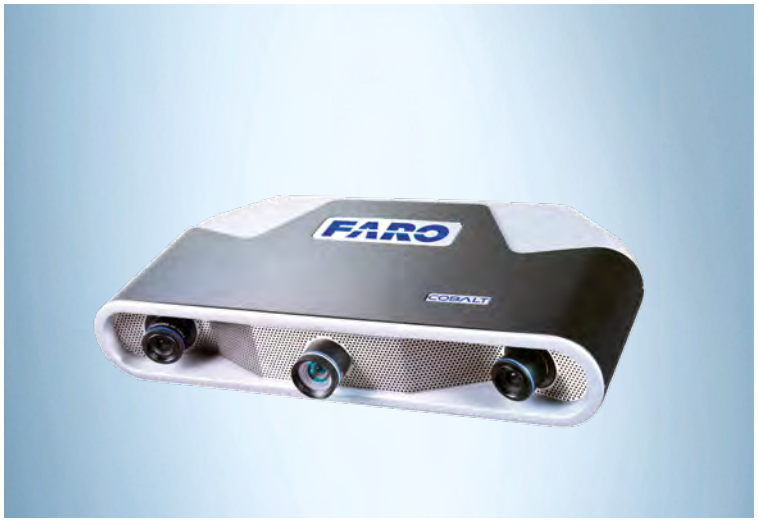
FARO® Products

Portable systems for measurement and 3D documentation

FARO

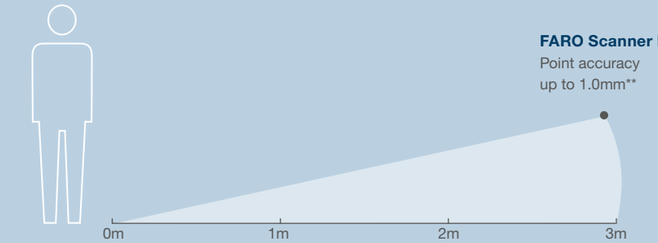


About FARO

PIONEER FOR PORTABLE MEASUREMENT

FARO develops portable devices for 3D measurement, inspection, imaging and surveying. Our focus is on simplifying our customers' work with tools and empowering them to dramatically reduce on-site measuring time and eliminate costly errors. As the pioneer in portable measurement, we have re-invented measuring: instead of carrying your parts to the measuring machine our systems can be deployed just where they are needed. With FARO you have 3D measurement peace of mind.

3D DOCUMENTATION SOLUTIONS



FARO Scanner Freestyle^{3D} X
Point accuracy
up to 1.0mm**

FARO Scanner Freestyle^{3D}
Point accuracy
up to 1.5mm**

The handheld scanner for professionals **FARO Scanner Freestyle^{3D}** provides a fast and easy to use scanning solution with verifiable accuracy of the 3D colour scan data. It quickly and reliably documents rooms, structures and objects in 3D and creates high-definition pointclouds.

FARO Laser Scanner Focus^{M} 70
Distance accuracy
up to ±3mm***

FARO Laser Scanner Focus^{S} 150
Distance accuracy
up to ±1mm***

FARO Laser Scanner Focus^{S} 350
Distance accuracy
up to ±1mm***

FARO Laser Scanner Focus^{3D} X 30
Distance accuracy
up to ±2mm***

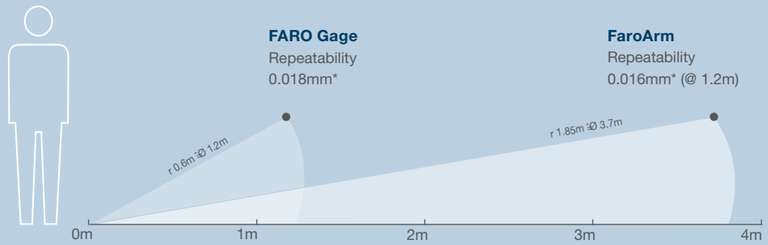
FARO Laser Scanner Focus^{3D} X 130 / HDR
Distance accuracy
up to ±2mm***

FARO Laser Scanner Focus^{3D} X 330 / HDR
Distance accuracy
up to ±2mm***

The **FARO Laser Scanner** is a portable non-contact measurement system to accurately capture 3D data. The system rotates 360° and measures everything within its line of sight with a scan rate of up to 976,000 points per seconds.

FARO is certified according to ISO 9001 and accredited according to ISO/IEC 17025:2005.

METROLOGY SOLUTIONS



FARO Gage
Repeatability
0.018mm*

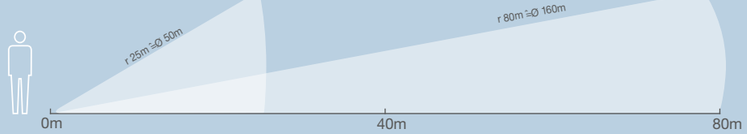
FaroArm
Repeatability
0.016mm* (@ 1.2m)

FARO Laser Line Probe
Accuracy
±0.025mm*

The **FARO Gage** enables measurements right on the machine producing your part. With its 1.2m (48") working volume, it is the 'mount-it-to-where-you-make-it', truly portable, cost-effective, 3D, minimal-training gages for machinists.

The **FaroArm** renders traditional CMMs, hand tools and other portable CMMs obsolete. It is available in different arm lengths and is ideal for inspection, reverse engineering and CAD-to-part-analysis of parts, fixtures and assemblies.

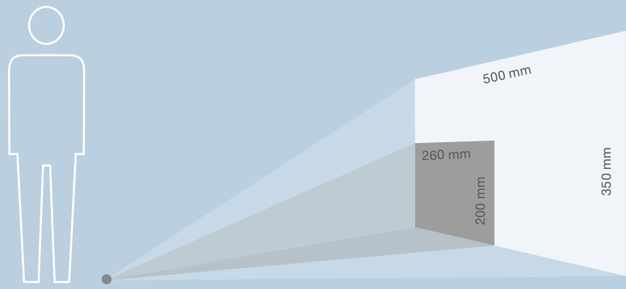
The first fully integrated laser scanner on FARO's patented seven-axis arm. The FaroArm combined with the **Laser Line Probe** is perfect for reverse engineering and can inspect to CAD and records up to 560,000 points per second.



FARO Laser Tracker Vantage^{E}
Accuracy
0.017mm* (@2-25m; typical)

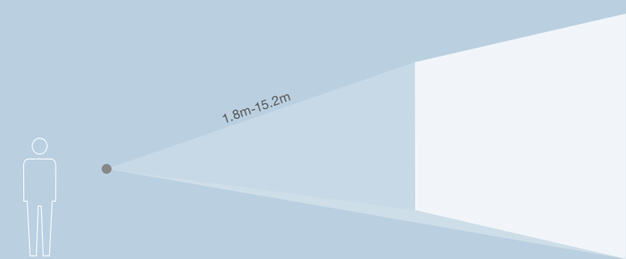
FARO Laser Tracker Vantage^{S}
Accuracy
0.017mm* (@2-25m; typical)

The **FARO Vantage Laser Trackers** are portable 3D measurement systems for addressing challenges in large-scale metrology including assembly alignment, part and assembly inspection, machine installation and alignment, and reverse engineering.



FARO Cobalt Array Imager

The **FARO Cobalt Array Imager** is a metrology-grade, non-contact scanner which utilizes blue light technology to capture millions of high resolution 3D coordinate measurements in seconds. Cobalt is easily deployed as a manual device or as part of a fully automated system.



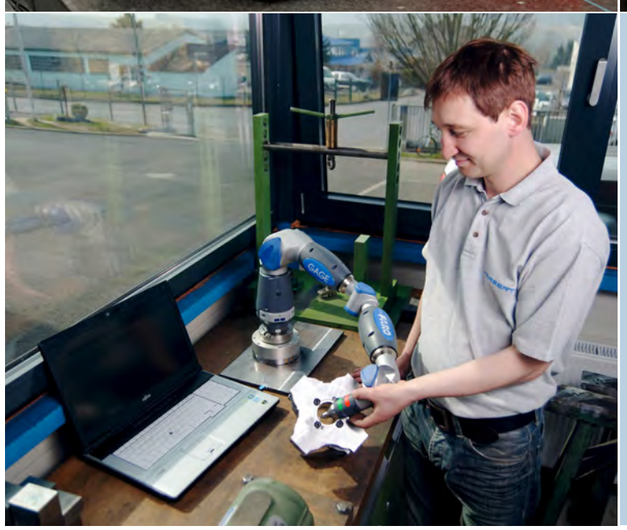
FARO Tracer^{M}

Positional Accuracy
± 0.25mm @ 4.6m

The **FARO Tracer^{M}** is a virtual templating and positioning solution, which allows to reduces or eliminates physical templates and hard tooling.

*Depending on the measuring instrument different accuracy test methods have been used. ** Measured on a 1m reference scale, in 1m distance, for a lateral scanner movement of 1m, using targets for distance measurement.
*** Distance accuracy is defined as a systematic measurement error at around 10m and 25m, one sigma.

FARO® Gage



TYPICAL APPLICATIONS

Aerospace: Repair & refit

Tool & Die: Master moulds, tool setup

Automotive: Engine components, braking components, hydraulics and castings

Castings & Mould Making: Pre-cast mould, composite tooling

*Repeatability = Single point articulation performance test. **Accuracy = Volumetric maximum deviation. Performance specifications according to B89.4.22

FARO® Gage

YOUR PERSONAL CMM

FARO Gage is a high-precision, portable 3D coordinate measurement system with a working range of 1.2m and a measurement accuracy of 0.018mm. A variety of attachment options enable rapid deployment directly at the workplace or in a processing centre. The Gage is now equipped with the Bluetooth® wireless technology. Users can now inspect, then transmit data up to 10m (30 feet) away – even through walls – without having to use cables.

