Test report no.: *Prüfbericht-Nr.:*	**CN24JE42 003**	**Order No.:** *Auftragsnr.:*	168478033	**Page 1 of 24** *Seite 1 von 24*
Client reference no.: *Kunden-Referenz-Nr.:*	N/A	**Order date:** *Auftragsdatum:*	2024-04-10	
Client: *Auftraggeber:*	**Kaonbroadband Co., Ltd.** 884-3, Seongnam-daero, Bundang-gu, Seongnam-si, Gyeohggi-do, 13517 Republic of Korea			
Test item: *Prüfgegenstand:*	Wi-Fi7 Router			
Identification / Type no.: *Bezeichnung / Typ-Nr.:*	AR2340G, EVO8000AP			
Order content: *Auftrags-Inhalt***:**	Test Report			
Test specification *Prüfgrundlage:*	CFR47 FCC Part15: Subpart E Section 15.407			
Date of sample receipt: *Wareneingangsdatum:*	2024-04-15	Please refer to Photo Document		
Test sample no: *Prüfmuster-Nr.:*	A003564618 001~004 A003691667-001			
Testing period: *Prüfzeitraum:*	2024-04-15 - 2024-06-05			
Place of testing: *Ort der Prüfung:*	Refer to section 2.1			
Testing laboratory: *Prüflaboratorium:*	TÜV Rheinland (Shenzhen) Co., Ltd.			
Test result*: *Prüfergebnis*:*	Pass			

tested by: *geprüft von:*	x Breeze Jiang Signed by: Breeze Jiang	**authorized by:** *genehmigt von:*	x Bell Hu Signed by: Bell Hu
Date: 2024-07-08 *Datum:*		**Issue date:** 2024-07-08 *Ausstellungsdatum:*	
Position / *Stellung*:	Expert/Sachverständige(r)	**Position** / *Stellung*:	Expert/Sachverständige(r)

Other: *Sonstiges:*	FCC ID: 2AXCW-AP8000 This report is for 6GHz Wi-Fi.
Condition of the test item at delivery: *Zustand des Prüfgegenstandes bei Anlieferung:*	Test item complete and undamaged Prüfmuster vollständig und unbeschädigt

* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet

V05

Test report no.: **CN24JE42 003**

Remarks
Anmerkungen

1	The equipm_ent used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request. *Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.* *Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.*
2	As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. *Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.*
3	Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. *Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.*
4	The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the “Zero Guard Band Rule” and “Simple Acceptance” in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019. *Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.*

Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 MAXIMUM E.I.R.P.
RESULT: Pass

5.1.3 SPECTRAL DENSITY (E.I.R.P.)
RESULT: Pass

5.1.4 FREQUENCY STABILITY
RESULT: Pass

5.1.5 26DB BANDWIDTH AND 99% BANDWIDTH
RESULT: Pass

5.1.6 IN-BAND EMISSION (MASK)
RESULT: Pass

5.1.7 RADIATED SPURIOUS EMISSION
RESULT: Pass

5.1.8 CONTENTION BASED PROTOCOL
RESULT: Pass

5.1.9 CONDUCTED EMISSION ON AC MAINS
RESULT: N/A

Contents

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results of 6GHz Wi-Fi

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China
FCC Registration No.: 694916
ISED wireless device testing laboratory: 25069

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory
No.102, 1F of Southwest and No.205, 2F of West Warehouse Building, No.767 Tianyuan Road, Tianhe District, Guangzhou, Guangdong, P.R.China
FCC Registration No.: CN1207
ISED wireless device testing laboratory: 2932C

Note: Except for AC power-line conducted emissions, all test items performed in TÜV Rheinland (Shenzhen) Co., Ltd.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. Until**
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	21.09.2024
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	21.09.2024
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	21.09.2024
DC Power Supply	Keysight	E3642A	MY61276100	21.09.2024
Wireless Connectivity Tester	R&S	CMW270	102505	21.09.2024
Power Control Unit	Tonscend	JS0806-4ADC	N/A	21.09.2024
Automation Control Unit	Tonscend	JS0806-2	21C8060396	21.09.2024
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Unwanted Emission Testing (TS9975)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR 7	102021	25.07.2024
Signal Analyzer	R&S	FSV 40	101439	25.07.2024
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	25.07.2024
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	25.07.2024
Amplifier	R&S	SCU-18F	180070	25.07.2024
Amplifier	R&S	SCU40A	100475	25.07.2024
Trilog Broadband Antenna (30 MHz – 7 GHz)	Schwarzbeck	VULB 9162	193	06.08.2024
Double-Ridged Antenna (1 - 18 GHz)	ETS-LINDGREN	3117	00218717	06.08.2024
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	27.08.2024
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	06.08.2024
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	22.06.2024

Conducted Emissions				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	Rohde & Schwarz	ESW8	101312	2024-11-16
Artificial Mains Network	Rohde&Schwarz	ESH2-Z5	100114	2025-03-05
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Parameter	Uncertainty
Radio Frequency	±1 x 10-7
RF Power (conducted)	±2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	±6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	±6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB
Temperature	±1 °C
Humidity	±5 %
Voltage (DC)	±1 %
Voltage (AC, <10kHz)	±2 %

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. File for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at **Error! Reference source not found.** is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The Product is Wi-Fi7 Router which supports 2.4GHz Wi-Fi, 5GHzWi-Fi, 6Hz Wi-Fi and BLE functions.

