LTA

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EMC TEST REPORT

Dates of Tests: September 23 - 24, 2025
Project No: 250918-1422
Test Site : LTA Co., Ltd.

Model No. **BRR-X6410A2E**

APPLICANT **Hanwha Vision Co., Ltd**

Equipment Name	:	**VMS(Video Management Software) Appliance**
Manufacturer	:	**Hanwha Vision Co., Ltd**
Model name	:	**BRR-X6410A2E**
Additional Model Name	:	**BRR-X3210A2E**
Test Device Serial No.:	:	**Identification**
Rule Part(s)	:	**AS/NZS CISPR 32:2015**
		CISPR 32 Ed2.0
Date of issue	:	**October 13, 2025**

This test report is issued under the authority of:

Young Kyu Shin, Technical Manager

The test was supervised by:

Jong Chae Kim, Test Engineer

Revision history

Revision	Date of issue	Test report No.	Description
0	13.10.2025	LR500122510D	Initial

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1. General information's

1-1 Test Performed

Company name	:	**LTA Co., Ltd**
Address	:	4, Songju-ro 236beon-gil, Yangji-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, 17159, Korea
Web site	:	http://www.ltalab.com
E-mail	:	chahn@ltalab.com
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Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competents of calibration and testing laboratory".

1-2 Accredited agencies

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

Agency	Country	Accreditation No.	Validity	Reference
RRA	KOREA	KR0049	-	RRA accredited Lab.
	U.S.A		2027-02-27	
	CANADA		2026-08-05	
VCCI	JAPAN	C-14948	2026-09-10	VCCI registration
		T-12416	2026-09-10	
		R-14483	2026-10-15	
		G-10847	2027-12-13	
KOLAS	KOREA	KT551	2029-10-12	KOLAS accredited Lab.

2. Information's about test item

2-1 Client / Manufacturer

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 Ward, 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)

2-2 Equipment Under Test (EUT)

Class	:	A
Category	:	VMS(Video Management Software) Appliance
Model name	:	BRR-X6410A2E
Additional Model name	:	BRR-X3210A2E
Serial number	:	Identification
Date of receipt	:	September 18, 2025
EUT condition	:	Pre-production, not damaged, The console port of the device to be tested is a port for administrators and is excluded from the test item.
Interface Ports	:	AC IN, LAN x 3 EA, USB x 4 EA, HDMI x 2 EA, AUDIO OUT
Power rating	:	AC 240 V, 50 Hz

2-3 Modification

- NONE

2-4 Test conditions

Tested Model	:	BRR-X6410A2E
Test mode	:	Operating mode
Test Voltage	:	AC 240 V, 50 Hz

2-5 List of EUT and ACCESSORY

EUT				
Equipment Name	**Model Name**	**Serial No.**	**Manufacturer**	**Remarks**
VMS(Video Management Software) Appliance	**BRR-X6410A2E**	**N/A**	**HANWHA VISION VIETNAM COMPANY LIMITED**	**EUT**
Mouse	**MOKJUO**	**N/A**	**Primax Electronics Ltd.**	**EUT**
KeyBoard	**K8862**	**N/A**	**DWPH**	**EUT**
ACCESSORY				
Equipment Name	**Model Name**	**Serial No.**	**Manufacturer**	**Remarks**
LCD Monitor #1	P2018H	N/A	TPV Electronics (Fujian) Co., Ltd.	-
LCD Monitor #2	S22E450F	N/A	SANSUI ELECTRIC(CHINA) Co.,Ltd.	-
Notebook Computer	ThinkBook 14 G4 ABA	N/A	Lenovo Information Products (Shen Zhen) Co., Ltd	-
AC/DC Adapter	ADLX65YAC3 D	N/A	Acbel Electronic (Wuhan) Co., Ltd.	-
CCTV Camera	LND-6022R	N/A	HANWHA TECHWIN CO.,LTD.	-
PoE Adapter	SFC501G	N/A	Shenzhen Gospell Digital Technology Co.,Ltd	-
USB Memory #1	N/A	N/A	SanDisk	-
USB Memory #1	N/A	N/A	SanDisk	
HUB	NEXT-TC343LAN	N/A	YCN	-

2-6 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	1.6	NO
EUT	LAN	PoE Adapter	LAN	3.0	NO
EUT	LAN	Notebook Computer	LAN	3.0	NO
EUT	LAN	HUB	LAN	3.0	NO
EUT	USB	Mouse	USB	1.2	NO
EUT	USB	KeyBoard	USB	1.2	NO
EUT	USB	USB Memory #1	USB	-	-
EUT	USB	USB Memory #2	USB	-	-
EUT	HDMI	LCD Monitor #1	HDMI	1.4	YES
EUT	HDMI	LCD Monitor #2	HDMI	1.6	YES
EUT	AUDIO OUT	Earphone	AUDIO IN	0.8	NO
EUT	Ground	Earth	-	1.2	NO

3. Test Report

3.1 Summary of tests

Parameter	Applied Standard	Status
I. Emission		
Conducted Emissions	AS/NZS CISPR 32:2015	C
Radiated Emissions	AS/NZS CISPR 32:2015	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

4. Test Items

4-1 Conducted Emissions

Definition:

The test assesses the ability of the EUT to limit its internal noise from being present on the AC mains Power In/Output/Telecommunication ports.

We were performed the test according to LTA procedure LTA-QI-04.

Test method	:	AS/NZS CISPR 32:2015
Measurement Frequency range	:	150 kHz - 30 MHz
Measurement RBW	:	9 kHz
Test Location	:	Shielded Room
Test mode	:	Operating mode
Result	:	**Complies**

Measurement Data:

- Refer to the Next page (Maximum emission configuration)

A sample calculation:

COR. F (correction factor)= LISN Insertion loss + Cable loss + Pulse Limiter Factor

Emission Level= meter reading + COR.F

Limits for conducted disturbance at the mains ports of class A ITE

Frequency Range	Quasi-peak	Average
(0.15 - 0.5) MHz	79 dBµV	66 dBµV
(0.5 – 30) MHz	73 dBµV	60 dBµV
Note: The limits will decrease with the frequency logarithmically within 0.15 MHz to 0.5 MHz		

Limits for conducted disturbance at the mains ports of class B ITE

Frequency Range	Quasi-peak	Average
(0.15 – 0.5) MHz	(66 – 56) dBµV	(56 - 46) dBµV
(0.5 – 5) MHz	56 dBµV	46 dBµV
(5 – 30) MHz	60 dBµV	50 dBµV
Note: The limits will decrease with the frequency logarithmically within 0.15 MHz to 0.5 MHz		

Limits of conducted common mode (asymmetric mode) disturbance at telecommunication ports in the frequency range 0.15 MHz to 30 MHz for class A equipment

Frequency Range	Voltage limits		Current limits	
	Quasi-peak	Average	Quasi-peak	Average
(0.15 - 0.5) MHz	(97 – 87) dBμV	(84 – 74) dBμV	(53 – 43) dBμV	(40 – 30) dBμV
(0.5 – 30) MHz	87 dBμV	74 dBμV	43 dBμV	30 dBμV

