SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

QUANTA LABORATORIES
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MECHANICAL

Valid To: August 31, 2026 Certificate Number: 2454.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to the laboratory to perform the following types of environmental tests for the following industries: Aerospace, Defense, Telecommunication, Medical, Electronics and Automotive:

Test Technology:	**Test Capabilities:**	**Test Specifications/Standards:**
Vibration[1]	Electro Dynamic Sine, Random, Mixed Mode; SRS, TTH, LTH, (5 to 3 000) Hz Sine: up to 33 000 lbf Random: up to 35 000 lbf	EN 60065; EN 60204-1; ETSI EN 300 019; Telcordia GR-63-CORE; Telcordia GR-487-CORE; MIL-STD-167; MIL-STD-202; MIL-STD-331; MIL-STD-810F, G and H; AC 156; IEC 60068-2-64; ISO 15197 Sect. 6.10; MIL-PRF-28800; RTCA/DO-160; IEC 68; ISTA, Sect. 1A, 2A, 1B, 2B, 1G, 1H, 3A, 3E, 6A, 6B; UN 38.3; Telcordia GR-1221, 1209; ANSI C12.2, C136.3; EN/IEC 60601-1-11, Sect. 10.1.3c; ST/SG/AC10/11, Sect UN 38.3 T3
Seismic Loose Cargo (*Vertical and Horizontal*)	Servo Hydraulic Sine, Random, TTH, LTH and Shock Force: up to 11 000 lbf (1 to 500) Hz	ANSI T1.329; AC 156; Telcordia GR-63-CORE; GR-487-CORE; Telcordia GR-950-CORE; GR-3108-CORE; ASTM D4169

Test Technology:	**Test Capabilities:**	**Test Specifications/Standards:**
Mechanical Shock	Shock Machine: High g_n Shock: up to 10 000 g_n ½ Sine: up to 300 in/s Sawtooth: up to 100 in/s Trapezoid Triangle: up to 180 in/s. Electrodynamic Shaker: Shock: up to 400 g_n ½ Sine, Sawtooth, Trapezoid, Triangle	MIL-STD-810F, G and H, Method 516.5; MIL-STD-883E, Method 2002.3; MIL-STD-202F and 202G, Method 213B; RTCA/DO-160D, E, F, and G Sect. 7.0; ETSI 300 019-2, Sect. 1, 2, 3, 4, 5, 7; ISTA, Sect. 1A, 1B, 1G, 1H, 2A, 2B, 3A, 3E, 6A, 6B; IEC 60068-2-27; ANSI C12.1, C136.3; EN/IEC 60601-11, Sect. 10.1 3.a, b, d; ST/SG/AC.10/11, Sect. UN 38.3 T4
Packaged Drop Test/ Unpackaged Drop Test	Requirements of Standard	Telcordia GR-63-CORE; GR-487-CORE; GR-950-CORE; GR-3108-CORE; ETSI EN 300 019; MIL-PRF 28800; ISTA 1A, 2A, 1B, 2B, 1G, 1H, 3A, 3E, 6A, 6B, 6-FedEx-A; MIL STD 810F, 810G Method 516.6 Procedure IV; EN/IEC 60601-1:2012 section 15.3.4 Drop Test
Salt Fog	Temperature: 95 °F ± 3 °F Solution: (5 % ± 1) % NaCl pH: 6.5 to 7.2	ASTM B117; MIL-STD-810, Method 509; Telcordia GR-487-CORE; GR-950-CORE; GR-3108-CORE; RTCA/DO 160D E F Sect. 14.0; MIL STD 883E Method 1009.8
Temperature[1]	(-100 to 175) °C	AT&T-TP76200; Telcordia GR-63-CORE; GR-487-CORE; GR-950-CORE; GR-3108-CORE; MIL-PRF-28800F; MIL-STD-810; MIL-STD-202; MIL-STD-750E; RTCA/DO-160 C-G; ISO 15197 Sect. 6.11; ETSI EN 300 019; ASTM 4169; ISTA 1A, 2A, 1B, 2B, 1G, 1H, 3A, 3E.

