SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: April 30, 2025 Certificate Number: 5179.02

In recognition of the successful completion of the A2LA evaluation process, (including an assessment of the organization's compliance with A2LA's FDA ASCA Accreditation Program[2] requirements), accreditation is granted to this laboratory to perform the following product safety, emissions, immunity and radio tests:

Test Technology:	**Test Method(s)[1]:**
Electrical Safety	UL/CSA IEC/EN 61010-1; UL/CSA IEC/EN 61010-2 (All Inclusive); IEC 61010-1 Edition 3.1 2017-01*(excluding clauses 9.3.2, 10.5.3 (subsection 2), 12.2, 12.3 12.5.2, 13.2);* UL/CSA/AAMI IEC 60601-1; GB 9706.1:2020; GB 9706.1-2007; GB 9706.15-2008; UL/CSA/IEC/EN 60601-1 (inclusive of all collateral standards); UL/CSA IEC/EN 60601-2 (All Inclusive); IEC/ISO 80601-2 CSA 80601-2 (All Inclusive); IEC/EN 60601-1-4; IEC 62304; IEC 62366; UL/CSA/IEC/EN 62368-1; IEC/EN 62368-x (All Inclusive); IEC 60065-1; IEC 60950-1; IEC/EN 60950-22; UL/CSA.IEC/EN 60335-1; UL/CSA/IEC/EN 60335-2 (including all particular standards); UL/CSA/IEC/EN 60730-1; UL/CSA/IEC/EN 60730-2-x (All Inclusive); IEC/EN/CSA 60825-1; IEC/EN 60825-2; IEC/EN 60825-4; IEC/EN 60825-12; IEC/EN 60825-14; IEC/EN/CSA 62471; IEC 62471-2; IEC/EN 60598-1; IEC/EN 60598-2-x (All Inclusive); IEC/EN 61851-1; UL 1598/C22.2 No. 250; UL 8750; UL 1573; UL 508, 508A, 508C; UL 22; UL 73; UL 197; UL 291; UL 873; UL 935; UL 1741; UL 2231-1; UL 2231-2; UL 2594; UL 9741; IEEE 1547; UL 1778; UL 1838 (excluding clauses 9.6.3, 10.1, 10.2, 10.3)

Test Technology:	Test Method(s)[1]:
Electrical Safety (cont.)	ANSI/ AAMI ES60601-1:2005/(R)2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text) ANSI/AAMI ES60601-1:2005/A2:2021 *(excluding clauses 9.6.3, 10.1, 10.2, 10.3);* UL 1993; UL 1995; UL 1310; UL 1419; UL 1431; UL 1012; UL 1088; CSA C22.2 No. 107.1; CSA C22.2 No. 107.2; CSA C22.2 No. 107.3; CSA C22.2 NO 301; CSA-Z432; CSA-Z434; CAN/CSA-Z142; EN ISO 13850; EN ISO 13857; EN ISO 14119; EN ISO 13855; EN ISO 14120; IEC/EN 60204-1; EN 415-3; EN ISO 12100; ANSI B11.19; NFPA 79
Unintentional Emissions Radiated & Conducted	
U.S. (FCC)	
Unintentional Radiators	47 CFR, FCC Part 15, Subpart B (using ANSI C63.4-2014); ANSI C63.4-2014
Industrial, Scientific, and Medical (Consumer ISM)	47 CFR, FCC Part 18 (using MP-5:1986); MP-5:1986
Canada (ISED)	
Unintentional Radiators	ICES-003; CAN/CSA-CEI/IEC CISPR 22; CAN/CSA-CISPR 32; CAN/CSA C108.6-M91
Industrial, Scientific and Medical (ISM) Radio Frequency Generators	ICES-001
Vehicles, Boats and Other Devices Propelled by an Internal Combustion Engine, Electrical Means, or Both	ICES-002
Lighting Equipment	ICES-005
Japan	
Unintentional Radiators	VCCI V-3 (up to 6 GHz); V-4; VCCI-CISPR 32:2016 (up to 6 GHz); JIS T 0601-1-2
Australia	
Unintentional Radiators	AS/NZS CISPR 15; AS CISPR 15; AS/NZS CISPR 32; AS/NZS CISPR 11[3]; AS CISPR 11[3], AS/NZS CISPR 12; AS/NZS CISPR 13; AS/NZS CISPR 14.1; AS CISPR 14.1 (excluding measurements of clicks); AS/NZS CISPR 22; AS/NZS CISPR 24; AS/NZS CISPR 25; AS 62040.2; AS/NZS 61000.3.2; AS/NZS 61000.3.3; AS/NZS 61000.6.1; AS/NZS 61000.6.2; AS/NZS 61000.6.3; AS/NZS 61000.6.4

