

**KES Co., Ltd.**

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Report No.:

KES-EM-23T0243

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# EMC TEST REPORT

Test Report No. : KES-EM-23T0243  
Date of Issue : Mar. 16, 2023  
Product name : Network Camera  
Model/Type No. : XNP-C6403R  
Variant Model : -  
Applicant : Hanwha Vision Co., Ltd  
Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,  
Gyeonggi-do, Republic of Korea  
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)  
Date of Receipt : Mar. 02, 2023  
Test date : Mar. 06, 2023 ~ Mar. 08, 2023  
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Jun Soo, Jung  
EMC Test Engineer

Reviewed by

Hyo Jin, Kim  
EMC Technical Manager

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

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**REPORT REVISION HISTORY**

Date	Test Report No.	Revision History
Mar. 16, 2023	KES-EM-23T0243	Issued

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## 1.0 General Product Description

### Main Specifications of EUT are:

<b>Video</b>	
Imaging Device	1/2.8" CMOS
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.265/H.264: Max. 60fps/50fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
NETD	None
Pixel Size	None
Min. Illumination	Color: 0.05Lux(F1.6, 1/30sec) BW: 0Lux(IR LED On)
Video Out	None
Video Transmission Distance	None
<b>Lens</b>	
Focal Length (Zoom Ratio)	4.25~170mm(40x) zoom (digital 32x, total 1280x zoom)
Max. Aperture Ratio	F1.6(Wide)~F4.95(Tele)
Angular Field of View	H: 65.66°(Wide)~1.88°(Tele) / V: 39.4°(Wide)~1.09°(Tele)
Min. Object Distance	5m(16.4ft)
Focus Control	Oneshot AF, Focus save
Lens Type	DC auto iris
Mount Type	None
Optional Lens	None
<b>Pan / Tilt / Rotate</b>	
Pan / Tilt / Rotate Range	None
Pan Range	360° Endless
Pan Speed	Max. 700°/sec, Manual: 0.024°/sec~250°/sec
Tilt Range	110°(-20°~90°)
Tilt Speed	Max. 500°/sec, Manual: 0.024°/sec~250°/sec
Rotate Range	None
Sequence	Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule

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Preset Accuracy	Up to $\pm 0.1^\circ$ , Pan/Tilt correction
<b>Operational</b>	
Camera Title	Displayed up to 85 characters
Direction Indicator	Support
Day & Night	Auto(ICR)/Color/BW/Schedule
Backlight Compensation	BLC, HLC, WDR, SSDR
Wide Dynamic Range	Extreme WDR(150dB)
Digital Noise Reduction	SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)
Defog	Support
Motion Detection	8ea, 8point polygonal zones
Privacy Masking	32ea, Quadrangle Support - Color: Grey/Green/Red/Blue/Black/White - Mosaic
Gain Control	Manual / Max
White Balance	ATW /Narrow ATW /AWC /Manual /Indoor /Outdoor /Mercury /Sodium
LDC	None
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2~1/12,000sec)
Digital PTZ	None
Video Rotation	Flip, Mirror
Analytics	Classified object type : Person/Face/Vehicle/License plate Attributes : Vehicle(Type:car/bus/truck/motorcycle/bicycle) Support DetectionShot Analytics events based on AI engine - Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Motion detection, Tampering, Fog detection, Shock detection, Virtual area(Appear/Disappear) * Audio detection, Sound classification(with NW I/O Box)
Business Intelligence	None
Serial Interface	None
Alarm I/O	None

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Alarm Triggers	Analytics, Network disconnect * Alarm input(with NW I/O Box)
Alarm Events	File upload via FTP and e-mail Notification via e-mail SD/SDHC/SDXC or NAS recording at event triggers PTZ Preset Handover * Alarm output(with NW I/O Box)
Audio Streaming	None
Audio In	None
Audio Out	None
IR Viewable Length	200m(656.17ft), Wise IR
IR Illuminator (Optional)	None
IR Radiation angle	None
IR LED	None
IR Wavelength	None
IR Operation	None
Water Removal	Support(Spinning dry)
Auto Tracking	Object auto tracking(Person/Vehicle), Target lock tracking
Coaxial Protocol	None
Color Palettes	None
<b>Radiometry</b>	
Temperature Detect Range	None
Temperature Accuracy	None
Temperature Detection	None
Additional	None
<b>Network</b>	
Ethernet	Metal shielded RJ-45(10/100BASE-T)
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression	None
Smart Codec	Manual(5ea area), WiseStream II
Video Quality Adjustment	H.264/H.265: Target bitrate level control MJPEG: Target bitrate level control

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Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast (128 user) Multiple streaming(Up to 10 profiles)
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, PIM-SM, UPnP, Bonjour, LLDP, SRTP, NTCIP, MQTT
SIP support (VoIP, Peer-to-peer, SIP/PBX integration)	None
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP) Device certificate(Hanwha Techwin Root CA)
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform
<b>General</b>	
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	None
Edge Storage	Micro SD/SDHC/SDXC 2slot 1TB
Memory	4GB RAM, 512MB Flash
<b>Environmental &amp; Electrical</b>	
Operating Temperature / Humidity	-40°C~+50°C(-40°F ~ +122°F) / +74°C(+165°F) (MAX) based on NEMA-TS 2(2.2.7) * Start up should be done at above -30°C 0~95% RH(Non-condensing)
Storage Temperature / Humidity	-50°C ~ +60°C(-58°F ~ +140°F) / 0~90% RH
Certification	IP66, IK10, NEMA4X, NEMA-TS 2(2.2.8, 2.2.9)
Input Voltage	HPoE(IEEE802.3bt, Class6, Type3, Injector included)

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Power Consumption	Typical 24W, Max 40W
<b>Mechanical</b>	
Color / Material	Body : White / Aluminum Head : Black / Polycarbonate Hard-coated dome
RAL Code	White: RAL9003 / Black: RAL9005
Product Dimensions / Weight	ø158x293.3mm(6.22x11.55") / 3.2Kg(7.05lb)
Compatible Conduit hole / Gangbox	None
Hanging Mount (Dome)	None
Skin Cover	None
Skin Cover (Dome)	None
Weather Cap (Dome)	None
Power Module	None
Backbox	None
<b>Certifications &amp; Standards</b>	
Network	None
EMC	None
Safety	None
Environment	None
Video	None
<b>DORI (EN62676-4 standard)</b>	
Detect (25PPM/ 8PPF)	Wide: 59.5m(195.3ft) / Tele: 2340.4m(7678.4ft)
Observe (63PPM/ 19PPF)	Wide: 23.8m(78.1ft) / Tele: 936.2m(3071.4ft)
Recognize (125PPM/ 38PPF)	Wide: 11.9m(39.1ft) / Tele: 468.1m(1535.7ft)
Identify (250PPM/ 76PPF)	Wide: 6.0m(19.5ft) / Tele: 234.0m(767.8ft)
<b>LPR/ANPR/MMCR</b>	
Speed Description	None
Speed limit	None
Min. Forward Distance	None
Max. Forward Distance	None
Max. Horizontal Angle	None
Max. Vertical Angle	None
Horizontal Offset	None
Camera Height	None

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Lane Coverage	None
Vehicle Recognition	None
Available Countries	None
<b>Wisenet Road AI LPR/ANPR/MMCR</b>	
Solution	None
Speed Description	None
Lane Coverage	None
Speed limit	None
Min. Forward Distance	None
Max. Forward Distance	None
Max. Horizontal Angle	None
Max. Vertical Angle	None
Horizontal Offset	None
Camera Height	None
Vehicle Recognition	None
Available Countries	None

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## 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

## 1.2 Variant Model Differences

Not applicable

## 1.3 Device Modifications

Not applicable

## 1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
Network Camera	XNP-C6403R	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT
Fiber PoE Injector	PT-PSE106GBR-AH-S	PT2249210405	Dongguan PROCET Network Technology Co.,Ltd	-

## 1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Fiber PoE Injector	PT-PSE109GBRO-AH-S	PT2023220053	Dongguan PROCET Network Technology Co.,Ltd	-
Notebook	9JM8HT2	8KM8HT2	DELL INC.	-
Notebook Adapter	HA65NM130	-	Chicony Power Technology(Suzhou)Co., Ltd.	-
Optical Module 1	NEXT-SFP10G-SR	-	Shenzhen yichen technology development Co., Ltd.	-
Optical Module 2	NEXT-SFP10G-SR	-	Shenzhen yichen technology development Co., Ltd.	-
Micro SD card 1	-	-	SanDisk	-
Micro SD card 2	-	-	SanDisk	-

## 1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
Network Camera (EUT)	LAN	Fiber PoE Injector (EUT)	PoE	2.5	U
	Micro SD card slot	Micro SD card 1	Micro SD card slot	-	-
	Micro SD card slot	Micro SD card 2	Micro SD card slot	-	-
Fiber PoE Injector (EUT)	Optical slot	Optical Module 1	Optical slot	-	-
	LAN	Notebook	LAN	3.1	U
	Ground	Ground	Ground	-	-
Optical Module 1	Optical	Optical Module 2	Optical	5.0	U
Optical Module 2	Optical slot	Fiber PoE Injector	Optical slot	-	-
Notebook	DC jack	Notebook Adapter	Line	1.5	U