Note 1: The limits decrease linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Note 2: The current and voltage disturbance limits are derived for use with an impedance stabilization network (ISN) which presents a common mode (asymmetric mode) impedance of 150 Ω to the telecommunication port under test (conversion factor is 20 $\log_{10}$ 150/I= 44 dB)

Limits of conducted common mode (asymmetric mode) disturbance at telecommunication ports in the frequency range 0.15 MHz to 30 MHz for class B equipment

Frequency Range	Voltage limits		Current limits	
	Quasi-peak	Average	Quasi-peak	Average
(0.15 - 0.5) MHz	(84 – 74) dBμV	(74 – 64) dBμV	(40 – 30) dBμV	(30 – 20) dBμV
(0.5 – 30) MHz	74 dBμV	64 dBμV	30 dBμV	20 dBμV

Note 1: The limits decrease linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Note 2: The current and voltage disturbance limits are derived for use with an impedance stabilization network (ISN) which presents a common mode (asymmetric mode) impedance of 150 Ω to the telecommunication port under test (conversion factor is 20 $\log_{10}$ 150/I= 44 dB)

Conducted Emissions (LINE)

4, Songjuro 236 Beon-gil, Yangji-myeon
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449-822 Korea
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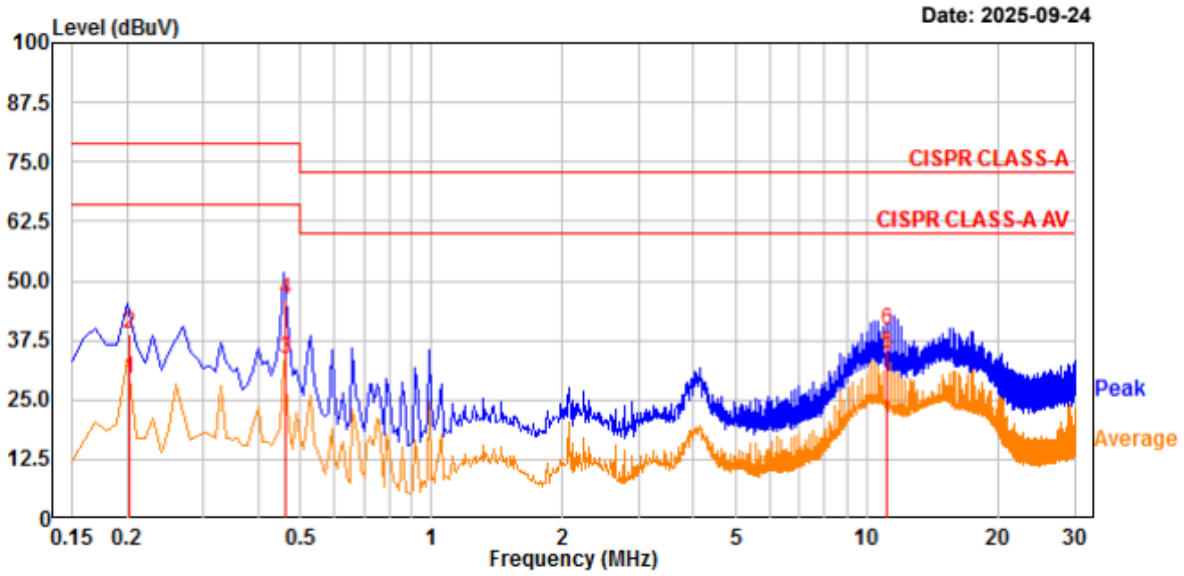
Project No.	: 250918-1422	Phase	: LIVE
Test Mode	: Operating	Test Power	: AC 240 V / 50 Hz
Temp./ Humi.	: 25 'C / 51 % R.H.	Test Engineer	: KIM J C



No.	Freq	RD QP	RD AV	C.F	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV	Phase
	MHz	dBµV	dBµV	dB	dBµV	dBµV	dBµV	dBµV	dB	dB	
2.	0.202	19.40	9.78	19.50	38.90	29.28	79.00	66.00	40.10	36.72	Line
4.	0.463	26.51	13.90	19.51	46.02	33.41	79.00	66.00	32.98	32.59	Line
6.	11.077	19.90	14.76	19.87	39.77	34.63	73.00	60.00	33.23	25.37	Line

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

Conducted Emissions (NEUTRAL)

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Cheoin-gu, Youngin-si, Gyeonggi-do
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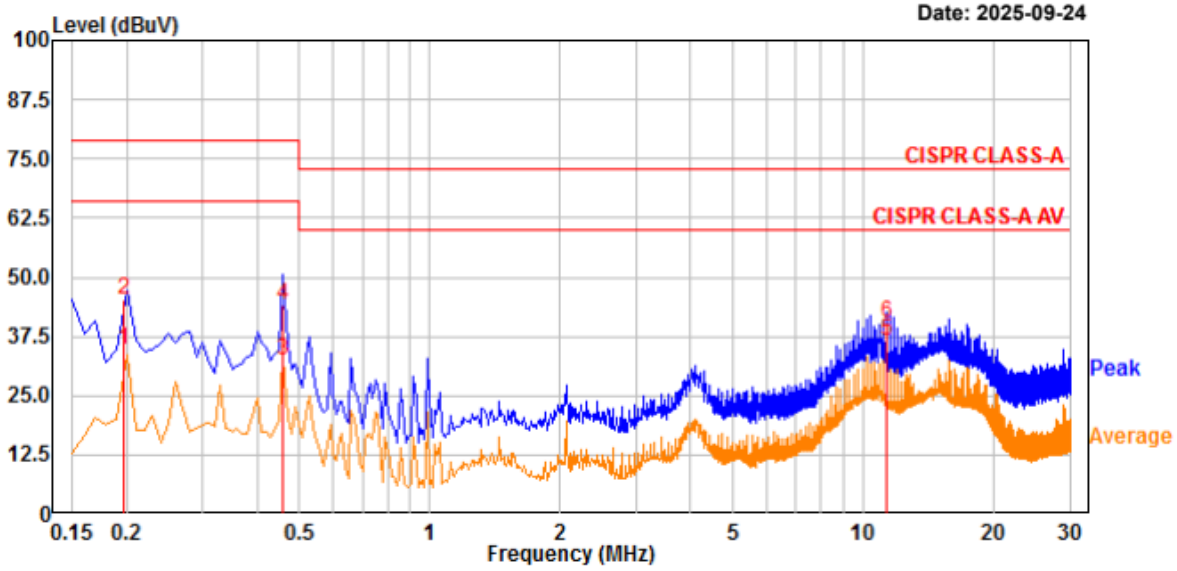
Project No.	: 250918-1422	Phase	: NEUTRAL
Test Mode	: Operating	Test Power	: AC 240 V / 50 Hz
Temp./ Humi.	: 25 'C / 51 % R.H.	Test Engineer	: KIM J C



