Testing Laboratory

Accreditation Certificate

Accreditation No.RTL03220

Labotech International Co., Ltd.

1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

meets the following criteria. On the basis of this, Japan Accreditation Board (JAB) grants accreditation to the said testing laboratory.

Applicable accreditation criteria	:	JIS Q 17025:2005 (ISO/IEC 17025:2005)
Scope of accreditation	:	**Electrical testing** (As described in the appendix)
Premises covered by accreditation	:	As described in the appendix.
Expiry date of accreditation	:	January 31, 2019

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system.
The management system requirements in ISO/IEC 17025:2005 meet the principles of ISO 9001:2008 and are aligned with its pertinent requirements.

Revised (15)	August 27, 2018
Renewed (3)	January 17, 2017
Initial accreditation	January 14, 2011

Tetsuji Oda

T. Oda, Chairman
Laboratory Accreditation Committee

Y. Iizuka

Y. Iizuka, President
Japan Accreditation Board

Issue No. : RTL03220-20180827

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

1) Premises on which testing activities are performed

Name of Premises		Labotech International Co., Ltd.
Address of Premises	Postal Code	663-8203
	Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, Japan
Testing service at permanent facilities or on site testing service		☑ Testing service at permanent facilities ☑ On site testing service

Scope of Accreditation

FIELD	M21 Electrical Testing

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.1 Continuous disturbance tests (performed at permanent facilities, and on site testing site)	CISPR 11 (except 10, Annex H), EN 55011 (except 10, Annex H) CISPR 22 (except 7), EN 55022 (except 7) CISPR 32 (except Table A.6, Table A.7, Table A.13) EN 55032 (except Table A.6, Table A.7, Table A.13) IEC 61000-6-3 (except 9), EN 61000-6-3 (except 9) IEC 61000-6-4 (except 9), EN 61000-6-4 (except 9) IEC 60945, EN 60945, JIS F 0812, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6 IEC 62236-3-2, EN 50121-3-2 IEC 60092-504, EN 60092-504, JIS F 8076 VCCI Technical requirements ANSI C63.4 : 2014 MP-5 (February 1986) FCC Part 15 Subpart B, FCC Part 18 CISPR 14-1 (except 8, Table B.3 Loop antenna system) EN 55014-1 (except 8, Table B.3 Loop antenna system)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.3 Discontinuous disturbance tests	CISPR 14-1 (except 8, Table B.3 Loop antenna system) EN 55014-1 (except 8, Table B.3 Loop antenna system) IEC 61000-6-3 (except 9), EN 61000-6-3 (except 9) IEC 61000-6-4 (except 9), EN 61000-6-4 (except 9) ANSI C63.4 : 2014

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
(performed at on site testing site)	
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.4 Conducted emission tests at telecommunication ports (performed at permanent facilities, and on site testing site)	CISPR 22 (except 7), EN 55022 (except 7) CISPR 32 (except Table A.6, Table A.7, Table A.13) EN 55032 (except Table A.6, Table A.7, Table A.13) IEC 61000-6-3 (except 9), EN 61000-6-3 (except 9) IEC 61000-6-4 (except 9), EN 61000-6-4 (except 9) VCCI Technical requirements
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.5 Magnetic/Electric field test(up to 30MHz) (performed at permanent facilities, and on site testing site)	CISPR 11 (except 10, Annex H) EN 55011 (except 10, Annex H) IEC 60945, EN 60945, JIS F 0812 IEC 60601-1-2, EN 60601-1-2 MP-5 (February 1986) FCC Part 18 CISPR 14-1 (except 8, Table B.3 Loop antenna system) EN 55014-1 (except 8, Table B.3 Loop antenna system)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.6 Electric field test(30MHz to 1GHz) (performed at permanent facilities, and on site testing site)	CISPR 11(except 10, Annex H), EN 55011 (except 10, Annex H), CISPR 22 (except 7), EN 55022 (except 7) CISPR 32 (except Table A.6, Table A.7, Table A.13) EN 55032 (except Table A.6, Table A.7, Table A.13) IEC 61000-6-3 (except 9), EN 61000-6-3 (except 9) IEC 61000-6-4 (except 9), EN 61000-6-4 (except 9) IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6 IEC 62236-3-2, EN 50121-3-2 VCCI Technical requirements ANSI C63.4 : 2014 MP-5 (February 1986) FCC Part 15 Subpart B, FCC Part 18 RSS-Gen CISPR 14-1 (except 8), EN 55014-1 (except 8)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.7 Electric field test(1GHz and	CISPR 11(except 10, Annex H), EN 55011 (except 10, Annex H), CISPR 22 (except 7), EN 55022 (except 7) CISPR 32 (except Table A.6, Table A.7, Table A.13) EN 55032 (except Table A.6, Table A.7, Table A.13)

