



EMC TEST REPORT For FCC

Test Report No. : KES-E1-17T0304-R1
Date of Issue : Feb. 24, 2023
Product name : NETWORK CAMERA
Model/Type No. : XNV-6120
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)
Equipment authorization : ☐ Declaration of Conformity
☒ Verification
☐ Certification
Date of Receipt : Apr. 14, 2017
Test date : Apr. 29, 2017
Test Results : ☒ In Compliance ☐ Not in Compliance

Tested by

Sung Keun, Park
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

Tested by Young Suk, Song
(Retired person)
Proxy signature : Sung Keun, Park

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
May. 02, 2017	KES-E1-17T0304	Issued
Feb. 24, 2023	KES-E1-17T0304-R1	Change the Model/Type No., Applicant, Applicant Address, manufacturer and manufacturer Address at the request of the customer

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1.0 General Product Description

Main Specifications of EUT are:

XNV-6120	
Video	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1945(H) x 1109(V) 2.16M
Effective Pixels	1945(H) x 1097(V) 2.13M
Scanning System	Progressive
Min. Illumination	Color : 0.03 Lux (1/30sec, F1.6) B/W : 0.003 Lux (1/30sec, F1.6)
S / N Ratio	50dB
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for installation USB : Micro USB type B, 1280x720, for installation
Lens	
Focal Length (Zoom Ratio)	5.2~62.4mm(Optical 12X)
Max. Aperture Ratio	F1.6 (Wide) ~ F3.0(Tele)
Angular Field of View	W : 54.58(H) X 32.19(V) X 61.40(D) T : 5.30(H) X 3.00(V) X 6.06(D)
Min. Object Distance	2.1m
Focus Control	Auto / Manual / One Push
Lens Type	DC Auto Iris
Mount Type	Board-in type
Pan / Tilt / Rotate	
Pan Range	0° ~ +354°
Tilt Range	0° ~ +75°
Rotate Range	0° ~ +355°
Operational	
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English/Numeric/Special Characters - China : English/Numeric/Special/Chinese Characters - Common : Multi-line (Max 5), Color (Grey/Green/Red/Blue/Black/White), Transparency, Auto Scale by Resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC(Masking/Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR5 (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Auto / Manual / Off
Motion Detection	Off/ On(8ea, 8point Polygonal zones)
Privacy Masking	Off / On (32ea, Rectangle zones) - Color : Grey/Green/Red/Blue/Black/White - Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (included Mercury & Sodium)
Contrast	level adjustment
LDC	On/Off (5 levels with Min/Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital Zoom	24X
Preset	300 ea
Image Rotation	Flip : On/Off Mirror : On/Off Hallway : 90° / 270°
Video & Audio Analytics	Tampering, Loitering, Directional Detection, Defocus Detection, Fog Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Face Detection, Motion Detection Sound Classification
Alarm	Input 1ea / Output 1ea
Alarm events	Alarm Input, Motion Detection, Video & Audio Analytics, Network Disconnect
Alarm events	File upload via FTP, E-Mail Notification via E-Mail local storage(SD/SDHC/SDXC) or NAS recording at Event Triggers External output preset
Audio out	Line out (3.5mm mono jack), Max output level: 1 Vrms
Pixel Counter	support

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Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High Motion JPEG
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.264/H.265 : Max. 60fps at all resolutions Motion JPEG : Max. 30fps at all resolutions
Smart Codec	Manual Mode (area-based : 5EA)
WiseStream II	support
Video Quality Adjustment	H.264/H.265/MJPEG : Target Bitrate Level Control
Bitrate Control Method	H.264/H.265 : CBR or VBR Motion JPEG : VBR
Streaming Capability	Multiple Streaming (Up to 10 Profiles)
Audio Compression Format	G.711 u-law / G.726 Selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional (2-Way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1X Authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at Unicast Mode
Edge Storage	SD/SDHC/SDXC 2slot (up to 512 GB) - Continuous recording(1st slot to 2nd slot) - Motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. NAS(Network Attached Storage) Local PC for Instant Recording
Application Programming	ONVIF Profile S/G SUNAPI 2.0(HTTP API) Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS: Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer Supported Browser: Google Chrome 56, MS Edge 39, Mozilla Firefox 49(Window 64bit only) , Apple Safari 10 (Mac OS X only) Plug-in Webviewer Supported Browser : MS Explore 11, Apple Safari 10 (Mac OS X only)
Central Management Software	SmartViewer
Environmental	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -35°C
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67, IP66, NEMA 4X
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	AC24V, DC12V, PoE(IEEE802.3af, Class3)
Power Consumption	24V AC : Max. 8.2W 12V DC : Max. 7W PoE : Max. 7.8W
Mechanical	
Color / Material	Ivory / Aluminum
Dimension (WxHxD)	Ø160 x H128.5mm
Weight	985g

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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.

Voltage ☐ 230 Vac ☐ 120 Vac ☒ 24 Vac ☒ 12 Vdc ☒ PoE
Frequency ☐ 50 Hz ☒ 60 Hz ☐ 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	XNV-6120	-	HANWHA VISION VIETNAM COMPANY LIMITED	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
POE Adaptor	POE36U-1AT-R	-	PHIHONG	-
Notebook	RV518	HTK991NC600187E	Samsung Electronics Co., Ltd	-
Notebook Adaptor	ADP-60ZH	AD-6019R	DELTA ELECTRONICS, INC.	-
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI-TECH GROUP.	-
MIC	CMK-303	-	CAMAC	-
Alarm	SIP-1201DD D0	-	SAMSUNG TECHWIN CO., LTD.	-

1.6 External I/O Cabling

- AC 24 V Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (E.U.T)	RJ-45	Notebook	RJ-45	3.0	U
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	3 Pin	Alarm	3 Pin	1.7	U

* Unshielded = U, Shielded = S

- DC 12 V Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (E.U.T)	RJ-45	Notebook	RJ-45	3.0	U
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	3 Pin	Alarm	3 Pin	1.7	U

* Unshielded = U, Shielded = S

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- PoE Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (E.U.T)	RJ-45 (POE)	POE Adaptor	RJ-45 (POE)	3.0	U
	RJ-45	Notebook	RJ-45	3.0	U
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	3 Pin	Alarm	3 Pin	1.7	U
Notebook	RJ-45 (DATA)	POE Adaptor	RJ-45 (DATA)	3.0	U

* Unshielded = U, Shielded = S

1.7 EUT Operating Mode(s)

Test mode	operating
AC 24 V Mode	E.U.T Monitoring, Ping test, 1 kHz
DC 12 V Mode	E.U.T Monitoring, Ping test
POE Mode	E.U.T Monitoring, Ping test

