

TEST REPORT

**This laboratory is accredited by National Radio Research
Agency Laboratory and National Voluntary Laboratory
Accreditation Program.**

The tests reported herein have been performed in accordance with
its terms of accreditation.

Test Report No. : LR500112403B
Issue Date : March 06, 2024
Applied Standard : FCC Part 15, Subpart B & ICES-003 (Issue.7)
Trade Name : Hanwha Vision Co., Ltd
Equipment Name : NETWORK VIDEO RECORDER
Model Name : WRN-2110SB1
Additional Model name : -
Serial Number : Identification

**This test result only responds to the tested sample. It is not allowed to copy this report even partly without the
allowance of the test laboratory.**

This test report is not related to KS Q ISO/IEC 17025 and KOLAS accreditation.

Revision history

Revision	Date of issue	Test report No.	Description
0	06.03.2024	LR500112403B	Initial



>>TABLE OF CONTENTS<<

LTA Certification	4
General information's	6
1- Brief Information.....	7
2- Test Site Description.....	10
3- Test Procedure	12
4- List of Equipment Used For the Tests	15
5- EMISSION	16
5-1 Conducted Emissions	16
5-2 Radiated Emissions (FCC)	18
Conclusions	24
Photograph of the measurements	25
Photograph of the EUT	29

LTA Certification**Applicant**

Company name : Hanwha Vision Co., Ltd
Address : 6, Pangyo-ro 319 Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do,
13488, KOREA
Telephone / Facsimile : +82-10-2221-6513 / +82-70-7147-8367

Factory #1

Company name : HANWHA VISION VIETNAM COMPANY LIMITED
Address : Lot O-2, Que Vo Industrial Zone extended area ,Nam Son commune,
Bac Ninh city,Bac Ninh province, Vietnam

Factory #2

Company name : D-TECH CO.,LTD.
Address : 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea
(Suwon Industrial Complex)

Equipment Under Test (EUT)

Equipment Name : NETWORK VIDEO RECORDER
Model name : WRN-2110SB1
Additional Model name : -
Serial number : Identification
Intended environment : Residential area
Date of receipt : February 14, 2024
EUT condition : Pre-production, not damaged
Interface ports : AC IN, HDMI, Display, AUDIO OUT, USB #1~#4,
NETWORK #1~#18, Console (Unused)
Power rating : AC 120 V, 60 Hz
Test Voltage : AC 120 V, 60 Hz

Model Description

- NONE

Model Specification

- The console port of the device to be tested is a port for administrators and is excluded from the test item.

*** To be continued next page ***

LTA Certification –cont.-**Test Performed**

Test started & completed : February 26 - 28, 2024
Location : LTA Co., Ltd.

Test Specification

Purpose of the test : Compliance test to the following standard
Applied standard : FCC Part 15, Subpart B & ICES-003 (Issue.7)
Classification : Class A
Deviations from Standard Test Method : N/A

Test Results

Measurement	Results*	Test method
Conducted Emissions	Complies	ANSI C 63.4 ICES-003 (Issue.7)
Radiated Emissions	Complies	ANSI C 63.4 ICES-003 (Issue.7)

* : The compliance statement is based on nominal value only.

Modification performed by the lab.:

- N/A

Laboratory's Certificate

Project number : 240214-0203
Issue date : March 06, 2024

This test report is issued under the authority of:

The test was supervised by:



Young Kyu Shin, Technical Manager

Jong Chae Kim, Test Engineer

The results in this report apply only to the sample(s) tested.

It is not allowed to copy this report even partly without the allowance of the test laboratory.

General information's

Purpose

This document is based on the Electromagnetic Interference (EMI) tests performed on the “WRN-2110SB1”.
The measurements were performed according to the measurement procedure described in ICES-003 and ANSI C 63.4. The tests were carried out in order to confirm whether the electromagnetic emissions from the EUT (Equipment Under Test), are within the Class A limits defined in ICES-003 and FCC Part 15.

Test Performed

Company name : LTA Co., Ltd.
Address : 4, Songju-ro 236beon-gil, Yangji-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, 17159, Korea
Telephone : +82-31-323-6008
Facsimile : +82-31-323-6010

Measurement uncertainty

Conducted Emissions (0.15 to 30 MHz) : ± 2.81 [dB] (k=2)
Radiated Emissions (30 to 1,000 MHz) : H : ± 4.62 [dB] (k=2) V : ± 4.85 [dB] (k=2)
(1 GHz to 6 GHz) : H : ± 5.65 [dB] (k=2) V : ± 5.68 [dB] (k=2)
(6 GHz to 18 GHz) : H : ± 5.90 [dB] (k=2) V : ± 5.74 [dB] (k=2)

The coverage factor k=2 yields approx. a 95% level of confidence for near-normal distribution typical of most measurement results.

Accredited agencies

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
RRA	KOREA		-	RRA accredited Lab.
	U.S.A	KR0049	2025-03-29	
	CANADA		2024-08-15	
VCCI	JAPAN	C-14948	2026-09-10	VCCI registration
		T-12416	2026-09-10	
		R-14483	2026-10-15	
		G-10847	2024-12-13	
KOLAS	KOREA	KT551	2025-10-12	KOLAS accredited Lab.

1- Brief Information

1-1 Test Summary

Parameter	Applied Standard	Status (note 1)
I. Emission		
Conducted Emissions	FCC Part 15.107 / ICES-003 Clause 3.2.1	C
Radiated Emissions	FCC Part 15.109 / ICES-003 Clause 3.2.2	C
Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable * The data in this test report are traceable to the national or international standards.		

Frequency range to be scanned:

0.15 MHz - 30 MHz as conducted measurement

30 MHz to 5th harmonic of the highest frequency or 40 GHz, whichever is lower as radiated measurement.

Bandwidth:

Measured by the CISPR quasi-peak function Bandwidth is 9 kHz in the frequency 0.15 MHz to 30 MHz and 120 kHz in the frequency 30 MHz to 1,000 MHz.

Measured by the Peak function Bandwidth is 1 MHz in the frequency 1 GHz to 40 GHz.

A sample calculation:

COR. F (correction factor)= Antenna factor + Cable loss- Amp.gain- Distance correction

Emission Level= meter reading + COR.F

1-2 Test mode of the EUT

The tests have been conducted with the following operational mode(s) of the EUT.

Operating mode

1-3 Modification

- NONE

1-4 List of EUT and ACCESSORY

EUT				
Equipment Name	Model Name	Serial No.	Manufacturer	Remarks
NETWORK VIDEO RECORDER	WRN-2110SB1	N/A	HANWHA VISION VIETNAM COMPANY LIMITED D-TECH CO.,LTD.	-
Mouse	MOKJUO	39400117	Primax Electronics Ltd.	--
ACCESSORY				
Equipment Name	Model Name	Serial No.	Manufacturer	Remarks
Keyboard	DK-201U	N/A	ADATA Korea	-
Monitor #1	24MT58DF	910KKURMG518	LG	-
Monitor #2	24BK550YW	003NTWGBL489	LG	-
Adapter#1	PA-1900-08	1Z01445509	LG	-
PoE Switch	SW1600-mini	N/A	ipTIME	-
Notebook Computer	ThinkBook 15 G2 ITL	MP20831Z	Lenovo	-
Adapter#2	ADLX65YCC3D	N/A	Lenovo	-
Camera #1	LND-6022R	ZNDE6V4M900007T	HANWHA TECHWIN CO.,LTD	-
Camera #2	LNV-6032R	ZNHX70GM70000MY	HANWHA TECHWIN CO.,LTD	-
Headphone	SHS-150V/W	N/A	SAMSUNG	-
USB Memory #1	N/A	N/A	SanDisk	-
USB Memory #2	N/A	N/A	SanDisk	-
USB-C Hub	C106	N/A	Linxee (Beijing) Technology Co.,Ltd.	-

