FARO® Scanner Freestyle³D
Efficiency in your hands

NEW MODEL
FAESTYLE³D
with Xtra accuracy

reddot award 2015
winner
3D HANDHELD SCANNER

FARO now offers a range of innovative and user-friendly handheld scanners to give new customer groups access to the world of 3D scanning. The FARO Scanner Freestyle provides a fast and easy-to-use scanning experience with verifiable accuracy of 3D color scan data. It quickly and reliably documents rooms, structures and objects in 3D and creates high-definition point clouds.

The Freestyle is the only industrial-grade handheld device allowing you to scan all kinds of surfaces and environments. With its versatile design, small size, and light weight it can be used flexibly to easily perform scanning tasks especially in hard-to-reach areas or narrow spaces.

Fast data acquisition, real-time visualization and the largest scan volume in the market provided by the Freestyle will reduce your time in the field and maximize your productivity.

The 3D scan data can easily be imported into all commonly used software solutions for architecture, engineering, construction, facility management, accident reconstruction, forensics or industrial manufacturing.

With the release of the new Freestyle X, FARO’s portfolio now contains two intuitive handheld scanners which are designed to satisfy the specific needs of the customers. The Freestyle X offers an extra accuracy to 1mm at 1m and enables users to carry out more challenging projects and deliver verifiable scan data.

INTUITIVE PLUG AND PLAY SYSTEM

The Freestyle provides highest productivity in the field since no warm up times are required.

REAL-TIME VISUALIZATION

The real-time point cloud visualization supports the intuitive data acquisition, even for inexperienced users.

INDUSTRIAL GRADE DEVICE

The Freestyle is the only industrial grade handheld device with IP 52 rating and weighs only 0.98Kg.

3D DOCUMENTATION SOLUTION

The users can seamlessly combine results from the Focus 3D with Freestyle results, even in grey scale.

UP TO 8M³ SCANNING VOLUME

The extensive scan volume boosts productivity by reducing scan time.

AUTOMATIC FLASH

The auto mode automatically activates and deactivates the built-in LED light depending on the existing light conditions.

ON-SITE CALIBRATION

The device can be easily calibrated on-site ensuring high quality data. A PDF report with key data permits maximum and verifiable confidence in the acquired data.

BEST POINT FILTER

The best point filter minimizes the noise and allows to get optimum data quality.

PERFORMANCE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>3D point accuracy</th>
<th>IP rating</th>
<th>Range</th>
<th>Recorded 3D points</th>
<th>Scan volume</th>
<th>Light source</th>
<th>Operating temperature range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freestyle</td>
<td>&lt;1.5mm</td>
<td>IP 5X</td>
<td>0.5-3m</td>
<td>Up to 88,000 points/s, point cloud density increases with time</td>
<td>8.1m³</td>
<td>Inbuilt auto LED flash</td>
<td>0-40°C</td>
</tr>
<tr>
<td>Freestyle X</td>
<td>&lt;1mm</td>
<td>IP 52***</td>
<td>0.5-3m</td>
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ARCHITECTURE & INTERIOR DESIGN

Industries such as architecture, civil engineering, interior design and BIM (Building Information Modeling) demand reliable, fast and accurate data. Information and spatial reference are essential through all phases of surveying and construction projects.

FARO’s Scanner Freestyle 3D offers the user an ideal solution, smoothing workflows, making processes faster and more efficient, delivering accurate data and satisfying statutory requirements.

APPLICATIONS

Measurements of complex structures and objects: The device is used to scan areas that the Laser Scanner FARO Focus 3D may not be able to easily reach. Examples include voids above suspended ceilings, down vertical shafts, and around complex objects that require higher accuracy and density, and would require too many setups with the Focus 3D. Complex objects for which more detail may be required include mechanical equipment such as chillers, engines, HVAC units, and elevator motors.

Project supervision: Whenever there are restorations, renewals, renovations or reconstructions, there is a need for close monitoring of the individual project phases to meet the project’s requirements.

Deformation monitoring: With the Freestyle 3D, you can determine if the surveyed structure or object is changing shape or moving.

Quality control: Precise laser scanning through each phase of a project ensures that the final as-built condition fits the original design and minimises the chance of potential problems.