BENEFITS

User friendliness
Replaces traditional hand tools and thus eliminates individual operator variability.

Productivity
Increases productivity with reduced measurement and inspection times.

Mobility
Mount and measure parts in manufacturing process.

Wireless data transfer
Connectivity through Bluetooth up to 10m (30ft) using Bluetooth® and Ethernet-ready* options.

Quality
Meets quality standards with automatic computer-generated reports.

PERFORMANCE SPECIFICATIONS

18µm

Measurement range (m/ft)		Repeatability* (mm/inch)	Accuracy** (mm/inch)	Weight (kg/lbs)
Gage	1.2 (4)	0.018 (0.0007)	±0.025 (±0.001)	9.1 (20.0)

FaroArm®

TYPICAL APPLICATIONS

Aerospace: Alignment, tooling & mould certification, part inspection

Automotive: Tool building & certification, alignment, part inspection

Metal Fabrication: OMI, first article inspection, periodic part inspection

Moulding/Tool & Die: Mould and die inspection, prototype part scanning

FARO® Edge

THE WORLD'S MOST INNOVATIVE MEASUREMENT ARM

The Edge is the most advanced, state-of-the-art FaroArm ever introduced. It is the first ever smart measurement arm featuring an integrated personal measurement assistant. With its built-in touchscreen and on-board operating system, the Edge revolutionizes portable metrology by providing standalone basic measurement capability. The FARO Edge simplifies the user experience with improved performance, portability, and reliability. Improve production, quality, and reverse engineering processes by rapidly verifying or scanning parts with confidence and accuracy using the FARO Edge.

BENEFITS

Ergonomics
Improved weight distribution and balance, for reduced strain and ease-of-use.

Multi-probe capability
Including standard, touch, FARO iProbes, and custom probes.

Smart sensor technology
Warn against excessive external loads, correct for thermal variations and detect possible setup problems.

Smart connectivity
Through Bluetooth®, WLAN, USB, and Ethernet ready options. Enables multiple device management through enhanced networking.

On-board measurement system
Built-in touchscreen computer for laptop-free basic measurements. On-board diagnostics and easy-to-setup measurement routines.

PERFORMANCE SPECIFICATIONS

24µm

7

Measurement range (m/ft)		Repeatability* (mm/inch)	Accuracy** (mm/inch)	FaroArm weight (kg/lbs)
		7 axes	7 axes	7 axes
Edge	1.8 (6)	0.024 (0.0009)	±0.034 (±0.0013)	10.7 (23.6)
Edge	2.7 (9)	0.029 (0.0011)	±0.041 (±0.0016)	10.9 (24.1)
Edge	3.7 (12)	0.064 (0.0025)	±0.091 (±0.0035)	11.3 (24.9)

*Repeatability = Single point articulation performance test. **Accuracy = Volumetric maximum deviation. Performance specifications according to B89.4.22

FARO® Prime

BEST ACCURACY, BEST VALUE PORTABLE CMM

Available in five working lengths and 6-axis configuration, the FARO Prime delivers the highest FaroArm accuracy at an amazing value. Equipped with Bluetooth® technology, the Prime eliminates the need to tether the device to a laptop. An extended-use battery and composite material construction ensure shop floor durability, day after day. Together, these features make the FARO Prime the ideal solution for basic measurements in inspection, reverse engineering, CAD-to-part analysis and for anything else where a high-accuracy, hard-probing measurement solution is needed.

BENEFITS

Extended-use battery
Integrated extended-use battery provides true ‘measure anywhere’ capability.

Bluetooth® wireless operation
Inspect and digitize wirelessly up to 10m (30ft.) away.

Internal counterbalancing
Internal counterbalancing provides comfortable stress-free usage.

Multi-probe capability
Including various ball diameters, custom extensions and optional touch sensitive probe.

Temperature & overload sensors
Located in each joint, they allow the arm to “feel” and react to thermal variations and improper handling for maximum accuracy.

PERFORMANCE SPECIFICATIONS

16µm
6

Measurement range (m/ft)		Repeatability* (mm/inch)	Accuracy** (mm/inch)	FaroArm weight (kg/lbs)
		6 axes	6 axes	6 axes
Prime	1.2 (4)	0.016 (0.000)	±0.023 (±0.0009)	9.1 (20.0)
Prime	1.8 (6)	0.019 (0.0007)	±0.027 (±0.0011)	9.3 (20.5)
Prime	2.4 (8)	0.024 (0.0009)	±0.034 (±0.0013)	9.5 (21.0)
Prime	3.0 (10)	0.042 (0.0017)	±0.059 (±0.0023)	9.75 (21.5)
Prime	3.7 (12)	0.060 (0.0024)	±0.085 (±0.0033)	9.98 (22.0)

*Repeatability = Single point articulation performance test. **Accuracy = Volumetric maximum deviation. Performance specifications according to B89.4.22

FaroArm® Fusion

QUALITY WITHOUT COMPROMISE

To make your products and processes the best in the world, there isn’t another portable CMM that combines the recision, durability, technology and cost-effectiveness of the FaroArm Fusion. The Fusion is the economical, all-in-one portable tool for performing inspections, tool certification, CAD-to-part analysis, or reverse engineering.

BENEFITS

Universal 3.5” quick mount
Offers ‘Mount-it-where-you-make-it’ convenience and less down-time.

Auto sleep mode
Automatically turns off unit to save energy and extend component life.

Bluetooth® wireless operation
Inspect and digitize wirelessly up to 10m (30ft.) away.

Multi-probe capability
Including various ball diameters, curved and extended probes.

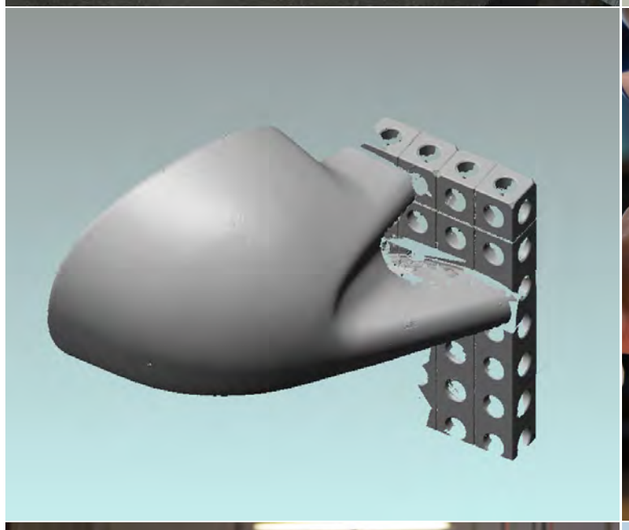
Internal counterbalancing
Internal counterbalancing provides comfortable stress-free usage.

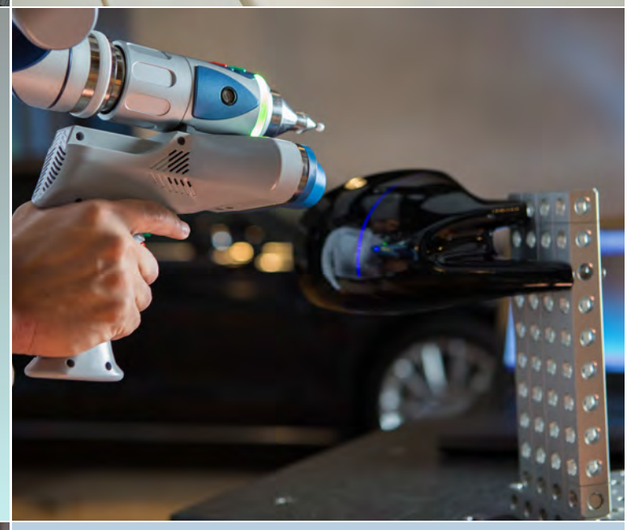
PERFORMANCE SPECIFICATIONS

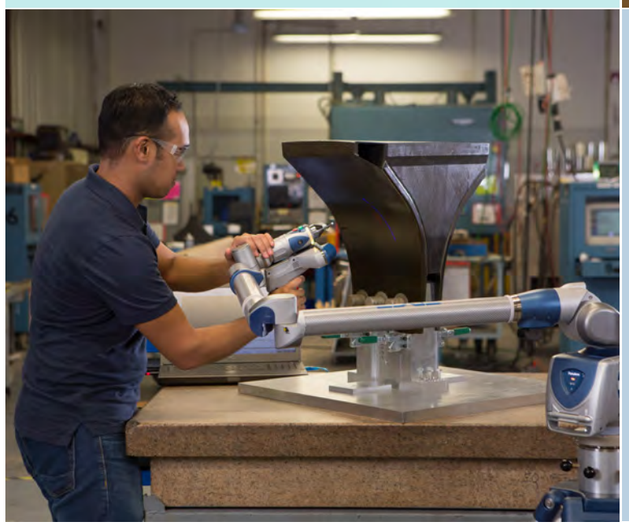
36µm
6
7

Measurement range (m/ft)		Repeatability* (mm/inch)		Accuracy** (mm/inch)		FaroArm weight (kg/lbs)	
		6 axes	7 axes	6 axes	7 axes	6 axes	7 axes
Fusion	1.8 (6)	0.036 (0.001)	0.046 (0.0018)	±0.051 (±0.0020)	±0.064 (±0.0025)	9.3 (20.5)	9.5 (21.0)
Fusion	2.4 (8)	0.043 (0.0017)	0.051 (0.0020)	±0.061 (±0.0024)	±0.071 (±0.0028)	9.5 (21.0)	9.75 (21.5)
Fusion	3.0 (10)	0.074 (0.0029)	0.089 (0.0035)	±0.104 (±0.0041)	±0.124 (±0.0049)	9.75 (21.5)	9.98 (22.0)
Fusion	3.7 (12)	0.104 (0.0041)	0.124 (0.0049)	±0.147 (±0.0058)	±0.175 (±0.0069)	9.98 (22.0)	10.21 (22.5)

