



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

QUANTA LABORATORIES  
3199 De La Cruz Boulevard  
Santa Clara, CA 95054  
Terry G. Liu Phone: 408 988 0770  
[test@quantalabs.com](mailto:test@quantalabs.com)

MECHANICAL

Valid To: August 31, 2024

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:

<u>Test Technology:</u>	<u>Test Capabilities:</u>	<u>Test Specifications/Standards:</u>
Vibration <sup>1</sup>	Electro Dynamic Sine, Random, Mixed Mode; SRS, TTH, LTH, (5 to 3,000) Hz Sine: 33,000 force-lbs Random: 35,000 force-lbs	EN 60065; EN 60204-1; ETSI EN 300 019; GR-63-CORE; 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; GR-1221, 1209; ANSI C12.2, C136.3; EN 60601-1, Sect. 10.1.3c; ST/SG/AC10/11, Sect UN 38.3 T3
Seismic Loose Cargo ( <i>Vertical and Horizontal</i> )	Servo Hydraulic Sine, Random, TTH, LTH and Shock 11,000 force-lbs (1 to 500) Hz	ANSI T1.329; AC 156; GR-63-CORE; GR-487-CORE; GR-950-CORE; GR-3108-CORE; ASTM D4169

<b><u>Test Technology:</u></b>	<b><u>Test Capabilities:</u></b>	<b><u>Test Specifications/Standards:</u></b>
Mechanical Shock	Shock Machine: High G Shock: 10,000 Gn ½ Sine: up to 300 in/s Sawtooth: 100 in/s Trapezoid Triangle: 180 in/s  Electrodynamic Shaker: Shock: 400g 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; ANSI C12.1, C136.3; EN 60601-1, Sect. 10.1 3.a, b, d; ST/SG/AC.10/11, Sect. UN 38.3 T4
Packaged Drop Testing/ Unpackaged Drop Testing	Requirements of Standard	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 Fedexp; MIL STD 810F 810G Method 516.6 Procedure IV; EN 60601-1 1.5.3.4
Salt Fog	Temperature 95°F±3°F Solution: 5% ±1% NaCl pH:6.5-7.2	ASTM B117; MIL-STD-810, Method 509; GR-487-CORE; GR-950-CORE; GR-3108-CORE; RTCA/DO 160D E F Sect. 14.0; MIL STD 883E Method 1009.8
Temperature <sup>1</sup>	(-100 to 175) °C	AT&T-TP76200; 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
Humidity <sup>1</sup>	(5 to 95) %RH	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



<b><u>Test Technology:</u></b>	<b><u>Test Capabilities:</u></b>	<b><u>Test Specifications/Standards:</u></b>
Thermal Shock <sup>1</sup>	(-72 to 125) °C	GR-63-CORE; GR-487-CORE; GR-950-CORE; GR-3108-CORE; ETSI EN 300 019; MIL STD 883E Method 1010.7; ISTA Sect. 3A 3E; ST SG AC 10/11 Sect. UN 38.3 T2
Altitude <sup>1</sup>	(-1500 to 95,000) feet	GR-63-CORE, MIL-STD-810F, G and H; MIL STD 883E Method 1001 ( <i>Except Condition g</i> ); MIL STD 202F 202G Method 105C ( <i>Except Condition g</i> ); RTCA/DO 160D E F Sect. 4.0; EN 60601-1 Sect. 10.1 Altitude 4.2.2; ST/SG/AC.10/11Rev.5 Sect. UN 38.3 T1
<b><i>Ingress Protection</i></b>		
Protection against ingress of dust: dust-protected equipment	Match requirements of the standard	IEC 60529 – IP5X; ISO 20653 – IP5K; IEC 60529 IPX2, 9K
Protection against ingress of dust; dust-tight equipment	Match requirements of the standard	IEC 60529 – IP6X; ISO 20653 – 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	1 meter depth water	IEC 60529 – IPX7; ISO 20653 – IPX7
Protection against the effect of continuous immersion in water	>1 meter >30 minutes	IEC 60529 – IPX8; ISO 20653 – IPX8
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; GR-1221; RTCA/DO-160D, E, F, and G, Sect. 6.0; IEC 60529
Overcharge	Provide up to 50A for 0-40V range, 17A for 0-200V range	ST/SG/AC.10/11, Sect. UN 38.3 T7
Short Circuit	Up to 600A	ST/SG/AC.10/11, Sect. UN 38.3 T5



<b><u>Test Technology:</u></b>	<b><u>Test Capabilities:</u></b>	<b><u>Test Specifications/Standards:</u></b>
Adhesion by Tape	N/A	ASTM D3359
Compression	Up to 100 kN	ISTA 2A, 2B, 3A, 6A, 6B, FedEx
Acceleration	1 – 250g 1000 – 20,000g	MIL-STD-810F and 810G, Method 513.5; MIL-STD-883E, Method 2001.2
Ultraviolet Exposure	UVA, UVB, UVC	ASTM G154
Acoustic Noise	(30 to 100) dBa Sound Pressure Sound Power	ISO 7779 ( <i>Excluding Section 6</i> ); Telcordia GR-63-CORE

<sup>1</sup> *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 10<sup>th</sup> day of November 2022.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 2454.01  
Valid to August 31, 2024

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