

# FARO Design ScanArm

## High-Resolution ScanArm for Reverse Engineering and CAD-Based Design

**FARO**



### High-Resolution Data

Features optically-superior blue laser technology to capture highly-detailed and noise-free scan data.

### Rapid Scanning Speed

An extra wide scan stripe and fast frame rate provides expanded laser coverage for fast point cloud capture.

### Lightweight and Maneuverable

Built for convenient desktop use in the design studio or engineering lab.

### No Targets or Spray Required

Advanced software algorithms enable seamless scanning across challenging materials regardless of contrast, reflectivity, or part complexity.

### Simple User Interface

Designed for easy operation regardless of skill level or 3D scanning experience.

### Hard Probing Capabilities

Utilize both high-resolution 3D scanning and high-precision probing of basic geometry.

### 3D Scan-to-CAD Solution for Product Development

The FARO Design ScanArm is a portable 3D scanning solution tailored for 3D modeling, reverse engineering, and CAD-based design applications across the product lifecycle management (PLM) process.

By combining FARO's best-in-class 3D scanning technology with powerful 3D design and modeling software, the Design ScanArm provides a turnkey solution that allows users to quickly digitize any part or object, easily design or modify reverse engineered models, create manufacturing-ready CAD models, and verify design intent of prototype products.

The Design ScanArm is the ideal solution for any organization that may have the need to manufacture parts without existing CAD models, develop aftermarket products that need to fit tightly with existing products, reverse engineer legacy parts for design changes or replacement, create digital libraries to decrease inventory and warehouse costs, design aesthetically pleasing, freeform surfaces, or leverage the power of rapid prototyping.

### Benefits

- ▶ Reduced Scan times
- ▶ Simplified user experience
- ▶ Scan across diverse surface materials without any special surface preparation or target placement
- ▶ Exceptional scan rate up to 500,000 points/second

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## FARO Laser Line Probe Specifications

System Accuracy: 100µm<sup>2</sup>  
Point Capture Rate: Up to 500K pts/sec  
Scan Width Range: 80-150mm

Point Resolution Range: 40-75µm  
Field of View (FOV) Depth: 115mm  
Probing Accuracy: 75µm

## Ideal Applications

### Reverse Engineering

Quickly digitize legacy parts to support design changes, replacements, incorporation into new designs, or to perform competitive analysis.

### CAD Reconstruction

Create manufacturing-ready CAD files for parts that are broken, lost, or unavailable.

### Aftermarket Products

Quickly and accurately scan OEM parts enabling the efficient design of aftermarket products in CAD based directly on the geometry of the mating part.

### Modification of Production Tooling

Capture the as-built condition of complex tools and molds in order to update the tooling needed to support a new model or variant or to reproduce or move the assembly line.

### Maintenance, Repair, and Overhaul (MRO)

Conduct wear and tear analysis and create as-built documentation on parts and tooling prior to maintenance efforts and create custom fit replacements for critical repairs.

### Digital Archiving and Engineering Documentation

Create digital libraries to decrease inventory and warehouse costs that can be reproduced as needed in the future.

### Industrial Design / Clay Modeling

Easily digitize complex, organic, challenging shapes for quick iterations to design aesthetically pleasing and functional freeform surfaces.

### 3D Printing / Rapid Prototyping

3D scan data can be easily produce a watertight, 3D printable mesh or scale model to feed directly into a 3D printer.

## Software Bundles

As a limited-time promotional offer<sup>1</sup>, The FARO Design ScanArm will be bundled with 3D System's® Geomagic® software at a reduced launch price.

| Software Package                                                               | Key Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Geomagic® Wrap<br>Scan it, Mesh it, Surface it...<br>in minutes                | Geomagic Wrap® delivers the industry's most powerful toolbox to transform 3D scan data and imported files into 3D models for immediate use downstream. From engineering to entertainment, art to archeology and manufacturing to museums, people from every walk of life are effortlessly reverse engineering perfect 3D models from scan data and 3D files using Geomagic Wrap.                                                                                |
| Geomagic® Design X<br>Ultimate Scan-to-CAD<br>Solution                         | Geomagic® Design X, the industry's most comprehensive reverse engineering software, combines history-based CAD with 3D scan data processing so you can create feature-based, editable solid models compatible with your existing CAD software.                                                                                                                                                                                                                  |
| Geomagic® for<br>SOLIDWORKS®<br>The fastest path from 3D<br>Scan to SOLIDWORKS | Imagine being able to capture anything in the physical world and have a solid model of it in minutes. Geomagic for SOLIDWORKS is the industry's most comprehensive Scan-to-SOLIDWORKS solution. Reduce the time required to build complex 3D models of real world objects by directly scanning or importing scan data into SOLIDWORKS. The advanced, automated wizards quickly and easily create accurate feature-based editable solid parts inside SOLIDWORKS. |

## Hardware Specifications

Operating temp range: 10°C to 40°C (50°F to 104°F)

Temperature rate: 3°C/5min (5.4°F/5min Max)

Power supply: Universal worldwide voltage,  
100-240VAC,  
47 to 63 Hz

<sup>1</sup>Special pricing is available through December 31, 2016

<sup>2</sup>The FARO Design ScanArm is not metrology-certified and the laser line probe is permanently attached

**Certifications:** Meets OSHA requirements, NRTL Listed (USA and Canada). Complies with 47 CFR § 15 and 21 CFR § 1040. Complies with the following EC Directives: 2014/30/EU - EMC; 1999/5/EC - R&TTE; 2011/65/EU - RoHS2; 2012/19/EU - WEEE; 2006/66/EC - Batteries and Accumulators; 2014/35/EU - LVD; 2009/125/EC - Ecodesign requirement

Conforms to the following standards: EN 61010-1/CSA-C22.2 No. 61010-1; EN 61326-1; EN 60825-1; ANSI Z136.1; IEEE 802.11 b/g; IC RSS-210.

Patents: 5402582, 5611147, 5794356, 6366831, 6606539, 6904691, 6925722, 6935036, 6973734, 6988322, 7017275, 7032321, 7043847, 7051450, 7069664, 7269910, 7735234, 7784194, 7804602, 7881896, RE42055, RE42082

System accuracy: determined by scanning a single sphere from multiple orientations and represented the maximum deviation of sphere position. Probing accuracy: determined by probing a single sphere from multiple orientations and represented the maximum deviation of sphere position.



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