1-5 Cable List

Cable List					
From		To		Length (m)	Shield
Type	I/O Port	Type	I/O Port		
EUT	AC IN	AC POWER SOURCE	AC OUT	1.1	NO
	USB #1	Mouse / EUT	-	1.0	NO
	USB #2	Keyboard	-	1.0	NO
	USB #3	USB MEMORY #1	-	-	NO
	USB #4	USB MEMORY #2	-	-	NO
	HDMI	Monitor #1	HDMI	1.4	YES
	Display	Monitor #2	Display	1.5	YES
	NETWORK #1	Notebook Computer	LAN	3.0	NO
	NETWORK #2	USB-C Hub	LAN	3.0	NO
	AUDIO OUT	Headphone	AUDIO IN	1.5	NO
	NETWORK #5 ~ #18	PoE Switch	LAN #1 ~ #16	1.8	NO
	NETWORK #3	Camera #1	LAN	3.0	NO
	NETWORK #4	Camera #2	LAN	3.0	NO

2- Test Site Description

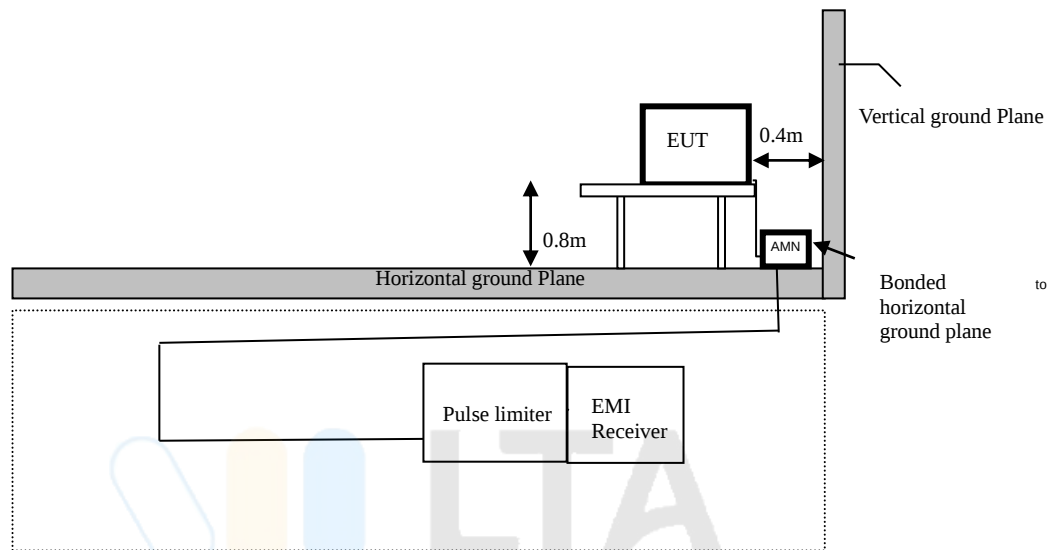
1-Facility

All the testing facilities are periodically serviced as a daily check for equipment and cables systems, an every 1 year facility check for the facilities and annual calibration for testing equipment according to ISO/IEC 17025. All the testing facilities are used as the same specifications shown below. There are descriptions both for radiated disturbance measurement and conducted disturbance measurement conformed by ANSI C 63.4.

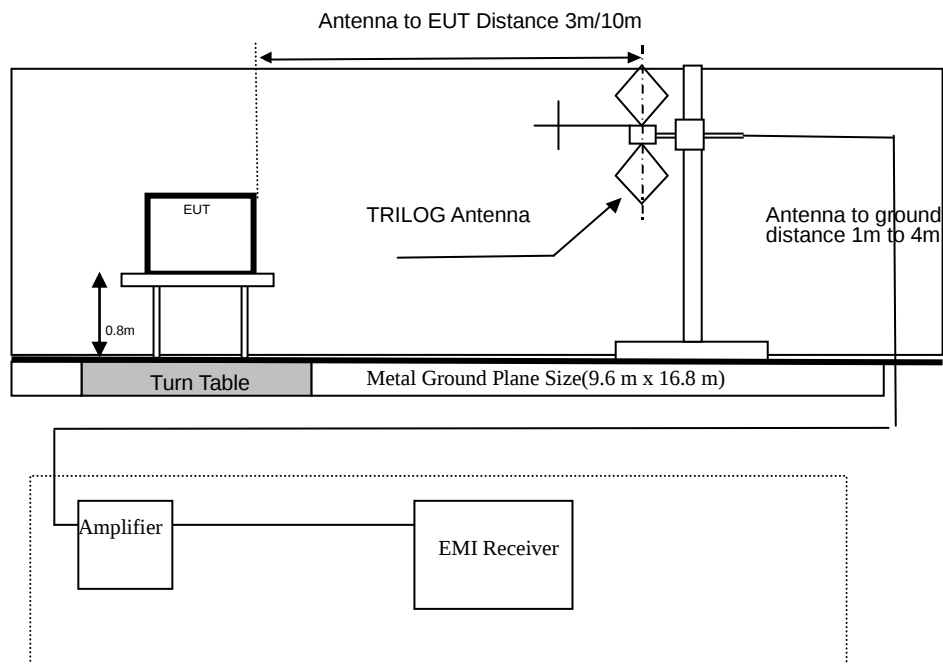
The NSA measurement of the 10 m chamber was performed on January 13, 2024 according to ANSI C 63.4.

The SVSWR measurement of the 10 m chamber was performed on October 18, 2023 according to ANSI C 63.4.