No.	Freq	RD QP	RD AV	C.F	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV	Phase
	MHz	dBµV	dBµV	dB	dBµV	dBµV	dBµV	dBµV	dB	dB	
2.	0.198	25.82	15.23	19.47	45.29	34.70	79.00	66.00	33.71	31.30	neutral
4.	0.459	24.78	12.99	19.49	44.27	32.48	79.00	66.00	34.73	33.52	neutral
6.	11.298	20.67	16.75	19.86	40.53	36.61	73.00	60.00	32.47	23.39	neutral

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

Conducted Emissions (TEL_1000 M #1)

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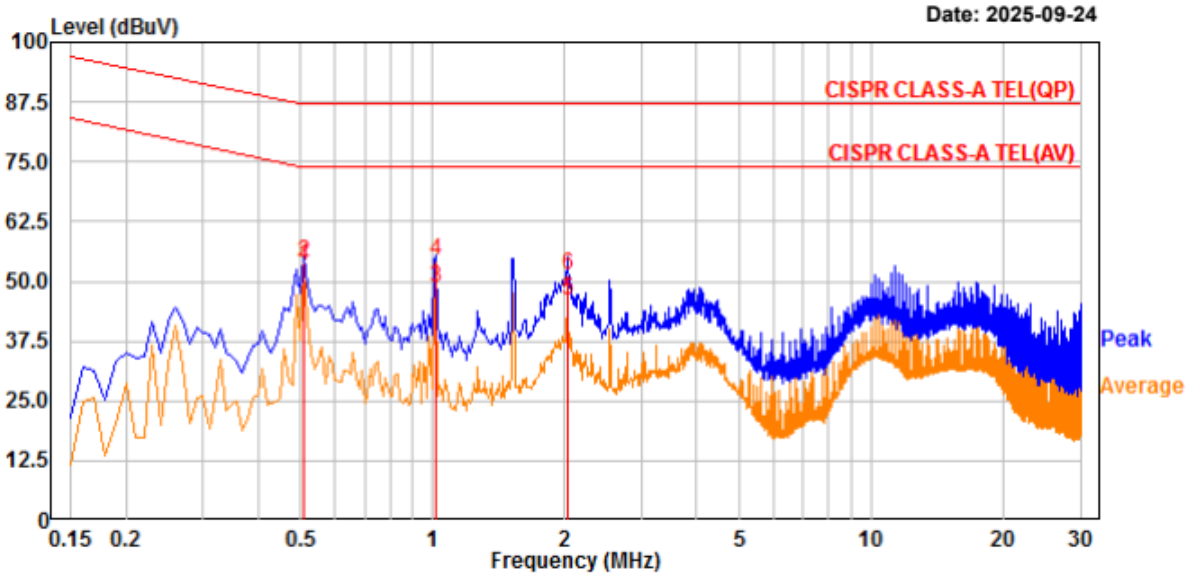
Cheoin-gu, Youngin-si, Gyeonggi-do
449-822 Korea
Tel:+82-31-3236008,9
Fax:+82-31-3236010

Project No.	: 250918-1422	Phase	: TEL_1000M (LAN #1)
Test Mode	: Operating	Test Power	: AC 240 V / 50 Hz
Temp./ Humi.	: 25 'C / 51 % R.H.	Test Engineer	: KIM J C



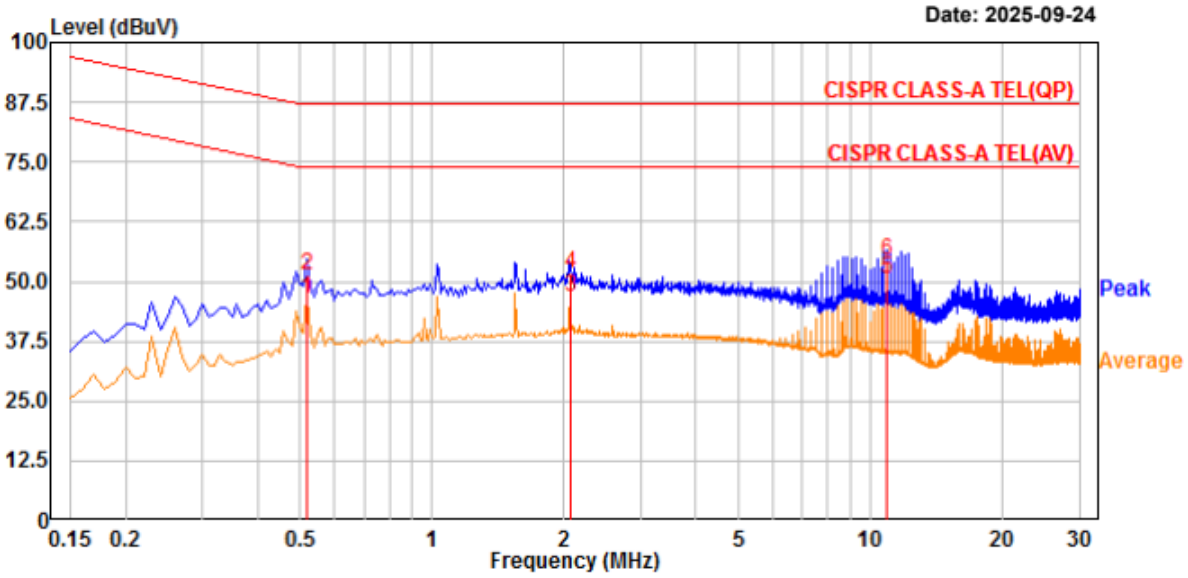
No.	Freq	RD QP	RD AV	C.F	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV	Phase
	MHz	dBµV	dBµV	dB	dBµV	dBµV	dBµV	dBµV	dB	dB	
2.	0.509	34.55	33.75	19.30	53.85	53.05	87.00	74.00	33.15	20.95	Line
4.	1.021	35.12	29.39	19.24	54.36	48.63	87.00	74.00	32.64	25.37	Line
6.	2.032	31.93	26.81	19.22	51.15	46.03	87.00	74.00	35.85	27.97	Line

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

Conducted Emissions (TEL_1000 M #2)

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.	: 250918-1422	Phase	: TEL_1000M (LAN #2)
Test Mode	: Operating	Test Power	: AC 240 V / 50 Hz
Temp./ Humi.	: 25 'C / 51 % R.H.	Test Engineer	: KIM J C



No.	Freq	RD QP	RD AV	C.F	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV	Phase
	MHz	dBµV	dBµV	dB	dBµV	dBµV	dBµV	dBµV	dB	dB	
2.	0.520	32.08	27.14	19.29	51.37	46.43	87.00	74.00	35.63	27.57	Line
4.	2.063	32.31	27.57	19.22	51.53	46.79	87.00	74.00	35.47	27.21	Line
6.	10.861	35.07	31.09	19.38	54.45	50.47	87.00	74.00	32.55	23.53	Line

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

4-2 Radiated Emissions

Definition:

The test assesses the ability of ancillary equipment to limit their internal noise from being radiated from the enclosure.

We were performed the test according to LTA procedure LTA-QI-04.