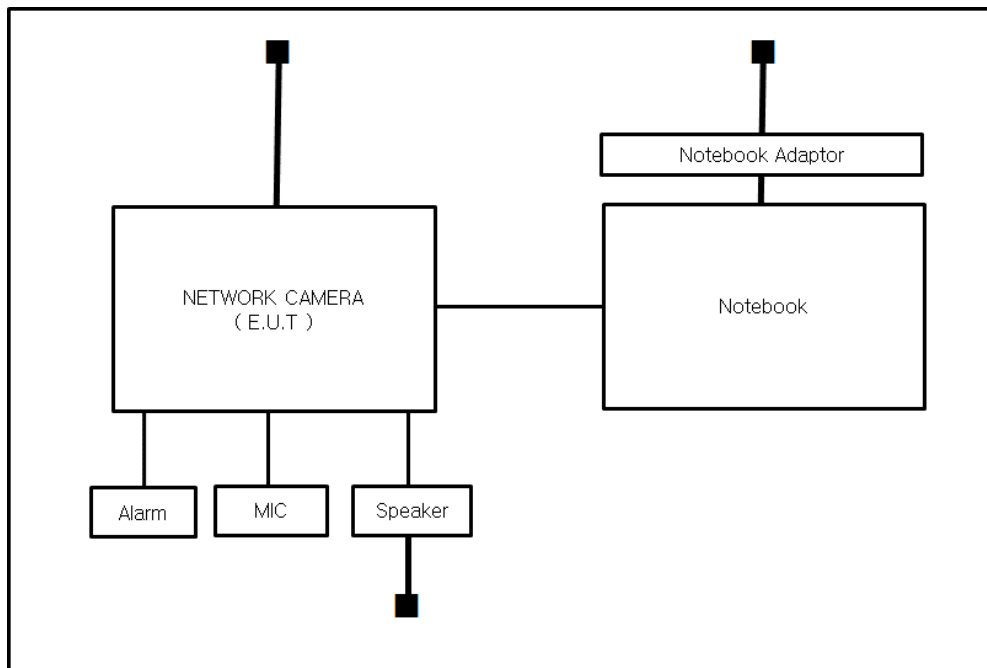
E.U.T Test operating S/W		
Name	Version	Manufacture Company
WebViewer	-	Hanwha Vision Co., Ltd

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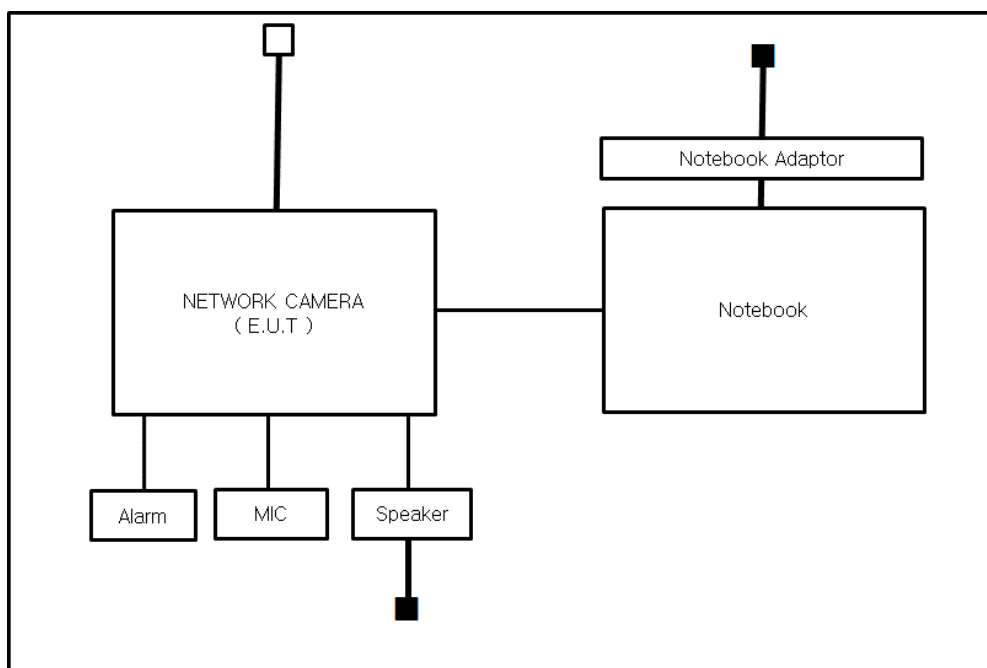
1.8 Configuration

■ AC Main
 □ DC Main

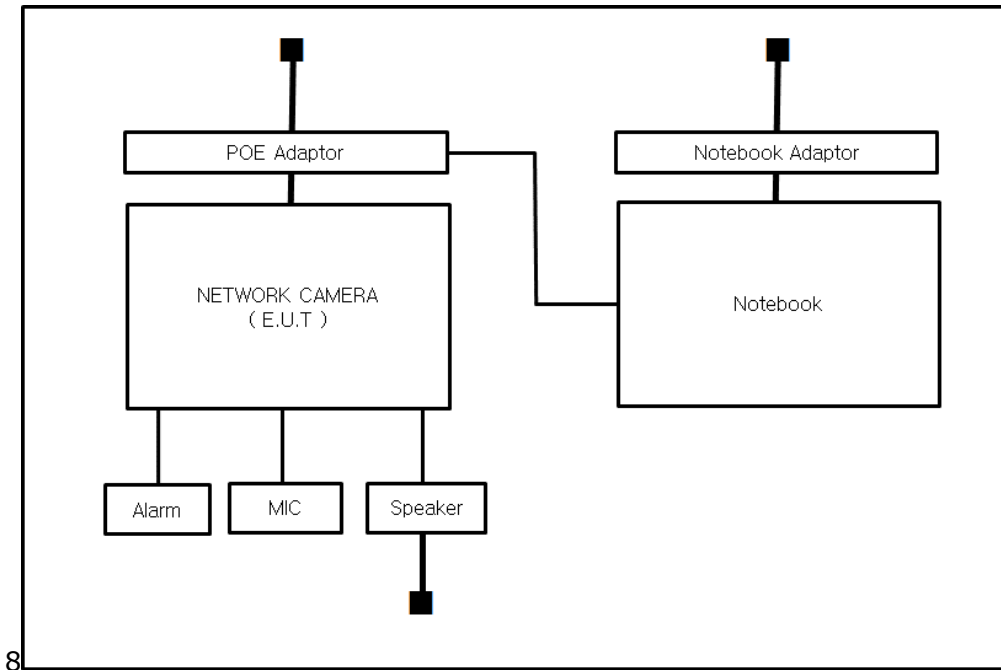
- AC 24 V Mode



- DC 12 V Mode



- PoE Mode



1.9 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.

