



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

### Washington Laboratories, Ltd.

4840 Winchester Blvd., Suites 5 and 6  
Frederick, Maryland 21703

Fulfills the requirements of

### ISO/IEC 17025:2017

and

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

and the

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

and the

FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety  
and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and  
Laboratory Medical Equipment

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](http://www.anab.org)

Jason Stine, Vice President

Expiry Date: 30 June 2024

Certificate Number: AT-1448



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

**U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T)  
Testing Designation Program <sup>2</sup>**

**Recognition of Telecommunications Testing - Innovation, Science, and Economic  
Development (ISED) Canada <sup>3</sup>**

**FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic  
Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical  
Systems, and Laboratory Medical Equipment <sup>4</sup>**

### Washington Laboratories, Ltd.

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## TESTING

Valid to: **June 30, 2024**

Certificate Number: **AT-1448**

### Testing performed in support of FCC approval procedures for Certification <sup>2</sup>

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C63.4-2014	-	220 GHz
Industrial, Scientific, and Medical Equipment (FCC Part 18) Consumer ISM equipment	FCC MP-5, (February 1986)	-	125 GHz
Intentional Radiators (FCC Part 15, Subpart C)	ANSI C63.10-2013	-	220 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	50 GHz
UWB Intentional Radiators (FCC Part 15, Subpart F) Ultra-wideband Operation	ANSI C63.10-2013	-	220 GHz

**Testing performed in support of FCC approval procedures for Certification <sup>2</sup>**

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
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
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	220 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	-	220 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	-	220 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	220 GHz

**Testing performed in support of FCC approval procedures for Certification <sup>2</sup>**

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments
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	-	220 GHz

**Testing to Meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada <sup>3</sup>**

Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-GEN	Issue 5, April 2018 Amendment 1, March 2019 Amendment 2, February 2021	General Requirements for Compliance of Radio Apparatus	-
RSS-102	Issue #5 March 2015, Amendment 1, February - 2021	Radio Frequency (RF) Exposure compliance of Radiocommunications Apparatus (All Frequency Bands)	Nerve Stimulation (NS) - Measurement
RSS-102	Issue #5 March 2015, Amendment 1, February - 2021	Radio Frequency (RF) Exposure compliance of Radiocommunications Apparatus (All Frequency Bands)	RF Exposure (RF Exp) - Measurement
RSS-111	Issue #5, September 2014	Broadband Public Safety Equipment Operating in the Band (4 940 to 4 990) MHz	-
RSS-112	Issue #1, February 2008	Land Mobile and Fixed Equipment Operating in the Band (1 670 to 1675) MHz	-
RSS-117	Issue #3, January 2016, Amendment June 2021	Land and Coast Station Transmitters Operating in the Band (200 to 535) kHz	-
RSS-119	Issue #12, May 2015, Amendment April 2022	Land Mobile and Fixed Equipment Operating in the Frequency Range (27.41 to 960) MHz	-
RSS-123	Issue #4, August 2019	Licensed Wireless Microphones	-
RSS-125	Issue #3, June 2020	Land Mobile and Fixed Equipment Operating in the Frequency Range (1.705 to 30) MHz	-
RSS-127	Issue #1, August 2009	Air-Ground Equipment Operating in the Bands (849 to 851) MHz and (894 tot 896) MHz	-
RSS-130	Issue #2, February 2019	Equipment Operating in the Frequency Bands (617 to 652) MHz, (663 to 698) MHz, (698 to 756) MHz, and (777 to 787) MHz	-
RSS-131	Issue #4 December 2022	Zone Enhancers	-



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**Testing to Meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada<sup>3</sup>**

Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-132	Issue #4, January 2023	Cellular Telephone Systems Operating in the Bands (824 to 849) MHz and (869 to 894) MHz	-
RSS-133	Issue #6 January 2018, Amendment January 2018	2 GHz Personal Communications	-
RSS-134	Issue #2, February 2016	900 MHz Narrowband Personal Communication Service	-
RSS-135	Issue #2, June 2009	Digital Scanner Receivers	-
RSS-137	Issue #2, February 2009	Location and Monitoring Service in the Band (902 to 928) MHz	-
RSS-139	Issue #4, September 2022	Advanced Wireless Services (AWS) Equipment Operating in the Bands (1 710 to 1 780) MHz and (2 110 to 2 180) MHz	-
RSS-141	Issue #2, June 2010	Aeronautical Radiocommunication Equipment in the Frequency Band (117.975 to 137) MHz	-
RSS-142	Issue #5, April 2013	Narrowband Multipoint Communication Systems in the Bands (1 429.5 to 1 432) MHz	-
RSS-170	Issue #4, September 2022	Mobile Earth Stations (MESs) and Ancillary Terrestrial Component (ATC) Equipment Operating in the Mobile-Satellite Service Bands (2 483.5 to 2 500) MHz	-
RSS-181	Issue #2 August 2019, Amendment February 2020	Coast and Ship Station Equipment Operating in the Maritime Service in the Frequency Range (1 605 to 28 000) kHz	-
RSS-182	Issue #6, June 2021	Maritime Radio Transmitters and Receivers in the Band (156 to 162.5) MHz	-
RSS-191	Issue #3, April 2008, Note January 2020	Local Multipoint Communication Systems in the Band (25.35 to 28.35) GHz; Point-to-Point and Point-to-Multipoint Broadband Communication Systems in the Bands (24.25 to 24.45) GHz and (25.05 to 25.25) GHz; and Point-to-Multipoint Broadband Communications in the Band (38.6 to 40) GHz	-
RSS-192	Issue #4, May 2020	Flexible Use Broadband Equipment Operating in the Band (3 450 to 3 650) MHz	-



