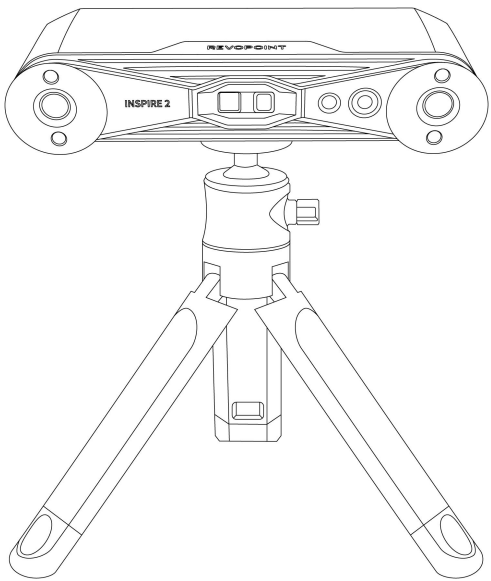
INSPIRE 2 3D Scanner

Quick Start Guide

V1.1



REVOPOINT

Thank you for choosing a Revopoint 3D scanner! Please carefully read this Quick Start Guide before your first scan.

Before first use, visit our official website at global.revopoint3d.com. Locate the Support-Download page to download the Windows/macOS version of Revo Metro. For iOS and Android users, find Revo Scan on the Apple App Store or Google Play Store to download.

Go to the bottom of the Download page to get the latest Quick Start Guide.

Visit Revopedia for more details on our products and usage.

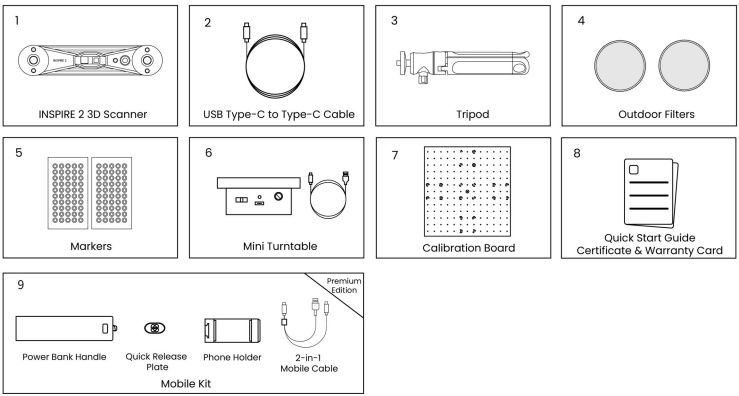
Follow our YouTube account, Revopoint 3D, for tutorial videos.

This content is subject to change. Please refer to the latest version.

⚠ Please keep the scanner away from water and any other liquids, and avoid bashing the scanner. This product's operating environment temperature range is 0°C to 30°C (32°F to 86°F). Please use the product only within this range.

Contents

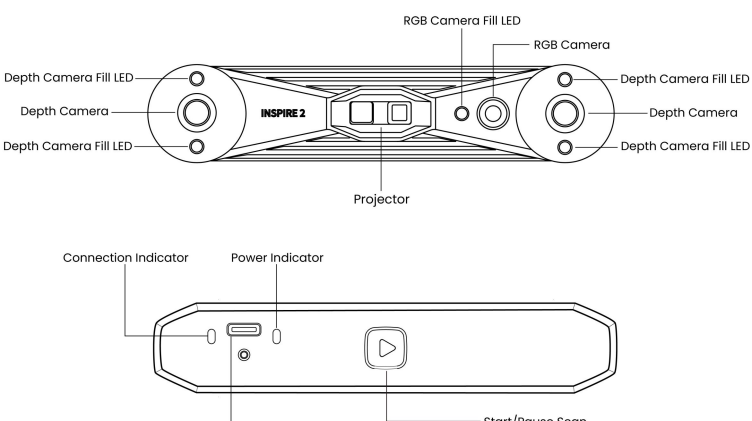
What's in the Box



※ For reference only.

