



TEST REPORT

EMC Test for PWFMDB200

APPLICANT LG Electronics Inc.

REPORT NO. HCT-EM-2407-FC010-R2

DATE OF ISSUE August 14, 2024

> Tested by Hyun-Jin Lim



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HCT CO., LTD. Bonejai Huh BongJai Huh **I** CEO

F-TP22-03(Rev.06)

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TEST REPORT FCC SDOC	REPORT NO. HCT-EM-2407-FC010-R2 DATE OF ISSUE August 14, 2024 FCC ID. BEJPWFMDB200
Applicant	LG Electronics Inc. 170, Seongsanpaechong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, 51533, Republic of Korea
Product Name Model Name	Cloud Gateway PWFMDB200
Date of Test	06.24.2024 to 07.23.2024
Location of Test	Permanent Testing Lab On Site Testing Lab (Address: See clause 1.2)
Test Standard Used	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
Test Results	Refer to the present document
Manufacturer Brand Name	LG Electronics Inc. LG





REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	July 29, 2024	Initial Release
1	August 09, 2024	Added the factory information
2	August 14, 2024	Changed applicant address

Notice

Content

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation

Scheme (KOLAS), which signed the ILAC-MRA.

(KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)



CONTENTS

1. TESTING LABORATORY	5
1.1 General Information	5
1.2 Location of the Test Site	5
2. GENERAL INFORMATION	6
2.1 Description of EUT	6
2.2 Power Source	6
2.3 Tested System Details	7
2.4 Cable Description	8
2.5 Noise Suppression Parts on Cable (I/O Cable)	9
2.6 Test Facility	10
2.7 Calibration of Measuring Instrument	10
2.8 Measurement Uncertainty	10
3. DESCRIPTION OF TEST	11
3.1 Measurement of Conducted Emission	11
3.2 Measurement of Radiated Emission	12
3.3 Configuration of Tested System	14
4. OPERATION OF THE EUT	15
5. MEASURING INSTRUMENTS	16
6. EMISSION TEST SUMMARY	17
6.1 Conducted Emission	17
6.1.1 Operating Condition	17
6.1.2 Measuring Data	18
6.2 Radiated Emission Below 1 GHz	20
6.2.1 Operating Condition	20
5.2.2 Measuring Data	21
6.3 Radiated Emission Above 1 GHz	23
6.3.1 Operating Condition	23
6.3.2 Measuring Data	24
7. APPENDIX A. TEST SETUP PHOTO	28





1. TESTING LABORATORY

1.1 General Information

Organization Name	HCT Co., Ltd.			
Address	2-6, 73, 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do,			
Address	17383. Rep. of Korea			
Telephone	+82 31 645 6300			
FAX	+82 31 645 6401			

1.2 Location of the Test Site

The test site is located at the following address.;

Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383. Rep. of Korea		
Telephone	+82 31 645 6300		
FAX	+82 31 645 6401		





2. GENERAL INFORMATION

2.1 Description of EUT

FCC ID.	BEJPWFMDB200		
Model Name	PWFMDB200		
Product Name	Cloud Gateway		
Frequency Range	WiFi: 2412 MHz to 2462 MHz		
Power Rating	DC 12 V		
	LG Electronics Inc.		
Manufacturer	84, Wanam-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do,		
	51554, Republic of Korea		
	LG Electronics Inc.		
	84, Wanam-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do,		
51554, Republic of Korea			
Factory	DTK		
	5th floor, 3-Hodong, Standard Factory Buildings, Masan Free Trade Zone,		
	#211 Jayumuyeok 3-gil, Masanhoewon-gu, Changwon-city, Gyeongsangnam-Do		
	630-490 Korea		

2.2 Power Source

During the test, the following power supply levels are utilized/provided.;

Power supply: AC 120 V, 60 Hz



2.3 Tested System Details

All equipment descriptions used in the tested system (including inserted cards) are:

Device Type	Model Name	Serial Number	Manufacturer
Cloud Gateway (EUT)	PWFMDB200	-	LG Electronics Inc.
AC/DC Adapter ^{a)}	PA-1041-81		LITE-ON Power Technology (CHANGZHOU) Co., LTD
BECON HVAC Controller	PACP4B010	-	LG Electronics Inc.
BECON HVAC Controller Adapter	PA-1041-81		LITE-ON Power Technology (CHANGZHOU) Co., LTD
Notebook PC	NT550XEZ	-	SAMSUNG Electronics Co., Ltd.
Notebook PC Adapter	EP-TA845 001	-	SOLUM VINA COMPANY LIMITED
AP	N904		ipTIME
AP Adapter	GA0520A-1		ipTIME

a) The AC/DC adapter is enclosed with the product (EUT).

- Input: 100~240 VAC, 50/60 Hz, 1.2 A

- Output: 12.0 VDC, 3.33 A, 40.0 W



2.4 Cable Description

[Ethernet Communication+RS485 Mode]

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
	DC IN	Y	N	1.0
EUT	RS485	Ν	Y	9.0
	LAN	Ν	N	3.0
AC/DC Adapter	AC IN	Ν	N	1.5
AP	DC IN	Ν	Ν	1.8
BECON HAVC Controller	DC IN	Ν	Ν	1.8
Notebook PC	DC IN	Ν	N	1.8

[WiFi 2.4 GHz+RS485 Mode]

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
CUT.	DC IN	Y	N	1.0
EUT	RS485	Ν	Y	9.0
AC/DC Adapter	AC IN	Ν	Ν	1.5
BECON HAVC		N	N	1 0
Controller	DC IN	IN	IN	1.0



2.5 Noise Suppression Parts on Cable (I/O Cable)

		n		1	n
Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
	DC IN	Y	EUT End	Y	EUT End
EUT	RS485	N	N/A	Y	EUT End
	LAN	N	N/A	Y	EUT End
AC/DC Adapter	AC IN	N	N/A	Ν	N/A
AP	DC IN	N	N/A	Y	EUT End
BECON HAVC Controller	DC IN	Ν	N/A	Y	EUT End
Notebook PC	DC IN	N	N/A	Y	EUT End

[Ethernet Communication+RS485 Mode]

[WiFi 2.4 GHz+RS485 Mode]

Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
	DC IN	Y	EUT End	Y	EUT End
EUT	RS485	N	N/A	Y	EUT End
	LAN	N	N/A	Y	EUT End
AC/DC Adapter	AC IN	N	N/A	Ν	N/A
BECON HAVC		N	NI/A	v	FUT End
Controller	DCIN	IN	IN/A	I	LOT LIIU



2.6 Test Facility

Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4-2014. The Normalized site attenuations (30 MHz to 1 GHz) and Site validation (1 GHz to 18 GHz) were performed in accordance with the standard in ANSI C63.4-2014 and ANSI C63.4a-2017 Our laboratories are accredited and designated in accordance with the provisions of Radio Waves ACT and International Standard ISO/IEC 17025:2017. (National Radio Research Agency, CABID No. KR0032)

2.7 Calibration of Measuring Instrument

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturers recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5:2017.

2.8 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the UCISPR measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter Test Site		Expanded Uncertainty	
Conducted Emission	EMI Shield Room	1.5 dB	
De dista d Ensia sia a	2 m Comi Anochoic Chombon #1	30 MHz to 1 GHz: 5.8 dB	
Radiated Emission	3 m Semi Anechoic Chamber #1	1 GHz to 18 GHz: 4.8 dB	





3. DESCRIPTION OF TEST

3.1 Measurement of Conducted Emission

The test procedure was in accordance with ANSI C63.4-2014, Clause 7.3

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN).

If the EUT is connected to the PC through USB, the AC power-line adapter of the PC is directly connected to a line impedance stabilization network (LISN).

Other support units were connected to the power mains through another LISN.

The two LISNs provide 50 $\,\Omega\,$ / 50 $\,\mu\text{H}$ of coupling impedance for the measuring instrument.

