



EMC TEST REPORT For FCC

Test Report No. : KES-E1-17T0085-R2
Date of Issue : Feb. 24, 2023
Product name : NETWORK CAMERA
Model/Type No. : XNO-8020R
Variant Model : XNO-8030R, XNO-8040R, XNO-8020RP, XNO-8030RP,
XNO-8040RP
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 : **Supplier's Declaration of Conformity**
Date of Receipt : Jan, 20, 2017
Test date : Feb. 01, 2017
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Dae Hyun, Kim
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

Tested by Yung Suk, Song
(Retired person)
Proxy signature : Dae Hyun, Kim

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
Feb. 06, 2017	KES-E1-17T0085	Issued
Oct, 27, 2021	KES-E1-17T0085-R1	Model name/ Variant Model/Address/Manufacturer change at customer's request
Feb. 24, 2023	KES-E1-17T0085-R2	Change the Applicant and manufacturer at the request of the customer

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1.0 General Product Description

Main Specifications of EUT are:

	XNO-8020R
Video	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3096(H) x 2094(V)
Effective Pixels	2616(H) x 1976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.2 lux(F1.6, 1/30sec) B/W : 0 Lux (IR LED On)
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)	3.7mm Fixed
Max. Aperture Ratio	F1.6
Angular Field of View	H: 97.5°, V:71.9°, D: 126.2°
Min. Object Distance	0.4m
Focus Control	Manual
Lens Type	Fixed
Mount Type	Board-in type
Operational	
IR Viewable Length	30m(98.43ft)
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	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR5 (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Auto(input from fog detection) / Manual / Off
Motion Detection	Off/ On(8ea, 8point Polygonal zones), Handover
Privacy Masking	Off / On (32ea, polygonal 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 PTZ	24X, 'Digital PTZ(Preset, Group)
Flip / Mirror	Flip : On/Off Mirror : On/Off Hallway view : 90°/270°
Video & Audio Analytics	Tampering, Loitering, Directional Detection, Defocus Detection, Fog&Dust Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Face Detection , Motion Detection, Digital Auto Tracking, Sound Classification, People counting, Heat map, Queue management
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	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 DPTZ preset

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Audio In	Selectable (Mic IN/Line IN), Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out, Max output level: 1 Vrms
Pixel Counter	Support
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	2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at all resolutions Motion JPEG : Max. 30fps
Smart Codec	Manual Mode (area-based : 5EA)
WiseStream II	Support
Video Quality Adjustment	H.264/H.265 : Target Bitrate Level Control MJPEG : Target Bitrate Level Control
Bitrate Control Method	H.264/H.265 : CBR or VBR MJPEG : 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 8/16/32/48KHz
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	Supported OS: Windows 7, 8, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer Supported Browser: Google Chrome 54, MS Edge 38, Mozilla Firefox 49, Apple Safari 9 (Mac OS X only) Plug-in Webviewer Supported Browser : MS Explore 11, Apple Safari 9 (Mac OS X only)
Streaming Method	Streaming Method
Max. User Access	20 users at Unicast Mode
Edge Storage	SD/SDHC/SDXC 2slot (up to 512 GB) - Continuous recording(1'st slot to 2'nd 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 Interface	ONVIF Profile S/G SUNAPI(HTTP API) 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 54, MS Edge 38, Mozilla Firefox 49(Window 64bit only), Apple Safari 9 (Mac OS X only) Plug-in Webviewer Supported Browser : MS Explore 11, Apple Safari 9 (Mac OS X only)
Central Management Software	SmartViewer, SSM
Environmental	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH *Start up should be done at above -20°C

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Storage Temperature / Humidity	-50°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67, IP68, NEMA 4X
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	12VDC ± 10%, PoE(IEEE802.3af)
Power Consumption	Max. 8.8W(12VDC), Max. 9.8W(PoE)
Mechanical	
Color / Material	Ivory / Aluminum
Dimension (WxHxD)	Ø120x296mm(Ø4.72" x 11.65")
Weight	1.3Kg

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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 ☐ 100 Vac ☐ 120 Vac ☐ 24 Vac ☒ 12 Vdc ☒ PoE
Frequency ☐ 50 Hz ☐ 60 Hz ☐ Hz

1.2 Variant Model Differences

- Add derivative model for vendor management

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	XNO-8020R	-	HANWHA VISION VIETNAM COMPANY LIMITED	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
POE Adapter	PD-3001GC/AC	RD9356082016964200	Power Dsine	-
Notebook	X56K	HN11N5151FJ0045W	HANSUNG	-
Notebook Adapter	A12-120P1A	F180271552011758	CHICONY POWER TECHNOLOGY CO.,LTD.	-
Phone	A1530	-	APPLE	-
MIC	CMK-303	-	CAMAC	-
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI- TECH GROUP.	-
Alarm	-	-	-	-
SD card	-	-	SanDisk	-

1.6 External I/O Cabling

- 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
	7 Pin	MIC	3.5 mm	1.7	U
		Speaker	3.5 mm	1.6	U
		Alarm	2 pin	3.0	U
	Slot	SD card	Slot	-	-
Notebook	Audio in	Phone	Audio out	1.7	U

- 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 Adapter	RJ-45 (POE)	3.0	U
	7 Pin	MIC	3.5 mm	1.7	U
		Speaker	3.5 mm	1.6	U
		Alarm	2 pin	3.0	U
	Slot	SD card	Slot	-	-
Notebook	Audio in	Phone	Audio out	1.7	U
	RJ-45 (DATA)	POE Adapter	RJ-45 (DATA)	3.0	U

* Unshielded = U, Shielded = S

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1.7 EUT Operating Mode(s)

