



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

QAI LABORATORIES LTD.<sup>1</sup>  
 3980 North Fraser Way  
 Burnaby, British Columbia, Canada, V5J 5K5  
 Contact: Parminder Singh      Phone: 604-527-8378

ELECTRICAL

Valid to: October 31, 2018

Certificate Number: 3657.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above, *as well as the satellite laboratory location listed below*, to perform the following tests:

**ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS**

**Electromagnetic Compatibility and Interference: EMC and EMI**

<b>Australia/New Zealand</b>	<b>Description of Standard</b>
AS/NZS CISPR 11:2011	Industrial, Scientific and Medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics
AS/NZS CISPR 12:2013	Vehicles, boats and internal combustion engine - Limits and methods of measurements for the protection of off-board receivers
AS/NZS CISPR 13:2012	Sound and television broadcast receivers and associated equipment. Radio disturbance characteristics. Limits and methods of measurement
AS/NZS CISPR 14.1:2013	Requirements for household appliances, electric tools and similar apparatus - Emission [excluding clicks] & Immunity
AS/NZS CISPR 15:2011	Limits and methods of measurement of radio disturbance characteristics of electrical
AS/NZS CISPR 22:2009	Information technology equipment - Radio disturbance characteristics
AS/NZS CISPR 32:2013	Electromagnetic compatibility of multimedia equipment – Emission Requirements
AS/NZS 4268:2012	ACMA (Short Range Devices) Standard
AS/NZS 61000.6.3:2012	Electromagnetic compatibility (EMC) – Part 6.3: Generic standards – Emission standard for residential, commercial and light-industrial environments

<b>Australia/New Zealand</b>	<b>Description of Standard</b>
AS/NZS 61000.6.4:2012	Electromagnetic compatibility (EMC) – Part 6.4: Generic standards – Emission standard for industrial environments
<b>Canada</b>	<b>Description of Standard</b>
ICES-001	Industrial, Scientific and Medical (ISM) Radio Frequency Generators
ICES-003 <sup>2</sup>	Information Technology Equipment (ITE) - Limits and methods of Measurement
ICES-004	Alternating current high voltage power systems
ICES-005	Radio Frequency Lighting Devices
ICES-006 <sup>2</sup>	AC Wire Carrier Current Devices for Unintentional Radiators
RSS-Gen	General Requirements and Information for the Certification of Radio Apparatus
RSS-102	Radio Frequency (RF) Exposure Compliance of Radio Communication Apparatus (All Frequency Bands) – ( <i>EXCLUDING SAR testing</i> )
RSS-111	Broadband public safety equipment operating in the band (4940 to 4990) MHz
RSS-112	Land mobile and fixed equipment operating in the band (1670 to 1675) MHz.
RSS-117	Land and coast station transmitters using A1, A2, A3, A2H, or A3H emissions operating in the (200 to 535) kHz band
RSS-119	Radio Transmitters and Receivers Operating in the Land Mobile and Fixed Services in the Frequency Range 27.41-960 MHz.
RSS-123	Licensed Low-Power Radio Apparatus
RSS-125	Land mobile and fixed radio transmitters and receivers, (1.705 to 50.0) MHz, primarily amplitude modulated
RSS-210	License-exempt Radio Apparatus (All Frequency Bands): Category I Equipment
RSS-247	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

<b>Chinese Taipei/Taiwan</b>	<b>Description of Standard</b>
CNS 13306	Specification for radio disturbance and immunity measuring apparatus and methods Part 1 - Radio disturbance and immunity measuring apparatus
CNS 13438 <sup>2</sup>	Limits and methods of measurement of radio interference characteristics of information technology equipment (ITE) [table top equipment only for testing up to 6 GHz]
CNS 13439 <sup>2</sup>	Limits and methods of measurement of radio interference characteristics of sound and television broadcast receiver and associated equipment.
CNS 13803 <sup>2</sup>	Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment
C-IS2031-0 (IS2031 -0)	Type I Telecommunications Business Point to Point Microwave Base Station RF Equipment Type Approval Technical Specifications
C-IS2034-1 (IS2034 -1)	Local Multipoint Distribution Service (LMDS) Microwave Base Station RF Equipment Type Approval Technical Specifications
LP 0001; LP 0002	Low-power Radio-frequency Devices Technical Specifications
RTTE01	2.4GHz Radio-frequency Telecommunications terminal equipment technical specification

