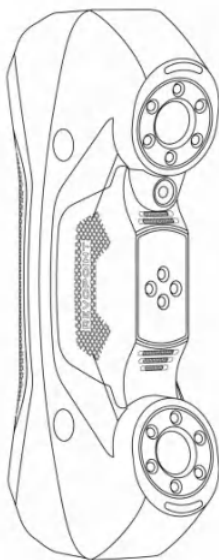


3D Scanner MetroY, MetroY Pro

Quick Start Guide

V1.0



REVOPOINT

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

Begin by downloading the **Revo Metro** software for your PC from the Support - Download section on Revopoint's website at global.revopoint3d.com for your MetroY 3D Scanner.

Go to the bottom of the Download page to get the latest Quick Start Guide. You can also 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 other liquids, and avoid dropping or hitting it. This product's operating environment temperature range is 0°C to 40°C (32°F to 104°F). Please use the product only within this range.

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What's in the Box

1



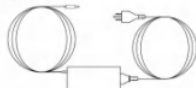
MetroY 3D Scanner

2



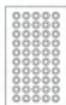
USB Type-C to
Type-C Cable

3



Power Adapter

4



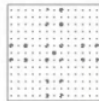
Markers x 200

5



Carrying

6



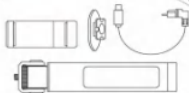
Calibration Board

7



Quick Start Guide
Certificate & Warranty

8



Mobile Kit (3rd Gen)

9



Tripod

10



Dual-axis Turntable

11

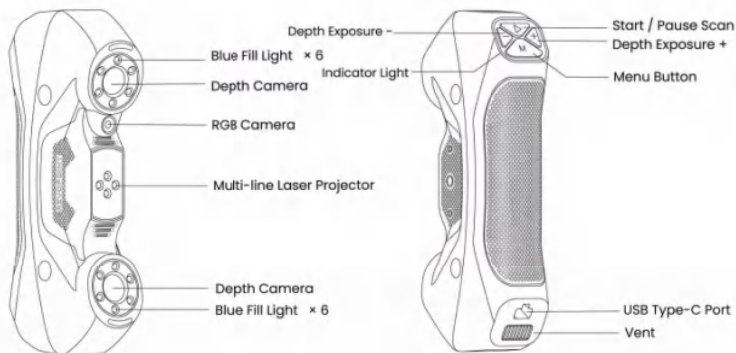


Sample

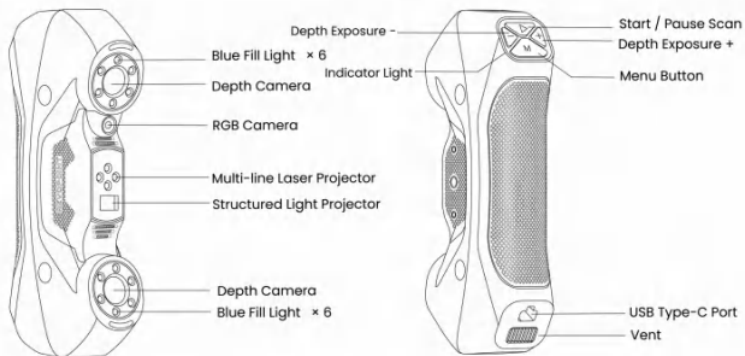
Note: The appearance of the scanner varies slightly depending on the model.
The Power Adapter may vary depending on the country or region.

Product Profile

MetroY:



MetroY Pro:



Indicator Light States

Green - Single flash	Power on
Red - Flashing	Powering up
Green - Solid	Powered
Green - Flashing	Operating normally

Button Functions

	Start/Pause
	Increase depth camera exposure
	Decrease depth camera exposure
	Zoom in/Zoom out central preview window or Custom settings

System Requirements

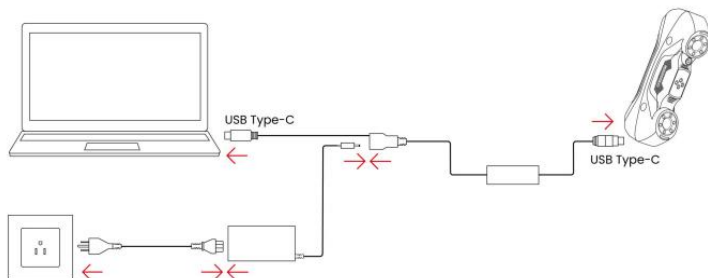
Before your first scan, please download the Revo Metro software from Revopoint's website at global.revopoint3d.com. The system requirements are as follows:

Minimum PC Requirements	
Windows System Version: Windows 10/11 (64-bit) RAM: ≥ 32 GB CPU: Intel i7 12th Gen or AMD Ryzen 7 5800 GPU (Optional): NVIDIA GeForce RTX 3050 (8 GB)	macOS System Version: macOS 11.0 or better RAM: ≥ 16 GB CPU: M1 Pro/Max/Ultra
Recommended PC Requirements	
Windows 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 RAM: ≥ 24 GB CPU: M2 Pro/Max/Ultra, M3 Pro/Max/Ultra

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. Please ensure the USB port on your PC is USB 3.0 or above.

Scanner Connection

Wired Connection



As shown in the above diagram, power the scanner and connect it to the PC's USB 3.0 port.

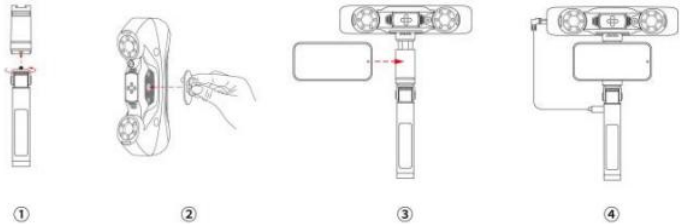
Note: If the connection fails or the frame rate drops below 10 fps, disconnect from the PC while leaving the power on, then reconnect the connector.