Test method	:	AS/NZS CISPR 32:2015
Measuring Distance	:	10 m below 1 GHz / 3 m above 1 GHz
Measurement Frequency range	:	30 MHz – 6 000 MHz
Measurement RBW	:	120 kHz @ 10 m / 1 MHz @ 3 m
Test Location	:	10 m Chamber
Test mode	:	Operating mode
Result	:	**Complies**

Measurement Data:

- Refer to the Next page (Maximum emission configuration)
- The highest internal source of an EUT is 3 GHz, the measurement shall only be made up to 6 GHz.

A sample calculation:

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

Emission Level= meter reading + COR.F

Limit of 10 m below 1 GHz

CLASS A

Frequency Range	Quasi-peak
(30 – 230) MHz	40 dBμV/m
(230 – 1 000) MHz	47 dBμV/m

CLASS B

Frequency Range	Quasi-peak
(30 – 230) MHz	30 dBμV/m
(230 – 1 000) MHz	37 dBμV/m

Limit of 3m above 1 GHz

CLASS A

Frequency Range	Average Limit @ 3m (dBμV/m)	Peak limit @ 3m (dBμV/m)
(1 000 – 3 000) MHz	56	76
(3 000 – 6 000) MHz	60	80

NOTE: The lower limit applies at the transition frequency.

CLASS B

Frequency Range	Average Limit @ 3m (dBμV/m)	Peak limit @ 3m (dBμV/m)
(1 000 – 3 000) MHz	50	70
(3 000 – 6 000) MHz	54	74

NOTE: The lower limit applies at the transition frequency.

Radiated Emissions (Below 1 GHz) / H

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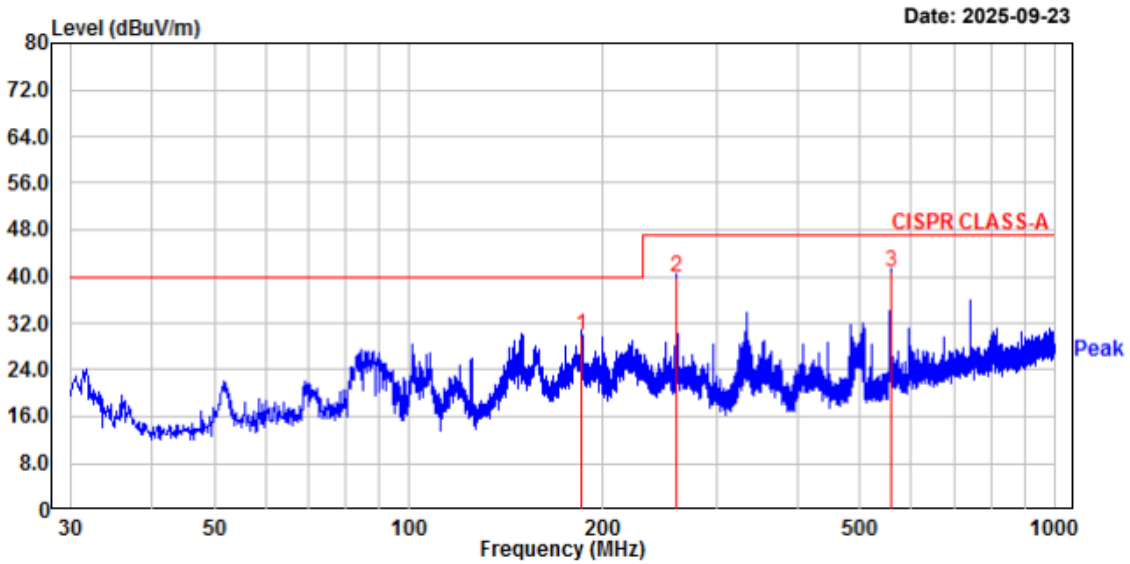
www.ltalab.com

Project No. : 250918-1422 Temp/Humi: 23 'C / 52 % R.H.

Test Mode : Operating Tested by: KIM J C

Power : AC 240 V / 50 Hz



No.	Freq	Reading	C.F	Result QP	Limit	Margin	Height	Angle	Polarity
	MHz	dBµV	dB	dBµV/m	dBµV/m	dB	cm	deg	
1.	185.56	40.87	-11.13	29.74	40.00	10.26	381	50	horizontal
2.	259.89	49.43	-9.66	39.77	47.00	7.23	318	158	horizontal
3.	556.95	42.31	-1.63	40.68	47.00	6.32	187	111	horizontal

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

Radiated Emissions (Below 1 GHz) / V

4, Songjuro 236Beon-gil, yanggi-myeon,
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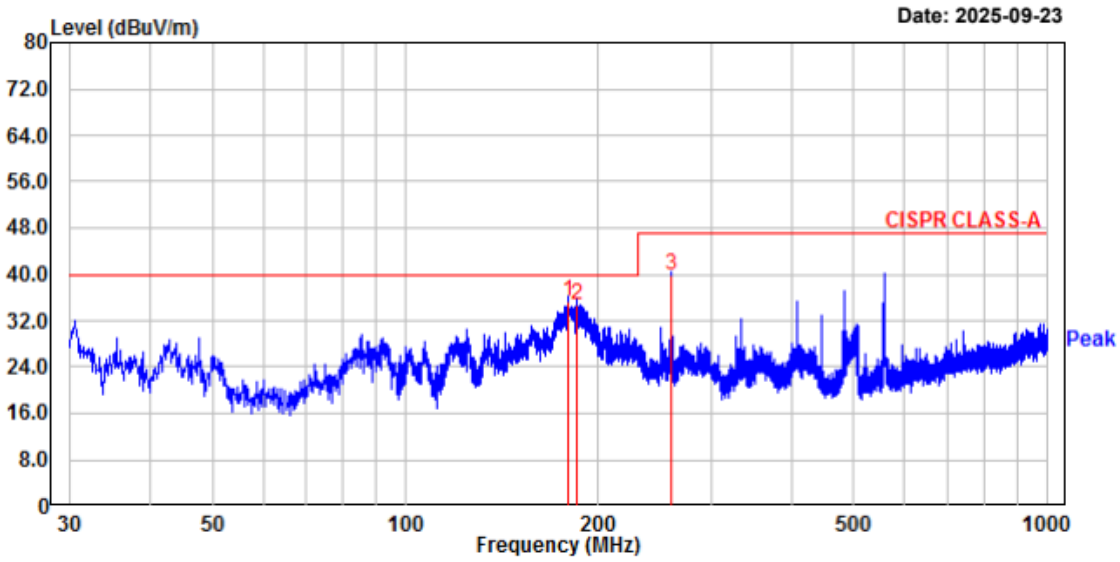
Project No. : 250918-1422 Temp/Humi: 23 'C / 52 % R.H.