<b>International &amp; European</b>	<b>Description of Standard</b>
IEC/EN 61000-4-2; IEC 60255-22-2; IEEE C37.90.3; ISO 10605	Electrostatic Discharge Immunity Test
IEC/EN 61000-4-3; IEC 60255-22-3; IEEE C37.90.2	Radiated, Radio-Frequency Electromagnetic Field Immunity
IEC/EN 61000-4-4; IEC 60255-22-4	Electrical Fast Transient/Burst Immunity Test
IEC/EN 61000-4-5; IEEE C37.90.1; IEEE C62.41; IEEE C62.45; IEC 60255-22-5	Surge Immunity Test
IEC/EN 61000-4-6	Immunity to Conducted Disturbances, Induced Radio-Frequency Fields
IEC/EN 61000-4-8	Power Frequency Magnetic Field Immunity Test
IEC/EN 61000-4-9	Pulse Magnetic Field Immunity Test

IEC/EN 61000-4-10	Damped Oscillatory Magnetic Field Immunity
IEC/EN 61000-4-11 <sup>2</sup>	Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
IEC/EN 55011 <sup>2</sup>	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurements
IEC/EN 55012 <sup>2</sup>	Vehicles, boats and internal combustion engine - Radio disturbance characteristics - Limits and methods of measurements for the protection of off-board receivers
IEC/EN 55013 <sup>2</sup>	Sound and television broadcast receivers and associated equipment. Radio disturbance characteristics; Limits and methods of measurement
IEC/EN 55014-1 & 2 <sup>2</sup>	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1&2 Emission & Immunity
IEC/EN 55015 <sup>2</sup>	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
IEC/EN 55020 <sup>2</sup>	Sound and television broadcast receivers and associated equipment - Immunity characteristics - Limits and methods of measurement
IEC/EN 55022 <sup>2</sup>	Information technology equipment - Radio disturbance characteristics. Limits and methods of measurement
IEC/EN 55024	Information technology equipment - Immunity characteristics - Limits and methods of measurement
IEC/EN 55025 <sup>2</sup>	Vehicles, boats and internal combustion engines -Radio disturbance characteristics - Limits and methods of measurements for the protection of on-board receivers
IEC/EN 55032 <sup>2</sup>	Electromagnetic compatibility of multimedia equipment. Emission requirements
IEC/EN 50130 - 4	Alarm Systems – Immunity Requirements
IEC/EN 50155; IEC/EN 50121-3-2	Railway applications – Emission and Immunity testing
IEC/EN 55103-1 & 2	Electromagnetic compatibilities: Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional Use-Part 1 & 2: Emissions/Immunity
IEC/EN 60945	Maritime navigation and radio communication equipment and systems
IEC/EN 61326-1	Electrical equipment for measurement, control and laboratory use
IEC/EN 61326-2-1, to -5	Electrical equipment for measurement, control and laboratory use: EMC requirements - Part 2-3: Particular requirements. Test configuration, operational conditions and performance criteria