Note: When connecting to a PC via Wi-Fi or scanning with a smartphone, the Mobile Kit is recommended. The Standard Edition box does not include the Mobile Kit; it can be purchased on Revopoint's online stores.

Product Profile



System Requirements

Please download and install the official software before the first scan. For where to download the software and its requirements, please refer to the table below.

Software	Revo Metro	Revo Scan (Phone)
Download Location	"Support - Download" on global.revopoint3d.com	Apple App Store or Google Play Store
Supported Scanning Modes	Full Field / Parallel Lines	Full Field
System Requirements	Windows: Win10/11 (64 - bit) RAM: ≥16 GB CPU: Intel i7 13th Gen or AMD Ryzen 7 5800 GPU : NVIDIA GeForce RTX 3060 (8GB) or better	Android System version: Android 9.0 or better RAM: ≥8 GB Storage : ≥128 GB
	macOS: macOS 11.0 or better RAM: ≥16 GB Processor: M1 Pro/Max/Ultra	iPhone: Models after iPhoneX System version: iOS 14.0 or better RAM: >4 GB Storage: ≥64 GB iPad: 10th Gen iPad or later

Note: If you're unsure about the CPU configuration, please ensure that the CPU has cores ≥ 8, threads ≥ 16, and a base frequency ≥ 2.4GHz. Ensure the USB port on your PC is USB 3.0 or above.
Only in Laser Line Scanning modes, a dedicated graphics card is required for acceleration. AMD and MAC GPUs do not currently support acceleration.

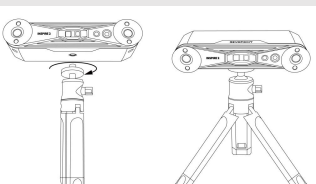
Scanner Connections

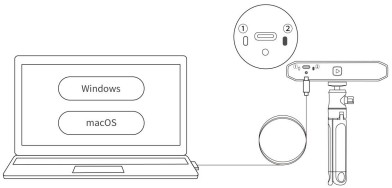
System / Mode	PC		Phone	
	Windows	macOS	Android	iOS
USB	✓	✓	✓	×
Wi-Fi	✓	✓	✓	✓

Using a PC to Scan

I. Connecting INSPIRE 2 to a PC via USB Cable

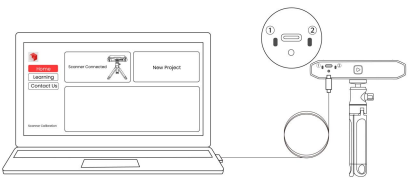
Step 1: Connect the Tripod to the scanner.
Note: Adjust the tripod's height by extending each leg evenly to the locking position to avoid instability.





Step 2: Use the USB Type-C to Type-C Cable to connect the scanner to a PC. When the scanner's indicator ② turns solid green, it's powered.

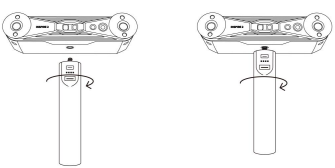
Step 3: Open Revo Metro, when the software shows Scanner Connected and the scanner's indicator ① turns solid blue, it's ready.

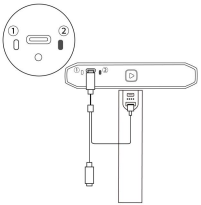


II. Connecting INSPIRE 2 to a PC via Wi-Fi

Step 1: Screw the scanner onto the Power Bank Handle.

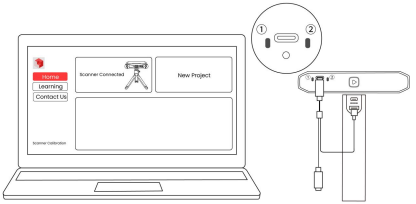
Note: Do not connect the scanner directly to a PC for power, or it will default to USB mode.