\* Unshielded=U, Shielded=S

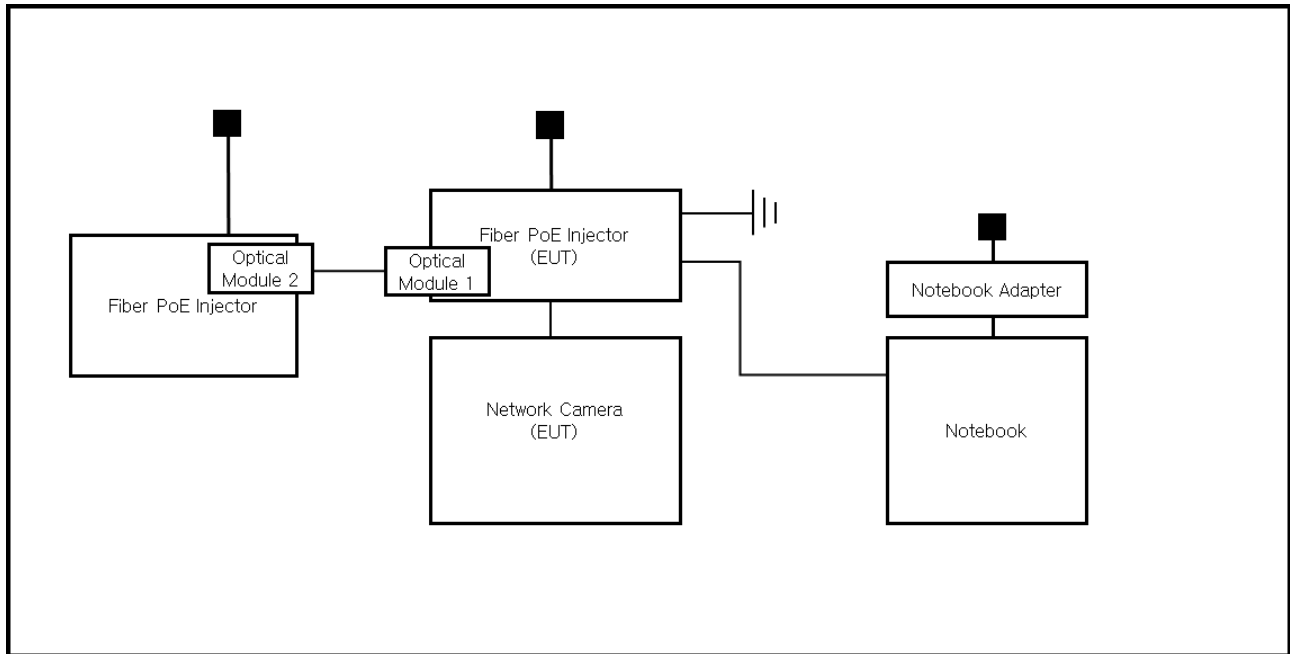
## 1.7 EUT Operating Mode(s)

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 VIETNAM COMPANY LIMITED

## 1.8 Configuration

■ AC Main  
□ DC Main



## 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

Mar. 07, 2023

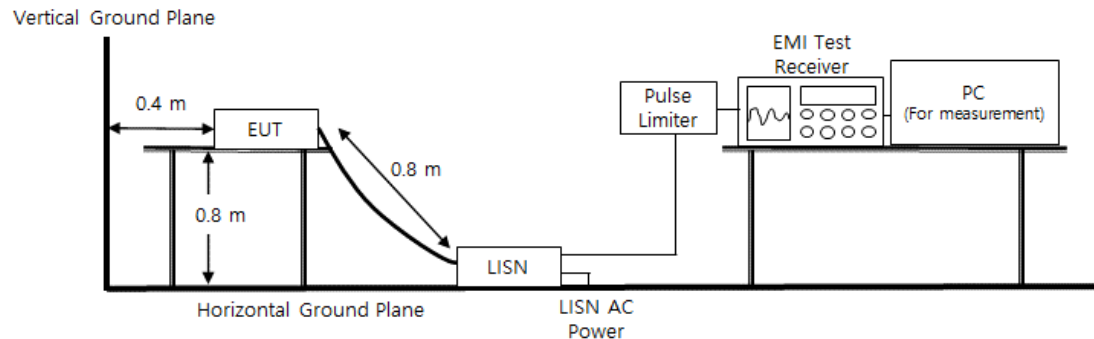
### Test Location

Electro wave Shieldroom #6

### Test Equipment

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

### Diagram of test setup





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### Test Conditions

Temperature: (24,2 ± 0,1) °C  
Relative Humidity: (43,2 ± 0,1) % 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.

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## 2.2 Radiated Electric Field Emissions(Below 1 GHz)

### Test Date

Mar. 06, 2023

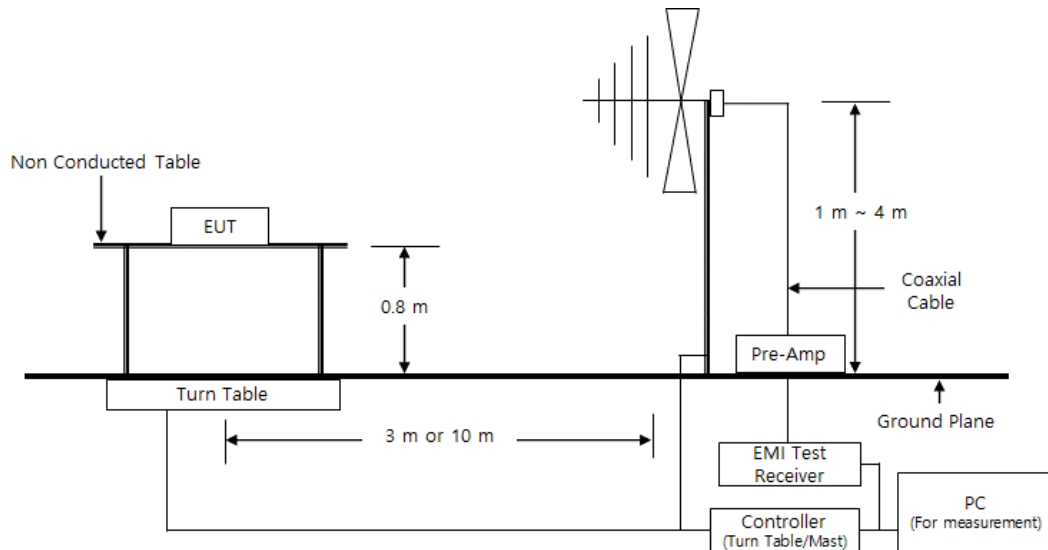
### Test Location

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

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
<input checked="" type="checkbox"/>	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESU26	R & S	100551	03, 31, 2023
<input checked="" type="checkbox"/>	AMPLIFIER	SCU 01	R & S	100603	11, 10, 2023
<input checked="" type="checkbox"/>	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 17, 2024
<input checked="" type="checkbox"/>	ATTENUATOR	8491A	HP	32173	03, 03, 2024

### Diagram of test setup



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### Test Conditions

Temperature: (23,1 ± 0,1) °C  
Relative Humidity: (42,1 ± 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.

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## 2.3 Radiated Electric Field Emissions(Above 1 GHz)

### Test Date

Mar. 08, 2023

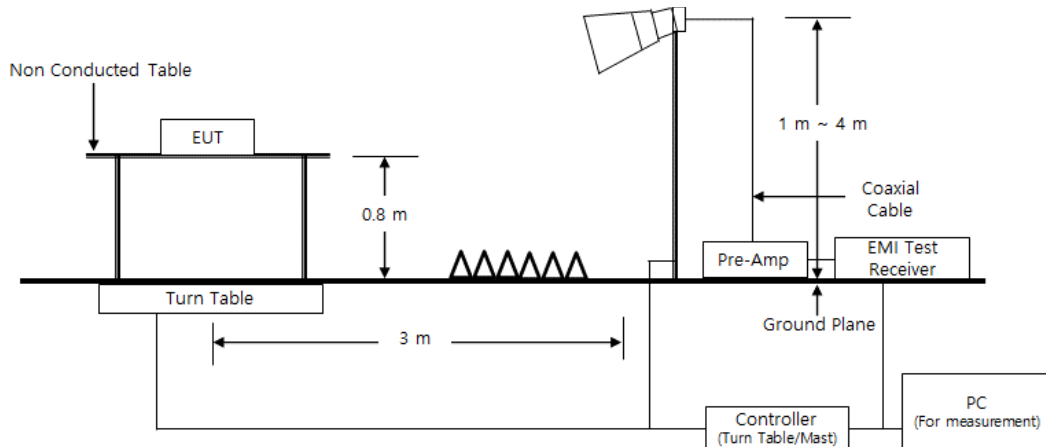
### Test Location

SEMI ANECHOIC CHAMBER #5

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
<input checked="" type="checkbox"/>	EMI Test S/W	ES10/RE	TOYO Corporation	2022.01.000	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	03, 31, 2023
<input checked="" type="checkbox"/>	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	11, 08, 2023
<input checked="" type="checkbox"/>	PREAMPLIFIER	8449B	HP	3008A00538	06, 02, 2023
<input checked="" type="checkbox"/>	ATTENUATOR	8491B	HP	23094	04, 21, 2023

### Diagram of test setup





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### Test Conditions

Temperature: (24,2 ± 0,1) °C  
Relative Humidity: (42,9 ± 0,1) % R.H.