This report is for Wi-Fi 6GHz operation only.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	**Value**	
Kind of Equipment:	Wi-Fi7 Router	
Type Designation:	AR2340G, EVO8000AP(They are electrically identical, only different in model name for market purpose)	
FCC ID:	2AXCW-AP8000	
Operating Voltage:	DC 12V, 3.33A via AC/DC adapter	
Operating Temperature Range:	0 °C ~ +40°C	
Adapter:	Model Number: GQ48-120333-HU Input: 100-240V~50/60Hz 1.5A Max Output: DC 12V/3.33A Manufacturer: DONGGUAN GUANGQI ELECTRONIC CO., LTD	
Technical Specification of Wi-Fi 802.11 a/ax/be		
Operating Frequency:	5925-7125 MHz band,	
Type of Modulation:	OFDM, OFDMA	
Protocol:	For 802.11a/ax-HE20/be-EHT20: 5955 ~7115MHz For 802.11ax-HE40/be-EHT40: 5965 ~ 7085MHz For 802.11ax-HE80/be-EHT80: 5985 ~ 7025MHz For 802.11ax-HE160/be-EHT160: 6025 ~ 6985MHz For 802.11be-EHT320: 6265 ~ 6905MHz	
Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11a MCS0~MCS11 for 802.11ax MCS0~MCS13 for 802.11be (All data rates considered, only the Worst-cases reported)	
Equipment Classification:	15E-6GHz Low Power Indoor Access Point (6ID)	
Antenna Type:	Integral Antennas	
Smart Antenna Systems	☒ 802.11a	☐SISO, ☐2*2 CDD, ☐3*3 CDD, ☒4*4 CDD
	☒ 802.11ax	☐SISO, ☐2*2 MIMO, ☐3*3 MIMO, ☒4*4 MIMO
	☒ 802.11be	☐SISO, ☐2*2 MIMO, ☐3*3 MIMO, ☒4*4 MIMO
Antenna Gain:	Refer to Table 3 Antenna Details	
RU Mode for 802.11ax/be	☒Full RU, ☒ Partial RU (Single RU, Multi RU, Multi-RU & punctured)	

Table 3: Antenna Details for Wi-Fi

Antenna Type	Frequency Band (MHz)	Peak Antenna Gain (dBi)				Beamforming Directional Gain (dBi)	CDD Directional Gain (dBi)	
		Ant 0	Ant 1	Ant 2	Ant 3		For Power	For PSD
Integral Antennas	2400~2500MHz	1.9	1.9	1.9	1.9	7.92	1.9	7.92
	5150~5875MHz	2.0	2.0	2.0	2.0	8.02	2.0	8.02
	5925~7125MHz	2.5	2.5	2.5	2.5	8.52	2.5	8.50

1. The device supports CDD Mode and Beamforming mode, details refer to the table as below.
2. CDD signals are correlated, the directional gain as follows,
When N_{SS}=1, for power measurements: Array Gain = 0 dB for $N_{ANT} \leqslant 4$, the directional gain = max antenna gain + array gain
For power spectral density (PSD) measurements: the max directional gain= 10 log [(10^(G1 /20) + 10^(G2 /20)+ ⋯ + (10^GN) /20)^2 /N_{ANT}]
3. Beamforming signals are correlated, the directional gain as follows, the max directional gain = 10 log[(10^(G1 /20) + 10^(G2 /20)+ ⋯ + (10^GN) /20)^2 /N_{ANT}]
4. The information as above is from the antenna specifications.

3.3 Applicable Standards

FCC CFR Title 47, Part 15, Subpart 15.407
ANSI C63.10-2013
FCC KDB 987594 D01 U-NII 6GHz General Requirements v01
FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v01r01
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC Workshop October 26, 2022, on 802.11be (Wi Fi 7)

3.4 Independent Operation Modes

The basic operation modes are:

A. On, Wi-Fi 802.11 a/ax/be wireless transmitting mode
    1. Low channel
    2. Middle channel
    3. High channel

B. On, Wi-Fi link

3.5 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.6 Submitted Documents

- Application Form
- Operation Description
- Schematics
- PCB Layout
- User Manual
- Block Diagram
- Rating Label
- Parts List

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests were performed on model AR2340G in this report.

