



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

DEKRA TESTING AND CERTIFICATION, S.A.U.
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ELECTRICAL

Valid To: September 30, 2020

Certificate Number: 3350.01

In recognition of the successful completion of the A2LA evaluation process accreditation is granted to this laboratory for the Bluetooth testing on Information Technology Equipment (ITE), Bluetooth devices, and NFC devices:

<u>Test Technology:</u>	<u>Test Method(s):</u>
<i>Near Field Communications (NFC)</i>	
NFC Forum Digital Protocol	NFC Forum Test Cases for Digital Protocol
NFC Forum Type 1 Tag Operation	NFC Forum Test Cases for Type 1 Tag Operation
NFC Forum Test Cases for Type 2 Tag and Type 2 Tag Operation	NFC Forum Test Cases for Type 2 Tag and Type 2 Tag Operation
NFC Forum Test Cases for Type 3 Tag and Type 3 Tag Operation	NFC Forum Test Cases for Type 3 Tag and Type 3 Tag Operation
NFC Forum Type 4 Tag and Type 4 Tag Operation	NFC Forum Test Cases for Type 4 Tag and Type 4 Tag Operation
NFC Forum Type 5 Tag and Type 5 Tag Operation	NFC Forum Test Cases for Type 5 Tag and Type 5 Tag Operation
NFC Forum Tag Performance	NFC Forum Test Cases for Tag Performance
NFC Forum Analog	NFC Forum Test Cases for Analog
NFC Forum Simple NDEF Exchange Protocol	NFC Forum Test Cases for Simple NDEF Exchange Protocol

<u>Test Technology:</u>	<u>Test Method(s):</u>
<i>Near Field Communications (NFC) (cont.)</i>	
NFC Forum Logical Link Control Protocol	NFC Forum Test Cases for Logical Link Control Protocol
UICC based NFC IOP	GSMA TS.27 - NFC Handset Testbook
<i>Bluetooth</i>	
Bluetooth Radio	Bluetooth Core Specification as outlined in the 'Core TCRL' for Radio and Physical Layer Conformance Testing
Bluetooth Protocol / Profile Conformance	Bluetooth Core Specification as outlined in the 'Core TCRL' for Protocol and Profile Conformance Testing
Bluetooth Protocol / Profile / Service Conformance	Bluetooth external to Core and Profile Specification as outlined in the 'GATT-Based TCRL' and 'Profile TCRL' for Service and Profile Conformance Testing
Bluetooth Profile Interoperability	Bluetooth external to Core and Profile Specification as outlined in the 'GATT-Based TCRL' and 'Profile TCRL' for Service and Profile Conformance Testing
<i>Field Trials</i> ¹	
GSM, UMTS, and LTE	GSM Association Official Document TS.11;
	GSM Association Official Document TS.40 – Miot Field and Lab Test Cases
<i>ULE</i>	
Interoperability ULE	Interfaces Test Specifications; Services Test Specifications
<i>Connected Car</i>	
Conformance Protocol	IEEE Std 802.11; Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications
	IEEE Std 1609.2; IEEE Standard for Wireless Access in Vehicular Environments – Security Services for Applications and Management Messages;



<u>Test Technology:</u>	<u>Test Method(s):</u>
<i>Connected Car</i> Conformance Protocol (cont.)	IEEE Std 1609.3; IEEE Standard for Wireless Access in Vehicular Environments (WAVE)—Networking Services;
	IEEE Std 1609.4; IEEE Standard for Wireless Access in Vehicular Environments (WAVE)—Multi-Channel Operation
<i>Connected Car</i> Conformance Protocol ITS-G5	TS 102 859 Conformance test specifications for Transmission of IP packets over GeoNetworking (GN6)
	TS 102 868 Conformance test specification for Co-operative Awareness Messages (CAM)
	TS 102 869 Conformance test specification for Decentralized Environmental Notification Messages (DENM)
	TS 102 870 Conformance test specifications for GeoNetworking Basic Transport Protocol (BTP)
	TS 102 871 Conformance test specifications for GeoNetworking ITS-G5 (GN)
	TS 103 191 Conformance test specifications for Signal Phase and Timing (SPAT) and Map (MAP)
	TS 103 096 Conformance test specification for TS 102 867 and TS 102 941 Security Testing
<i>Connected Car</i> RF Testing	ETSI EN 302 571 Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU



<u>Test Technology:</u>	<u>Test Method(s):</u>
<i>eCall</i> ¹	
eCall Conformance Testing (excluding crash test as applicable)	EVS-EN 16454; ETSI TS 103 412; ETSI TS 126 269; Commission Delegated Regulation (EU) 2017/79 (Annex I, II, III, IV, VI, VII, & VIII); GOST 33467; GOST 33470 R144 (ECE-TRANS-WP29-2017-132e) UAE.S 5019 _ 2018
<i>Mobile Communications</i>	
Communication Devices with GSM/GPRS/EDGE Interface:	
RF and Layer 1; Protocol; and SIM Testing	3GPP TS 51.010-1; 3GPP TS 51.010-4; ETSI EN 301 511; ETSI TS 151.010-1
Communication Devices with UMTS Interface:	
RF Testing	3GPP TS 34.121-1; ETSI TS 134 121-1; ETSI EN 301 908-1; ETSI EN 301 908-2
Protocol Testing	3GPP TS 34.123-1
USIM Testing	3GPP TS 31.121; 3GPP TS 31.124; ETSI TS 102 230
Communication Devices with LTE Interface:	
RF Testing	3GPP TS 36.521-1; 3GPP TS 36.521-3; ETSI EN 301 908-13
Protocol Testing	3GPP TS 36.523-1



<u>Test Technology:</u>	<u>Test Method(s):</u>
<i>Wireless Communications</i>	
Communication Devices with WLAN Interface:	
Interoperability Testing	Wi-Fi Alliance Certification Program According to the ATL Accreditation: https://www.wi-fi.org/AT4-wireless
<i>Cybersecurity testing</i>	
IoT devices:	
Cybersecurity testing for IoT devices	CTIA Cybersecurity Certification Test Plan for IoT Devices

¹This laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories for these tests.





Accredited Laboratory

A2LA has accredited

DEKRA TESTING AND CERTIFICATION, S.A.U.

Malága, Spain

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *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 1st day of October 2018.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3350.01
Valid to September 30, 2020
Revised March 26, 2019

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