CERTIFICATE OF ACCREDITATION

ANSI National Accreditation Board

11617 Coldwater Road, Fort Wayne, IN 46845 USA

This is to certify that

FARO Singapore PTE LTD

No. 3 Changi South Street 2
#01-01 Xilin Districentre Building B
Singapore 486548

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2017

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of activities to which this accreditation applies

L1147.09-1
Certificate Number

ANAB Approval

Certificate Valid Through: 01/25/2022
Version No. 004 Issued: 01/09/2020

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).

ANSI National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

FARO Singapore PTE LTD

No. 3 Changi South Street 2
#01-01 Xilin Districentre Building B, Singapore, 486548
Chee Wei Yeong (Customer Service): 65-6511-1312
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CALIBRATION

Valid to: **January 25, 2022** Certificate Number: **L1147.09-1**

Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) [2]	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate Measurement Machine (AACMM):			ASME B89.4.22-2004 at 5.2, 5.3 and 5.4
Volumetric Performance	(0 to 0.9) m (0 to 2.2) m	(0.35 + 0.45*L*) µm 3.5 µm	Ball Bar Kinematic Scale Bar
Effective Diameter	(3 to 25.4) mm	1 µm	Test Sphere
Articulated Arm Coordinate Measurement Machine (AACMM):			ISO 10360-12:2016 6.2, 6.3, 6.4
Probing Size Error (PSize)	Sphere Diameter: 25.4 mm	1 µm	Test Sphere
Probing Form Error (PForm)	Sphere Diameter: 25.4 mm	0.9 µm	Test Sphere
Articulated Location Error (LDia)	Sphere Diameter: 25.4 mm	1.7 µm	Test Sphere
Length Measurement Error, Unidirectional (EUni)	(0 to 1.05) m (0 to 1.8) m (0 to 2.42) m (0 to 2.65) m	3.3 µm 4.1 µm 6.6 µm 8.6 µm	Kinematic Scale Bar

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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): Single Point Articulation Performance	N/A [4]	0.41 µm	B89.4.22-2004 and ISO 10360-12:2016 Test Sphere
Articulated Arm Coordinate Measuring Machines (AACMM) with Optical Distance Sensors: Articulated Location Value	Sphere Diameter: 50.8 mm	4.4 µm	Based on ISO 10360-08:2013 Annex D Test Sphere
FARO 3D Imager (Optical 3D Measuring Systems)	Ball Bar Distance [3]: 220 mm (FOV: 500 mm) Ball Bar Distance [3]: 120 mm (FOV: 250 mm)	0.77 µm 0.54 µm	VDI/VDE 2634 Part 2: Ball Bars
Faro Laser Tracker: Ranging Length Measurement	(0.04 to 25) m	(2 + 0.4*L*) µm	ASME B89.4.19-2006: Reference Laser Tracker
Faro Laser Tracker: Transverse Length Measurement	(0.23 to 6.2) m	(8 + 1.2*X*) µm	ASME B89.4.19:2006 Reference Laser Tracker Kinematic Scale Bars
Faro Laser Tracker: Orientation Error of Six-DOF Probe	(2.5 to 10) m	2 µm	ISO 10360-10:2016
Laser Line Probe (LLP): Diameter Z Distance/Position	Cylinder Diameter: 25.4 mm (80 to 230) mm	3.8 µm 2.9 µm	Internal Procedure: Reference Cylinder Calibrated distance/ Position by Laser Interferometer

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. FOV = Field of View.
4. Point measurements do not have a range.
5. This scope is formatted as part of a single document including Certificate of Accreditation No. L1147.09-1.

Vice President