

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

FARO Technologies – Banmai 90 Moo 1, Tiwanon Rd

Banmai, Muang, Pathumthani 12000

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at <u>www.anab.org</u>.



Jason Stine, Vice President Expiry Date: 25 January 2026 Certificate Number: L1147.15-1

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

FARO Technologies – Banmai

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CALIBRATION

Valid to: January 25, 2026

Certificate Number: L1147.15-1

Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate Measurement Machine (AACMM): Probing Size Error (PSize)	Sphere Diameter: 25.4 mm	6 Axis 1.5m- 1.4 μm 6 Axis 2.0m- 1.6 μm 6 Axis 2.5m- 1.8 μm 6 Axis 3.0m- 2.4 μm 6 Axis 3.5m- 3.2 μm 6 Axis 4.0m- 4.0 μm 7 Axis 2.0m- 2.0 μm 7 Axis 2.5m- 2.2 μm 7 Axis 3.0m- 3.2 μm 7 Axis 3.5m- 4.0 μm 7 Axis 4.0m- 5.2 μm	ISO 10360-12:2016 6.2, 6.3, 6.4 Test Sphere
Articulated Arm Coordinate Measurement Machine (AACMM): Probing Form Error (PForm)	Sphere Diameter: 25.4 mm	6 Axis 1.5m- 2.4 μm 6 Axis 2.0m- 3.4 μm 6 Axis 2.5m- 3.6 μm 6 Axis 3.0m- 5.2 μm 6 Axis 3.5m- 6.8 μm 6 Axis 4.0m- 7.6 μm 7 Axis 2.0m- 4.0 μm 7 Axis 2.5m- 4.4 μm 7 Axis 3.0m- 6.4 μm 7 Axis 3.5m- 7.8 μm 7 Axis 4.0m- 8.8 μm	Test Sphere



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Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate Measurement Machine (AACMM): Articulated Location Error (LDia)	Sphere Diameter: 25.4 mm	6 Axis 1.5m- 2.4 μm 6 Axis 2.0m- 3.0 μm 6 Axis 2.5m- 3.2 μm 6 Axis 3.0m- 9.2 μm 6 Axis 3.5m- 13 μm 6 Axis 4.0m- 16 μm 7 Axis 2.0m- 4.0 μm 7 Axis 2.5m- 4.4 μm 7 Axis 3.0m- 15 μm 7 Axis 3.5m- 18 μm 7 Axis 4.0m- 22 μm	Test Sphere
Articulated Arm Coordinate Measurement Machine (AACMM): Length Measurement Error, Unidirectional (EUni)	(0 to 1.05) m (0 to 1.36) m (0 to 1.8) m (0 to 2.11) m (0 to 2.42) m (0 to 2.64) m	3.1 μm 3.7 μm 4.0 μm 5.7 μm 6.4 μm 8.4 μm	Kinematic Scale Bar
Articulated Arm Coordinate Measurement Machine (AACMM): Single Point Articulation Performance	N/A ³	6 Axis 1.5m- 2.4 μm 6 Axis 2.0m- 3.2 μm 6 Axis 2.5m- 3.6 μm 6 Axis 3.0m- 5.4 μm 6 Axis 3.5m- 7.2 μm 6 Axis 4.0m- 9.0 μm 7 Axis 2.0m- 3.6 μm 7 Axis 2.5m- 4.0 μm 7 Axis 3.0m- 6.4 μm 7 Axis 3.5m- 9.0 μm 7 Axis 4.0m- 11 μm	B89.4.22-2004 and ISO 10360- 12:2016 Test Sphere
Articulated Arm Coordinate Measuring Machines (AACMM) with Optical Distance Sensors:			Based on ISO 10360-08:2013 Annex D
Articulated Location Error	Sphere Diameter: 50.8 mm	4.4 μm	Test Sphere





Length-Dimensional Metrology

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Laser Line Probe (LLP):	Cylinder Diameter:		Internal Procedure:
Diameter	25.4 mm	1.8 μm	Reference Cylinder
Z Distance/Position	(75 to 360) mm	1.5 µm	Calibrated Distance/ Position by Laser Interferometer
FARO Laser Tracker:			ISO 10360-10:2016 (Table 4) ASME B89.4.19:2006
High Accuracy Ranging Length Measurement	(0 m to 48) m	(1.1 + 0.16 <i>L</i>) μm	IFM Integrated Automated ADM Rail. Direct Comparison to Laser Interferometer
FARO Laser Tracker:			ISO 10360-10:2016 (Table 4)
Ranging Length Measurement	(0.04 to 70) m	$(2 + 0.4L) \mu{ m m}$	ASME B89.4.19:2006
			Reference Laser Tracker
FARO Laser Tracker:			ASME B89.4.19:2006
Transverse Length Measurement	(0.23 to 6.2) m	(8 + 1.2 <i>X</i>) μm	Reference Laser Tracker
			Kinematic Scale Bars
FARO Laser Tracker:			ISO 10360-10:2016 (Tables 4 and 5)
Transverse Length Measurement	(0.5 to 6.2) m	4.9 μm	Kinematic Scale Bars
FARO Laser Tracker:			ISO 10360-10:2016
Probing Error of Form	(0.5 to 2) m	1.0 µm	Reference Sphere
FARO Laser Tracker:			ISO 10360-10:2016
Probing Error of Size	(0.5 to 2) m	1.6 µm	Reference Sphere





Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
FARO Laser Tracker:			
Orientation Error of Six-DOF Probe	2.5 m to 10 m	2.0 µm	ISO 10360-10:2016

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (*k*=2), corresponding to a confidence level of approximately 95%.

Notes:

- 1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
- 2. L = Length in meters, X = the perpendicular distance from the tracker to the space frame.

3. Point measurements do not have a range.

4. This scope is formatted as part of a single document including Certificate of Accreditation No. L1147.15-1.

Jason Stine, Vice President



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