Test Technology:	**Test Capabilities:**	**Test Specifications/Standards:**
Humidity[1]	(5 to 95) %RH	Telcordia GR-63-CORE; GR-487-CORE; GR-950-CORE; GR-3108-CORE; MIL-STD-810; MIL-STD-202; RTCA/DO-160 C-G; ISO 15197 Sect. 6.12; ETSI EN 300 019
Thermal Shock[1]	(-72 to 125) °C	Telcordia GR-63-CORE; GR-487-CORE; GR-950-CORE; GR-3108-CORE; ETSI EN 300 019; MIL STD 883E Method 1011.9; ISTA Sect. 3A, 3E; ST SG AC 10/11 Sect. UN 38.3 T2
Altitude[1]	(-1 500 to 70 000 feet	Telcordia GR-63-CORE; MIL-STD-810F, G and H; MIL STD 883E Method 1001 (*Except Condition g*); MIL STD 202F, 202G Method 105C (*Except Condition g*); RTCA/DO 160D E F Sect. 4.0; EN/IEC 60601-1-11 Sect 4.2.2, 4.2.3; ST/SG/AC.10/11Rev.5 Sect. UN 38.3 T1
Ingress Protection		
Protection against hazardous parts, foreign objects and dust	Test Rod/Wire Probes, Test Sphere Probe, and Test Finger Probe; Dust chamber	IEC 60529 - IP2X; IEC 60529 - IP5X, IP6X; ISO 20653 – IP5K, IP6K;
Protection against spraying water	10 l/min ±5%	IEC 60529 – IPX3; ISO 20653 – IPX3
Protection against splashing water	10 l/min ±5%	IEC 60529 – IPX4; ISO 20653 – IPX4
Protection against water jets	12.5 l/min ±5%	IEC 60529 – IPX5; ISO 20653 – IPX5
Protection against powerful water jets	100 l/min ±5%	IEC 60529 – IPX6; ISO 20653 – IPX6
Protection against the effects of temporary immersion in water	Nominal: 1 meter depth of water 30 min immersion time	IEC 60529 – IPX7; ISO 20653 – IPX7
Protection against the effect of continuous immersion in water	>1 m depth of water >30 min immersion time	IEC 60529 – IPX8; ISO 20653 – IPX8

Test Technology:	**Test Capabilities:**	**Test Specifications/Standards:**
Moisture Resistance	(-100 to 175) °C (5 to 95) %RH	MIL-STD-883E, Method 1004.7; MIL-STD-202F and 202G, Methods 103B and 106E; Telcordia GR-63-CORE Issue 3, Sect. 4.1, 5.1; Telcordia GR-1221; RTCA/DO-160D, E, F, and G, Sect. 6.0; IEC 60529
Overcharge	Provide up to 50 A for (0 to 40) V range, 17 A for (0 to 200) V range	ST/SG/AC.10/11, Sect. UN 38.3 T7
Short Circuit	Up to 600 A	ST/SG/AC.10/11, Sect. UN 38.3 T5
Adhesion by Tape	N/A	ASTM D3359
Compression	Up to 100 kN	ISTA Procedures 2A, 2B, 6A, 6B, 6-FedEx-A, 6-FedEx-B
Acceleration	(1 to 250) g_n (1 000 to 20 000) g_n g_n = standard acceleration of the gravity	MIL-STD-810F and 810G, Method 513.8; MIL-STD-883E, Method 2001.2.
Ultraviolet Exposure	UVA, UVB	ASTM G154
Acoustic Noise	(30 to 100) dBa Sound Pressure Sound Power	ISO 7779 (*Excluding Section 6*); Telcordia GR-63-CORE

[1] *This laboratory also uses customer supplied specifications directly related to the testing technologies and parameters listed above.*

Accredited Laboratory

A2LA has accredited

QUANTA LABORATORIES

Santa Clara, CA

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. 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*).

Presented this 13th day of January 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2454.01
Valid to August 31, 2026

For the types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.