- b. Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.
- c. The frequency ranges from 150 $\,\rm kHz\,$ to 30 $\,\rm MHz\,$ was searched.

Frequency (Mb)	Class A Class A Quasi-Peak Average (dBµV) (dBµV)		Class B Quasi-Peak (dBµV)	Class B Average (dBµV)
0.15 to 0.5	79	66	66 to 56*	56 to 46*
0.5 to 5	73	60	56	46
5 to 30	73	60	60	50

Conducted Emission Limits

NOTE. The more stringent limit applies at transition frequencies.

[*] The limit level in dBµV decreases linearly with the logarithm of frequency.



3.2 Measurement of Radiated Emission

The test procedure was in accordance with ANSI C63.4-2014, Clause 8.3

- a. The EUT was placed on the top of a turn table 0.8 meters above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 m away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from 1 m to 4 m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 m to 4 m and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to Peak and Average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- g. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. (1 GHz to 40 GHz)

		Class A		Class B			
Frequency (Mbz)	Antenna Distance (m)	Field Strength (µV/m)	Quasi-Peak (dBµV/m)	Antenna Distance (m)	Field Strength (µV/m)	Quasi-Peak (dBµV/m)	
30 to 88	10	90	39.0	3	100	40.0	
88 to 216	10	150	43.5	3	150	43.5	
216 to 960	10	210	46.4	3	200	46.0	
Above 960	10	300	49.5	3	500	54.0	
Frequency	Antonno D	istance	Class A		Class B		
(附)	(m)	Antenna Distance (m)		Average (dBµV/m)	Peak (dBμV/m)	Average (dBμV/m)	
Above 1 000	3		80	60	74	54	

Radiated Emission Limits





Frequency Range of Radiated Measurements

An unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a Radiated Emission limit is specified, up to the frequency shown in the following table

Highest frequency generated or used in the device or on which the device operates or tunes (배2)	Upper frequency of measurement range (毗)
Below 1.705	30
1.705 to 108	1 000
108 to 500	2 000
500 to 1 000	5 000
Above 1 000	5th harmonic of the highest frequency or 40 GHz, whichever is lower



3.3 Configuration of Tested System

[Ethernet Communication+RS485 Mode]



[WiFi 2.4 GHz+RS485 Mode]





4. OPERATION OF THE EUT

During preliminary test and final tests, the following operating mode was investigated. It was tested the following operating mode, after connecting all peripheral devices.

Operating Mode:

Ethernet Communication + RS485 Mode

After connecting the Cloud Gateway and AP with a LAN cable, the test was performed in the ping test status. And the RS485 port is communicating with the peripheral device.

WiFi 2.4 GHz + RS485 Mode

Tested in ping test status after connecting Cloud Gateway and AP with wireless WiFi 2.4 GHz. And RS485 port is communicating with peripheral device.





5. MEASURING INSTRUMENTS

Туре		Model Name	Manufacturer	Serial Number	Calibration Cycle	Next Calibration Date
Con	ducted emission					
\boxtimes	EMI Test Receiver	ESR7	Rohde & Schwarz	101910	1 year	07.02.2025
\square	LISN	ENV216	Rohde & Schwarz	102245	1 year	07.17.2025
	LISN	ENV216	Rohde & Schwarz	100073	1 year	05.07.2025
\bowtie	Software	EMC32	Rohde & Schwarz	-	-	-
Rad	iated emission below	1 GHz				
\boxtimes	EMI Test Receiver	ESU40	Rohde & Schwarz	100524	1 year	05.07.2025
\square	Bilog Antenna	VULB9168	Schwarzbeck	255	2 year	03.10.2025
\square	Antenna master	MA4640-XP-ET	INNCO SYSTEM	-	N/A	-
\square	Turn Table	1060	INNCO SYSTEM	-	N/A	-
\square	Software	EMC32	Rohde & Schwarz	-	-	-
Rad	iated emission above	1 GHz				
\boxtimes	EMI test receiver	ESU40	Rohde & Schwarz	100524	1 year	05.07.2025
\boxtimes	Horn Antenna	HF907	Rohde & Schwarz	103160	1 year	10.16.2024
\boxtimes	Power Amplifier	TK-PA18H	TESTEK	170034-L	1 year	11.01.2024
	Horn Antenna	BBHA 9170	Schwarzbeck	BBHA 9170 #786	1 year	11.01.2024
	Power Amplifier	TK-PA1840H	TESTEK	170030-L	1 year	02.20.2025
\boxtimes	Antenna master	MA4640-XP-ET	INNCO SYSTEM	-	N/A	-
\bowtie	Turn Table	1060	INNCO SYSTEM	-	N/A	-
\square	Software	EMC32	Rohde & Schwarz	-	-	-