Test Mode : Operating Tested by: KIM J C

Power : AC 240 V / 50 Hz



No.	Freq	Reading	C.F	Result QP	Limit	Margin	Height	Angle	Polarity
	MHz	dBµV	dB	dBµV/m	dBµV/m	dB	cm	deg	
1.	179.26	45.80	-10.42	35.38	40.00	4.62	108	339	vertical
2.	185.56	45.86	-11.13	34.73	40.00	5.27	114	45	vertical
3.	259.89	49.57	-9.66	39.91	47.00	7.09	123	156	vertical

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

Radiated Emissions (Above 1 GHz) / H

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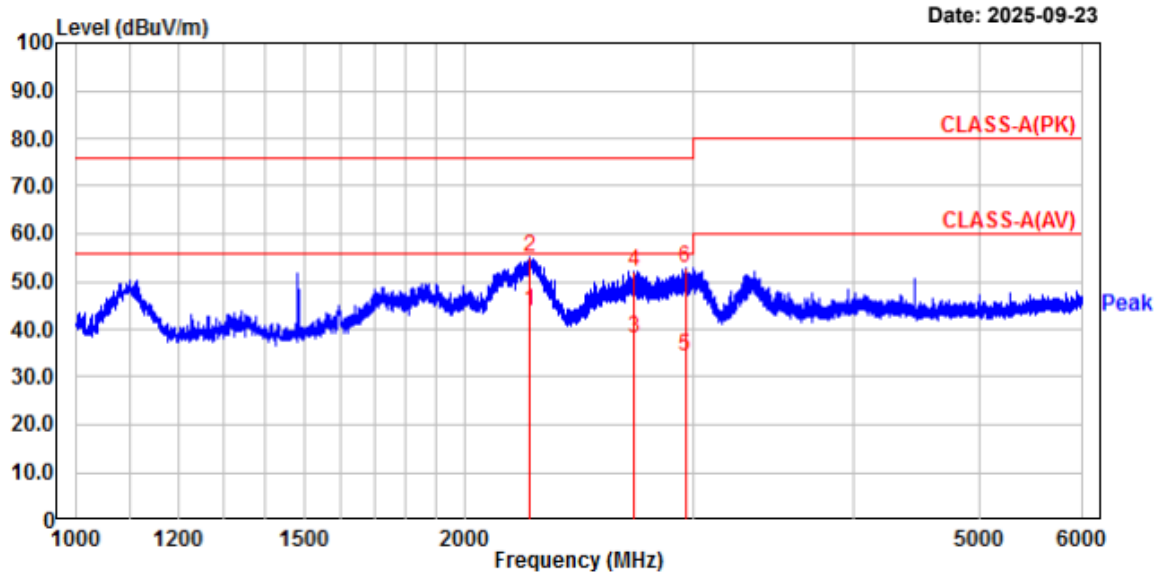
Fax : +82-31-3236010
www.ltalab.com

Project No.	: 250918-1422	Temp/Humi: 23 'C / 53 % R.H.	
Test Mode	: Operating	Tested by: KIM J C	
Power	: AC 240 V / 50 Hz	Measure distance : 3.8 m	



No.	Freq	RD PK	RD AV	C.F	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Polarity
	MHz	dBµV	dBµV	dB	dBµV	dBµV	dBµV	dBµV	dB	dB	cm	deg	
2.	2246.25	51.21	39.76	3.84	55.05	43.60	76.00	56.00	20.95	12.40	100	358	horizontal
4.	2700.63	45.83	31.68	6.31	52.14	37.99	76.00	56.00	23.86	18.01	100	286	horizontal
6.	2960.00	45.31	26.83	7.37	52.68	34.20	76.00	56.00	23.32	21.80	100	264	horizontal

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

Radiated Emissions (Above 1 GHz) / V

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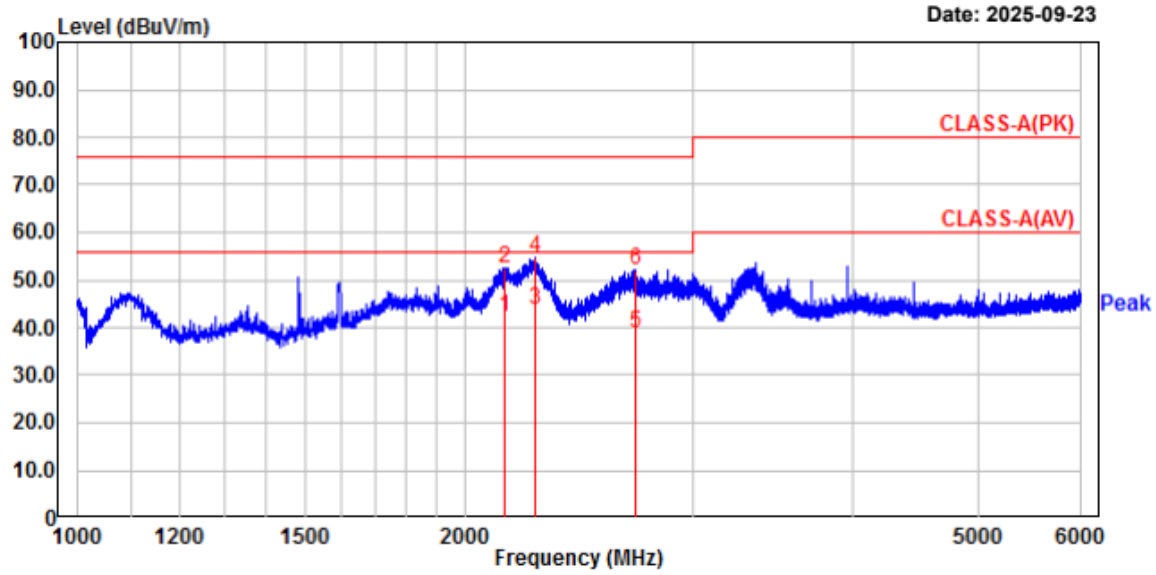
Fax : +82-31-3236010
www.ltalab.com

Project No.	: 250918-1422	Temp/Humi:	23 'C / 53 % R.H.
Test Mode	: Operating	Tested by:	KIM J C
Power	: AC 240 V / 50 Hz	Measure distance :	3.8 m



No.	Freq	RD PK	RD AV	C.F	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle	Polarity
	MHz	dBµV	dBµV	dB	dBµV	dBµV	dBµV	dBµV	dB	dB	cm	deg	
2.	2146.25	48.59	38.25	4.05	52.64	42.30	76.00	56.00	23.36	13.70	100	356	vertical
4.	2264.38	50.95	40.06	3.79	54.74	43.85	76.00	56.00	21.26	12.15	100	44	vertical
6.	2706.88	45.84	32.64	6.33	52.17	38.97	76.00	56.00	23.83	17.03	100	336	vertical

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

APPENDIX A

TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment are identified by the Test Laboratory.