Test mode	operating
DC, POE	E.U.T Monitoring, 1 kHz, Ping Test

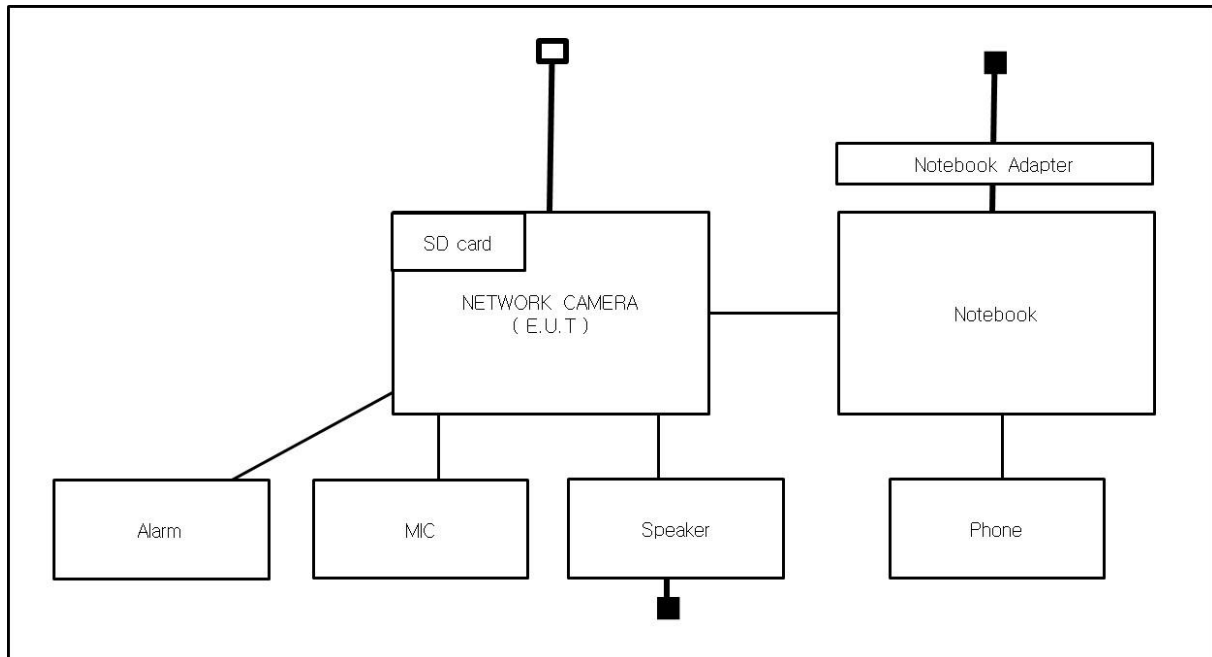
E.U.T Test operating S/W		
Name	Version	Manufacture Company
Web Viewer	-	Hanwha Vision Co., Ltd

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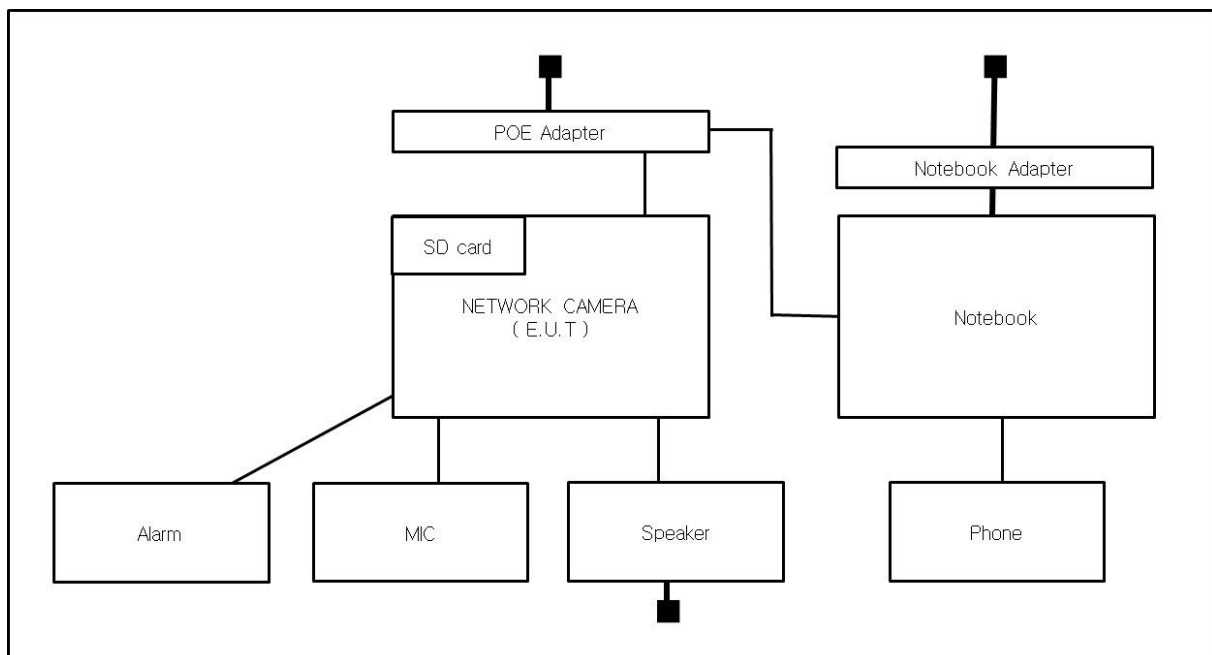
1.8 Configuration

■ AC Main
 □ DC Main

- 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, Yeoju-si, Gyeonggi-do, 12658, Korea. 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 , 10 m Open Area 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, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	 23298-1
JAPAN	VCCI	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	 R-20056, C-20036, T-20040, G-20057
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area 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



2.1 Conducted Emissions at Mains Power Ports

Test Date

N/A

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☐	EMI Test Receiver	ESR3	R & S	101783	05, 03, 2017
☐	LISN	ENV216	R & S	101137	02, 04, 2017
☐	LISN	ENV216	R & S	101786	05, 02, 2017
☐	Electro wave Shieldroom	-	SEMITEC	-	-
☐	EMI Test S/W	EMC32	R & S	9.12.00	-

Test Conditions

Temperature: °C
Relative Humidity: %

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

N/A Because the E.U.T power is 12 v (dc) power and PoE, limits are not specified.