### Frequency Range of Measurement

1 GHz to 5 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.

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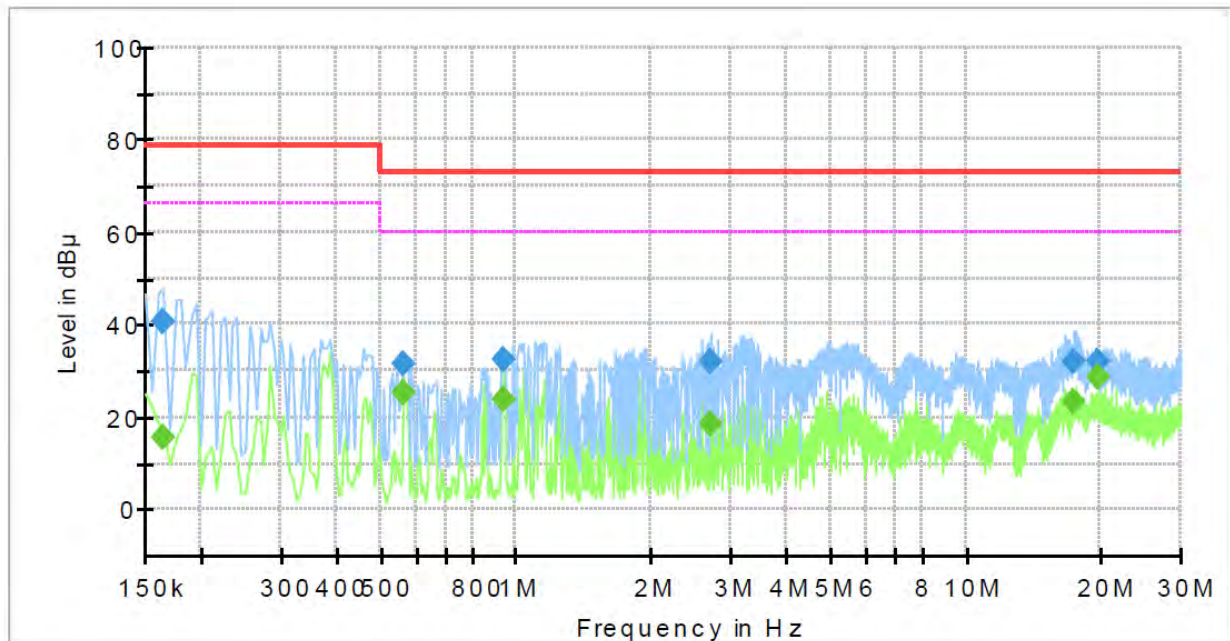
## APPENDIX A – TEST DATA

### Conducted Emissions at Mains Power Ports

HOT LINE

#### Common Information

Test Description: Conducted Emission  
Model No.: XNP-C6403R  
Phase: L1  
Mode:  
Operator Name: KES



#### Final\_Result

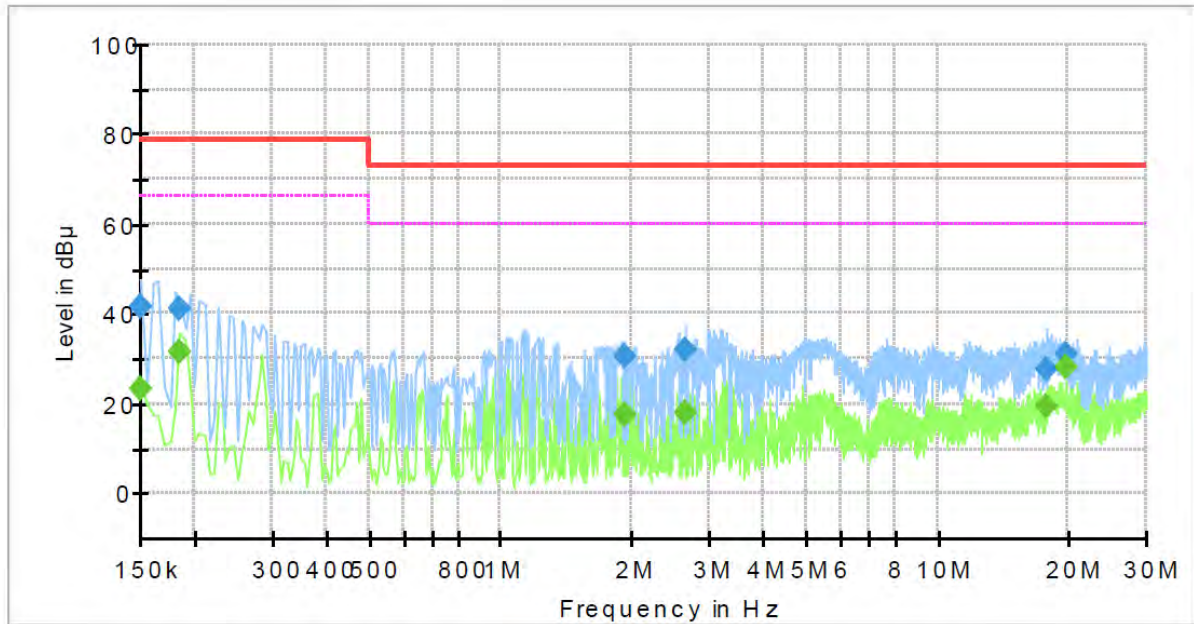
Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.165000	---	15.41	66.00	50.59	1000.0	9.000	L1	19.5
0.165000	40.83	---	79.00	38.17	1000.0	9.000	L1	19.5
0.565000	---	25.04	60.00	34.96	1000.0	9.000	L1	19.8
0.565000	31.57	---	73.00	41.43	1000.0	9.000	L1	19.8
0.940000	---	23.96	60.00	36.04	1000.0	9.000	L1	20.1
0.940000	32.69	---	73.00	40.31	1000.0	9.000	L1	20.1
2.725000	---	18.57	60.00	41.43	1000.0	9.000	L1	20.2
2.725000	32.15	---	73.00	40.85	1000.0	9.000	L1	20.2
17.430000	---	23.33	60.00	36.67	1000.0	9.000	L1	20.0
17.430000	31.74	---	73.00	41.26	1000.0	9.000	L1	20.0
19.710000	---	28.44	60.00	31.56	1000.0	9.000	L1	20.2
19.710000	32.11	---	73.00	40.89	1000.0	9.000	L1	20.2

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## NEUTRAL LINE

### Common Information

Test Description:	Conducted Emission
Model No.:	XNP-C6403R
Phase:	N
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	---	23.28	66.00	42.72	1000.0	9.000	N	19.4
0.150000	41.66	---	79.00	37.34	1000.0	9.000	N	19.4
0.185000	---	31.67	66.00	34.33	1000.0	9.000	N	19.5
0.185000	40.92	---	79.00	38.08	1000.0	9.000	N	19.5
1.925000	---	17.61	60.00	42.39	1000.0	9.000	N	20.3
1.925000	30.46	---	73.00	42.54	1000.0	9.000	N	20.3
2.640000	---	17.80	60.00	42.20	1000.0	9.000	N	20.2
2.640000	31.83	---	73.00	41.17	1000.0	9.000	N	20.2
17.795000	---	19.49	60.00	40.51	1000.0	9.000	N	20.1
17.795000	27.67	---	73.00	45.33	1000.0	9.000	N	20.1
19.710000	---	28.06	60.00	31.94	1000.0	9.000	N	20.2
19.710000	31.08	---	73.00	41.92	1000.0	9.000	N	20.2

#### ◆ 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))

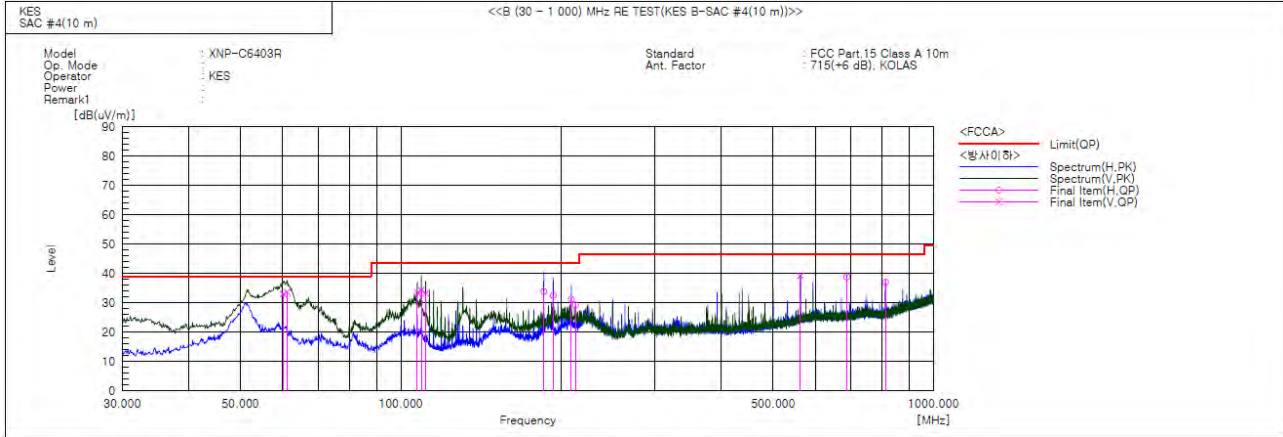
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## Radiated Electric Field Emissions(Below 1 GHz)

- 47 CFR Part 15, Subpart B

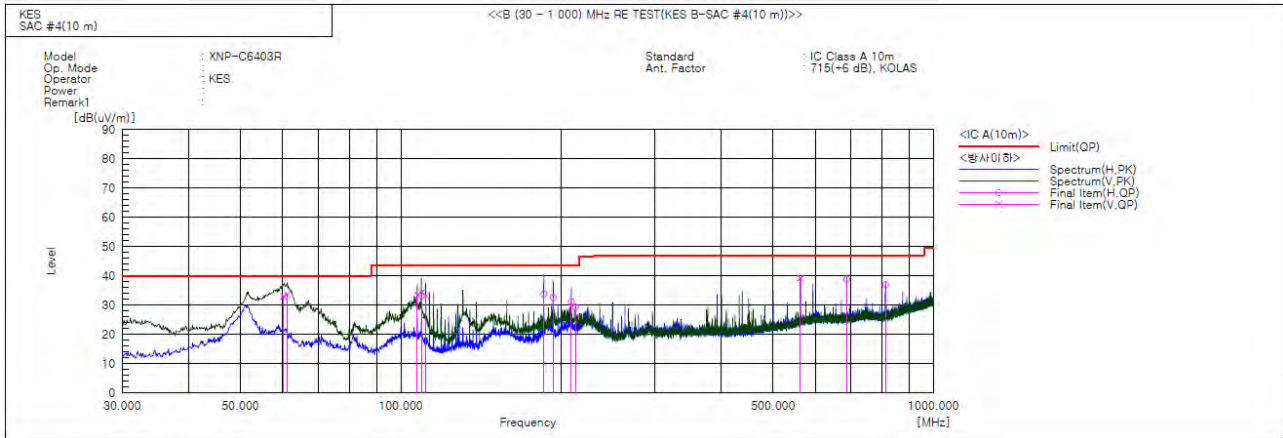


### Final Result

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	60.191	V	54.9	-21.9	33.0	39.0	6.0	100.0	229.0	
2	61.161	V	55.7	-22.1	33.6	39.0	5.4	102.0	288.0	
3	107.358	V	56.1	-22.6	33.5	43.5	10.0	100.0	322.0	
4	109.298	V	57.1	-22.8	34.3	43.5	9.2	108.0	288.0	
5	111.359	V	56.2	-23.0	33.2	43.5	10.3	100.0	114.0	
6	185.564	H	56.8	-23.0	33.8	43.5	9.7	380.0	285.0	
7	193.324	H	54.6	-22.1	32.5	43.5	11.0	394.0	53.0	
8	208.965	H	51.7	-20.6	31.1	43.5	12.4	387.0	68.0	
9	212.845	H	49.6	-20.3	29.3	43.5	14.2	400.0	113.0	
10	562.530	V	48.5	-9.3	39.2	46.5	7.3	102.0	232.0	
11	687.660	H	46.4	-7.6	38.8	46.5	7.7	399.0	323.0	
12	812.669	H	44.2	-7.2	37.0	46.5	9.5	400.0	158.0	