FARO® ScanArm







TYPICAL APPLICATIONS

Aerospace: Reverse engineering, certification, part inspection

Automotive: Tool building & certification, alignment, part inspection

Metal Fabrication: OMI, first article inspection, periodic part inspection

Moulding/Tool & Die: Mould and die inspection, prototype part scanning

FARO® Edge ScanArm HD

HIGH SPEED PERFORMANCE MEETS HD DATA CLARITY

The FARO Edge ScanArm HD combines the flexibility and the functionalities of a FARO Edge measuring Arm with the high-definition Laser Line Probe HD creating a powerful contact/non-contact portable measurement system ideal for challenging applications in different industries. The Edge ScanArm HD provides point cloud capture with rapid speed, superior resolution and high accuracy — all in a compact and easy-to-use system.

BENEFITS

Rapid scanning speed
The extra wide scan stripe and fast frame rate boosts productivity by increasing coverage and reducing scanning time

Compact and simple to use
Dramatically reduce required training time with the new crosshair feature and existing LED Rangefinder functionality which provides real-time scanning feedback. The small size and friendly user-interface result in a versatile and intuitive tool

Scan challenging materials
Seamlessly scan across diverse surface materials regardless of contrast, reflectivity or part complexity without any special coatings

High definition data
Intricate components can be captured in fine detail as a result of the 2,000 actual points per scanline and the new blue laser featuring noise reduction technology

Highly accurate and repeatable
Reliable, repeatable and highly accurate measurement data is delivered with confidence as a result of superior optical performance.

PERFORMANCE SPECIFICATIONS

Accuracy	±25µm (±0.0008”)
Repeatability	25µm, 2σ (0.01”)
Stand-off	115mm (4.5”)
Depth of field	115mm (4.5”)
Effective scan width	Near field 80mm (3.1”) Far field 150mm (5.9”)
Points per line	2,000 points/line
Minimum point spacing	40µm, (0.0015”)
Scan rate	280 frames/second, 280fps x 2,000 points/line = 560,000 points/second
Laser	Class 2M
Weight	485g (1.1lbs.)

FARO® Edge ScanArm ES

LIGHTWEIGHT AND SMALL SCANNING SOLUTION

The FARO Edge ScanArm ES combines the flexibility and the functionalities of a FARO Edge measuring Arm with the smallest Laser Line Probe on the market, the FARO Laser Line Probe ES. It's the ideal device for all the users that are looking for an efficient and user friendly solution for probing and scanning tasks enabling to capture materials with challenging surfaces. The FARO Edge ScanArm ES delivers a good performance at a very competitive price in the industry for a handheld laser scanning system.

BENEFITS

Ergonomic handling
The low weight (222,4g) of the Laser Line Probe and the ergonomic handle design enable ensure fatigue-free work for operators

Automatic scanning optimization
Software algorithms automatically adjust the scanning parameters for a wide variety of surfaces

Complete Measurement Solution
Use laser and hard probes seamlessly to inspect freeform surfaces, increasing the efficiency of inspection processes

Wireless scanning
The FARO Laser Line Probe ES is fully compatible with the Bluetooth®, Wi-Fi, USB, and Ethernet ready technologies used in the FARO Edge

PERFORMANCE SPECIFICATIONS

Accuracy	±35µm (±0.0014")
Repeatability	35µm, 2σ (0.0014")
Stand-off	80mm (3.15")
Depth of field	85mm (3.35")
Effective scan width	Near field 53mm (2.09") Far field 90mm (3.5")
Points per line	752 points/line
Scan rate	60 frames/second x 752 points/line = 45,120 points/second
Laser	660nm, CDRH Class II/IEC Class 2M
Weight	222.4g (0.49lbs.)

FARO® Laser ScanArm V3

ALL IN ONE MEASUREMENT SYSTEM

The FARO Laser ScanArm V3 combines the FaroArm Fusion with the Laser Line Probe V3. It's the perfect device for all the users that are looking for a single, convenient solution for probing and scanning tasks of simple surfaces. The FARO Laser ScanArm V3 is a ideal entry level all in one solution which fits perfectly to many surface inspection applications.

BENEFITS

Complete measurement solution
Use laser and hard probes seamlessly to inspect freeform surfaces, increasing the efficiency of inspection processes

Fully integrated scanning
No need for interface box or external wiring

Removable Laser Line Probe
The Laser Line Probe can be removed for better tactile measurement handling

Wireless scanning
The Laser Line Probe is fully compatible with the Bluetooth® technology used in the FaroArm Fusion

PERFORMANCE SPECIFICATIONS

Accuracy	±35µm (±0.0014")
Repeatability	35µm, 2σ (0.0014")
Stand-off	95mm (3.75")
Depth of field	85mm (3.35")
Effective scan width	Near field 34mm (1.34") Far field 60mm (2.36")
Points per line	640 points/line
Scan rate	30 frames/second x 640points/line = 19,200 points/second
Laser	660nm, CDRH Class II/IEC Class 2M
Weight	370g (0.82lbs.)

FARO® Vantage^{S} & Vantage^{E} Laser Trackers

TYPICAL APPLICATIONS

Alignment: Real-time measurement during assembly confirms tolerances and improves quality control

Machine Installation, Alignment, and Maintenance: Ensure that machines are calibrated and monitor wear and tear on mechanical parts so that they consistently operate within specifications

Part and Assembly Inspection: Produce a digital record of actual versus nominal data to validate conformance to quality requirements

Tool, Die, and Mold Building: Perform full volumetric accuracy measurements to monitor wear and ensure consistency

Reverse Engineering: Acquire precise digital measurement data on parts or assemblies for which blueprints or CAD drawings do not exist

Robot Calibration: Perform on-site, routine maintenance calibrations on robots to ensure conformance to specifications and uniform output

*MPE and all accuracy specifications are calculated per ASME B89.4.19 - 2006. Variation in air temperature is not included. Specifications, descriptions, and technical data may be subject to change.
**With selected targets

FARO® Vantage^{S} & Vantage^{E} Laser Trackers

HIGH-ACCURACY LASER TRACKERS FOR SHORT-TO-LARGE RANGE APPLICATIONS

The FARO Vantage^{S} and Vantage^{E} Laser Trackers offer the next level in laser tracker productivity for addressing challenges in large-scale metrology including assembly alignment, part and assembly inspection, machine installation and alignment, and reverse engineering. With innovative RemoteControls™ workflow, superior accuracy, exceptional portability and ruggedness, these Laser Trackers enable you to build and inspect products by measuring quickly, simply and precisely. They streamline your processes and give you confidence in your measurement results.

The Vantage^{S} is intended for short-to-long range measurement applications of up to 80 meters, while the Vantage^{E} supports short-to-medium range applications of up to 25 meters.

BENEFITS

Advanced and intuitive control
RemoteControls feature enhances workflow by allowing a user the control of the system using a mobile device and through simple gestures.

Next Generation Portability
With integrated master control unit (MCU), battery operation capability, industrial grade Wi-Fi and innovative travel case system.

Continuous operation
With a hot-swappable battery pack that completely eliminates the need for AC power.

Rugged design and construction
Rigorously tested for resistance to shock, vibration, temperature cycle, and humidity. Rated IP52 for dust and water resistance.

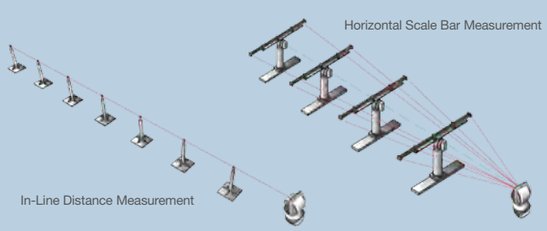
Easy-to-use
Quickly and efficiently locate and lock onto a target with SmartFind function and simple gestures.

Flexibility
Mounted in different configurations - vertically, horizontally, upside down, or even at an angle - to fit in tight, congested areas.