2.2 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Feb, 01, 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 Receiver	ESR3	R&S	101781	05, 03, 2017
☒	Trilog-Broadband Antenna	VULB9163	Schwarzbeck	714	11, 28, 2018
☒	OATS	-	KES	-	-
☒	Antenna Mast	-	DAEIL EMC	-	-
☒	Turn Table	-	DAEIL EMC	-	-
☒	EMI Test S/W	-	-	-	-

Test Conditions

Temperature: 2,2 °C
Relative Humidity: 40,0 %

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

Feb, 01, 2017

Test Location

Semi Anechoic Chamber #1

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	Log-Periodic Antenna	STLP 9149	SCHWARZBECK	9149-255	05, 17, 2018
☒	EMI TEST Receiver	ESU26	R&S	100551	04, 18, 2017
☒	Preamplifier	SCU 18	R&S	102232	06, 29, 2017
☒	Semi Anechoic Chamber #1	-	KES	-	-
☒	Tilt Antenna Mast	TAM 4.0-E	maturro	18100116	-
☒	Turn Table	DT 2000-1,5T	INN-CO	-	-
☒	EMI Test S/W	N/A	N/A	N/A	N/A

Test Conditions

Temperature: 23,0 °C

Relative Humidity: 40,1 %

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.



APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

[HOT]

N/A

◆ 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)



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[NEUTRAL]

N/A

◆ 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)

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Radiated Electric Field Emissions(Below 1 GHz)

- 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]
232.67	12.33	H	2.31	12.25	4.51	29.09	46.40	17.31
266.51	11.96	V	1.25	12.80	4.86	29.62	46.40	16.78
370.38	13.22	V	2.33	14.96	5.86	34.04	46.40	12.36
370.43	16.21	H	1.95	14.96	5.86	37.03	46.40	9.37
459.69	10.32	V	3.01	16.65	6.84	33.81	46.40	12.59
459.79	17.25	H	2.01	16.65	6.84	40.74	46.40	5.66
603.15	12.63	V	2.09	19.33	7.85	39.81	46.40	6.59
646.97	14.87	H	1.03	19.48	8.13	42.48	46.40	3.92

* H : Horizontal, V : Vertical

◆ Calculation

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

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

Correction Factor : ANT FACTOR + Cable loss

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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]
138.62	12.33	H	1.26	7.64	3.43	23.40	43.50	20.10
259.76	13.93	V	3.01	12.67	4.80	31.40	46.40	15.00
282.17	13.25	H	2.00	13.09	5.00	31.34	46.40	15.06
351.05	12.36	V	1.96	14.54	5.65	32.55	46.40	13.85
360.65	11.91	H	3.01	14.75	5.75	32.41	46.40	13.99
459.79	10.09	V	1.25	16.65	6.84	33.58	46.40	12.82
602.32	11.32	V	1.02	19.33	7.85	38.50	46.40	7.90
607.08	10.85	H	3.01	19.34	7.88	38.07	46.40	8.33

* H : Horizontal, V : Vertical

◆ Calculation

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

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

Correction Factor : ANT FACTOR + Cable loss



Radiated Electric Field Emissions(Above 1 GHz)

- DC 12 V Mode

- PK

Frequency	Amplitude	ANT Polar.	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	(H/V)	[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	[dB]
1 140.000	76.110	V	1.260	21.210	3.300	43.640	56.980	80.000	23.020
1 141.000	74.760	H	2.360	21.210	3.300	43.640	55.630	80.000	24.370
1 761.000	63.660	H	3.210	24.380	4.210	43.710	48.540	80.000	31.460
1 995.000	66.820	V	3.250	25.570	4.400	43.780	53.010	80.000	26.990
2 396.000	60.320	V	1.250	27.260	4.900	43.960	48.520	80.000	31.480
2 398.000	54.750	H	1.330	27.270	4.900	43.960	42.960	80.000	37.040
3 207.000	48.770	V	2.360	30.120	5.690	44.220	40.360	80.000	39.640
3 327.000	46.530	H	1.250	30.310	5.800	44.230	38.410	80.000	41.590
4 169.000	43.350	H	2.010	31.700	6.810	44.230	37.630	80.000	42.370
4 859.000	40.290	V	1.360	32.970	7.000	44.310	35.950	80.000	44.050

- AV

Frequency	Amplitude	ANT Polar.	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	(H/V)	[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	[dB]
1 135.000	49.710	V	1.520	21.180	3.290	43.640	30.540	60.000	29.460
1 140.000	50.580	H	2.340	21.210	3.300	43.640	31.450	60.000	28.550
1 763.000	43.550	H	3.020	24.390	4.220	43.710	28.450	60.000	31.550
1 989.000	45.990	V	3.330	25.540	4.390	43.780	32.140	60.000	27.860
2 389.000	41.480	H	2.010	27.230	4.890	43.960	29.640	60.000	30.360
2 402.000	42.360	V	1.360	27.280	4.900	43.960	30.580	60.000	29.420
3 212.000	38.040	V	2.950	30.130	5.690	44.220	29.640	60.000	30.360
3 331.000	31.590	H	1.950	30.320	5.800	44.230	23.480	60.000	36.520
4 173.000	31.570	H	2.000	31.710	6.820	44.230	25.870	60.000	34.130
4 862.000	29.020	V	1.290	32.980	7.000	44.310	24.690	60.000	35.310

◆ Calculation

Over Limit [dB] = (Read Level[dBuV] + Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]) - Limit Line[dBuV]

Over Limit : Margin Value, Read Level : Reading Value, Ant Factor : Ant Factor,
Cable Loss : Cable loss, Preamp Factor : Preamp Factor