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# - 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	60.191	V	54.9	-21.9	33.0	40.0	7.0	100.0	229.0	
2	61.161	V	55.7	-22.1	33.6	40.0	6.4	102.0	288.0	
3	107.358	V	56.1	-22.6	33.5	43.5	10.0	100.0	322.0	
4	109.298	V	57.1	-22.8	34.3	43.5	9.2	108.0	288.0	
5	111.359	V	56.2	-23.0	33.2	43.5	10.3	100.0	114.0	
6	185.564	H	56.8	-23.0	33.8	43.5	9.7	380.0	285.0	
7	193.324	H	54.6	-22.1	32.5	43.5	11.0	394.0	53.0	
8	208.965	H	51.7	-20.6	31.1	43.5	12.4	387.0	68.0	
9	212.845	H	49.6	-20.3	29.3	43.5	14.2	400.0	113.0	
10	562.530	V	48.5	-9.3	39.2	47.0	7.8	102.0	232.0	
11	687.660	H	46.4	-7.6	38.8	47.0	8.2	399.0	323.0	
12	812.669	H	44.2	-7.2	37.0	47.0	10.0	400.0	158.0	

## ◆ Calculation - SAC #4(10 m)

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

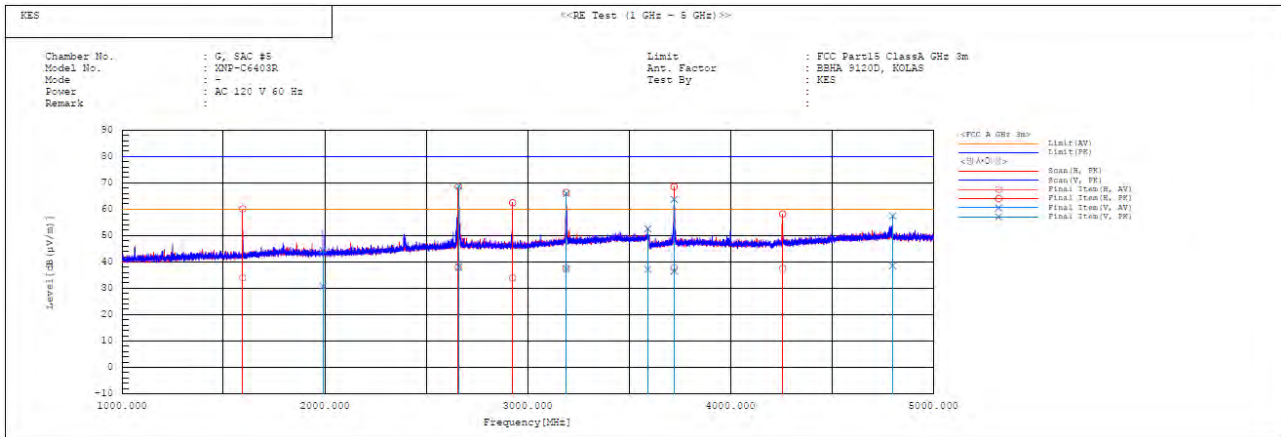
Margin(QP)[dB] = Limit[dB(μV/m)] - Result(QP) [dB(μV/m)]

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)



### Final Result

No.	Frequency [MHz]	Pol	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result AV [dB(μV/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]	Remark
1	1595.431	H	33.6	59.7	0.4	34.0	60.1	60.0	80.0	26.0	19.9	378.0	85.8	
2	1990.761	V	28.7	42.4	2.0	30.7	44.4	60.0	80.0	29.3	35.6	100.0	42.7	
3	2658.764	H	33.8	64.4	4.2	38.0	68.6	60.0	80.0	22.0	11.4	398.0	258.0	
4	2660.858	V	33.9	64.6	4.2	38.1	68.8	60.0	80.0	21.9	11.2	102.0	160.6	
5	2926.192	H	29.0	57.5	4.9	33.9	62.4	60.0	80.0	26.1	17.6	392.0	262.8	
6	3190.312	H	31.7	60.4	5.9	37.6	66.3	60.0	80.0	22.4	13.7	100.0	211.5	
7	3191.712	V	31.4	60.0	5.9	37.3	65.9	60.0	80.0	22.7	14.1	155.0	11.5	
8	3592.475	V	31.3	46.6	5.9	37.2	52.5	60.0	80.0	22.8	27.5	100.0	165.0	
9	3721.926	V	29.9	57.1	6.6	36.5	63.7	60.0	80.0	23.5	16.3	105.0	1.2	
10	3722.700	H	31.1	61.9	6.6	37.7	68.5	60.0	80.0	22.3	11.5	365.0	147.4	
11	4257.336	H	29.4	50.0	8.2	37.6	58.2	60.0	80.0	22.4	21.8	400.0	143.7	
12	4799.585	V	28.4	47.4	10.1	38.5	57.5	60.0	80.0	21.5	22.5	102.0	153.3	

### ◆ Calculation

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

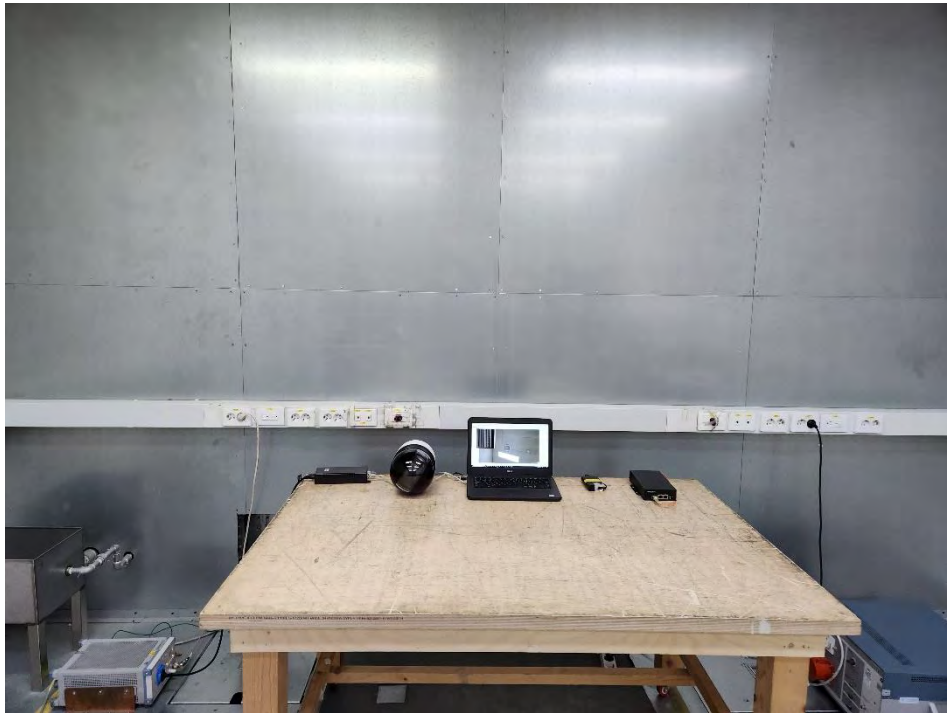
Margin(PK/CAV)[dB] = Limit[dB(μV/m)] - Result(PK/CAV) [dB(μV/m)]