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**Testing to Meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada<sup>3</sup>**

Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-194	Issue #1, October 2007	Fixed Wireless Access Equipment Operating in the Band (953 to 960) MHz	-
RSS-195	Issue #2, April 2014	Wireless Communication Service (WCS) Equipment Operating in the Bands (2 305 to 2 320) MHz and (2 345 to 2 360) MHz	-
RSS-210	Issue #10 December 2019, Amendment April 2020	License-Exempt Radio Apparatus: Category I Equipment	-
RSS-211	Issue #1, March 2015	Level Probing Radar Equipment	-
RSS-215	Issue #2, June 2009	Analogue Scanner Receivers	-
RSS-216	Issue #2, January 2016	Wireless Power Transfer Devices	-
RSS-220	Issue #1 March 2009, Amendment 1, July 2018	Devices Using Ultra-Wideband (UWB) Technology	-
RSS-236	Issue #2, September 2022	General Radio Service Equipment Operating in the Band (26.960 to 27.410) MHz (Citizens Band)	-
RSS-238	Issue #1, July 2013	Shipborne Radar in the (2 900 to 3 100) MHz and (9 225 to 9 500) MHz Bands	-
RSS-243	Issue #3, February 2010	Medical Devices Operating in the (401 to 406) MHz Frequency Band	-
RSS-244	Issue #1, June 2013	Medical Devices Operating in the Band (413 to 457) MHz	-
RSS-247	Issue #2 February 2017, Note Mar 2017	Digital Transmission Systems (DTS), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Networks (LE-LAN) Devices	Without DFS
RSS-248	Issue #1 November 2021	Radio Local Area Network (RLAN) Devices Operating in the (5 925 to 7 125) MHz Band	Per ISED notice 2021-DRS0011
RSS-251	Issue 2, July 2018	Vehicular Radar and Airport Fixed or Mobile Radar in the (76 to 81) GHz Frequency Band	-
RSS-287	Issue #2, March 2014, Amendment June 2021	Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Beacons (MSLD)	-

**Testing to Meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada <sup>3</sup>**

Test Method (Standard)	Issue, Date, Amendment	Test Specification(s)	Comments
RSS-288	Issue #1, January 2012	Global Maritime Distress and Safety System (GMDSS)	-
RSS-310	Issue #5, January 2020	License-Exempt Radio Apparatus: Category II Equipment	-
SPR-002	Second edition, October 2022	Supplementary Procedure for Assessing compliance with RSS-102 Nerve Stimulation Exposure Limits	-

**Testing to meet the requirements of ANAB Supplemental Requirements SR 2437, FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment <sup>4</sup>**

Product Type	Specific Tests or Properties Measured	Specification, Standard, Method, or Technique Used	Comments
Medical Electrical Equipment + Medical Systems	Electromagnetic disturbances	19-8, IEC 60601-1-2 Edition 4.0 2014-02	-
Medical Electrical Equipment + Medical Systems	Electromagnetic disturbances	19-36, IEC 60601-1-2 Edition 4.1 2020-09 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Oxygen concentrator equipment	1-148, ISO 80601-2-69 Second edition 2020-11	-
Medical Electrical Equipment + Medical Systems	Electromagnetic immunity	19-19, IEC TR 60601-4-2 Edition 1.0 2016-05	-
Medical Electrical Equipment + Medical Systems	Usability	5-132, IEC60601-1-6 Edition 3.2 2020-07 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Usability	5-89, IEC 60601-1-6 Edition 3.1 2013-10	-
Medical Electrical Equipment + Medical Systems	Alarm systems in medical electrical equipment and medical electrical systems	5-76, IEC 60601-1-8 Edition 2.1 2012-11	-
Medical Electrical Equipment + Medical Systems	Alarm systems in medical electrical equipment and medical electrical systems	5-131 IEC 60601-1-8 Edition 2.2 2020-07 CONSOLIDATED VERSION	-



