FARO®

Focus Solution for Public Safety Applications

On-Scene Digital Documentation with Global Reach

Hybrid Reality Capture™, Powered by Flash Technology™ for Efficient Public Safety Scene Documentation

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 scenes and use the scanner for broader public safety applications like **crash scene reconstruction, crime scene reconstruction, pre-incident planning,** 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. Using the scanner in Flash mode will save you up to an additional 50% of time on the scene without significantly compromising data quality and accuracy, making Flash Technology™ ideal for pre-incident planning and event security.

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 designed specifically for public safety applications. It's perfect for efficiently documenting **crime and crash scenes**, conducting **pre-incident planning**, and **capturing disaster areas**. Integrated with a powerful suite of software, it allows seamless data collection and rapid sharing with key personnel, enhancing response and investigation outcomes.

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

A 'Focused' Look

The Focus solution provides exceptional capturing efficiency, data quality, and accuracy for public safety professionals while offering data quality at faster scan speeds. Focus Premium Max, Focus Premium, and Focus Core can reduce on-scene 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 the complete dataset on-scene, so you don't have to wait until getting back to the office to see what evidence you've collected. 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 or use it in FARO Zone Software for analysis and deliverable creation.

Increased Scanning Range

With an expanded range of up to 400m, the Focus Premium Max outperforms comparable solutions and surpasses even previous models of the FARO Focus.

Focus Premium Max Features

With a **scanning range of up to 400m**, capture data from larger sites and explore broader public safety applications, such as event security planning and safety planning for public spaces.	Smartphone-enabled **remote control capabilities**.	Improved wireless workflow with more **stable and faster Wi-Fi operation**.
On-site registration means faster evidence collection 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** and optional upgrade to use the **Sphere XG®** Digital Reality Platform; compatibility with **FARO Zone** Software for diagrams, analysis, animations, and videos.	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** 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

Save Time on the Scene

With a 200m range and the option to scan in Hybrid Reality Capture mode, Focus Premium is perfect for 3D capturing **crash scenes, crime scenes, building and event site data** for **safety planning**, and more.

Collect Evidence Quickly and With Confidence

Collecting evidence from a crime or crash scene must be done quickly and thoroughly — and you must be confident in the thoroughness of the evidence you've collected. 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 data collection, Focus Premium connects with the new FARO Stream App, which allows you to pre-register scans and see what data you've collected while still on the scene. The pre-registered scans can then be uploaded directly to the cloud, enabling efficient data processing and collaboration — and an offline mode is available for those who don't want to use the cloud to process and store their data.

Scan More in Less Time

With an optional panoramic camera mount and a one-year Hybrid Reality Capture™ subscription included, you can significantly reduce scanning time for large areas designated for pre-incident planning, security planning, and critical infrastructure documentation. This time savings allows you to take additional scans that might not have been feasible with slower systems, ensuring improved productivity, enhanced accuracy, and exceptional colorized visual clarity for thorough documentation and analysis.

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

Focus Core
LASER SCANNER

Versatile 3D Reality Capture

Focus Core has a 100m range that's well-suited to **crime and crash scene reconstruction, failure investigation**, historical preservation, arson investigation, 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 as fast as one minute per scan, along with quick loading and responsive system performance. 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.* The Focus system provides multiple options for processing, storing, and sharing evidence or data, complemented by advanced forensic analysis tools through FARO Zone software.

Digitize Crime Scenes, Crash Scenes, Buildings, and Event Sites

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.

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

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.

Streamline Digital Workflows

Whether it's for crime scene analysts, crash reconstructionists, forensic investigators, pre-incident planners, or for courtroom testimony and 3D photorealistic visual representations, the Focus scanning solution enables enhanced workflow efficiencies. Using 3D hardware and software tools will help public safety professionals provide the closure and answers all parties seek. These tools can also help first responders save lives by having the most accurate information at their fingertips.

Stream

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.

Accurate, Impressive Deliverables

FARO Zone Software is a comprehensive scene documentation software program that enables the creation of courtroom-ready deliverables, 3D walk-throughs, and fly-throughs to help jurors, investigators, and other viewers gain a spatial understanding of the scene that is much more compelling than a 2D diagram.

Zone

FARO Zone 3D Software lets you use measurements from different sources to analyze the scene, create accurate 2D and 3D diagrams, and present compelling walk-throughs and animations.

