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

1) Premises on which testing activities are performed

Name of Premises	Kishu Lab.
Address	579-1, Umehara, Wakayama-shi, Wakayama, 640-8452 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
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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.1 Continuous disturbance tests	CISPR 11 (except 10), EN 55011 (except 10) 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, EN 61000-6-3, EN IEC 61000-6-3 IEC 61000-6-4, EN 61000-6-4, EN IEC 61000-6-4 IEC 60945, EN 60945, JIS F 0812, ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 IEC 62236-3-2 (except Table 1, 1.2), EN 50121-3-2 (except Table 1, 1.2) VCCI-CISPR 32 ANSI C63.4: 2014, ANSI C63.4a: 2017 FCC Part 15 Subpart B CISPR 14-1 (except Table 4 Loop antenna system) EN 55014-1 (except Table 4 Loop antenna system) ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.3 Discontinuous disturbance tests	CISPR 14-1 (except Table 4 Loop antenna system) EN 55014-1 (except Table 4 Loop antenna system) IEC 61000-6-3, EN 61000-6-3, EN IEC 61000-6-3 IEC 61000-6-4, EN 61000-6-4, EN IEC 61000-6-4 ANSI C63.4: 2014, ANSI C63.4a: 2017



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.4 Conducted emission tests at telecommunication ports	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, EN 61000-6-3, EN IEC 61000-6-3 IEC 61000-6-4, EN 61000-6-4, EN IEC 61000-6-4 ETSI EN 301 489-1 VCCI-CISPR 32
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.5 Magnetic/Electric field test(up to 30MHz)	CISPR 11 (except 10) EN 55011 (except 10) IEC 60945, EN 60945, JIS F 0812 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 CISPR 14-1 (except Table 4 Loop antenna system) EN 55014-1 (except Table 4 Loop antenna system) ETSI EN 302 248
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.6 Electric field test(30MHz to 1GHz)	CISPR 11(except 10), EN 55011 (except 10), 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, EN 61000-6-3, EN IEC 61000-6-3 IEC 61000-6-4, EN 61000-6-4, EN IEC 61000-6-4 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 IEC 62236-3-2 (except 1.2 of Table 1), EN 50121-3-2 (except 1.2 of Table 1) VCCI-CISPR 32 ANSI C63.4: 2014, ANSI C63.4a: 2017 FCC Part 15 Subpart B CISPR 14-1, EN 55014-1 ETSI EN 302 248 ETSI EN 301 489-1



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
-M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.7 Electric field test(1GHz and over)	CISPR 11(except 10), EN 55011 (except 10), 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 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 62236-3-2 (except 1.2 of Table 1), EN 50121-3-2 (except 1.2 of Table 1) VCCI-CISPR 32 ANSI C63.4: 2014, ANSI C63.4a: 2017 FCC Part 15 Subpart B IEC 61000-6-3, EN 61000-6-3, EN IEC 61000-6-3 IEC 61000-6-4, EN 61000-6-4, EN IEC 61000-6-4 CISPR 14-1 (except Table 4 Loop antenna system) EN 55014-1 (except Table 4 Loop antenna system) ETSI EN 302 248 ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.9 Disturbance power tests	CISPR 14-1 (except Table 4 Loop antenna system) EN 55014-1 (except Table 4 Loop antenna system)
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.10 Harmonic current emission tests	IEC 61000-3-2, EN 61000-3-2, EN IEC 61000-3-2, JIS C 61000-3-2 IEC 61000-6-3, EN 61000-6-3, EN IEC 61000-6-3 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.12 Voltage fluctuation and flicker tests	IEC 61000-3-3, EN 61000-3-3 IEC 61000-6-3, EN 61000-6-3, EN IEC 61000-6-3 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1 ETSI EN 301 489-1