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**Testing to meet the requirements of ANAB Supplemental Requirements SR 2437, FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment <sup>4</sup>**

Product Type	Specific Tests or Properties Measured	Specification, Standard, Method, or Technique Used	Comments
Medical Electrical Equipment + Medical Systems	Physiologic closed-loop controllers	19-9 IEC 60601-1-10 Edition 1.1 2013-11	-
Medical Electrical Equipment + Medical Systems	Medical electrical equipment and medical electrical systems used in the home healthcare environment	19-14, IEC 60601-1-11 Edition 2.0 2015-01	-
Medical Electrical Equipment + Medical Systems	Medical electrical equipment and medical electrical systems used in the home healthcare environment	19-38, IEC 60601-1-11 Edition 2.1 2020-07 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Medical electrical equipment and medical electrical systems used in the home healthcare environment	19-16, ANSI AAMI HA60601-1-11:2015	-
Medical Electrical Equipment + Medical Systems	Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment	19-39, IEC 60601-1-12 Edition 1.1 2020-07 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment	19-15, IEC 60601-1-12 Edition 1.0 2014-06	-
Medical Electrical Equipment + Medical Systems	Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements	19-34, IEC 61010-1 Edition 3.1 2017-01 CONSOLIDATED VERSION	-
Medical Electrical Equipment + Medical Systems	Medical Electrical Equipment – Part 1: General Requirements for Basic safety and essential performance.	19-4, ANSI AAMI ES60601-1:2005/(R)2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012 (Consolidated Text)	-





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**Electromagnetic Compatibility**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Emissions Standards	Radiated and Conducted Emissions (40 Hz to 30 GHz)	FCC Part 15 B/C/D/E using, ANSI C63.4 (2009), ANSI C63.4 (2014) & ANSI C63.17 (2013); ANSI C63.10 (2014); FCC Part 18 using FCC OST/MP-05 (1986); FCC Report and Order ET Docket 98-153(FCC 02-48); Procedures IDB 20040420-001; Procedures in IDB 20021108-001 with FCC Method 47 CFR Part 15, Subpart F: DA 00-705 (March 30, 2000) and KDB Pub. No.558074, KDB Pub. No. 200433; DA 02-2138; CISPR 16-1-4 2007 +A1 2007; CISPR 16-1-4:2010 ; CISPR 22 (1997) +A1, (2000) + A2, (2002), CISPR 22 (2005); CISPR 22 (2008) ; EN 55022 (1998) +A1, (2000) + A2, (2003), EN 55022 (2006), +A1 (2007); EN 55022:2010 ; EN 55022:2010 + AC:2011 ; EN55032:2015;
Emissions Standards	Radiated and Conducted Emissions (40 Hz to 30 GHz)	AS/NZS CISPR 22; CAN/CSA-CEI/IEC CISPR 22; CISPR 32:2015; CNS 13438(up to 6GHz); KS C 9832:2019; CISPR 11 (1997)+A1, (1999)+A2, (2002); CISPR 11: 2004-06;CISPR 11:2009/A1:2010; EN 55011 (1998)+A1, (1999)+A2, (2002); EN 55011:2009 / A1:2010; EN 55011:2016 AS/NZS CISPR 11; CNS 13803; KS C 9811:2019 Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020
Emissions Standards	Harmonics Emissions	IEC 61000-3-2 (2000) +A1, (2001) +A2, (2004), IEC 61000-3-2 (2005); IEC 61000-3-2 Ed 4.0: 2014; EN 61000-3-2 (2000) +A2, (2005), + A1:2008; EN 61000-3-2:2006 + A1:2009 + A2:2009; EN 61000-3-2 (2014); AS/NZS 61000-3-2; KN 61000-3-2
Emissions Standards	Flicker Emissions	IEC 61000-3-3 (1994)+A1, (2001)+A2, (2005), 2008, 2013; EN 61000-3-3 (1995)+A1, (2001)+A2, (2005), 2008, 2013; AS/NZS 61000-3-3; KN 61000-3-3

