



TEST REPORT



Report No. : KES-EM-23T0950-R1
Page 1 / 31

KES Co., Ltd.
#3002, #3503, #3701, 40, Simin-daero365beon-gil,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057,
Republic of Korea
Tel : +82-31-425-6200, Fax : +82-31-425-6200

1. Client

Applicant : Hanwha Vision Co., Ltd

Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do,
Republic of Korea

2. Sample Description

Product name : NETWORK CAMERA

Model/Type No. : QND-8012

Variant Model : QND-8022, QND-8011, QND-8021

Manufacturer : 1. HANWHA VISION VIETNAM COMPANY LIMITED
2. D-TECH CO.,LTD.

Manufacturer Address : 1. Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune,
Bac Ninh city, Bac Ninh province, Vietnam
2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do, Korea
(Suwon Industrial Complex)

3. Equipment authorization : Supplier's Declaration of Conformity

3. Date of Receipt : Jan. 24, 2024

4. Test date : Oct. 29, 2023

5. Date of Issue : Jan. 24, 2024

7. Test Results : In Compliance

Tested by

Reviewed by

Dae Hyun, Kim
EMC Test Engineer

Dong Il, Lee
EMC Technical Manager

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

**REPORT REVISION HISTORY**

Date	Test Report No.	Revision History
Nov. 08, 2023	KES-EM-23T0950	Issued
Jan. 24, 2024	KES-EM-23T0950-R1	Reissuance due to the addition of a derivative

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TABLE OF CONTENTS

1.0	General Product Description.....	4
1.1	Test Voltage & Frequency	7
1.2	Variant Model Differences	7
1.3	Device Modifications	7
1.4	Equipment Under Test	7
1.5	Support Equipments	7
1.6	External I/O Cabling.....	8
1.7	EUT Operating Mode(s).....	8
1.8	Configuration.....	9
1.9	Remarks when standards applied	10
1.10	Calibration Details of Equipment Used for Measurement	10
1.11	Test Facility	10
1.12	Laboratory Accreditations and Listings	10
2.0	Test Regulations	11
2.1	Conducted Emissions at Mains Power Ports.....	12
2.2	Radiated Electric Field Emissions(Below 1 GHz).....	14
2.3	Radiated Electric Field Emissions(Above 1 GHz)	16
APPENDIX A – TEST DATA		18
Conducted Emissions at Mains Power Ports		18
Radiated Electric Field Emissions(Below 1 GHz)		20
Radiated Electric Field Emissions(Above 1 GHz).....		22
Test Setup Photos and Configuration.....		23
Conducted Emissions at Mains Power Ports		23
Radiated Electric Field Emissions(Below 1 GHz)		24
Radiated Electric Field Emissions(Above 1 GHz).....		25
EUT External Photographs.....		26
EUT Internal Photographs.....		27



1.0 General Product Description

Main Specifications of EUT are:

Datasheet exposure	QND-8012	
	Video	
Show	Imaging Device	1/2.8" CMOS
Show	Resolution	5MP mode : 2592x1944, 1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240 4MP mode : 2560x1440, 1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Hide	Max. Resolution	2592x1944
Hide	Max. Resolution(MP)	5MP
Show	Max. Framerate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 15fps (@5MP Max. 2fps)
Show	NETD	None
Show	Pixel Size	None
Show	Min. Illumination	Color: 0.15Lux(F2.0, 1/30sec)
Show	Video Out	micro HDMI: 1080p@30/25fps(60/50Hz)
Show	Video Transmission Distance	None
	Lens	
Show	Focal Length (Zoom Ratio)	2.8mm fixed focal
Hide	Max. Focal Length	2.8
Hide	Min. Focal Length	2.8
Hide	Zoom Ratio	None
Hide	Focal Type	Fixed focal
Show	Max. Aperture Ratio	F2.0
Show	Angular Field of View	H: 105°/ V: 77°/ D: 137°
Hide	Max. Horizontal Angle	105
Hide	Min. Horizontal Angle	105
Hide	Max. Vertical Angle	77
Hide	Min. Vertical Angle	77
Show	Min. Object Distance	None
Show	Focus Control	Fixed
Show	Lens Type	None
Show	Mount Type	None
Show	Optional Lens	None
	Pan / Tilt / Rotate	
Show	Pan / Tilt / Rotate Range	0°~350° / 0°~69° / 0°~355°
Hide	Max. Tilt Angle	69
Hide	Min. Tilt Angle	0
Show	Pan Range	None
Show	Pan Speed	None
Show	Tilt Range	None
Show	Tilt Speed	None
Show	Rotate Range	None
Show	Sequence	None
Show	Preset Accuracy	None
	Operational	
Show	Camera Title	Displayed up to 85 characters
Show	Direction Indicator	None
Show	Day & Night	Auto(Electrical)
Show	Backlight Compensation	BLC, WDR, SSDR
Show	Wide Dynamic Range	120dB
Show	Digital Noise Reduction	SSNR
Show	Digital Image Stabilization	None
Show	Defog	None
Show	Motion Detection	4ea, polygonal zones
Show	Privacy Masking	6ea, rectangular zones
Show	Gain Control	Low / Middle / High
Show	White Balance	ATW / AWC / Manual / Indoor / Outdoor
Show	LDC	Support
Show	Electronic Shutter Speed	Minimum / Maximum / Anti flicker (1/5~1/12,000sec)
Hide	Digital PTZ	None
Show	Video Rotation	Flip, Mirror, Hallway view(90°/270°)
Hide	Hallway view	Support
Show	Analytics	Defocus detection, Motion detection, Tampering