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KES-E1-17T0085-R2

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- PoE Mode

- PK

Frequency	Amplitude	ANT Polar.	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	(H/V)	[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	[dB]
1 145.000	74.790	V	2.140	21.230	3.310	43.640	55.690	80.000	24.310
1 582.000	65.000	H	1.530	23.460	3.840	43.650	48.650	80.000	31.350
1 993.000	72.230	V	2.360	25.560	4.400	43.780	58.410	80.000	21.590
1 994.000	62.030	H	2.330	25.570	4.400	43.780	48.220	80.000	31.780
2 401.000	57.990	H	1.840	27.280	4.900	43.960	46.210	80.000	33.790
2 401.000	60.520	V	2.650	27.280	4.900	43.960	48.740	80.000	31.260
3 190.000	52.050	V	2.990	30.090	5.660	44.220	43.580	80.000	36.420
3 684.000	46.760	V	1.030	30.880	6.280	44.240	39.680	80.000	40.320
4 349.000	45.010	H	2.390	32.030	6.740	44.240	39.540	80.000	40.460
4 888.000	43.250	H	1.230	33.020	7.000	44.310	38.960	80.000	41.040

- AV

Frequency	Amplitude	ANT Polar.	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	(H/V)	[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	[dB]
1 152.000	50.530	V	2.180	21.270	3.320	43.640	31.480	60.000	28.520
1 583.000	43.320	H	1.630	23.470	3.840	43.650	26.980	60.000	33.020
1 989.000	49.500	V	1.990	25.540	4.390	43.780	35.650	60.000	24.350
1 998.000	42.530	H	2.370	25.590	4.400	43.780	28.740	60.000	31.260
2 398.000	43.370	V	1.250	27.270	4.900	43.960	31.580	60.000	28.420
2 399.000	41.140	H	2.330	27.270	4.900	43.960	29.350	60.000	30.650
3 195.000	34.660	V	3.050	30.100	5.670	44.220	26.210	60.000	33.790
3 689.000	31.640	V	1.520	30.890	6.280	44.230	24.580	60.000	35.420
4 357.000	31.090	H	2.300	32.050	6.730	44.250	25.620	60.000	34.380
4 879.000	28.820	H	1.090	33.010	7.000	44.310	24.520	60.000	35.480

◆ Calculation

Over Limit [dB] = (Read Level[dBuV] + Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]) - Limit Line[dBuV]

Over Limit : Margin Value, Read Level : Reading Value, Ant Factor : Ant Factor,
Cable Loss : Cable loss, Preamp Factor : Preamp Factor

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Test Setup Photos and Configuration

Conducted Voltage Emissions

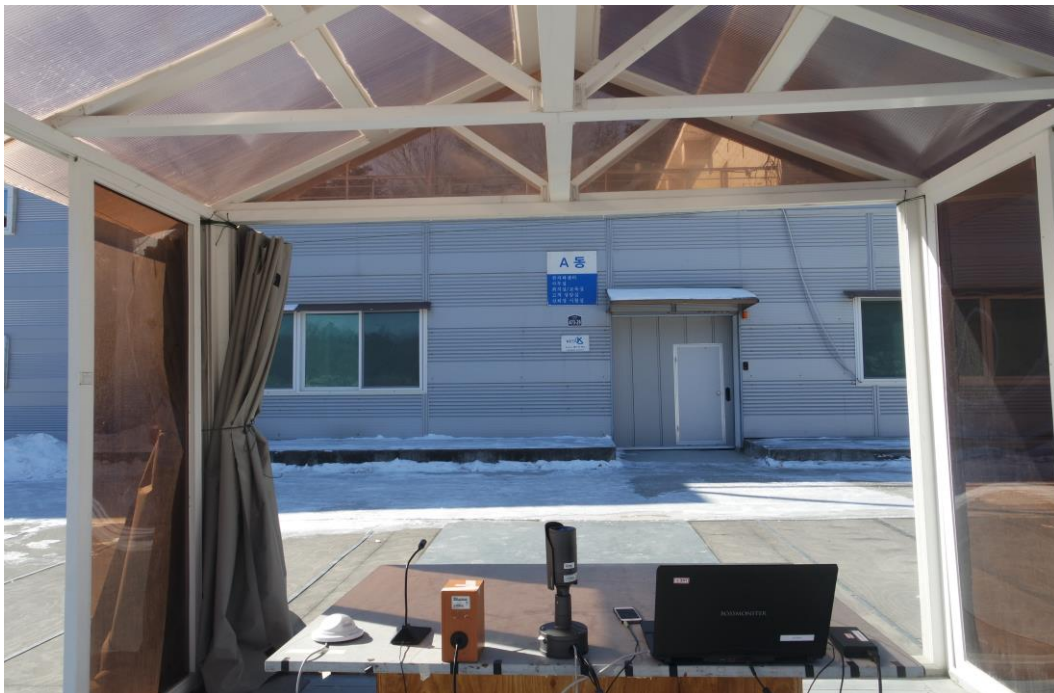
N/A

N/A

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Radiated Electric Field Emissions(Below 1 GHz)

- DC 12 V Mode



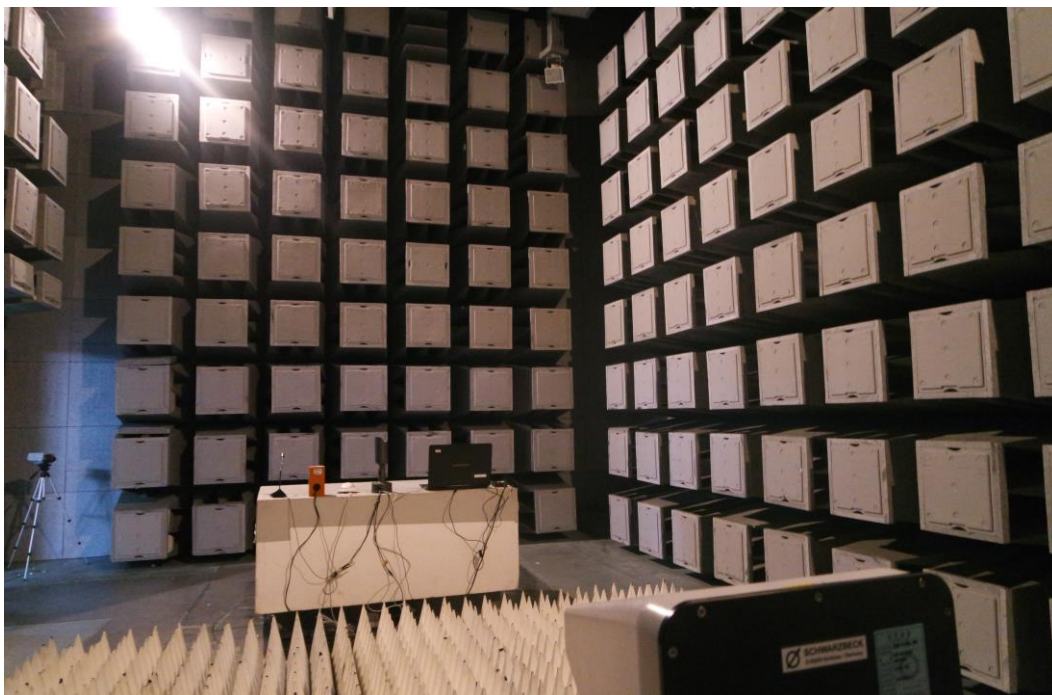
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- PoE Mode



