SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid to: December 31, 2025 Certificate Number: 2135.01

In recognition of the successful completion of the A2LA Accreditation Program evaluation process (including an assessment of the organization's compliance with A2LA's FDA ASCA Accreditation Program[1] requirements) accreditation is granted to this laboratory, accreditation is granted to this laboratory to perform the following Electromagnetic Compatibility, Telecommunications, Wireless, Bluetooth and OTA testing:

Test:	**Test Methods:**
Electromagnetic Compatibility	
Emissions	
Radiated and Conducted (*3m semi-anechoic chambers*)	47 CFR Part 15B (using ANSI C63.4-2014 amended as per ANSI C63.4a-2017), and Part 18 (using MP-5:1986); ICES-003; CISPR 11; EN 55011; AS/NZS CISPR 11; KS C 9811; CISPR 22; EN 55022; AS/NZS CISPR 22; CISPR 32 (*excluding equipment within the scope of CISPR 13*); EN 55032; VCCI-CISPR 32:2016; KS C 9832:2019; RRA Public Notification 2017-19, Dec 28, 2017; RRA Announce 2017-71, Dec 28, 2017; CNS 13438; IEC 60601-1-2; EN 60601-1-2
Harmonic Current Emissions	EN 61000-3-2; IEC 61000-3-2; KS C 9610-3-2; CNS 14934-2
Voltage Fluctuations and Flicker	EN 61000-3-3; IEC 61000-3-3; KS C 9610-3-2; CNS 14934-3
Generic and Product Family Standards	IEC 61000-6-1; EN 61000-6-1; IEC 61000-6-2; EN 61000-6-2; IEC 61000-6-3; EN 61000-6-3; IEC 61000-6-4; EN 61000-6-4; EN 301 489-1; EN 301 489-3; EN 301 489-17; EN 301 489-19; EN 301 489-33; EN 301 489-52; KS X 3124:2020; KS X 3125:2020; KS X 3126:2020; KS X 3129:2020
Immunity	EN 61000-6-1; IEC 61000-6-1; IEC 61000-6-2; EN 61000-6-2; AS/NZS 61000.6.1; CISPR 24; EN 55035; KS C 9835:2019; CNS 14675; AS/NZS CISPR 24; EN 55024
Electrostatic Discharge (ESD)	EN 61000-4-2; IEC 61000-4-2; KS C 9610-4-2; CNS 14676-2
Radiated Immunity	EN 61000-4-3; IEC 61000-4-3; KS C 9610-4-3; CNS 14676-3
Electrical Fast Transients/Bursts (EFT/B)	EN 61000-4-4; IEC 61000-4-4; KS C 9610-4-4; CNS 14676-4

Test:	**Test Methods:**
Immunity (cont'd)	
Surge	EN 61000-4-5; IEC 61000-4-5; KS C 9610-4-5; CNS 14676-5
Conducted Immunity	EN 61000-4-6; IEC 61000-4-6; KS C 9610-4-6; CNS 14676-6
Power Frequency Magnetic Immunity	EN 61000-4-8; IEC 61000-4-8; KS C 9610-4-8; CNS 14676-8
Voltage Dips, Short Interruptions and Voltage Variations	EN 61000-4-11; IEC 61000-4-11; KS C 9610-4-11; CNS 14676-11
Generic and Product Family Standards	IEC 60601-1-2; EN 60601-1-2; KS C IEC 60601-1-2
Automotive EMC	
Conducted Transient Immunity	ISO 7637-2; ISO 7637-3
Radio Communications	
Intentional Radiators	47 CFR Part 15C, E (using ANSI C63.10-2013 and/or FCC KDB 905462 D02 (v02)); 47 CFR Part 15D (using ANSI C63.17:2015); 47 CFR Parts 22, 24, 25, 27, 30, 74, 90, 95, 96, 97, and 101 (using Part 2, ANSI/TIA 603-E or ANSI C63.26:2015); 47 CFR Part 15F (using ANSI C63.10:2013); RSS-GEN; RSS-102 measurement (RF Exposure, NS); SPR-002; RSS-111; RSS-112; RSS-119; RSS-123; RSS-125; RSS-127; RSS-130; RSS-131; RSS-132; RSS-133; RSS-134; RSS-135; RSS-137; RSS-139; RSS-140; RSS-142; RSS-170; RSS-191; RSS-192; RSS-194; RSS-195; RSS-196; RSS-197; RSS-198; RSS-199; RSS-210; RSS-211; RSS-213; RSS-215; RSS-216; RSS-220; RSS-222; RSS-236; RSS-238; RSS-243; RSS-244; RSS-246; RSS-247 (*with DFS*); RSS-248; RSS-251; RSS-252; RSS-287; RSS-288; QCVN 54:2020/BTTTT; QCVN 55:2011/BTTTT; QCVN 18:2014/BTTTT; QCVN 65:2013/BTTTT; TCVN 7189:2009; TCVN 7317:2003; AS/NZS 4771; AS 2772.2; AS/NZS 4268; MSIT Public Notification 2018-38; KS X 3123; LP0002 Section 3.10 & 4.7; N1: Specified Radio Equipment Specified in Article 38-2-2, Paragraph 1, Item 1 of the Radio Law; Article 49-20, 21 of the Ordinance Regulating Radio Equipment; EN 300 328; EN 301 893; EN 300 220; EN 300 440-1; EN 300 440-2; EN 300 330-1; EN 300 330-2; EN 300 113; EN 300 487; EN 301 511; EN 301 908-1; EN 301 908-2; EN 301 908-6; EN 301 908-13; EN 301 908-14; EN 301 091-1; EN 301 091-2; EN 301 091-3; EN 301 441; EN 302 065-1; EN 302 065-2; EN 302 065-3, EN 303 883-1; EN 303 883-2; EN 302 208; EN 302 264; EN 302 502; EN 302 858; EN 303 413; EN 303 417; ARIB T-33; ARIB T-66; ARIB T-71; NOM 121-SCT1-2009

