



SPOT CHECK EVALUATION

FCC ID : PY321300542
Equipment : Netgear 5G MHS Travel Router
Model Name : MR6110
Applicant : Netgear Inc
350 E. Plumeria Drive, San Jose, CA 95134, United States
Standard : 47 CFR Part 2, 22(H), 24(E), 27, 90(R), 96
FCC Part 15 Subpart C §15.247
FCC Part 15 Subpart E §15.407

The product was received on Dec 20, 2021, and testing was started from Jan. 03, 2022 and completed on Jan. 23, 2022.

We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Jan. 30, 2022
02	1. Revise standard in front cover page. 2. Add sample received and tested date 3. Revise equipment class DSS to DTS 4. Add List of Measuring Equipment 5. Add Setup Photographs	Feb. 01, 2022



1. Introduction Section

FCC ID: PY321100529 (parent model) and FCC ID: PY321300542 (variant model) use the same identical internal printed circuit board layouts, while the variant model depopulates mmWave related components, details are available in the operational description. Based on their similarity, the FCC Part 15C (equipment class: DTS) and FCC Part 15E (equipment class: NII) and FCC Part 22, 24, 27, 90, 96 (equipment class: PCB, CBE) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01. The spot check data in this report is used to justify the data reuse.

The applicant should take full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PY321300542).



2. Model Difference Information

PY321100529 and PY321300542 use the identical internal printed circuit board layout, and the major differences which may relate to RF are listed below:

- Removal of FR2 related components.
- Less CA combination supported.
- Smaller size of the display.
- Software implementation does not support WiFi 6E.

PY321100529 and PY321300542 use the same WLAN chipset, same WLAN firmware, and same DFS radar detection mechanism.

The detail of similarity and difference is illustrated in the operational description. Based on the information, spot check of conducted power and emission level was performed and presented in this report to justify the data referencing.



3. Spot Check Verification Data Section

Conducted power test and radiated spurious emission test configurations were selected from the worst cases identified in the parent model and tested to demonstrate the test data from original model remains representative for the variant model.

Summary for power and RSE spot check for each rule entry and technology is listed as below:

Test Item	Mode	PY321100529 Parent Worst Result	PY321300542 Variant Check Result	Difference (dB)
Conducted Power (dBm)	WWAN LTE Band 2	23.48	23.08	-0.40
	WWAN LTE Band 4	23.16	23.11	-0.05
	WWAN LTE Band 5	23.27	23.34	0.07
	WWAN LTE Band 7	22.95	22.57	-0.38
	WWAN LTE Band 12	23.12	23.54	0.42
	WWAN LTE Band 14	23.09	23.10	0.01
	WWAN LTE Band 30	21.97	22.01	0.04
	WWAN LTE Band 48	22.54	22.23	-0.31
	WWAN LTE Band 66	23.83	23.96	0.13
	WWAN NR n2	23.84	23.37	-0.47
	WWAN NR n5	23.39	23.23	-0.16
	WWAN NR n12	23.41	23.19	-0.22
	WWAN NR n14	23.07	22.71	-0.36
	WWAN NR n30	22.37	22.17	-0.20
	WWAN NR n66	23.97	23.52	-0.45
	WWAN NR n77 (27O)	22.56	22.32	-0.24
	WWAN NR n77 (27Q)	22.33	22.06	-0.27
Average Conducted Power (dBm)	WLAN 2.4G	12.86	12.81	-0.05
	WLAN 5G (5150~5250)	12.96	12.61	-0.35
	WLAN 5G (5250~5350)	12.86	12.83	-0.03
	WLAN 5G (5470~5725)	12.81	12.74	-0.07
	WLAN 5G (5725~5850)	12.96	12.88	-0.08