Table 4: RF Channel and Frequency of 6GHz Wi-Fi

802.11a/ax-HE20/be-EHT20

Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)
1	5955	61	6255	121	6555	181	6855
5	5975	65	6275	125	6575	185	6875
9	5995	69	6295	129	6595	189	6895
13	6015	73	6315	133	6615	193	6915
17	6035	77	6335	137	6635	197	6935
21	6055	81	6355	141	6655	201	6955
25	6075	85	6375	145	6675	205	6975
29	6095	89	6395	149	6695	209	6995
33	6115	93	6415	153	6715	213	7015
37	6135	97	6435	157	6735	217	7035
41	6155	101	6455	161	6755	221	7055
45	6175	105	6475	165	6775	225	7075
49	6195	109	6495	169	6795	229	7095
53	6215	113	6515	173	6815	233	7115
57	6235	117	6535	177	6835		

802.11ax-HE40/be-EHT40

Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)
3	5965	123	6565
11	6005	131	6605
19	6045	139	6645
27	6085	147	6685
35	6125	155	6725
43	6165	163	6765
51	6205	171	6805
59	6245	179	6845
67	6285	187	6885
75	6325	195	6925
83	6365	203	6965
91	6405	211	7005
99	6445	219	7045
107	6485	227	7085
115	6525		

802.11ax-HE80/be-EHT80

Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)
7	5985	71	6305	135	6625	199	6945
23	6065	87	6385	151	6705	215	7025
39	6145	103	6465	167	6785	/	/
55	6225	119	6545	183	6865	/	/

802.11ax-HE160/be-EHT160

Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)
15	6025	143	6665
47	6185	175	6825
79	6345	207	6985
111	6505	/	/

802.11be-EHT320

Channel	Center Frequency (MHz)	Channel	Center Frequency (MHz)
63	6265	191	6905
127	6585	175	/

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T14	N/A
Laptop	X260	LENOVO	PC0FF78S

