

# FARO Scanner Freestyle<sup>3D</sup> Objects

Medium volume high accuracy color handheld laser scanner for reality capture, reverse engineering and crime scene documentation



## Midrange Measurement Volume

A measurement range of 0.3m - 0.8m allows the fast capturing of small to mid-sized components and products.

## High Accuracy

The verifiable accuracy of 0.5mm enables you to capture detailed scan data and carry out challenging measurement applications.

## Optional On-site Calibration

The device can be easily calibrated on-site ensuring high quality data. A PDF report with key data permits maximum and verifiable confidence in the acquired data.

## Real-time Point Cloud Visualization

The real-time point cloud visualization supports the intuitive data acquisition, even for untrained operators.

## Powerful Meshing Tool

With SCENE Process, offering a large scale meshing tool, scan data can be processed into a watertight meshed model or prepared for export into end user software.

## Best Solution for Midrange Measurements

The FARO Freestyle<sup>3D</sup> Objects is a top-quality high-accuracy handheld scanner for Product Design and Public Safety Forensics professionals. It quickly and reliably documents small to mid-sized objects, like crime or crash scene environments and details or products to reverse engineer into 3D high-definition point clouds. Thanks to its lightweight carbon fibre body, the handheld scanner is extremely portable and mobile. With highest accuracy it is suitable for all applications in which challenging projects must be quickly scanned in color from various perspectives.

## Most Common Applications

Archiving casting patterns, reverse engineering fiberglass, roto-molded and structural foam parts and components, reality capture for movie and game production and product packaging design, product, accident and crime scene visualization.

## Benefits

- ▶ Highest precision and ease of use for capturing of mid-sized objects
- ▶ Auto levelling
- ▶ Flexibility to work without artificial targets
- ▶ No extra power supply required
- ▶ Seamless integration with Focus<sup>3D</sup> Laser scan data, even in grey scale
- ▶ Worldwide service and support from local FARO facilities

## Performance Specifications Freestyle<sup>3D</sup> Objects



|   |   |
|---|---|
| <b>Range</b>                                | 0.3m - 0.8m   |
| <b>Resolution @ 0.5m distance</b>           | ≤ 0.2mm   |
| <b>3D point accuracy<sup>1</sup></b>        | ≤ 0.5mm   |
| <b>Typical lateral accuracy<sup>2</sup></b> | ≤ 0.5mm   |
| <b>Typical Noise (rms)</b>                  | 0.2mm @ 0.3m distance<br>0.4mm @ 0.5m distance<br>0.8mm @ 0.8m distance                     |
| <b>Scan volume</b>                          | 0.13m <sup>3</sup>  |
| <b>Typical field of view (HxW)</b>          | 270mm x 360mm @ 0.3m<br>450mm x 540mm @ 0.5m<br>600mm x 680mm @ 0.8m                        |
| <b>Single image point density</b>           | Up to 45,000 points/m <sup>2</sup> in 0.5m distance   |
| <b>Recorded 3D points<sup>3</sup></b>       | Up to 88,000 points/s,<br>point cloud density increases with time                           |
| <b>Export formats</b>                       | Scan points:<br>.e57, .wrl, .dxf, .xyz, .xyb, .igs, .pts, .pod<br>Mesh:<br>.stl, .obj, .ply |
| <b>Lighting conditions<sup>4</sup></b>      | Up to 10,000 Lux  |
| <b>Light source</b>                         | Inbuilt auto LED flash  |
| <b>Eye safety</b>                           | Class 1 laser   |
| <b>IP rating</b>                            | IP 52*  |
| <b>Operating temperature range</b>          | 0 - 40°C  |
| <b>Operating humidity range</b>             | Non-condensing  |

|                          |   |
|--------------------------|---|
| <b>Calibration</b>       | Optional in-field user calibration with supplied calibration plate. |
| <b>Exposure time</b>     | 0.02ms - 10ms (autoexposure)  |
| <b>Texture color</b>     | 24bit   |
| <b>Dimensions</b>        | 260mm x 310mm x 105mm   |
| <b>Weight</b>            | 0.98kg  |
| <b>Connectivity</b>      | USB 3.0   |
| <b>Power supply</b>      | 5W, USB 3.0-powered   |
| <b>Laser power</b>       | max. 800mW  |
| <b>Duration of pulse</b> | ≤ 10ms  |
| <b>Wavelength</b>        | 798-821 nm  |

<sup>1</sup> Measured in 0.5m distance, for a lateral scanner movement around an object of a size of 2m, using targets for distance measurement. <sup>2</sup> Measured in 0.3m-0.8m distance <sup>3</sup> Point density depends on scanned surface and lighting conditions <sup>4</sup> Limited range and point density in sunlight

\* Dust protection 5. Water protection 2: Protection against dripping water whilst device in standard idle and scanning positions, with downward or forward facing sensor side.

### Recommended System Requirements for Tablet

Microsoft Windows 10 Pro, 64bit  
6th generation Intel® Core™ i5  
256GB hard disc with 8GB RAM  
MicroSDHC  
Microsoft® Surface Pro 4 is a recommended device



To learn more, visit: [www.faro.com/Freestyle3DObjects/sg](http://www.faro.com/Freestyle3DObjects/sg)

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