Test Item	Mode	ANT	PY321100529 Parent Worst Result	PY321300542 Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBm)	WWAN LTE Band 7	2	-35.97	-36.30	-0.33
	WWAN LTE Band 48	1	-44.31	-50.05	-5.74
	WWAN LTE Band 66	2	-36.29	-40.90	-4.61
	WWAN NR n2 (EN-DC 66A_n2A)	1	-38.38	-39.41	-1.03
	WWAN NR n2 (SA mode)	2	-39.83	-37.34	2.49
	WWAN NR n5 (EN-DC 2A_n5A)	1	-33.52	-43.35	-9.83
	WWAN NR n5 (EN-DC 12A_n5A)	2	-33.24	-43.90	-10.66
	WWAN NR n12 (EN-DC 66A_n12A)	1	-30.94	-43.19	-12.25
	WWAN NR n14 (EN-DC 30A_n14A)	1	-48.25	-45.50	2.75
	WWAN NR n30 (EN-DC 14A_n30A)	2	-43.10	-53.75	-10.65
	WWAN NR n77 (SA mode)	1	-32.84	-32.65	0.19
	WWAN NR n77 (EN-DC 5A_n77A)	2	-31.25	-29.52	1.73
Radiated Spurious Emission (Band Edge) (dBuV/m)	WLAN 2.4G	3+4	44.36	46.93	2.57
	WLAN 5G	3+4	45.06	44.35	-0.71
Radiated Spurious Emission (Harmonic) (dBuV/m)	WLAN 2.4G	3+4	43.56	41.93	-1.63
	WLAN 5G	3+4	44.40	44.46	0.06

**Conclusion:**

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

The spot check emission level is not degraded more than 3dB, and the margin to the limit is greater than 1.5dB, data referencing is justified according to the guidance in the KDB inquiry



4. Reference detail Section

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	Reference FCC ID (Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)
22, 24, 27, 90, 96	PCB CBE	LTE	2/4/5/7/12/14/30/48/66 ULCA 48C/66B/66C	PY321100529	Original Grant	FG190614A FG190614C FG190614E FG190614G FG190614J	PY321300542
		NR	n2/n5/n12/n14 /n30/n66/n77	PY321100529	Original Grant	FG190614B FG190614D FG190614F FG190614H FG190614I	PY321300542
15C	DTS	Wi-Fi	2400~2483.5	PY321100529	Original Grant	FR190614A	PY321300542
15E	NII	Wi-Fi	5150~5250 5250~5350 5470~5725 5725~5850	PY321100529	Original Grant	FR190614B FR190614C	PY321300542
		DFS	5250~5350 5470~5725	PY321100529	Original Grant	FZ190614A FZ190614B	PY321300542

END of this report



5. List of Measuring Equipment

<Radiation for FCC Part 22(H), 24(E), 27(D), 27(H), 27(L), 27(M), 90(R)>

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Jan. 06, 2022~ Jan. 23, 2022	Sep. 06, 2022	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N -06	47020 & 06	30MHz to 1GHz	Oct. 09, 2021	Jan. 06, 2022~ Jan. 23, 2022	Oct. 08, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02114	1G~18GHz	Aug. 04, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 03, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1522	1G~18GHz	Oct. 12, 2021	Jan. 06, 2022~ Jan. 23, 2022	Oct. 11, 2022	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	00991	18GHz ~40GHz	May. 12, 2021	Jan. 06, 2022~ Jan. 23, 2022	May. 11, 2022	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Jul. 05, 2021	Jan. 06, 2022~ Jan. 23, 2022	Jul. 04, 2022	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845S E	980729	1-18GHz	Jul. 09, 2021	Jan. 06, 2022~ Jan. 23, 2022	Jul. 08, 2022	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Jan. 06, 2022~ Jan. 23, 2022	Jun. 21, 2022	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec.09.,2021	Jan. 06, 2022~ Jan. 23, 2022	Dec. 08.,2022	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY59053012	3Hz~26.5GHz	Nov.18.,2021	Jan. 06, 2022~ Jan. 23, 2022	Nov. 17.,2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/4P E	NA	Aug. 28, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/4P E	NA	Aug. 28, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-5 757	NA	Aug. 28, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)