Wireless Connection



1. Follow steps ① and ② to align the screw on the battery grip with the threaded hole on the scanner's side, then turn the wheel to secure it.
2. According to step ③, connect the battery grip to the scanner using the USB Type-C to Type-C cable for power.
3. Find and connect to the Wi-Fi network "METROY-REVO-XXXXXXX" (no password required) on your PC. Open Revo Metro, wait for the scanner to connect, then start scanning.

MetroY also supports wireless casting to a phone via Revo Mirror:



1. Following steps ①, ②, and ③, mount the Mobile Kit (phone holder, battery grip, quick-release plate) onto the scanner.
2. According to step ④, connect the battery grip to the scanner using the USB Type-C to Type-C cable to supply power.
3. Download the Revo Mirror software for both your PC and phone from the Support - Download section on Revopoint's website.
4. After connecting both PC and phone to the "METROY-REVO-XXXXXXX" Wi-Fi, open Revo Metro on the computer, wait for the scanner to connect and reach the scanning page, then click the casting button.
5. Tap the detected device to be mirrored in the mobile Revo Mirror app.
6. 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.

Note: Mobile Kit can be purchased from Revopoint's online stores.

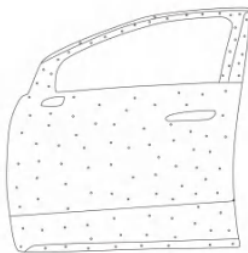
Scanning Modes Introduction

- ① **Cross-Lines:** Captures shiny metals and black objects. It's more efficient than Parallel Lines mode.
- ② **Parallel-Lines:** Captures fine and complex details at a lower speed.
- ③ **Single-Line:** Performs accurate scans of localized deep holes, grooves, and narrow areas using marker tracking.
- ④ **Full-field (Only MetroY Pro):** Rapidly capture feature-rich objects.
- ⑤ **Auto Turntable (Only MetroY Pro):** The turntable, scanner, and Revo Metro work together to automatically scan an object in single-shot mode, streamlining the process and creating detailed, color-accurate 3D model if needed.

Scanning Tips

- ① Operate the scanner at room temperature around 20°C (68°F). After powering on MetroY, wait 10 minutes for it to warm up to ensure optimal scanning results.
- ② Scan in a clean indoor environment and ensure that there are no other objects within the scanner's field of view.

- ③ When using Marker Scans, place markers irregularly on the object, ensuring at least 5 can be detected in a frame. **For best accuracy, attach markers to flat surfaces and avoid soft pads or cloths.**



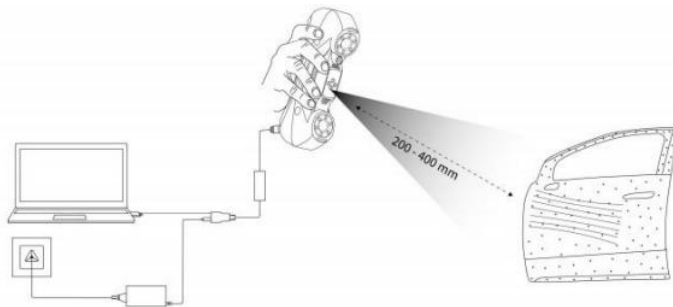
- ④ MetroY uses a Class 1 laser projector, while MetroY Pro uses a Class 2M. Avoid looking directly at the laser or using magnifying tools like telescopes or cameras, as it can damage your retina. Keep reflective surfaces such as mirrors away from the beam's path.

⑤ **Instructions for Using Scanning Spray**

- For transparent or highly reflective objects (e.g., glass, stainless steel, electroplated surfaces), both line laser and structured light scanning require scanning spray.
- For dark reflective or metallic reflective surfaces (e.g., black paint, machined aluminum alloy), line laser scanning can be performed without spray, but Full-field scanning and Auto Turntable scanning require scanning spray.

Your First Scan

E.g., Handheld Scanning



After the scanner is connected, click the **New Project** button on Revo Metro's Home page to enter the Marker Scan interface, then set parameters and start your scan using the following steps:



※ Please refer to the actual interface in Revo Metro.

- ① Choose scanning mode based on your needs. For laser line scanning, set the target point distance before scanning.

Note: Increasing point distance speeds up scanning, decreasing it enhances detail but slows the process.

- ② Choose Object Type according to your requirements.

- ③ Select the inner radius of the markers currently in use to enhance scanning accuracy.

Note: Only Revopoint standard marker sizes are supported.

- ④ Move the scanner closer or further away from the object until the scanning distance indicator bar shows **Excellent** or **Good**.

- ⑤ Click the Auto button to automatically set the Depth Cameras' exposure, or turn off the Auto exposure and adjust the slider until there are as few blue and red areas on the object in the Depth Camera preview window as possible and the entire object appears gray.

- ⑥ Click the  button to begin your scan. During the scan, aim the scanner at the object, move it slowly and steadily around the object, and keep the distance between the scanner and the object at 250 – 350 mm. In Revo Metro, refer to the distance indicator bar to ensure an excellent distance. 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.

Note: When scanning with laser line modes, the point cloud changes from red to green as more data is captured. Green indicates higher quality, so it's best to scan the same areas from different angles and finish when the model is mostly green.

- ⑦ Click **One-click Edit** to process the model automatically, or manually edit using Fusion, Mesh settings, and other tools for a more detailed model. When manually processing point cloud fusion, it is suggested to use the system's recommended point distance. Minimal point distances increase calculation time. See Revo Metro's Learning page User Manual for details.