Radiated Electric Field Emissions(Above 1 GHz)

- DC 12 V Mode



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- PoE Mode



EUT External Photographs

(Top)



(Bottom)



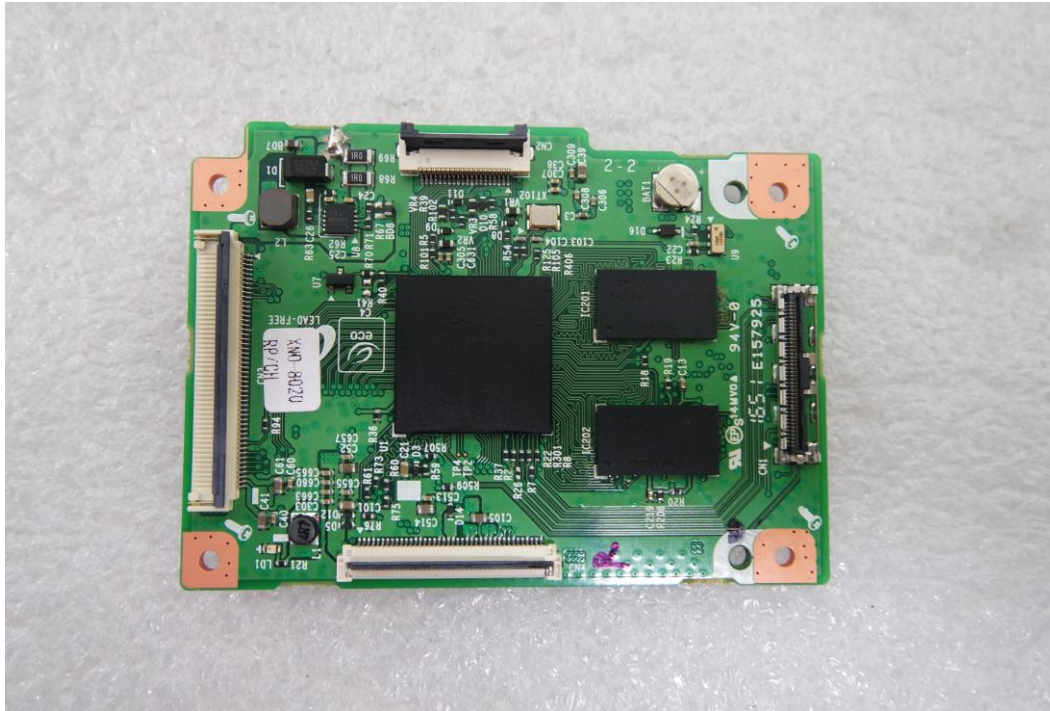
EUT Internal Photographs

(Internal View)

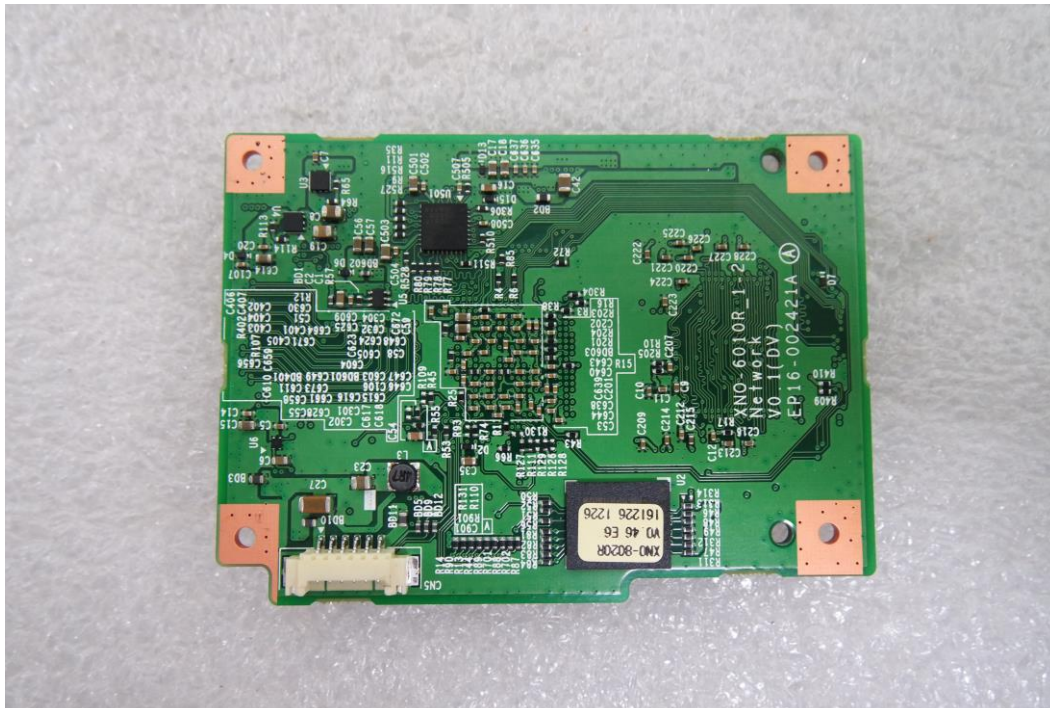


EUT Internal View – Main Board

(Top)



