FARO Focus Premium 3D Laser Scanner

The ultimate solution for 3D data capture

The new generation of FARO Focus laser scanner —— FARO ® Focus Premium is being launched! Scan faster, more effective, durable, easy to carry. Help you capture the real world with confidence and connect your world more quickly.

Performance advantages：

► With a new SHIP-based component and a proven design, the new FARO ® Focus Premium laser scanner is a faster, more accurate, and more data-sharing scanner.

► Scan time is reduced by up to 50%:

► With an optional FARO PanoCam upgrade scheme, it takes about a minute for a general scan, or even a color scan.

► Ultra-high color resolution:

► The latest color technology enables Focus Premium to capture scans with up to 266-megapixel color information.

► Two years warranty:

Competitive service means maximizing the life of this product, while reducing the total cost of ownership throughout the life of the device. The two-year warranty provides maximum flexibility and knows any repair or defective parts.

Functional characteristics:

Focus Premium provides extraordinary capture efficiency, data quality and precision for professional applications in construction, public safety, operation and maintenance, and the manufacturing market, scanning faster while ensuring data quality (up to 1 minute per time) and reducing site scan time by up to 50%.

In addition, faster loading and system response can also improve data management efficiency combined with new FARO Stream mobile applications and uploaded to the new FARO Sphere cloud-based collaboration platform.

☑Scan distances of up to 350 m, expanding the scan range for each scan location

　☑Support for remote control of smartphones, only limited by the range of the Wi-Fi network

☑Optimize the wireless workflow with a more stable and faster Wi-Fi operation

☑Field registration, which combines multiple scans and uses common and overlapping processes, can speed up project completion and gain a real-time understanding of the scanning error and missing data

☑Seamless connection with Stream and Sphere

☑Scanner control can be performed on an applied or actual Focus

☑Users can easily create items, change scanner settings, manage image resolution, select color or black and white scans, group scans through clusters, and add comments

☑Durable construction and shell can withstand harsh daily working conditions

☑Integrated high-speed SSD data storage to achieve maximum scanning capacity and fast processing of scans

Technical Specifications：

Performance Specifications

Range Option	Focus Premium 350	Focus Premium 150	Focus Premium 70
Unambiguity Interval	614 m for up to 0.5 MPts/sec 307 m at 1 MPts/sec 153 m at 2 MPts/sec	614 m for up to 0.5 MPts/sec 307 m at 1 MPts/sec 153 m at 2 MPts/sec	614 m for up to 0.5 MPts/sec 307 m at 1 MPts/sec 153 m at 2 MPts/sec
Range			
White, 90% Reflectivity	0.5 – 350 m	0.5 – 150 m	0.5 – 70 m
Dark-grey, 10% Reflectivity	0.5 – 150 m	0.5 – 150 m	0.5 – 70 m
Black, 2% Reflectivity	0.5 – 50 m	0.5 – 50 m	0.5 – 50 m
Range Noise[1,2]			
White, 90% Reflectivity	0.1 mm @ 10 m, 0.2 mm @ 25 m		
Dark-grey, 10% Reflectivity	0.3 mm @ 10 m, 0.4 mm @ 25 m		
Black, 2% Reflectivity	0.7 mm @ 10 m, 1.2 mm @ 25 m		
Max Speed	Up to 2 MPts/sec		
3D Accuracy[3]	2 mm @ 10 m, 3.5 mm @ 25 m		
Ranging Error[4]	±1 mm		
Angular Accuracy[5]	19 arcsec		
LaserHDR	Yes		
Temperature Range[6]	Operating: +5 ° to +40 °C, Extended Operating: -20 ° to +55 °C, Storage: -10 ° to +60 °C		

Additional Performance Specifications

Color Unit

Color Resolution	Up to 266 MPx color
Raw Color Resolution	867 MPx
HDR Camera	13 MPx - 2x, 3x, 5x brackets
Parallax	Minimized due to co-axial design

Deflection Unit

Field of View	300° vertical[8] / 360° horizontal
Step Size	0.009° (40,960 Pts on 360°) vertical / 0.009° (40,960 Pts on 360°) horizontal
Max. Scan Speed	97 Hz (vertical)

Laser (Optical Transmitter)

Laser Class	Laser Class 1
Wavelength	1553.5 nm
Beam Divergence	0.3 mrad (1/e)
Beam Diameter at Exit	2.12 mm (1/e)

Data Handling and Control

Data Storage	SATA 3.0 SSD 128 GB and SDXC™ V30 64 GB SD Card; SD3.0, UHS-I / SDXC™ / SDHC™, max. 512 GB
Scanner Control	Via touch screen display and WLAN connection, Control by FARO Stream App (iOS & Android) or mobile devices with HTML5