Report No. : KES-EM-23T0950-R1

Show	Analytics	Defocus detection, Motion detection, Tampering
Show	Business Intelligence	People counting
Hide	People Counting	Support
Hide	Vehicle Counting	None
Hide	Queue Management	None
Hide	Heat Map	None
Show	Serial Interface	None
Show	Alarm I/O	None
Show	Alarm Triggers	Analytics, Network disconnect
Show	Alarm Events	File upload via FTP and e-mail Notification via e-mail SD/SDHC/SDXC or NAS recording at event triggers
Show	Audio Streaming	None
Show	Audio In	None
Hide	Built-in MIC	None
Show	Audio Out	None
Hide	Audio Line	None
Show	Light Type	None
Show	Light Viewable Length	None
Show	IR Viewable Length	None
Show	IR Illuminator (Optional)	None
Show	IR Radiation angle	None
Show	IR LED	None
Show	IR Wavelength	None
Show	IR Operation	None
Show	Water Removal	None
Show	Auto Tracking	None
Show	Coaxial Protocol	None
Show	Color Palettes	None
	Radiometry	
Show	Temperature Detect Range	None
Show	Temperature Accuracy	None
Show	Temperature Detection	None
Show	Additional	None
	Network	
Show	Ethernet	RJ-45(10/100BASE-T)
Show	Video Compression	H.265/H.264: Main/High, MJPEG
Show	Audio Compression	None
Show	Smart Codec	WiseStream II
Hide	AI Codec	None
Hide	Video Quality Adjustment	H.264/H.265: Target bitrate level control MJPEG: Quality Level control
Show	Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Show	Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 profiles)
Show	Protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP
Show	SIP support (VoIP, Peer-to-peer, SIP/PE	None
Show	Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP)
Show	Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform
	Security	
Show	OS / Firmware Protect	Firmware encryption
Show	User authentication	Digest Authentication, Prevent brute-force attack
Show	Network authentication	802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2)
Show	Secure Communication	HTTPS, SRTP, WSS(Websocket secure)
Show	Access Control	Access control based on IP address
Show	Data Protect	Authentication information encryption, ZIP compression encryption
Show	Audit	User Access/System/Event log management
Show	Device ID	Device Certificate(Hanwha Private Root CA)
Show	Secure Storage	SDcard partition encrypt
Show	Security Certificate	None
	General	
Show	Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch
Show	Web Viewer	None
Show	Edge Storage	Micro SD/SDHC/SDXC 1slot 128GB
Hide	Storage slot	SD 1slot
Show	Memory	512MB RAM, 256MB Flash

KES-QP16-F01(00-23-01-01)

KES Co., Ltd.

The authenticity of this test report can be found on the verification page of our website (www.kes.co.kr).



Report No. : KES-EM-23T0950-R1

	Environmental & Electrical	
Show	Operating Temperature / Humidity	-10°C ~ +40°C(-14°F ~ +104°F) / 0~90% RH
Show	Storage Temperature / Humidity	-30°C ~ +60°C(-22°F ~ +140°F) / 0~90% RH
Show	Certification	IP42, IK08
Hide	IK Rating	IK08
Show	Input Voltage	PoE(IEEE802.3af, Class2)
Show	Power Consumption	PoE: Max 5.00W, typical 4.00W
	Mechanical	
Show	Color / Material	White / Plastic
Hide	Color	White
Hide	Material	Plastic
Show	RAL Code	RAL9003
Show	Product Dimensions / Weight	ø99x56mm(ø3.9x2.2"), 165g(0.36 lb)
Show	Compatible Conduit hole / Gangbox	None
Show	Hanging Mount (Dome)	SBP-099HWW
Hide	Skin Cover	None
Hide	Skin Cover (Dome)	None
Hide	Weather Cap (Dome)	None
Hide	Power Module	None
Show	Backbox	None
	Certifications & Standards	
Show	Network	None
Show	EMC	None
Show	Safety	None
Show	Environment	None
Show	Video	None
	DORI (EN62676-4 standard)	
Show	Detect (25PPM/ 8PPF)	40.2m(12.26ft)
Show	Observe (63PPM/ 19PPF)	16.1m(4.90ft)
Show	Recognize (125PPM/ 38PPF)	8.0m(2.45ft)
Show	Identify (250PPM/ 76PPF)	4.0m(1.23ft)
	LPR/ANPR/MMCR	
Show	Speed Description	None
Show	Speed limit	None
Show	Min. Forward Distance	None
Show	Max. Forward Distance	None
Show	Max. Horizontal Angle	None
Show	Max. Vertical Angle	None
Show	Horizontal Offset	None
Show	Camera Height	None
Show	Lane Coverage	None
Show	Vehicle Recognition	None
Show	Available Countries	None
	Wisenet Road AI LPR/ANPR/MMCR	
Show	Solution	None
Show	Speed Description	None
Show	Lane Coverage	None
Show	Speed limit	None
Show	Min. Forward Distance	None
Show	Max. Forward Distance	None
Show	Max. Horizontal Angle	None
Show	Max. Vertical Angle	None
Show	Horizontal Offset	None
Show	Camera Height	None
Show	Vehicle Recognition	None
Show	Available Countries	None



1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

☒ AC 120 V, 60 Hz (PoE Adapter Input power)

1.2 Variant Model Differences

- QND-8022

Addition of a simple derivative model due to the difference in fixed lenses

- QND-8011, QND-8021

Addition of derivative models for place of sale management

Basic model and electrical circuitry, structure and performance are the same.

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	QND-8012	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
PoE Adapter	PT-PSE109GBRO-AH	-	Dongguan PROCET Network Technology Co.,Ltd	-
Notebook	LG15N54	503NZWY038929	LG Electronics Co., Ltd	-
Notebook Adapter	PA-1900-14	OF2R26334870177 64	LITE-ON TECHNOLOGY COPORATION	-
Micro SD Card	-	-	-	-



1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (EUT)	RJ-45 (PoE)	PoE Adapter	RJ-45 (PoE)	3.5	U
	Micro SD Slot	Micro SD Card	Micro SD Slot	-	-
PoE Adapter	RJ-45 (LAN)	Notebook	RJ-45 (LAN)	1.5	U
Notebook	DC Jack	Notebook Adapter	DC Jack	1.3	U