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

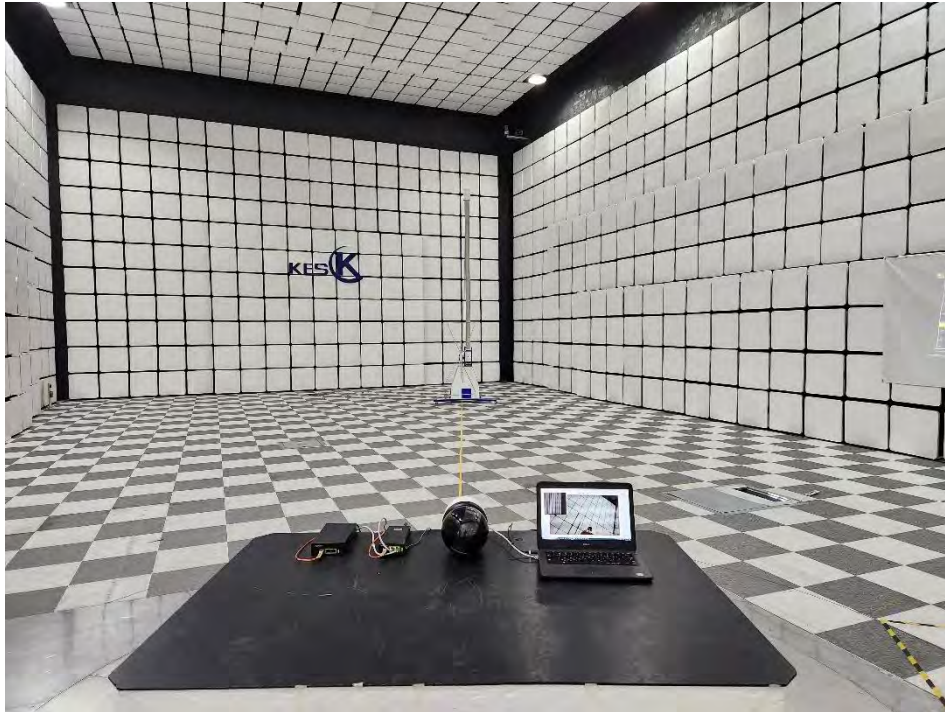
## Test Setup Photos and Configuration

### Conducted Emissions at Mains Power Ports



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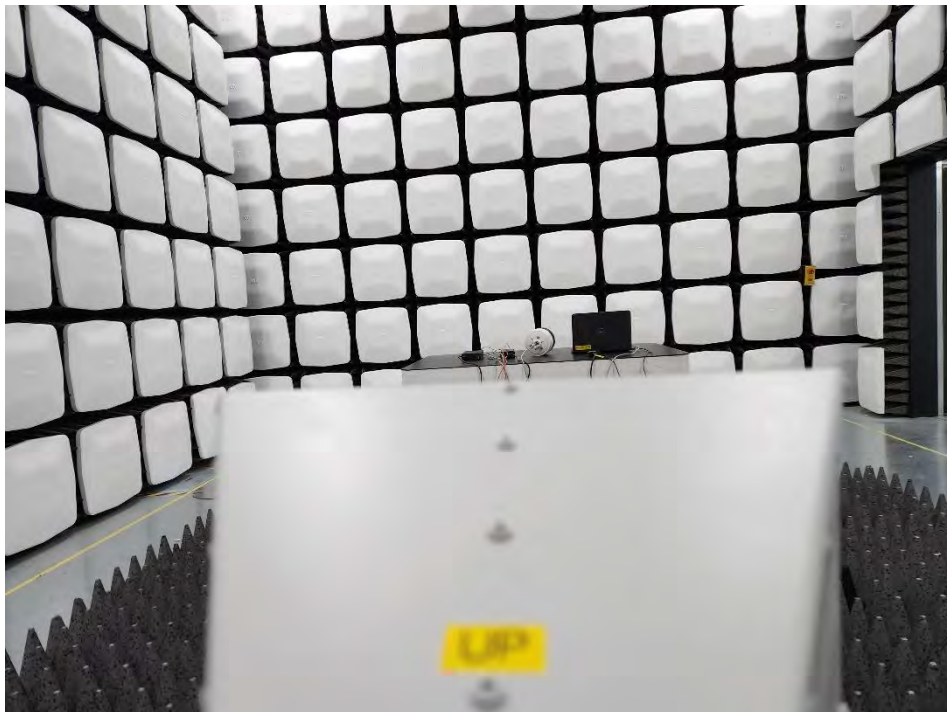
## Radiated Electric Field Emissions(Below 1 GHz)



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## Radiated Electric Field Emissions(Above 1 GHz)



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## EUT External Photographs

(Top)



(Bottom)



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**EUT Internal Photographs**

(Internal View)

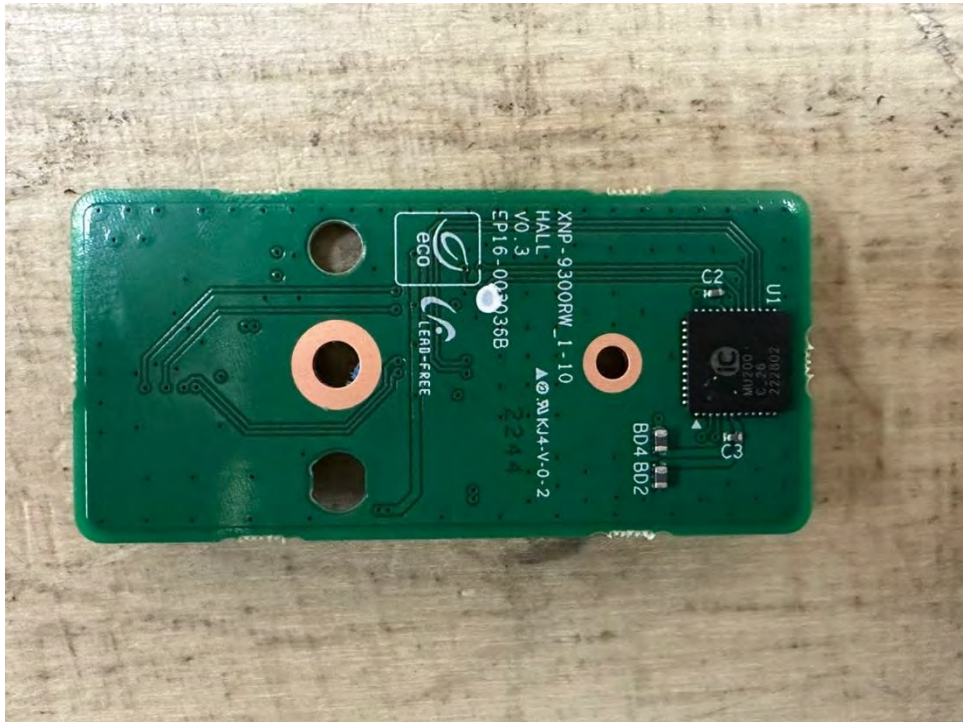


## EUT Internal View – Board 1

(Top)



(Bottom)



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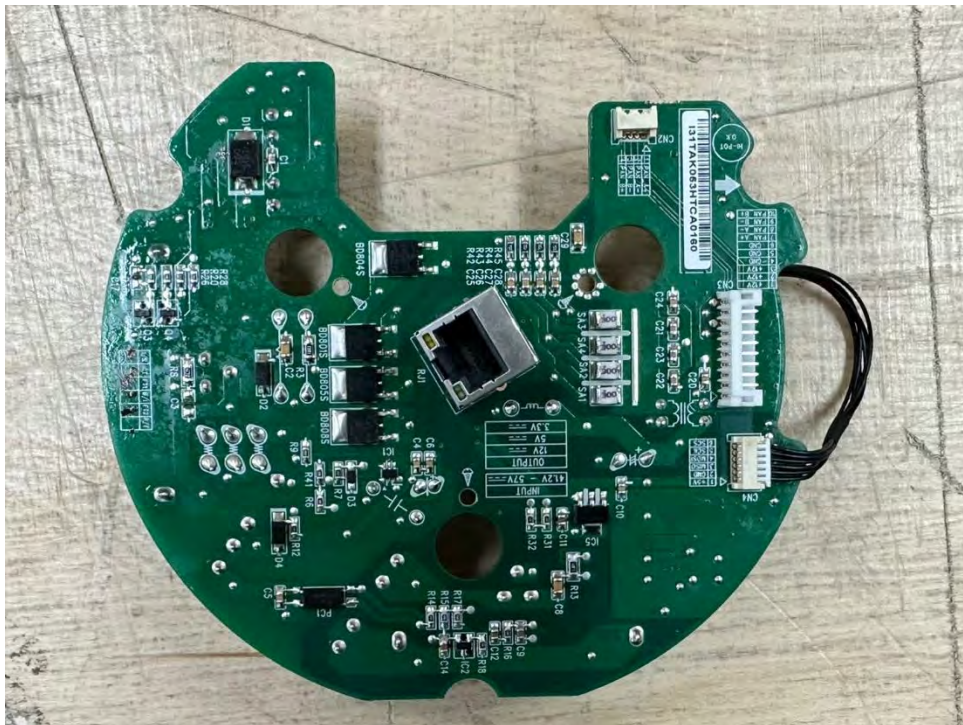


## EUT Internal View – Board 2

(Top)



(Bottom)



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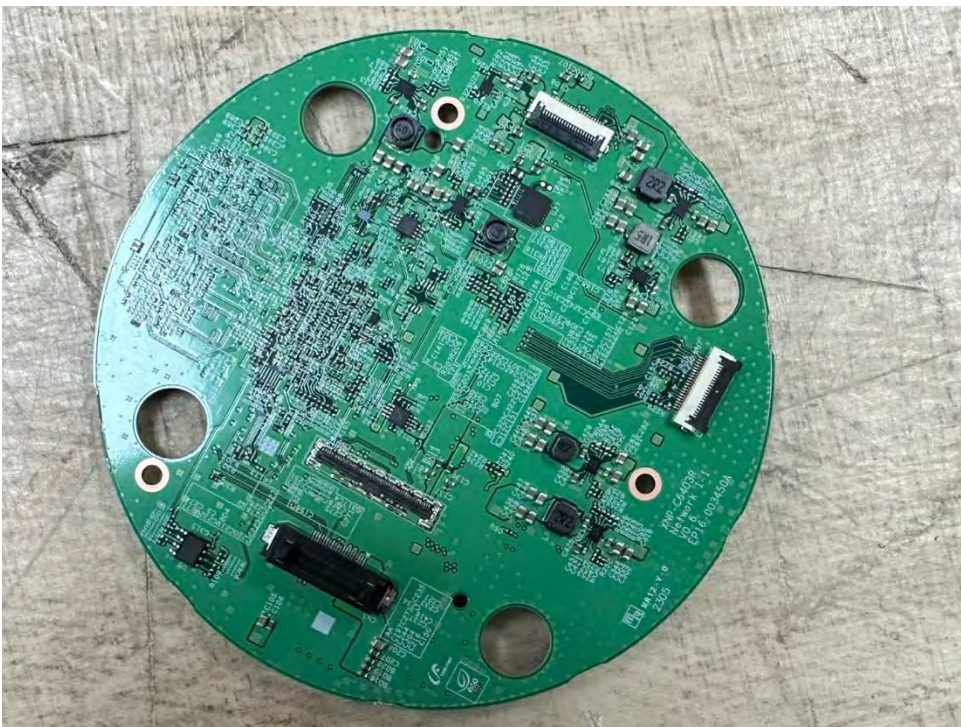


## EUT Internal View – Board 3

(Top)



(Bottom)