Test Technology:	Test Method(s)[1]:
South Africa	
Unintentional Radiators	SANS 211; SANS 212; SANS 213; SANS 214-1; SANS 214-2; SANS 215; SANS 2200; SANS 222; SANS 224; SANS 225; SANS 2332; SANS 2335; SANS 60601-1-2; SANS 61326-1; SANS 61000-6-1; SANS 61000-6-3; SANS 61000-6-2; SANS 61000-6-4; SANS 61547; SANS 62040-2
Israel	
Unintentional Radiators	SI 62368; SI 961 Part 32; SI 961 Part 24
International	
Unintentional Radiators	CISPR 11[4]; CISPR 12; CISPR 13; CISPR 14-1 (excluding measure of clicks); CISPR 15; CISPR 16-2-1; CISPR 16-2-3; CISPR 22; CISPR 32; EN 55011[4]; EN 55012; EN 55013; EN 55014-1 (excluding measure of clicks); EN 55015; EN 55022; EN 55032: EN 12015 (excluding measurements of clicks); EN 15194 (sections C1.2.2 and C1.2.3)
Intentional Emissions Unlicensed Transmitters U.S. (FCC)	
Intentional Radiators	47 CFR, FCC Part 15 C Unlicensed Transmitters (using ANSI C63.10-2013)
U-NII without DFS Intentional Radiators	47 CFR FCC Part 15 E, U-NII without DFS (using ANSI C63.10-2013)
Canada (ISED)	
Intentional Radiators License Exempt	RSS-GEN; RSS-102 Measurement (RF Exp); RSS-210; RSS-213; RSS-244; RSS-247 without DFS; RSS-310
Japan	
Intentional Radiators License Exempt	ARIB Standard STD-T66; ARIB Standard STD-T99; ARIB Standard STD-T71 without DFS
Australia/New Zealand	
Intentional Radiators License Exempt	Radiocommunications Equipment (General) Rules 2021 - Schedule 5, Part 15, Short Range Equipment Standard using test methods AS/NZS 4268:2017 + Amd 1:2021 ETSI EN 300 220-1 V3.1.1 (2017-2) ETSI EN 300 330 V2.1.1 (2017-02) ETSI EN 300 440 V2.2.1 (2018-07) Federal Communications Commission Rules Title 47 (Telecommunications) Part 15–Radio Frequency Devices