Step 2: Use the 2-in-1 Mobile Cable to connect the scanner and Power Bank Handle. When the scanner's indicator ② turns solid green, it's powered.

Step 3: Search for a Wi-Fi network called **INSPIRE2-REVO-XXXXXXXX** in your PC's Wi-Fi settings, and connect (no password is required).

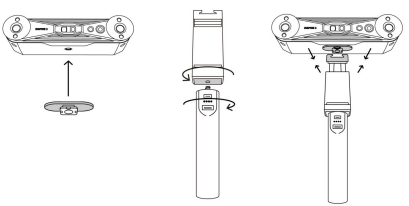


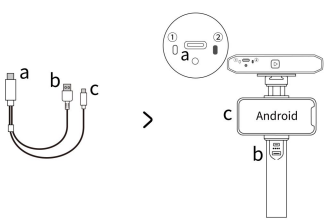
Step 4: Open Revo Metro, when the software shows Scanner Connected and the scanner's indicator ① turns solid blue, it's ready.

Using a Phone to Scan

I. Connecting INSPIRE 2 to Android Phones via USB Cable

Step 1: Attach the Quick Release Plate, Phone Holder, and Power Bank Handle to the scanner.

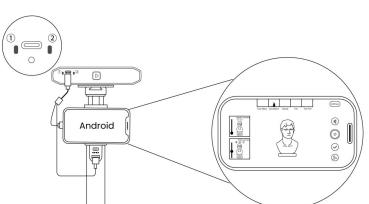




Step 2: Put a phone in the Phone Holder, and use the 2-in-1 Mobile Cable to connect to the ports shown. When the scanner's indicator ② turns solid green, it's powered.

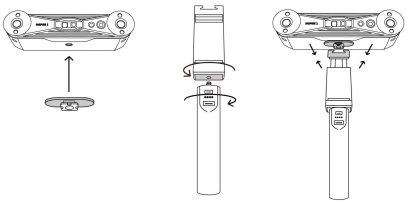
Note: The 2-in-1 Mobile Cable can only be used to connect Android phones.

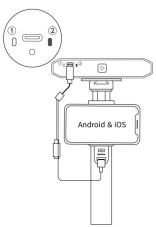
Step 3: Open Revo Scan. When indicator ① turns solid blue and the phone displays the scanning preview screen, it's ready.



II. Connecting INSPIRE 2 to Android or iOS Phones via Wi-Fi

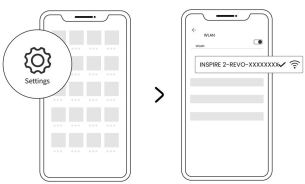
Step 1: Attach the Quick Release Plate, Phone Holder, and Power Bank Handle to the scanner.

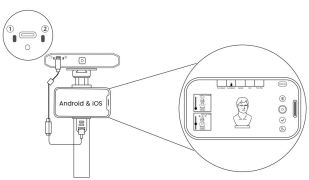




Step 2: Put a phone in the Phone Holder, and use the 2-in-1 Mobile Cable to connect the scanner to the Power Bank Handle. When the scanner's indicator ② turns solid green, it's powered.

Step 3: Search for a Wi-Fi network called **INSPIRE2-REVO-XXXXXXXX** in your smartphone's Wi-Fi settings, and connect (no password is required).

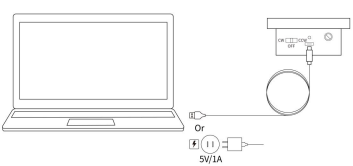


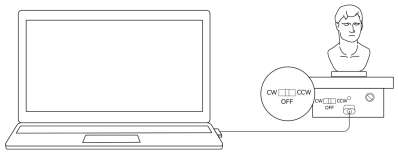


Step 4: Open Revo Scan. When indicator ① turns solid blue and the phone displays the scanning preview screen, it's ready.

