FARO®

Focus Laser Scanning Solution

Capture With Confidence and Connect Your World Faster

Hybrid Reality Capture™, powered by Flash Technology™

Focus Premium Max
LASER SCANNER

Exceptional Capturing Efficiency, Data Quality, and Accuracy

The Focus Premium Max boasts an extended range of up to 400 meters. This significant increase in range over previous Focus models enables you to capture data of larger structures and use the scanner for broader **geospatial** applications, such as **infrastructure surveys, topographical mapping, stockpile volume calculations**, and more.

Up to 50% Faster Scan Times with Flash Technology

With a panoramic camera mount and Hybrid Reality Capture included, the Focus Premium Max can take Flash Technology scans.* You have the flexibility to mix Flash scans (which take just 28 seconds) and traditional scans — boosting field productivity by over 50% and reducing time spent on site.

Super-High Color Resolution

The latest color camera technology enables Focus scanners to capture scans with up to 266 megapixels of color information.

A Comprehensive Scanning Solution

Building on our history of accuracy and reliability, the Focus Premium Max is fast, accurate, and can be paired with a suite of software that's perfect for efficiently collecting data and quickly sharing it with key stakeholders for improved project outcomes.

* Includes perpetual license to Flash Technology; 360° camera not included

On Closer Inspection

The Focus solution provides exceptional capturing efficiency, data quality, and accuracy for professional applications across the construction, geospatial, public safety, operations & maintenance, and manufacturing markets while offering data quality at faster scan speeds (up to 1 minute per scan), reducing on-site scanning time by up to 50%. Meanwhile, faster loading and system response yields greater data management efficiency when paired with FARO apps and software. The FARO Stream™ App allows you to visualize what you're scanning on-site, so you don't have to wait until getting back to the office to see what you scanned. After processing the data in FARO SCENE Software, you can upload it to the FARO Sphere® XG Digital Reality Platform for collaboration and data management.

Focus Premium Max Features

With a **scanning range of up to 400 m**, capture data from large structures and geospatial applications like infrastructure surveys, topographical mapping, and stockpile volume calculations.	Smartphone-enabled **remote control capabilities**.	Improved wireless workflow with more **stable and faster Wi-Fi operation**.
On-site registration means faster project completion and real-time awareness of scan errors or missing data — know before leaving the scene if there are data gaps.	**Connectivity with the Stream App and** optional upgrade to use the **Sphere XG** Digital Reality Platform.	Scanner control can be executed on either the **app or on-board user interface**.
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** can withstand tough day-to-day work (Ingress Protection [IP] Rating of IP54).	A **built-in SSD card** means that even if you forgot your SD card, you can still scan without having to waste time driving back to the office.

Focus Premium
LASER SCANNER

Reduce Rework and Save Time

With a 200 m range and the option to scan in Hybrid Reality Capture mode, Focus Premium is perfect for collecting **as-built documentation**, data **for MEP design and installations, construction quality control, structural surveys**, and more.

Reduce Wasted Time and Material

Capturing the measurements of a large building or facility with conventional documentation can take days or weeks — and even then, the data might be incomplete. The FARO Focus Premium creates accurate, photorealistic 3D representations of any environment or object in just a few minutes, even in the most extreme outdoors conditions.

No More Scanning Blind

For efficient, comprehensive on-site data capture, Focus Premium connects with the new FARO Stream App, bridging FARO hardware to the cloud. Pre-registration scans are fed directly into the cloud, so jobs can be done more efficiently.

Scan More in Less Time

With the optional panoramic camera mount and one-year Hybrid Reality Capture subscription, you can save up to 2.5 days of scanning for projects that require five scanning days. This saved time allows you to consider taking additional scans that you might not have taken under slower scanning systems, ensuring improved on-site productivity, even more predictable accuracy, and all of it achieved with exceptional colorized visual clarity.

* 360 ° camera not included; optional one-year license to Flash Technology

Focus Core
LASER SCANNER

Versatile 3D Reality Capture

Focus Core has a 100 m range that's well-suited to industrial **facility management, historic preservation**, collecting **as-built documentation**, and more.

✔ Ideal for Low Profile Projects

Business-savvy 3D reality capture device, with an **excellent price-performance ratio** featuring a wide range of professional applications in construction, public safety and building operations.