Conducted Emissions

	Item	Model Name	Manufacturer	Serial No.	Next Cal.	Interval
☒	EMI TEST Receiver	ESR	Rohde & Schwarz	101499	2026.03.05	1 year
☒	Pulse Limiter	ESH3-Z2	Rohde & Schwarz	100710	2026.03.05	1 year
☐	ISN	ISN T800	TESEQ	27109	2026.08.20	1 year
☒	ISN	ENY81-CA6	Rohde & Schwarz	101565	2026.08.20	1 year
☐	ISN	ISN S8	Schwarzbeck	79	2026.08.18	1 year
☐	CURRENT PROBE	EZ-17	Rohde & Schwarz	100508	2026.08.19	1 year
☐	CDN	TSCDN-C1-BNC-75	F.C.C	07004	2026.03.05	1 year
☐	LISN	ESH3-Z6	Rohde & Schwarz	100378	2026.08.18	1 year
☐	LISN	ESH3-Z6	Rohde & Schwarz	101468	2026.08.18	1 year
☒	LISN(main)	ENV216	Rohde & Schwarz	102872	2026.08.18	1 year
☒	LISN(sub)	ENV216	Rohde & Schwarz	101222	2026.08.18	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	2026.08.18	1 year
☒	Amplifier	310N	SONOMA INSTRUMENT	240504	2026.03.11	1 year
☒	BILOG Antenna	VULB 9168	SCHWARZBECK	749	2027.03.13	2 year
☒	TEST PROGRAM	e3 20181212a (V9)	AUDIX	-	-	-

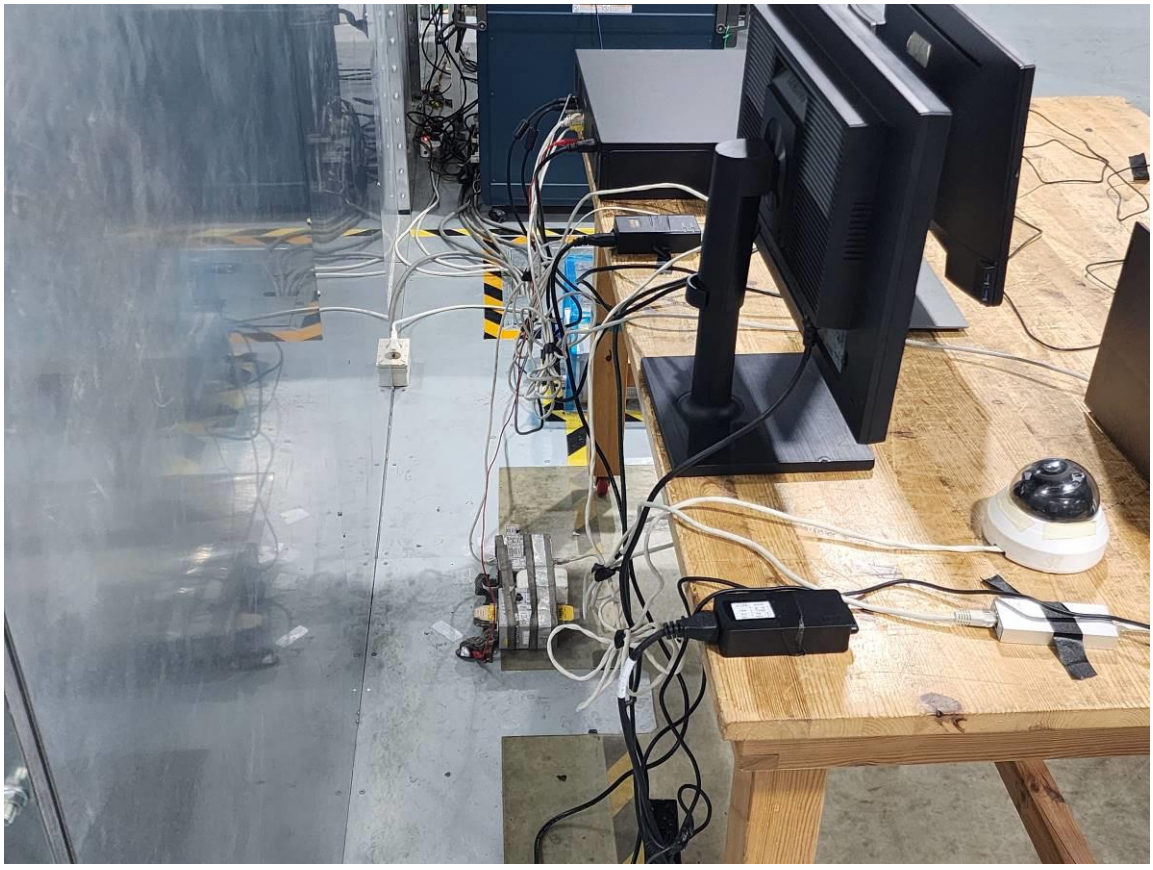
Radiated Emissions – Above 1 GHz

	Item	Model Name	Manufacturer	Serial No.	Next Cal.	Interval
☒	EMI TEST Receiver	ESU	Rohde & Schwarz	100092	2026.08.18	1 year
☒	Amplifier	8449B	Agilent	3008A02126	2026.03.05	1 year
☒	HORN ANTENNA	3115	ETS	114105	2026.03.24	1 year
☒	TEST PROGRAM	e3 20181212a (V9)	AUDIX	-	-	-