6. EMISSION TEST SUMMARY

6.1 Conducted Emission

6.1.1 Operating Condition

The test results of conducted emission at mains ports provide the following information:

Test Standard Used	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
Frequency Range	0.15 MHz to 30 MHz
Detector	Quasi-Peak, CISPR-Average
Bandwidth	9 kHz (6 dB)
Operating Mode	Ethernet Communication + RS485 Mode WiFi 2.4 대z + RS485 Mode
Test Site	EMI Shield Room
Temperature	min. 22.6 °C, max. 24.9 °C
Relative Humidity	min. 42.2 %, max. 45.3 %
Test Date	07.23.2024

A Conducted emission is calculated by the following equation:

Calculation Formula: QuasiPeak or CAverage= Receiver Reading + Corr. Corr. = LISN Factor + Cable Loss Margin = Limit – QuasiPeak or CAverage

The measurements from both Live (L1) and Neutral (N) of the LISN are combined into a single graph.

F-TP22-03 (Rev. 06)





6.1.2 Measurement Data



Ethernet Communication + RS485 Mode

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1523	43.30	65.88	22.58	9.000	L1	9.6
0.1635	41.01	65.28	24.28	9.000	L1	9.6
0.1725	39.04	64.84	25.80	9.000	N	9.5
0.4628	40.71	56.64	15.93	9.000	L1	9.6
1.3370	31.72	56.00	24.28	9.000	L1	9.6
4.9640	31.86	56.00	24.14	9.000	L1	9.7
18.2435	43.18	60.00	16.82	9.000	N	9.9
18.3043	41.11	60.00	18.89	9.000	N	9.9
19.4788	42.41	60.00	17.59	9.000	N	9.9

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1545	27.73	55.75	28.02	9.000	L1	9.6
0.1680	25.52	55.06	29.54	9.000	L1	9.6
0.1793	24.89	54.52	29.63	9.000	L1	9.6
0.4560	34.90	46.77	11.86	9.000	L1	9.6
1.3393	23.45	46.00	22.55	9.000	L1	9.6
4.9663	28.82	46.00	17.18	9.000	L1	9.7
18.2435	37.83	50.00	12.17	9.000	N	9.9
18.3043	37.23	50.00	12.77	9.000	N	9.9
19.4788	42.28	50.00	7.72	9.000	N	9.9





WiFi 2.4 GHz + RS485 Mode Full Spectrum

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1523	42.50	65.88	23.38	9.000	L1	9.6
0.1613	41.25	65.40	24.15	9.000	L1	9.6
0.4650	39.59	56.60	17.01	9.000	L1	9.6
1.3393	31.47	56.00	24.53	9.000	L1	9.6
1.7488	29.07	56.00	26.93	9.000	L1	9.6
8.7980	43.66	60.00	16.34	9.000	L1	9.8
9.5630	45.30	60.00	14.70	9.000	L1	9.8
10.3280	41.94	60.00	18.06	9.000	N	9.8
15.6830	46.90	60.00	13.10	9.000	N	9.8
16.4480	47.00	60.00	13.00	9.000	N	9.9
17.2130	45.50	60.00	14.50	9.000	N	9.9

