

# **CERTIFICATE OF ACCREDITATION**

# **The ANSI National Accreditation Board**

Hereby attests that

# FARO Japan Inc.

716, Kumada, Nagakute-shi Aichi, 480-1144, Japan

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: L1147.06-1

> 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 Japan Inc.

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### CALIBRATION

Valid to: January 25, 2026

Certificate Number: L1147.06-1

#### Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate Measurement Machine (AACMM): Volumetric Performance	(0 to 2.2) m	<b>3.5</b> μm	ASME B89.4.22-2004 at 5.2, 5.3 and 5.4 ISO 10360-2:2001 Kinematic Scale Bar
Effective Diameter	(3 to 25.4) mm	1.0 µm	Test Sphere
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





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#### Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method, and/or Equipment
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
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 <sup>3</sup>	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



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#### Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate			Based on ISO 10360-
Measuring Machines			08:2013 Annex D
(AACMM) with Optical			
Distance Sensors:			
	Sphere Diameter:		
Articulated Location Value	50.8 mm	<b>4.4</b> μm	Test Sphere
Laser Line Probe (LLP):	Cylinder Diameter:		Internal Procedure:
Diameter	25.4 mm	3.8 µm	Reference Cylinder
Z Distance/Position	(80 to 230) mm	2.9 µm	Calibrated Distance/ Position by Laser Interferometer
Faro Laser Tracker: Ranging Length Measurement	(0.04 to 25) m	(2 + 0.4 <i>L</i> ) μm	ASME B89.4.19-2006: Reference Laser Tracker

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. L1147.06-1.

Jason Stine, Vice President



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