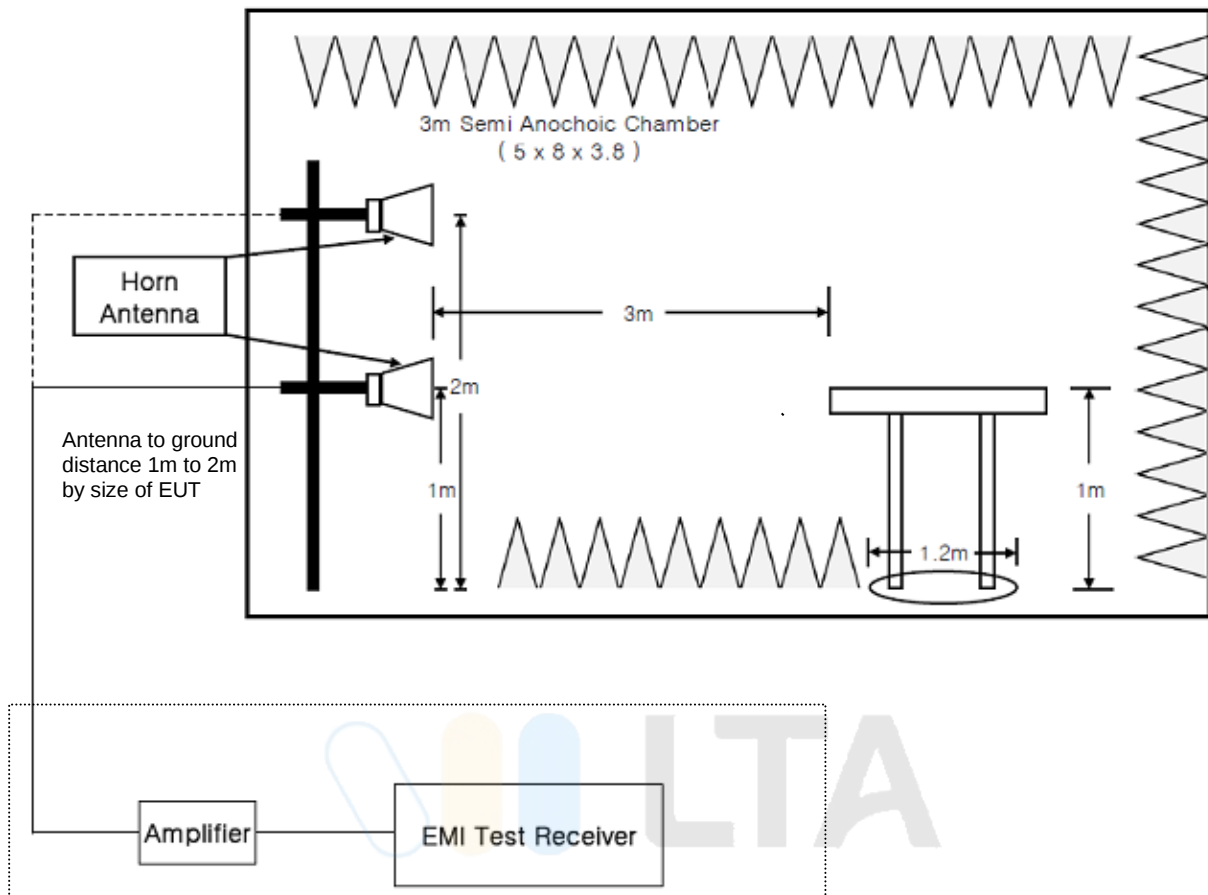
2-1 Conducted Emissions



2-2 Radiated Emissions – Below 1 GHz



2-3 Radiated Emissions – Above 1 GHz



3- Test Procedure

3-1 Conducted Emissions

- The measurement is carried out on an open site with horizontal and metallic ground plane.
- An AMN(Artificial Mains Network) with a nominal impedance ($50\ \Omega$ / $50\ \mu\text{H}$) as defined in ANSI C 63.4, shall be utilized.
- The AMN is grounded on a horizontal metal ground plane.
- Measurement is carried out using an EMI receiver with quasi-peak detectors and average detector.
(Refer to the List of test equipment used for the test.)
- The shortest distance between the EUT and the AMN is 0.8 m.
- The EUT is placed on the non-conducting table with 0.8 m height.
- Refer to "Brief Information"(page 7-8) about details of the EUT and configuration of the cables.
- Measurement is carried out as manual operation.
 - searching the maximum frequency point of the disturbance wave in each frequency range.
 - reading the disturbance level of quasi-peak, average and Line (L) and Neutral (N) in 9 kHz bandwidth by the EMI receiver.
 - calculating the measurement result with the following formula or equation.
(Result = Reading + Cor.F.(LISN Factor + Cable Loss + Pulse Limiter)
(ex) = $13.23\ \text{dB}\mu\text{V} + (9.63\ \text{dB} + 0.01\ \text{dB} + 9.86\ \text{dB})$
 = $32.73\ \text{dB}\mu\text{V}$

3-2 Radiated Emissions – Below 1 GHz

- Test site is met the requirements of ANSI C 63.4 and the distance between the EUT and the antenna is adjusted 3 m or 10 m.
 - The turntable can be rotated 360 degrees.
 - The antenna can be adjusted between 1 m and 4 m in height above the ground.
 - The EUT is placed on the non-conducting table with 0.8 m height on the turntable.
 - Measurements are carried out using an EMI receiver with quasi-peak detectors (120 kHz bandwidth).
 - Refer to the list of test equipment used for the test.
 - The TRILOG antenna are used as wideband antenna.
 - The TRILOG antenna is used in the frequency range of 30 MHz to 1 000 MHz.
 - A variable attenuator is used for verifying amplifier's linearity.
 - Rotating the turntable and adjusting the height of the antenna are carried out by control buttons on the console.
 - Refer to "Brief Information"(page 7-8) about details of the EUT and configuration of the cables.
 - Measurement is carried out by a LTA operator as manual operation.
- searching the worst direction with the maximum level of the disturbance wave in rotating the turntable 360 degrees at each searched frequency point.
 - setting the height of the antenna with the maximum level of the disturbance wave from 1 m to 4 m.
 - reading the disturbance level by the EMI receiver with quasi-peak detectors (120 kHz bandwidth) according to ANSI C 63.4.
 - measuring to vertical and horizontal polarization.
 - calculating the measurement result with the following formula or equation:
(Result = Reading + Cor.F (antenna factor + cable loss - PreAmp Gain)
(ex) = 50.6 dBμV/m + (11.08 dB(1/m) + 1.31 dB - 27.32 dB)
= 35.67 dBμV/m

3-3 Radiated Emissions – Above 1 GHz

- Test site is met the requirements of ANSI C 63.4 and the distance between the EUT and the antenna is adjusted 3 m.
- The turntable can be rotated 360 degrees.
- The antenna can be adjusted between 1 m and 4 m in height above the ground.
- The EUT is placed on the non-conducting table with 1 m height on the turntable.
- Measurements are carried out using an EMI receiver with peak and average detectors(1 MHz bandwidth).
- Refer to the list of test equipment used for the test.
- The HORN antenna are used as wideband antenna.
- The HORN antenna is used in the frequency range of 1 GHz to 18 GHz.
- A variable attenuator is used for verifying amplifier's linearity.
- Rotating the turntable and adjusting the height of the antenna are carried out by control buttons on the console.
- Refer to "Brief Information"(page 7-8) about details of the EUT and configuration of the cables.
- Measurement is carried out by a LTA operator as manual operation.
 - searching the worst direction with the maximum level of the disturbance wave in rotating the turntable 360 degrees at each searched frequency point.
 - setting the height of the antenna with the maximum level of the disturbance wave from 1 m to 4 m
 - reading the disturbance level by the EMI receiver with peak and average detectors (1 MHz bandwidth) according to ANSI C 63.4.
 - measuring to vertical and horizontal polarization.
 - calculating the measurement result with the following formula or equation:
(Result = Reading + Cor.F (antenna factor + cable loss + Measure distance – PreAmp Gain)
(ex) = 35.9 dBμV/m + (23.92 dB(1/m) + 7.01 dB + 1.50 dB - 28.33 dB)
= 40.0 dBμV/m

4- List of Equipment Used For the Tests

Conducted Emissions

	Item	Model Name	Manufacturer	Serial No.	Next Cal.	Interval
☒	EMI TEST Receiver	ESR	Rohde & Schwarz	101499	2024.03.13	1 year
☒	Pulse Limiter	ESH3-Z2	Rohde & Schwarz	100710	2024.03.13	1 year
☐	LISN	ESH3-Z6	Rohde & Schwarz	100378	2024.08.22	1 year
☐	LISN	ESH3-Z6	Rohde & Schwarz	101468	2024.08.22	1 year
☒	LISN(main)	ENV216	Rohde & Schwarz	102872	2024.09.07	1 year
☒	LISN(sub)	LT32C/10	AFJ	32031518210	2024.08.22	1 year
☒	TEST PROGRAM	e3_ce 20181212a (V9)	AUDIX	-	-	-

Radiated Emissions – Below 1 GHz

	Item	Model Name	Manufacturer	Serial No.	Next Cal.	Interval
☒	EMI TEST Receiver	ESCI7	Rohde & Schwarz	100772	2024.08.22	1 year
☒	Amplifier	8447D	HP	1937A03453	2024.08.22	1 year
☒	BILOG Antenna	VULB 9168	SCHWARZBECK	749	2025.03.29	2 year
☒	TEST PROGRAM	e3 20181212a (V9)	AUDIX	-	-	-

Radiated Emissions – Above 1 GHz

	Item	Model Name	Manufacturer	Serial No.	Next Cal.	Interval
☒	EMI TEST Receiver	ESCI7	Rohde & Schwarz	100772	2024.08.22	1 year
☐	EMI TEST Receiver	ESU	Rohde & Schwarz	100092	2024.08.22	1 year
☒	Amplifier	8449B	Agilent	3008A02126	2024.03.14	1 year
☐	Amplifier	PAM-840A	COM-POWER	461314	2024.03.15	1 year
☐	HORN ANTENNA	3116B	ETS	133350	2024.03.22	1 year
☐	HORN ANTENNA	3116B	ETS	81109	2024.04.25	1 year
☒	HORN ANTENNA	3115	ETS	114105	2024.04.20	1 year
☒	TEST PROGRAM	e3 20181212a (V9)	AUDIX	-	-	-

