



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

LabTest Certification, Inc.
3128, 20800 Westminster HWY
Richmond B.C. V6V 2W3

Fulfills the requirements of

ISO/IEC 17025:2017

And

U.S. Federal Communication Commission (FCC) EMC and Telecommunications
(EC&T) Testing Designation Program

Recognition of Telecommunications Testing - Innovation, Science, and Economic
Development (ISED) Canada

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 04 March 2022

Certificate Number: AT-2033



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

LabTest Certification, Inc.

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TESTING

Valid to: **March 04, 2022**

Certificate Number: **AT-2033**

Testing performed in support of FCC approval procedures for Certification

| Type of Device Examples | Scope of Accreditation | Supporting FCC Guidance | Comments / Maximum Frequency Tested |
|--|---|-------------------------|-------------------------------------|
| Unintentional Radiators (FCC Part 15, Subpart B) | ANSI C63.4-2014 | - | 40 GHz |
| Industrial, Scientific, and Medical Equipment (FCC Part 18) Consumer ISM equipment | FCC MP-5, (February 1986) | - | 40 GHz |
| Intentional Radiators (FCC Part 15 Subpart C) | ANSI C63.10-2013 | - | 40 GHz |
| U-NII without DFS Intentional Radiators (FCC Part 15, Subpart E) Unlicensed National Information Infrastructure Devices (U-NII without DFS) | ANSI C63.10-2013 | KDB Publication 789033 | 40 GHz |
| U-NII with DFS Intentional Radiators (FCC Part 15 Subpart E) Unlicensed National Information Infrastructure U-NII) Devices with Dynamic Frequency Selection (DFS) | FCC KDB Publication 905462 D02 UNII DFS Compliance Procedures New Rules v02 (April 8, 2016) | - | 40 GHz |
| UWB Intentional Radiators (FCC Part 15, Subpart F) Ultra-wideband Operation | ANSI C63.10-2013 | - | 40 GHz |
| BPL Intentional Radiators (FCC Part 15, Subpart G) Access Broadband Over Power Line (Access BPL) | ANSI C63.10-2013 | - | 40 GHz |
| White Space Device Intentional Radiators (FCC Part 15, Subpart H) White Space Devices | ANSI C63.10-2013 | - | 40 GHz |

Testing performed in support of FCC approval procedures for Certification

| Type of Device Examples | Scope of Accreditation | Supporting FCC Guidance | Comments / Maximum Frequency Tested |
|--|---|--|-------------------------------------|
| Commercial Mobile Services (FCC Licensed Radio Service Equipment) Part 22 (cellular) Part 24 Part 25 (below 3 GHz) Part 27 | ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015 | KDB Publication 971168 | 40 GHz |
| General Mobile Radio Services (FCC Licensed Radio Service Equipment) [1] Part 22 (non-cellular) Part 90 (below 3 GHz) Part 95 (below 3 GHz) Part 97 (below 3 GHz) Part 101 (below 3 GHz) | ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015 | - | 40 GHz |
| Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) Part 96 | ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015 | KDB Publication 971168 KDB Publication 940660 | 40 GHz |
| Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) Part 80 Part 87 | ANSI/TIA-603-E or ANSI C63-26-2015 | - | 40 GHz |
| Microwave and Millimeter Bands Radio Services (FCC Licensed Radio Service Equipment) Part 25 Part 30 Part 74 Part 90 (above 3 GHz) Part 95 (above 3 GHz) Part 97 (above 3 GHz) Part 101 | ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015 | KDB Publication 653005 | 40 GHz |
| Broadcast Radio Services (FCC Licensed Radio Service Equipment) Part 73 Part 74 (below 3 GHz) | ANSI/TIA-603-E or TIA-102.CAAA-E-2016 or ANSI C63.26-2015 | - | 40 GHz |
| Signal Boosters (Part 20) Wideband Consumer signal boosters Provider-specific signal boosters Industrial signal boosters Signal Boosters (Section 90.219) | ANSI C63.26-2015 | KDB Publication 935210 D03, D04, and D05 [1] | 40 GHz |