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
over) (performed at permanent facilities, and on site testing site)	IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2 VCCI Technical requirements ANSI C63.4 : 2014 MP-5 (February 1986) FCC Part 15 Subpart B, FCC Part 18 RSS-Gen IEC 61000-6-3 (except 9), EN 61000-6-3 (except 9) IEC 61000-6-4 (except 9), EN 61000-6-4 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.9 Disturbance power tests (performed at on site testing site)	CISPR 14-1 (except 8, Table B.3 Loop antenna system) EN 55014-1 (except 8, Table B.3 Loop antenna system)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.10 Harmonic current emission tests (performed at permanent facilities, and on site testing site)	IEC 61000-3-2, EN 61000-3-2, JIS C 61000-3-2 IEC 61000-6-3, EN 61000-6-3 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.12Voltage fluctuation and flicker tests (performed at permanent facilities, and on site testing site)	IEC 61000-3-3, EN 61000-3-3 IEC 61000-6-3, EN 61000-6-3 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.14 Electrostatic discharge immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-2, EN 61000-4-2 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
	IEC 62236-3-2, EN 50121-3-2 CISPR 14-2 (except 9), EN 55014-2 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.15 RF radiated electromagnetic field immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-3, EN 61000-4-3 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2 (except 9), EN 55014-2 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.16 Electrical fast transient/burst immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-4, EN 61000-4-4 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2 (except 9), EN 55014-2 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.17 Surge immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-5, EN 61000-4-5 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2 (except 9), EN 55014-2 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.18 RF conducted immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-6, EN 61000-4-6 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
	IEC 62236-3-2, EN 50121-3-2 CISPR 14-2 (except 9), EN 55014-2 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.19 Power frequency magnetic field immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-8, EN 61000-4-8 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.20 A.C. power supply fluctuation immunity tests (performed at permanent facilities, and on site testing site)	IEC 61000-4-11, EN 61000-4-11 IEC 61000-6-1, EN 61000-6-1 IEC 61000-6-2, EN 61000-6-2 IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076, EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, JIS C 1806-1 IEC 61326-2-6, EN 61326-2-6 CISPR 14-2 (except 9), EN 55014-2 (except 9)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.25 Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests (performed at permanent facilities, and on site testing site)	IEC 60945 10.8, EN 60945 10.8, JIS F 0812 10.8 IEC 945:1996 10.2, EN 60945:1997 10.2
M21 Electrical testing M21.5 Environmental testing M21.5.18 Vibration tests(sinusoidal) (performed at permanent facilities, and on site testing site)	IEC 60068-2-6 (7, 9, and 11 are limited to visual check by viewing and operation check by electricity. Frequency range 2Hz to 2600Hz, Acceleration range $\leqq$1000m/s^2 Displacement range $\leqq$76.2mm p-p), EN 60068-2-6 (7, 9 and 11 are limited to visual check by viewing and operation check by electricity. Frequency range 2Hz to 2600Hz, Acceleration range $\leqq$1000m/s^2 Displacement range $\leqq$76.2mm p-p), JIS C 60068-2-6 (7, 9, and 11 are limited to visual check by viewing and operation check by electricity. Frequency range 2Hz to 2600Hz, Acceleration range $\leqq$1000m/s^2 Displacement range $\leqq$76.2mm p-p),

Accreditation No.	RTL03220

Accreditation Certificate
Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
	IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076 JIS D 1601:1995
M21 Electrical testing M21.5 Environmental testing M21.5.1 Cold tests (performed at permanent facilities)	IEC 60068-2-1 (6.8, 6.10, and 6.13 are limited to visual check by viewing and operation check by electricity. Test Ab Temperature range -40℃ to +5℃), EN 60068-2-1 (6.8, 6.10, and 6.13 are limited to visual check by viewing and operation check by electricity. Test Ab Temperature range -40℃ to +5℃), JIS C 60068-2-1 (6.8, 6.10, and 6.13 are limited to visual check by viewing and operation check by electricity. Test Ab Temperature range -40℃ to +5℃), IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076
M21 Electrical testing M21.5 Environmental testing M21.5.2 Dry heat tests (performed at permanent facilities)	IEC 60068-2-2 (6.7, 6.9, and 6.13 are limited to visual check by viewing and operation check by electricity. Test Bb Temperature range ≦100℃), EN 60068-2-2 (6.7, 6.9, and 6.13 are limited to visual check by viewing and operation check by electricity. Test Bb Temperature range ≦100℃), JIS C 60068-2-2 (6.7, 6.9, and 6.13 are limited to visual check by viewing and operation check by electricity. Test Bb Temperature range ≦100℃), IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076
M21 Electrical testing M21.5 Environmental testing M21.5.6 Damp Heat tests, cyclic (12+12-Hour cycle) (performed at permanent facilities)	IEC 60068-2-30 (6, 8, 10 are limited to visual check by viewing and operation check by electricity.), EN 60068-2-30 (6, 8, 10 are limited to visual check by viewing and operation check by electricity.), JIS C 60068-2-30 (6, 8, 10 are limited to visual check by viewing and operation check by electricity.), IEC 60945, EN 60945, JIS F 0812 IEC 60092-504, JIS F 8076
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.1 Frequency (performed at permanent facilities, and on site testing site)	FCC Part 2.1055, 25.202, 74.861, 80.209, 80.213, 87.133, 90.213, 90.215, 101.107 ANSI/TIA-603-D RSS-Gen, RSS-170, RSS-181, RSS-182, RSS-238 EN 302 248