1.10 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

1.11 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:

☐ **EMC – Directive 2014/30/EU**

☐ EN 61000-6-3:2011

☐ EN 61000-6-1:2007

☐ EN 61000-6-4:2007 +A1:2011

☐ EN 61000-6-2:2005

☐ EN 55011:2007 +A1:2010

☐ Group 1
☐ Class A

☐ Group 2
☐ Class B

☐ EN 55014-1:2006 +A2:2011

☐ EN 55014-2:1997 +A2:2008

☐ EN 55015:2013

☐ EN 55032:2015

☐ Class A

☐ Class B

☐ EN 55024:2010

☐ EN 50130-4:2011 +A1:2014

☐ EN 61000-3-2:2014

☐ EN 61000-3-3:2013

☐ EN 61326-1:2013



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☐ **VCCI V-3 / 2015.04**

☐ Class A

☐ Class B

☐ **AS/NZS CISPR22:2009 +A1:2010**

☐ Class A

☐ Class B

☒ **47 CFR Part 15, Subpart B**

☐ CISPR 22:2009 +A1:2010

☐ Class A

☐ Class B

☒ ANSI C63.4-2014

☒ Class A

☐ Class B

☐ **IC Regulation ICES-003 : 2016**

☐ CAN/CSA CISPR 22-10

☐ Class A

☐ Class B

☐ ANSI C63.4-2014

☐ **RE- Directive 2014/53/EU**

☐ EN 301 489-1 V1.9.2

☐ Equipment for fixed use

☐ Equipment for vehicular use

☐ Equipment for portable use

☐ EN 301 489-3 V1.6.1

☐ EN 301 489-17 V2.2.1

☐ EN 60945:2002

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2.1 Conducted Emissions at Mains Power Ports

Test Date

Apr. 29, 2017

Test Location

Electro wave Shieldroom

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	101781	04, 27, 2018
☒	LISN	ENV216	R & S	101787	01, 11, 2018
☒	LISN	ESH2-Z5	R & S	100450	04, 27, 2018
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 13, 2017

Test Conditions

Temperature: 21,2 °C
Relative Humidity: 36,3 %

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

Apr. 29, 2017

Test Location

☐ Open Area Test Site #1 ☒ Open Area Test Site #2

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	-	-	-	-
☒	EMI TEST RECEIVER	ESVS10	Rohde & Schwarz	826008/014	04, 18, 2018
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	714	11, 28, 2018
☐	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	04, 14, 2018

Test Conditions

Temperature: 23,0 °C
Relative Humidity: 29,0 %

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

Apr. 29, 2017

Test Location

Semi Anechoic Chamber #1

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	Rohde & Schwarz	100551	04, 17, 2018
☒	PREAMPLIFIER	SCU 18	Rohde & Schwarz	102232	06, 29, 2017
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM,INC	414	02, 15, 2019

Test Conditions

Temperature: 22,3 °C
Relative Humidity: 38,2 %

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.

APPENDIX A – TEST DATA

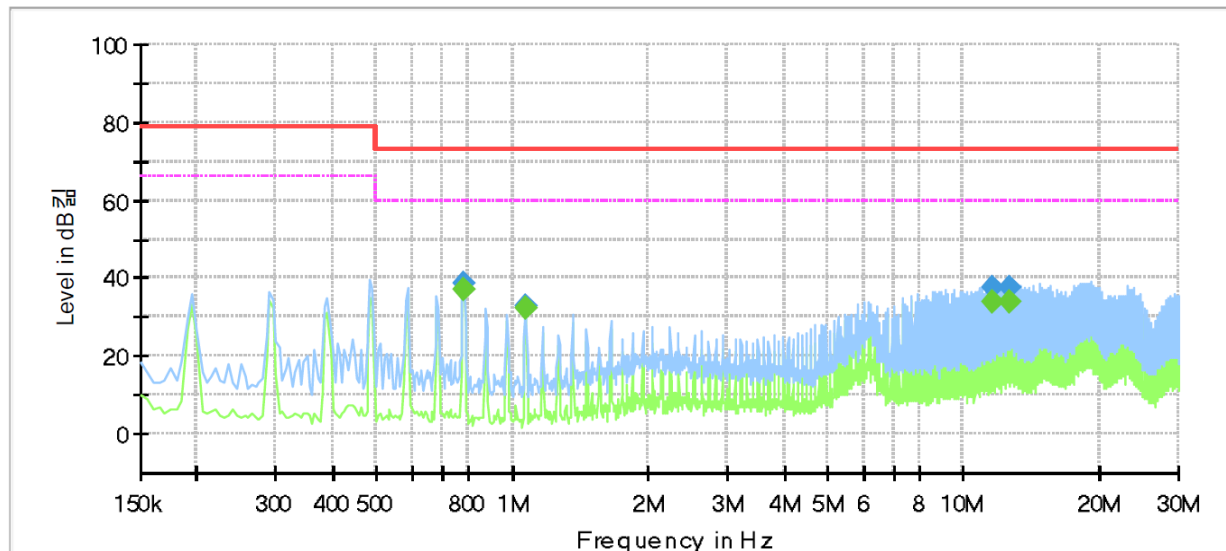
Conducted Emissions at Mains Power Ports

- AC 24 V Mode

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-6120N
Mode	AC 24 V_H
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.780000	---	37.21	60.00	22.79	1000.0	9.000	L1	20.2
0.780000	38.69	---	73.00	34.31	1000.0	9.000	L1	20.2
1.070000	---	32.17	60.00	27.83	1000.0	9.000	L1	20.1
1.070000	32.63	---	73.00	40.37	1000.0	9.000	L1	20.1
11.585000	---	34.03	60.00	25.97	1000.0	9.000	L1	20.0
11.585000	37.51	---	73.00	35.49	1000.0	9.000	L1	20.0
12.655000	---	33.90	60.00	26.10	1000.0	9.000	L1	20.1
12.655000	37.75	---	73.00	35.25	1000.0	9.000	L1	20.1