Electromagnetic Compatibility

| Test Method | Test Specification(s) | Range | Comments |
|---|--|---|----------|
| Unintentional Radiators; Radiated and Conducted Emissions | ANSI C63.4-2003, ANSI C63.4-2009 ANSI C63.4:2014; FCC OST/MP-05 (1986); ICES-001(2006); ICES-002(2013); ICES-003(2016); ICES-005(2015); CISPR 16-2-1(2017); CISPR 16-2-3(2016); EN 55016-2-1(2014); EN 55016-2-3(2014); CISPR 11(2016); EN 55011(2016); AS/NZS CISPR 11(2016); KN 11 (RRA Announce 2016-79, Dec, 19, 2016); VCCI V-3 (up to 6 GHz); VCCI V-5; CNS 13438 | 9 kHz to 40 GHz | - |
| Harmonics Emissions | IEC 61000-3-2 (2014); EN 61000-3-2 (2014); AS/NZS 61000-3-2(2014); KN 61000-3-2 (RRA Announce 2016-79, Dec, 19, 2016) IEC 61000-3-12 (2011), EN 61000-3-12 (2011) | - | - |
| Flicker Emissions | IEC 61000-3-3 (2013); EN 61000-3-3 (2013); AS/NZS 61000-3-3(2013); KN 61000-3-3 (RRA Announce 2016-79, Dec, 19, 2016) IEC 61000-3-11(2010), EN 61000-3-11(2010) | - | - |
| ESD Immunity Testing | IEC 61000-4-2(2008); EN 61000-4-2(2009); KN 61000-4-2 (RRA Announce 2016-79, Dec, 19, 2016) IEC 60255-22-2(2014), ISO 10605(2008) | - | - |
| RF Immunity Radiated Immunity | IEC 61000-4-3(2010); IEC 61000-4-20(2010); EN 61000-4-3(2010); EN 61000-4-20(2010); KN 61000-4-3 (RRA Announce 2016-79, Dec, 19, 2016), IEEE Std. C37.90.2 | Up to 18 GHz 30V/m @ 3m 200V/m @ 1m | - |
| EFT | IEC 61000-4-4 (2012); EN 61000-4-4(2012); KN 61000-4-4 (RRA Announce 2016-79, Dec, 19, 2016) | | - |

Electromagnetic Compatibility

| Test Method | Test Specification(s) | Range | Comments |
|---------------------------------------|--|-------|----------|
| Surge | IEC 61000-4-5 (2017); EN 61000-4-5 (2014); KN 61000-4-5 (RRA Announce 2016-79, Dec, 19, 2016) | | - |
| Conducted Immunity | IEC 61000-4-6 (2013); EN 61000-4-6 (2014); KN 61000-4-6 (RRA Announce 2016-79, Dec, 19, 2016) IEC 61000-4-16(2015) | - | - |
| Low Frequency Magnetic Immunity | IEC 61000-4-8 (2009); EN 61000-4-8(2010); KN 61000-4-8 (RRA Announce 2016-79, Dec, 19, 2016) | - | - |
| Pulse Field Immunity | IEC 61000-4-9(2016), EN 61000-4-9(2016) KN 61000-4-9 (2017) | - | - |
| Damped Oscillatory Field | IEC 61000-4-10(2016), EN 61000-4-10(2017) | - | - |
| Power Dips and Interrupts | IEC 61000-4-11 (2017); EN 61000-4-11 (2004); KN 61000-4-11 (RRA Announce 2016-79, Dec, 19, 2016) | - | - |
| Ring Wave Immunity | IEC 61000-4-12 (2017), EN 61000-4-12 (2017) | - | - |
| Harmonics and Interharmonics | IEC 61000-4-13 (2015), EN 61000-4-13 (2009) | - | - |
| Damped oscillatory wave immunity test | IEC 61000-4-18 (2010), EN 61000-4-18(2007) | - | - |
| Generic EMC Standards | IEC 61000-6-1(2016), IEC 61000-6-3(2010) EN 61000-6-1(2007) EN 61000-6-3(2017/AC:2012) AS/NZS 61000.6.3(2012) KN 61000-6-1 (RRA Announce 2016-79, Dec, 19, 2016) KN 61000-6-3 (RRA Announce 2016-79, Dec, 19, 2016) IEC 61000-6-2(2016), IEC 61000-6-4(2018) EN 61000-6-2(2005), AS/NZS 61000.6.4(2012) EN 61000-6-4(2007/A1:2011) KN 61000-6-2 (RRA Announce 2016-79, Dec, 19, 2016) KN 61000-6-4 (RRA Announce 2016-79, Dec, 19, 2016) | - | - |