5- EMISSION

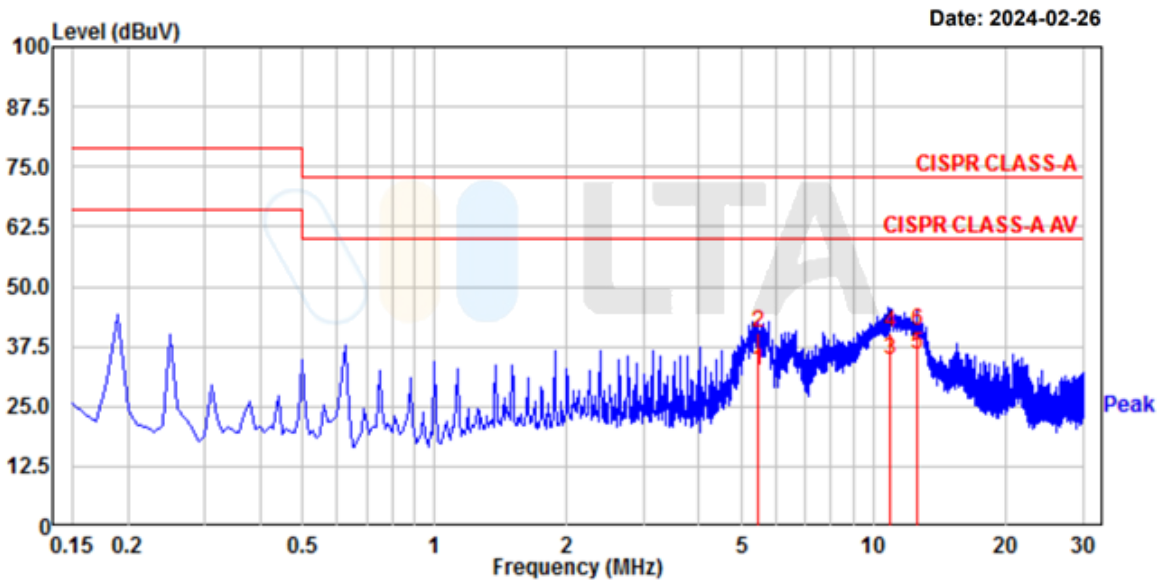
5-1 Conducted Emissions

(LINE)



4, Songjuro 236 Beon-gil, Yangji-myeon
Cheoin-gu, Youngin-si, Gyeonggi-do
449-822 Korea
Tel:+82-31-3236008,9
Fax:+82-31-3236010

Project No.	: 240214-0203	Phase	: LIVE
Test Mode	: Operating	Test Power	: AC 120 V / 60 Hz
Temp./ Humi.	: 17 'C / 35 % R.H.	Test Engineer	: KIM J C



No.	Freq MHz	RD QP dBμV	RD AV dBμV	C.F dB	Result QP dBμV	Result AV dBμV	Limit QP dBμV	Limit AV dBμV	Margin QP dB	Margin AV dB	Phase
2.	5.435	20.77	12.95	19.67	40.44	32.62	73.00	60.00	32.56	27.38	Line
4.	10.896	20.74	14.92	19.82	40.56	34.74	73.00	60.00	32.44	25.26	Line
6.	12.558	20.96	15.86	19.87	40.83	35.73	73.00	60.00	32.17	24.27	Line

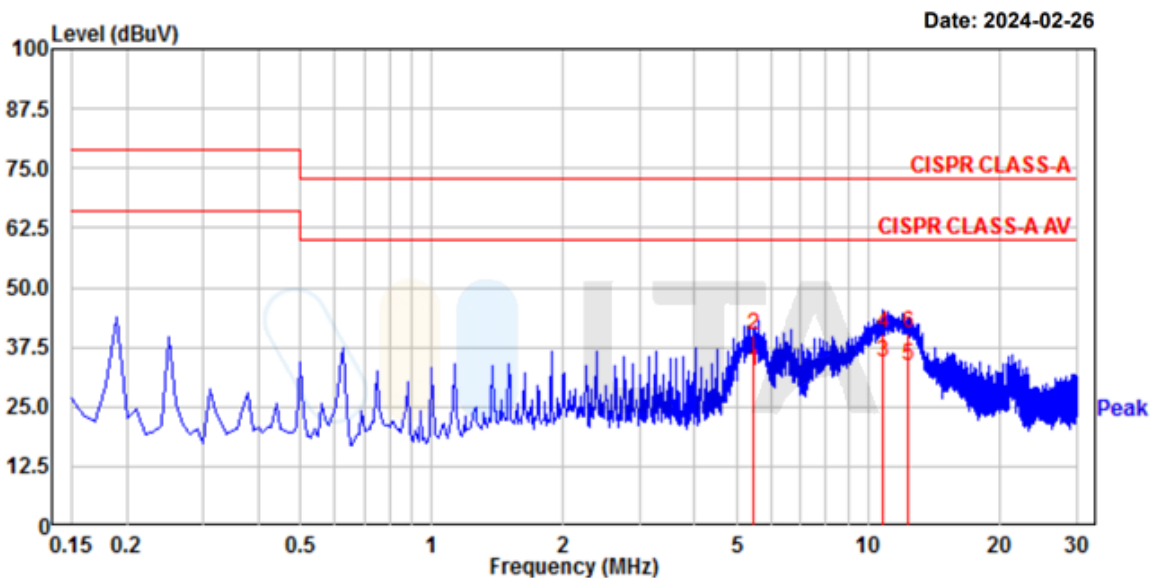
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

(NEUTRAL)



4, Songjuro 236 Beon-gil, Yangji-myeon
Cheoin-gu, Youngin-si, Gyeonggi-do
449-822 Korea
Tel:+82-31-3236008,9
Fax:+82-31-3236010

Project No.	: 240214-0203	Phase	: NEUTRAL
Test Mode	: Operating	Test Power	: AC 120 V / 60 Hz
Temp./ Humi.	: 17 'C / 35 % R.H.	Test Engineer	: KIM J C



No.	Freq MHz	RD QP dBuV	RD AV dBuV	C.F dB	Result QP dBuV	Result AV dBuV	Limit QP dBuV	Limit AV dBuV	Margin QP dB	Margin AV dB	Phase
2.	5.464	20.39	12.69	19.68	40.07	32.37	73.00	60.00	32.93	27.63	neutral
4.	10.777	20.68	14.43	19.84	40.52	34.27	73.00	60.00	32.48	25.73	neutral
6.	12.360	20.41	13.58	19.88	40.29	33.46	73.00	60.00	32.71	26.54	neutral

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

5-2 Radiated Emissions (FCC)

(Below 1 GHz) / H



4, Songjuro 236Beon-gil, yanggi-myeon,
Yongin-si, Gyeonggi-do, Korea
Tel : +82-31-3236008,9
Fax : +82-31-3236010
www.ltalab.com

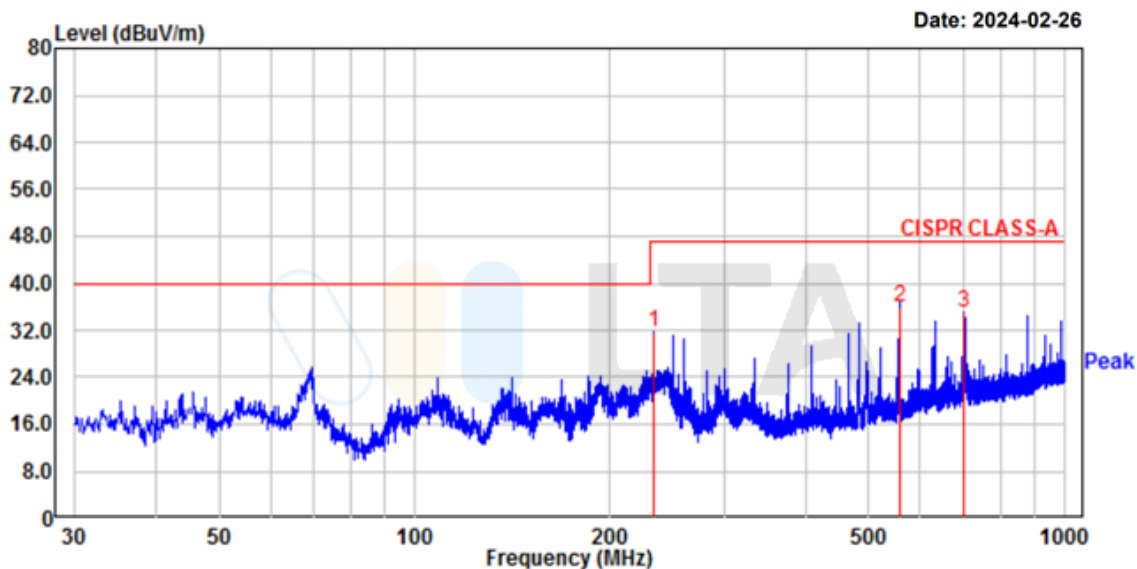
Project No. : 240214-0203

Temp/Humi: 18 'C / 33 % R.H.