* Unshielded=U, Shielded=S

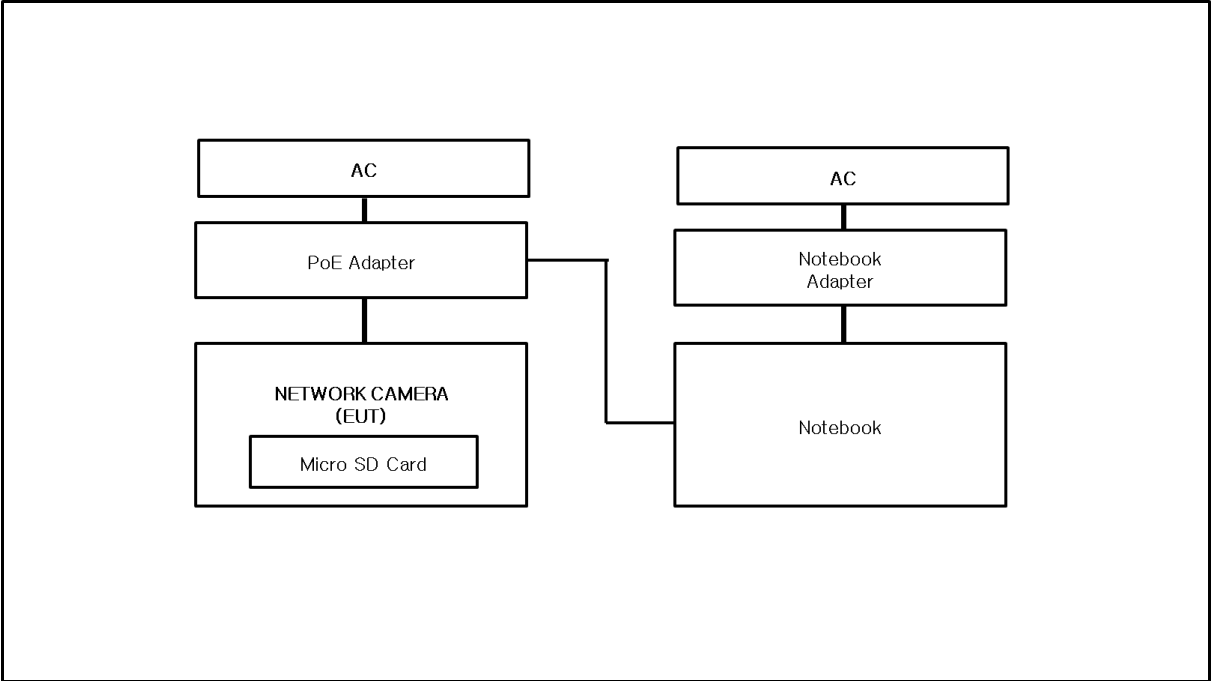
1.7 EUT Operating Mode(s)

Test mode	operating
Operation	1. Check if the EUT image is output to the laptop normally. 2. Check if the network is operating normally through a ping test. 3. After the test, check if the EUT video has been recorded normally.

EUT Test operating S/W		
Name	Version	Manufacture Company
Web Viewer	-	Hanwha Vision Co., Ltd



1.8 Configuration



**1.9 Remarks when standards applied**

N/A

1.10 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

1.11 Test Facility

The measurement facility is located at 473-21, Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea, Republic of. The sites are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-4:2019

1.12 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	RRA	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	KOLAS	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	FCC	3 m & 10 m Semi-Anechoic Chamber Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	 23298
JAPAN	VCCI	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)	 C-20136, T-20137, R-20181, G-20176
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 001633 0004



2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **47 CFR Part 15, Subpart B**

☐ CISPR 22:2009 +A1:2010

☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B

☒ **IC Regulation ICES-003 Issue 7**

☐ CAN/CSA-CISPR 32:17

☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B





2.1 Conducted Emissions at Mains Power Ports

Test Date

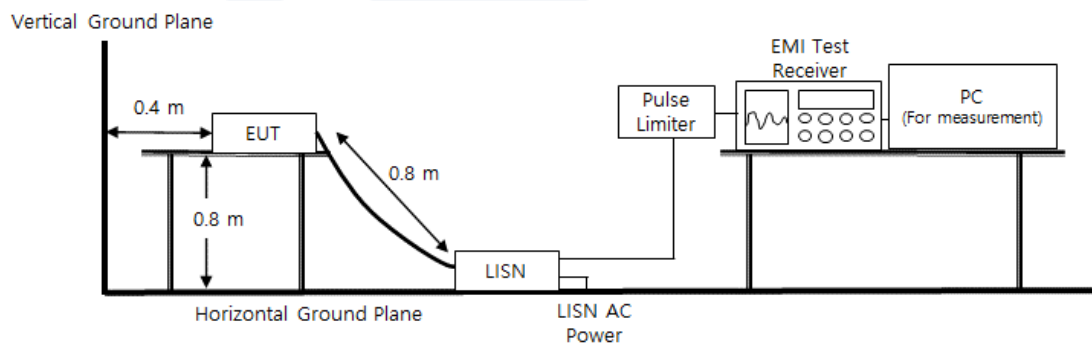
Oct. 29, 2023

Test Location

Electro wave Shieldroom #6

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EMC32	R & S	9.12.00	-
☒	EMI TEST RECEIVER	ESR3	R & S	101783	11, 11, 2023
☒	LISN	ENV216	R & S	101787	11, 10, 2023
☒	LISN	ESH2-Z5	R & S	100450	11, 10, 2023
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 10, 2023

Diagram of test setup



Test Conditions

Temperature: (23,0 ± 0,1) °C
Relative Humidity: (45,3 ± 0,0) % R.H.

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

Remarks

See Appendix A for test data.





2.2 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Oct. 29, 2023

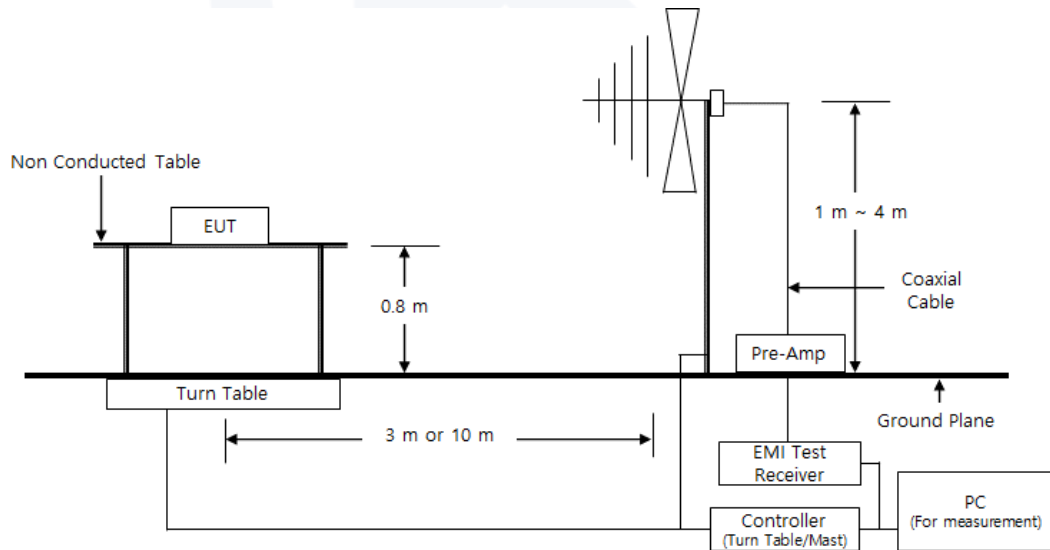
Test Location

☐ OPEN AREA TEST SITE #2☒ SEMI ANECHOIC CHAMBER #4(10m)

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
☒	EMI TEST RECEIVER	ESU26	R & S	100551	03, 21, 2024
☒	AMPLIFIER	SCU 01	R & S	100603	11, 10, 2023
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 17, 2024
☒	ATTENUATOR	8491A	HP	32173	03, 03, 2024

Diagram of test setup





Test Conditions

Temperature: (22,2 ± 0,1) °C
Relative Humidity: (42,9 ± 0,1) % R.H.