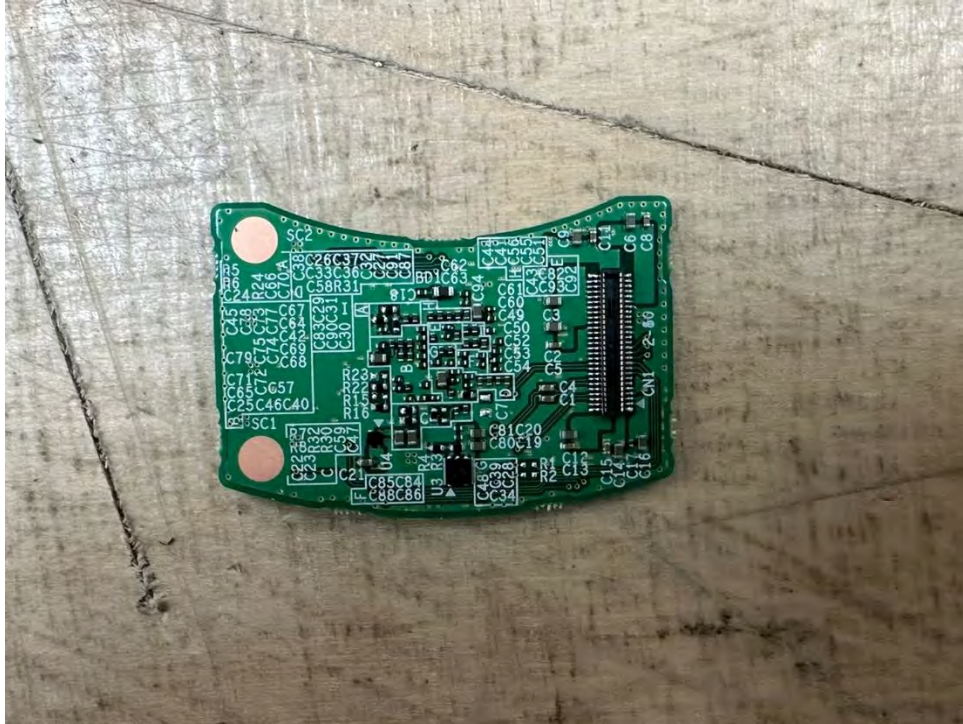


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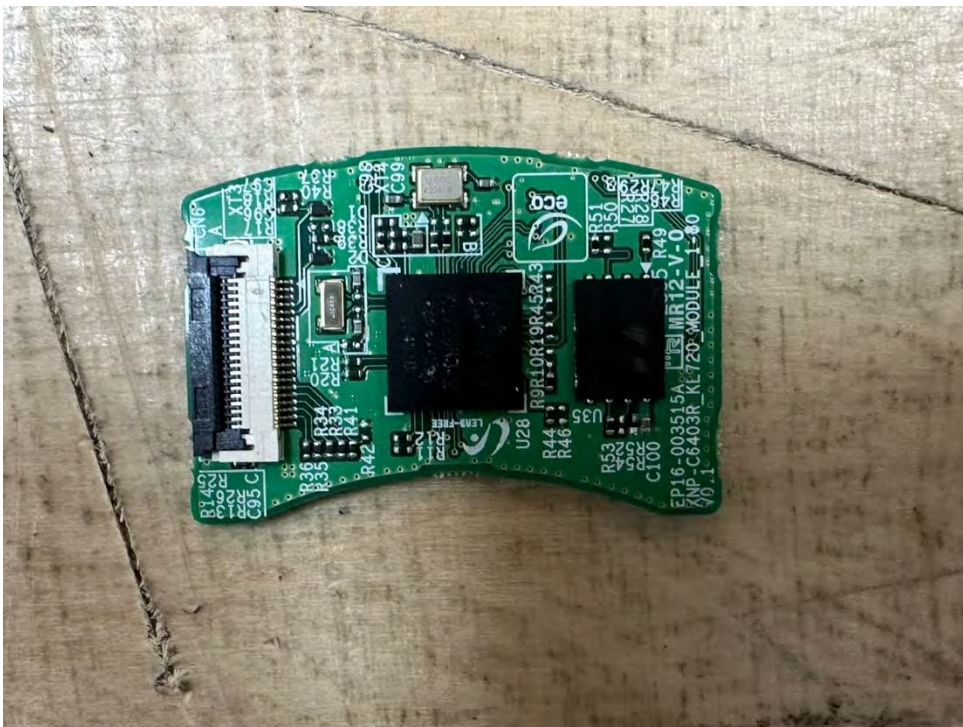


## EUT Internal View – Board 4

(Top)



(Bottom)

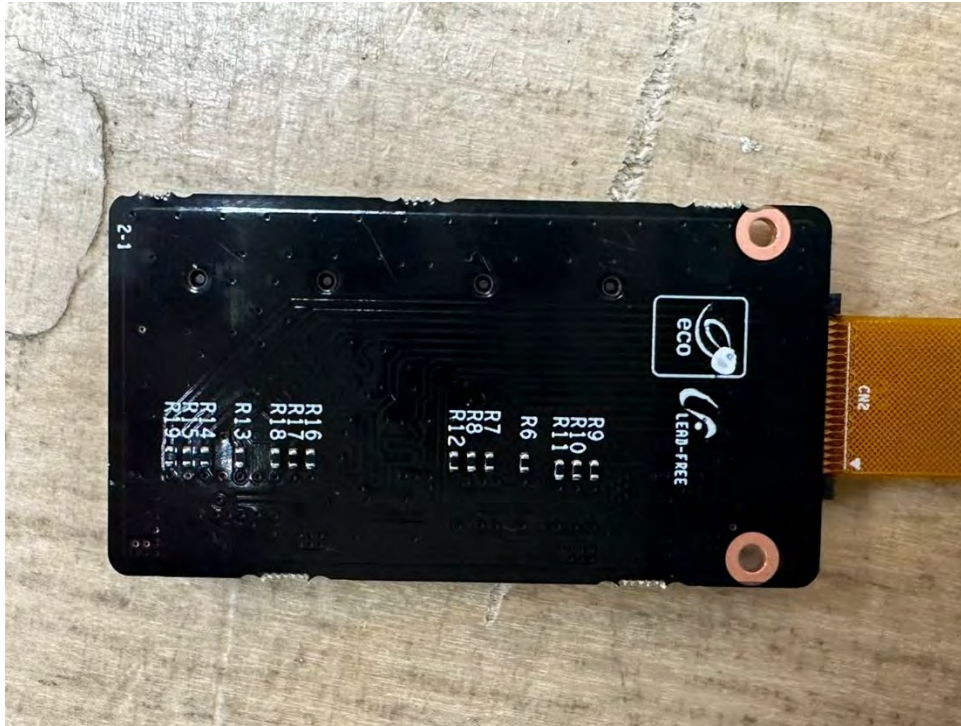


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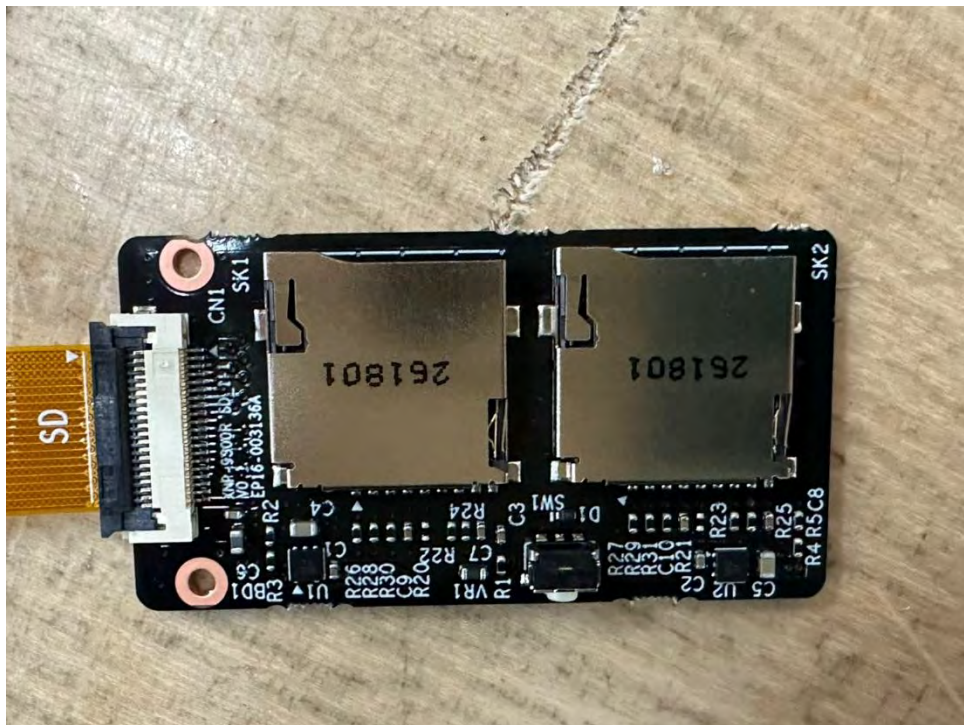


## EUT Internal View – Board 5

(Top)



(Bottom)



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## EUT Internal View – Board 6

(Top)



(Bottom)

