

FARO® Laser Scanner Focus^{3D} S



NEW – Multi-Sensor & WLAN (Wi-Fi)

Focus^{3D} S multi-sensor fully integrated with compass, height sensor and dual axis compensator that deliver valuable information about the scan's height, orientation and level, and supports automatic post processing.

Compass

The new FARO Focus^{3D} S multi-sensor employs an electronic compass. This contributes to a successful auto-registration since orientation data is now attached to each scan.

Height Sensor (Altimeter)

Height information is now available with each scan, e.g. differentiation of height data obtained as you scan different floor levels of a building.

Dual Axis Compensator

Helpful in minimizing the number of targets.

WLAN (Wi-Fi)

WLAN remote control permits you to start, stop, view or download scans at a distance.

Small and compact

Sized at 24 x 20 x 10cm³ and weighing only 5.0kg, the Focus^{3D} S is the smallest 3D scanner ever built

Integrated colour camera

Integrated color camera featuring an automatic 70 megapixels parallax-free color overlay that produce photorealistic 3D color scans.

Intuitive touchscreen display

Control all scanner functions with a touch interface for unparalleled ease of use and control

FARO Focus^{3D} S: Small, light, user-friendly

The Focus^{3D} S is a high-speed 3D scanner for detailed measurement and 3D Documentation. Focus^{3D} S multi-sensor uses laser technology to produce incredibly detailed 3-dimensional images of complex environments and geometries within minutes. The resulting image is an assembly of millions of 3D measurement points in colour which provide an exact digital reproduction of existing conditions.

A leap in innovation and efficiency to lower your costs

The Focus^{3D} S offers the most efficient method for 3-dimensional documentation of building construction, excavation volumes, façade and structural deformations, crime scenes, accident details, product geometry, factories, process plants and more. Given its minimal size, weight and touch screen interface, the Focus^{3D} S is user friendly and saves up to 50% of scan time compared to conventional scanners. Its ease of handling and use is unsurpassed.

Benefits

- ▶ **Complete 3D documentation:** Suitable for documentation of large spaces, quality control of components and reverse engineering
- ▶ **Precise & fast:** Its millimetre-accuracy and its 976,000 measurement points/sec mean precise and efficient measurement
- ▶ **Economical:** Unsurpassed cost-value proposition make every scanning project economical
- ▶ **Easy:** Compact design and touch interface

FARO® Laser Scanner Focus^{3D} S



Specifications

Ranging unit

Unambiguity interval: 153.49m (503.58ft)
Range Focus^{3D} S 120¹: 0.6m - 120m indoor or outdoor with low ambient light and normal incidence to a 90% reflective surface
Range Focus^{3D} S 20: 0.6m - 20m at normal incidence on >10% matte reflective surface
Measurement speed: 122,000 / 244,000 / 488,000 / 976,000 points/sec
Ranging error²: ±2mm at 10m and 25m, each at 90% and 10% reflectivity
Ranging noise³:
 @10m - raw data: 0.6mm @ 90% refl. | 1.2mm @ 10% refl.
 @10m - noise compressed⁴: 0.3mm @ 90% refl. | 0.6mm @ 10% refl.
 @25m - raw data: 0.95mm @ 90% refl. | 2.2mm @ 10% refl.
 @25m - noise compressed⁴: 0.5mm @ 90% refl. | 1.1mm @ 10% refl.

Colour unit

Resolution: Up to 70 megapixel colour
Dynamic colour feature: Automatic adaption of brightness

Multi-Sensor

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

Deflection unit

Vertical field of view: 300°
Horizontal field of view: 360°
Vertical step size: 0.009° (40,960 3D pixels on 360°)
Horizontal step size: 0.009° (40,960 3D pixels on 360°)
Max. vertical scan speed: 5,820rpm or 97Hz

Laser (Optical transmitter)

Laser power (cw Ø): 20mW (Laser class 3R)
Wavelength: 905nm
Beam divergence: Typical 0.19mrad (0.011°)
Beam diameter at exit: 3.0mm, circular

Data handling and control

Data storage: SD, SDHC™, SDXC™; 32GB card included
Scanner control: Via touchscreen display and Wi-Fi
New Wi-Fi (WLAN) access: Remote control, Scan Visualisation and download are possible on mobile devices with Flash®

1) Depends on ambient light, which can act as a source of noise. Bright ambient light (e.g. sunshine) may shorten the actual range of the scanner to lesser distances. In low ambient light, the range can be more than 120m for normal incidence on high-reflective surfaces.
 2) Ranging error is defined as the maximum error in the distance measured by the scanner from its origin point to a point on a planar target.
 3) Ranging noise is defined as a standard deviation of values about the best-fit plane.
 4) A noise-compression algorithm may be activated to average points in sets of 4 or 16, thereby compressing raw data noise by a factor of 2 or 4. Subject to change without prior notice.



General

Power supply voltage: 19V (external supply), 14.4V (internal battery)
Power consumption: 40W and 80W respectively (while battery charges)
Battery life: Up to 5 hours
Ambient temperature: 5° - 40°C
Humidity: Non-condensing
Cable connector: Located in scanner mount

Weight: 5.0kg
Size: 240 x 200 x 100mm³
Maintenance calibration: Annual
Parallax-free: Yes

To learn more, visit www.faroasia.com/LaserScanner

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