Exceptional Capturing Efficiency

Enjoy scan speeds up to one minute per scan and faster loading/system response. Greater data management efficiency when paired with Stream and uploaded to Sphere XG. With the option to mount a panoramic camera, Focus Core provides the ability to upgrade and scan in Hybrid Reality Capture mode if this capability is desired.*

📶 Remote Access for Global Collaboration

100 meter scanning range, smartphone-enabled remote control capabilities, and improved wireless workflow with faster Wi-Fi operation.

2 Year Warranty

Each Focus comes with a two-year warranty to help you get the most out of your laser scanner. A two-year warranty provides you with peace of mind — knowing that any defective parts will be replaced — and reduces the total cost of ownership throughout the device's lifespan.

* 360° camera not included; optional one-year subscription to Flash Technology

Performance Specifications

Models	Focus Premium Max	Focus Premium	Focus Core
Unambiguity Interval[1]		614 m	
Range			
White, 90% Reflectivity	0.5 – 400 m	0.5 – 200 m	0.5 – 100 m
Dark-grey, 10% Reflectivity	0.5 – 150 m	0.5 – 150 m	0.5 – 100 m
Black, 2% Reflectivity	0.5 – 50 m	0.5 – 50 m	0.5 – 50 m
Range Noise[2,3]			
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[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: -10° 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: From start until the scanner can be moved[10]	Gray scale < 1 min	HDR Colored < 1:15 Colored Flash Scan < 30 seconds[11]
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 year

1. @ 0.5MPts/s, depends on scanning speed **| 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.** 2x150°, homogeneous point spacing is not guaranteed | **9.** Ferromagnetic objects can disturb the earth magnetic field and lead to inaccurate measurements | **10.** Accelerated Profile with PanoCam | **11.** Hybrid Reality Capture™, powered by Flash Technology, is a patent-pending option that requires a PanoCam extension to the Focus Premium, firmware version 7.3.0 or later, a FARO Sphere workspace and SCENE 2023 or later.

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

Designed for Complete Integration

FARO's complementary products — FARO Sphere XG Digital Reality Platform and FARO Stream App (which serves as an on-site data visualizer and bridges the gap between Focus and Sphere XG) — create a powerful union of three distinct technologies, enabling users to capture with confidence and connect their world anytime, anywhere. This reduces time to decision while streamlining workflow tasks, meeting the demands of today's increasingly digital workforce.

Boost Productivity with Hybrid Reality Capture

Included perpetually for the Focus Premium Max and as a one year trial (with the option to continue subscribing) for Focus Premium and Focus Core is the capability to take Flash Technology scans with the addition of a panoramic camera. With Hybrid Reality Capture powered by Flash Technology at your fingertips, you will benefit from fully colorized 3D scan data in less than 30 seconds per station. For large and complex areas that typically require many scan positions, this provides you with the extra productivity to set your business apart.

No More "Scanning Blind"

Stream App provides live feedback of the captured scans while performing its pre-registration function. This takes the guesswork out of scanning and means that you don't have to wait until you get back to the office to see where you scanned and find out if you missed a spot.

Additionally, Focus allows for the inclusion of complementary data like field annotations and photographic images in the project after a scan is complete.

Stream

SCENE

After processing in SCENE Software, Stream App integrates the captured data seamlessly into Sphere XG, providing a full FARO solution and application compatibility.

Digital Reality Platform

What sets Focus scanners apart is their ability to share on-site data with key stakeholders via the Sphere XG Digital Reality Platform. This digital reality platform gives your off-site colleagues the ability to work on the data or share it with end customers — breaking down organizational silos and improving customer satisfaction.

Additionally, Sphere XG is integrated with three customer service platforms: Knowledge Base, which provides technical product information; FARO Support, which provides 24/7 personalized service; and FARO Academy, which provides on-demand and live training and education programs.

Store the Data Your Way

Use the cloud or keep your data offline — it's up to you. Upload data to Sphere XG and share with key stakeholders for quicker decision-making, or process the data offline, directly in FARO SCENE Software.