Frequency Range of Measurement

30 MHz to 1 GHz

Instrument Settings

IF Band Width: 120 kHz

Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

Remarks

See Appendix A for test data.





2.3 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Oct. 29, 2023

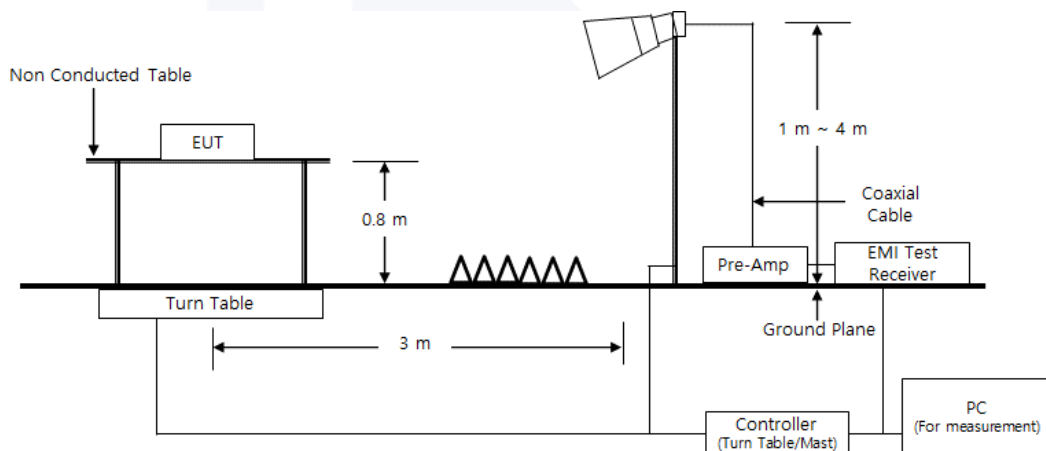
Test Location

SEMI ANECHOIC CHAMBER #5

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test SW	ES10/RE	TOYO Corporation	2022.01.000	-
☒	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	03, 21, 2024
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	11, 08, 2023
☒	PREAMPLIFIER	8449B	HP	3008A00538	05, 31, 2024
☒	ATTENUATOR	8491B	HP	23094	03, 21, 2024

Diagram of test setup





Test Conditions

Temperature: (23,3 ± 0,1) °C
Relative Humidity: (44,2 ± 0,0) % R.H.

Frequency Range of Measurement

1 GHz to 6 GHz

Instrument Settings

IF Band Width: 1 MHz

Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

Remarks

- See Appendix A for test data.
- The Average of the test data is the cispr average result.



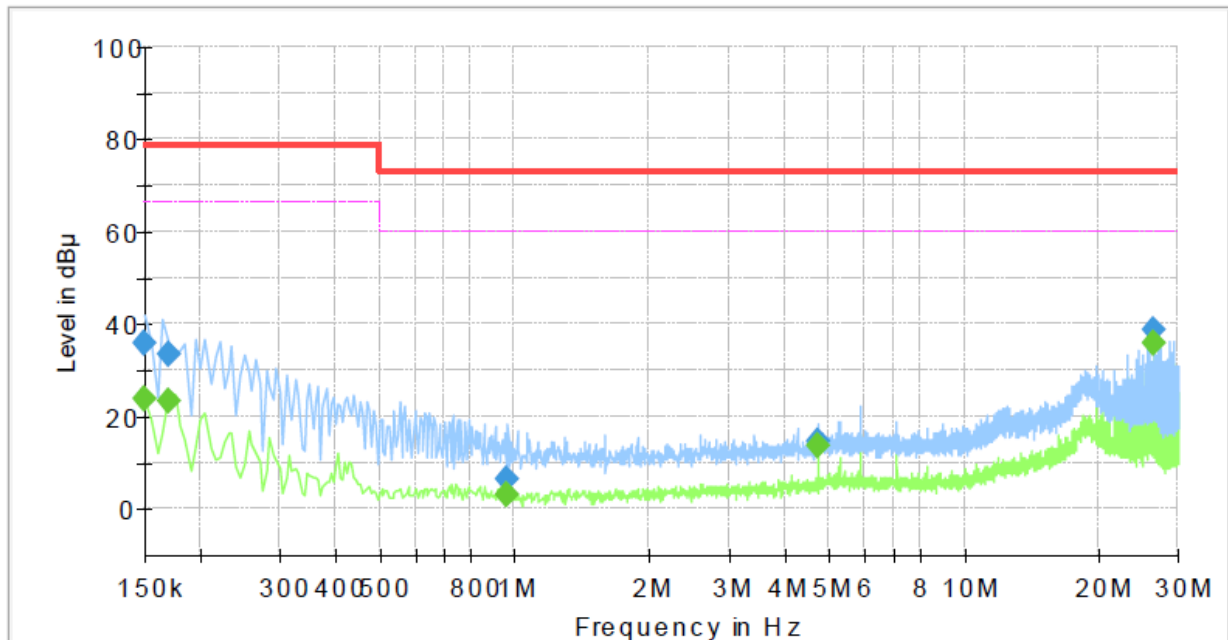
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

HOT LINE

Common Information

Test Description: Conducted Emission
Model No.: QND-8012
Phase:
Mode:
Operator Name: KES