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1545	26.80	55.75	28.95	9.000	L1	9.6
0.1680	25.07	55.06	29.99	9.000	L1	9.6
0.4538	35.70	46.81	11.10	9.000	L1	9.6
1.2898	24.57	46.00	21.43	9.000	L1	9.6
1.3708	22.43	46.00	23.57	9.000	L1	9.6
8.7980	43.28	50.00	6.72	9.000	N	9.8
9.5630	44.60	50.00	5.40	9.000	Ν	9.8
10.3280	40.95	50.00	9.05	9.000	N	9.8
15.6830	46.60	50.00	3.40	9.000	Ν	9.8
16.4480	46.80	50.00	3.20	9.000	Ν	9.9
17.2130	45.30	50.00	4.70	9.000	Ν	9.9





6.2 Radiated Emission Below 1 GHz

6.2.1 Operating Condition

The test results of radiated emission provide the following information:

Used Test Standard	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
Frequency Range	30 MHz to 1 000 MHz
Detector	Quasi-Peak
Bandwidth	120 kHz (6 dB)
Antenna Height	1 m to 4 m
Antenna Polarity	Horizontal, Vertical
Operating Mode	Ethernet Communication + RS485 Mode WiFi 2.4 GHz + RS485 Mode
Test Site	3 m Semi Anechoic Chamber #1
Temperature	min. 22.8 °C, max. 25.1 °C
Relative Humidity	min. 42.1 %, max. 45.3 %
Test Date	06.24.2024

A field strength is calculated by the following equation.

Calculation Formula: QuasiPeak = Reading (Receiver Reading) + Corr. Corr. (Correction Factor) = Antenna Factor + Cable Loss Margin = Limit - QuasiPeak

The measurements' polarities are H and V, where H means horizontal and V means vertical.



5.2.2 Measurement Data

Ethernet Communication + RS485 Mode



Full Spectrum

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.3960	34.10	40.00	5.90	100.0	V	341.0	19.0
38.5552	31.70	40.00	8.30	100.0	v	65.0	19.4
55.0259	35.60	40.00	4.40	100.0	v	27.0	20.0
72.5448	30.00	40.00	10.00	374.8	v	0.0	17.7
94.1458	27.45	43.50	16.05	125.1	V	277.0	15.0
110.5920	27.50	43.50	16.00	100.0	v	15.0	16.4
125.1011	31.70	43.50	11.80	110.8	v	134.0	17.9
249.7648	35.70	46.00	10.30	100.0	v	147.0	19.1
500.0957	40.00	46.00	6.00	110.7	v	332.0	25.4
1000.0000	44.00	54.00	10.00	100.0	V	213.0	32.7







WiFi 2.4 GHz + RS485 Mode

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.3855	29.26	40.00	10.74	125.1	V	0.0	18.7
56.4405	29.90	40.00	10.10	100.0	V	280.0	19.9
66.5853	25.30	40.00	14.70	100.0	V	197.0	18.8
141.5978	25.30	43.50	18.20	100.0	V	146.0	19.5
187.0241	30.98	43.50	12.52	100.0	V	168.0	17.9
296.7947	23.64	46.00	22.36	109.9	V	183.0	20.4
494.8445	38.80	46.00	7.20	125.1	V	220.0	25.2
500.1001	39.80	46.00	6.20	125.3	V	152.0	25.4

Full Spectrum





6.3 Radiated Emission Above 1 GHz

6.3.1 Operating Condition

The test results of radiated emission provide the following information:

Used Test Standard	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014				
Detector	Peak, CISPR-Average				
Bandwidth	1 MHz				
Highest Frequency	2462 MHz				
Tested Frequency Range	1 GHz to 18 GHz				
Antenna Height 1 m to 4 m					
Antenna Polarity	Horizontal, Vertical				
Operating ModeEthernet Communication + RS485 ModeWiFi 2.4 GHz + RS485 Mode					
Test Site	3 m Semi Anechoic Chamber #1				
Temperature	min. 22.8 °C, max. 25.1 °C				
Relative Humidity	min. 42.1 %, max. 45.3 %				
Test Date	06.24.2024				

A field strength is calculated by the following equation.