IEC/EN 62233	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure (Excluding SAR Testing)
IEC/EN 61000-3-2 <sup>2</sup>	Harmonic current emissions (equipment input current $\leq 16$ A per phase)
IEC/EN 61000-3-3 <sup>2</sup>	Voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rat current $\leq 16$ A per phase and not subject to conditional connection
IEC/EN 61000-3-11 <sup>2</sup>	Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems -Equipment with rated current $\leq 75$ A and subject to conditional connection
IEC/EN 61000-3-12 <sup>2</sup>	Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current $> 16$ A and $\leq 75$ A per phase
IEC/EN 61000-6-1 & 3	Part 6-1 & 3: Generic standards – Immunity/Emissions for residential, commercial & light-industrial environments
IEC/EN 61000-6-2 & 4	Part 6-2 & 4: Generic standards – Immunity/Emissions for industrial environments
IEC/EN 55014-1 <sup>2</sup>	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
IEC/EN 300 386	Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements
IEC/EN 300 086-1 & 2	Land Mobile Service; Radio equipment with an internal or external RF connector intended primarily for analogue speech
IEC/EN 300 113-1 & 2	Land mobile service - Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector
IEC/EN 300 220-1, -2, -3	Short Range Devices (SRD) - Radio equipment to be used in the (25 to 1000) MHz frequency range with power levels ranging up to 500 mW
IEC/EN 300 328-1 & 2	Wideband transmission systems - Data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques
IEC/EN 300 330-1 & 2	Short Range Devices (SRD) - Radio equipment in the frequency range 9 KHz to 25 MHz and inductive loop systems in the frequency range 9 KHz to 30 MHz
IEC/EN 300 339	General electromagnetic compatibility (EMC) for radio communications equipment
IEC/EN 300 373-1, -2, -3	Maritime mobile transmitters and receivers for use in the MF and HF bands

IEC/EN 300 385	Electromagnetic Compatibility (EMC) standard for fixed radio links and ancillary equipment
IEC/EN 300 683	Electromagnetic compatibility standard for Short Range Devices (SRD) operating on frequencies between 9 kHz and 25 GHz
IEC/EN 301 489-01 to IEC/EN 301 489-26	Electromagnetic compatibility (EMC) standards for radio equipment and services
CISPR 11:2011/ EN55011 <sup>2</sup>	Industrial, scientific and medical (ISM) radio-frequency equipment Electromagnetic disturbance characteristics - Limits and methods of measurement
CISPR 12:2013/ EN55012 <sup>2</sup>	Vehicles, boats and internal combustion engine - Radio disturbance characteristics - Limits and methods of measurements for the protection of off-board receivers ( <i>excluding tests on Boats, and excluding the Insertion Loss Test Methods detailed in Informative Annex E of CISPR 12</i> );
CISPR 13:2012/ EN55013 <sup>2</sup>	Sound and television broadcast receivers and associated equipment – Radio disturbance characteristics - Limits and methods of measurement
CISPR 14-1&2:2013/ EN55014-1&2	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1&2: Emission/Immunity
CISPR 15:2011/ EN55015 <sup>2</sup>	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
CISPR 16-2-1/EN55016-2-1	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity- Conducted disturbance measurements
CISPR 16-2-2, 2-3, 2-4; EN55016-2-2, 2-3, 2-4	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-2 through 2-4: Methods of measurement of disturbances and immunity
CISPR 20/EN55020	Sound and television broadcast receivers and associated equipment – Immunity characteristics - Limits and methods of measurement <i>[excluding section 5.8]</i>
CISPR 22:2009/ EN55022 <sup>2</sup>	Information technology equipment - Radio disturbance characteristics- Limits and methods of measurement
CISPR 24/EN55024	Information technology equipment - Immunity characteristics-Limits and methods of measurements and measuring
CISPR 25/EN55025 <sup>2</sup>	Vehicles, boats and internal combustion engines -Limits and methods of measurements for the protection of on-board receivers
CISPR 32:2015/ EN55032 <sup>2</sup>	Electromagnetic compatibility of multimedia equipment - Emission requirements

IEC/EN 61000-4-2 through 61000-4-12	Electromagnetic compatibility (EMC) Immunity Test
ETSI EN 300 086	Land mobile service. Technical characteristics and test conditions for radio equipment with an internal or external RF connector intended primarily for analogue speech
ETSI EN 300 113-1	Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector
ETSI EN 300 328	Electromagnetic compatibility and Radio Spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
ETSI EN 300 330-1&2	Electromagnetic compatibility and Radio Spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz

**Japan**

**Description of Standard**

STD-T66; STD-T67; STD-T70	ARIB Standard
VCCI V-1	Agreement of voluntary control council for interference by information technology equipment
VCCI V-2	Rules for Voluntary control measures
VCCI V-3 ( <i>up to 6 GHz</i> )	Technical Requirements [table top equipment only for testing above 1 GHz]
VCCI V-15	Guidelines for Measuring Conducted EMI at Telecommunication Ports
Article 2 paragraph 1 Item 19 = 2.4 GHz	Wideband Communications; - Japanese Radio standard
Article 2 paragraph 1 Item 19-2 = 2.4 GHz	WLAN - High Channel; - Japanese Radio standard
Article 2 paragraph 1 Item 19-3 = 5 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-5 = 4.9 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-6 = 4.9 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-9 = 4.9 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-10 = 4.9 GHz	WLAN; - Japanese Radio standard
JIS C 1806-1	Electrical Equipment for Measurement, Control & Laboratory Use

## Hong Kong

HKCA 1039	Radios Equipment Operating in 2.4 GHz or 5GHz with Frequency Hopping or Digital Modulation
HKCA 1042	Radio Equipment Operating in the 5GHz band for Wireless Access
HKCA 1049	RFID Equipment Operating in the 865-868 MHz AND/OR 920-925 MHz

## Republic of Korea

## Reference Standard

KN/CISPR 16-2-1 to 4	IEC 16-2-1 to -4
KN/EN 61000-2-2	IEC 61000-2-2
KN/EN 61000-2-4	IEC 61000-2-4
KN/EN 61000-3-2/61000-3-12	IEC 61000-3-2/61000-3-12 <sup>2</sup>
KN/EN 61000-3-3/61000-3-11	IEC 61000-3-3/61000-3-11 <sup>2</sup>
KN/ EN 61000-4-2 to -6	IEC 61000-4-2 to -6
KN/EN 61000-4-8 & 9	IEC 61000-4-8 & 9
KN/EN 61000-4-11	IEC 61000-4-11 <sup>2</sup>
KN/CISPR 11	CISPR 11 <sup>2</sup>
KN/CISPR 13	CISPR 13 <sup>2</sup>
KN/CISPR 15	CISPR 15 <sup>2</sup>
KN/CISPR 22	CISPR 22 <sup>2</sup>
KN/CISPR 24	CISPR 24
KN/CISPR 32	CISPR 32 <sup>2</sup>
KN 35	KN 35 <sup>2</sup>
KN/EN 60601-1-2	IEC 60601-1-2
KN/EN 14-1 & 2	CISPR 14-1 & 2
KN/EN 16-1-1 to -5	CISPR 16-1-1 to -5
KN/EN 16-2-1 to -5	CISPR 16-2-1 to -5
KN/EN 301 489-01 to -26	IEC 301 489-01 to -26
KN/EN 60945	IEC 60945



KN/EN 60974 IEC 60974  
KN/EN 61000-6-1 through 4 IEC 61000-6-1 through 4

**United States**

**Description of Standard**

ANSI C63.4.2014<sup>2</sup> American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

ANSI C63.10:2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Device

ANSI C63.17 American National Standards for methods of measurement of the electromagnetic and operational compatibility of unlicensed personal communications services (UPCS) Devices.

EIA/TIA-603 Land mobile FM or PM communications equipment measurement and performance standards

FCC 47 CFR Part 2 Frequency Allocations and Radio Treaty Matters; General Rules and Regulations

FCC 47 CFR Part 11 Emergency alert system (EAS)

FCC 47 CFR Part 15<sup>2</sup> Radio Frequency Devices

FCC 47 CFR Part 18<sup>2</sup> Industrial, Scientific, and Medical Equipment  
(using FCC MP-5)

FCC 47 CFR Part 22 Public mobile services

FCC 47 CFR Part 24 Personal communications services

FCC 47 CFR Part 25 Satellite communications

FCC 47 CFR Part 90 Private Land Mobile Radio Services

FCC 47 CFR Part 95 Personal radio services

FCC 47 CFR Part 97 Amateur radio services

FCC MP-5<sup>2</sup> Methods of Measurements of Radio Noise Emissions from ISM equipment

MIL-STD-461F Requirements for the control of electromagnetic interference characteristics of subsystems and equipment. Restricted to following: CE101, CE102, CE106, RE101, RE102, and RE103.