Interface Connection

WLAN	IEEE 802.11 ac/a/b/g/n 2x2 MIMO, as access point or client in existing networks (2.4 and 5 GHz)
USB	USB 3 port

Additional Features

Dual Axis Compensator	Performs a leveling of each scan with an accuracy of 19 arcsec valid within ±2°
Height Sensor	Via an electronic barometer, the height relative to a fixed point can be detected and added to a scan
Compass[9]	The electronic compass gives the scan an orientation
GNSS	Integrated GPS & GLONASS
On-Site Compensation	Creates current quality report and improves compensation automatically
Accessory Bay	The accessory bay connects versatile accessories to the scanner
Inverse Mounting	Yes
Real-time, On-site Registration	Stream App real-time scan streaming, registration, overview map and Sphere cloud upload
Electronic Automation Interface	Available as option, only at point of sale
Digital Hash Function	Scans are cryptographically hashed and signed by the scanner
Rescanning of Distant Targets	Defined areas recaptured in higher resolution at a greater distance
Retake Photos	Select individual photographs with unwanted objects and retake them

General Specifications

Power Supply	19 V (external supply), 14.4 V (internal battery)
Typical Power Consumption	19 W idle, 32 W scanning, 72 W charging
Typical Battery Operation Time	About 4 hours
Typical Scan Time[7]	About 1 min
Ingress Protection (IP) Rating Class	54
Humidity	Non-condensing
Weight	4.4 kg (including battery)
Size/Dimensions	230 x 183 x 103 mm
Calibration	Recommended annually
Manufacturer Warranty	2 years

## Supporting products: FARO Sphere and FARO Stream

For optimal field capture, Focus Premium connects to FARO Stream program applications as a bridge to FARO hardware and FARO Sphere cloud environments. Pre-registered scans are then directly imported into the cloud, which leads to more efficient working —— processing captured feedback while working.

With FARO Sphere and Stream, Focus Premium can deliver better data faster. It reduces decision-making time while simplifying processes and improving efficiency to meet today's growing needs for remote, digital work.

FARO Sphere
FARO Sphere is a cloud-based information platform that provides users with a collaborative experience of centralized, cross-company reality capture applications and customer support tools through a secure single-sign-on process, enabling faster 3D data acquisition, processing, and project management anywhere in the world.
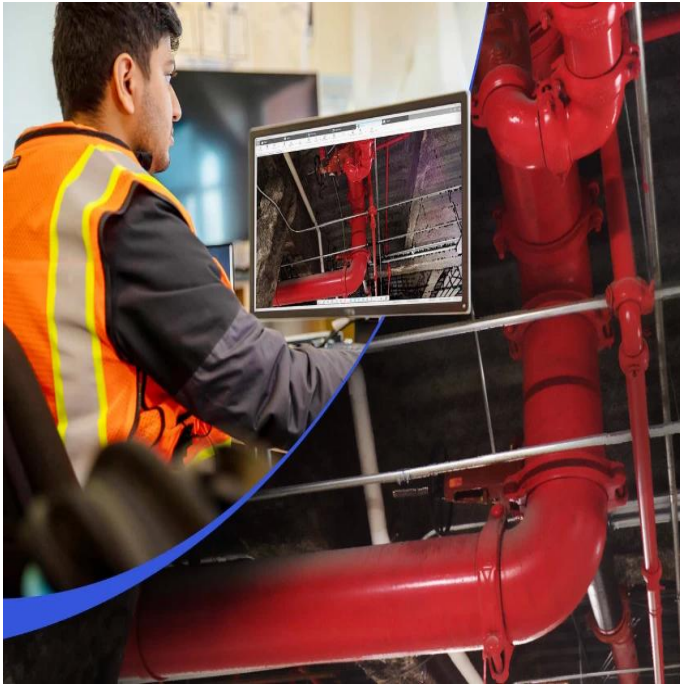
Sphere systemizes each activity while maintaining intuitive navigation, enabling users to better organize their 3D scans and manage data from different teams around the world. With the application FARO WebShare in Sphere, users can easily view and explore project-based data efficiently.

FARO Stream

FARO Stream is the first mobile app to connect FARO hardware with FARO Sphere cloud-based applications and services. FARO Stream provides real-time feedback on captured scanned data and performs preregistration functions anytime, anywhere. Stream provides the best field efficiency for data capture for scanning operations using Focus Premium scanners in the areas of construction, engineering, construction, and facility management.

Stream seamlessly integrates the captured data into Sphere and provides complete FARO solutions and application compatibility.

Combined —— end-to-end 3D digital reality capture and collaboration platform for Focus Premium, Stream, and Sphere. Wait for you to explore together