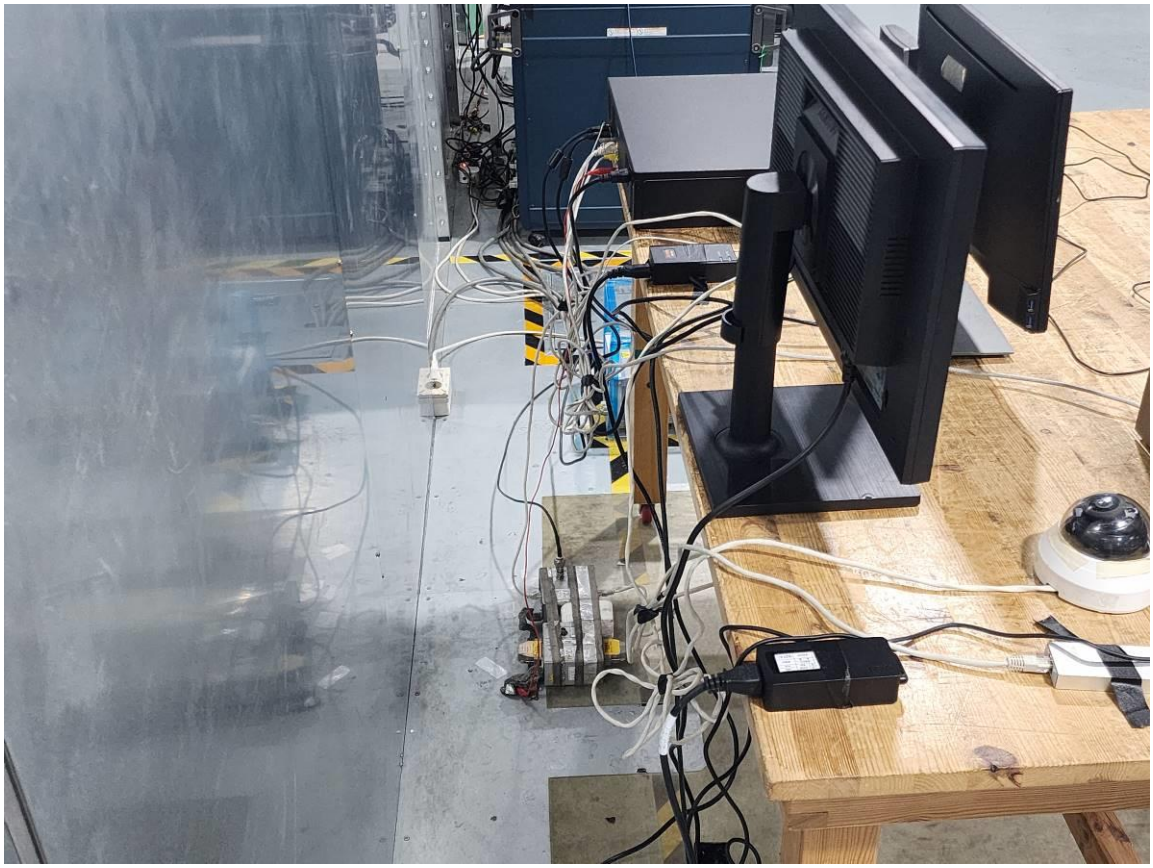
APPENDIX B

PHOTOGRAPHS

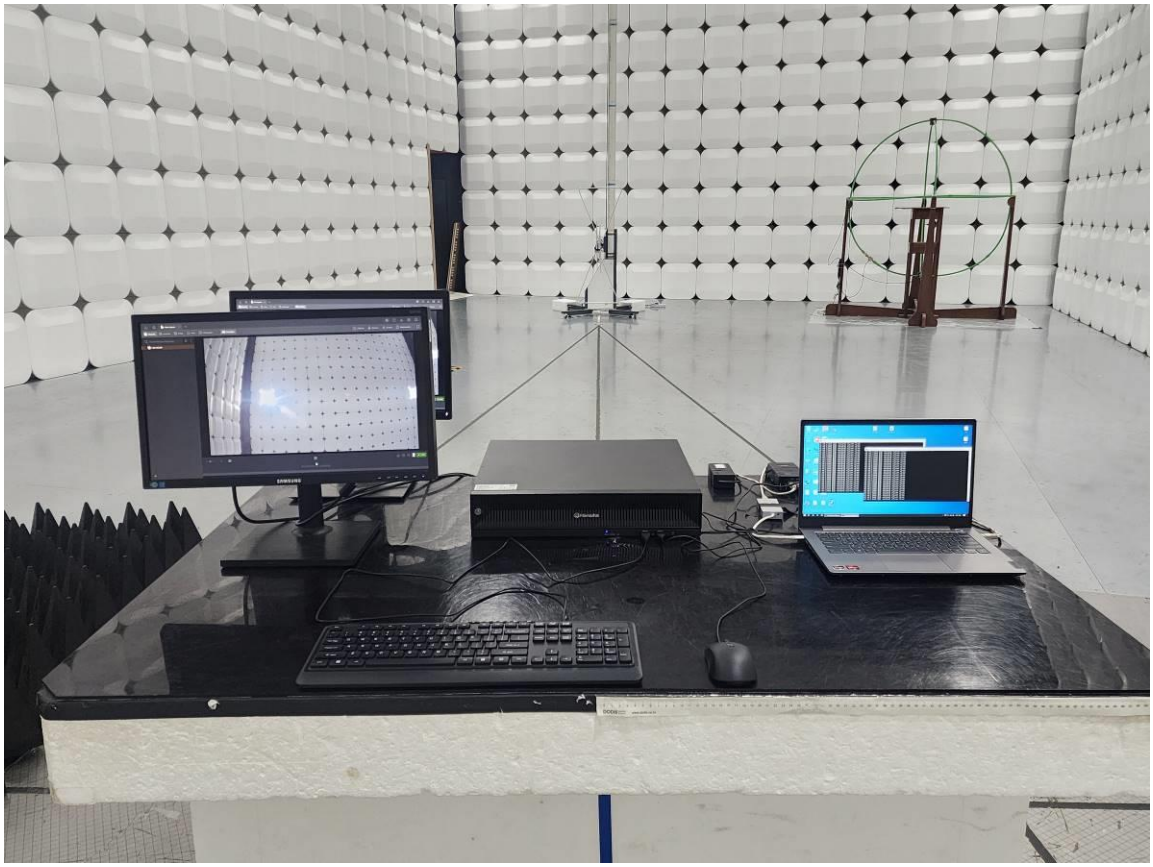
Conducted Emissions

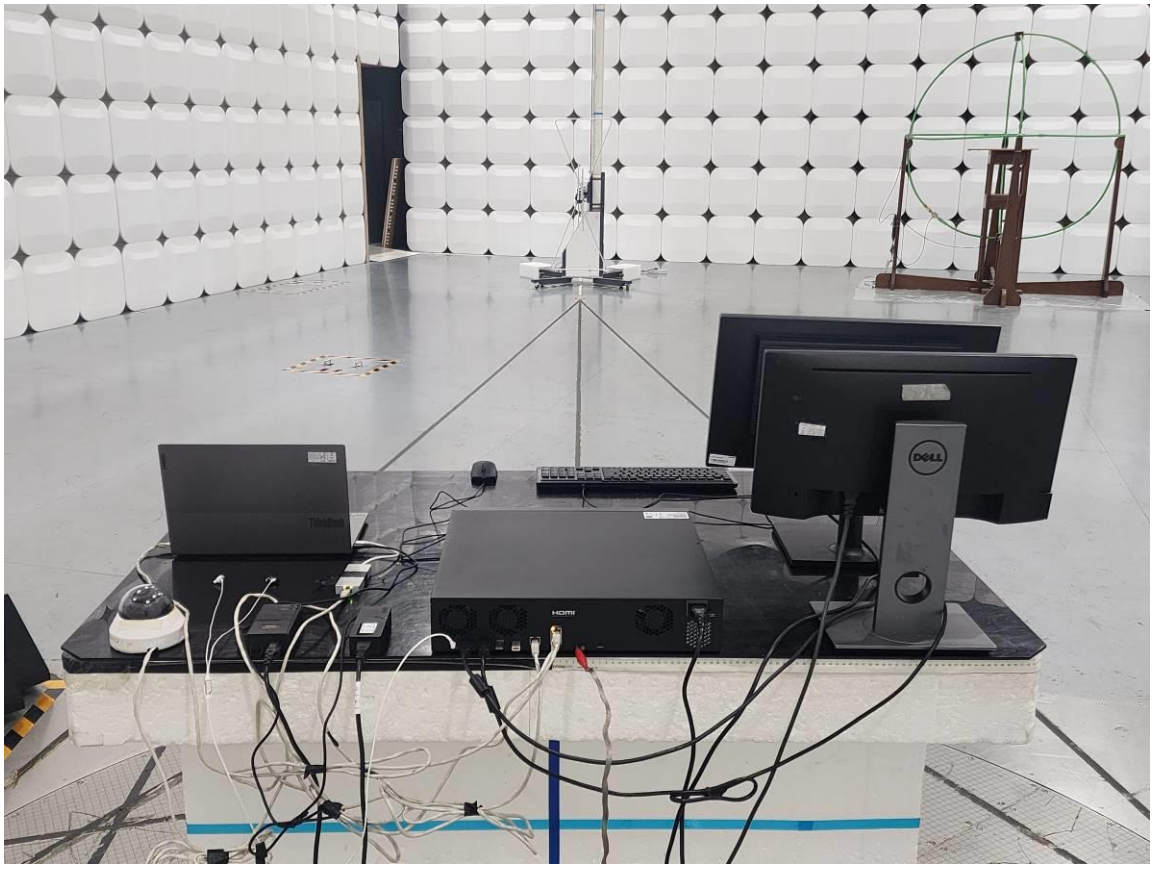


Conducted Emissions (TEL)