<b>Singapore</b>	<b>Description of Standard</b>
IMDA TS SRD	Technical specification for short range devices
IMDA TS AR	Technical specification for amateur radio equipment
IMDA TS WBA	Technical specification for wireless broadband access (WBA) equipment
IMDA TS LMR	Technical specification for land mobile radio equipment
IMDA TS RPG	Technical specification for radio pagers (for public paging service)
IMDA TS CBS	Technical specification for cellular base station and repeater system
IMDA TS UWB	Technical specification for ultra-wideband (UWB) devices
IMDA TS EMC	EMC requirements for telecommunication equipment
IMDA TS GMPCS	Technical specification for global mobile personal communication by satellite (GMPCS) terminals
<b>Medical Standards</b>	<b>Description of Standard (EMC -Requirements and tests only)</b>
IEC/EN 60601-1-2	Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance

<sup>1</sup> *This accreditation covers testing performed at the main laboratory listed above, and the satellite laboratory listed below:*

UBC Malcolm Knapp Research Forest  
QAI Laboratories EMC Test Facility  
14500 Silver Valley Road  
Maple Ridge, British Columbia, V4R 2R3  
Canada

**Australia/New Zealand**

**Description of Standard**

AS/NZS 11:2011	Industrial, Scientific and Medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics
AS/NZS 12:2013	Vehicles, boats and internal combustion engine - Limits and methods of measurements for the protection of off-board receivers
AS/NZS 13:2012	Sound and television broadcast receivers and associated equipment. Radio disturbance characteristics; Limits and methods of measurement
AS/NZS 14.1:2013	Requirements for household appliances, electric tools and similar apparatus - Emission [ <i>excluding clicks</i> ]
AS/NZS 22:2009	Information technology equipment - Radio disturbance characteristics

**Canada**

**Description of Standard**

ICES-001	Industrial, Scientific, and Medical (ISM) Radio Frequency Generators
ICES-003	Information Technology Equipment (ITE) - Limits and Methods of Measurement
RSS-Gen	General Requirements and Information for the Certification of Radio Apparatus
RSS-210	License-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

**International & European**

**Description of Standard**

IEC/EN 55011 <sup>2</sup>	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurements
IEC/EN 55012 <sup>2</sup>	Vehicles, boats and internal combustion engine - Radio disturbance characteristics - Limits and methods of measurements for the protection of off-board receivers ( <i>excluding tests on Boats, and excluding the Insertion Loss Test Methods detailed in Informative Annex E of CISPR 12</i> );
IEC/EN 55013 <sup>2</sup>	Sound and television broadcast receivers and associated equipment. Radio disturbance characteristics. Limits and methods of measurement

IEC/EN 55014-1 <sup>2</sup>	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
IEC/EN 55022 <sup>2</sup>	Information technology equipment - Radio disturbance characteristics. Limits and methods of measurement
IEC/EN 61000-3-2 <sup>2</sup>	Harmonic current emissions (equipment input current $\leq 16$ A per phase)
IEC/EN 61000-3-3 <sup>2</sup>	Voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rat current $\leq 16$ A per phase and not subject to conditional connection
IEC/EN 301 489-01	Electromagnetic compatibility (EMC) standards for radio equipment and services
AS/NZS CISPR 11:2011/ EN55011 <sup>2</sup>	Industrial, scientific and medical (ISM) radio-frequency equipment Electromagnetic disturbance characteristics - Limits and methods of measurement
AS/NZS CISPR 12:2013/ EN55012 <sup>2</sup>	Vehicles, boats and internal combustion engine - Radio disturbance characteristics - Limits and methods of measurements for the protection of off-board receivers ( <i>excluding tests on Boats, and excluding the Insertion Loss Test Methods detailed in Informative Annex E of CISPR 12</i> );
AS/NZS CISPR 13:2012/ EN55013 <sup>2</sup>	Sound and television broadcast receivers and associated equipment – Radio disturbance characteristics - Limits and methods of measurement
AS/NZS CISPR 14-1&2:2013/ EN55014-1&2	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1&2: Emission/Immunity
AS/NZS CISPR 22:2009/ EN55022 <sup>2</sup>	Information technology equipment - Radio disturbance characteristics- Limits and methods of measurement
ETSI EN 300 328	Electromagnetic compatibility and Radio Spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
IEC/EN 300 328-1 & 2	Wideband transmission systems - Data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques
IEC/EN 301 489-01	Electromagnetic compatibility (EMC) standards for radio equipment and Services