**Electromagnetic Compatibility**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Emissions Standards	Product Specific Emissions	<p>IEC 61000-6-3; EN 61000-6-3; AS/NZS 61000.6.3; IEC 61000-6-4; EN 61000-6-4; AS/NZS 61000.6.4; CISPR 14-1 (2000) +A1, (2001) +A2, (2002), (excluding measurement of clicks); CISPR 14-1: 2005-11(excluding measurement of clicks); EN 55014-1 (2000)+A1, (2001)+A2, (2002), EN 55014-2:2021 (excluding measurement of clicks); AS/NZS CISPR 14-1 (excluding measurement of clicks); KS C 9814-1:2020; KS C 9814-2:2022, KS C 9610-6-3:2017; KS C 9610-6-4 2017; Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021 RRA Public Notification 2020-6, Sep 25, 2020; CNS 13783-1 (2001)+A12004, (excluding measurement of clicks); CISPR 25 Ed. 3.0 (2008-03), sections 6.2, 6.3 and 6.4 only CISPR 25: (2016), sections 6.3, 6.4 and 6.5 only</p>
Immunity Standards	ESD Immunity Testing	<p>IEC 61000-4-2 (1995)+A1, (1997)+A2, (1998); IEC 61000-4-2, Ed. 2.0 (2008-12) EN 61000-4-2 (1995)+A1,(1999)+A2, (2001), 2009; KN 61000-4-2 with (RRA Announce 2018-128, Dec 24, 2018)</p>
Immunity Standards	RF Immunity Radiated Immunity (Up to 6.0 GHz, 20 V/m)	<p>IEC 61000-4-3 (1995), A1(1998), A2(2000); IEC 61000-4-3 (2002)+A1, (2002); IEC 61000-4-3 (2006); IEC 61000-4-3, Ed. 3.0 (2006-02) + A1 (2007) + A2 (2010); EN 61000-4-3 (1996), A1(1998), A2 (2001); EN 61000-4-3 (2002)+A1, (2003); EN 61000-4-3 (2006) +A1 (2008) + A2 (2010) KN 61000-4-3 with (RRA Announce RRA Announce 2018-128, Dec 24,2018)</p>
Immunity Standards	EFT	<p>IEC 61000-4-4 (1995) +A1, (2000)+A2, (2001); IEC 61000-4-4 (2004); IEC 61000-4-4, Ed. 2.0 + A1 (2010); IEC 61000-4-4 Ed. 2.1 (2011); IEC 61000-4-4 Ed.3.0 (2012) EN 61000-4-4 (1995) +A1, (2001)+A2, (2002); EN 61000-4-4 (2004) +A1:2010; EN 61000-4-4:2012; KN 61000-4-4 with (RRA Announce 2018-128, Dec 24, 2018)</p>
Immunity Standards	Surge	<p>IEC 61000-4-5 (1995)+A1, (2000), IEC 61000-4-5 (2005);+ Corr 1 (2009); IEC 61000-4-5; Ed 3.0 (2014); EN 61000-4-5 (1995)+A1, (2001), EN 61000-4-5 (2006); EN 61000-4-5 (2014) KN 61000-4-5 with (RRA Announce 2018-128, Dec 24,2018)</p>



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**Electromagnetic Compatibility**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Immunity Standards	Conducted Immunity	IEC 61000-4-6 (1996) +A1, (2001), IEC 61000-4-6 (2003) +A1, (2004) +A2, (2006); IEC 61000-4-6 Ed. 3.0 (2008); IEC 61000-4-6 Ed. 4.0 (2013) EN 61000-4-6 (1996) +A1, (2001), EN 61000-4-6 (2007); EN 61000-4-6 (2009) ; EN 61000-4-6 (2014) KN 61000-4-6 with (RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	Low Frequency Magnetic Immunity	IEC 61000-4-8 (1993)+A1, (2000); IEC 61000-4-8 (2009) EN 61000-4-8 (1994)+A1, (2001);EN 61000-4-8:2010 KN 61000-4-8 with(RRA Announce 2014-38 June 23, 2014)
Immunity Standards	Pulse Magnetic	IEC 61000-4-9 (1993)+A1, (2000); IEC 61000-4-9, Ed 1.1 (2001-03); IEC 61000-4-9, Ed 2.0 (2016) EN 610000-4-9 (1993)+A1, (2001); EN 610000-4-9: (2016); KN 61000-4-9 with(RRA Announce RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	Damped Oscillatory Magnetic	IEC 61000-4-10 (1993)+A1, (2000); IEC 61000-4-10, Ed 1.1 (2001-03); IEC 61000-4-10, Ed 2.0 (2016) EN 61000-4-10 (1993)+A1, (2001); EN 61000-4-10: (2017)
Immunity Standards	Power Dips and Interrupts	IEC 61000-4-11 (1993)+A1, (2000); (2004); IEC 61000-4-11: (2004), +A1(2017) EN 61000-4-11 (1993)+A1, (2001); (2004) KN 61000-4-11with (RRA Announce 2018-128, Dec 24,2018)
Immunity Standards	Ring Wave Immunity	IEC 61000-4-12 (1995) +A1, (2000), IEC 61000-4-12 (2006); EN 61000-4-12 (1995) +A1, (2001), EN 61000-4-12 (2006)
Immunity Standards	Harmonics and Inter-harmonics	IEC 61000-4-13 Ed. 1.1 (2002) + A1 (2009); IEC 61000-4-13 Ed. 1.2 (2015) EN 61000-4-13 (2002) +A1 (2009) +A2(2016)
Immunity Standards	Immunity, Common Mode Disturbances	IEC 61000-4-16, Edition 1.1 (2002-07), IEC 61000-4-16, ed. 1.2 (2011-05), IEC 61000-4-16, Ed 2.0 (2015); EN 61000-4-16 (2016)
Immunity Standards	Immunity, Ripple on D.C. input power	IEC 61000-4-17:1999+A1:2001+A2:2008; EN 61000-4-17:1999, +A2(2009)
Immunity Standards	Damped oscillatory wave immunity test	IEC 61000-4-18 ed1.0 (2006);IEC 61000-4-18 Ed1.1 (2011); EN 61000-4-18 (2007)
Immunity Standards	Immunity, Power Frequency Variation I<16A	IEC 61000-4-28:1999, +A1(2001), +A2(2009) EN 61000-4-28: (2000), +A2(2009)
Immunity Standards	Immunity, Voltage dips, short interruptions and voltage variations on d.c. input power port	IEC 61000-4-29:2000; EN 61000-4-29:2001