Electromagnetic Compatibility

| Test Method | Test Specification(s) | Range | Comments |
|---|---|-------|----------|
| Product Type EMC Standards Multimedia Equipment | CISPR 22 (2010), CISPR 24(2010/A1:2015) CISPR 32(2015), CISPR 35(2016) EN 55022(2010), EN55024 (2010) EN 55032(2015), EN 55035(2017) AS/NZS CISPR 22(2010) AS/NZS CISPR 32(2013) AS/NZS CISPR 24(2009) KN35 (RRA Announce 2016-79, Dec, 19, 2016) TCVN 7189:2009, TCVN 7600:2010 TCVN 7317:2003 | - | - |
| Product Type EMC Standards Household appliances | CISPR 14-1(2016), EN 55014-1 (2017) CISPR 14-2(2015), EN55014-2(2015) AS/NZS CISPR 14-1(2013) KN 14-1(RRA Announce 2016-79, Dec, 19, 2016) | - | - |
| Product Type EMC Standards Measurement Control & Laboratory | IEC 61326-1(2012), IEC 61326-2(2012) EN 61326-1(2013), EN 61326-2(2013) | - | - |
| Product Type EMC Standards Medical Devices | IEC 60601-1-2(Ed3 & Ed.4) EN 60601-1-2(2015) KN 60101-1-2(RRA Announce 2016-79, Dec, 19, 2016) | - | - |
| Product Type EMC Standards, Lifts, escalators and moving walks | EN 12015(2014), EN 12016(2013) | - | - |
| Product Type EMC Standards, Alarm systems | EN 50130-4(2011) | - | - |
| Product Type EMC Standards Audio, video, audio-visual and entertain-ment; lighting control apparatus for professional use | EN 55103-1(2012), EN 55103-2(2009) | - | - |
| Product Type EMC Standards Signaling on low-voltage electrical installation | EN50065-1(2011), EN50065-2-1(2003) EN50065-2-2(2003), EN50065-2-3(2003) | - | - |



Electromagnetic Compatibility

| Test Method | Test Specification(s) | Range | Comments |
|---|--|-------|----------|
| Product Type EMC Standards Lighting and similar equipment | CISPR 15(2013/A1 :2015) EN 55015(2013), IEC 61547(2009) EN 61547(2009) KN 61547(RRA Announce 2016-79, Dec, 19, 2016) | - | - |
| Product Type EMC Standards Gases, toxic gases or oxygen | EN 50270(2015) | - | - |
| Product Type EMC Standards, Electricity metering equipment (a.c.) | IEC 62053-22(2003/A1:2016) EN 62053-22(2003) | | |
| Product Type EMC Standards, Railway applications | EC 62236-1, 2, 3, 4, 5(2008) EN 50121-1,2,3,4,5(2015) | | |
| Product Type EMC Standards Automotive | CISPR 12(2009), CISPR 25(2016) EN 55012(2012), EN 55025(2017) AS/NZS CISPR 12(2013), ISO 7637-2 ISO 11452-1(2015), ISO 11452-2(2019) ISO 11452-4(2015), ISO 11452-7(2015) ISO 11452-8(2015), ISO 11452-9(2015) ISO 11452-10(2015), ISO 10605(2014) UNECE R10:2014 | - | - |
| Product Type EMC Standards Maritime | IEC 60945(2002) EN 60945(2002) LLOYD'S REGISTE TYPE APPROVAL SYSTEM Test Specification Number 1 DNVGL-CG-0339 | - | - |
| Product Type EMC Standards UPS and Power Units | IEC 61800-3(2017) EN 61800-3(2004) IEC 62040-2(2016) EN 62040-2(2006) AS 62040-2(2008) | - | - |
| Military Conducted Emissions | MIL-STD-461E, F, G: Methods CE101, CE102, CE106 MIL-STD-462D Methods CE101, CE102, CE106 MIL-STD-462 Methods CE01, CE02, CE03, CE06 | - | - |