<b>Japan</b>	<b>Description of Standard</b>
VCCI V-3 ( <i>up to 6 GHz</i> )	Technical Requirements [table top equipment only for testing above 1 GHz]
VCCI V-15	Guidelines for Measuring Conducted EMI at Telecommunication Ports
Article 2 paragraph 1 Item 19 = 2.4 GHz	Wideband Communications; - Japanese Radio standard
Article 2 paragraph 1 Item 19-2 = 2.4 GHz	WLAN - High Channel; - Japanese Radio standard
Article 2 paragraph 1 Item 19-3 = 5 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-5 = 4.9 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-6 = 4.9 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-9 = 4.9 GHz	WLAN; - Japanese Radio standard
Article 2 paragraph 1 Item 19-10 = 4.9 GHz	WLAN; - Japanese Radio standard

<b>Republic of Korea</b>	<b>Reference Standard</b>
KN/EN 61000-3-2/61000-3-12	IEC 61000-3-2/61000-3-12 <sup>2</sup>
KN/EN 61000-3-3/61000-3-11	IEC 61000-3-3/61000-3-11 <sup>2</sup>
KN/CISPR 11	CISPR 11 <sup>2</sup>
KN/CISPR 13	CISPR 13 <sup>2</sup>
KN/EN 14-1	CISPR 14-1
KN/CISPR 22	CISPR 22 <sup>2</sup>
KN/EN 301 489-01	IEC 301 489-01

<b>United States</b>	<b>Description of Standard</b>
FCC	FCC Part 15 Subpart C 15.231, 15.247, and 12.205 (using ANSI C63.4:2003, 2009, and 2014)
FCC 47 CFR Part 15B/C	Radio Frequency Devices
FCC 47 CFR Part 18	Industrial, Scientific, and Medical Equipment
ANSI C63.4 (2003, 2009, 2014) <sup>2</sup>	American National Standard for Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

**United States****Description of Standard**FCC MP-5 <sup>2</sup>

Methods of Measurements of Radio Noise Emissions from ISM equipment

<sup>2</sup> *This laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories for these tests.*

**On the following systems and products:**

Wireless/radio devices and electromechanical and electronic equipment for: information technology (ITE); industrial, scientific, and medical (ISM) applications; residential service; household appliances, small tools and similar apparatus; receivers; licensed and unlicensed transmitters/transceivers; UPS systems; alarm/security systems; central office telephone equipment; heavy industrial equipment; marine equipment; consumer audio/video equipment; professional audio/video equipment; arc welders; PLC controllers; lifts, escalators and passenger conveyers; land vehicles and electrical subassemblies/components for: commercial and military land vehicles, commercial aircraft, military and naval ships, submarines and small craft, commercial ships, yachts and small craft; and scientific and laboratory apparatus.



# Accredited Laboratory

A2LA has accredited

## QAI LABORATORIES LTD.

*Burnaby, British Columbia, Canada*

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 8 January 2009).



Presented this 22<sup>nd</sup> day of July 2016.

A handwritten signature in blue ink, appearing to read "J. C. Burt".

Senior Director of Quality & Communications  
For the Accreditation Council  
Certificate Number 3657.02  
Valid to October 31, 2018

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