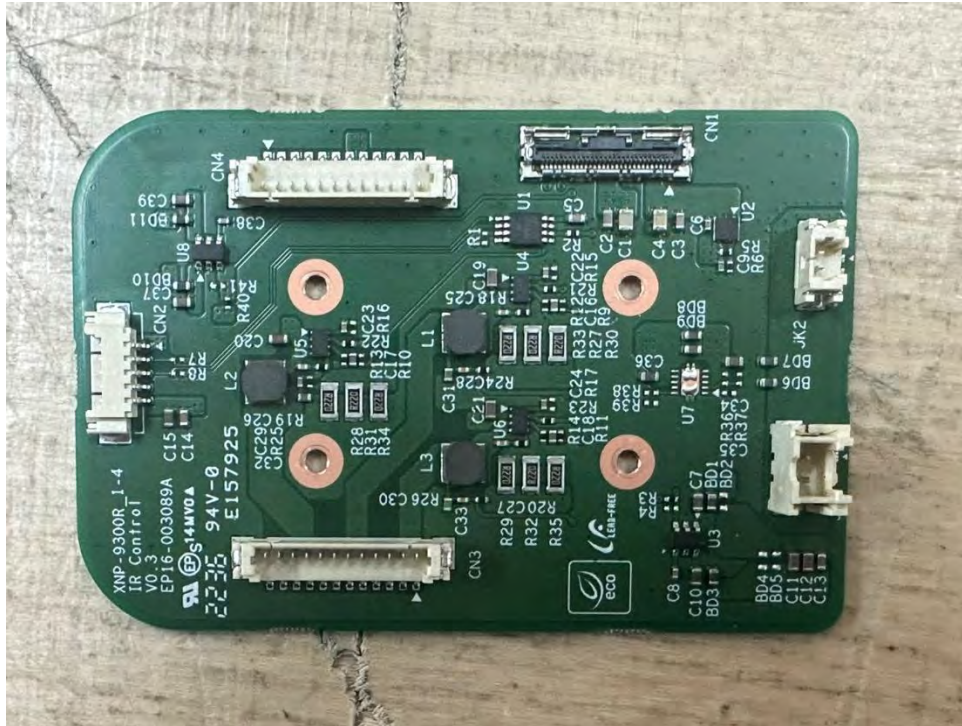


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## EUT Internal View – Board 7

(Top)



(Bottom)

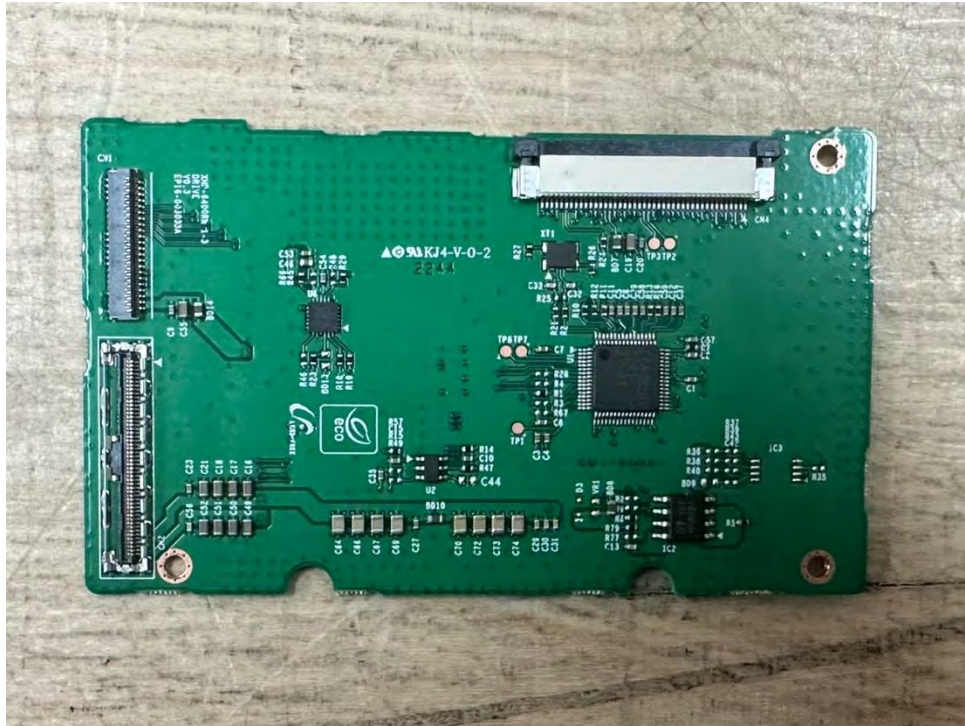


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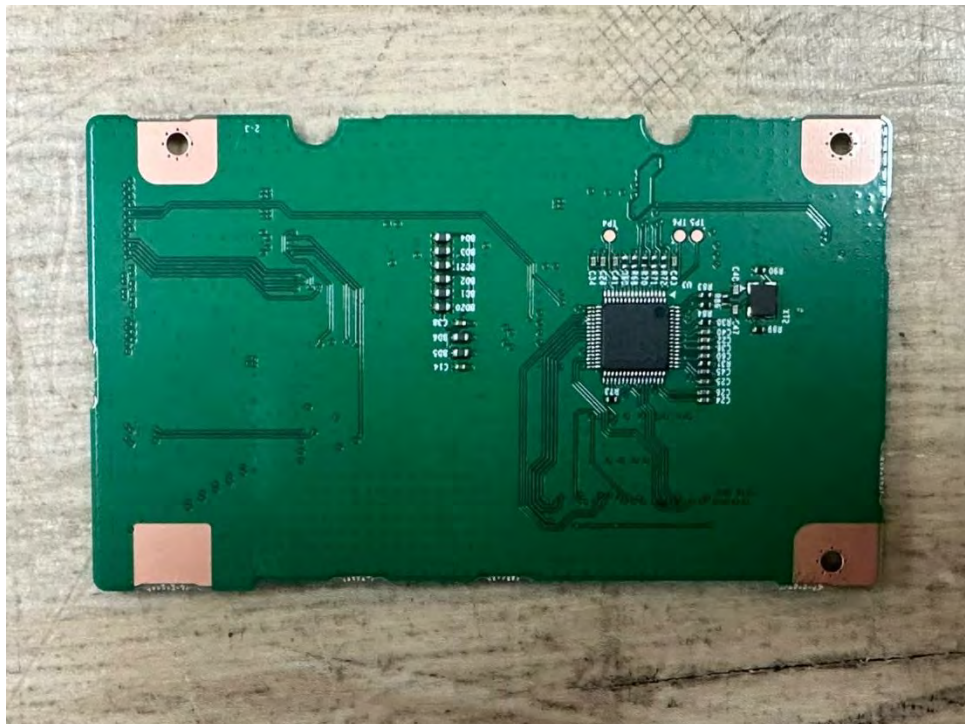


## EUT Internal View – Board 8

(Top)



(Bottom)

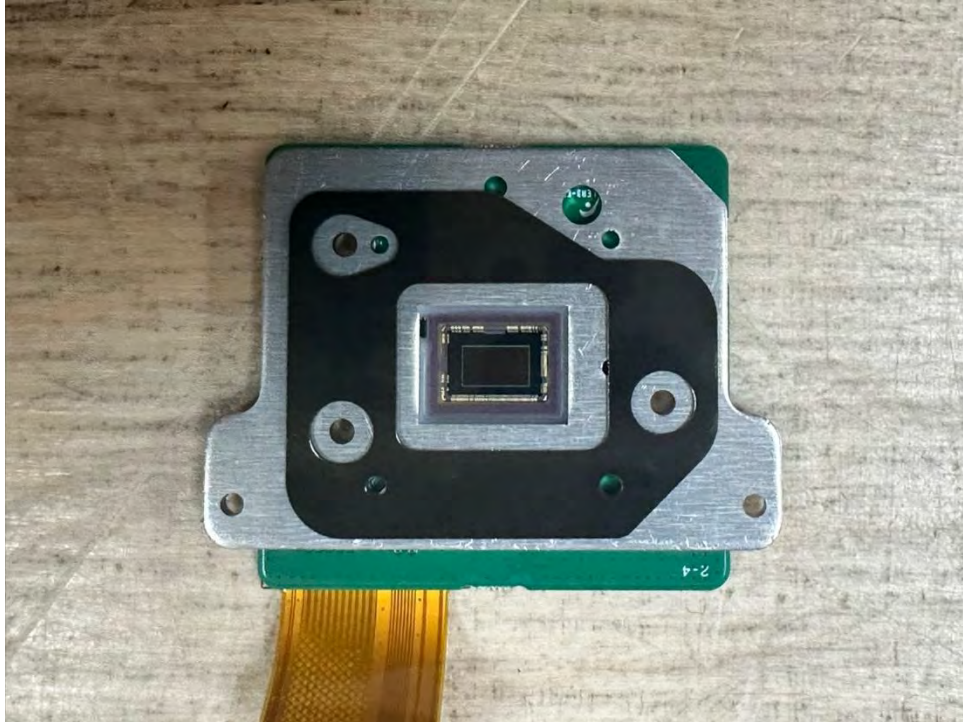


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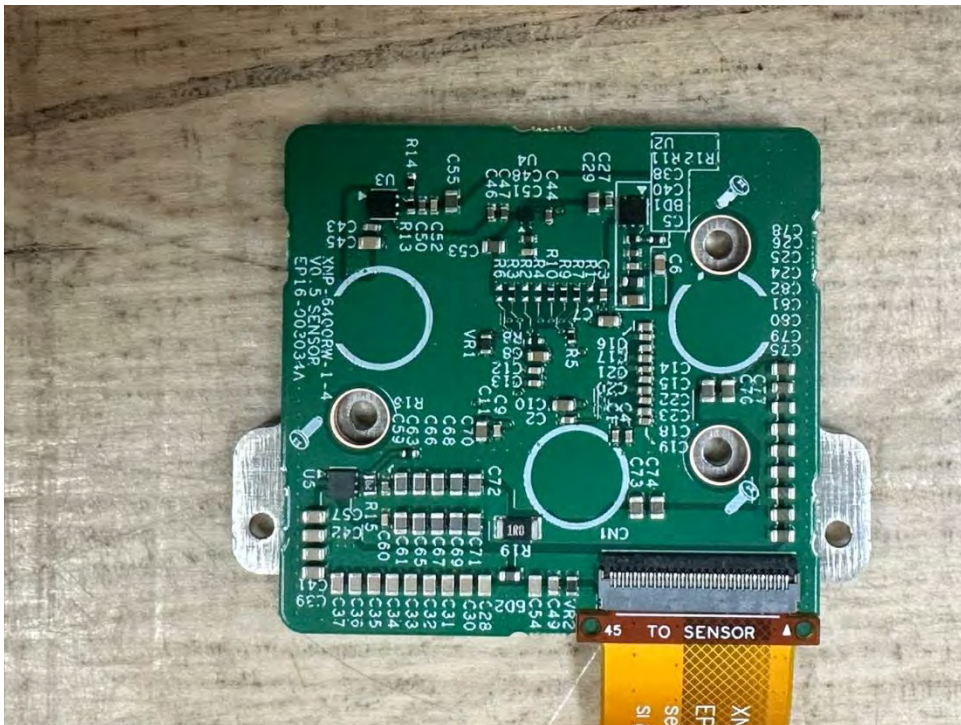