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.14 Electrostatic discharge immunity tests	IEC 61000-4-2, EN 61000-4-2, EN IEC 61000-4-2 IEC 61000-6-1, EN 61000-6-1, EN IEC 61000-6-1 IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2, EN 55014-2 CISPR 35, EN 55035, ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.15 RF radiated electromagnetic field immunity tests	IEC 61000-4-3, EN 61000-4-3, EN IEC 61000-4-3 IEC 61000-6-1, EN 61000-6-1, EN IEC 61000-6-1 IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 CISPR 14-2, EN 55014-2 CISPR 35, EN 55035 ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.16 Electrical fast transient/burst immunity tests	IEC 61000-4-4, EN 61000-4-4 IEC 61000-6-1, EN 61000-6-1, EN IEC 61000-6-1 IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2, EN 55014-2 CISPR 35, EN 55035 ETSI EN 301 489-1



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.17 Surge immunity tests	IEC 61000-4-5, EN 61000-4-5 IEC 61000-6-1, EN 61000-6-1, EN IEC 61000-6-1 IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2, EN 55014-2 CISPR 35, EN 55035 ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.18 RF conducted immunity tests	IEC 61000-4-6, EN 61000-4-6, EN IEC 61000-4-6 IEC 61000-6-1, EN 61000-6-1, EN IEC 61000-6-1 IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2 (expect BCI method), EN 60601-1-2 (expect BCI method), JIS T 0601-1-2 (expect BCI method) IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 IEC 62236-3-2, EN 50121-3-2 CISPR 14-2, EN 55014-2 CISPR 35, EN 55035 ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.19 Power frequency magnetic field immunity tests	IEC 61000-4-8, EN 61000-4-8 IEC 61000-6-1, EN 61000-6-1, EN IEC 61000-6-1 IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 CISPR 35, EN 55035



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.20 A.C. power supply fluctuation immunity tests	IEC 61000-4-11, EN 61000-4-11, EN IEC 61000-4-11 IEC 61000-6-1 (up to 16 A), EN 61000-6-1, EN IEC 61000-6-1 (up to 16 A) IEC 61000-6-2, EN 61000-6-2, EN IEC 61000-6-2 IEC 60945, EN 60945, JIS F 0812 ETSI EN 301 843-1 IEC 60601-1-2, EN 60601-1-2, JIS T 0601-1-2 IEC 61326-1, EN 61326-1, EN IEC 61326-1, JIS C 61326-1 IEC 61326-2-6, EN 61326-2-6, EN IEC 61326-2-6 CISPR 14-2, EN 55014-2 CISPR 35, EN 55035 ETSI EN 301 489-1
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.23 Test for immunity to conducted, disturbance in the frequency range 0Hz to 150kHz	IEC 60945:1996 10.2, EN 60945:1997 10.2
M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.25 Voltage dips, short interruptions and voltage variations on DC input power port immunity tests	IEC 60945 10.8, EN 60945 10.8, JIS F 0812 10.8



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.5 Environmental testing M21.5.18 Vibration tests(sinusoidal)	IEC 60068-2-6 (7, 9, and 11 are limited to visual check by viewing and operation check by electricity. Horizontal: Frequency range 2Hz to 800Hz, Acceleration range $\leq 100\text{m/s}^2$ Displacement range $\leq 50\text{mm p-p}$, Vertical: Frequency range 2Hz to 2000Hz, Acceleration range $\leq 100\text{m/s}^2$ Displacement range $\leq 50\text{mm p-p}$), EN 60068-2-6 (7, 9 and 11 are limited to visual check by viewing and operation check by electricity. Horizontal: Frequency range 2Hz to 800Hz, Acceleration range $\leq 100\text{m/s}^2$ Displacement range $\leq 50\text{mm p-p}$, Vertical: Frequency range 2Hz to 2000Hz, Acceleration range $\leq 100\text{m/s}^2$ Displacement range $\leq 50\text{mm p-p}$), JIS C 60068-2-6 (7, 9, and 11 are limited to visual check by viewing and operation check by electricity. Horizontal: Frequency range 2Hz to 800Hz, Acceleration range $\leq 100\text{m/s}^2$ Displacement range $\leq 50\text{mm p-p}$, Vertical: Frequency range 2Hz to 2000Hz, Acceleration range $\leq 100\text{m/s}^2$ Displacement range $\leq 50\text{mm p-p}$), IEC 60945, EN 60945, JIS F 0812
M21 Electrical testing M21.5 Environmental testing M21.5.1 Cold tests	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°C to $+5^\circ\text{C}$), EN 60068-2-1, EN 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°C to $+5^\circ\text{C}$), 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°C to $+5^\circ\text{C}$), IEC 60945, EN 60945, JIS F 0812
M21 Electrical testing M21.5 Environmental testing M21.5.2 Dry heat tests	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 $\leq 100^\circ\text{C}$), EN 60068-2-2, EN 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 $\leq 100^\circ\text{C}$), 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 $\leq 100^\circ\text{C}$), IEC 60945, EN 60945, JIS F 0812



