FARO® Quantum Max with FARO Blu® xE Laser Line Probe

The New Standard in ScanArm Performance and Affordability

When it comes to performing accurate 3D measurement and inspection on small to medium sized parts, no tool can match the utility, speed and accuracy of the FaroArm®.

When a part or tool is difficult to measure and contact probes cannot capture all of its features, manufacturers utilize the non-contact functionality of the Quantum Max ScanArm to do the job. The new FARO Blu xE LLP is our most cost-effective 3D laser scanner for the FaroArm. It joins the family of Quantum Max ScanArms, offering a comprehensive contact/noncontact metrology solution, allowing users to significantly speed up and simplify their measurement and scanning activities with greater affordability.

The system provides rapid data capture, performance and affordability. It is ideal for inspection and quality control, offering a perfect solution for point cloud comparison with CAD, rapid prototyping, reverse engineering and 3D modeling of free-form surfaces — allowing for confident measurements across a wide range of industrial uses at a value that delivers a significant return on investment (ROI).

Designed with the precision of a lab instrument and the ruggedness of a shop floor device, the FARO Quantum ScanArm sets up in seconds, reducing inspection time and delivering quality results with exceptional flexibility — resulting in increased throughput and productivity.

The FARO Blu xE LLP sets a new industry benchmark in non-contact performance and affordability, allowing small and medium size operations to take full advantage of 3D scanning technology, benefiting from lean manufacturing practices.

Features

Rapid Capture

- Provides excellent coverage and high speed scanning up to 400,000 points per second

Kinematic Mount

- Dual kinematic seats on the Quantum Max allow for hard probe and LLP interchangeable hot swappable mounting positions to easily move the LLP from top to front

8-Axis Compatibility

- Rotate the objects in real-time, reach everywhere without repositioning the device or the part for even faster scanning

Optimized Measurement Volumes

- ScanArms available in multiple lengths allow users to select best tool and get the best results for the job

Benefits

Speed

- Wide scan stripe and fast frame rate boost productivity by increasing coverage and reducing scanning time

High Quality Data

- Intricate components can be captured in fine detail as a result of dense point data on each scanline

Scan Challenging Materials

- Exclusive FARO Continuous Light Rectifications (CLR) scanning technology provides users with the highest quality scan data possible on dark, translucent and reflective surfaces

Durability

- Improved rigidity and stability deliver optimized accuracy and repeatability with superior performance while maintaining shop-hardened ruggedness for use in the harshest factory environment

Applications

Reverse Engineering and CAD Reconstruction

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

Additive Manufacturing/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

Aftermarket Products

- Quickly and accurately scan OEM parts to enable the efficient design of aftermarket products in CAD, based directly on the geometry of the mating part

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

Industrial Design/Clay Modeling

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

Historical Preservation and Digital Archiving

- Create digital libraries with greater detail for preservation and virtual display or decrease mold inventory and warehouse costs that can be reproduced as needed in the future

Special Effects, Movies and Games

- Capture and digitize objects and props in full realistic detail to be used in digital visualization for entertainment projects such as movies and gaming

Product Visualization

- Create color 3D models for visual displays — such as web catalogs, competitive analysis and product marketing

ScanArm System Accuracy - Non-Contact Measurement[2] (FaroArm with LLP)			
FAROBlu Max	xE		
Quantum Max	E	M	S
2.0 m (6.6 ft)	0.060 mm 0.0024 in	0.043 mm 0.0017 in	0.042 mm 0.0017 in
2.5 m (8.2 ft)	0.066 mm 0.0026 in	0.048 mm 0.0019 in	0.044 mm 0.0017 in
3.0 m (9.8 ft)	0.089 mm 0.0035 in	0.065 mm 0.0026 in	0.057 mm 0.0022 in
3.5 m (11.5 ft)	0.101 mm 0.0040 in	0.080 mm 0.0031 in	0.070 mm 0.0028 in
4.0 m (13.1 ft)	0.120 mm 0.0047 in	0.090 mm 0.0035 in	0.082 mm 0.0032 in

Hardware Specifications	
FaroArm	
Operating Temperature	10 C - 40 C (50 F - 104 F)
Operating Humidity	95%, Non-Condensing
Power Supply	100-240 VAC, 47/63 Hz
8-Axis	
Max Load Capacity	100 kg (220 lbs)
Standard Plate Diameter	250 mm (9.8 in)
Weight	4.3 kg (9.5 lbs)

Hardware Specifications	
Laser Line Probe	xE
Accuracy	30 µm (0.0012 in)
Max Scan Width	150 mm (5.9 in)
Mid Scan Width	110 mm (4.3 in)
Min Scan Width	80 mm (3.1 in)
Stand-off	105 mm (4.1 in)
Depth of Field	110 mm (4.3 in)
Min Point Spacing	40 µm (0.0016 in)
Weight	369.7 g
Max Points Per Line	2000
Max Scan Rate	200 Hz
Point Acquisition Rate	400,000 points per second
Laser Type	450 nm/635 nm, Class 2

All values represent MPE (Maximum Permissible Error)
[1] Contact Measurement (FaroArm) : In Accordance with ISO 10360-12; defined as EUNI (Unilateral Error) - Distance error between two points comparing measured versus nominal. Values are +/-
[2] Non-Contact Measurement (ScanArm and ScanArm + 8-Axis): Based on ISO 10360-8 Annex D; defined as LDIA (Sphere Location Diameter Error) - Diameter of the spherical zone containing the centers of a sphere measure from multiple orientations. Values are absolute
For the complete set of specifications in accordance with ISO 10360-12 please visit **www.faro.com**

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; CISPR 11:2015; EN/IEC 61326-1:2020 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

Local operations around the world. Go to **FARO.com** to learn more.

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