Mini Turntable Setup

Step 1: Connect the turntable to a PC or a 5V/1A third-party power adapter via the turntable's power cable. When the indicator turns solid green, it's powered.





Step 2: Place an object on the turntable. Flick the switch to change the turntable's rotational direction, and twist the dial to set the speed.

Scanning Modes Introduction

Full Field: High scanning speed for rapid point cloud capture of common objects, supported on PC and mobile apps.

Parallel Lines: Designed for precision scanning, it handles reflective metal and black objects without spray coating. Supported on PC and mirrored to a smartphone via Revo Mirror for preview and control.

Revo Mirror screen mirroring steps:

① Visit the Revopoint official website and go to "Support - Download" menu to download and install Revo Mirror for both desktop and mobile.

② Mount the Mobile Kit (Phone Holder, Power Bank handle, Quick Release Plate) onto the scanner. Connect the Power Bank Handle to the scanner with the 2-in-1 Mobile cable.

③ Ensure both the computer and phone are connected to the network named "INSPIRE2-REVO-XXXXXXXX." Open Revo Metro, wait for the scanner to connect and enter the scanning page, then click the mirroring button.

④ Tap the detected device to be mirrored in the mobile Revo Mirror app.

⑤ Follow the prompt on the PC to enter the PIN code to complete the initial pairing. Then, click "Enter Screen Mirror Mode" to control the scanning process.

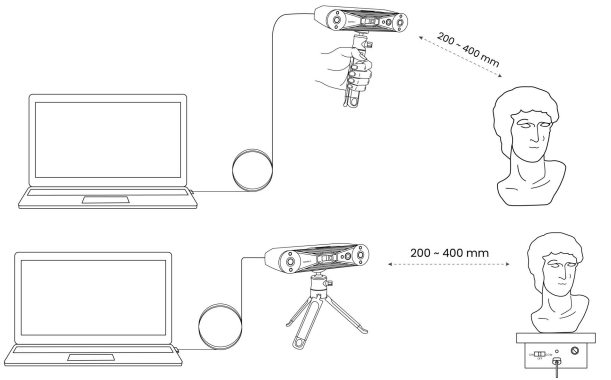
Read Before Scanning

- This product uses a Class 1 laser projector. Avoid looking directly at it at close range! Please refer to the Class 1 laser standard document for details.
- Ensure only the object to be scanned is shown in the Depth Cameras' preview window. Ensure the object is evenly lit if you need a color model.
- When scanning with markers, attach them irregularly on the surface, ensuring at least 5 can be captured in one frame. For best accuracy, place markers on flat surfaces and avoid curved ones.
- Before calibrating the scanner or scanning in Parallel Lines mode, it is necessary to warm up the device for 10 minutes to ensure optimal accuracy.

Scanning Scenarios

Indoor Scanning

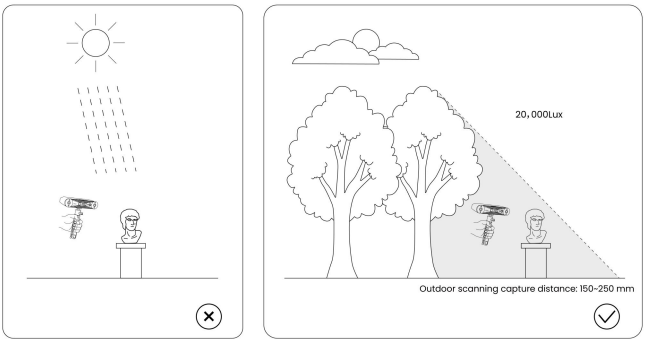
When scanning, aim the scanner at the object, hold it steady, and move slowly and evenly, or mount it on a tripod on a stable surface. The scanner should be about **200–400 mm** from the object. Refer to the software's distance indicator bar for optimal distance.



Outdoor Scanning

- Select "Outdoor Object" as the Object Type. Attach the two outdoor filters to the front of the left and right depth cameras before outdoor scanning.
- When scanning outdoors, avoid direct sunlight to minimize interference from reflective surfaces.
- Avoid scanning in rainy or windy weather to prevent water damage or reduced data accuracy from wet surfaces.