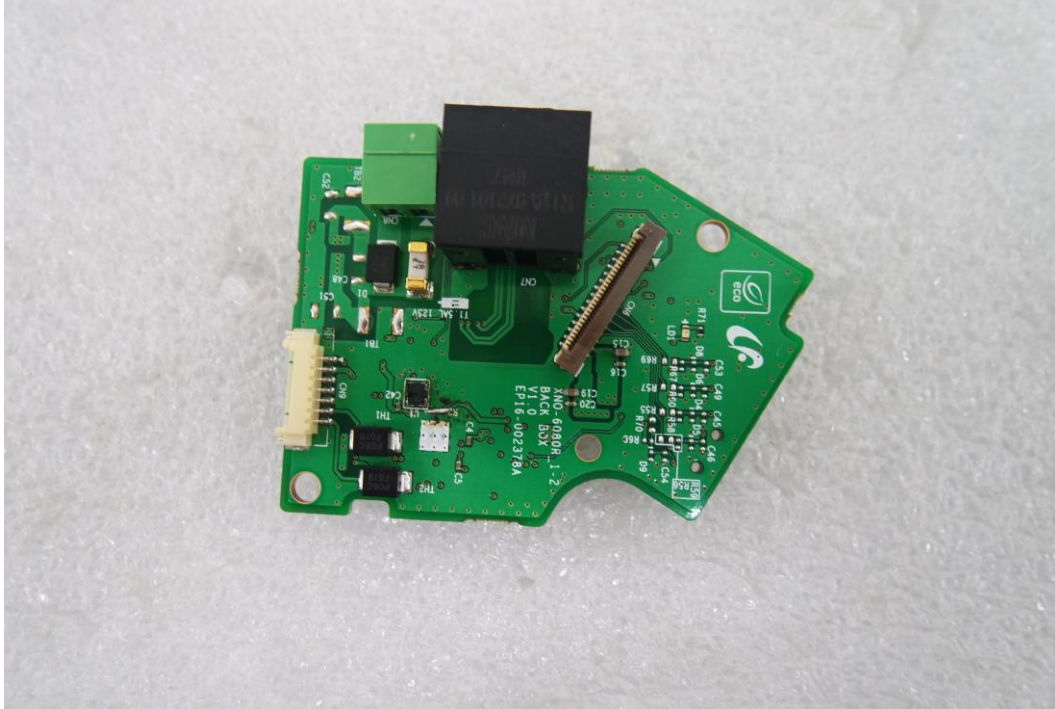
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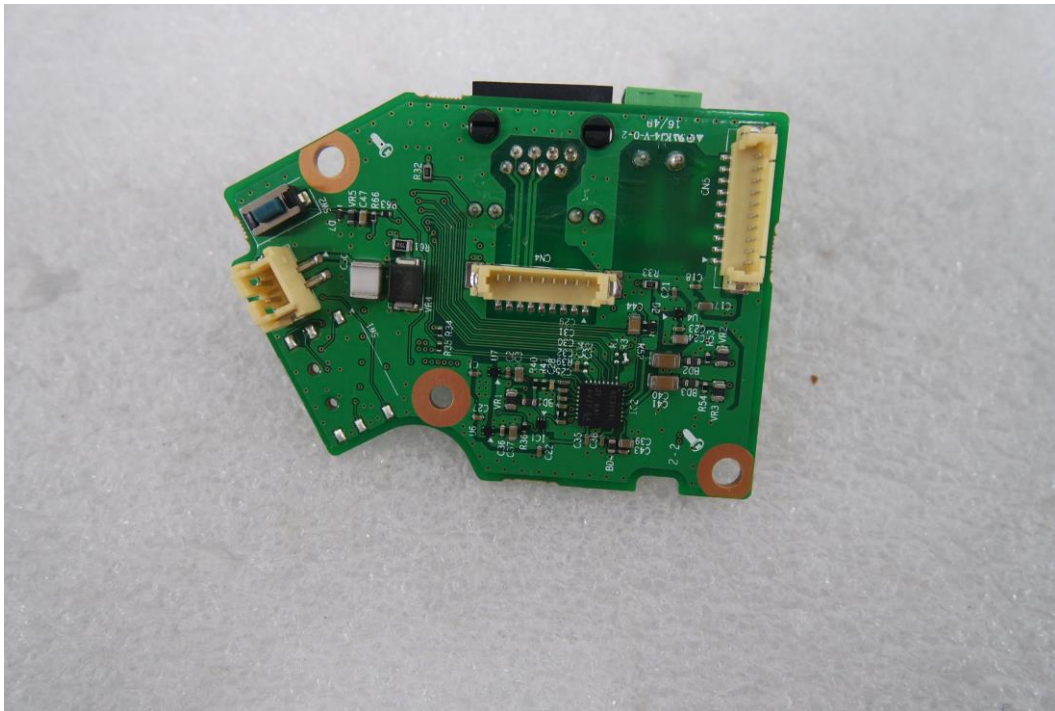
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EUT Internal View – Sub Board 1

(Top)



(Bottom)



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EUT Internal View – Sub Board 2

(Top)