Final Result

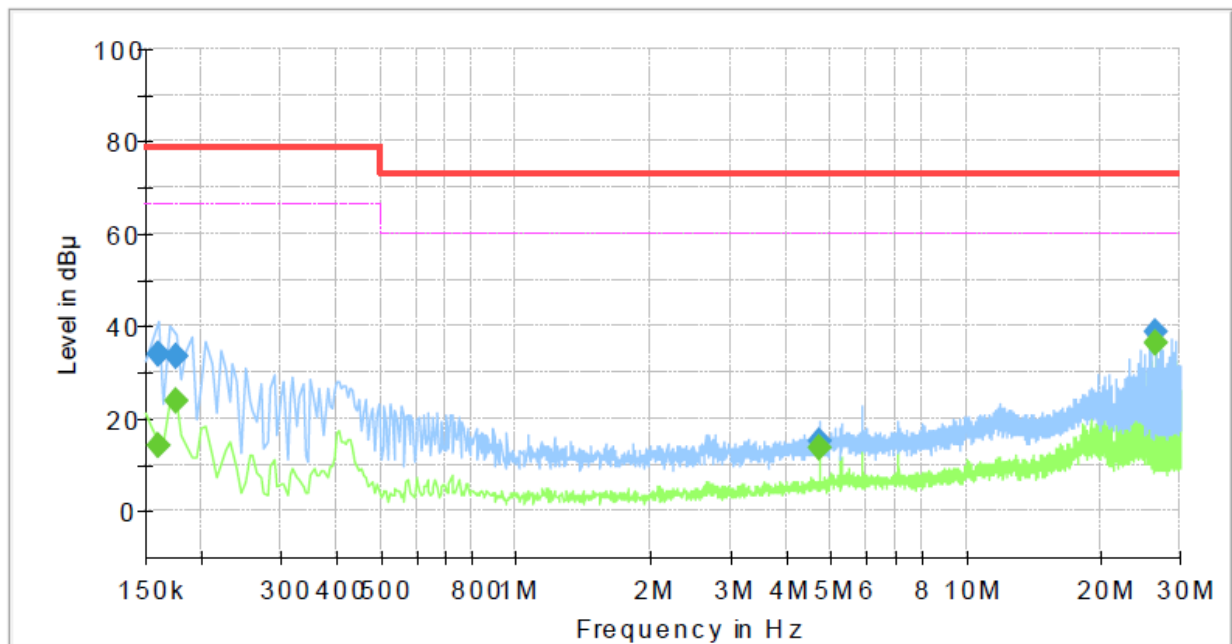
Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	23.72	66.00	42.28	1000.0	9.000	L1	19.4
0.150000	35.67	---	79.00	43.33	1000.0	9.000	L1	19.4
0.170000	---	23.41	66.00	42.59	1000.0	9.000	L1	19.4
0.170000	33.31	---	79.00	45.69	1000.0	9.000	L1	19.4
0.965000	---	2.86	60.00	57.14	1000.0	9.000	L1	19.5
0.965000	6.55	---	73.00	66.45	1000.0	9.000	L1	19.5
4.725000	---	13.48	60.00	46.52	1000.0	9.000	L1	19.7
4.725000	14.77	---	73.00	58.23	1000.0	9.000	L1	19.7
26.610000	---	35.82	60.00	24.18	1000.0	9.000	L1	20.3
26.610000	38.58	---	73.00	34.42	1000.0	9.000	L1	20.3



NEUTRAL LINE

Common Information

Test Description: Conducted Emission
Model No.: QND-8012
Phase:
Mode:
Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.160000	---	14.13	66.00	51.87	1000.0	9.000	N	19.4
0.160000	34.02	---	79.00	44.98	1000.0	9.000	N	19.4
0.175000	---	23.78	66.00	42.22	1000.0	9.000	N	19.4
0.175000	33.66	---	79.00	45.34	1000.0	9.000	N	19.4
4.725000	---	13.68	60.00	46.32	1000.0	9.000	N	19.7
4.725000	15.28	---	73.00	57.72	1000.0	9.000	N	19.7
26.610000	---	36.15	60.00	23.85	1000.0	9.000	N	20.3
26.610000	38.94	---	73.00	34.06	1000.0	9.000	N	20.3

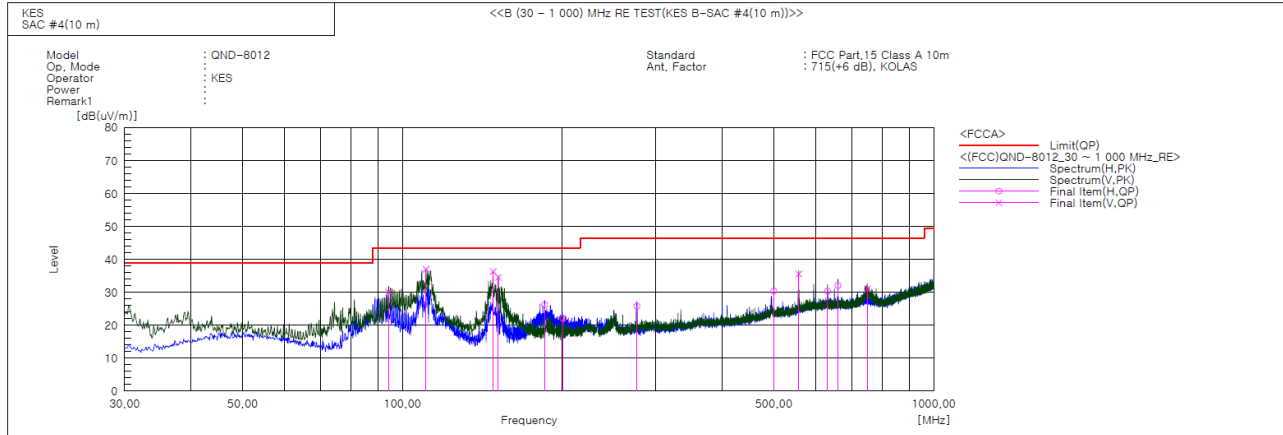
◆ Calculation

QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

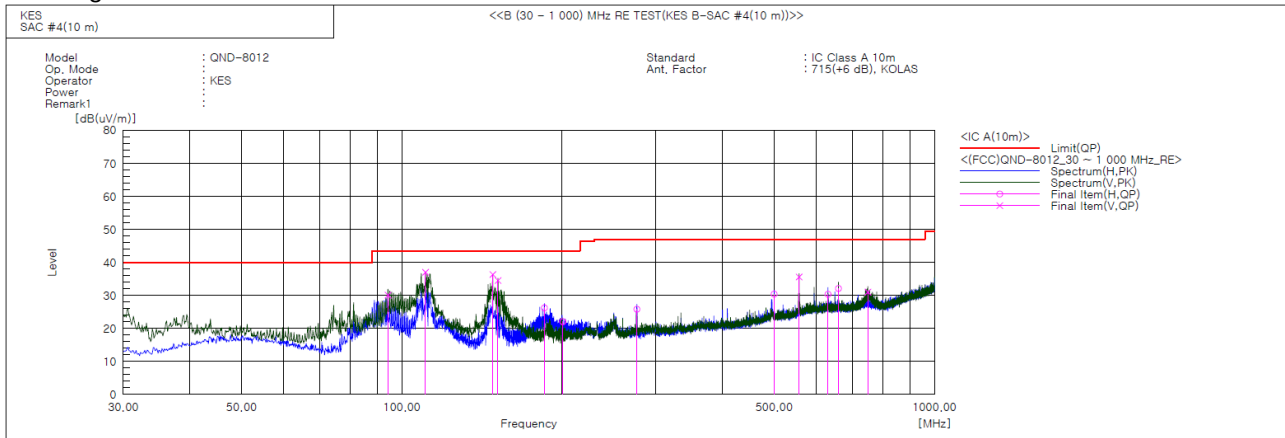
**Radiated Electric Field Emissions(Below 1 GHz)****- 47 CFR Part 15, Subpart B****Final Result**

