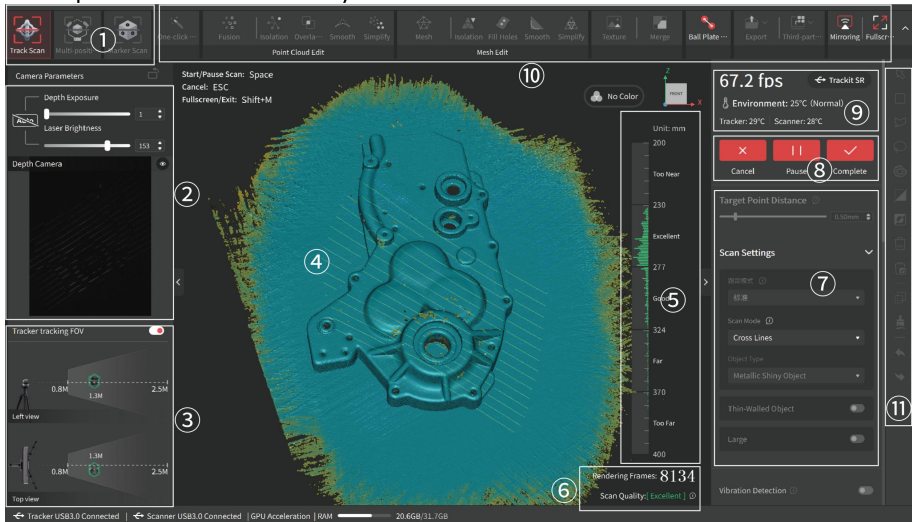
Track Scan: Scan without markers by tracking the Scanner's position and angle in real time. The Tracker and object must stay still during the scan, making it suitable for quickly scanning small and medium-sized objects.

Multi-position Scan: Ideal for scanning large objects. Before scanning, move the Tracker to capture the global markers across the entire object surface. Then, move the Tracker and Scanner area by area to scan point clouds based on the global markers. Ensure that at least five markers

remain visible to both the Tracker and Scanner during movement.

Marker Scan: The Scanner functions as a standalone 3D scanner. Markers are required to be placed on the objects before scanning. Then, the scanner aligns point cloud data by identifying the markers. It's suitable for scanning small and medium-sized objects.

After connecting the scanner, click the **New Project** button on Revo Track's Home page to enter the project interface. It is recommended to switch the scanning mode in the upper left corner of the interface as required, then set other parameters and start your scan.



※ Please refer to the actual software interface.

- | | |
|--------------------------------|-------------------------------|
| ① Scanning Modes | ⑥ Total Frames / Scan Quality |
| ② Depth Camera Preview Window | ⑦ Scan Settings |
| ③ Tracker's FOV Preview Window | ⑧ Scan Controls |
| ④ Central Preview Window | ⑨ Scanner Info |
| ⑤ Distance Indicator Bar | ⑩ Tab Bar |
| | ⑪ Toolbar |

For detailed scanning steps or software instructions, please refer to the *Trackit SR User Manual*.

IC Warning

This device complies with Industry Canada's 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.

This Class B digital apparatus complies with Canadian ICES-003.

IC RF Statement:

When using the product, maintain a distance of 20 cm from the body to ensure compliance with RF exposure requirements.

FCC Warning

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.

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body.

User Manual



Tutorial Videos



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