Test Mode : Operating

Tested by: KIM J C

Power : AC 120 V / 60 Hz



No.	Freq MHz	Reading dBμV	C.F dB	Result QP dBμV/m	Limit dBμV/m	Margin dB	Height cm	Angle deg	Polarity
1.	233.22	44.14	-12.41	31.73	47.00	15.27	325	227	horizontal
2.	556.95	38.76	-2.95	35.81	47.00	11.19	124	75	horizontal
3.	699.18	34.37	0.73	35.10	47.00	11.90	108	290	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

(Below 1 GHz) / V



4, Songjuro 236Beon-gil, yanggi-myeon,
Yongin-si, Gyeonggi-do, Korea
Tel : +82-31-3236008,9
Fax : +82-31-3236010
www.ltalab.com

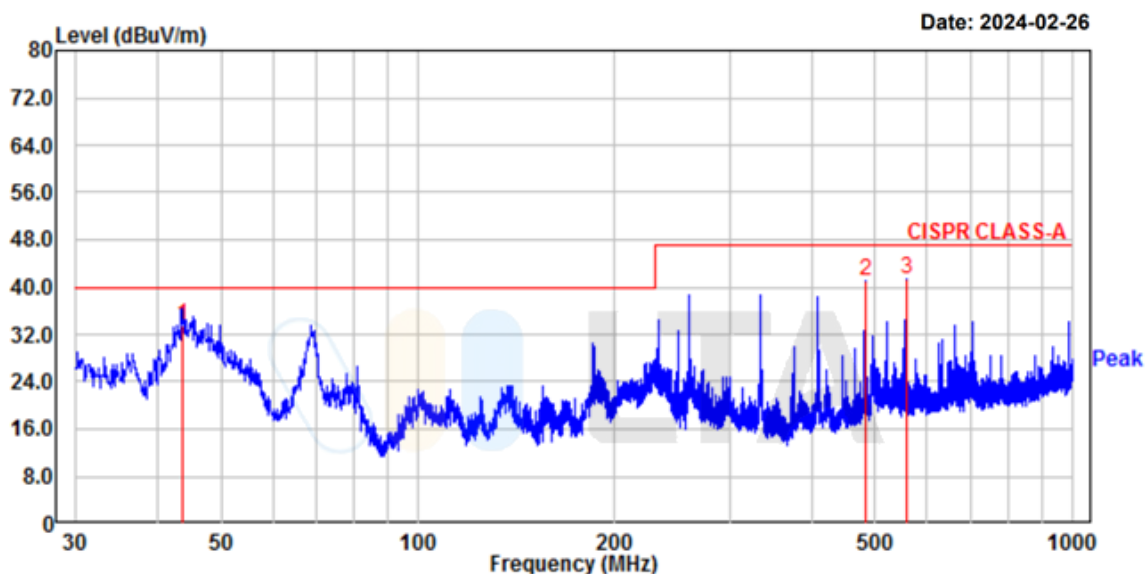
Project No. : 240214-0203

Temp/Humi: 18 'C / 33 % R.H.

Test Mode : Operating

Tested by: KIM J C

Power : AC 120 V / 60 Hz



No.	Freq MHz	Reading dBμV	C.F dB	Result QP dBμV/m	Limit dBμV/m	Margin dB	Height cm	Angle deg	Polarity
1.	43.70	45.30	-11.82	33.48	40.00	6.52	148	96	vertical
2.	482.63	45.90	-4.89	41.01	47.00	5.99	400	53	vertical
3.	556.95	44.18	-2.95	41.23	47.00	5.77	290	95	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (IC)

(Below 1 GHz) / H



4, Songjuro 236Beon-gil, yanggi-myeon,
Yongin-si, Gyeonggi-do, Korea
Tel : +82-31-3236008,9
Fax : +82-31-3236010
www.ltalab.com

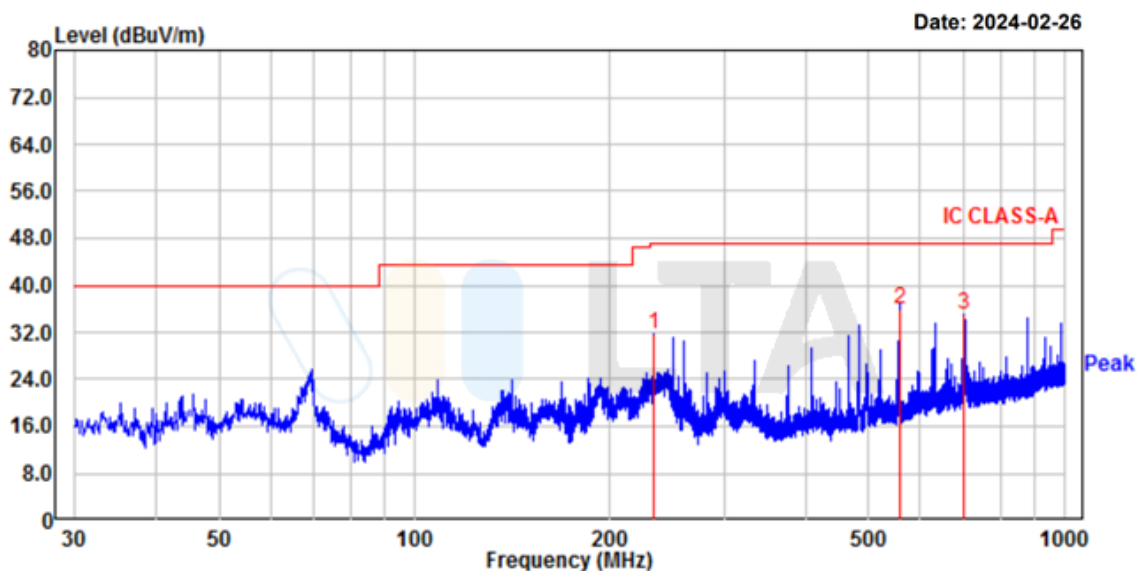
Project No. : 240214-0203

Temp/Humi: 18 'C / 33 % R.H.

Test Mode : Operating

Tested by: KIM J C

Power : AC 120 V / 60 Hz



No.	Freq MHz	Reading dBμV	C.F dB	Result QP dBμV/m	Limit dBμV/m	Margin dB	Height cm	Angle deg	Polarity
1.	233.22	44.14	-12.41	31.73	47.00	15.27	325	227	horizontal
2.	556.95	38.76	-2.95	35.81	47.00	11.19	124	75	horizontal
3.	699.18	34.37	0.73	35.10	47.00	11.90	108	290	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

(Below 1 GHz) / V



4, Songjuro 236Beon-gil, yanggi-myeon,
Yongin-si, Gyeonggi-do, Korea
Tel : +82-31-3236008,9
Fax : +82-31-3236010
www.ltalab.com

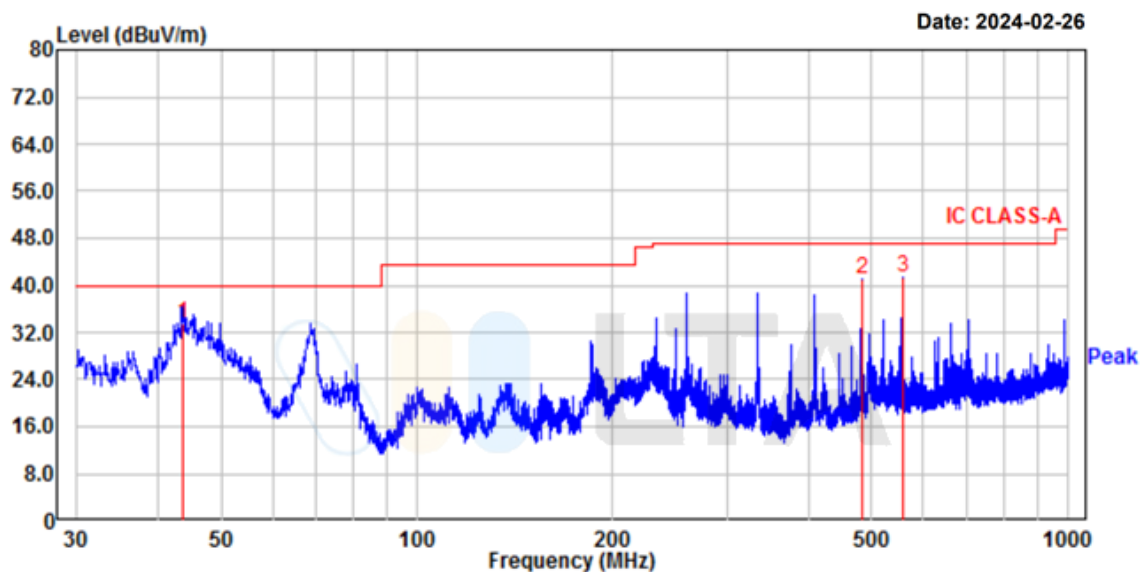
Project No. : 240214-0203

Temp/Humi: 18 'C / 33 % R.H.