Integration with FARO Focus 3D scan data in larger projects: The Freestyle 3D is an excellent tool to complete Focus 3D scan data in hard-to-reach places or where more detail is needed, even in grey scale.

BENEFITS

Time savings: simple and complete data capture through all phases of construction projects.

Real-time, digital 3D data capture.

Best productivity in the field, since no warm up times are required.

Ability to scan in tight and hard-to-reach areas and around corners where there is limited visibility.

Flexibility to work with or without artificial targets.
With the Freestyle 3D, FARO provides remodelers, engineers, craftsmen and 3D artists with an efficient tool for rapid, seamless and precise documentation of the current status of buildings and building assets of every kind.

The lightweight makes it ideal for mobile usage on building sites. It records building shells, areas above ceilings, architectural features (ornate mouldings) and areas of buildings in 3D – completely, quickly and cost-effectively.

**APPLICATIONS**

- **Area construction progress monitoring**: Seamless capture and monitoring of construction progress for legal and technical documentation.
- **Built environment**: Precise geometrical recording of existing properties as the basis for conversions or extensions.
- **Free-form components inspection**: Precise dimensional check of complex components such as free-form shape elements.
- **Deformations control**: Documentation of deformation processes and monitoring of countermeasures.
- **Reverse engineering**: Copies of products and components for which no construction plans and/or CAD data are available.
- **Restoration & Conservation**: Creation of 3D models for restoring purposes preserving the original building substance and protection of historical/archaeological material and inventory.

**BENEFITS**

- Provides architects, interior designers or building owners with an intuitive option to capture almost any structure in a highly accurate point cloud.
- After processing, all the data can be exported to all commonly used CAD programs.
- Simple variance comparison throughout the construction process and in the final building inspections.
- Seamless integration with Focus 3D laser scan data, even in grey scale.
- Cost-efficient, quick and accurate 3D capture of as-built geometry.
The handheld scanner Freestyle³D offers quick and reliable 3D documentation data. The scan data can be used for building management, collision detection for retrofits, as-built documentation for CAD modelling and other plant design tasks.

Through the real-time visualization of the captured 3D point cloud directly on the tablet, the intuitive user interface and the lightweight (less than 1Kg) of the scanner, the data acquisition process can be performed quickly and easily even by inexperienced users.

**APPLICATIONS**

**Documentation:** The Freestyle³D accurately records the asset data that is needed by Facility Managers – be it the structural situation on a production plant or the building services equipment in an office block.

**Planning of structural alterations:** The scan data provides an accurate three-dimensional model of the actual status of the building. As a result Facility Managers can run through the usage options for rooms and installations even before planning actually begins.

**Re-planning of technical modifications:** Changes to technical equipment, such as pipes, air ducts and electrical supply lines, can be depicted and checked in advance in the virtual model. This offers a stable basis for re-planning.

**Reconstruction:** Detailed 3D data can be gathered for reconstruction of lost deteriorated components of historical sites or archaeological objects.

**BENEFITS**

Digital 3D capturing of complex forms of historic material and inventory at a high level of detail.

Intuitive Plug and Play system. The Freestyle³D provides highest productivity in the field since no warm up times are required.

Lightweight industrial grade device. The Freestyle³D is the only industrial grade handheld device with IP 52 rating and weighs only 0.98Kg.

After processing, all the data can be exported to all commonly used CAD programs.

Seamless integration with Focus³D laser scan data, even in grey scale.
**FORENSIC**

With FARO’s Freestyle® the entire crime scene can be easily captured and recorded as a highly detailed 3D point cloud. With this digital data forensics teams can acquire the whole crime scene, reconstruct it and share it with other departments without losing evidence quality over years.

The Freestyle® captures effortlessly almost any surface type in a wide range of environments by simply pointing the FARO Freestyle® towards the surface or the object.

**APPLICATIONS**

**Crime scenes investigation & analysis:** The Freestyle® allows the users to perform complex investigations easier and faster.

**Digital proof collection:** Quick and accurate capture of evidences, objects and particles found on-site.

**Process integration:** The Freestyle® can be used by combining traditional investigative methods with cutting-edge laser scanning technology for better results.

**Accessibility:** With the digital data captured, forensic specialists can investigate the crime scene, reconstruct it and share it with other departments even years after the incident.