<Radiation for FCC Part 27(O), 96 >

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Jan. 20, 2022~ Jan. 21, 2022	Sep. 06, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	37059 & 01	30MHz~1GHz	Oct. 09, 2021	Jan. 20, 2022~ Jan. 21, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 09, 2021	Jan. 20, 2022~ Jan. 21, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 03, 2021	Jan. 20, 2022~ Jan. 21, 2022	Dec. 02, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1212	1GHz~18GHz	May. 18, 2021	Jan. 20, 2022~ Jan. 21, 2022	May. 17, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 30, 2021	Jan. 20, 2022~ Jan. 21, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	00993	18GHz~40GHz	Nov. 30, 2021	Jan. 20, 2022~ Jan. 21, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 24, 2021	Jan. 20, 2022~ Jan. 21, 2022	Mar. 23, 2022	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	May. 25, 2021	Jan. 20, 2022~ Jan. 21, 2022	May. 24, 2022	Radiation (03CH12-HY)
Preamplifier	E-INSTRUME NT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900270	1GHz~18GHz	Dec. 27, 2021	Jan. 20, 2022~ Jan. 21, 2022	Dec. 26, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Jan. 20, 2022~ Jan. 21, 2022	Dec. 23, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 15, 2021	Jan. 20, 2022~ Jan. 21, 2022	Oct. 14, 2022	Radiation (03CH12-HY)
Base Station	Anritsu	MT8821C	6201432816	2/3/4G/LTE FDD/TDD with44)/LTE-3C C DLCA/2CC ULCA, CatM1/NB1/NB 2	May 10, 2021	Jan. 20, 2022~ Jan. 21, 2022	May 09, 2023	Radiation (03CH12-HY)
Base Station	Anritsu	MT8000A	6262261912	N/A	Mar 04, 2021	Jan. 20, 2022~ Jan. 21, 2022	Mar 03, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Jan. 20, 2022~ Jan. 21, 2022	Mar. 10, 2022	Radiation (03CH12-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 10, 2021	Jan. 20, 2022~ Jan. 21, 2022	Dec. 09, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15539/4	30MHz~18GHz	Feb. 22, 2021	Jan. 20, 2022~ Jan. 21, 2022	Feb. 21, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 22, 2021	Jan. 20, 2022~ Jan. 21, 2022	Feb. 21, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 22, 2021	Jan. 20, 2022~ Jan. 21, 2022	Feb. 21, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12 SS	SN2	1.2GHz Low Pass Filter	Mar. 17, 2021	Jan. 20, 2022~ Jan. 21, 2022	Mar. 16, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-1080 -1200-15000-6 0SS	SN1	1.2GHz High Pass Filter	Mar. 17, 2021	Jan. 20, 2022~ Jan. 21, 2022	Mar. 16, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN2	3GHz High Pass Filter	Jul. 12, 2021	Jan. 20, 2022~ Jan. 21, 2022	Jul. 11, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 17, 2021	Jan. 20, 2022~ Jan. 21, 2022	Mar. 16, 2022	Radiation (03CH12-HY)
Hygrometer	TECEPIL	DTM-303B	TP140349	N/A	Sep. 30, 2021	Jan. 20, 2022~ Jan. 21, 2022	Sep. 29, 2022	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jan. 20, 2022~ Jan. 21, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jan. 20, 2022~ Jan. 21, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jan. 20, 2022~ Jan. 21, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Jan. 20, 2022~ Jan. 21, 2022	N/A	Radiation (03CH12-HY)

**<Conducted for FCC Part 22, 24, 27, 90, 96>**

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6201664755	2/3/4G/LTE FDD/TDD with44)/LTE-3CC DLCA/2CC ULCA, CatM1/NB1/NB2	Jul. 21, 2021	Jan. 04, 2022~ Jan. 12, 2022	Jul. 20, 2022	Conducted (TH03-HY)
Base Station	Anritsu	MT8821C	6201432816	2/3/4G/LTE FDD/TDD with44)/LTE-3CC DLCA/2CC ULCA, CatM1/NB1/NB2	May 10, 2021	Jan. 04, 2022~ Jan. 12, 2022	May 09, 2023	Conducted (TH03-HY)
Base Station	Anritsu	MT8000A	6262261912	N/A	Mar 04, 2021	Jan. 04, 2022~ Jan. 12, 2022	Mar 03, 2022	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101909	10Hz~40GHz	Aug. 13, 2021	Jan. 04, 2022~ Jan. 12, 2022	Aug. 12, 2022	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 09, 2021	Jan. 04, 2022~ Jan. 12, 2022	Sep. 08, 2022	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890001	1V~20V 0.5A~5A	Oct. 06, 2021	Jan. 04, 2022~ Jan. 12, 2022	Oct. 05, 2022	Conducted (TH03-HY)
Coupler	Warison	20dB 25W S MA Directional Coupler	#B	1-18GHz	Jan. 09, 2021	Jan. 04, 2022~ Jan. 07, 2022	Jan. 08, 2022	Conducted (TH03-HY)
Coupler	Warison	20dB 25W S MA Directional Coupler	#B	1-18GHz	Jan. 07, 2022	Jan. 07, 2022~ Jan. 12, 2022	Jan. 06, 2023	Conducted (TH03-HY)