Test Mode : Operating

Tested by: KIM J C

Power : AC 120 V / 60 Hz



No.	Freq MHz	Reading dBμV	C.F dB	Result QP dBμV/m	Limit dBμV/m	Margin dB	Height cm	Angle deg	Polarity
1.	43.70	45.30	-11.82	33.48	40.00	6.52	148	96	vertical
2.	482.63	45.90	-4.89	41.01	47.00	5.99	400	53	vertical
3.	556.95	44.18	-2.95	41.23	47.00	5.77	290	95	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (FCC / IC) (Above 1 GHz) / H



4, Songjuro 236Beon-gil, yanggi-myeon,
Yongin-si, Gyeonggi-do, Korea
Tel : +82-31-3236008,9
Fax : +82-31-3236010
www.ltalab.com

Project No. : 240214-0203

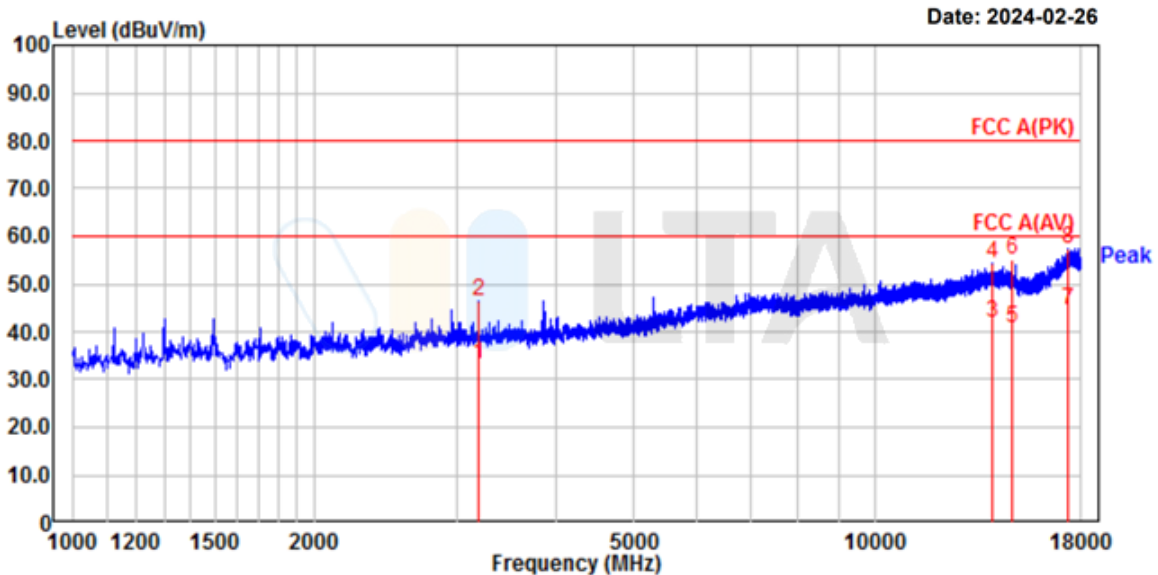
Temp/Humi: 18 'C / 33 % R.H.

Test Mode : Operating

Tested by: KIM J C

Power : AC 120 V / 60 Hz

Measure distance : 3.7 m



No.	Freq MHz	RD PK dBuV	RD AV dBuV	C.F dB	Result PK dBuV	Result AV dBuV	Limit PK dBuV	Limit AV dBuV	Margin PK dB	Margin AV dB	Height cm	Angle deg	Polarity
2.	3199.38	47.50	34.10	-0.98	46.52	33.12	80.00	60.00	33.48	26.88	115	111	horizontal
4.	13990.13	38.40	25.69	16.03	54.43	41.72	80.00	60.00	25.57	18.28	100	343	horizontal
6.	14772.13	40.18	26.18	14.75	54.93	40.93	80.00	60.00	25.07	19.07	108	161	horizontal
8.	17413.50	38.14	25.32	19.19	57.33	44.51	80.00	60.00	22.67	15.49	100	310	horizontal

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss + Measure distance - Preamp gain

(Above 1 GHz) / V



4, Songjuro 236Beon-gil, yanggi-myeon,
Yongin-si, Gyeonggi-do, Korea
Tel : +82-31-3236008,9
Fax : +82-31-3236010
www.ltalab.com

Project No. : 240214-0203

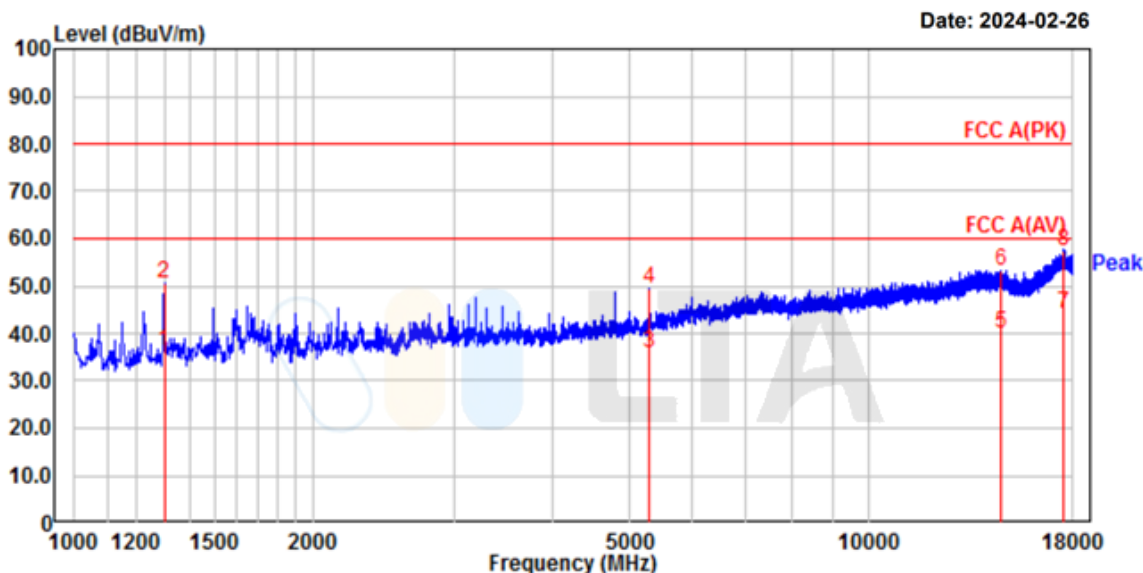
Temp/Humi: 18 'C / 33 % R.H.

Test Mode : Operating

Tested by: KIM J C

Power : AC 120 V / 60 Hz

Measure distance : 3.7 m



No.	Freq MHz	RD PK dBμV	RD AV dBμV	C.F dB	Result PK dBμV	Result AV dBμV	Limit PK dBμV	Limit AV dBμV	Margin PK dB	Margin AV dB	Height cm	Angle deg	Polarity
2.	1297.50	58.95	44.70	-8.51	50.44	36.19	80.00	60.00	29.56	23.81	100	306	vertical
4.	5279.75	45.22	31.69	4.09	49.31	35.78	80.00	60.00	30.69	24.22	122	283	vertical
6.	14627.63	38.06	24.74	15.33	53.39	40.07	80.00	60.00	26.61	19.93	105	246	vertical
8.	17534.63	38.08	24.81	19.31	57.39	44.12	80.00	60.00	22.61	15.88	100	173	vertical

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss + Measure distance - Preamp gain

Conclusions

Product models "**WRN-2110SB1**" meets all of the Class A requirements of the FCC Part 15, Subpart B. Limits of radio disturbance characteristics of ITE).