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	94.141	V	52.7	-22.6	30.1	43.5	13.4	112.0	82.0	
2	110.753	V	59.6	-22.6	37.0	43.5	6.5	100.0	323.0	
3	148.098	V	61.3	-25.0	36.3	43.5	7.2	124.0	91.0	
4	151.493	V	59.4	-24.9	34.5	43.5	9.0	100.0	121.0	
5	185.200	H	48.9	-22.7	26.2	43.5	17.3	400.0	222.0	
6	200.599	H	43.0	-21.0	22.0	43.5	21.5	400.0	218.0	
7	276.138	H	44.1	-18.3	25.8	46.5	20.7	375.0	347.0	
8	500.086	H	41.0	-10.6	30.4	46.5	16.1	390.0	186.0	
9	556.953	V	44.8	-9.2	35.6	46.5	10.9	100.0	161.0	
10	631.158	H	37.9	-7.6	30.3	46.5	16.2	280.0	31.0	
11	660.015	H	39.6	-7.5	32.1	46.5	14.4	400.0	124.0	
12	750.104	V	37.2	-6.2	31.0	46.5	15.5	137.0	213.0	



Report No. : KES-EM-23T0950-R1

- IC Regulation ICES-003 Issue 7



Final Result

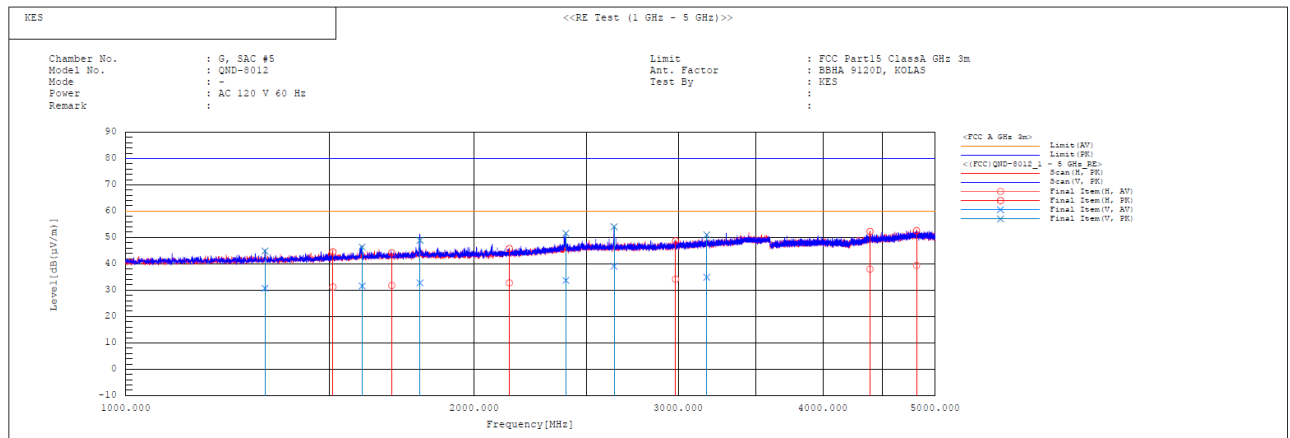
No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	94.141	V	52.7	-22.6	30.1	43.5	13.4	112.0	82.0	
2	110.753	V	59.6	-22.6	37.0	43.5	6.5	100.0	323.0	
3	148.098	V	61.3	-25.0	36.3	43.5	7.2	124.0	91.0	
4	151.493	V	59.4	-24.9	34.5	43.5	9.0	100.0	121.0	
5	185.200	H	48.9	-22.7	26.2	43.5	17.3	400.0	222.0	
6	200.599	H	43.0	-21.0	22.0	43.5	21.5	400.0	218.0	
7	276.138	H	44.1	-18.3	25.8	47.0	21.2	375.0	347.0	
8	500.086	H	41.0	-10.6	30.4	47.0	16.6	390.0	186.0	
9	556.953	V	44.8	-9.2	35.6	47.0	11.4	100.0	161.0	
10	631.158	H	37.9	-7.6	30.3	47.0	16.7	280.0	31.0	
11	660.015	H	39.6	-7.5	32.1	47.0	14.9	400.0	124.0	
12	750.104	V	37.2	-6.2	31.0	47.0	16.0	137.0	213.0	

◆ Calculation

$$\text{Result(QP)} [\text{dB}(\mu\text{V/m})] = (\text{Reading(QP)} [\text{dB}(\mu\text{V})] + \text{c.f} [\text{dB}(1/\text{m})])$$
$$\text{Margin(QP)} [\text{dB}] = \text{Limit} [\text{dB}(\mu\text{V/m})] - \text{Result(QP)} [\text{dB}(\mu\text{V/m})]$$

Reading(QP) : Reading value, Result(QP) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

