FARO Focus Premium
The Ultimate in 3D Data Capture

Building on our history of accuracy and reliability, the new FARO® Focus Premium Laser Scanner is the fastest, most accurate and most data-sharing-enabled scanner on the market to date, featuring entirely new components with a proven design.

Up to 50% Faster Scan Times

About 1 minute to complete a typical scan, in combination with the optional FARO PanoCam upgrade, even in color.

Super-High Color Resolution

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

Two-Year Warranty

Competitive service means maximizing the life of this product while reducing the total cost of ownership throughout the device's lifespan. Two years allows for maximum flexibility and the piece of mind knowing that any repairs or defective parts will be replaced.

On Closer Inspection

Focus Premium provides exceptional capturing efficiency, data quality and accuracy for professional applications across the construction, public safety, operations & maintenance and manufacturing markets, while offering data quality at faster scan speeds (up to 1 minute per scan) reducing onsite scanning time by up to 50%. Meanwhile, faster loading and system response yields greater data management efficiency when paired with FARO Stream and uploaded to FARO Sphere.

Focus Premium Features:

- Up to 350m scanning range, leading to superior area coverage per scan position
- Smartphone-enabled Focus Premium remote control capabilities, limited only by the range of a Wi-Fi network
- Improved wireless workflow with more stable and faster Wi-Fi operation
- On-site registration, the process of combining multiple scans using common overlap, means faster project completion and real-time awareness of scan errors or missing data
- Seamless connectivity with the FARO Stream mobile app
- Scanner control can be executed on either the app or on the actual Focus. Users have easy access to create projects, change scanner settings, manage image resolution, opt for color or black and white scans, group scans through clustering, and add annotations
- Rugged construction and housing means the Focus Premium can withstand the tough day-to-day work
- Integrated high-speed SSD data storage for maximum scan capacity and lighting fast scan processing

Performance Specifications

Unambiguity Interval	614 m for up to 0.5 MPts/sec	307 m at 1 MPts/sec	153 m at 2 MPts/sec
Range[1]	White: 0.5 – up to 350 m	Dark-grey: 0.5 – up to 150 m	Black: 0.5 – 50 m
Max Speed	Up to 2 MPts/sec		
Range Noise[1,2,3]	White: 0.1 mm @10 m 0.2 mm @25 m	Dark-grey: 0.3 mm @10 m 0.4 mm @25 m	Black: 0.7 mm @10 m 1.2 mm @25 m
3D Accuracy[4]	2 mm @10 m	3.5 mm @25 m	
Ranging Error[5]	±1 mm		
Angular Accuracy[6]	19 arcsec		
LaserHDR	Yes		
Temperature Range[7]	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[9] / 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 HTML

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[10]	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
Tripod Safety	It is recommended that only one tripod segment is used to maximize scanner stability

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[8]	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

CLASS 1 LASER PRODUCT

1. White 90% Reflectivity, Dark-gray 10% Reflectivity, Black 2% Reflectivity, for a Lambertian scatterer | **2.** Ranging noise is defined as the variation of distance samples from repeated measurements of a single point at 122k Pts/sec | **3.** Some surfaces can lead to additional noise | **4.** For distances larger 25 m add 0.1 mm/m of uncertainty | **5.** Ranging error is defined as a systematic measurement error at around 10 m and 25 m |**6.** It is recommended to perform on-site compensation in the event the unit is exposed to exceptional temperature or mechanical stress|**7.** Low temperature operation: scanner has to be powered on while internal temperature is at or above 15° C. High temperature operation: additional accessory Thermal Cover required | **8.** Accelerated Profile with PanoCam | **9.** 2x150°, homogeneous point spacing is not guaranteed | **10.** Ferromagnetic objects can disturb the earth magnetic field and lead to inaccurate measurements

All accuracy specifications are standard deviations, after warm-up and within operating temperature range; unless otherwise noted. Subject to change without prior notice.