POINT TO POINT ACCURACY[a]

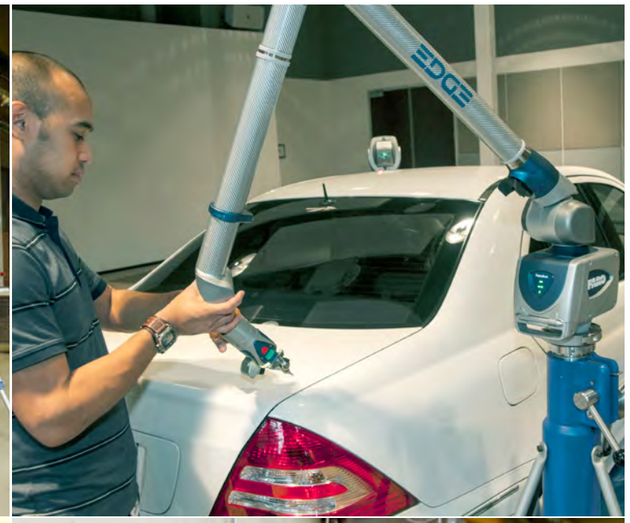
In-Line Distance Measurement[b]					
Length		2-5m (6.6-16.4ft)	2-10m (6.6-32.8ft)	2-25m (6.6-65.6ft)	2-80m[C] (6.6-262.5ft)
Distance		3m (9.8ft)	8m (26.2ft)	23m (75.5ft)	78m (255.9ft)
ADM	MPE[a]	0.018mm (0.0007")	0.022mm (0.0009")	0.034mm (0.0013'')	0.078mm (0.0031")
	Typical	0.009mm (0.0004")	0.011mm (0.0004")	0.017mm (0.0007'')	0.039mm (0.0015")

Horizontal Scale Bar Measurement 2.3m (7.55ft)[b]						
Range		2m (6.6ft)	5m (16.4ft)	10m (32.8ft)	25m (82.0ft)	80m[C] (262.5ft)
ADM	MPE[a]	0.044mm (0.0017")	0.064mm (0.0025")	0.099mm (0.0039")	0.205mm (0.0081'')	0.594mm (0.0234")
	Typical	0.022mm (0.0009")	0.032mm (0.0013")	0.049mm (0.0019")	0.103mm (0.0040'')	0.297mm (0.0117")



[a] MPE (Maximum Permissible Error) and all accuracy specifications are calculated per ASME B89.4.19 - 2006. Variation in air temperature is not included. Specifications, descriptions, and technical data may be subject to change.
[b] With integrated weather station.
[c] With selected targets. Lengths and distances of over 25m are not applicable to Vantage^{E}.
Protected by U.S. patents: 7,327,446; 7,352,446; 7,466,401; 7,701,559; 8,040,525; 8,120,780.

FARO® TrackArm



TYPICAL APPLICATIONS

Aerospace: Inspection & certification, installation and alignment

Tool & die: master molds, tool setup, composite tooling

Automotive: Tool certification, reverse engineering

Heavy equipment: In-process/large part inspection

FARO® TrackArm

SUPER 6DOF – THE LARGE-SCALE MEASUREMENT SOLUTION THAT CAN SEE AROUND CORNERS

FARO's Super 6DoF package combines all the capabilities of 3D Measurement Arm and Laser Tracker technology to create an integrated 3D measurement system that is the industry's only 6-degrees-of-freedom (6DoF) solution that completely eliminates line-of-sight challenges and significantly expands measurement range while maintaining superior accuracy.

If you already use a Laser Tracker, adding the FaroArm will eliminate line-of-sight restrictions and will provide fast, high-resolution 3D scanning to easily measure difficult to reach features and surfaces.

If you already use a FaroArm, adding the Laser Tracker will expand the Arm's working volume so it can be quickly positioned with greater accuracy.

When used with a FARO ScanArm, the Tracker is effectively provided with a wide-area, surface-scanning capability, creating a maximum size, accuracy and flexibility 3D scanning and measurement system.

BENEFITS

Greater capability and value

Turnkey bundle that includes two separate portable coordinate measurement machines and leading 6DoF capabilities.

Flexibility

Each system can also be used independently when needed, improving efficiency.

Cost effective

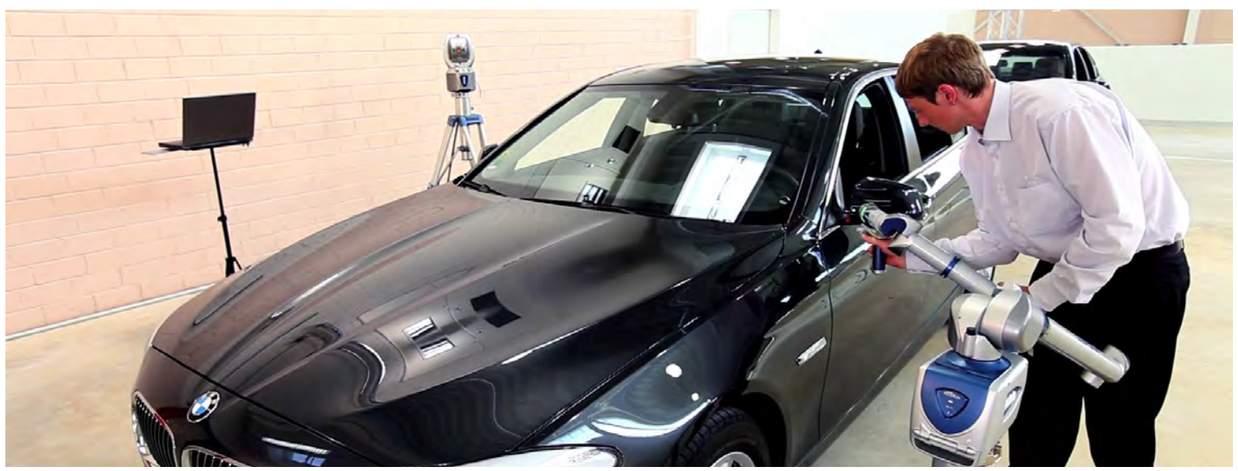
Large volume measurement at a fraction of the cost of comparable system.

Ease of use

Quickly synchronize devices by collecting points in space.

Wireless freedom

Ultimate portability with cable-free operation.



FARO® Cobalt Array Imager

TYPICAL APPLICATIONS

Automotive: Automated quality control & assembly verification, Sheet metal inspection, Tool & die inspection & reverse engineering, Suspension / chassis component inspection

Machining, Metalworking & Assembly: Casting & machined part inspection, Automated quality control, Mold & die inspection & reverse engineering

Aerospace: Automated quality control & assembly verification, Composite tooling, Wing skin & body panel inspection & reverse engineering

Common applications for Automotive, MMA and Aerospace: Automated in-line inspection, On-machine inspection, CAD-based inspection, Troubleshooting

FARO® Cobalt Array Imager

AUTOMATED NON-CONTACT CMM

The FARO Cobalt Array Imager is a metrology-grade, non-contact scanner which utilizes blue light technology to capture millions of high resolution 3D coordinate measurements in seconds.

It is versatile - supporting a wide variety of deployment options including multi-imager array, tripod, rotary table, robot and industrial inspection cells. The Cobalt delivers fast and consistent measurements for dimensional inspection and reverse engineering applications on parts, assemblies, and tools.

The Cobalt Imager is equipped with dedicated on-board processors – an industry first. The smart sensor allows unique multi-imager array configurations which expand the 3D scan area to deliver rapid, automated and comprehensive inspection. The actionable data is then displayed as a simple go/no-go result or an easy-to-read dimensional deviation color map. An unlimited number of 3D imagers can be placed in array configurations virtually anywhere in a manufacturing process – all scanning simultaneously and controlled by a single computer.

Choose between the **5MP Cobalt** or the **9MP Cobalt**. The 9MP version improves the resolution and the ability to capture features on edges and surfaces.

BENEFITS

Productivity

- Dramatically reduce inspection cycle times using multiple imager arrays
- Increase productivity by automating measurement workflows
- Real-time 3D data for statistical process control (SPC) without slowing production

Performance

- Measurement accuracy ensured by self-monitoring
- Accurately capture light and dark surfaces and/or multi-colored objects in a single scan

User friendliness

- Easy set-up and transport
- Easy to configure and integrate within the production environment

Convenience

- High-end performance at an affordable price
- Worldwide service and support from regional FARO locations

PERFORMANCE SPECIFICATIONS

Model	Field of View (mm)	Point Spacing (mm/inch)	Measurement Volume (mm/inch)			Standoff Distance (mm/inch)	Accuracy*
			Width	Height	Depth		
5MP	250	0.155 / 0.006	260 / 10.2	200 / 7.9	90 / 3.5	505 / 19.9	0.027mm
	500	0.255 / 0.010	500 / 19.7	350 / 13.8	300 / 11.8	320 / 12.6	0.050mm
9MP	250	0.082 / 0.003	260 / 10.2	200 / 7.9	90 / 3.5	515 / 20.3	0.027mm
	500	0.175 / 0.007	500 / 19.7	350 / 13.8	300 / 11.8	315 / 12.4	0.050mm

*Calibration per VDI/VDE 2634 part 2.

FARO® Cobalt Array Imager

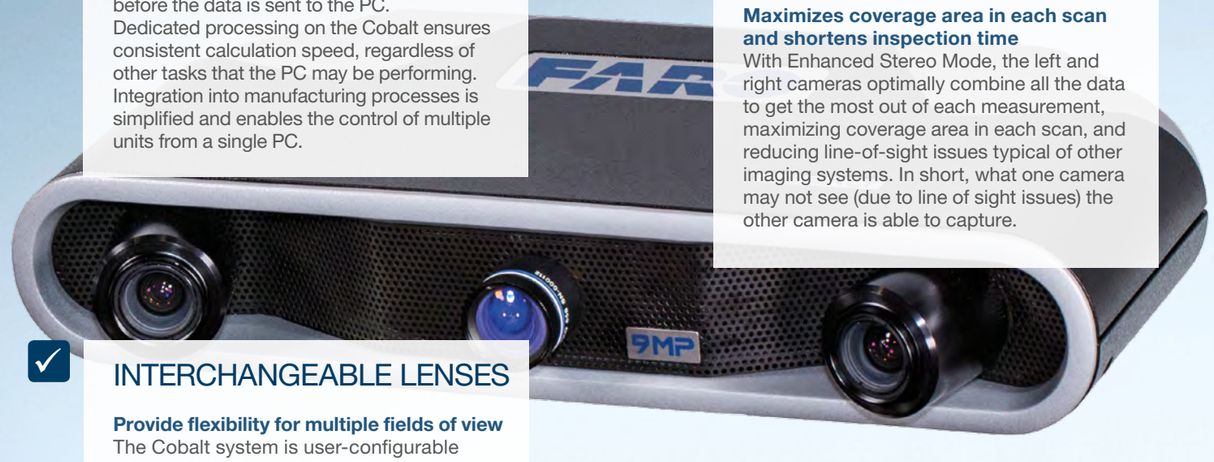
FARO® Cobalt Array Imager

ON-BOARD PROCESSING

Delivers fast, reliable performance, and easy multi-unit integration
On-board processing enables the Cobalt system to calculate accurate point cloud data before the data is sent to the PC.
Dedicated processing on the Cobalt ensures consistent calculation speed, regardless of other tasks that the PC may be performing.
Integration into manufacturing processes is simplified and enables the control of multiple units from a single PC.