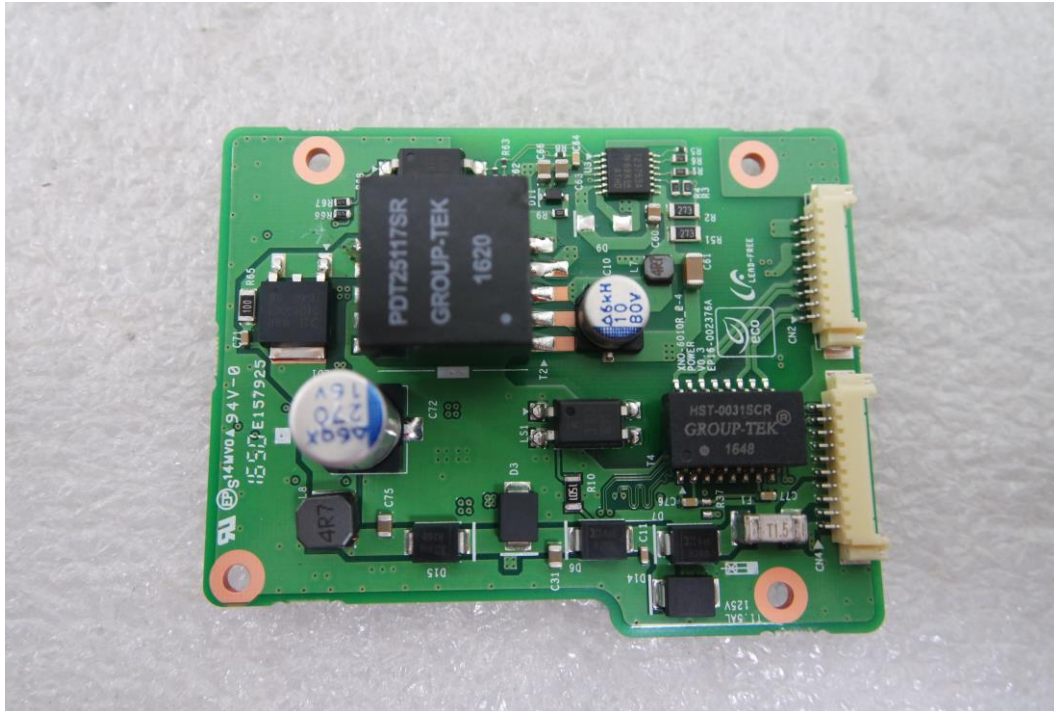
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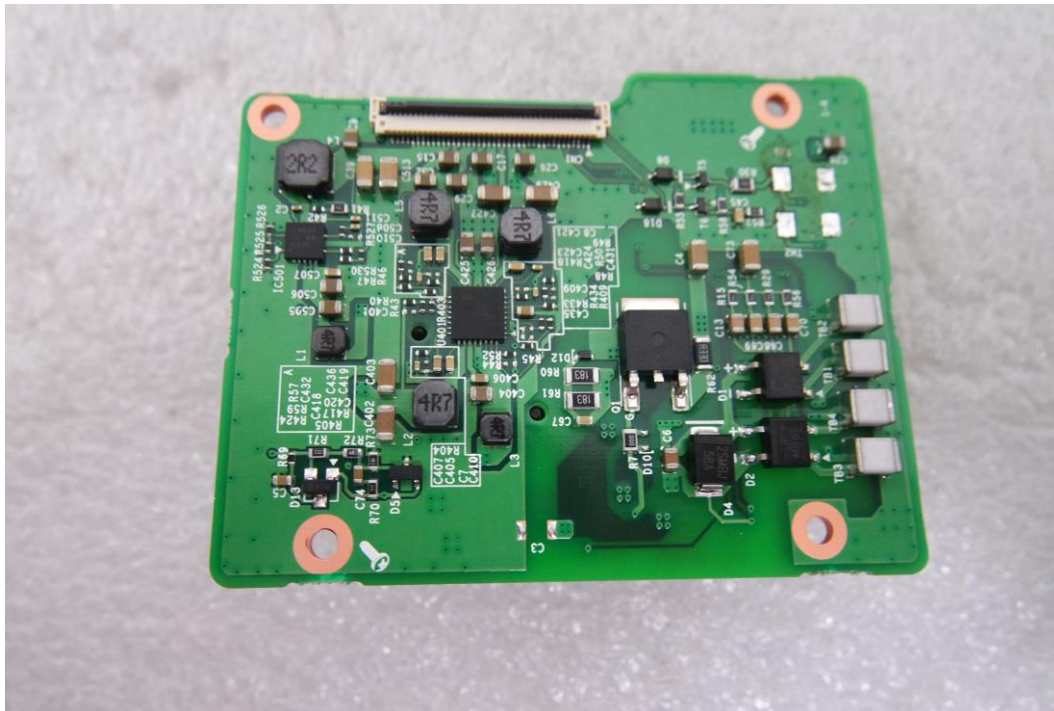
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EUT Internal View – Sub Board 3

(Top)