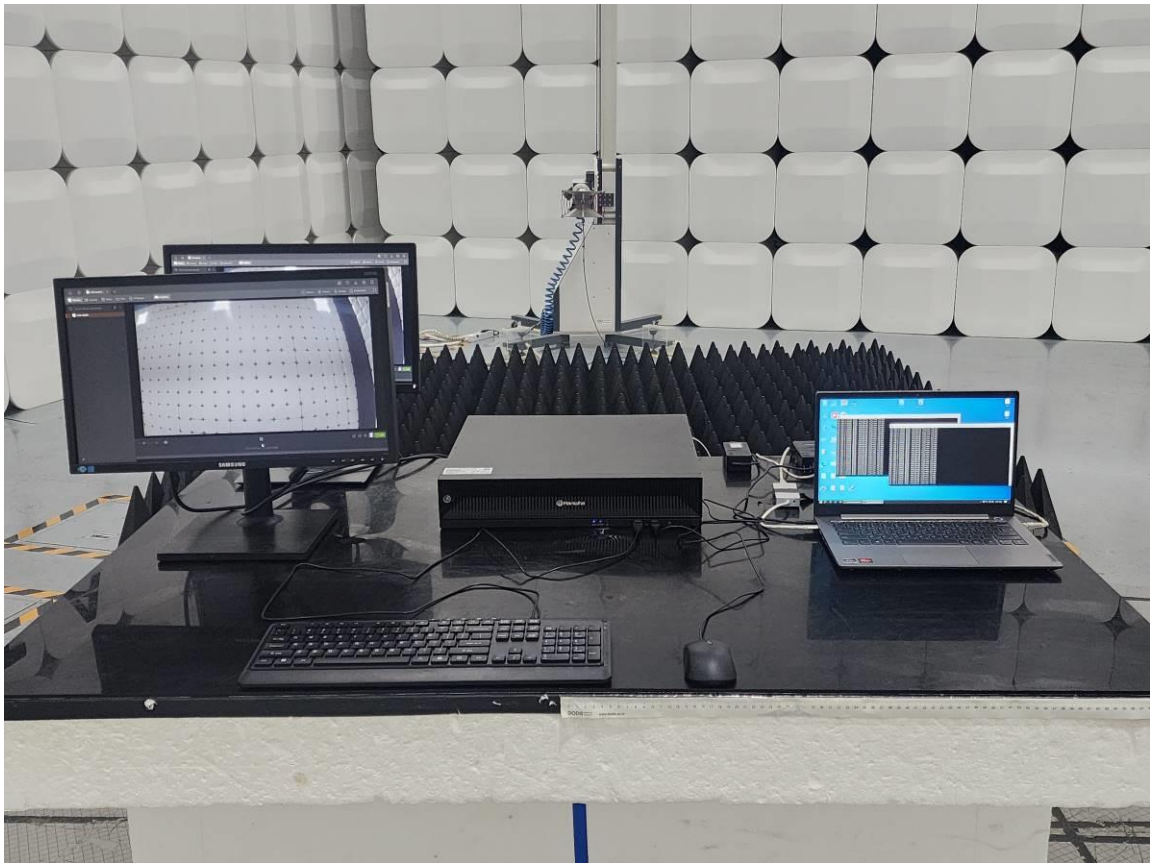


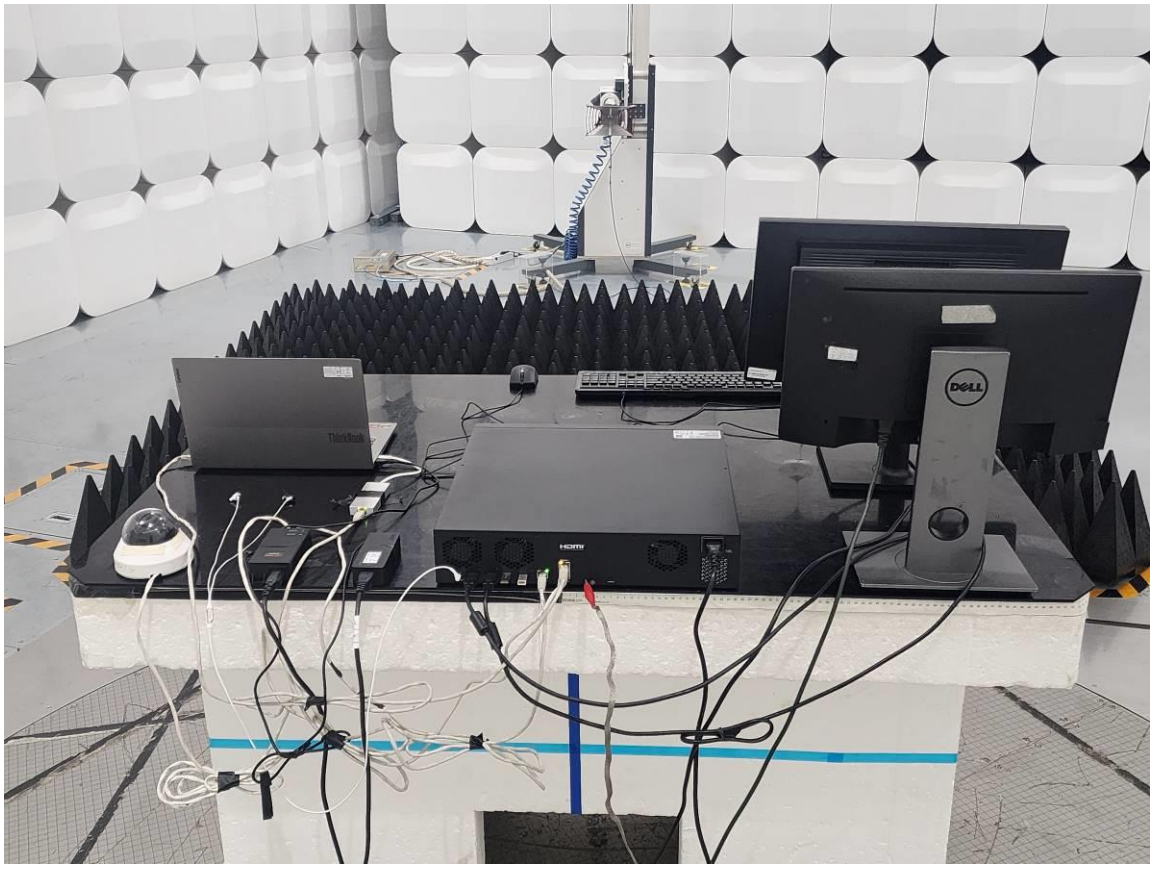
Radiated Emissions - Below 1 GHz





Radiated Emissions - Above 1 GHz





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