

FARO® Scanner Freestyle^{3D} X

The Xtra accurate Freestyle^{3D} X for challenging scanning projects

FARO®



reddot award 2015
winner

XTRA ACCURACY

The verifiable accuracy of 1mm enables you to carry out highly challenging scanning projects.

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.

AUTOMATIC FLASH

The new auto mode automatically activates and de-activates the built-in LED light depending on the existing light conditions.

REAL-TIME POINT CLOUD VISUALIZATION

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

UP TO 8m³ SCANNING VOLUME

The extensive scan volume boosts productivity by reducing scan time.

BEST POINT FILTER

The new best point filter minimizes the noise and allows to get optimum data quality.

X-TRA ACCURACY FOR HANDHELD LASER SCANNING

The FARO Freestyle^{3D} X is a top-quality high-accuracy handheld scanner for professionals. It quickly and reliably documents rooms, structures and objects in 3D and creates high-definition pointclouds. Thanks to its lightweight carbon fibre body, the handheld scanner weighs less than a kilogramme and is therefore extremely portable and mobile. With extraordinary accuracy it is suitable for all applications in which challenging projects must be quickly scanned from various perspectives. The 3D scan data can easily be imported into all commonly used software solutions for architecture, engineering, construction accident reconstruction, forensics or industrial manufacturing.

MOST COMMON APPLICATIONS

Architecture, Construction & Engineering, Forensics & Law Enforcement, Oil & Gas, Maritime, Virtual Reality, 3D Scanning Service Providers

BENEFITS

- ▶ FARO certified accuracy
- ▶ Auto levelling
- ▶ Flexibility to work without artificial targets
- ▶ No extra power supply required
- ▶ Easy-to-use scanning software
- ▶ Seamless integration with Focus^{3D} laser scan data, even in grey scale
- ▶ Worldwide service and support from local FARO facilities

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PERFORMANCE SPECIFICATIONS FREESTYLE^{3D} X

Range	0.5 - 3m
Resolution @ 0.5m distance	Lateral: 0.2mm - 1mm Depth: 0.2mm
3D point accuracy/ whole scan accuracy¹	<1.0mm
Typical lateral accuracy²	<1mm
Single image point density	Up to 45,000 points/m ² in 0.5m distance Up to 10,500 points/m ² in 1m distance
Recorded 3D points³	Up to 88,000 points/s, point cloud density increases with time
Typical Noise (rms)	0.7mm @ 0.5m distance 0.75mm @ 1m distance 2.5mm @ 2m distance 5mm @ 3m distance
Best point filter⁴	Noise reduction of typically 40% when scanning the same object from different distances
Eye safety	Class 1 laser
Lighting conditions⁵	Up to 10,000 Lux
Light source	Inbuilt auto LED flash
Scan volume	8.1m ³
Typical field of view (HxW)	450mm x 530mm @ 0.5m 930mm x 1,100mm @ 1m 1,800mm x 2,000mm @ 2m 2,600mm x 2,900mm @ 3m
Typical angular field of view (HxW)	45°x56° @ 0.5m 45°x59° @ 1m 49°x54° @ 2m 49°x52° @ 3m
Exposure time	0.02ms - 10ms (autoexposure)

Texture color	24bit
Dimensions	260mm x 310mm x 105mm
Connectivity	USB 3.0
Weight	0.98kg
Power supply	5W, USB 3.0-powered
IP rating	IP 52*
Calibration	Optional in-field user calibration with supplied calibration plate.
Operating temperature range	0 - 40°C
Operating humidity range	Non-condensing
Laser power	max. 800mW
Duration of pulse	<= 10ms
Wavelength	798-821 nm

¹ Measured on a 1m reference scale, in 1m distance, for a lateral scanner movement of 1m, using targets for distance measurement ² Measured in 0.5m-3m distance ³ Point density depends on scanned surface and lighting conditions ⁴ Noise reduction for equal scan times at 0.5m, 1m, 2m and 3m distance from object ⁵ Limited range and point density in sunlight
* Dust protection 5. Water protection 2: Protection against dripping water whilst device in standard idle position with sensor side facing downward

Recommended System Requirements for Tablet

Microsoft Windows 8.1 pro, 64-Bit
4th generation Intel® Core™ i5
256GB hard disc with 8GB RAM
MicroSDHC
Microsoft® Surface Pro 2 or 3 is a recommended device



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