During scanning, aim the scanner at the object, hold it steady, and move slowly and evenly. Keep the scanner at the optimal distance that the software's distance indicator bar indicates from the object.

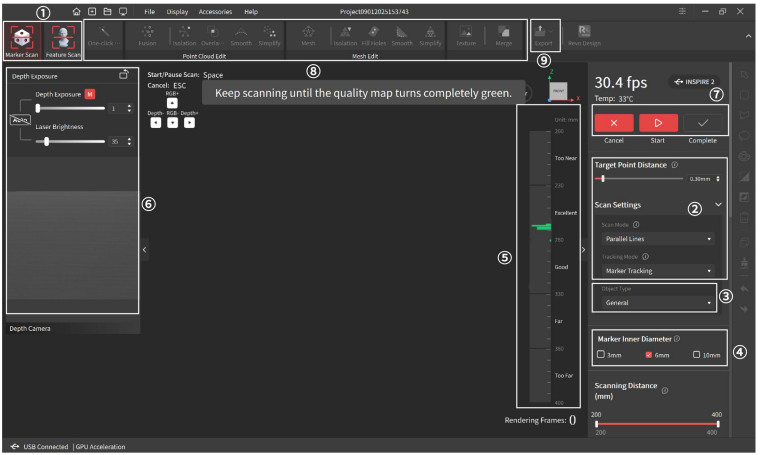


Note: The software lets users recalibrate the 3D scanner for optimal accuracy. Refer to the "Scanner Calibration" function on the home page for details. The scanner was professionally calibrated at the factory, so you can first check its accuracy using the calibration program. If the check fails, follow the on-screen instructions to recalibrate.

First Scan

I. First Scan Using Revo Metro (PC)

After connecting the scanner, click "New Project" on the home page and follow the steps below to set up and start scanning.



※ Please refer to Revo Metro's interface.

① Choose Marker Scan or Feature Scan (the interface shown is Marker Scan).

② In Scan Settings, select Parallel Lines or Full Field. In Parallel Lines mode, preset the Target Point Distance before scanning.

Note: Larger Target Point Distance speeds up scanning; smaller spacing produces more details but slows it down.

③ Choose Object Type according to your requirements.

④ Select the inner diameter of the markers currently in use to enhance scanning accuracy.

Note: Only Revopoint standard marker sizes are supported.

⑤ Move the scanner closer or further away from the object until the scanning distance indicator bar shows **Excellent** or **Good**.

⑥ Click the Auto button to automatically set the Depth Cameras' exposure, or disable Auto exposure and adjust the slider to minimize blue and red areas, ensuring the entire object appears gray.

⑦ Click the ▷ button to begin your scan. During the scan, aim and move the scanner slowly and steadily around the object. Use the Revo Metro's distance indicator bar to maintain an ideal distance. You can click the ❙❙ button to pause and check your model anytime during your scan. If the model is incomplete, click the ▷ button to continue your scan. Click the ✓ button to finish the scan when the model is complete.

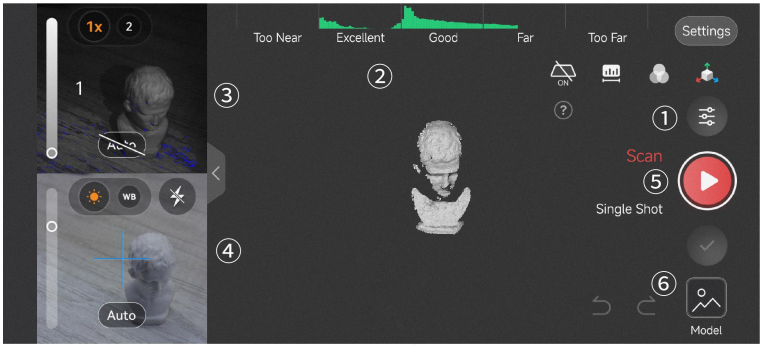
⑧ Click **One-click Edit** to process the model automatically, or manually edit it using Fusion, Mesh settings, and other tools for a detailed model. When manually fusing point clouds, it's

suggested to use the system's recommended point distance. Setting a minimal distance increases calculation time. For details, please refer to the User Manual on the Learning page.