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.5 Environmental testing M21.5.6 Damp Heat tests, cyclic (12+12-Hour cycle)	IEC 60068-2-30 (6, 8, 10 are limited to visual check by viewing and operation check by electricity.), EN 60068-2-30, EN IEC 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
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.1 Frequency	FCC Part 2.1055, 25.202, 74.861, 80.209, 80.213, 87.133, 90.213, 90.215, 101.107 ANSI/TIA-603-E ETSI EN 302 248, ETSI EN 303 135 V2.1.1
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.2 Occupied frequency bandwidth	FCC Part 2.1049, 74.861, 80.209, 80.211, 87.135, 87.137, 87.139, 90.209, 90.210, 101.109
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.3 Spurious emission intensity	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-E ETSI EN 302 248, ETSI EN 303 135 V2.1.1
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.4 Antenna power	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-E ETSI EN 302 248, ETSI EN 303 135 V2.1.1
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.8 Carrier-wave power	FCC Part 2.1046, 30.202, 80.215, 87.131, 95.3167 ANSI/TIA-603-E ETSI EN 302 248
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.11 Transmission rise time and transmission fall time	FCC Part 2.1047, 80.213, 87.141, 90.207
M21 Electrical testing M21.27 Radio Transmitter tests M21.27.12 Adjacent channel leakage power or out-band leakage power	FCC Part 2.1051, 2.1053, 2.1057, 80.211, 80.273, 87.139, 90.210 ANSI/TIA-603-E ETSI EN 302 248, ETSI EN 303 135 V2.1.1



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.28 Radio Receiver tests M21.28.1 Limit of radio waves which are secondarily emitted	FCC Section 2.1051, 2.1053, 2.1057, 80.217, 90.210 ANSI/TIA-603-E
M21 Electrical testing M21.28 Radio Receiver tests M21.28.5 Spurious response	ETSI EN 303 135 V2.1.1
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, ANSI C63.4a-2017 (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-E-2016; [1] or · ANSI C63.26-2015 (Measurement frequency : up to 40 GHz)
M21 Electrical testing M21.41 Accreditation Scope of EMC laboratory for FCC M21.41.14 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-2016; [1] or · ANSI/TIA-102.CAAA-E-2016; [1] or · ANSI C63.26-2015 (Measurement frequency : up to 40 GHz)



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CODE OF CLASSIFICATION, NAME	TEST METHOD STANDARD
M21 Electrical testing M21.34 Household and Similar Equipment (Except Air Conditioners and Heat Pumps)	IEC 62233 (2005)(5.5.2) EN 62233 (2008) (5.5.2)
M21 Electrical testing M21.35 Air Conditioners and Heat Pumps M21.35.15 Other Safety Performance Test	IEC 62233 (2005) (5.5.2) EN 62233 (2008) (5.5.2)

(Notes on Accreditation Certificate)

The laboratory is only accredited for laboratory activities outlined within the methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

When version information of standards or methods are not identified in the scope, laboratories shall adapt to use the current version of such standards within six months at latest from the issued date of current version.

Notes for EMC test laboratory for FCC

Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (<https://apps.fcc.gov/oetcf/eas/>) for a listing of FCC approved laboratories.

Japan Accreditation Board