◆ 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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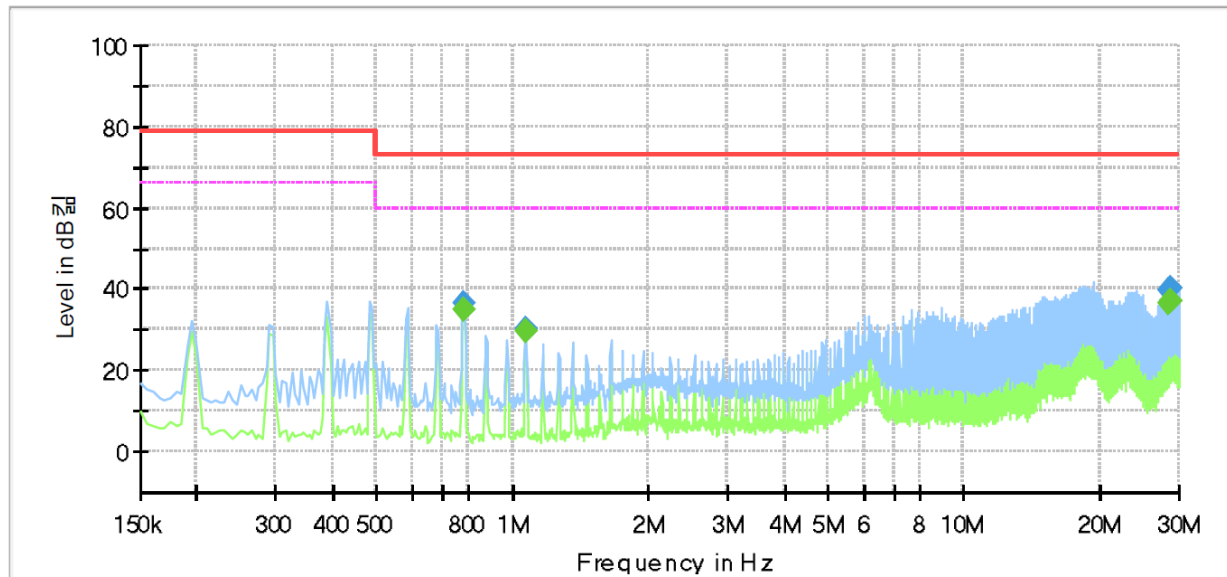
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[NEUTRAL]

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-6120N
Mode	AC 24 V_N
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dB μ V)	CAverage (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.780000	---	34.81	60.00	25.19	1000.0	9.000	N	20.2
0.780000	36.28	---	73.00	36.72	1000.0	9.000	N	20.2
1.070000	---	29.86	60.00	30.14	1000.0	9.000	N	20.1
1.070000	30.32	---	73.00	42.68	1000.0	9.000	N	20.1
28.425000	---	36.51	60.00	23.49	1000.0	9.000	N	20.6
28.425000	39.61	---	73.00	33.39	1000.0	9.000	N	20.6
28.715000	---	37.17	60.00	22.83	1000.0	9.000	N	20.6
28.715000	40.17	---	73.00	32.83	1000.0	9.000	N	20.6

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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

Radiated Electric Field Emissions(Below 1 GHz)

- AC 24 V Mode

Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dB μ V]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dB μ V/m]	[dB μ V/m]	[dB]
215.27	15.00	H	4.00	12.02	3.32	30.34	43.50	13.16
215.56	15.20	V	1.00	12.02	3.32	30.54	43.50	12.96
239.15	15.80	V	1.02	12.34	3.58	31.72	46.40	14.68
250.67	16.40	H	3.98	12.50	3.70	32.60	46.40	13.80
299.15	16.90	V	1.01	13.40	4.10	34.40	46.40	12.00
333.68	16.80	H	3.99	14.16	4.20	35.16	46.40	11.24

* H : Horizontal, V : Vertical

- DC 12 V Mode

Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dB μ V]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dB μ V/m]	[dB μ V/m]	[dB]
209.80	17.00	V	1.00	11.94	3.26	32.20	43.50	11.30
216.18	15.20	H	4.00	12.03	3.33	30.56	46.40	15.84
250.62	15.80	V	1.02	12.50	3.70	32.00	46.40	14.40
312.72	16.20	V	1.01	13.70	4.14	34.04	46.40	12.36
334.28	15.10	H	3.98	14.17	4.20	33.47	46.40	12.93
399.99	14.00	H	3.99	15.61	4.60	34.21	46.40	12.19

* H : Horizontal, V : Vertical

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KES-E1-17T0304-R1

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- PoE Mode

Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dBμV/m]	[dBμV/m]	[dB]
42.12	17.50	V	1.00	12.45	1.57	31.52	39.00	7.48
42.92	15.50	H	4.00	12.64	1.58	29.72	39.00	9.28
76.56	19.50	V	1.01	7.41	2.02	28.93	39.00	10.07
250.00	16.40	H	3.98	12.49	3.69	32.58	46.40	13.82
311.00	17.30	V	1.02	13.66	4.13	35.09	46.40	11.31
350.00	16.80	H	3.99	14.52	4.24	35.56	46.40	10.84

* H : Horizontal, V : Vertical

◆ Calculation

Corrected Amplitude [dBμV] = Amplitude[dBuV] + Correction Factor [dB]

Corrected Amplitude : The Final Value, Amplitude : Reading Value,

Correction Factor : ANT FACTOR + Cable loss

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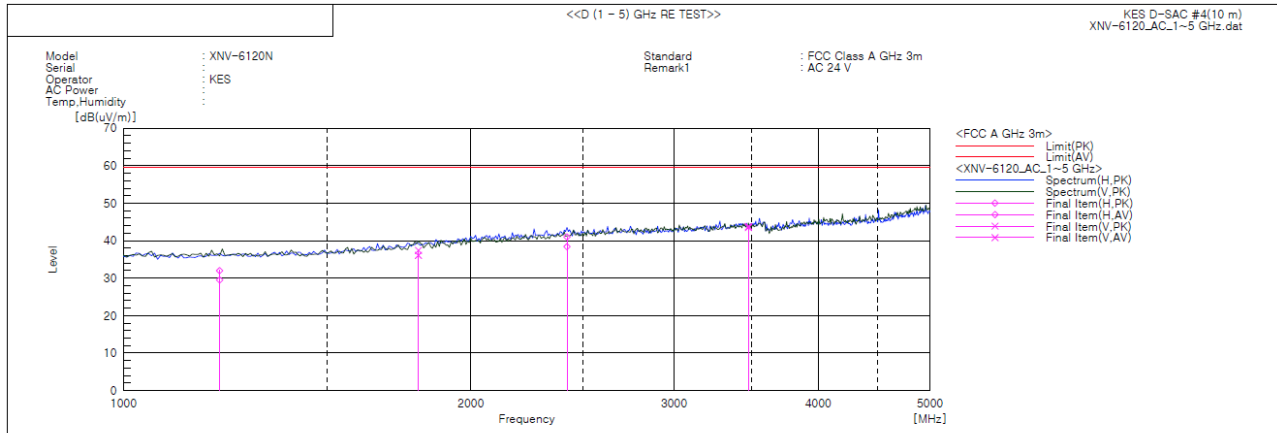
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Radiated Electric Field Emissions(Above 1 GHz)