**Radiated Electric Field Emissions(Above 1 GHz)**

No.	Frequency [MHz]	Pol	Reading		c.f	Result		Limit		Margin		Height	Angle	Remark
			AV	PK		AV	PK	AV	PK	AV	PK			
			[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]	
1	1319.118	V	30.9	45.1	-0.2	30.7	44.9	60.0	80.0	29.3	35.1	120.0	192.8	
2	1509.667	H	30.5	43.9	0.7	31.2	44.6	60.0	80.0	28.8	35.4	254.0	351.1	
3	1600.005	V	30.5	45.3	1.1	31.6	46.4	60.0	80.0	28.4	33.6	100.0	214.7	
4	1696.909	H	30.3	42.7	1.5	31.8	44.2	60.0	80.0	28.2	35.8	274.0	27.0	
5	1794.968	V	30.9	47.0	1.9	32.8	48.9	60.0	80.0	27.2	31.1	192.0	177.7	
6	2144.227	H	29.5	42.5	3.3	32.8	45.8	60.0	80.0	27.2	34.2	250.0	254.6	
7	2399.255	V	29.4	47.3	4.3	33.7	51.6	60.0	80.0	26.3	28.4	100.0	189.3	
8	2640.400	V	34.0	49.0	5.1	39.1	54.1	60.0	80.0	20.9	25.9	100.0	133.6	
9	2983.621	H	27.9	42.4	6.3	34.2	48.7	60.0	80.0	25.8	31.3	265.0	97.9	
10	3174.410	V	28.4	44.5	6.5	34.9	51.0	60.0	80.0	25.1	29.0	115.0	170.3	
11	4391.935	H	27.9	42.2	10.1	38.0	52.3	60.0	80.0	22.0	27.7	277.0	39.5	
12	4817.604	H	27.9	41.1	11.5	39.4	52.6	60.0	80.0	20.6	27.4	310.0	290.9	

◆ Calculation

Result(PK/CAV) [dB(μV/m)] = (Reading(PK/CAV)[dB(μV)] + c.f[dB(1/m)])

Margin(PK/CAV)[dB] = Limit[dB(μV/m)] - Result(PK/CAV) [dB(μV/m)]

Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value



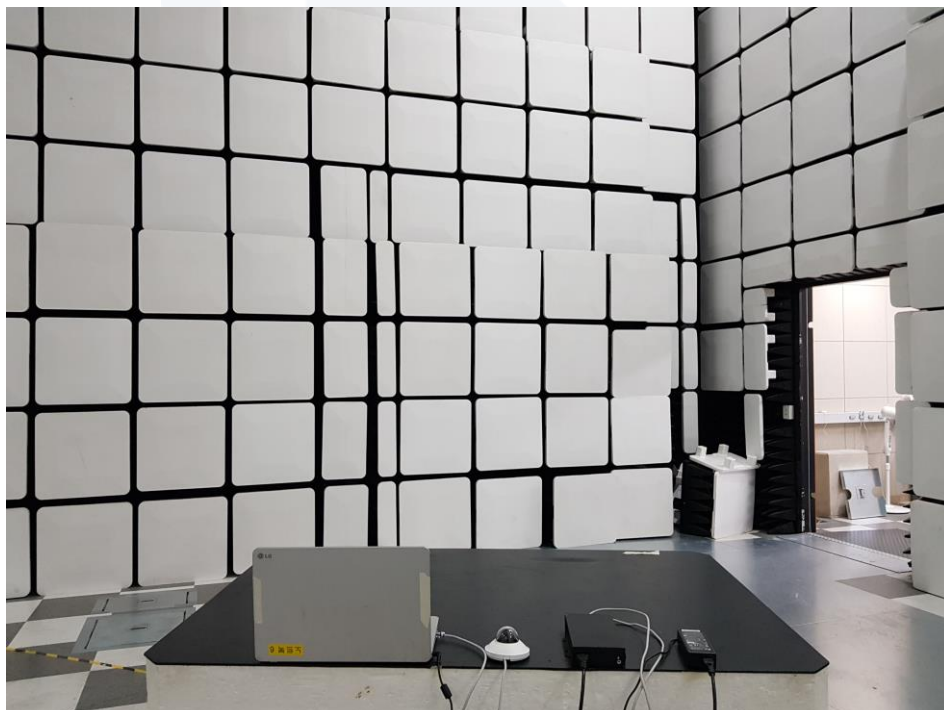
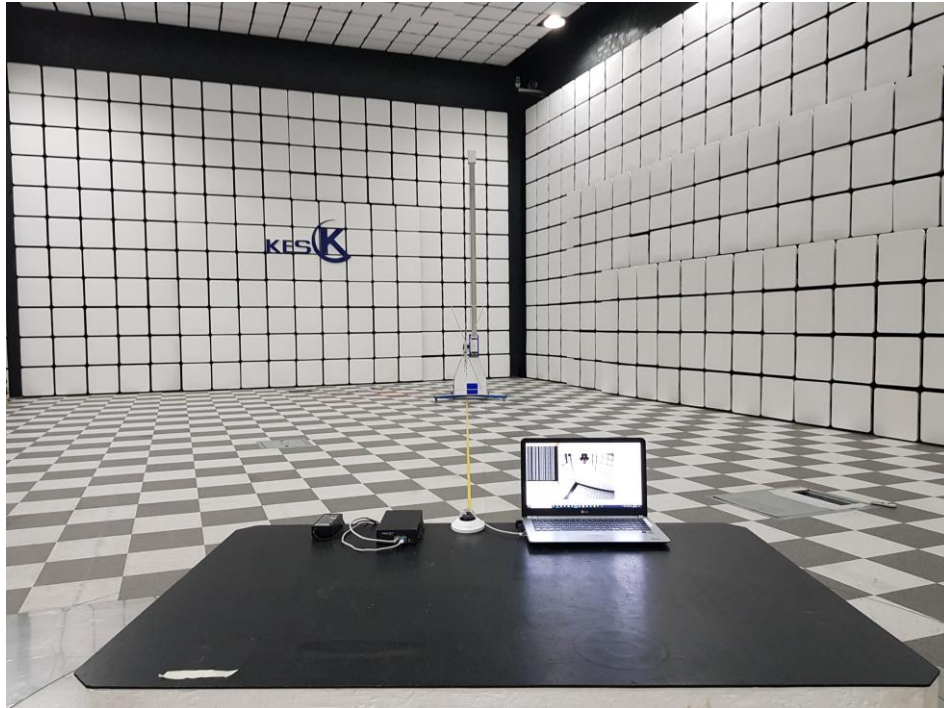
Test Setup Photos and Configuration

