

FARO

FREESTYLE^{3D} X



FARO Freestyle^{3D} X Scanner

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

Enhanced accuracy for handheld laser scanning

The FARO Freestyle^{3D} X is a top-quality, high-precision, handheld scanner for professionals. It quickly and reliably documents rooms, structures and objects in 3D and creates high-definition point clouds. With unbeatable precision and verifiable accuracy, it is suitable for all uses in which installations or properties must be quickly measured from various perspectives. Best-in-class, extensive scan volume boosts productivity by reducing scan time. The FARO Freestyle^{3D} X is a durable, industrial-grade device. Thanks to its lightweight carbon fiber body, the handheld scanner is highly mobile. A tablet PC is available from FARO (or may be purchased elsewhere) and supports intuitive data acquisition. The 3D scan data can easily be imported into all commonly-used software solutions for architecture.

Features

Handheld color laser scanner

Effortlessly capture almost any surface type in a wide range of environments by simply pointing the FARO Freestyle^{3D} X to the surface of the object.

Intuitive plug and play system

The Freestyle^{3D} X provides high-productivity in the field with no warm-up time.

Real-time point cloud visualization

Point cloud viewing during scanning provides assurance of accurate data acquisition.

Automatic flash

Automatically activates and de-activates the built-in LED light depending on the existing light conditions.

Optional on-site calibration

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

Best point filter

Minimizes the noise and delivers optimum data quality.

3D documentation solution

The user can seamlessly combine results from the Focus^{3D} and the Freestyle^{3D} X, even in gray scale.

Industries and applications

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

Benefits

- Ability to measure and scan in tight and hard-to-reach areas
- Scan around corners where there is limited visibility
- Memory-scan technology allows users to pause and resume scanning at any time
- Flexibility to work with or without artificial targets
- Auto leveling
- Precision handheld scanning - accuracy to 1.5mm / 0.059 in
- Easy-to-use scanning software
- Worldwide service and support from local FARO facilities
- 3D scan data can easily be imported into commonly-used software solutions

Specifications

Range	0.5 - 3m / 1.6 - 9.8 ft	Scan volume data	8.1m ³ / 286 ft ³
Resolution at 0.5m / 1.6 ft	Lateral: 0.2 - 1mm / 0.008 - 0.039 in Depth: 0.2mm / 0.008 in	Typical field of view (HxW)	450mm x 530mm at 0.5m 930mm x 1,100mm at 1m 1,800mm x 2,000mm at 2m 2,600mm x 2,900mm at 3m
3D point accuracy/whole scan accuracy ¹	<1.0mm / 0.059 in	Typical angular field of view (HxW)	45°x56° at 0.5m / 0.020 in 45°x59° at 1m / 0.039 in 49°x54° at 2m / 0.079 in 49°x52° at 3m / 0.118 in
Typical lateral accuracy ²	<1mm / 0.039 in	Exposure time	0.02ms - 10ms (auto exposure)
Single image point density	Up to 45,000 points/m ² at 0.5m distance Up to 10,500 points/m ² at 1m distance	Texture color	24-Bit
Recorded 3D points ³	Up to 88,000 points/sec; point cloud density increases with time	Dimensions	260 x 310 x 105mm / 10.24 x 12.20 x 4.13 in
Typical Noise (rms)	0.7mm at 0.5m distance 0.75mm at 1m distance 2.5mm at 2m distance 5mm at 3m distance	Connectivity	USB 3.0
Best point filter	Noise reduction of typically 40% when scanning the same object from different distances	Weight	0.98Kg / 2.2 lb
Eye safety ⁴	Class 1 laser	Power supply	5W, USB3.0-powered
Lighting conditions ⁵	Up to 10,000 Lux	IP Rating	IP52
Light source	Built-in LED flash	Calibration	Optional in-field user calibration with supplied calibration plate
		Operating temperature range	0 - 40°C / 32 - 104°F
		Operating humidity range	Non-condensing

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 / 1.6-9.8 ft 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

⁶ Protection against dripping water while 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
- MicroSDXC
- Microsoft® Surface Pro 2 or 3 is a recommended device