Calculation Formula:	Peak or CAverage = Reading (Receiver Reading) + Corr.
	Corr. (Correction Factor) = Antenna Factor+ Cable Loss –Amplifier Gain
	Margin = Limit - Peak or CAverage

The measurements' polarities are H and V, where H means horizontal and V means vertical.





6.3.2 Measurement Data



Ethernet Communication + RS485 Mode

Full Spectrum

Final_Result_PK+

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1092.3800	39.27	74.00	34.73	125.0	V	136.0	-31.0
1234.9550	48.13	74.00	25.87	113.5	V	337.0	-30.3
1250.1150	47.32	74.00	26.68	107.6	v	324.0	-30.3
1991.9700	35.35	74.00	38.65	107.6	Н	25.0	-26.0
2133.2750	33.84	74.00	40.16	100.0	v	3.0	-25.4
3576.7800	35.95	74.00	38.05	100.0	Н	213.0	-19.3
4248.8950	47.20	74.00	26.80	107.6	v	232.0	-17.1
9604.7700	41.40	74.00	32.60	208.5	V	332.0	-9.0

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1092.3800	18.87	54.00	35.13	125.0	V	136.0	-31.0
1234.9550	20.65	54.00	33.35	113.5	V	337.0	-30.3
1250.1150	19.24	54.00	34.76	107.6	V	324.0	-30.3
1991.9700	26.21	54.00	27.79	107.6	Н	25.0	-26.0
2133.2750	20.68	54.00	33.32	100.0	v	3.0	-25.4
3576.7800	23.98	54.00	30.02	100.0	Н	213.0	-19.3
4248.8950	25.63	54.00	28.37	107.6	V	232.0	-17.1
9604.7700	28.99	54.00	25.01	208.5	V	332.0	-9.0

WiFi 2.4 GHz Fundamental Frequency: 2.411 GHz

WiFi 2.4 GHz Harmonic Frequency: 4.893 GHz, 7.3546 GHz, 12.0789 GHz, 16.9205 GHz

WiFi 2.4 GHz + RS485 Mode

Final_Result_PK+

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1103.1850	48.72	74.00	25.28	125.1	V	221.0	-31.0
1244.1750	52.31	74.00	21.69	191.6	V	183.0	-30.3
2374.4200	46.50	74.00	27.50	118.6	н	150.0	-24.4
2771.7400	48.84	74.00	25.16	174.7	Н	210.0	-22.6
3080.0800	42.90	74.00	31.10	125.2	v	199.0	-21.3
4775.3450	42.63	74.00	31.37	125.2	Н	144.0	-15.7
5312.8000	49.44	74.00	24.56	300.6	Н	114.0	-14.3

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1103.1850	22.08	54.00	31.92	125.1	V	221.0	-31.0
1244.1750	22.34	54.00	31.66	191.6	v	183.0	-30.3
2374.4200	21.36	54.00	32.64	118.6	Н	150.0	-24.4
2771.7400	25.65	54.00	28.35	174.7	Н	210.0	-22.6
3080.0800	23.63	54.00	30.37	125.2	v	199.0	-21.3
4775.3450	26.37	54.00	27.63	125.2	Н	144.0	-15.7
5312.8000	27.44	54.00	26.56	300.6	Н	114.0	-14.3

WiFi 2.4 GHz Fundamental Frequency: 2.4416 GHz

WiFi 2.4 GHz Harmonic Frequency: 4.8964, 7.3835 V, 9.7652 GHz, 12.1843 GHz, 14.8329 GHz, 17.0973 GHz

7. APPENDIX A. TEST SETUP PHOTO

Please refer to Appendix. A and test setup photo file no. as follows;

File No.	Date of Issue	Description
HCT-EM-2407-FC010-P	July 29, 2024	Initial Release

End of report