Conducted Emissions at Mains Power Ports



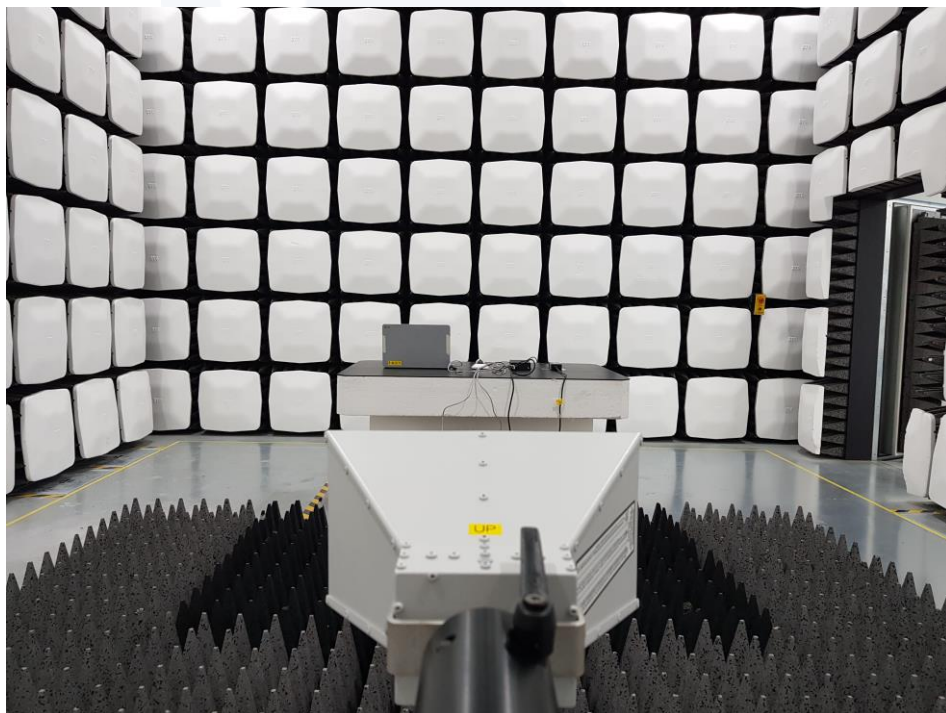
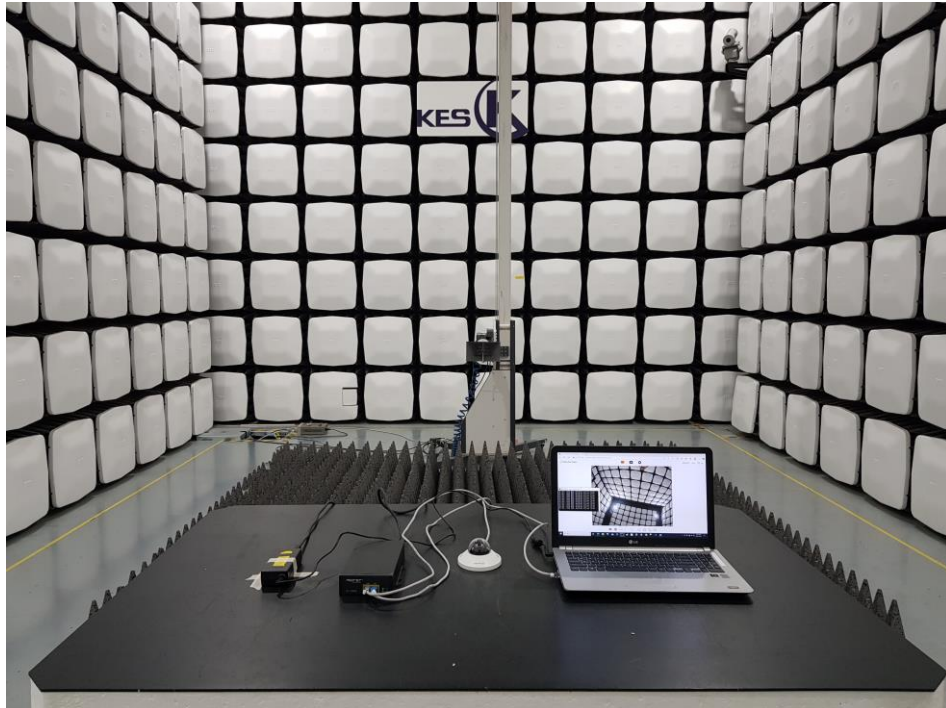


Radiated Electric Field Emissions(Below 1 GHz)





Radiated Electric Field Emissions(Above 1 GHz)





EUT External Photographs

(Top)



(Bottom)





EUT Internal Photographs

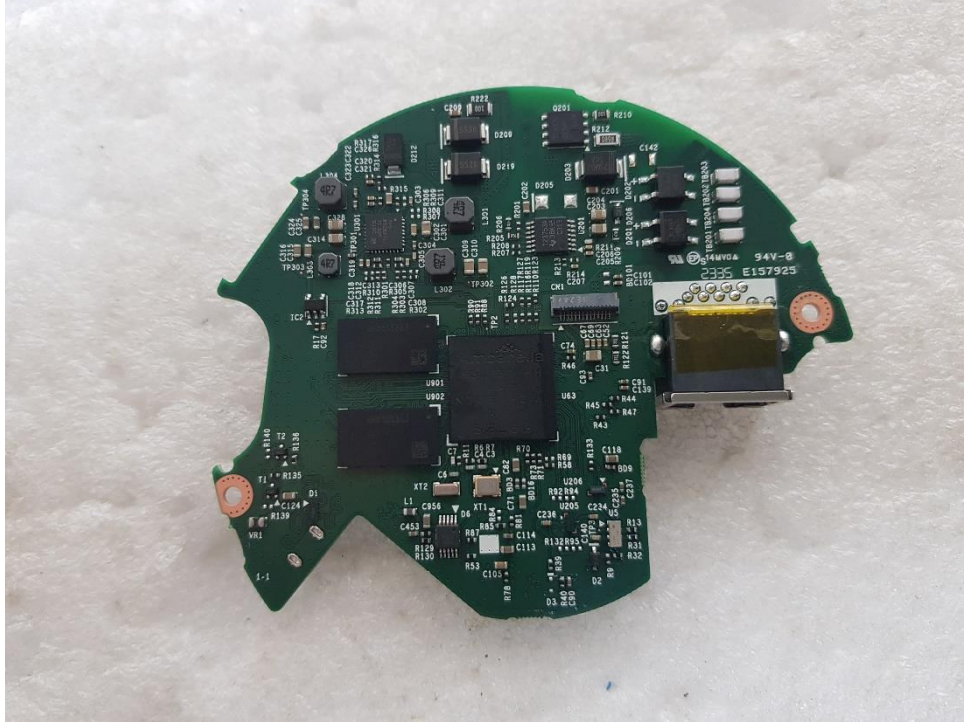
(Internal View)





EUT Internal View – Board 1

(Top)



(Bottom)





EUT Internal View – Lens

(Top)



(Bottom)





Label Photographs

FCC Label



NETWORK CAMERA

QND-8012

IC Label

CAN ICES-003(A) / NMB-003(A)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.