(Refer to Test Specification and Test Results in the "LTA certification", page 4 and 5)

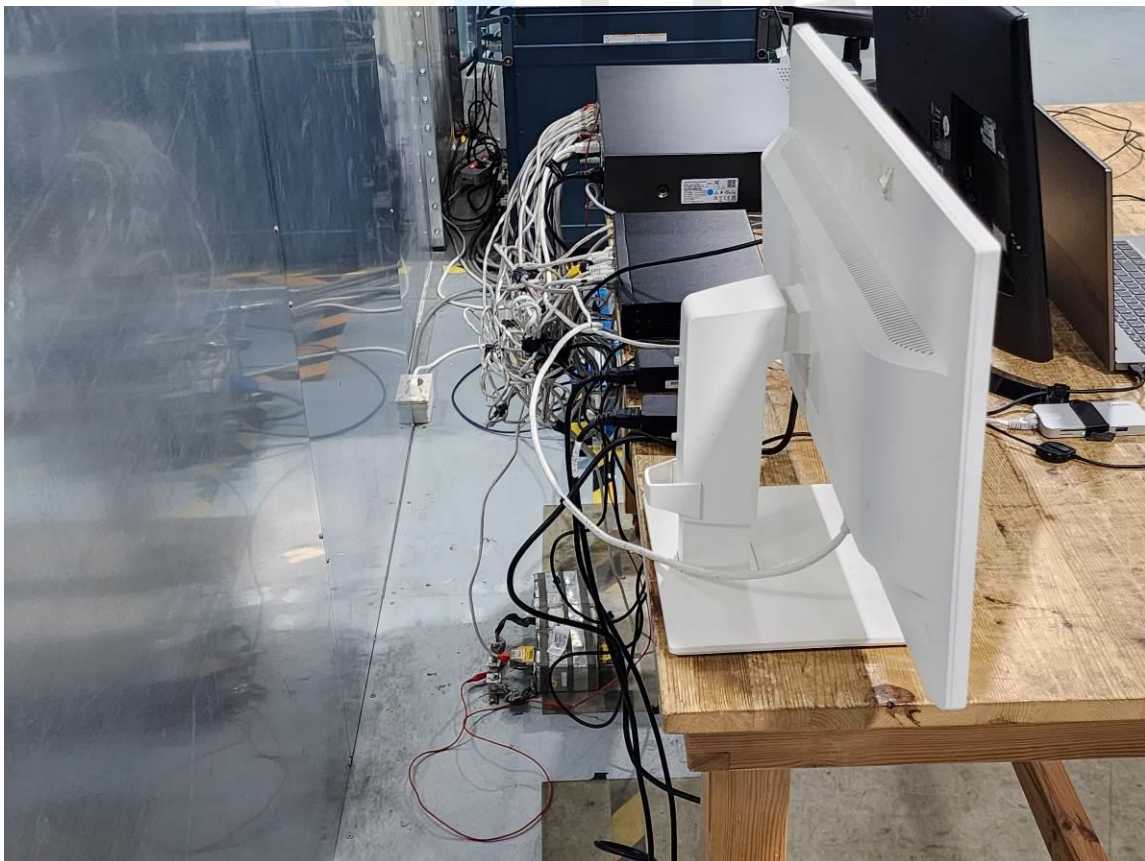
- The highest internal source of an EUT is 3.4 GHz, the measurement shall be made up to 18 GHz.



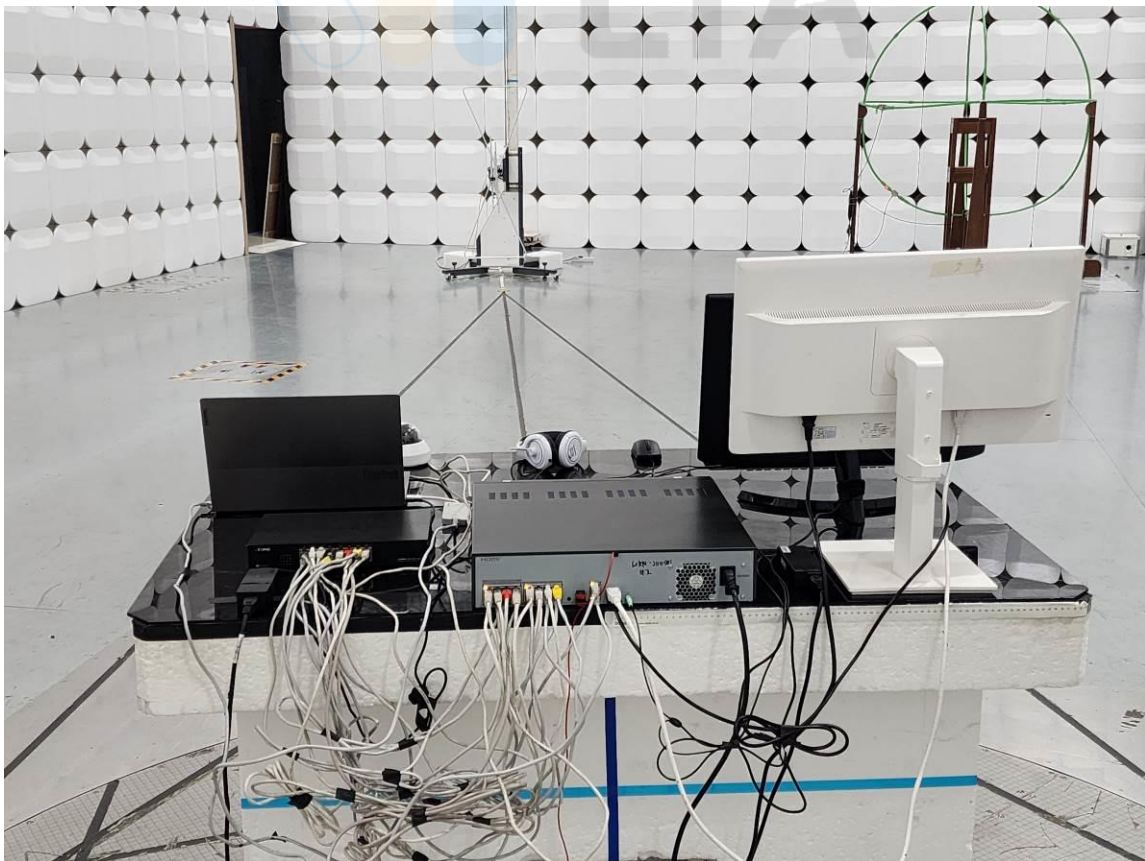
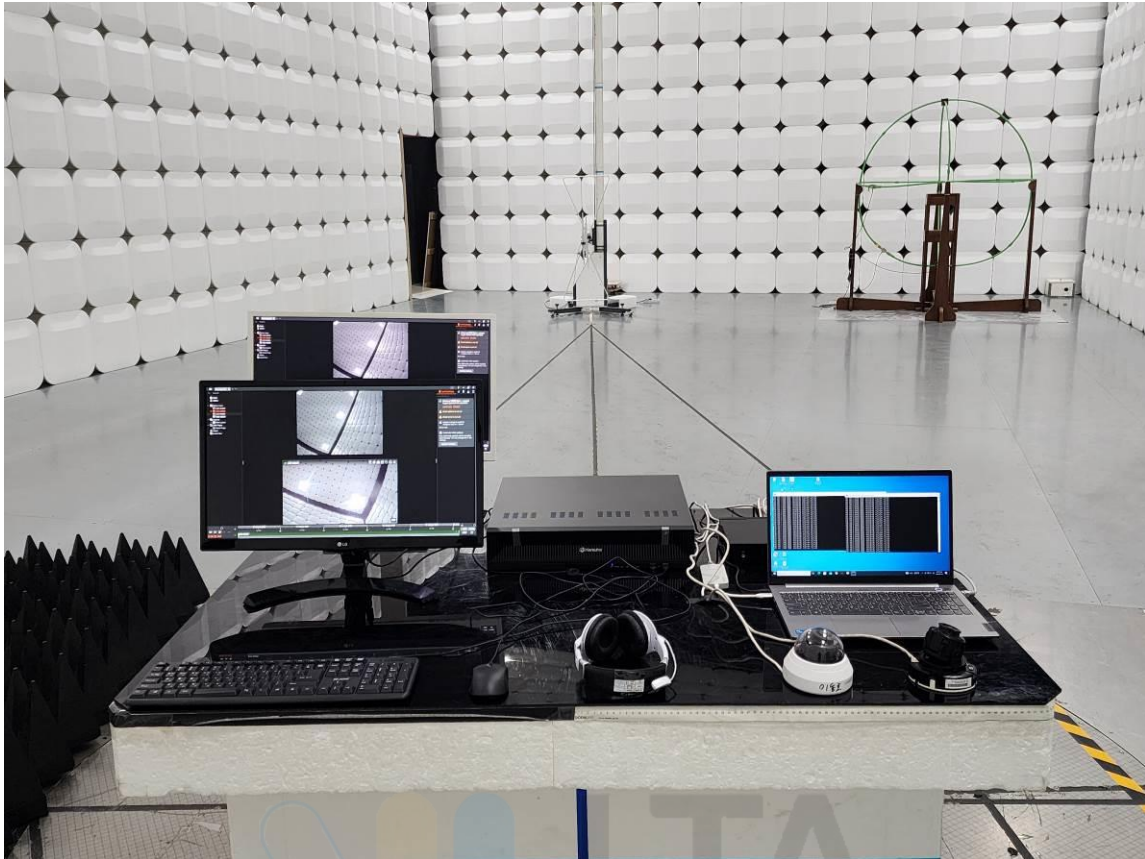
Photograph of the measurements



