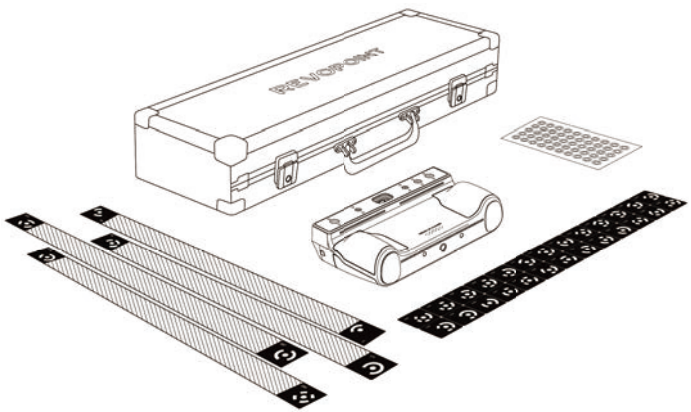
Photogrammetric Metrology Kit

Quick Start Guide

V1.0



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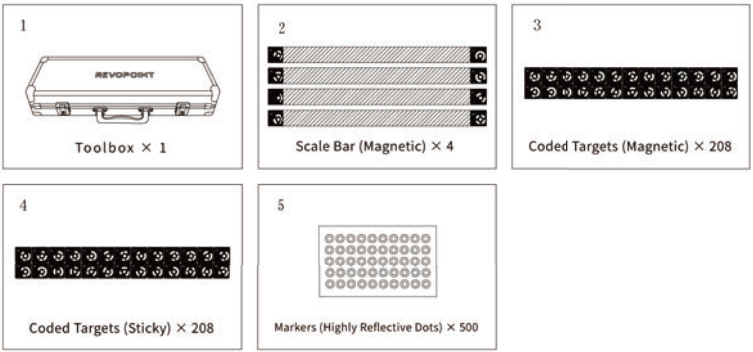
1. Product Overview

The Photogrammetric Metrology Kit is a brand-new 3D measurement tool developed by Revopoint. Powered by multi-viewpoint stereo vision technology, the kit, the MIRACO Plus 3D scanner's high-resolution RGB camera, and powerful algorithms accurately measure the 3D coordinates of coded targets on an object's surface, outputting more accurate models.

2. What's in the Box?



3. Read Before Use

1) The Photogrammetric Metrology Kit should be used with a MIRACO Plus 3D scanner.

Note: Use Revo Scan 5 (PC) version 5.4.12 or later.

2) The scale bars have been professionally calibrated at the factory. Do not hit or bump them, as this may affect their accuracy.
3) To avoid duplicate coded target numbers, don't mix the magnetic and sticky coded targets from the same kit. Also, don't combine coded target sets from different kits.
4) Coded targets can be used together with markers to ensure full coverage of an object's surface.
5) To avoid accuracy errors, the object or scene's surfaces should be rigid and not deform or be displaced during the process.
6) The kit's magnetic accessories are suitable for surfaces with strong magnetic properties, such as steel, iron, and stainless steel.

4. How to Use

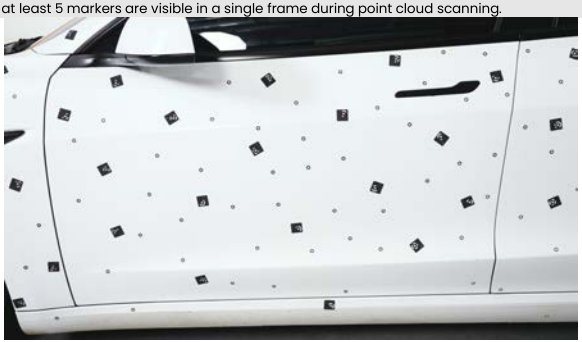
4.1 Set up the Environment

① Stick the coded targets and markers

Stick the coded targets and markers on or around the object randomly, avoiding the feature-rich areas on its surface.

For example, when capturing at a distance of 1 m from the object, the distance between the coded targets should be about 20 cm, and the distance between the markers should be about 10 cm.

Note: Affix the coded targets and markers according to the guidelines below to ensure smooth photogrammetry and point cloud scanning.
Ensure at least 8 coded targets are visible in a single frame during photogrammetry.
Ensure at least 5 markers are visible in a single frame during point cloud scanning.



② Place Scale Bars

- Place the scale bars against the object's surface or around it. Ensure the scale bars are not parallel but angular to each other.
- Place the scale bars in a blank area. Avoid covering the coded targets or markers. At least two scale bars are needed.

Note: Do not move the scale bars, coded targets, and markers when shooting for photogrammetry.
The scale bars can be removed during point cloud scanning but do not change the location of the coded targets and markers.

③ Check the Environment

- Only shoot indoors. Ensure the ambient light is even and soft. It is recommended to shoot under natural light.
- Ensure the shooting area is tidy.
- Ensure the object being captured remains still and free from bright spots or shadows on its surface.