**Electromagnetic Compatibility**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Immunity Standards	Product Specific Immunity	CISPR 24 (1997)+A1, (2001)+A2, (2002); CISPR 24 ed2.0 (2010-08) EN55024 (2010)+A1, (2015); IEC/EN 55025:2017; EN 55035:2017; CISPR 35:2016 AS/NZS CISPR 24:2002 +A1 (2009); KN 35 with RRA Public Notification 2018-19, Oct 19, 2018; RRA Announce 2018-128, Dec 24,2018 EN 61000-6-1; EN 61000-6-2; AS/NZS 4254.1; EN 55103-2; EN 50130-4; ISO 7637-2; KS C 9835:2019 KS C 9610-6-1:2019; KS C 9610-6-2:2019 Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020
Immunity Standards	Combined Emissions / Immunity Generic / Specific Standards	IEC 60601-1-2; EN 60601-1-2; KS C IEC 60601-1-2:2012 with Technical Requirements for Electromagnetic Compatibility RRA Public Notification 2021-3, Feb 8, 2021; Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb 8, 2021; RRA Public Notification 2020-6, Sep 25, 2020; IEC 61326; EN 61326 IEC 60533
Emissions & Immunity Guidance Documents	Combined Emissions / Immunity Generic Reference	Regulatory Guide 1.180 EPRI 102323 Rev 2, EPRI 102323 Rev 3, EPRI 102323 Rev 4; Technical Requirements for Telecommunications Terminal Equipment (RRA Public Notification 2021-36, Dec 23, 2021); Technical Requirements for Electromagnetic Compatibility (RRA Public Notification 2018-19, Oct 19, 2018); Test Methods for Electromagnetic Compatibility (RRA Announce 2018-128, Dec 24, 2018);
Electromagnetic Compatibility Directive (2014/30/EU)	2015/208 Annex XV (Agricultural and Forestry vehicles)	EN 61326-3-1 Ed. 2.0 b:2017, EN/ISO 13309, ISO 11454-1/2 ISO/TR 10605 Annex XV (17.2.2015)

**Product Safety**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Product Safety	Measurement Control and Lab Use	IEC 61010-1 (2001); IEC61010-1:2010; EN 61010-1 (2001); EN61010-1:2010 ; UL61010-1 (2008); UL61010-1 (2012); CAN/CSAC22.2 No.61010-1 (2004); CAN/CSA C22.2 No. 61010-1-2012