ENHANCED STEREO MODE

Maximizes coverage area in each scan and shortens inspection time
With Enhanced Stereo Mode, the left and right cameras optimally combine all the data to get the most out of each measurement, maximizing coverage area in each scan, and reducing line-of-sight issues typical of other imaging systems. In short, what one camera may not see (due to line of sight issues) the other camera is able to capture.



INTERCHANGEABLE LENSES

Provide flexibility for multiple fields of view
The Cobalt system is user-configurable with multiple fields of view. The option of interchangeable lens kits enable the system to collect point cloud data on various-sized parts with different point spacing (resolution). Higher resolution results in more detailed scans. Lens kits are easily removed and replaced on the Cobalt.

STEREO CAMERAS

Enable high accuracy, stability and self-monitoring
Stereo Cameras deliver the highest accuracy and also monitors the system itself. This ensures the system is working within specification and is scanning with a high consistency during each measurement process.

HIGH DYNAMIC RANGE

Easily handles complex parts with both dark and light surfaces, different colors, textures, and reflectivity
The High Dynamic Range (HDR) feature provides the ability to measure both dark and light surfaces at the same time, by collecting data with multiple exposures. Automatic-exposure selects the optimal settings to achieve coverage on selected areas. The user can define any number of areas to get full coverage of a surface.

DEPLOYMENT OPTIONS

Based on specific application requirements, the FARO Cobalt Array Imager supports different deployment options:

Multiple Imager Array

With Multiple Imager Arrays, an unlimited number of Cobalt sensors can be used to simultaneously gather data on an object that is being inspected.
This expands the effective field of view which, in turn, reduces inspection time and increases productivity.
For dedicated inspections, a multiple imager array of Cobalt sensors will be faster, more easily integrated, more affordable, more accurate and easier to maintain than a robot-based imager or laser line systems currently on the market.

Robot Mount
Ideal for fully automated inspection applications.

Rotary Table

Particular advantageous for automated inspection of small parts.

Tripod Mount

Useful for reverse engineering applications and non-recurring inspections

Combination Deployments

Maximize productivity and inspection throughput by combining multiple deployment options:

- Robots and Rotary Stages can be used together
- Robots and Multiple Imager Arrays can be used together

AUTOMATIC EXPOSURE

Applies optimal exposure settings to ensure the best possible data for every situation
Automatic exposure selects the optimal exposure, ensuring the best possible data at all times. These optimal exposures can then be saved and entered into an inspection program to skip subsequent auto-exposure steps and further accelerate the process.

BLUE LIGHT TECHNOLOGY

Enhances ability to measure dark and reflective surfaces in variable lighting conditions
The Cobalt system uses blue LED and digital projection to achieve a high-intensity, structured light pattern. Blue light provides an excellent contrast, even on dark and shiny surfaces. Filters on the camera reject ambient light outside of the blue spectrum, enabling operation independent of lighting conditions.

HIGH RESOLUTION

Provides higher precision critical for capturing fine details, features, and edges
High resolution refers to the point spacing of the resulting point cloud, which is a function of the resolution of the camera and the field of view. Choose between the 5MP Cobalt or the 9MP Cobalt. The 9MP version improves the resolution and the ability to capture features on edges and surfaces. Cobalt offers 5 and 9 megapixel cameras and multiple fields of view. The narrow fields of view have a higher resolution than the wider fields of view.

FARO® Tracer^{M}

ADVANCED TRAJECTORY CONTROL (ATC)

Provides fast projection with superior dynamic accuracy and a rapid refresh rate – which minimizes flicker associated with other laser projection systems.

MULTI-PROJECTOR ARRAY OPERATION

For large assemblies and/or in space-constrained areas, multiple Tracer^{M} projectors can be controlled from a single workstation to provide large-scale virtual templates in one coordinate system.

ACCURATE, VARIABLE AND LONG-RANGE PROJECTION

Variable focus allows multi-range projection from 1.83 to 15.25 meters (6 to 50 feet).

RETRO-REFLECTIVE ALIGNMENT TARGETS

Photogrammetric targets (6 minimum) are used to enable the best fit alignment of the projected image onto the surface or object, thereby allowing the projected image to be consistent with the CAD model.

RUGGED, RELIABLE SOLUTION

Proven production floor technology in a dust-sealed industrial enclosure.

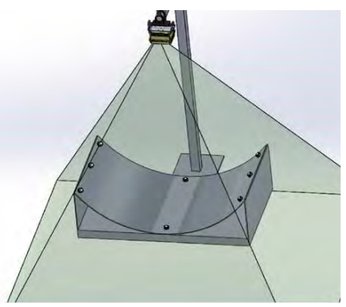
INDUSTRIES AND APPLICATIONS

Composite Industry: Hand ply layup, Advanced Fiber Placement (AFP) machines, Mandrel tracking and layup

Aerospace and Defense: System bracket placement, Rib and stringer placement, Click-bonds and stand offs, Fastener/drill location, Paint masking

Automotive and Heavy Equipment: Weld stud/block location, Precision table applications, Factory floor layout for Production Lines, Fencing and Robotic Station Layout

Other Industries: Shipbuilding and marine construction, Railway



FARO® Tracer^{M}

VIRTUAL TEMPLATING AND POSITIONING SOLUTION

The FARO Tracer^{M} Laser Projector accurately projects a laser line onto a surface or object, providing a virtual template which operators and assemblers use to quickly and accurately position components with absolute confidence.

The laser template is created using a 3D CAD model which enables the system to visually project a laser outline of parts, artifacts, or areas of interest. The result is a virtual and collaborative 3D template to streamline a wide range of assembly and production applications.

The virtual templating solution eliminates the need for physical templates and hard tooling, and reduces the risk of human error. As a result, organizations are able to avoid the time and expense associated with using large, heavy templates while significantly improving quality control processes. An easy-to-use operator interface minimizes both the time and the skill required for operation.

The ability to guide a process sequence, along with accurately locating and orienting components, increases manufacturing efficiencies. Costly non-conformances are eliminated by implementing a simple, reliable, and cost-effective solution to streamline production processes.

SOFTWARE

The FARO RayTracer™ Software Suite - containing the RayTracer Operator and RayTracer Administrator programs - is required to operate the TracerM projector. Customers may also choose to use an additional third-party software package that can directly create XML files in the proper format for the TracerM to utilize for projection.

BENEFITS

- Cost and capital expenditure savings versus building and storing physical templates and tooling.
- Time savings with fast setup and no need to reconfigure tooling work cells - moving immediately from CAD design to virtual template.
- Reduce scrap and rework, and improve quality and throughput to help minimize rejects and non-conformances.

PERFORMANCE SPECIFICATIONS

Performance	
Projection Range	1.8 to 15.2 m (6 to 50 ft)
Angular Field of View	60° (X & Y)
Focused Line Width	0.5 mm (0.02 in)
Positional Accuracy	± 0.25 mm @ 4.6 m (± 0.010 in @ 15 ft)

Dimensions	
Projector Size	L 445 mm x W 239 mm x H 338 mm (L 17.5 in x W 9.4 in x H 13.3 in)
Projector Weight	17.24 kg (38 lbs.)

FARO® CAM2® Measure 10

YOUR COMPLETE 3D MEASUREMENT SOFTWARE

FARO CAM2 Measure 10 is a metrology software suite designed for users who are seeking powerful solutions that enable fast and efficient 3D measurement with unbeatable simplicity. CAM2 Measure 10 can be used in combination with each FARO metrology device, such as FaroArm, FARO ScanArm, FARO Laser Tracker and FARO Cobalt Array Imager.

SOFTWARE VERSIONS

CAM2 Measure 10 – Full
A comprehensive version ideally-suited for all contact and non-contact 3D measurement applications when point cloud data may be required.

CAM2 Measure 10 – Probing
A limited version ideally-suited for all contact measurement applications when point cloud data is not required.

MAIN FEATURES

GD&T
Simplified analysis and visual reporting allows the results from a part inspection to be displayed just like a print to easily visualize and determine part quality. This completely eliminates the need to look at each feature sequentially to make the same determination.

Simultaneous Measurement Capabilities
Connect multiple 3D measurement devices within the same coordinate system and simultaneously scan into a single seat of software on one computer. This capability allows users to quickly scan large objects and complete 3D scanning jobs faster than ever before.

Cross Section Analysis
This feature allows for the 2D analysis of scan data over a well-defined area of the CAD. Users can extract dimensions (radius, angle, height) for analysis, add markers to define locations where labels will show deviations and set the best view for reporting.