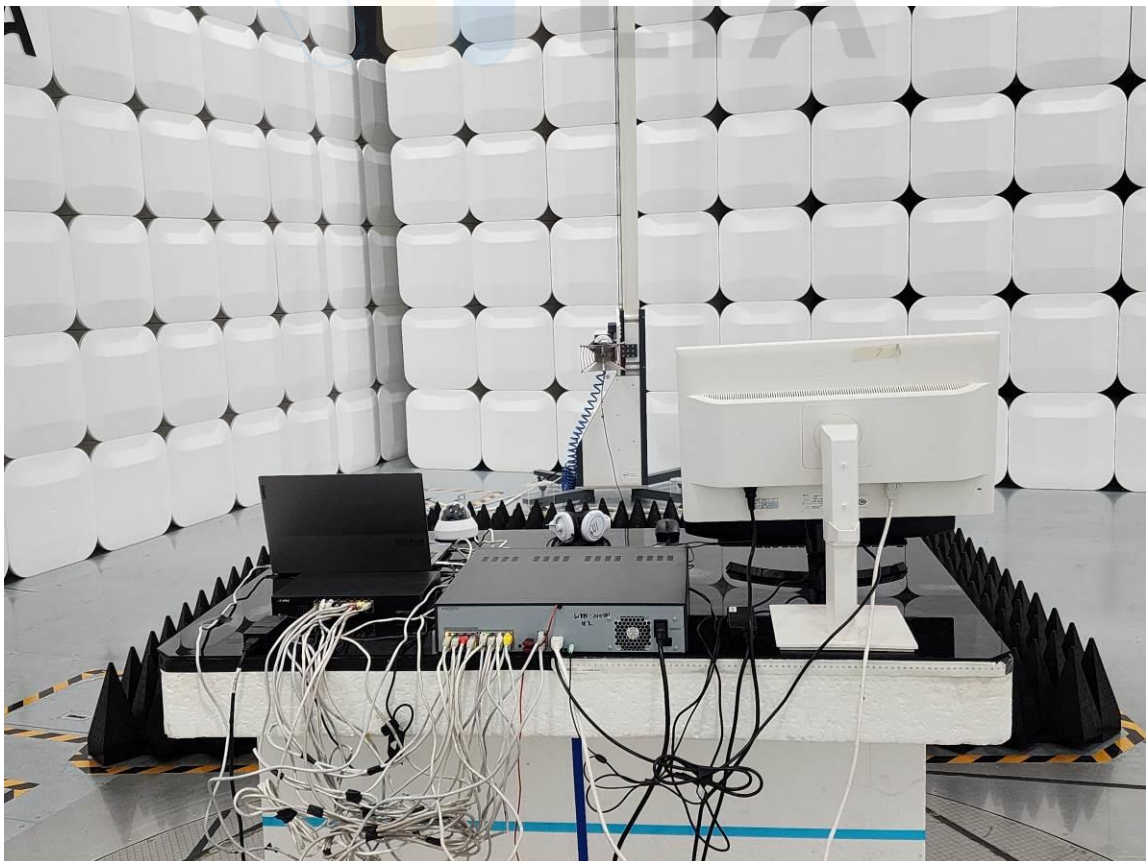
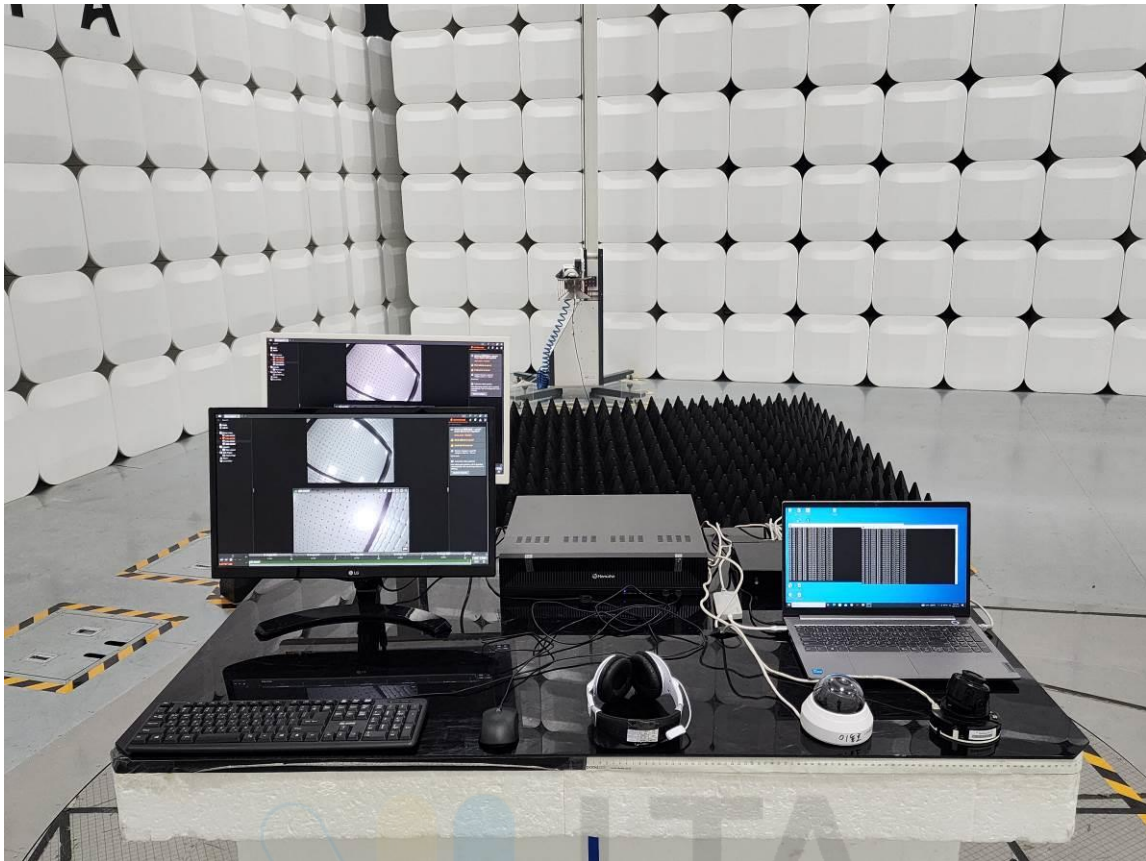
Conducted Emissions



Radiated Emissions - Below 1 GHz



Radiated Emissions - Above 1 GHz



Photograph of the EUT



EUT



EUT