- AC 24 V Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	1211.538	H	43.5	41.0	-11.5	32.0	29.5	79.5	59.5	47.5	30.0	100.0	210.0	
2	2423.077	H	44.0	41.4	-3.0	41.0	38.4	79.5	59.5	38.5	21.1	100.0	213.0	
3	1801.282	V	44.5	43.2	-7.1	37.4	36.1	79.5	59.5	42.1	23.4	100.0	275.0	
4	3480.769	V	44.0	43.7	-0.2	43.8	43.5	79.5	59.5	35.7	16.0	400.0	11.0	

◆ Calculation

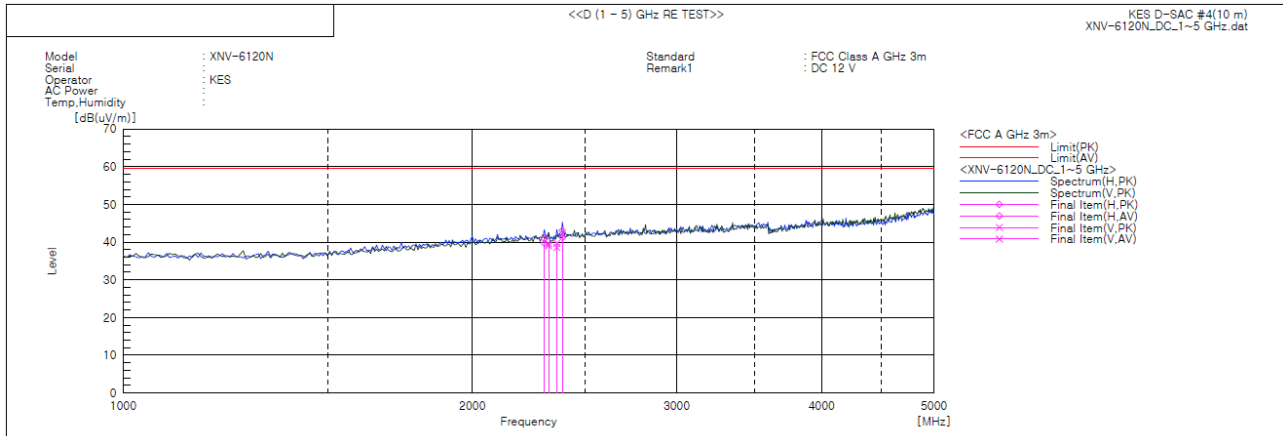
Correction Factor [dB] = Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]

Corrected Amplitude [dBuV] = Amplitude[dBuV] + Correction Factor [dB]

Corrected Amplitude : The Final Value, Amplitude : Reading Value



- DC 12 V Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	2391.026	H	46.2	44.3	-3.1	43.1	41.2	79.5	59.5	36.4	18.3	100.0	343.0	
2	2307.692	H	44.3	43.1	-3.4	40.9	39.7	79.5	59.5	38.6	19.8	100.0	192.0	
3	2365.385	V	43.3	42.2	-3.6	39.7	38.6	79.5	59.5	39.8	20.9	100.0	304.0	
4	2326.923	V	43.2	42.7	-3.7	39.5	39.0	79.5	59.5	40.0	20.5	400.0	261.0	

◆ Calculation

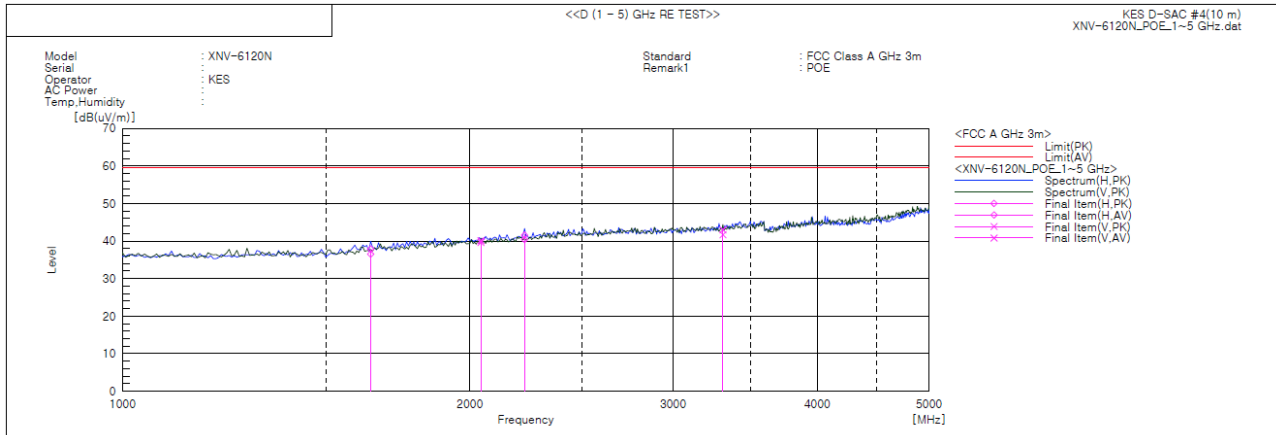
Correction Factor [dB] = Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]

Corrected Amplitude [dBuV] = Amplitude[dBuV] + Correction Factor [dB]

Corrected Amplitude : The Final Value, Amplitude : Reading Value



- PoE Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading AV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [deg]	Remark
1	2230.769	H	45.3	44.1	-3.7	41.6	40.4	79.5	59.5	37.9	19.1	100.0	88.0	
2	1641.026	H	46.2	44.8	-8.3	37.9	36.5	79.5	59.5	41.6	23.0	100.0	243.0	
3	2044.872	V	45.3	44.8	-5.2	40.1	39.6	79.5	59.5	39.4	19.9	100.0	77.0	
4	3314.103	V	43.5	42.2	-0.5	43.0	41.7	79.5	59.5	36.5	17.8	100.0	77.0	

◆ Calculation

Correction Factor [dB] = Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]

Corrected Amplitude [dBuV] = Amplitude[dBuV] + Correction Factor [dB]