Electromagnetic Compatibility

| Test Method | Test Specification(s) | Range | Comments |
|-----------------------------------|--|-------|----------|
| Military Radiated Emissions | MIL-STD-461E, F, G: Methods RE101, RE102 and RE103 MIL-STD-462D: Methods RE101, RE102 and RE 103 MIL-STD-462: Methods RE01, RE02 and RE03 | - | - |
| Military Conducted Susceptibility | MIL-STD-461E, F, G: Methods CS101, CS 103, CS104, CS105, CS109, CS114, CS115, CS116 MIL-STD- 462D: Methods CS101, CS103, CS114, CS115, CS116; CS118 MIL-STD-462: Methods, CS01, CS02, CS03, CS04, CS05, CS06, CS08 | - | - |
| Military Radiated Susceptibility | MIL-STD-461/462D: Methods RS101, RS103 MIL-STD-461E, F, G: Methods RS101, RS103 | - | - |

Radio


| Test Method | Test Specification(s) | Range | Comments |
|-----------------------|--|-------|----------|
| Australia/New Zealand | AS/NZS 4268(2012) AS/NZS 4295(2015) AS/NZS 4365(2011) | - | - |
| Europe | ETSI EN 300 113, v2.2.1(2016-12) ETSI EN 300 220-1, v3.1.1(2017-02) ETSI EN 300 220-2, v3.2.0(2017-09) ETSI EN 300 328, v2.2.0(2017-11) ETSI EN 300 330, v2.1.1(2017-02) ETSI EN 300 390, v2.1.1(2016-03) ETSI EN 300 440, v2.2.0(2017-09) ETSI EN 301 489-1, v2.2.0(2017-03) ETSI EN 301 489-3, v2.2.1(2017-03) ETSI EN 301 489-4, v3.2.0(2017-03) ETSI EN 301 489-5, v2.2.0(2017-03) ETSI EN 301 489-11, v1.3.1(2006-05) ETSI EN 301 489-13, v1.2.1(2002-08) ETSI EN 301 489-17, v3.2.0(2017-03) ETSI EN 301 489-34, v2.1.1(2017-04) | - | - |

Radio

| Test Method | Test Specification(s) | Range | Comments |
|-------------|--|-------|----------|
| Canada | RSS-Gen (2014), RSS-111(2014), RSS-112(2008), RSS-117(2016), RSS-119(2015), RSS-123(2015), RSS-125(2000), RSS-127(2009), RSS-130(2013), RSS-131(2017), RSS-132(2013), RSS-133(2013), RSS-134(2016), RSS-135(2009), RSS-137(2009), RSS-139(2015), RSS-141(2010), RSS-142(2013), RSS-170(2015), RSS-181(1971), RSS-182(2012), RSS-191(2008), RSS-192(2008), RSS-194(2007), RSS-195(2014), RSS-210(2016), RSS-211(2015), RSS-213(2015), RSS-215(2009), RSS-216(2016), RSS-220(2009), RSS-236(2012), RSS-238(2013), RSS-243(2010), RSS-244(2013), RSS-247(2017) with DFS RSS-251(2014), RSS-287(2014), RSS-288(2012), RSS-310(2015), RSS-102 (NS-Calculation only) | - | - |
| Hongkong | HKCA 1039 Issue 6 June 2015; HKCA 1042 Issue 2 Feb 2003; HKCA 1049 Issue 1 April 2005; HKCA 1020 Issue 7 Nov 2011; HKCA 1043 Issue 4 June 2008; HKCA 1056 Issue 1 May 2011 | - | - |
| Vietnam | QCVN 18:2014/BTTTT, QCVN 44:2011/BTTTT QCVN 54:2011/BTTTT, QCVN 55:2011/BTTTT QCVN 65:2013/BTTTT, QCVN 73:2013/BTTTT QCVN 74:2013/BTTTT, QCVN 96:2015/BTTTT | - | - |
| Mexico | NOM-084sct1-2002, NOM-088/1-SCT1-2002 NOM-088/2-SCT1-2002 NOM-EM-016-SCF1-2015 | - | - |
| South Korea | MSIT Public Notification 2019-74, Aug 30, 2019 RRA Public Notification 2019-9, Jun 3, 2019 | - | - |

Notes:

- For Signal Boosters (Part 20) accreditation is required for Commercial Mobile Services (FCC Licensed Radio Services Equipment) and for Signal Booster (Section 90.219) accreditation is required for General Mobile Radio Services (FCC Licensed Radio Service Equipment).
- This scope is formatted as part of a single document including Certificate of Accreditation No. AT-2033.



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