Test Technology:	Test Method(s)[1]:
International	
Intentional Radiators License Exempt	ETSI EN 300 220-2; ETSI EN 300 330-2; ETSI EN 303 454; ETSI EN 300 328; ETSI EN 301 893; ETSI EN 302 291; ETSI EN 303 417; ETSI EN 301 489-1 (including all subparts); ETSI EN 300 440-1; ETSI EN 300 440-2; ETSI EN 301 908-1 V11.1.1 (sections 4.2.2 and 4.2.3)
Radio Licensed Transmitters	
U.S. (FCC)	
Commercial Mobile Services	47 CFR, FCC Part 22 (cellular), Part 24, Part 25 (below 3 GHz), Part 27 (using ANSI C63.26-2015); ANSI/TIA 603-E
General Mobile Radio Services	47 CFR, Part 22 (non-cellular), Part 90 (below 3 GHz), Part 95 (below 3 GHz), Part 97 (below 3 GHz), and Part 101 (below 3 GHz) (using ANSI C63.26-2015)
Citizens Broadband Radio Services	47 CFR, Part 96 (using ANSI C63.26-2015)
Canada (ISED)	
Licensed Transmitters	RSS-GEN; RSS-102 Measurement (RF Exp); RSS-112; RSS-117; RSS-119; RSS-123; RSS-125; RSS-127; RSS-130; RSS-132; RSS-133; RSS-134; RSS-137; RSS-139; RSS-140; RSS-141; RSS-142; RSS-170; RSS-181; RSS-182; RSS-192; RSS-194; RSS-195; RSS-196; RSS-197; RSS-199; RSS-211; RSS-215; RSS-216; RSS-220; RSS-222; RSS-236; RSS-238; RSS-243; RSS-310
Korea	
Technical Requirements for Electromagnetic Compatibility	Technical Requirements for Electromagnetic Compatibility (RRA Public Notification 2022-12, May 31, 2022) Korean only; KN 11; KS C 9811; KN 60601-1-2; KS C IEC 60601-1-2; KN 14-1; KS C 9814-1; KN 14-2; KS C 9814-2; KN 15; KS C 9815; KN 61547; KS C 9547; KN 301 489-1; KS X 3124; KN 301 489-17; KS X 3126; KN 301 489-6; KS X 3128; KN 301 489-13; KS X 3131; KN 301 489-5; KS X 3127; KN 301 489-3; KS X 3125; KN 301 489-9; KS X 3130; KN 301 489-18; KS X 3132; KN 301 489-15; KS X 3136; KN 301 489-2; KS X 3137; KN 301 489-27; KS X 3134; KN 301 489-32; KS X 3138; KN 301 489-20; KS X 3139; KN 62040-2; KS C 9040-2; KN 32; KS C 9832; KN 35 (excluding xDSL-specific requirements); KS C 9835 (excluding xDSL-specific requirements); KN 61000-6-1; KS C 9610-6-1; KN 61000-6-2; KS C 9610-6-2; KN 61000-6-3; KS C 9610-6-3

Test Technology:	**Test Method(s)[1]:**
Korea Technical Requirements for Electromagnetic Compatibility (cont.)	KN 61000-6-4; KS C 9610-6-4; KN 60974-10; KS C 9974-10; KN 60945;KN 12015; KS B 6955; KN 12016; KS B 6945
Taiwan	CNS 15936 (up to 6 GHz), CNS 13439, CNS 13438; IP0001; LP0002; RTTE01
Hong Kong	HKCA 1007; HKCA 1035; HKCA 1039; HKCA 1042; HKTA 1049; HKCA 1078
Immunity	
Electrostatic Discharge[4] (ESD)	IEC 61000-4-2; EN 61000-4-2; KN 61000-4-2; KS C 9610-4-2; IEC 60255-22-2; IEEE C37.90.3; SANS 61000-4-2
Radiated Immunity	IEC 61000-4-3; EN 61000-4-3; KN 61000-4-3; KS C 9610-4-3; IEC 60255-22-3; IEEE C37.90.2; IEC 61000-4-39; SANS 61000-4-3
Electrical Fast Transient / Burst[4]	IEC 61000-4-4; EN 61000-4-4; KN 61000-4-4; KS C 9610-4-4; IEC 60255-22-4; SANS 61000-4-4
Surge Immunity[4]	IEC 61000-4-5; EN 61000-4-5; KN 61000-4-5; KS C 9610-4-5; IEEE C37.90.1; IEEE C62.41; IEEE C62.41.1; IEEE C62.41.2;IEEE C62.45; IEC 60255-22-5 (level 3 and 4); SANS 61000-4-5
Conducted Immunity[4]	IEC 61000-4-6; EN 61000-4-6; KN 61000-4-6; KS C 9610-4-6; IEC 60255-22-6; SANS 61000-4-6
Power Frequency Magnetic Field Immunity[4]	EN 61000-4-8; IEC 61000-4-8; KN 61000-4-8; KS C 9610-4-8; SANS 61000-4-8
Impulse Magnetic Field	IEC 61000-4-9; EN 61000-4-9; KN 61000-4-9; KS C 9610-4-9; SANS 61000-4-9
Damped Oscillatory Magnetic Field Immunity	IEC 61000-4-10; EN 61000-4-10; SANS 61000-4-10
Voltage Dips, Interruptions, and Line Voltage Variations[4]	IEC 61000-4-11; EN 61000-4-11; KN 61000-4-11; KS C 9610-4-11; IEC 61000-4-17; EN 61000-4-17; IEC 61000-4-29; EN 61000-4-29; SANS 61000-4-11
Ring Wave Immunity	IEC 61000-4-12; EN 61000-4-12; SANS 61000-4-12
Harmonics / Inter-harmonics	IEC 61000-4-13; EN 61000-4-13; SANS 61000-4-13