Corrected Amplitude : The Final Value, Amplitude : Reading Value

Test Setup Photos and Configuration

Conducted Voltage Emissions



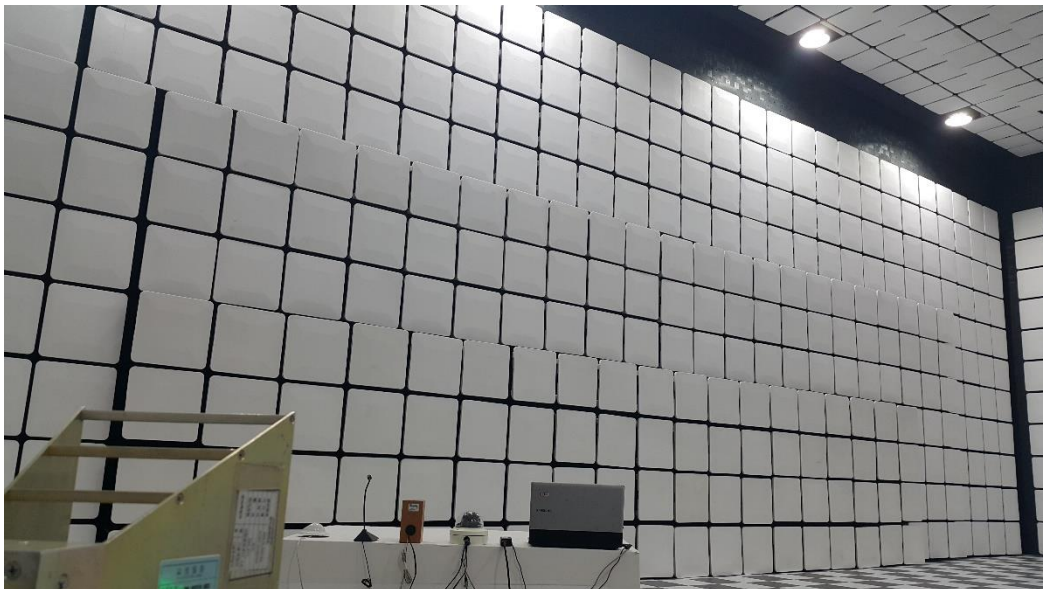
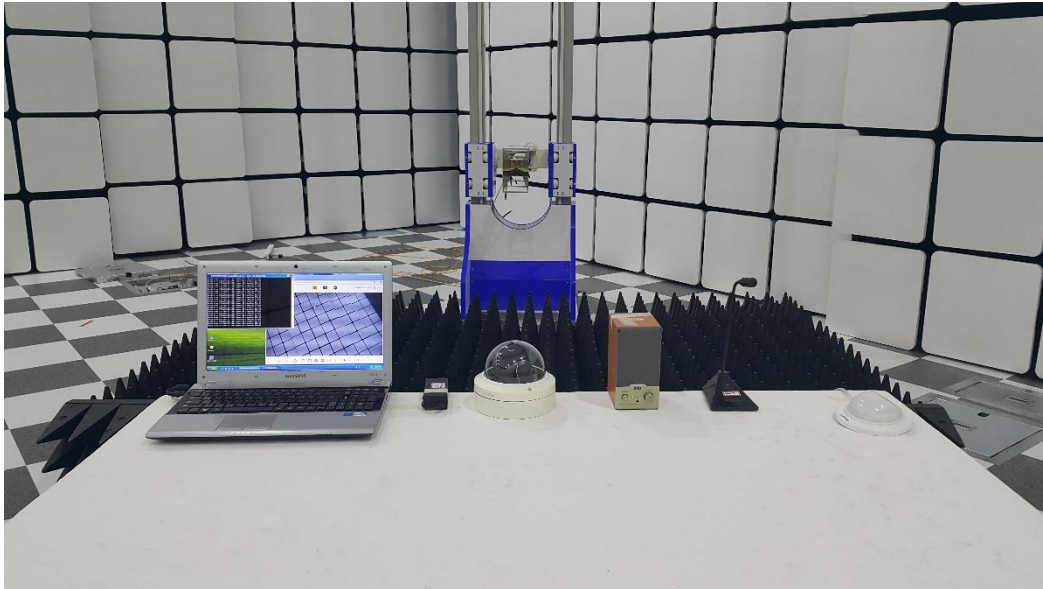
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Radiated Electric Field Emissions(Below 1 GHz)



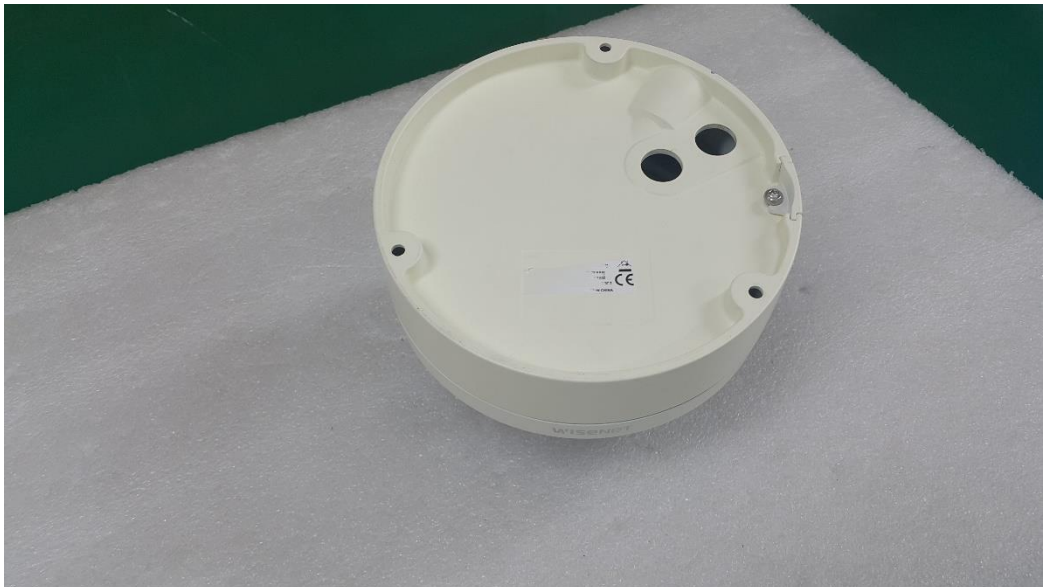
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Radiated Electric Field Emissions(Above 1 GHz)