**Product Safety**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Product Safety	ITE	IEC 60950-1 (2005); IEC60950-1:2005+A1:2009+A2 :2013; IEC 60950 Ed 2 (2005) +A1+A2+A3+A4+A11; IEC 60950 Ed 2.2 (2013);EN 60950-1 (2006); EN60950-1:2006 + A11:2009; EN60950-1:2006 + A1:2010; EN 60950-1:2006+A11:2009+A1:2010+A12:2011 AS/NZS 60950-1 (2003); AS/NZS 60950.1 (2003) + A1 (2006) + A2 (2008) + A3 (2008) AS/NZS 60950.1 :2011; AS/NZS 60950.1: 2015; ANSI/UL 60950-1 (2007); ANSI/UL 60950-1 (2003) and CAN/CSA 22.2 No. 60950-1 CAN/CSA C22.2 60950-1-07 (2007) CAN/CSA C22.2 No. 60950-1-07 + A11:2009 + A1:2009 + A12:2011; CAN/CSA C22.2 60950-1-07 (R2012) EN 62368-1:2014/AC:2015; IEC 62368-1 Ed2-2014; IEC 62368-1 Ed3-2018; CSA/UL 62368-1:2014
Product Safety	Medical Equipment	IEC 60601-1:1988+ A1:1991 + A2:1995; IEC60601-1:2005+A1:2012+A2:2020 (ed 3.2); IEC 60601-1-11:2010; IEC 60601-1-11:2015, IEC 60601-2-10:1987 +A1:2001; IEC 60601-2-10: Ed 2.1: 2016, IEC 60601-2-40:1998; EN 60601-1: 1990 +A1:1993 + A2:1995; EN60601-1:2006+A1:2013; EN 60601-1-11:2010 ; EN 60601-1-11:2015; EN 60601-2-10 :2000 + A1:2001 ; EN 60601-2-10: 2015; EN 60601-2-40 :1998; UL60601-1 (2006); AAMI ES60601-1:2010
Product Safety	Machinery	IEC 60204-1:2005 +A1:2008 ; IEC 60204-1Ed 5.1: 2009; EN60204-1:2006 + A1:2009
Product Safety	Transmitters	EN 60215:1989 + A2:1994; IEC 60215:1987 + A2:1993; IEC 60215 Ed 4.0: 2016
Product Safety	Household & Similar Electronics	EN 60335-1:2002 +A14:2010; EN 60335-1 (2012) +A11: 2014 IEC 60335-1:2001 +A2:2006; IEC 60335-1 Ed. 5.0 (2010); IEC 60335-1 Ed. 5.2 (2016); UL60335-1 (2006); UL60335-1 (2011); EN 60335-2-2:2010; IEC 60335-2-2:2009; IEC 60335-2-2 2012-11; IEC 60335-2-2 Ed 6.2: 2016; EN 60335-2-75:2004/A12:2010; IEC 60335-2-75:2012-12; IEC 60335-2-75 Ed 3.1: 2015; EN 60335-2-82:2003/A1:2008; IEC 60335-2-82:2002 + A1:2008; IEC 60335-2-82 Ed 2.2: 2015
Product Safety	Audio, Video and Similar Electronic App.	EN60065:2002 +A2:2010 ; IEC60065:2001 +A2:2010; IEC 60065 Ed 8.0: 2014; UL60065 (2004); UL 60065: 2015
Product Safety	General (Enclosures)	IEC 60529 Ed 2.2: 2013 Section 13.2 & Sub-sections 14.2.1, 14.2.2, 14.2.7, 14.2.8 UL94 Ed 6.0: 2013; EN 60529: 1992 +A2: 2013 Section 13.2 & Sub-sections 14.2.1, 14.2.2, 14.2.7, 14.2.8

**Radio**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Radio Testing	Australia/New Zealand	AS/NZS 4268, AS/NZS 4295, AS/NZS 4365
Radio Testing	Singapore	IDA TS: EMC, IDA TS GMPCS ITU-R M.1343-1
Radio Testing	USA	TIA/EIA 603-E using 47 CFR Parts 2 (cellular and non-cellular), 4, 25, 26, 27, 74, 80, 87, 90, 95, 97 and 101, ANSI C63.26 (2015)
Radio Testing	Korea	<p>KS X31242020; KS X3125:2020; KS X3126:2020, KS X3129:2020;            Technical Requirements for Electromagnetic Compatibility RRA Public            Notification 2021-3, Feb 8, 2021;            Test Methods for Electromagnetic Compatibility RRA Announce 2021-10, Feb            8, 2021; RRA Public Notification 2020-6, Sep 25, 2020            Technical Requirements for Radio Equipment for Telecommunication Services            (RRA Public Notification 2021-34, Dec 28, 2021            Technical Requirements of other Radio services for Simple Radio station, Space            Station and Earth Station (RRA Public Notification 2012-35, Dec 28, 2021);            Technical Requirements of Radio Wave Application(RRA Public Notification            2016-20, Sep 27, 2016)            Technical Requirements for the Human Protection against Electromagnetic            Waves (MSIT Public Notification 2019-4, Jan 16, 2019);            Equipment to be Subject of Test Procedure for Electromagnetic Field Strength            and Specific Absorption Rate (RRA Public Notification 2021-16, Oct 12, 2021)            Technical Requirements for Measurement of Electromagnetic Field Strength            (RRA Public Notification 2021-22, Nov 29, 2021),            Assessment Procedure of Radio Equipment KS X 3123 (RRA Announce 2018-            19, Oct 19, 2018)            Technical Requirements for Electromagnetic Compatibility (RRA Public            Notification 2018-19, Oct 19, 2018); with RRA Announce 2018-128, Dec 24,            2018;            Test Technical Requirements for Telecommunications Terminal Equipment            (RRA Public Notification 2021-36, Dec 23, 2021)</p>
Radio Testing	Europe	<p>ETSI EN 300 220-1; ETSI EN 300 328; ETSI EN 300 330-2;            ETSI EN 300 390-2; ETSI EN 300 440-2; ETSI EN 301 489-1;            ETSI EN 301 489-3; ETSI EN 301 489-4; ETSI EN 301 489-5;            ETSI EN 301 489-7; ETSI EN 301 489-8; ETSI EN 301 489-12;            ETSI EN 301 489-15; ETSI EN 301 489-17; ETSI EN 300 826;            ETSI EN 302 208-1; ETSI EN 302 326-1; ETSI EN 301-489-20;            ETSI EN 301 428; ETSI EN 301 441; ETSI EN 301 442; ETSI EN 301-443;            ETSI EN 301 459; ETSI EN 301 893; ETSI EN 302 208-2;            ETSI EN 300-219-2; ETSI EN 300-219-1; ETSI EN 301 681;            ETSI EN 301 426 (sections 4.2.1 and 4.2.2 only);</p>