**Fire Investigation:** Detailed fire scene data can be captured and analyzed in 3D.

**BENEFITS**

**Time savings:** simple and complete data capture of a crime scene.

**Verifiable scan accuracy** measured to NIST traceable calibration plate (optional).

**Seamless integration** with Focus® laser scan data, even in grey scale.

**High detailed, extremely fast data acquisition.**

**Real-time, digital 3D data capture.**

Point cloud data can be used by law enforcement diagramming software solutions including FARO CAD Zone and ARAS 360.
Investigators in law enforcement industry depend on reliable, fast and accurate data. Information and spatial references are essential through all phases of investigation.

FARO’s Scanner Freestyle 3D offers an ideal solution, smoothing workflows, making processes faster and more efficient, delivering accurate data and satisfying statutory requirements.

The Freestyle 3D’s light weight makes it ideal for mobile usage on accident scenes.

**ACCIDENT RECONSTRUCTION**

**Applications**

- Traffic accident investigation & analysis: Handling, investigating and analyzing road incidents is fast and reliable using the FARO Freestyle 3D.

- Collect more critical evidence: The Freestyle 3D allows accident investigators to scan in tight spaces such as inside the vehicle. In addition, detailed scans can be performed on crush areas.

- Collision reconstruction: Complex and timely investigations are made easier and faster with the Freestyle 3D.

- Digital accessibility: With the digital data captured, police and investigators can document the accident scene digitally, reconstruct it and share it with other departments without losing evidence quality.

**Benefits**

- Time-saving, simple and complete recording of the current accident sites.

- Verifiable scan accuracy measured to NIST traceable calibration plate (optional).

- Real-time, digital 3D data capture and analysis of materials, volumes, structures.

- Export functionality to several law enforcement diagramming software solutions, including FARO CAD zone and ARAS 360.
3D Documentation Workflow

INDUSTRY LEADING FARO WORKFLOW IN 3D DOCUMENTATION

Simplify the workflow even in your most complex scanning projects with the Freestyle® integration. Scan full scenes with FARO’s Laser Scanner Focus® X 130 or X 330. Add even more details and capturings using the brand new FARO Freestyle 3D.

Now you can capture points in areas where a positioning of a laser scanner isn’t possible or when high details from different angles are needed. Point clouds are edited with the powerful FARO SCENE software. With its unique automated scan placement, scanning on site is even faster and processing easier. Share your results securely via WebShare Cloud and collaborate with your project- and business partners anywhere in the world.

STEP 1 - SCAN

Setup the FARO Laser Scanner Focus®. Acquire scan data of any environment under almost any weather condition.

Add additional detail in your point clouds by capturing data with the FARO Freestyle 3D.

STEP 2 - PROCESS

Process and merge point clouds in FARO SCENE. You can instantly perform measurements, calculate volumes and add annotations to your scan data. The powerful automatic features of SCENE will speed up editing and give you a never before seen software experience.

STEP 3 - COLLABORATE

Your processed scan data can be shared quickly and securely via the FARO hosted WebShare Cloud service with colleagues, project- and business partners.

FARO® LASER SCANNER FOCUS® X 330

The FARO Focus® X 330 a high-speed 3D scanner with extra long range. The Focus® X advances into entirely new dimensions: it can scan objects up to 330 meters away even in direct sunlight. With its integrated GPS receiver, the laser scanner is able to correlate individual scans in post-processing making it ideal for surveying based applications.

FARO® LASER SCANNER FOCUS® X 130

The ultra-portable Focus® X 130 enables fast, straightforward, and accurate measurements up to 130 metres. The 3D scan data can easily be imported into all commonly used software solutions for accident reconstruction, architecture, civil engineering, construction, forensics or industrial manufacturing.
DATA SHARING WITHOUT LIMITS

With SCENE WebShare Cloud, FARO offers a comprehensive service to provide users with simple access to 3D documentation. Neither technical training nor specialist skills in 3D laser scanning are necessary to work with the intuitive user interface.

Digital data, such as 3D documentation, often has to be available to many different project partners. Previously, users had their own internet server, could use SCENE WebShare to present their laser scan projects to clients and project partners. Now FARO goes considerably further, offering the SCENE WebShare Cloud solution, a hosting service with various packages at different prices.