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.2 Occupied frequency bandwidth (performed at permanent facilities, and on site testing site)	FCC Part 2.1049, 74.861, 80.209, 80.211, 87.135, 87.137, 87.139, 90.209, 90.210, 101.109 RSS-Gen, RSS-182
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.3 Spurious emission intensity (performed at permanent facilities, and on site testing site)	FCC Part 2.1051, 2.1053, 2.1057, 25.204, 74.861, 80.211, 80.217, 80.273, 87.139, 90.210, 101.111 ANSI/TIA-603-D RSS-Gen, RSS-170, RSS-181, RSS-182, RSS-238 EN 302 248
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.3 Spurious emission intensity (performed at on site testing site)	IEC 62388 Annex B, ITU-R M.1177
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.4 Antenna power (performed at permanent facilities, and on site testing site)	FCC Part 2.1046, 25.204, 25.216, 74.861, 80,215, 80.855, 80.873, 80.909, 80.911, 80.959, 87.131, 90.205, 90.215, 90.217, 101.113 ANSI/TIA-603-D RSS-Gen, RSS-170, RSS-181, RSS-182, RSS-238 EN 302 248
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.8 Carrier-wave power (performed at permanent facilities, and on site testing site)	FCC Part 2.1046, 80,215, 87.131 ANSI/TIA-603-D RSS-Gen, RSS-170, RSS-181, RSS-182, RSS-238 EN 302 248
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.11 Transmission rise time and transmission fall time (performed at permanent facilities, and on site testing site)	FCC Part 2.1047, 80.213, 87.141, 90.207 RSS-Gen, RSS-238
M21 Electrical testing M21.27 Radio Transmitter tests	FCC Part 2.1051, 2.1053, 2.1057, 80.211, 80.273, 87.139, 90.210 ANSI/TIA-603-D

Accreditation No.	RTL03220

Accreditation Certificate Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
M21.27.12 Adjacent channel leakage power or out-band leakage power (performed at permanent facilities, and on site testing site)	RSS-Gen, RSS-181, RSS-182, RSS-238 EN 302 248
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.12 Adjacent channel leakage power or out-band leakage power (performed at on site testing site)	IEC 62388 Annex B, ITU-R M.1177
M21 Electrical testing M21.28 Radio Receiver tests M21.28.1 Limit of radio waves which are secondarily emitted (performed at permanent facilities, and on site testing site)	FCC Section 2.1051, 2.1053, 2.1057, 80.217, 90.210 ANSI/TIA-603-D RSS-Gen, RSS-170, RSS-181, RSS-182 EN 302 248
M21 Electrical testing M21.41 Accreditation Scope of EMC laboratory for FCC M21.41.1 Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C63.4-2014 (Measurement frequency : up to 40 GHz)
M21 Electrical testing M21.41 Accreditation Scope of EMC laboratory for FCC M21.41.2 Industrial, Scientific, and Medical Equipment (FCC Part 18) ・Consumer ISM equipment	FCC MP-5 (February 1986) (Measurement frequency : up to 40 GHz)
M21 Electrical testing M21.41 Accreditation Scope of EMC laboratory for FCC M21.41.13 Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) ・Part 80 ・Part 87	ANSI/TIA-603-D (Measurement frequency : up to 40 GHz)
M21 Electrical testing M21.41 Accreditation Scope of EMC laboratory for FCC M21.41.14	ANSI/TIA-603-D TIA-102.CAAA-D (Measurement frequency : up to 40 GHz)

Accreditation No.	RTL03220

Accreditation Certificate
Appendix

Type of Laboratory	Testing Laboratory
Name of Laboratory	Labotech International Co., Ltd.
Address	1-16, Fukazu-cho, Nishinomiya-shi, Hyogo, 663-8203 Japan

CODE OF CLASSIFICATION NAME	TEST METHOD STANDARD
Microwave and Millimeter Bands Radio Services (FCC Licensed Radio Service Equipment) ・ Part 25 ・ Part 74 ・ Part 90 (90Y, 90Z, DSRC) ・ Part 101	

Japan Accreditation Board