Test:	Test Methods:
Human Exposure to RF Electromagnetic Fields	EN 50360; EN 50371; EN 62311; EN 62479; EN 50364; EN 50566; FCC OET 65, Supplement C; Australian Communications Authority, Radio Communications (Electromagnetic Radiation, Human Exposure) Standard 2003; IEEE Std. C95.1; IEEE Std. C95.3; AS/NZS 2772.1; AS/NZS 2772.2
Wireless Certification Schemes **OTA** *(Over The Air Performance)*	CTIA Test Plan for Wireless Device Over-the-Air Performance; CTIA Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices; T-MOBILE; AT&T; SPRINT; VODAFONE; VzW LTE Over the Air Radiated Performance Test Plan; VzW Over the Air Radiated Performance for CDMA & LTE Multimode Devices Test Plan; VzW 5G_NR_FR1_RFOTA and 5G_NR_FR2_RFOTA
Bluetooth	T-Mobile Interoperability Handset Compatibility Testing
Wi-Fi	WMM System Interoperability Test Plan with Test Engine; WMM Power Save System Interoperability Test Plan; Wi-Fi WPS Test Plan Wi-Fi Alliance; 802.11n 2.0 System Interoperability Test Plan; 802.11 ac, Voice Personal; Miracast; Wi-Fi Direct; WMM-AC; Passpoint; WiFi 6/E
Wireless Coexistence	IEEE/ANSI C63.27
WInnForum Protocol Testing	WINNF-TS-0122
Qi Compliance Testing Scope	WPC Qi Specification PTx
Spurious Emissions According to PTCRB	3GPP TS 34.114; 3GPP TS 25.144; 3GPP TS 34.124; 3GPP TS 36.124; 3GPP TS 38.124
Mobile Communications 2G/3G/4G Audio	AS/ACIF S042.1; 3GPP TS.26.132; 3GPP2 CS0056-A; VzW Codec and Voice Quality; CTIA Speech Performance Test Plan
CTIA IoI Cybersecurity [2]	CTIA Cybersecurity Certification Test Plan for IoT Devices

[1] 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.

[2] Accreditation to the requirements of the CTIA Certification Test Plan does not imply authorization by the CTIA Certification program. Please see the CTIA website https://ctiacertification.org/test-labs/ for a listing of Authorized Test Labs (ATLs).

Testing Activities performed under the scope of the 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* [3]	
Standards	**ASCA Doc Number**
IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED VERSION	19-36

[3] 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 https://www.fda.gov/medical-devices/standards-and-conformity-assessment-program/asca-accredited-testing-laboratories.

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[4]:

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)	325000
Intentional Radiators Part 15C	ANSI C63.10:2013	325000
Unlicensed Personal Communication Systems Devices Part 15D	ANSI C63.17:2013	40000
U-NII without DFS Intentional Radiators Part 15E	ANSI C63.10:2013	40000
U-NII with DFS Intentional Radiators Part 15E	FCC KDB 905462 D02 (v02)	40000
UWB Intentional Radiators Part 15F	ANSI C63.10:2013	325000
Commercial Mobile Services (FCC Licensed Radio Service Equipment) Part 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI/TIA-603-E or ANSI C63.26:2015	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[4]:

Rule Subpart/Technology	**Test Method**	**Maximum Frequency (MHz)**
General Mobile Radio Services (FCC Licensed Radio Service Equipment) Parts 22 (non-cellular), 90 (below 3 GHz), 95, 97 (below 3 GHz), and 101 (below 3 GHz)	ANSI/TIA-603-E or ANSI C63.26:2015	40000
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96	ANSI/TIA-603-E or ANSI C63.26:2015	40000
Microwave and Millimeter Bands Radio Services Parts 25, 30, 74, 90 (above 3 GHz), 95 (above 3 GHz), 97 (above 3 GHz), and 101	ANSI/TIA-603-E or ANSI C63.26:2015	325000

[4]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.

On the following product types: Telecommunications Terminal Equipment (TTE), Radio Equipment, Network Equipment, Information Technology Equipment (ITE), Automotive Electronic Equipment, Radiocommunication Equipment and Systems, Vehicles, Medical Electrical Equipment, Motors, Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment, Household Appliances, Electric Tools, Low-voltage Switchgear and Controlgear, Programmable Controllers, Electrical Equipment for Measurement, Control and Laboratory Use

Accredited Laboratory

A2LA has accredited

CETECOM INC.

Milpitas, CA

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 24th day of January 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2135.01
Valid to December 31, 2025

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