

FARO® Freestyle^{3D} Objects Scanner

FARO®

Portable handheld laser scanner for reality capture in full color with high accuracy.

Capture Small Details with High Accuracy

The FARO Freestyle^{3D} Objects is a high precision, handheld laser scanner useful for Product Design and Public Safety-Forensics professionals. Users can efficiently and reliably document small to mid-sized objects such as crime or crash scene environments and detailed products to reverse engineer into 3D high-definition point clouds. With its award-winning*, lightweight, user-friendly design, the Freestyle^{3D} Objects Scanner is the go-to choice when portability and high accuracy are top priorities.

* Red Dot Award for Product Design

Most Common Applications

- Archive casting patterns, reverse engineering fiberglass, roto-molded and structural foam parts and components
- Reality capture for movie and game production
- Document product packaging design and products
- Digitally capture and preserve small pieces of evidence
- Document hard-to-reach areas such as under vehicles and behind furniture
- Use in postmortem examinations to document wounds and tissue damage



Benefits

- Highest precision and ease of use for capturing mid-sized objects
- Auto levelling
- Flexibility to work with or without artificial targets
- Powered exclusively by tablet; no extra cables or batteries required
- Seamless integration with scan data from the long-range FARO Focus Laser Scanners, even in gray scale
- Worldwide service and support from local FARO facilities



Mid-range 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 users to capture detailed scan data and carry out the most demanding 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 measured 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.

Performance Specifications Freestyle^{3D} Objects

| | |
|---------------------------------------|---|
| Range | 0.3m - 0.8m |
| Resolution @ 0.5m Distance | ≤ 0.2mm |
| 3D Point Accuracy ¹ | ≤ 0.5mm |
| Typical Lateral Accuracy ² | ≤ 0.5mm |
| Typical Noise (rms) | 0.2mm @ 0.3m distance 0.4mm @ 0.5m distance 0.8mm @ 0.8m distance |
| Scan Volume | 0.13m ³ |
| Typical Field of View (HxW) | 270mm x 360mm @ 0.3m 450mm x 540mm @ 0.5m 600mm x 680mm @ 0.8m |
| Single Image Point Density | Up to 45,000 points/m ² in 0.5m distance |
| Recorded 3D Points ³ | Up to 88,000 points/s, point cloud density increases with time |
| Export Formats | Scan points: .e57, .wrl, .dxf, .xyz, .xyb, .igs, .pts, .pod Mesh: .stl, .obj, .ply |
| Lighting Conditions ⁴ | Up to 10,000 Lux |
| Light Source | Built-in auto LED flash |
| Eye Safety | Class 1 laser |
| IP Rating | IP 52* |
| Operating Temperature Range | 0 - 40°C |
| Operating Humidity Range | Non-condensing |
| Calibration | Optional in-field user calibration with supplied calibration plate. |
| Exposure Time | 0.02ms - 10ms (autoexposure) |
| Texture Color | 24bit |
| Dimensions | 260mm x 310mm x 105mm |
| Weight | 0.98kg |



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|-------------------|---------------------|
| Connectivity | USB 3.0 |
| Power Supply | 5W, USB 3.0-powered |
| Laser Power | max. 800mW |
| Duration of Pulse | ≤ 10ms |
| Wavelength | 798-821nm |

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

* Dust protection 5. Water protection 2: Protection against dripping water while the device is in standard idle and scanning position 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



For more information,
call 800.736.0234 or visit www.faro.com