Digital Reality Platform

What sets Focus scanners apart is their ability to share on-site data via the Sphere XG Digital Reality Platform. This digital reality platform gives your off-site colleagues the ability to view important data, helping share public safety scene documentation.

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 personnel for quicker decision-making, or process the data offline, directly in FARO SCENE Software.
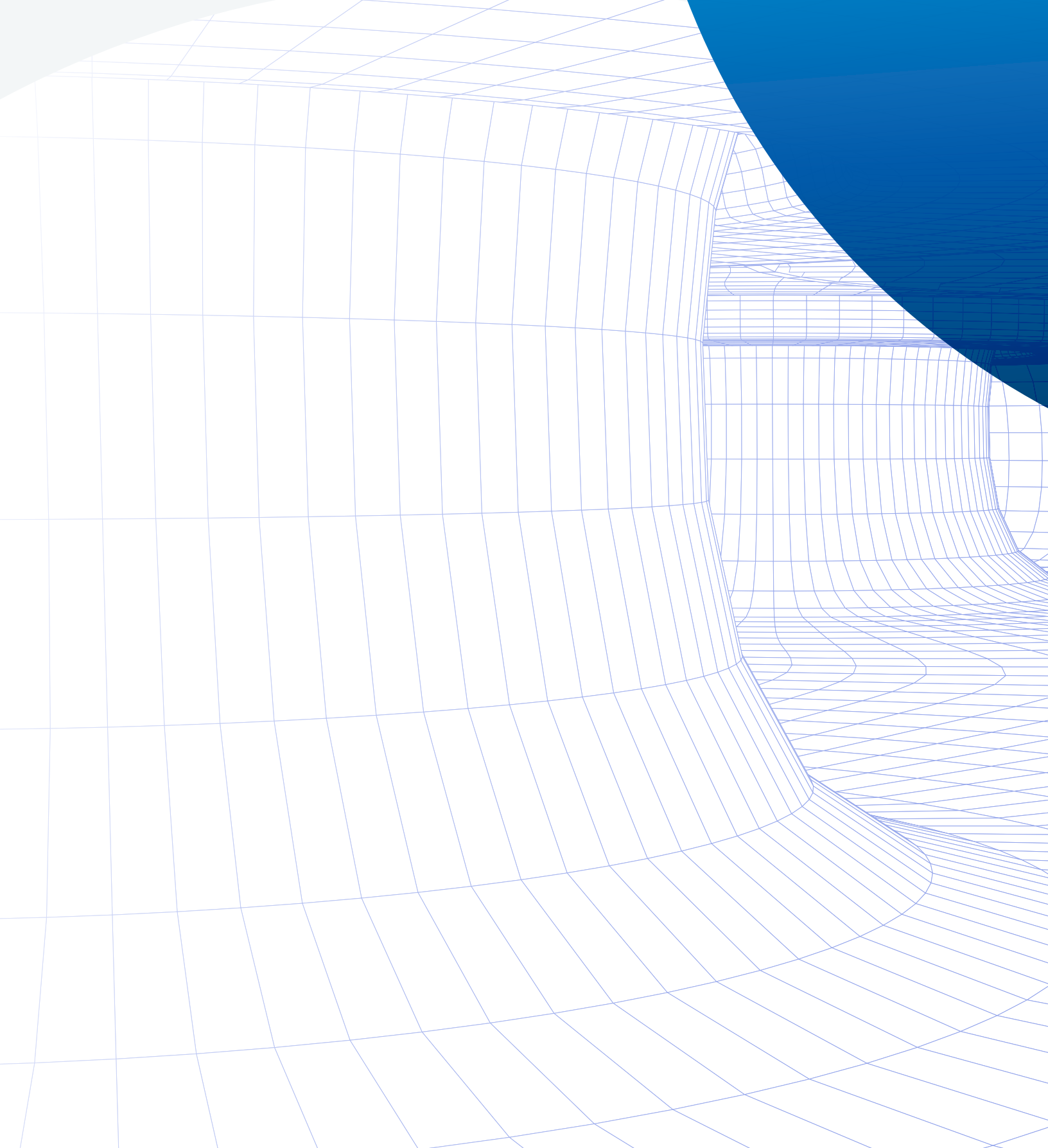
A Complete Solution for Your 3D Scanning Needs

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

The Focus solution reduces the amount of time law enforcement must remain on-scene and makes this valuable time productive and safe. The Stream App's on-site visualization allows public safety professionals to have more confidence that they've collected the critical evidence before they leave the scene.

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