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EUT External Photographs



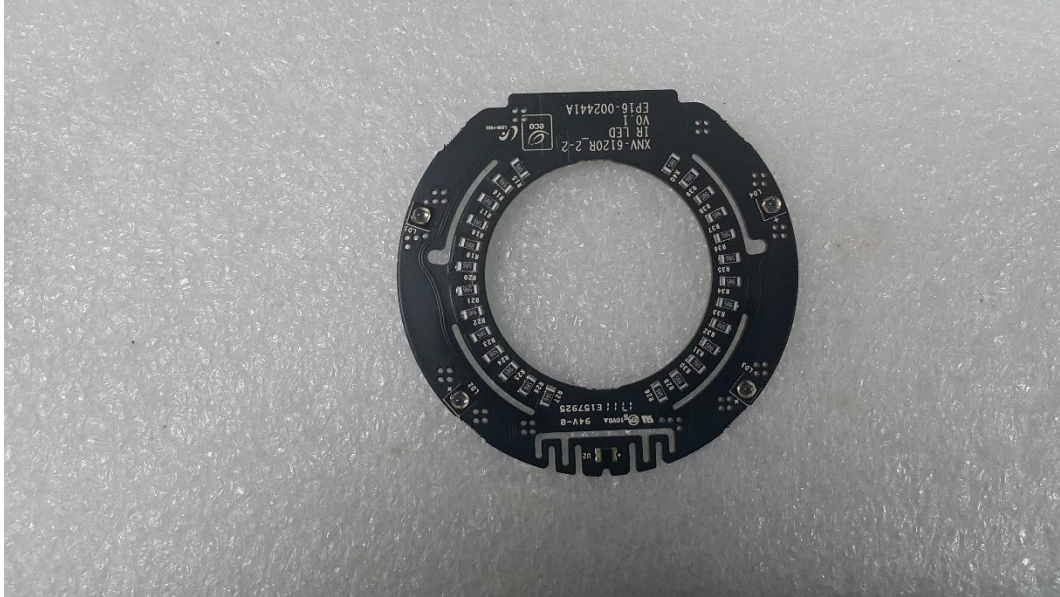
EUT Internal Photographs

(Internal View)

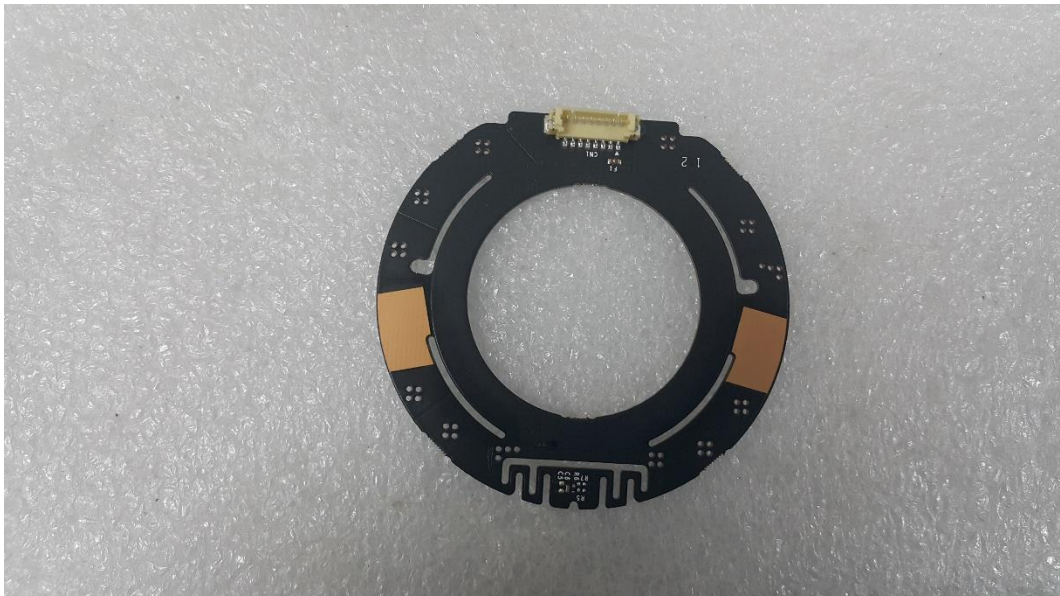


EUT Internal View – LED Board

(Top)



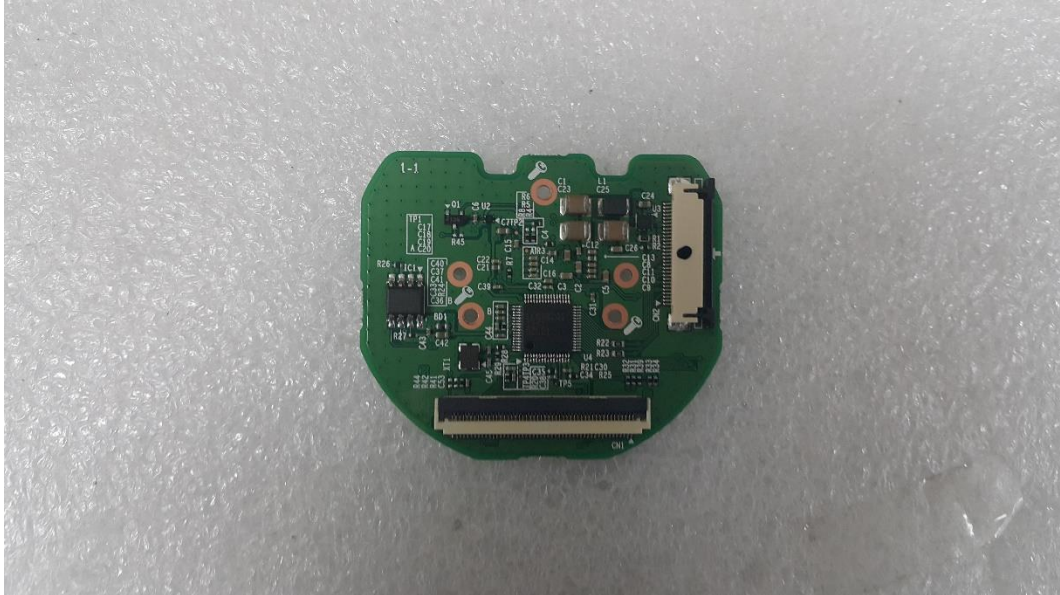
(Bottom)