**Radio**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
		ETSI EN 301 721 (sections 4.2.1, 4.2.2, 4.2.3 and 4.2.4)
Military EMC	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
Military EMC	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 EMC	Conducted Susceptibility	MIL-STD-461E, F, G: Methods CS101, CS 103; CS 104; CS 105, 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 EMC	Radiated Susceptibility	MIL-STD-461E, F, G: Methods RS101, RS103; MIL-STD-461/462D: Methods RS101, RS103
Military EMC	Vehicle Power	MIL-STD-1275 (A, B, C, D, E)
Military EMC	Aircraft Power	MIL-STD-704 (A, B, C, D, F, G)
Military EMC	Ship Power	MIL-STD-1399 S300 (A, B); MIL-STD-1399 S390
Military EMC	Magnetics (Shipboard)	DOD-STD-1399 S-070
Airborne Equipment	Magnetic Effect	RTCA DO-160E, F, G: Section 15
Airborne Equipment	Power Input	RTCA DO-160E, F, G: Section 16
Airborne Equipment	Voltage Spikes	RTCA DO-160E, F, G: Section 17
Airborne Equipment	Audio Frequency Conducted Susceptibility	RTCA DO-160E, F, G: Section 18
Airborne Equipment	Induced Signal Susceptibility	RTCA DO-160E, F, G: Section 19
Airborne Equipment	Conducted Susceptibility and Radiated Susceptibility	RTCA DO-160E, F, G: Section 20.4 Section 20.5
Airborne Equipment	Conducted and Radiated Emissions	RTCA DO-160E, F, G: Section 21.4 Section 21.5
Airborne Equipment	Lighting Induced Transient Susceptibility	RTCA DO-160E, F, G: Section 22

**Radio**

Field of Test	Specific Tests or Properties Measured	Specification, Standard Method, or Technique Used
Airborne Equipment	ESD	RTCA DO-160E, F, G: Section 25
The Radio Equipment Directive (RED) 2014/53/EU	Private/Professional Mobile Radio Transmission Systems	IMT Cellular Network; Essential requirements of article 3.2, Part 1: EN 301-908- v.11.1.1, EN 301-360 V2.1.1 (2016) EN 301-358 V1.1.1 (2001), EN 303-213-6-1 V2.1.1

**Environmental**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Humidity	MIL-STD-810, Method 507.4; 507.5; 507.6	General Commercial, Military & Military COTS, Industrial.	-
Salt Fog	MIL-STD-810: Method 509	General Commercial, Military & Military COTS, Industrial	-
Immersion	MIL-STD-810, Method 512.4; 512.5; 512.6	General Commercial, Military & Military COTS, Industrial	-
Vibration	MIL-STD-810: Method 514.5, 514.6; 514.7	General Commercial, Military & Military COTS, Industrial	-
Shock	MIL-STD-810: Method 516.5; 516.6; 516.7	General Commercial, Military & Military COTS, Industrial	-
Temperature and Altitude	RTCA DO-160E, F, G: Section 4	General Commercial, Military & Military COTS, Industrial	-
Temperature Variation	RTCA DO-160E, F, G: Section 5	General Commercial, Military & Military COTS, Industrial	-
Humidity	RTCA DO-160E, F, G: Section 6	General Commercial, Military & Military COTS, Industrial	-
Operational Shocks and Crash Safety	RTCA DO-160E, F, G: Section 7	General Commercial, Military & Military COTS, Industrial	-
Vibration	RTCA DO-160E, F, G: Section 8	General Commercial, Military & Military COTS, Industrial	-
Waterproofness	RTCA DO-160E, F, G: Section 10	General Commercial, Military & Military COTS, Industrial	-
Fluids Susceptibility	RTCA DO-160E, F, G: Section 11	General Commercial, Military & Military COTS, Industrial	-
Salt Fog	RTCA DO-160E, F, G: Section 14	General Commercial, Military & Military COTS, Industrial	-
Flammability	RTCA DO-160E, F, G: Section 26	General Commercial, Military & Military COTS, Industrial	-