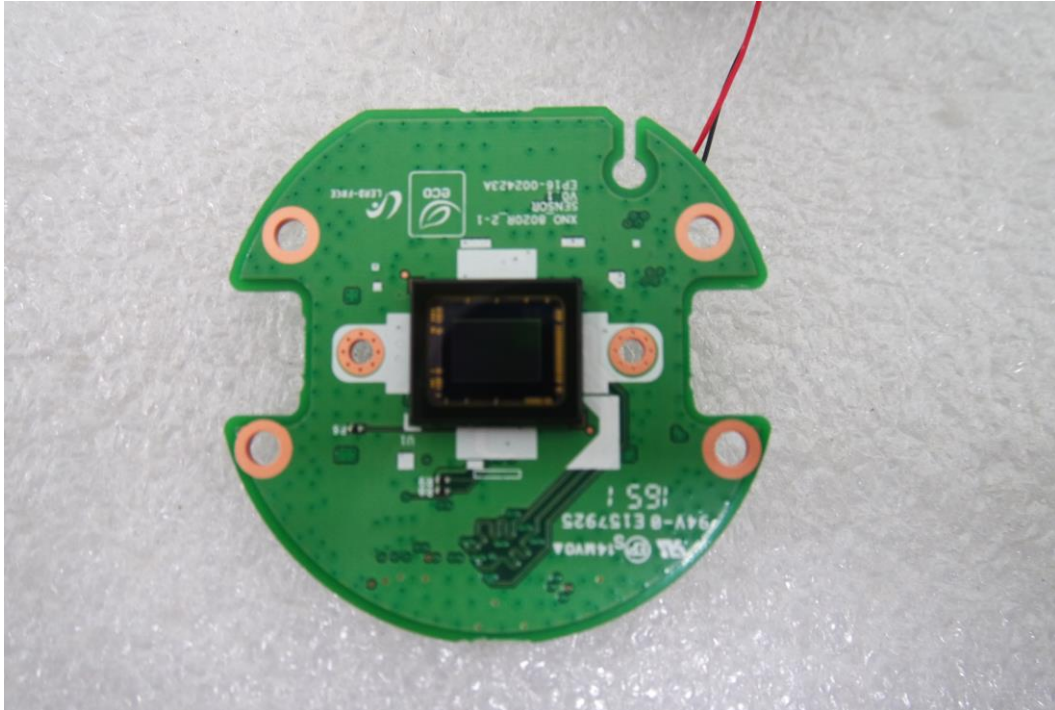
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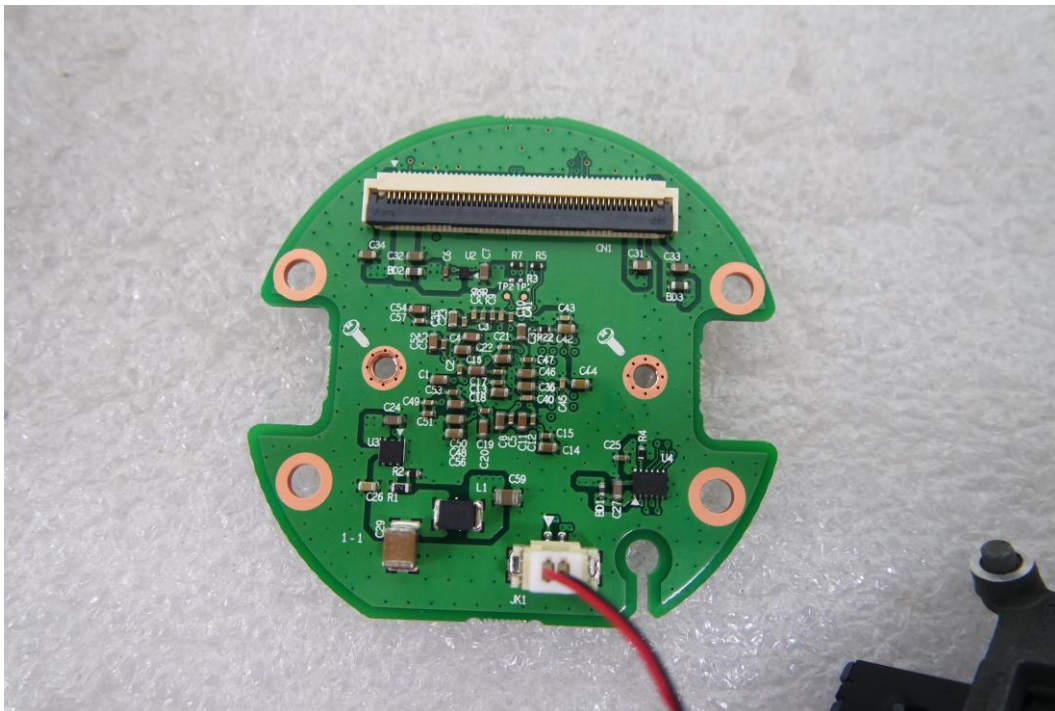
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EUT Internal View – Lens Board

(Top)



(Bottom)



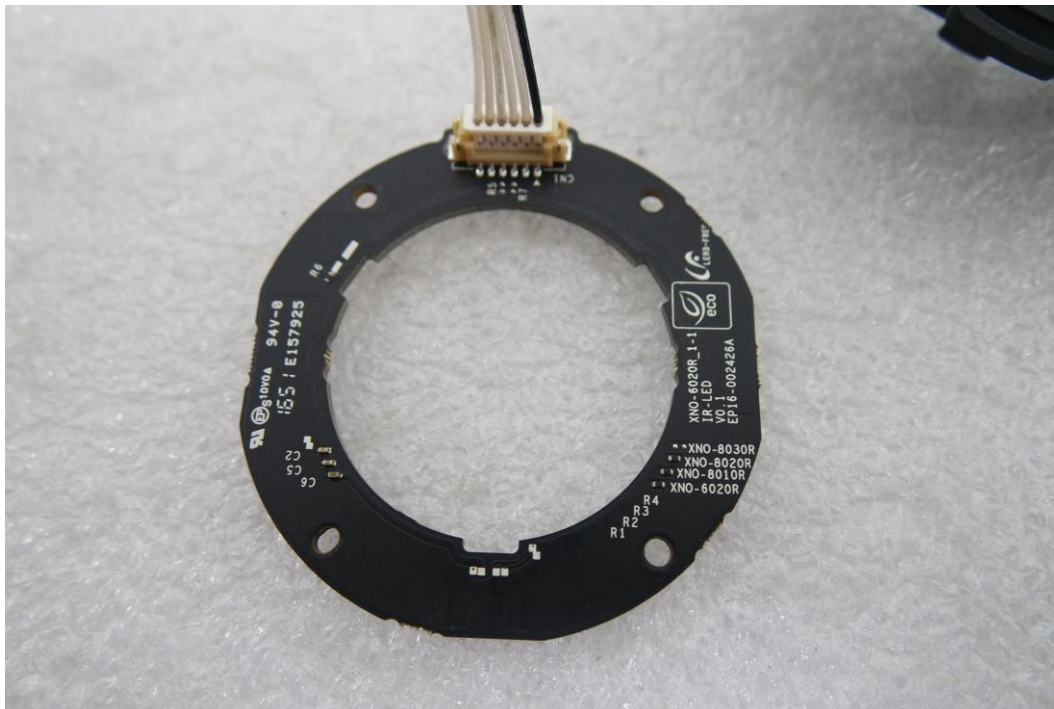
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EUT Internal View – LED Board

(Top)



(Bottom)



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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.