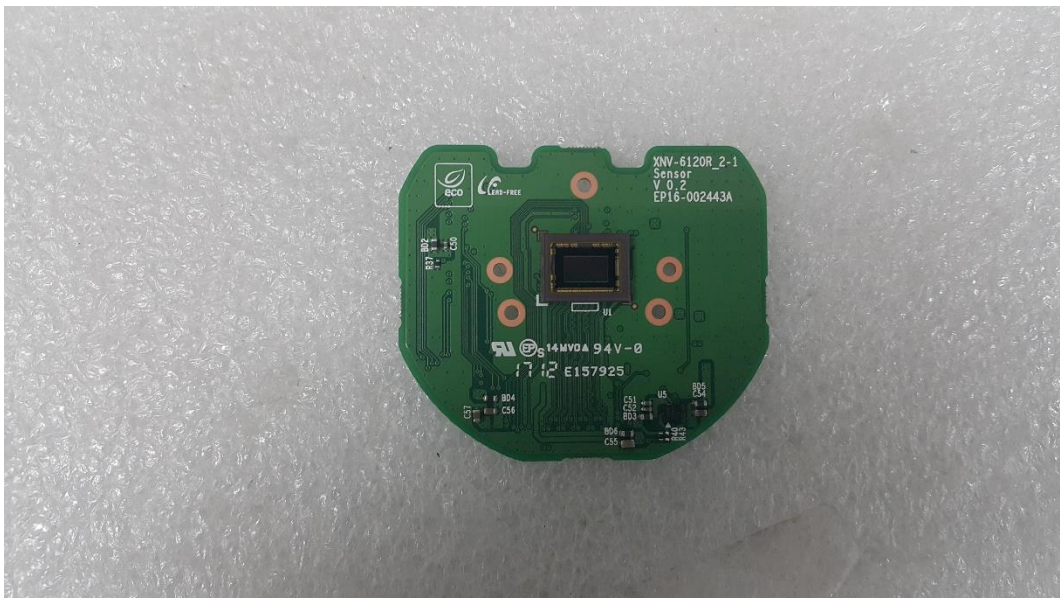
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EUT Internal View – Lens Board

(Top)

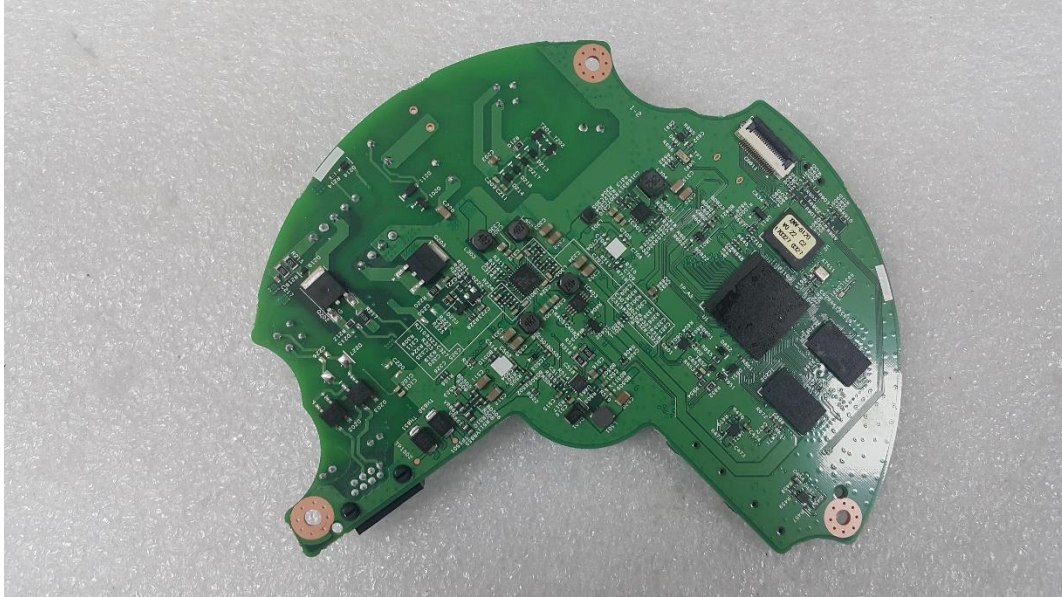


(Bottom)



EUT Internal View – Board

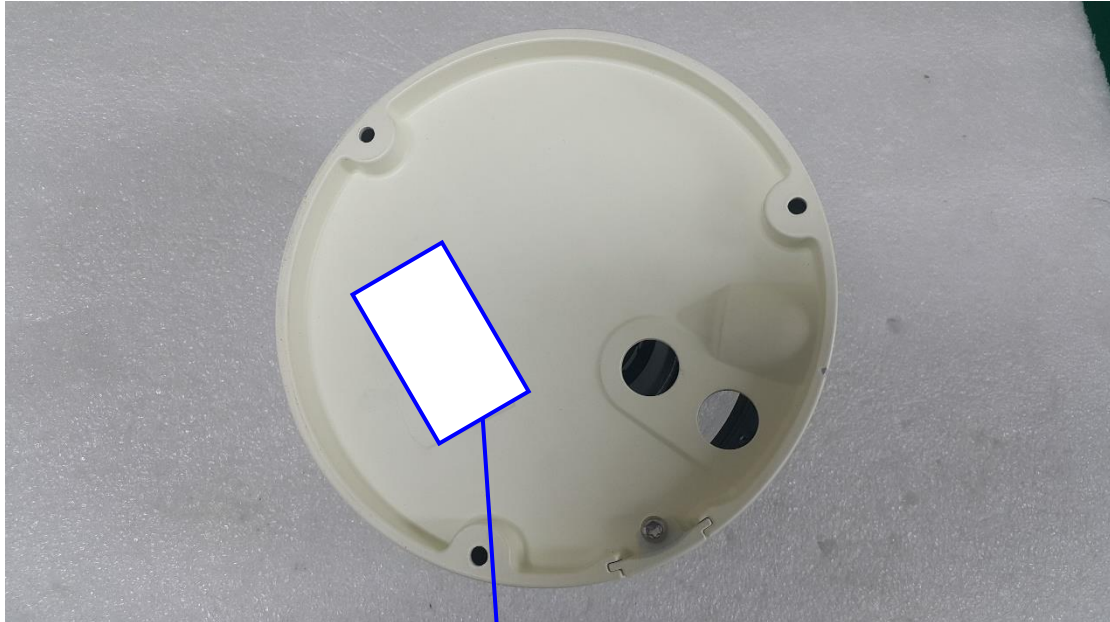
(Top)



(Bottom)



Label Photographs



This device complies with part 15 of the FCC Rules. Operation in subject to the following two conditions: (1) This device Sep not cause harmful interference, and (2) this device must accept any interference received, including interference that Sep cause undesired operation.