SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

DEKRA CERTIFICATION, INC.
405 Glenn Drive, Suite 12
Sterling, VA 20164
Mr. Domingo Galvez Phone: 703-657-2014
Domingo.Galvez@dekra.com

ELECTRICAL

Valid To: October 31, 2024 Certificate Number: 2764.01

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[4] requirements), accreditation is granted to this laboratory to perform the following Electrical tests:

Test:	**Test Method(s)[1]:**
EMC	
Emissions	
Conducted and Radiated (3m semi-anechoic chamber)	CISPR 32; EN 55032; CISPR 22; EN 55022; CISPR 11[2]; EN 55011[2]; CFR 47 FCC, Part 15, Subpart B (using ANSI C63.4:2014)[2]; CFR 47 FCC, Part 18 (using MP-5:1986); ICES-001; ICES-003
Harmonics Current Emissions	EN 61000-3-2; IEC 61000-3-2
Fluctuation and Flicker	EN 61000-3-3; IEC 61000-3-3
Immunity	
Electrostatic Discharge (ESD) [2]	EN 61000-4-2; IEC 61000-4-2
Radiated Immunity	EN 61000-4-3; IEC 61000-4-3
Electrical Fast Transient/Burst (EFT) [2]	EN 61000-4-4; IEC 61000-4-4
Surge Immunity [2]	EN 61000-4-5; IEC 61000-4-5
Conducted Immunity [2]	EN 61000-4-6; IEC 61000-4-6
Power Frequency Magnetic Field	EN 61000-4-8 (*excluding short duration mode*); IEC 61000-4-8 (*excluding short duration mode*)

Test:	**Test Method(s) [1]:**
Voltage Dips, Short Interruptions and Voltage Variations Immunity	EN 61000-4-11; IEC 61000-4-11
Family, Product, or Industry Specific Specifications:	
	IEC/EN 61000-6-1; IEC/EN 61000-6-2; IEC/EN 61000-6-3; IEC/EN 61000-6-4; IEC/EN 55014-1 (*excluding disturbance power measurement*); CISPR 14-1 (*excluding disturbance power measurement*); IEC/EN 55014-2; CISPR 14-2; IEC/EN 55024; CISPR 24; IEC 60601-1-2[4]; EN 60601-1-2; AIM 7351731; ANSI C63.27; AAIM TIR69; IEC/EN 61326-1; IEC/EN 61326-2-1 through 2-6; EN 301 489-1; EN 301 489-3; EN 301 489-5; EN 301 489-17; EN 301 489-19; EN 301 489-33; EN 301 489-34; EN 301 489-52;
Automotive EMC	
Conducted and Radiated Emissions	CISPR 25 (*clauses 6.2, 6.3, and 6.4 only*); EN 55025 (*clauses 6.2, 6.3, and 6.4 only*); SAE J1113-41
Conducted Transient Emissions	ISO 7637-2
Conducted Transient Immunity	ISO 7637-2; ISO 7637-3 (*CCC method only*)
Electrostatic Discharge (ESD)	ISO 10605 (*excluding clause 10 vehicle test method*)
Absorber-lined Shielded Enclosure (ALSE)	ISO 11452-2; SAE J1113-21
Bulk Current Injection (BCI)	ISO 11452-4 (*excluding TWC test method*)

Test:	**Test Method(s) [1]:**
Product Family Standards	UNECE Regulation 10 (*ESA [electronic sub assembly] only*); IEC 61851-21-1 (*ESA only*); EN 61851-21 (*clause 9 EMC only*); IEC 61851-21-2; EN 61851-22 (*clause 11.3 EMC only*); EN 50498; SAE J1849 (*clauses 5.8, 6.3, 6.4 only*)
RF Testing	
Unlicensed Transmitter / Receiver – Emissions	CFR 47 FCC, Part 15, Subparts C, E, and F (using ANSI C63.10:2013 and FCC KDB 905462 D02 [v02]); RSS-GEN; RSS-210; RSS-213; RSS-216; RSS-220; RSS-247; RSS-248; IFT-008-2015 (*all subsections*); NOM-208-SCFI-2016 (*all subsections*)
Licensed Transmitter / Receiver – Emissions (*excluding SAR and HAC testing*)	CFR 47 FCC Parts 2, 22, 24, 25, 27, 90, 95, 96, 97, and 101 (using ANSI C63.26:2015); RSS-GEN; RSS-102 (RF Exposure Evaluation)[MEAS]; RSS-102 (Nerve Stimulation)[MEAS]; SPR-002; RSS-119; RSS-130; RSS-132; RSS-133; RSS-134; RSS-139; RSS-140; RSS-170; RSS-195; RSS-197; RSS-199; NOM-221/2-SCFI-2018 (*all subsections*); IFT-011-2017 (Part 2) (*all subsections*); ARIB-STD-T66