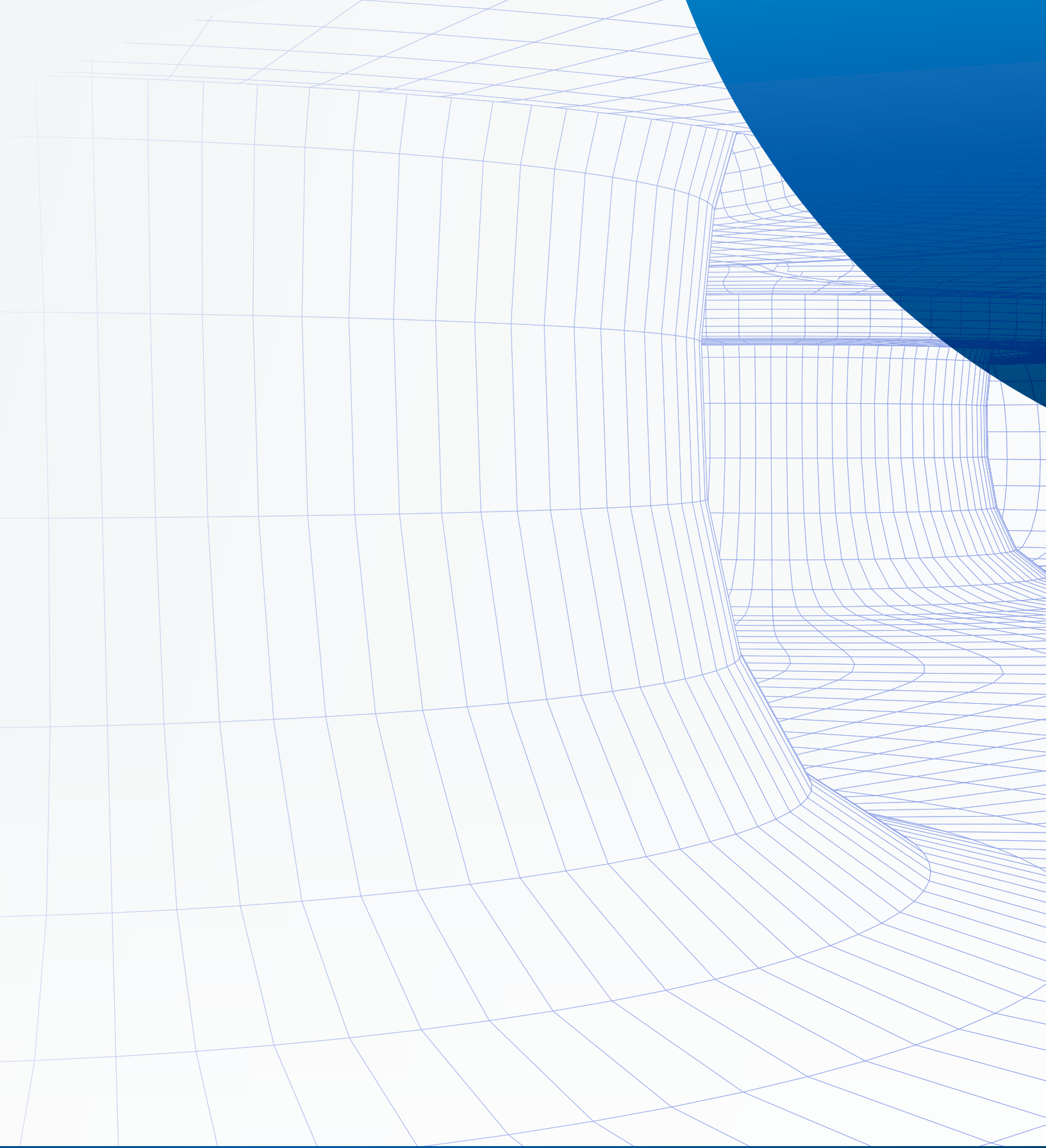# A Complete Solution for Your 3D Scanning Needs

Whether it's for creating as-built documentation, Building Information Modeling (BIM), industrial facility management, infrastructure projects, improved construction quality control, historic preservation, or gathering data for documenting an asset or facility, the Focus — when paired with the Stream App, SCENE Software, and Sphere XG, plus any number of specific tools like the FARO As-Built™ Software Suite, FARO BuildIT Construction Software, the FARO Flatness Check™ App, tripods, backpacks, traceable 3D referencing targets, and more — enables enhanced workflow efficiencies that will drive business success.

Choose the Package to Fit Your Needs

The Focus Premium Laser Scanning solution comes in three models to suit your needs: the **Focus Premium Max** with a 400 m range, the **Focus Premium** with a 200 m range, and the **Focus Core** with a 100 m range. The panoramic camera mount — included with Premium Max and optional for Premium and Core — enables scanning in Hybrid Reality Capture mode for increased efficiency, with Premium and Core including a one-year subscription and Premium Max offering a perpetual license for Hybrid Reality Capture.

> **When you choose a Focus, you're choosing a 3D laser scanning solution that boosts productivity, saves time, and reduces rework.**

Contact your local sales representative or visit FARO.com to learn more.