3D Scan Trim Edges
Trim edges on materials such as sheet metal to be easily scanned, preventing the need to collect hard probed measurements on part edges.

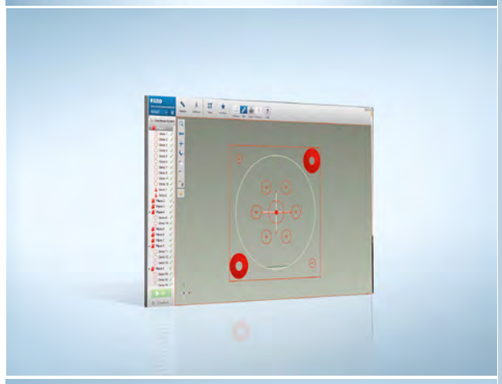
Automated Repeat Inspections
Easily automate repeat inspections by programing data analysis to automatically occur after the measurements are taken. The ability to automate these reoccurring inspection tasks can reduce required training time, eliminate the risk of operator error, and allow jobs to be completed quickly and confidently.

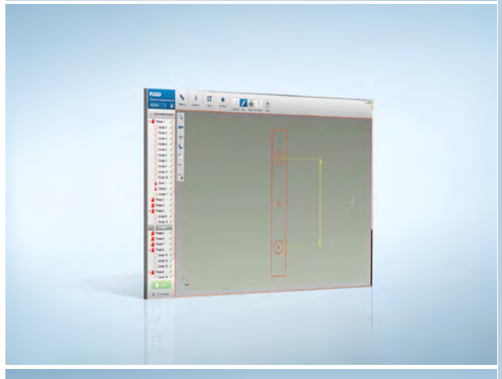
SOFTWARE OPTIONS

Compatible with numerous software solutions
All FARO measurement systems can be used in conjunction with a broad range of third party software.

Some of our software partners
Aberlink, Carl Zeiss, Delcam, Dynalog, Geomagic, Innov-Metric Software, INUS Technology & Rapidform, Metrologic, Metromec, New River Kinematics, Robert McNeel & Associates (Rhino3d), SolidWorks, TeZet, Verisurf Software

CAM2® SmartInspect





THE FIRST PORTABLE METROLOGY SOFTWARE

Engineered for simplicity, FARO's CAM2 SmartInspect is the perfect software for any FARO Laser Tracker, FaroArm or FARO Gage user who is looking for non-CAD based inspection. The software design is simple and intuitive. Even users without any 3D metrology background can be easily trained.for basic geometric measurements

SOFTWARE VERSIONS

Basic: Picture-based measurements
Combine real pictures of your component with every measurement process providing the user an image-based support for measurement guidance.

Pro: Picture-based and Live on screen 3D view measurements
Interactions with the live view provide an intuitive platform to creating the necessary dimensions and constructions that cannot be measured directly to support the measurement process.

ADDITIONAL FEATURES

Touch-capable use
The software runs on Microsoft Windows™ based PCs or Touchpads as the first portable metrology software for FARO Arms and laser trackers.

Smart suggestion box
Suggestions are always available to the user on what he can do next with the objects that he has selected. This allows new users to get hints on the capabilities which are available to them while Expert users can exploit this feature to speed up their workflow.

Repeated part measurement
Once a part has been measured, the measurement can be repeated with a single click. Using the Image View mode, the second measurement can be performed by any user.

QuickTool import
The QuickTools functionality permits to import and use QuickTools programs generated in the FARO CAM2 Measure 10 software.

Move device
Users can move their device during the measurement process and measure their part from different positions.

FARO® Laser Scanner Focus^{S} & Focus^{M}

APPLICATIONS

The latest FARO Focus Laser Scanner generation maximizes productivity and simplifies workflows for as-built documentation in numerous application fields:

Archaeology and Heritage:
Reconstruction, restoration, conservation

Architecture:
Facades documentation, surface analysis, clash detection and BIM modeling

Asset and Facility Management:
Documentation, planning of structural alterations, replanning of technical modifications

Civil Engineering and Construction:
Structural analysis and maintenance, construction process monitoring, built environment, free-form component inspection, space optimization

Digital Factory and Process Industry:
Conversions and extensions, offsite production, asset management, training, site supervision

Public Safety Forensics:
Crime scenes investigation analysis, bullet path reconstruction, crash investigation & analysis, passive safety of cars, fire investigation

Shipbuilding:
As-built documentation, ballast water treatment (BWT), retrofit, ship repair

Surveying:
Scanning of large or distant objects, projects supervision, deformation monitoring, large volume calculation, quality control

FARO® Laser Scanner Focus^{S} & Focus^{M}

EXTEND YOUR FOCUS - BEYOND MEASURING

The Focus^{S} and Focus^{M} scanners are the latest addition to FARO's popular, compact, lightweight and intuitive laser scanner product line. The Focus^{S} 150 and 350 devices are the most forward-thinking laser scanners on the market, adding several customer-centric features, such as Ingress Protection Rating (IP54), increased scanning accuracy and range, an internal accessory bay and an on-site compensation tool for verifying the scan data quality. The Laser Scanner Focus^{M} 70 is FARO's new short-range professional grade scanner with the highest return on investment in the market.

All new scanner models combine the well-known benefits from FARO's well-known Focus^{3D} Laser Scanners with today's most innovative features to perform laser scanning in both indoor and outdoor environments - truly mobile, fast and reliable. The devices provide the next level of laser scanning for applications in industries like Construction BIM/CIM and Public Safety Forensics.

BENEFITS

Accuracy*
Reality-like scan data by increased distance accuracy and angular accuracy

Temperature
Extended temperature range allows scanning in extreme weather conditions such as desert heat or arctic cold

On-site Compensation*
Confident data quality through the on-site compensation functionality

IP Rating - Class 54
Scanning in rough environments, while providing protection from dust, debris and water splashes

Intuitive Touchscreen
Easy handling of scanner control through its large and luminous touchscreen

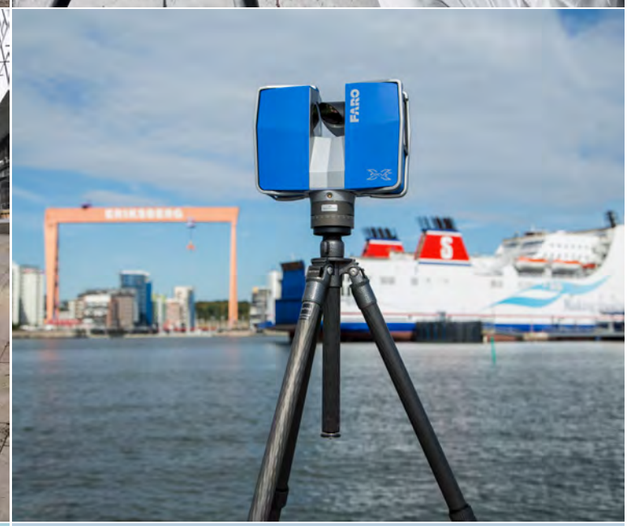
Accessory Bay*
Future-proof investment and expandability due to the integrated accessory bay

PERFORMANCE SPECIFICATIONS

Model	Range	Integrated color camera	Multi-Sensor	Measurement speed	Ranging error**	Rangingnoise***
Focus^{S} 350	0.6 – 350m	up to 165 mio. pixel, HDR (2x, 3x, 5x)	GNSS (GPS, GLONASS), Compass Height Sensor Dual Axis Compensator	up to 976,000 points/second	±1mm	@10m - raw data: 0.3mm @90 % refl. 0.4mm @10% refl. 1.3mm @2% refl. @25m – raw data: 0.3mm @90 % refl. 0.5mm @10% refl. 2.0mm @2% refl.
Focus^{S} 150	0.6 – 150m					
Focus^{M} 70	0.6 – 70m			up to 488,000 points/second	±3mm	@10m - raw data: 0.7mm @90 % refl. 0.8mm @10% refl. 1.5mm @2% refl. @25m – raw data: 0.7mm @90 % refl. 0.8mm @10% refl. 2.1mm @2% refl.

* Features/Specifications available for Focus S series only. ** Ranging error is defined as a systematic measurement error at around 10m and 25m, one sigma.
*** Ranging noise is defined as a standard deviation of values about the best-fit plane for measurement speed of 122,000 points/sec.

FARO® Laser Scanner Focus^{3D}



TYPICAL APPLICATIONS

Architecture, BIM/CIM, Civil Engineering and Surveying: Excavation control, deformation control, façade inspection, structural analysis and maintenance, free-form components inspection, construction progress monitoring

Process Industry and Digital Factory: Conversions and extensions, offsite production, asset management, site supervision

Inspection and Reverse Engineering: Interior fixtures and fittings, manufacturing documentation, quality control

Other Applications: Heritage, public safety, shipbuilding, tunnel & mining, facility management, CGI. automation & mobile mapping

FARO® Laser Scanner Focus^{3D}

POWERFUL AND TRULY MOBILE SCANNING IN 3D

The FARO Laser Scanner Focus^{3D} is the perfect instrument for all kinds of 3D documentation and surveying projects. The technology behind enables the user to quick create of accurate three-dimensional colour images – so-called point clouds – of large buildings, components, excavations, building sites or crime scenes, etc.

The Focus^{3D} X-product line is small and portable and offers three various scanning ranges - 30m, 130m and 330m, exceptional ease of use, high scanning speed and excellent image quality. It also has an intuitive touch screen display and an integrated long-life & quick-charge battery.

The increased camera resolution and HDR functionality deliver extraordinary color overlays for scanned point clouds. This improves the visualization of important details on site.