⑨ After post-processing, export the model in formats such as PLY, OBJ, or STL.

Note: The Full Field scanning mode supports color scanning. Enable color scanning in this mode to obtain a color model.

II. First Scan Using Revo Scan (Phone)



① Open Revo Scan on your phone and tap the button. Choose Accuracy, Tracking Mode, and Object Type according to your needs. Toggle Color Scanning if you need a color model.

② Move the scanner closer or further away from the object until the scanning distance indicator bar shows **Excellent** or **Good**.

③ Tap the Auto button for automatic Depth Camera exposure, or disable Auto exposure and adjust the slider to minimize blue and red areas in the preview window.

④ Adjust the RGB Camera's exposure for color scans. Tap Auto for automatic exposure, or turn off Auto and drag the slider until the object's color is clear and sharp in the preview window.

⑤ Tap the button to start your scan. Try not to scan the same areas repeatedly.

⑥ Tap the button to finish the scan and click the "Model" in the lower right corner to enter the post-processing interface when the scan is over.

⑦ You can share the project to Revo Metro on your PC for more editing options.

Note: Revo Scan on Android and iOS devices is continuously updated. Please refer to the actual interface.

IC Warning

This device complies with Industry Canada's licence-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 20cm 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 into 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 minimum distance 20cm between the radiator & your body.

Specifications

Name	INSPIRE 2
Scanning Type	Handheld and Desktop
Technology	Dual-camera Infrared Structured Light and Infrared Multi-line Laser
Scannable Object Size	Small to Medium
Single-frame Precision, up to	0.03 mm
Single-frame Accuracy, up to	0.05 mm
Volumetric Accuracy	0.05 mm + 0.1 mm × L (m) , L is the length of the object. (Note: Using marker tracking mode)
Fused Point Distance, up to	0.1 mm
Working Distance (Indoor)	200 ~ 400 mm
Working Distance (Outdoor)	150 ~ 250 mm
Single Capture Area at Nearest Distance (Indoor)	130 × 129 mm at 200 mm
Single Capture Area at Furthest Distance (Indoor)	293 × 257 mm at 400 mm
Angular Field of View (H × V)	43 × 35°
Minimum Scan Volume	20 × 20 × 20 mm
Maximum Scan Volume	2 × 2 × 2 m
Scanning Speed, up to	Full-field Structured Light Scan: 18 fps Multi-line Laser Scan: 90 fps (GPU), 40 fps (CPU)
RGB Camera Resolution	1280 × 800
Color Scanning	Yes
Tracking Methods	Feature, Marker, Global Marker
Outdoor Scanning	Yes
3D Light Source	Class 1 Infrared Light
Fill Lights	4 Infrared LEDs
White Flash LEDs	1 White Flash LED
Built in Chip Computing	Depth Map Computing
Buttons	1
Output File Formats	PLY, OBJ, STL, ASC, 3MF, GLTF, FBX

Ready to Print 3D Models	Yes
Wi-Fi	6
Bluetooth	4.1
Connector Type	USB Type-C
Power Requirements	DC 5V, 1A
Scanner Weight	190 g
Dimensions (L × W × H)	53 × 27 × 132 mm
Special Object Scanning	Using scanning spray is recommended when scanning transparent, specular surfaces.
User Recalibration	Yes
Supported Accessories	Large Turntable, Dual-axis Turntable, Power Bank, Mobile Kit(II)

*The above information is for reference only. Please check the latest specifications on the Revopoint website.

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