## EUT Internal View – Board 9

(Top)



(Bottom)



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## EUT Internal View – Board 10

(Top)



(Bottom)

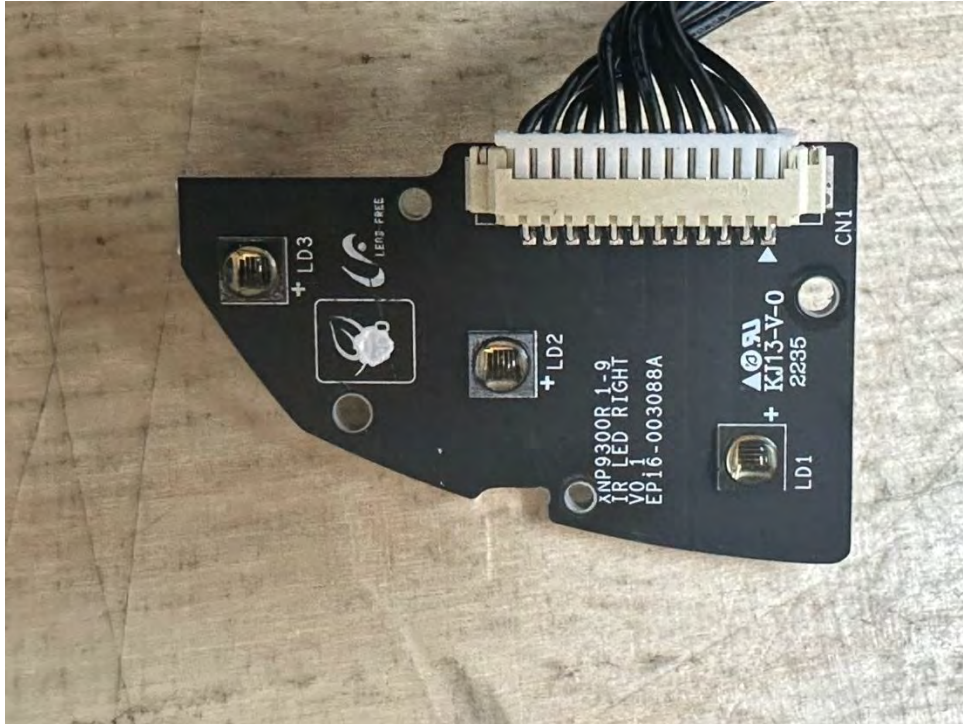


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## EUT Internal View – Board 11

(Top)



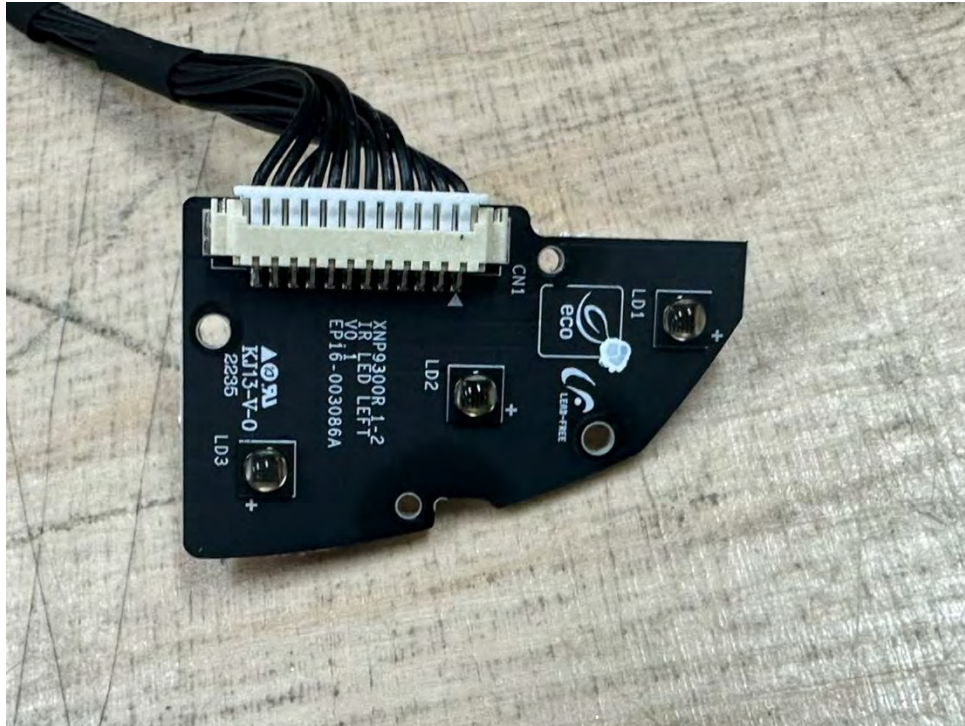
(Bottom)



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## EUT Internal View – Board 12

(Top)



(Bottom)



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## EUT Internal View – Board 13

(Top)



(Bottom)



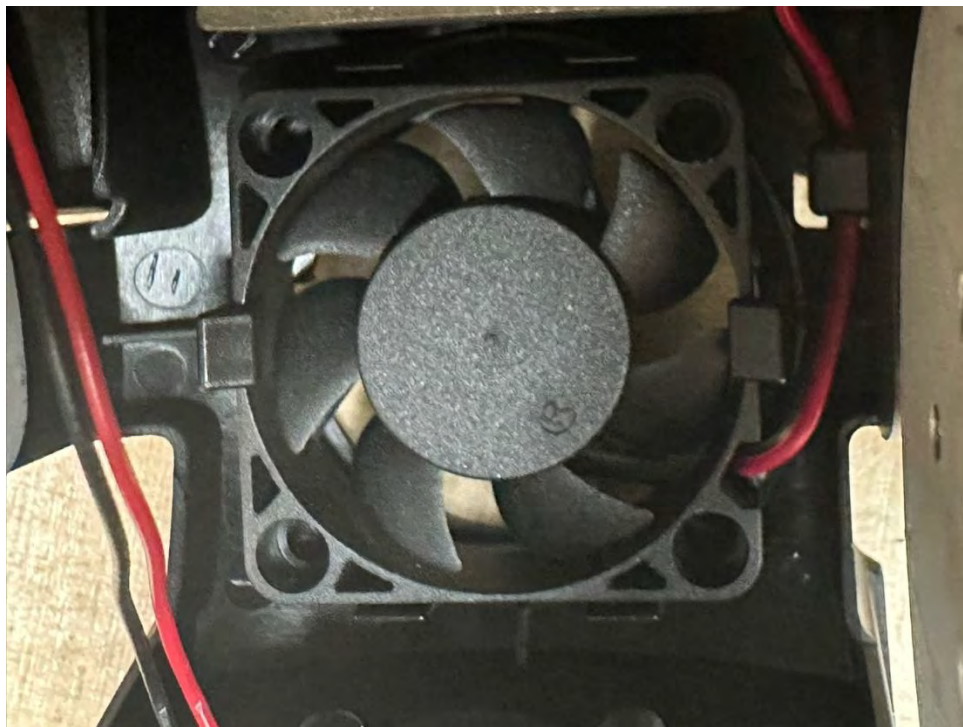
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## EUT Internal View – Fan 1

(Top)



(Bottom)



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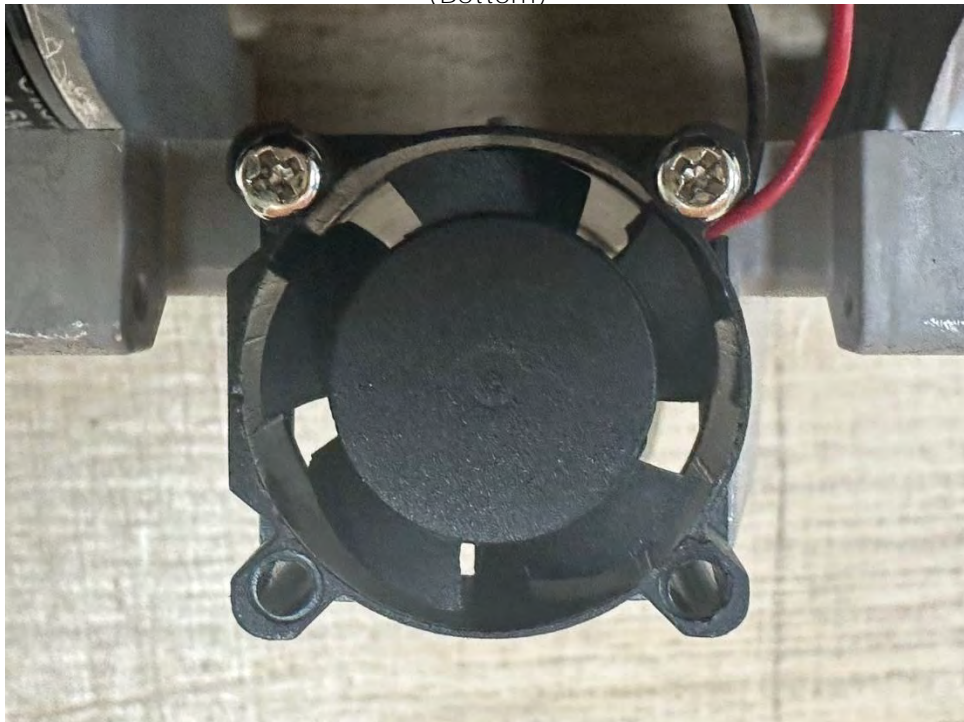


## EUT Internal View – Fan 2

(Top)



(Bottom)



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## EUT Internal View – Injector

(Top)



(Bottom)



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## EUT Internal View – Camera

(Top)



(Bottom)



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## Label Photographs

### FCC Label



Network Camera

XNP-C6403R

### 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.