Test Technology:	Test Method(s)[1]:
Immunity to Conducted, Common Mode Disturbances in the Frequency Range 0 Hz to 150 kHz	IEC 61000-4-16; EN 61000-4-16; SANS 61000-4-16
Oscillatory Wave Immunity	IEC 61000-4-18; EN 61000-4-18; IEC 60255-22-1; IEC 60255-26
Frequency Variations	IEC 61000-4-28; EN 61000-4-28
Emissions	
Emissions Current Harmonics[4]	EN 61000-3-2; IEC 61000-3-2; SANS 61000-3-2
Voltage Fluctuations & Flicker[4]	EN 61000-3-3; IEC 61000-3-3; SANS 61000-3-3
Generic and Product Specific Standards	
Laboratory Equipment (Emission and Immunity)	IEC 61326-1; EN 61326-1; IEC/EN 61326-2-6; IEC/EN 61326-2-1; IEC/EN 61326-2-2; IEC/EN 61326-2-3; IEC/EN 61326-2-4
Medical Equipment (Emissions and Immunity)[3]	IEC 60601-1-2 1; EN 60601-1-2; NBR IEC 60601-1-2; IEC 60601-4-2; ISO 14117
Alarm Systems (Immunity)	EN 50130-4; IEC 50131-2-2; EN 50131-2-2; IEC 50131-5-3; EN 50131-5-3; IEC 62599-2
UPS / Audio / Lighting	IEC 60240-2; EN 62040-2; IEC55103-1; EN 55103-1; IEC 55103-2; EN 55103-2; IEC61547; EN 61547
Household Appliances	CISPR 14-2:1997 + A1:2001; EN 55014-2 + A1:2001 + A2:2008
ITE/Telecom (Immunity)	CISPR 24; EN 55024; KN 24: ETSI EN 300 386; CISPR 35; EN 55035
Residential, Commercial and Light Industrial Generic (Emissions and Immunity)	IEC 61000-6-3; EN 61000-6-3; IEC 61000-6-1; EN 61000-6-1; IEC 61000-6-8; EN 61000-6-8
Industrial Generic (Emissions and Immunity)	IEC 61000-6-4; EN 61000-6-4; IEC 61000-6-2; EN 61000-6-2
Railway (Emissions and Immunity)	EN 50121-1; EN 50121-2; EN 50121-3-1; EN 50121-3-2; EN 50121-4; EN 50121-5; IEC 62236-1; IEC 62236-2; IEC 62236-3-1; IEC 62236-3-2; IEC 62236-4; IEC 62236-5
Uninterruptible Power Supply (Emissions)	IEC 62040-2; EN 62040-2
Tele-control Equipment and Systems (Emissions)	IEC 60870-2-1; EN 60870-2-1; AS 60870-2-1