BENEFITS

Small and compact
The Focus^{3D} is the smallest and most compact laser scanner ever built.

Scanning in direct sunlight possible
Extreme flexibility to perform scanning projects every time, everywhere. Even in the brightest sunlight.

WLAN
WLAN remote control permits you to start, stop, view or download scans at a distance.

Stand-alone solution
The ultraportable design combined with SD card storage and powerful built-in battery allows for operation without any external device.

Multi-Sensor
The integrated Compass, the Height Sensor and the Dual Axis Compensator dramatically minimize manual efforts.

PERFORMANCE SPECIFICATIONS

Model	Range	Integrated colour camera	HDR	Multi-Sensor	Measurement speed	Ranging error	Ranging noise
Focus^{3D} X 330 HDR	0.6 – 330m	Up to 165 mio. pixel	Yes	GPS Compass Height Sensor Dual Axis Compensator	up to 976,000 points/second	±2mm*	@10m – raw data: 0.3mm @90 % refl. @25m – raw data: 0.3mm @90 % refl.
Focus^{3D} X 330		Up to 70 mio. pixel	No				
Focus^{3D} X 130 HDR	0.6 – 130m	Up to 165 mio. pixel	Yes				
Focus^{3D} X 130		Up to 70 mio. pixel	No				
Focus^{3D} X 30	0.6 – 30m	No	No	Compass Height Sensor Dual Axis Compensator			

* Ranging error is defined as a systematic measurement error at around 10m and 25m, one sigma.

FARO® Scanner Freestyle^{3D}

TYPICAL APPLICATIONS

Architecture & Interior design: Measurements of complex structures and objects, project supervision, deformation monitoring, quality control
Restoration & 3D modelling: Area construction, progress monitoring, built environment, free-form components inspection, deformations control, reverse engineering, restoration and conservation
Construction & Facility management: Documentation, planning of structural alterations, re-planning of technical modifications, reconstruction
Forensic: Crime scene investigation and analysis, digital proof collection, accesibility, body mapping, blood spatter analysis, fire investigation
Accident reconstruction: Traffic accident investigation and analysis, passive safety of cars, collision reconstruction

FARO® Scanner Freestyle^{3D}

reddot award 2015
winner

3D HANDHELD SCANNER FOR PROFESSIONALS

The new FARO Scanner Freestyle^{3D} provides a fast and easy to use scanning solution with verifiable accuracy of the 3D colour scan data. It is the only industrial-grade handheld device allowing you to scan the most common and challenging surfaces. 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.

FARO´s portfolio contains two intuitive handheld scanners which are designed to satisfy the specific needs of the customers. The Freestyle3D X offers an extra accuracy to 1mm at 1m and enables users to carry out more challenging projects and deliver verifiable scan data.

BENEFITS

Intuitive plug and play system
Start your scan instantly and benefit from highest productivity since no warm up times are required.

Up to 8m^3 indoor scanning volume
The extensive scan volume allows you to reduce the scan time in the field and increase your productivity.

Large operating temperature range
Create your scan projects even under harsh environmental conditions.

On-site calibration
Ability to easily calibrate the device on-site ensuring high quality 3D data. A PDF report with key data permits maximum and verifiable confidence in the acquired data.

Real-time point cloud visualization
Intuitive data acquisition, even for inexperienced users, receiving real-time feedback on quality of acquired area.

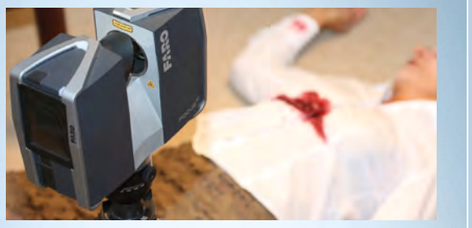
Seamless integration with Focus^{3D} data
Ability to complete your project with the seamless integration of Focus^{3D} and Freestyle^{3D} data, even in grey scale.

PERFORMANCE SPECIFICATIONS

Model	3D point accuracy*	IP rating	Range	Recorded 3D points**	Scan volume	Light source	Operating temperature range
Freestyle^{3D}	≤ 1.5mm	IP 5X	0.5-3m	Up to 88,000 points/s, point cloud density increases with time	8.1m^3	Inbuilt auto LED flash	0-40°C
Freestyle^{3D} X	≤ 1mm	IP 52***					

* Measured on a 1m reference scale, in 1m distance, for a lateral scanner movement of 1m, using targets for distance measurement
** Point density depends on scanned surface and lighting conditions
*** Dust protection 5. Protection against dripping water whilst device in standard idle position with sensor side facing downward

Our Public Safety Solutions



PUBLIC SAFETY HARDWARE SOLUTIONS – PRESERVE THE EVIDENCE

FARO Laser Scanner Focus^{3D}

The ultra-portable laser scanners Focus^{3D} X-series enable fast, straightforward, and accurate point cloud data of crime and crash scenes. The Focus^{3D} records and preserves critical evidence from crime and accident sites, up to 330m, by combining the highest-
precision scanning technology with mobility and ease-of-use.

- Scan up to 330m and capture up to one million pts/s
- Capture a 360 degree scan
- Create a 3D point cloud, ideal for taking measurements and creating diagrams
- High effectiveness in documenting scenes either in very low light and/or direct sunlight
- Easy positioning with the integrated GPS receiver

FARO Scanner Freestyle^{3D}

The FARO Freestyle^{3D} Scanner, a handheld scanner, provides a fast and easy scanning solution with verifiable accuracy of the 3D color scan data. With the largest scan volume on the market for a handheld device, the Freestyle^{3D} reduces scan time in the field.

FARO Forensic ScanArm

The Forensic ScanArm is a portable, non-contact 3D scanning solution tailored for forensic anthropology, crime lab, and medical examiner applications.

PUBLIC SAFETY SOFTWARE SOLUTIONS – FIRE INVESTIGATION

FARO® FireZone 10 has all the tools fire service professionals need to create diagrams for fire investigation, pre-incident planning, post-incident critiques, and training. Features specifically for fire investigators make it fast and easy to create 2D and 3D diagrams of a fire scene, show wall elevations, fire origin, char, smoke, and direction of fire travel. Use satellite maps and thousands of
pre-drawn, fire service symbols to quickly create pre-fire plan diagrams, post-incident critiques, and training diagrams.

- Full realistic 2D and 3D documentation of fire scenes in a point cloud
- Comprehensive collection and digital preservation of the circumstantial and physical evidence of the fire
- Allows accurate and compelling 3D diagrams of fire scenes
- Displays of doors, windows, furniture, cabinets, fire origin, and evidence placards by placing symbols in the 2D diagram, and clicking one button to view the symbols in 3D
- Shows flame vectors, char and smoke damage by placing texture and patterns
- Quick creations of accurate “exploded room” diagrams with the Wall Elevation Builder
- Shows the extent of fire damage in 3D to furniture, cabinets, appliances, etc.

Our Public Safety Solutions

PUBLIC SAFETY SOFTWARE SOLUTIONS – CRIME & CRASH INVESTIGATION

For more that two decades, FARO CADZone has been the drawing program of choice for police investigators, accident reconstructionists and law enforcement officers who need to accurately and realistically draw and map crime and crash scenes in 2D or 3D. The latest versions of the software have even more tools for investigators, including faster rendering of animations and images, intuitive interfaces, international
symbols and even trajectory cones that provide better depth and measurement.

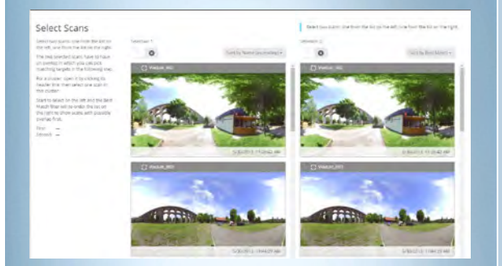
- Complete forensic diagramming package with analysis tools
- True 3D drawing functionality with 2D to 3D multi-window option
- Virtual walk-through of a crash or crime scene from any angle in 2D or 3D
- High resolution 3D graphics
- True 3D, vector-based CAD application
- Easy conversion from 2D to 3D view
- Enhanced renderings with realistic satellite image backgrounds
- Bullet trajectory cones to show the user‘s uncertainty factor
- Measurements for skid, momentum and critical speed analysis

PUBLIC SAFETY SOFTWARE SOLUTIONS – FARO REALITY®

FARO Reality makes it possible for forensic investigators to perform extensive analysis and create compelling courtroom exhibits. The software’s intuitive tools allow creation of 2D crash simulations and 3D animations with multiple collisions, including lighting control, vehicle suspension, weather effects, human body animations, and more.

- Import measurement data in standard file formats from laser scanners
- Create 2D and 3D diagrams using the comprehensive library of predrawn symbols
- Animate objects within a point cloud for full 3D immersion
- Quickly generate 3D animations along curvilinear paths with multiple impact points
- Establish moving and tracking cameras to capture more realistic animation recordings
- Model vehicle crush and synchronize damage to display at impact points in the animation
- Create realistic 3D scenes/diagrams by integrating 3D terrain data from Google Earth™
- Detailed 3D human models can be posed to match a body found at the scene, including multiple anatomical layers

Software for 3D documentation



SCENE SOFTWARE

SCENE 3D laser scanner software is specifically designed for FARO Focus^{S}, Focus^{3D} and Freestlye^{3D} Laser Scanners. SCENE processes and manages scanned data easily and efficiently by using automatic object recognition and scan registration.

