FARO Focus^{3D} X 130 HDR

The Imaging Laser Scanner

HDR Laser Scanner for Mid-Range Applications

The FARO Focus^{3D} X 130 HDR Laser Scanner is a powerful high-speed 3D scanner delivering realistic and true-to-detail scan results.

The ultra-portable Focus^{3D} X 130 HDR enables fast, straightforward, and accurate measurements of façades, complex structures, production and supply facilities, accident scenes, and crime scenes. Combining high-precision scanning technology with authentic mobility and ease of use, the device offers reliability, flexibility, and real-time views of recorded data. The 3D scan data can easily be imported into commonly used software solutions for architecture, engineering, construction, accident reconstruction, forensics or industrial manufacturing.

With a battery runtime of 4.5 hours, the laser scanner also has a high level of flexibility and endurance. The Focus' light weight, small size and SD card make the scanner truly mobile.

Features

HDR Photo Overlay

The Focus^{3D} X 130 HDR delivers precision scanning with authentic color imagery, even under challenging lighting conditions. Predefined HDR profiles increase the picture quality recorded in very bright or dark environments.

High-Definition (HD) Photo Resolution

The increased camera resolution of the Focus^{3D} X 130 HDR delivers extraordinary color overlays for scanned point clouds. This improves the visualization of important details.

Mid-Range Scanning - Up to 130 meters

The Focus^{3D} X 130 HDR can scan objects up to 130 meters (426 feet) away. Buildings, interiors, accident scenes and crime scenes can be documented with just a few scans, thus resulting in efficient project completion.

Easy Positioning - Integrated GPS Receiver

With its integrated GPS receiver, the Focus^{3D} X 130 HDR is able to correlate individual scans in post-processing, simplifying workflows.

Extra Portable

The Focus^{3D} X 130 HDR measures just 9 7/16 x 7 7/8 x 4 in (240 x 200 x 100 mm) weighs only 11.5 lb (5.2 kg). The standard carrying case meets the carry-on physical size requirements of most airlines.

Benefits

- Safe and fast data capturing with superior color detail
- Reliable, life-like visualization, even under extreme lighting conditions
- Reduced complexity by integrated scanning and imaging workflow for all kinds of measurements even in challenging environments
- Increased onsite productivity due to one-person operation
- Revolutionary price/performance ratio, as an all-in-one device
- The Focus^{3D} X 130 HDR is an ideal tool for architectural construction, facility management and public safety (forensics & accident reconstruction) applications.

Performance Specifications

Ranging unit

Unambiguity interval: >130 m
Range: 0.6 m - 130 m indoor or outdoor with upright incidence to a 90% reflective surface
Measurement speed (pts/sec): 122,000 / 244,000 / 488,000 / 976,000
Ranging error[1]: ±2mm

Ranging noise[2]	@10 m	@10 m - noise compressed[3]	@25 m	@25 m - noise compressed[3]
@ 90% refl.	0.3 mm	0.15 mm	0.3 mm	0.15 mm
@ 10% refl.	0.4 mm	0.2 mm	0.5 mm	0.25 mm

Color unit

Resolution: Up to 170 megapixel color per scan
HDR: High Dynamic Range (HDR) photo recording, 3x / 5x
Parallax: Co-axial design

Deflection unit

Field of view[4] (vertical/horizontal): 300° / 360°
Step size (vertical/horizontal): 0.009° (40,960 3D-Pixel on 360°) / 0.009° (40,960 3D-Pixel on 360°)
Max. vertical scan speed: 5,820 rpm or 97 Hz

Laser (optical transmitter)

Laser class: Laser Class 1
Wavelength: 1550 nm
Beam divergence: Typical 0.19 mrad (0.011°) (1/e, half angle)
Beam diameter at exit: Typical 2.25 mm (1/e)

Data handling and control

Data storage: SD, SDHC™, SDXC™; 32GB card included
Scanner control: Via touchscreen display and WLAN
WLAN access: Remote control, scan visualization are possible on mobile devices with Flash® and HTML5

Multi-Sensor

Dual axis compensator: Levels each scan: Accuracy 0.015°; Range ± 5°
Height sensor: The height relative to a fixed point can be detected and added to a scan via an electronic barometer
Compass[5]: The electronic compass gives the scan an orientation. A calibration feature is included.
GPS: Integrated GPS receiver

CLASS 1
LASER PRODUCT

[1] Ranging error is defined as a systematic measurement error at around 10m and 25m, one sigma. Improved compensation available for dedicated mounting (fee-based service). [2] Ranging noise is defined as a standard deviation of values about the best-fit plane for measurement speed of 122,000 points/sec.[3] A noise-compression algorithm may be activated thereby compressing raw data noise by a factor of 2 or 4. [4]2x150° Homogenous point spacing is not guaranteed. [5] Ferromagnetic objects can disturb the earth magnetic field and lead to inaccurate measurements.

General

Power supply voltage: 19 V (external supply)
14.4 V (internal battery)
Power consumption: 40 W operating
80 W while battery charges
Battery life: 4.5 hours
Ambient temperature: 41° - 104° F (5° - 40° C)
Humidity: Non-condensing
Cable connector: Located in scanner mount
Weight: 11.5 lb (5.2 kg)
Size: 9 7/16 x 7 7/8 x 4 in
(240 x 200 x 100 mm)
Maintenance/calibration: Annual

For more information, call 800.736.0234
or visit www.faro.com/focus3d

ISO 9001 BUREAU VERITAS Certification
ANAB ACCREDITED
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