Test Technology:	**Test Method(s)[1]:**
Cable Networks/Radio Signals (Emissions and Immunity	EN 50083-2; IEC 60728-2; IEC 60945 (section 9 and 10)
Relays (Emissions and Immunity)	EN 60255-26
Low-voltage switchgear and control gear	IEC 60947-1; IEC 60947-4-1
Product family standard for lifts, escalators, and moving walks (Immunity)	EN 12016
Vehicles, Boats, and Internal Combustion Engines	EN 55025; CISPR 25; IEC 61851-21-2
Automatic Electrical Controls	IEC 60730-1 (sections 23 and 26); EN 60730-1 (sections 23 and 26)
Welding equipment	IEC 60974-10; IEC 62135-2
Machine Tools (Emissions and Immunity)	EN 50370-1; EN 50370-2; EN 61800-3; IEC 61800-3
Automotive Component EMC	ISO 11452-2; ISO 11452-4
Agricultural / Forestry Machinery	ISO 14982 (excluding section 6.8)
Communication Networking Devices	IEEE 1613; IEEE 1613.1; IEC 61326-2-4; IEC 61850-3
Home and Building Electronic, Automation, & Control System	EN 50491-5-1; EN 50491-5-2
Safety-Related Systems and Equipment Intended to Perform Safety-Related Functions (Functional Safety) – General Industrial Application	IEC 61326-3-1
Industrial-Process Measurement and Control	EN 61131-2; IEC 61131-2; KN 61131-2

On the following products or types of products:
Industrial, Scientific, and Medical (ISM) Equipment; Information Technology Equipment (ITE); Household Appliances; Portable Tools; Multimedia; and Medical Equipment.

[1] When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

Testing activities performed under the scope of U.S. FDA ASCA Pilot program specifications: *Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment – Standards Specific Information for the Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program* published on September 25th, 2020, and in accordance with all requirements of A2LA *R256 Specific Requirements- FDA ASCA Program*[2]:

Standards	**ASCA Doc Number**
ANSI/AAMI ES60601–1:2005/(R)2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text) Medical electrical equipment—Part 1: General requirements for basic safety and essential performance (IEC 60601–1:2005, MOD) [Including Amendment 2 (2021)] *(excluding clauses 9.6.3, 10.1, 10.2, 10.3)*	19-46
IEC 61010-1 Edition 3.1 2017-01 CONSOLIDATED VERSION *(excluding clauses 9.3.2, 10.5.3 (subsection 2), 12.2, 12.3 12.5.2, 13.2)*	19-34
IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED VERSION	19-36
IEC 60601-2-2 Edition 6.0 2017-03	6-389
IEC 60601-2-22 Edition 3.1 2012-10	12-268

[2] These methods have been assessed by A2LA according to A2LA's FDA ASCA Program requirements. Accreditation by A2LA does not imply FDA ASCA-Accreditation. All ASCA-accreditation decisions for testing laboratory applications are made solely by the FDA, a list of approved laboratories can be found at FDA.gov.

[3] The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

[4] This laboratory performs field testing activities for these tests. The field-testing scope excludes tests where the contribution of uncertainty due to the field site itself is required by the standard to be included in the measurement uncertainty calculation requirements.

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1 [5]:

Rule Subpart/Technology	**Test Method**	**Maximum Frequency (MHz)**
Unintentional Radiators Part 15B	ANSI C63.4-2014	40000
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5 (February 1986)	40000
Intentional Radiators Part 15C	ANSI C63.10:2013	40000

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1 [5]:

Rule Subpart/Technology	**Test Method**	**Maximum Frequency (MHz)**
U-NII Intentional Radiators Part 15E	ANSI C63.10:2013	40000
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI C63.26-2015	40000
General Mobile Radio Services (FCC Licensed Radio Service Equipment) Parts 22 (non-cellular), 90 (below 3 GHz), 95 (below 3 GHz), 97 (below 3 GHz), and 101 (below 3 GHz)	ANSI C63.26-2015	40000
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96	ANSI C63.26-2015	40000

[5] Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (https://apps.fcc.gov/oetcf/eas/) for a listing of FCC approved laboratories.

Accredited Laboratory

A2LA has accredited

MEGALAB GROUP INC

Aurora, Ontario, Canada

for technical competence in the field of

Electrical 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 laboratory also meets A2LA R256 - Specific Requirements - FDA ASCA Program. 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 23rd day of May 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5179.02
Valid to April 30, 2025

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