



FARO® Design ScanArm 2.0

Creating Better Efficiencies in the Product Design Workflow

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.



Features & Benefits

High-Resolution Data

Features volumetric accuracy up to 75 microns for confidence that real world designs precisely match the dimensions and detail of the source objects.

Rapid Scanning Speed

The FAROBlu™ Laser Line Probe HD provides expanded coverage and speed scanning at 600,000 points per second.

Optimized Measurement Volumes

Available in lengths of 2.5 m, 3.5 m and 4.0 m, to deliver the highest precision and easiest handling for the specific application needs.

Ultimate Portability

Optional dual hot, swappable batteries enabling continuous operation anywhere without the need for external power.

Lightweight and Maneuverable

Enhanced ergonomics and an overall weight of less than 10kg/22lb, increases maneuverability and productivity over extended periods of operation.

Toolless Kinematic iProbes

Quickly connect/disconnect iProbes without the need to recalibrate for projects requiring contact measurement.

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 before they 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 easily produce a watertight, 3D printable mesh or scale model to feed directly into a 3D printer.

Software

The FARO Design ScanArm can be bundled with one of 3D System's® Geomagic® as well as other 3rd party software packages.

Software Package	Key Capabilities
Geomagic® Wrap Scan it, Mesh it, Surface it... 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 Ultimate Scan-to-CAD 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 SOLIDWORKS® The fastest path from 3D 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.

Laser Line Probe Specifications

Scan Rate:	300 frames/second, 300 fps x 2,000 points/line = 600,000 points/second
Stand Off:	115 mm
Depth of Field:	115 mm
Effective Scan Width:	Near field 80 mm, Far field 150 mm
Minimum Point Spacing:	40µm
Laser:	Class 2M

Hardware Specifications

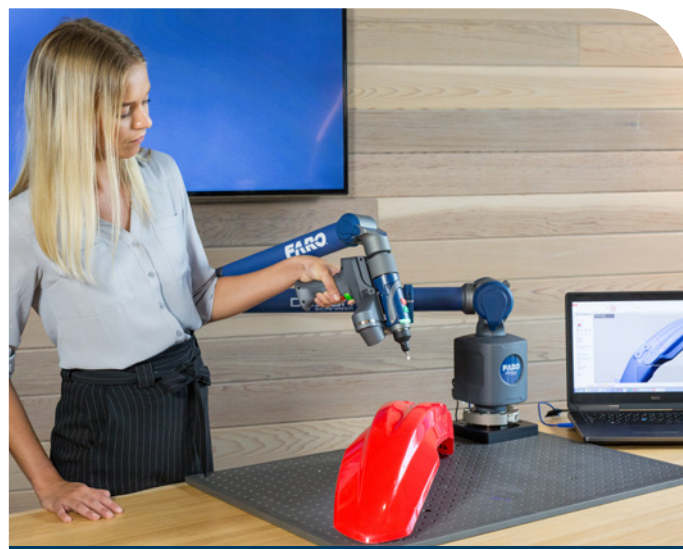
Operating Temp range:	10°C to 40°C (50°F to 104°F)
Temperature Rate:	3°C/5min (5.4°F/5min Max)
Operating humidity range:	95%, non-condensing
Power Supply:	Universal worldwide voltage, 100-240VAC, 47 to 63 Hz
Weight:	2.5m: 9.5kg/20.9lb, 3.5m: 9.6kg/21.2lb, 4.0m: 9.8kg/21.5lb

Performance Specifications

ScanArm Accuracy	
Measurement Range	System Accuracy ¹
Design ScanArm 2.5 m (8.2 ft)	0.075 mm (0.0030 in)
Design ScanArm 3.5 m (11.5 ft)	0.110 mm (0.0043 in)
Design ScanArm 4.0 m (13.1 ft)	0.130 mm (0.0051 in)

All values represent MPE (Maximum Permissible Error)

¹ System accuracy: determined by scanning / probing a single sphere from multiple orientations and represented the maximum deviation of sphere position or by comparing measured versus nominal values between two points within the arm volume.



Certifications: Meets OSHA requirements, NRTL TÜV SÜD C-US Listed, Complies with Electronic Code of Federal Regulations 47 CFR PART 15, 17 CFR Parts 240 and 249b – Conflict Material, 21 CFR 1040 Performance standards For Light-Emitting Products, and 10 CFR Part 430 – Department of Energy; Energy Conservation for External Power Supplies. Complies with the following EC Directives: 93/68/EEC CE Marking; 2014/30/EU Electrical Equipment; 2014/53/EU Radio Equipment Directive; 2011/65/EU RoHS2; 2002/96/EC WEEE; 2006/66/EC WEEE; 2006/66/EC Batteries and Accumulators; 2014/35/EU Low Voltage Directive; 2009/125/EC Ecodesign requirement. Conforms to the following standards: EN 61010-1:2010 / CSA-C22.2 No. 61010-1; EN 61326-1:2013 EMC; ETSI EN 300 328 V2.1.1; ETSI 301 489-1 V1.9.2; ETSI 301 489-17 V2.2.1; ETSI EN 62311:2008; IEEE 802.11 b/g; FCC Part 15.247 (WLAN and Bluetooth); Japanese Radio Law MPT No. 37 Ordinance (MIC classification WW); UN T1-T8; IEC 62133 2nd ed.; IEC 60825-1:2014 ed3.0; FDA (CDRH) 21 CFR 1040.10 / ANSI Z136.1-2007; EN 50581:2012; 21 CFR 1002 (Records & Reports); 21 CFR 1010 (Performance Standards). Shock and Vibrations Testing per International Electrotechnical Commission (IEC) Standards: IEC 60068-2-6; IEC 60068-2-64; IEC 60068-2-27. Extreme Temperature Cycling (-20°C to 60°C). Based on: IEC 60068-2-1; MIL-STD-810G; ISTA.

Note: The FARO Design ScanArm is not metrology-certified and the laser line probe is permanently attached

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Contract Holder