Test:	**Test Method(s) [1]:**
EU Radio Test	ETSI EN 300 328; ETSI EN 301 893; ETSI EN 300 220-1; ETSI EN 300 220-2; ETSI EN 300 330; ETSI EN 300 440; ETSI EN 303 413; ETSI EN 303 417; ETSI EN 303 345-1/2/3/4; ETSI EN 302 065-1/2/3/4; ETSI EN 302 208
GSM/GPRS/EDGE. Radiated Spurious Emissions	ETSI EN 301 511; ETSI TS 151.010-1; 3GPP TS 51.010-1
WCDMA/UMTS/HSPA Radiated Spurious Emissions	ETSI EN 301 908-1; ETSI TS 134.124; 3GPP TS 34.124
LTE FDD/TDD Radiated Spurious Emissions	ETSI EN 301 908-1; ETSI TS 136.124; 3GPP TS 36.124
Wireless	
GSM; GPRS; EGPRS; UMTS (W-CDMA); LTE; CDMA; CDMA 1RTT; CDMA1xEVDO	CTIA Test Plan for Wireless Device Over-the-Air Performance; Method of Measurement for Radiated RF Power and Receiver Performance, Version 3.9.x
Wi-Fi	CTIA Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices, Version 2.2
UMTS/GSM/ GPRS/EDGE	3GPP TS 34.114; User Equipment (UE)/Mobile Station (MS) Over the Air (OTA) Antenna Performance; Conformance Testing (*excluding reverberation chamber method*)
CBRS	
Broadband Radio Service (CBRS)	Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification CBSD/DP as Unit Under Test (UUT); Working Document WINNF-TS-0122; CBRS Alliance Certification Test Plan CBRSA-TS-9001

Test:	**Test Method(s) [1]:**
Field Trials [2]	
GSM, UMTS, LTE	GSM Association Official Document TS.11
Product Safety	IEC 62368-1, EN 62368-1, DS/EN 62368-1, CEI EN 62368-1, J62368-1, SASO-IEC-62368-1 (*all excluding Clauses 5.4.5, 5.5.8, 10.5, 10.6, Annexes C, C, G5.3.4, G9, G10, G13.6, G15, M.7, M.8, R, S {except S.2}, and Y*); CAN/CSA C22.2 No. 62368-1-14; CSA/UL 62368-1; UL 62368-1; AS/NZS 62368.1; NMX-I-62368-1-NYCE; IEC 62368-3; NOM-001-SCFI (*excluding clauses 5.2-5.6*); IEC 60950-1, NMX-I-60950-1-NYCE (*both excluding Clauses 2.3, 3.3, 4.7, 7, Annexes C, E, H, N, Q, S, U, Y, AA, and CC*) IEC 60065, NMX-I-60065-NYCE (*both excluding Clauses 6, 8.17, 8.21, 10.2, 12.1.3, 14.5, 18, Annexes A, B, H, K, and L*)
Medical Electrical Equipment– Part 1: General Requirements for Basic Safety and Essential Performance	IEC 60601-1; EN 60601-1; UL 60601-1; ANSI/AAMI ES60601-1; CAN/CSA C22.2 No. 60601-1;
Safety Requirements for Medical Electrical Systems	IEC 60601-1-1; EN 60601-1-1; UL 60601-1-1; CAN/CSA C22.2 No. 60601-1-1; ANSI AAMI ES60601-1:2005/(R)2012 and A1:2012 C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text); IEC 60601-1-2 Edition 4.0 2014-02; IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED Version

On the following products or types of products:
Base Stations, Subscriber Stations, Customer Premise Equipment (CPE), NFC Devices, Mobile Devices, Multimedia Devices, Automotive Components, Appliances, and Medical Devices.

[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*.

[2] This laboratory performs field testing (or calibration) activities for these tests (or parameters).

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 [3]:		
Rule Subpart/Technology	**Test Method**	**Maximum Frequency**
Unintentional Radiators		
Part 15B	ANSI C63.4:2014	40000 MHz
Industrial, Scientific, and Medical Equipment		
Part 18	FCC MP-5 (February 1986)	40000 MHz
Intentional Radiators		
Part 15C	ANSI C63.10:2013	40000 MHz
U-NII without DFS Intentional Radiators		
Part 15E	ANSI C63.10:2013	40000 MHz
U-NII with DFS Intentional Radiators		
Part 15E	FCC KDB 905462 D02 (v02)	40000 MHz
UWB Intentional Radiators		
Part 15F	ANSI C63.10:2013	40000 MHz
Commercial Mobile Services (FCC Licensed Radio Service Equipment)		
Parts 22 (cellular), 24, 25 (below 3 GHz), and 27	ANSI C63.26:2015	40000 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 C63.26:2015	40000 MHz
Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment)		
Part 96	ANSI C63.26:2015	40000 MHz

[3]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.

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* [4]:	
Standard:	**Recognition Number:**
ANSI AAMI ES60601-1:2005/(R)2012 and A1:2012 C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text)	19-46
IEC 60601-1-2 Edition 4.0 2014-02	19-8
IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED Version	19-36

[4] 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.

Accredited Laboratory

A2LA has accredited

DEKRA CERTIFICATION, INC.

Sterling, VA

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 15th day of February 2023.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2764.01
Valid to October 31, 2024

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