ANSI National Accreditation Board

**Environmental**

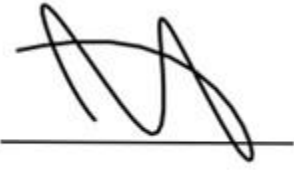
Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Cold	IEC 60068-2-1	General Commercial, Military & Military COTS, Industrial	-
Dry Heat	IEC 60068-2-2	General Commercial, Military & Military COTS, Industrial	-
Steady State Damp Heat	IEC 60068-2-3	General Commercial, Military & Military COTS, Industrial	-
Sinusoidal Vibration	IEC 60068-2-6	General Commercial, Military & Military COTS, Industrial	-
Salt Mist	IEC 60068-2-11	General Commercial, Military & Military COTS, Industrial	-
Low Air Pressure	IEC 60068-2-13	General Commercial, Military & Military COTS, Industrial	-
Change of Temperature	IEC 60068-2-14	General Commercial, Military & Military COTS, Industrial	-
Shock	IEC 60068-2-27	General Commercial, Military & Military COTS, Industrial	-
Bump	IEC 60068-2-29	General Commercial, Military & Military COTS, Industrial	-
Cyclic Damp Heat	IEC 60068-2-30	General Commercial, Military & Military COTS, Industrial	-
Drop and Topple	IEC 60068-2-31	General Commercial, Military & Military COTS, Industrial	-
Free Fall	IEC 60068-2-32	General Commercial, Military & Military COTS, Industrial	-
Cyclic Composite Temperature and Humidity	IEC 60068-2-38	General Commercial, Military & Military COTS, Industrial	-
Combined Cold / Low Air Pressure	IEC 60068-2-40	General Commercial, Military & Military COTS, Industrial	-
Combined Dry Heat / Low Air Pressure	IEC 60068-2-41	General Commercial, Military & Military COTS, Industrial	-
Immersion in Cleaning Solvents	IEC 60068-2-45	General Commercial, Military & Military COTS, Industrial	-
Combined Cold / Vibration	IEC60068-2-50	General Commercial, Military & Military COTS, Industrial	-
Combined Dry Heat / Vibration	IEC60068-2-51	General Commercial, Military & Military COTS, Industrial	-
Cyclic Salt Mist	IEC60068-2-52	General Commercial, Military & Military COTS, Industrial	-
Test Cb: Damp Heat Steady State	IEC60068-2-56	General Commercial, Military & Military COTS, Industrial	-
Test Fh: Broadband Random Vibration	IEC60068-2-64	General Commercial, Military & Military COTS, Industrial	-

**Environmental**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Test Xc: Fluid Contamination	IEC60068-2-74	General Commercial, Military & Military COTS, Industrial	-
Test Cab: Damp heat, steady state	IEC60068-2-78	General Commercial, Military & Military COTS, Industrial	-

Note:

1. This scope of accreditation covers Customer Site Testing.
2. Meets the requirements of the FCC equipment authorization program as detailed in 47 CFR Part 2 Subpart J as defined in the ANAB SR 2412 U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T) Testing Designation Accreditation Program. Recognition by the FCC can be confirmed by visiting their website <https://apps.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm>.
3. Testing performed to meet the Requirements for Recognition of Telecommunications Testing – Innovation, Science, and Economic Development (ISED) Canada. Recognition by ISED can be confirmed by visiting their website [https://www.ic.gc.ca/eic/site/mra-arm.nsf/eng/h\\_nj00091.html](https://www.ic.gc.ca/eic/site/mra-arm.nsf/eng/h_nj00091.html).
4. Testing to meet the requirements of ANAB Supplemental Requirements SR 2437, FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program – Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and Laboratory Medical Equipment. Recognition by the FDA can be confirmed by visiting their website <https://www.fda.gov/medical-devices/standards-and-conformity-assessment-program/asca-accredited-testing-laboratories>.
5. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1448.



Jason Stine, Vice President