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

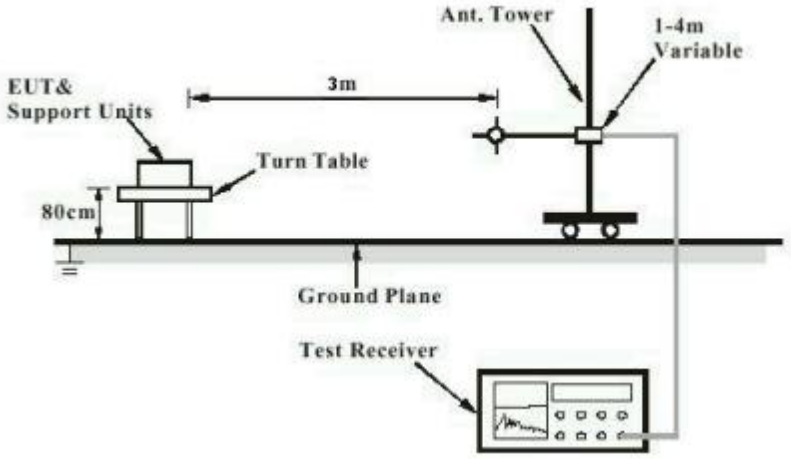


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

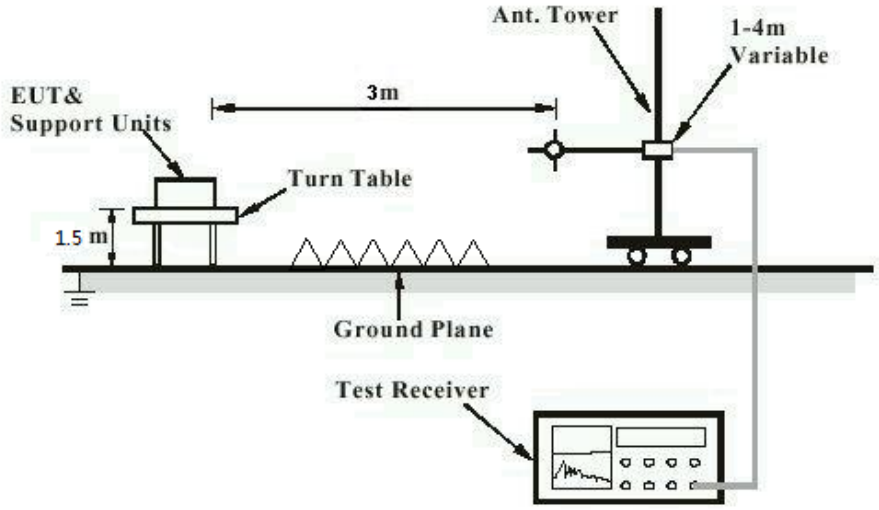


Diagram of Measurement Configuration for Mains Conduction Measurement

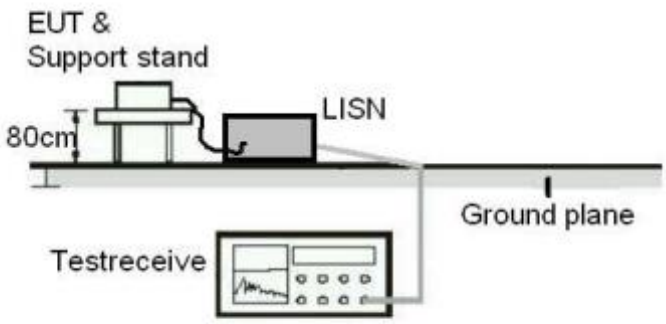
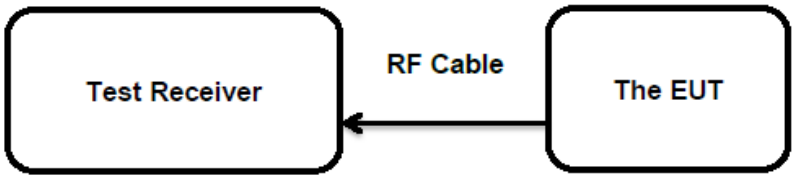


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification
Test standard : Part 15.203

The EUT have 4 Integral antennas for 6GHz Wi-Fi. Antenna gain as listed in section 3.2 table 2.
Therefore the EUT is considered sufficient to comply with the provision.
Refer to EUT Photo for further details.

5.1.2 Maximum e.i.r.p.

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(a)(5)
Basic standard	:	ANSI C63.10: 2013
Limits	:	<1W (30dBm) EIRP

Test Setup

Date of testing	:	2024-05-20 to 2024-06-05
Input voltage	:	DC 12V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.3 Spectral Density (E.I.R.P.)

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(a)(5)
Basic standard	:	ANSI C63.10: 2013
Limits	:	<5dBm/MHz EIRP

Test standard	:	FCC Part 15.407(a)(5)
Date of testing	:	2024-05-20 to 2024-06-05
Input voltage	:	DC 12V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.4 Frequency Stability

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(g)
Basic standard	:	ANSI C63.10: 2013
Limits	:	Within assigned bands
Kind of test site	:	Shielded Room

Date of testing	:	2024-05-23 to 2024-06-02
Input voltage	:	DC 12V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

As declared, the device will be maintained within assigned bands under all conditions of normal operation as Specified.

5.1.5 26dB Bandwidth and 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(a)
Basic standard	:	ANSI C63.10: 2013
Limits	:	N/A
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-05-23 to 2024-06-02
Input voltage	:	DC 12V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.6 In-Band Emission (Mask)

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-05-23 to 2024-06-02
Input voltage	:	DC 12V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.7 Radiated Spurious Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(b) & FCC Part 15.205 & FCC Part 15.209
Basic standard	:	ANSI C63.10: 2013
Limits	:	Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz. Restricted Bands meet the requirement of 15.209 limit.

Test Setup

Date of testing	:	2024-05-23 to 2024-06-02
Input voltage	:	DC 12V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	Refer to test result
Relative humidity	:	Refer to test result
Atmospheric pressure	:	101 kPa

Remark:
Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst-case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

5.1.8 CONTENTION BASED PROTOCOL

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.407(d) KDB 987594 D01 U-NII 6GHz General Requirements KDB 987594 D02 U-NII 6 GHz EMC Measurement
Limits	:	Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission. Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel and stay off the channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain. (See note) To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty. Note: The EUT encounters the incumbent signal that its power level is less than or equal to the detection threshold (-62dBm) with reference to 0dBi antenna gain. And the incumbent signal level will be amplified by the EUT antenna gain to yield an actual injected signal at the antenna port, the actual injected is identified as an AWGN signal. The calculation is as follows:Incumbent signal level (dBm) + Antenna Gain (dBi) = AWGN Signal power Level (dBm) Incumbent signal level (dBm) ≤ Detection Threshold (-62dBm+3=-59dBm) All incumbent signal levels in the report comply with the -59dBm threshold.
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-05-20 to 2024-06-02
Input voltage	:	DC 12V
Operation mode	:	B
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.9 Conducted Emission on AC Mains

RESULT: **N/A**

Test Specification

Test standard	:	FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	:	ANSI C63.10: 2013
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-05-23
Input voltage	:	120V/60Hz
Operation mode	:	B
Ambient temperature	:	Refer to test result
Relative humidity	:	Refer to test result
Atmospheric pressure	:	101 kPa

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

7 List of Tables