**< FCC Part 15C >**

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 03, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Dec. 02, 2022	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101 800-30-10P	1590075	1GHz~18GHz	Apr. 22, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Apr. 21, 2022	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 04, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Oct. 03, 2022	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Jul. 23, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Jul. 22, 2022	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jul. 22, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Jul. 21, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682-4	30MHz to 18GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971-4	9kHz to 18GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655-4	9kHz to 18GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,80 1606/2	18GHz~40GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 17, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Sep. 16, 2022	Radiation (03CH07-HY)
Controller	EMEC	EM1000	N/A	Control Ant Mast	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Controller	MF	MF-7802	N/A	Control Turn table	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Attenuator	HONOVA	5910 SMA-50-005-19-NE	ATT-36	N/A	Oct. 30, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Oct. 29, 2022	Radiation (03CH07-HY)
Software	Audix	E3	N/A	N/A	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	Mar. 09, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Mar. 08, 2022	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917025 1	18GHz~40GHz	Nov. 30, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Nov. 29, 2022	Radiation (03CH07-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Jan.03.2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Jan.03.2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Jan.03.2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW191204(B OX8)	N/A	Jan. 07,2021	Jan.03.2022	Jan. 06,2022	Conducted (TH05-HY)

**<Radiation for FCC Part 15E Band1、Band4>**

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 03, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Dec. 02, 2022	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101 800-30-10P	1590075	1GHz~18GHz	Apr. 22, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Apr. 21, 2022	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 04, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Oct. 03, 2022	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Jul. 23, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Jul. 22, 2022	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jul. 22, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Jul. 21, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682-4	30MHz to 18GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971-4	9kHz to 18GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655-4	9kHz to 18GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,80 1606/2	18GHz~40GHz	Feb. 24, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Feb. 23, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 17, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Sep. 16, 2022	Radiation (03CH07-HY)
Controller	EMEC	EM1000	N/A	Control Ant Mast	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Controller	MF	MF-7802	N/A	Control Turn table	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)
Attenuator	HONOVA	5910 SMA-50-005-19-NE	ATT-36	N/A	Oct. 30, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Oct. 29, 2022	Radiation (03CH07-HY)
Software	Audix	E3	N/A	N/A	N/A	Jan. 08, 2022 ~ Jan. 21, 2022	N/A	Radiation (03CH07-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	Mar. 09, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Mar. 08, 2022	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZB ECK	BBHA 9170	BBHA917025 1	18GHz~40GHz	Nov. 30, 2021	Jan. 08, 2022 ~ Jan. 21, 2022	Nov. 29, 2022	Radiation (03CH07-HY)



<Radiation for FCC Part 15E Band2、Band3>

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Jan. 06, 2022~ Jan. 23, 2022	Sep. 06, 2022	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N-06	47020 & 06	30MHz to 1GHz	Oct. 09, 2021	Jan. 06, 2022~ Jan. 23, 2022	Oct. 08, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1G~18GHz	Aug. 04, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 03, 2022	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	Oct. 12, 2021	Jan. 06, 2022~ Jan. 23, 2022	Oct. 11, 2022	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00991	18GHz ~40GHz	May. 12, 2021	Jan. 06, 2022~ Jan. 23, 2022	May. 11, 2022	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Jul. 05, 2021	Jan. 06, 2022~ Jan. 23, 2022	Jul. 04, 2022	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845SE	980729	1-18GHz	Jul. 09, 2021	Jan. 06, 2022~ Jan. 23, 2022	Jul. 08, 2022	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Jan. 06, 2022~ Jan. 23, 2022	Jun. 21, 2022	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec.09,.2021	Jan. 06, 2022~ Jan. 23, 2022	Dec. 08,.2022	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY59053012	3Hz~26.5GHz	Nov.18,.2021	Jan. 06, 2022~ Jan. 23, 2022	Nov. 17,.2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/4PE	NA	Aug. 28, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/4PE	NA	Aug. 28, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-57 57	NA	Aug. 28, 2021	Jan. 06, 2022~ Jan. 23, 2022	Aug. 27, 2022	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jan. 06, 2022~ Jan. 23, 2022	N/A	Radiation (03CH16-HY)

<Conducted for FCC Part 15E>

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Jan.04.2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Jan.04.2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Jan.04.2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW191204(B OX8)	N/A	Jan. 07,2021	Jan.04.2022	Jan. 06,2022	Conducted (TH05-HY)

Note: Test equipment calibration is traceable to the procedure of ISO17025.