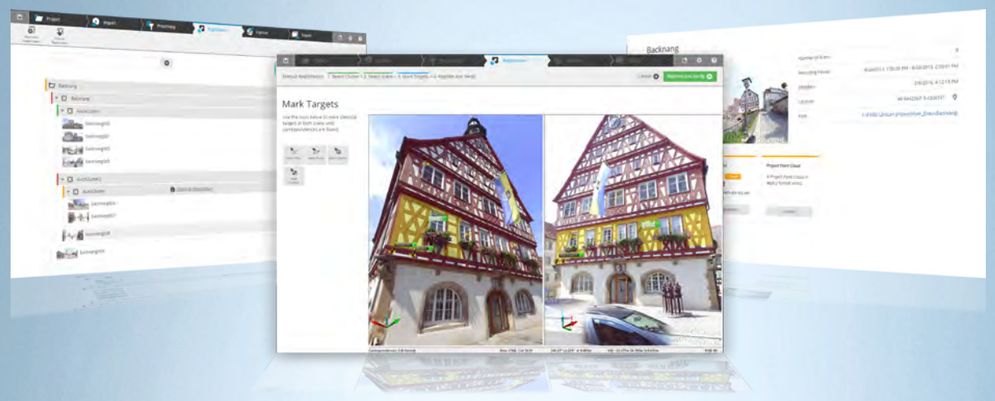
SCENE is an extremely user-friendly software that allows individual scans to be automatically combined into a project. The resulting point cloud can be viewed in three dimensions. All the scans are available in colour and as high-contrast intensity images.

FEATURES

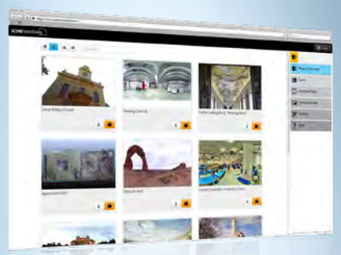
- Supports FARO Focus^{S}, Focus^{3D} X Series & FARO Freestyle^{3D} Laser Scanners
- Intuitive user interface
- Powerful solid 3D surfaces rendering
- 3D mesh engine
- HDR mapping
- Easy collaboration and secured sharing with WebShare Cloud
- Plug-ins in 3D App Center for extended functionality

SOFTWARE FOR THE FARO FREESTYLE^{3D}

The FARO Freestyle^{3D} comes with two software applications. SCENE Capture, which is installed on the tablet to record and visualize the capturing of 3D data and SCENE Process, which processes your captured 3D data when capturing is completed. Both software applications interdigitate perfectly and ensure best scanning results.



Software for 3D documentation



SCENE WEBSHARE CLOUD

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
- 3D viewing

Our package	
Storage	50GB*
Downloads / month	50GB*
Good for (typical)	500 scans
Assigned users	Unlimited
3D conversion for 3D viewing / month	100 scan positions*

* Additional requests will be charged according to requirements.

3D APP CENTER FOR LASER SCANNING APPS

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

PointSense

PointSense Solutions for AutoCAD® and Revit®

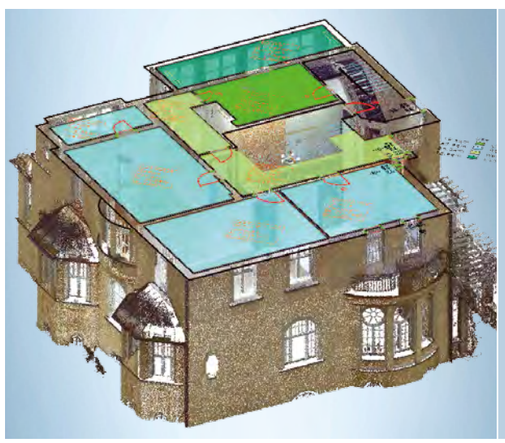
The FARO PointSense software solutions provide Autodesk® customers with various powerful tools for analyzing and modeling point cloud data directly inside AutoCAD® and Revit®. Besides the generic solutions PointSense basic/Pro and PointSense for Revit®, FARO offers industry AutoCAD® plug'ins (Building, Plant, Heritage) adding additional application specific functionality for particular customer groups on top.

PointSense Pro

Essential 3D point cloud tools within AutoCAD®

PointSense Pro provides several advanced tools for enhancing the management, analysis and modeling of native laser scan data within AutoCAD®.

- Automated fitting of polylines, cylinders and planes to point cloud sections
- Advanced scan navigation and visualization
- Ortho images with ClearView functions
- Clash detection analysis between scan and drafted CAD objects
- Deformation analysis and ground point extraction

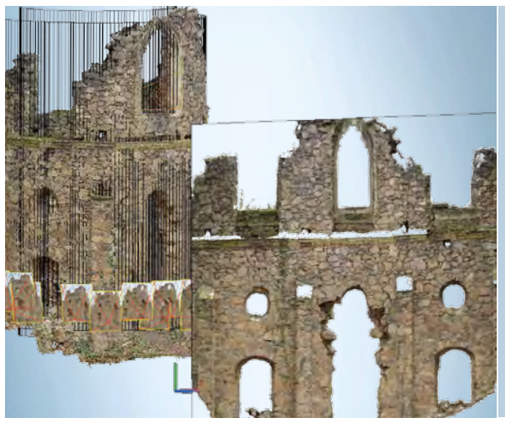


PointSense Building

From 3D laser scanner data to 2D plans

PointSense Building streamlines the extraction of accurate 2D floor-plans and elevations from 3D scans in AutoCAD®, e.g. for property planning, facility management, interior design or special construction such as shipbuilding.

- Intuitive construction of 2D sections with automatic line extraction
- Specialized drawing and dimensioning commands for building elements such as windows, doors, staircases, etc.
- Database driven area management tools
- Deformation tools for floor and façade analysis



PointSense Heritage

Photogrammetry and laser scans in AutoCAD®

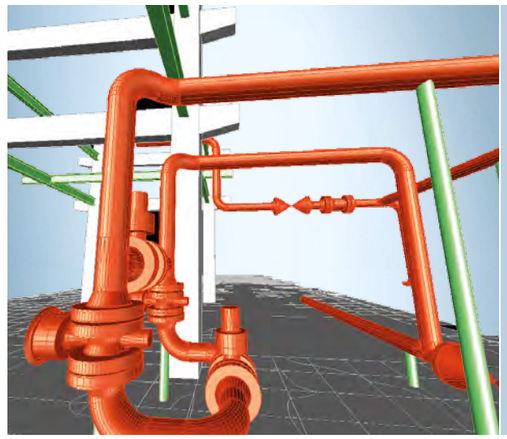
PointSense Heritage is suitable for the documentation of historical monuments in conservation, historic building research and the recording of complex three-dimensional excavations in archaeology.

- Photogrammetric functions combined with essential point cloud design tools
- Calculation of true ortho photos
- Generation of detailed image mosaics through unwrapping of point clouds and photos of towers, arches, ceiling frescoes, façades etc. into a plane

PointSense and VirtuSurv

FARO AEC Solution Packages

The industry solution PointSense Plant for AutoCAD® and the generic solution PointSense for Revit® can be acquired in a specific AEC Solution Package, which bundles a FARO Laser Scanner Focus, SCENE and PointSense software. Both packages cover a seamless workflow, from as-built data capturing, via first scan data processing to extraction of final deliverables, like 2D plans and 3D / BIM models.

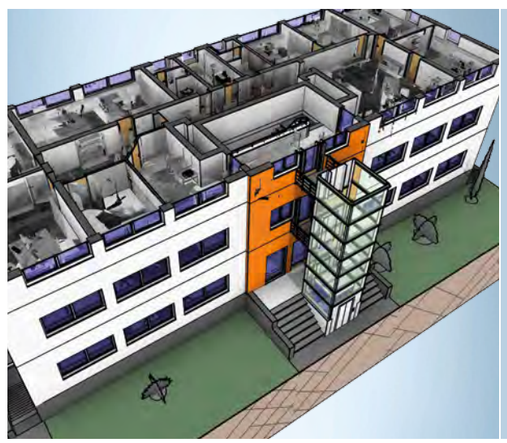


PointSense Plant

Intelligent Plant Design from Scan Data in AutoCAD®

FARO PointSense Plant provides tools for pattern recognizing plant assets from point cloud data giving designers the ability to move directly into their familiar AutoCAD® based plant design programs (Plant 3D, MEP, CADWorx, AutoPlant, etc.).

- Catalog driven pattern recognition using industry standard components or user created fittings
- Automatic precalculation of pipes
- Intuitive steps for modeling or deriving tie-in points for piping systems and steel construction
- Support of insulated pipe runs
- Tank analysis etc.



PointSense for Revit®

From Laser Scans to Revit® Models

Modeling and detailing BIM elements with point clouds in Revit®: Ground surfaces, walls, doors, windows, stairs, columns, pipes,
beams, pillars, roofs and many more.

- Tools for automatically fitting and aligning walls, pipes and Revit® work planes in point clouds
- Create directly in the point cloud using 3D construction aids and real 3D point snap.
- Calculate from ortho images directly in the Revit® project
- Process scan data in the Revit® families editor

VirtuSurv - standalone software

Evaluation of laser scan data with or without CAD

VirtuSurv is FARO's standalone software for working with highly visual, photo-like laser scan data. The program supports the import, export and display of numerous structured scan data formats.

- Fill in forms and databases with coordinates and distances directly sent from the scan view
- Draw directly to your familiar CAD by sending coordinates and commands
- Supports AutoCAD® (LT), BricsCAD, SEMA, Rhino, IntelliCAD, Cadwork...