Features
- Easy data sharing and collaboration
- Best possible security level
- Minimal set up and maintenance effort
- Persistent measurements & annotations
- Hosting service offered by FARO
- Support for mobile devices

www.websharecloud.com

APP CENTER

The FARO 3D App Center!
In the 3D App Center you will find software dedicated to the FARO 3D Documentation world. The shop is divided into two main categories: Stand-alone apps and plug-in apps.

3d-app-center.faro.com
**Accessories**

**RUGGEDIZED PELI™ CASE FOR TRANSPORT**

The waterproof and extremely sturdy Pelicase, with lots of compartments for important accessories, stores besides the FARO® Freestyle® device, the Microsoft® Surface Pro 3 and the carbon calibration plate.

The ultra high impact copolymer polypropylene is extremely strong and flexible against external impacts. Stainless steel pins are used in hinges, latches and handles to prevent corrosion.

**CALIBRATION PLATE**

The FARO® Freestyle® comes with a carbon fibre calibration plate. This plate can be used for in-field calibration, whenever needed.

The in-field calibration gives any operator the opportunity to ensure high accuracy scan data in any environment or surrounding condition. With the calibration plate FARO provides the user with the opportunity to determine and verify that the device is within the expected specifications. The results are available as PDF report, documenting the on-site calibration results.

**MEASURED TO NIST TRACEABLE CALIBRATION PLATE**

The measured to NIST traceable calibration plate made of carbon fibre can be used for in-field calibration. It is traceable to the U.S. National Institute of Standards and Technology (NIST) and offers verifiable scan accuracy for law enforcement applications.

**SOFTWARE COMPATIBILITY**

The Freestyle® and it’s SCENE software are compatible with the most common CAD software applications. SCENE can be used to export scan data to over 50 common software solutions, such as:

- General CAD: AutoCAD, Microstation, Rhino
- Plant construction: AVEVA PDMS, Intergraph PDS, AutoCAD Plant 3D, Microstation, Rhino
- Architecture: AutoCAD Architecture, REVIT
- Civil engineering / Surveying: AutoCAD Civil 3D, PolyWorks Surveyor, Carlson, Microsurveys
- Heritage: 3D Reconstructor
- Quality control: Geomagic Qualify, PolyWorks Inspector, Rapidform XOR
- Forensics: AutoCAD, SCENE Forensics
- Reverse engineering: Geomagic Studio, PolyWorks Modeler, Rapidform XOR
- Tunneling: RR Tunnel, TMS
- Visualization: Pointools

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**MICROSOFT® SURFACE PRO 3 TABLET**

It’s a tablet and laptop all in one device. Barely tipping the scales at 798 g, the 12-inch Surface Pro 3 has all the power and performance of a premium laptop in a thin and lightweight design.

12 Inch ClearType Full HD Plus Touch Display
Pre-loaded with Windows 8.1 Pro
Wireless: Wi-Fi 802.11ac/802.11 a/b/g/n
Two 5MP HD cameras, front and rear-facing
Up to 9 hours battery life

**WORLDWIDE CUSTOMER SERVICE & SUPPORT**

Phone: Our customer service staff is available from 8am to 5pm (CEST) from Monday to Friday.
Free call number: 00 800 3276 7378
E-Mail: support@faroeurope.com
Online-Support Center: www.faro.com/support
On-site: Our application engineers will help you on-site.

Worldwide service and support from local FARO facilities with hotline support, calibration and repair services for professionals. If you like to add an additional service contract you will receive a 10% discount on all accessories and free re-certification, and on-call advice.

**LEARN MORE**

The Freestyle® has an intuitive control concept, enabling even inexperienced users to get started straight away. Valuable tips and suggestions are to be found in the tutorial section which is stored on the tablet. However we also offer workshops, seminars and training courses for specific applications and tasks. In these, we teach you how you can use your Freestyle® even more efficiently.

**You are in good hands**

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E-Mail: support@faroeurope.com
Online-Support Center: www.faro.com/support
On-site: Our application engineers will help you on-site.

Worldwide service and support from local FARO facilities with hotline support, calibration and repair services for professionals. If you like to add an additional service contract you will receive a 10% discount on all accessories and free re-certification, and on-call advice.

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