



KES Co., Ltd.

3701, 40, Simin-daero 365beon-gil,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

Report No.:

KES-EM-22T0572-R1

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EMC TEST REPORT For RCM

Test Report No. : KES-EM-22T0572-R1
Date of Issue : Feb. 24, 2023
Product name : NETWORK CAMERA
Model/Type No. : XNV-C6083
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 : Jun. 21, 2022
Test date : Jun. 27, 2022 ~ Jun. 28, 2022
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

김세헌

Se Heon, Kim
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
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
Jul. 13, 2022	KES-EM-22T0572	Issued
Feb. 24, 2023	KES-EM-22T0572-R1	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:

	XNV-C6083
Video	
Imaging Device	1/2.8" progressive 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: 0.01Lux(F1.4, 1/30sec, 30IRE) B/W : 0.001Lux(F1.4, 1/30sec, 30IRE), 30/25fps Color: 0.02Lux(F1.4, 1/60sec, 30IRE) B/W : 0.002Lux(F1.4, 1/60sec, 30IRE), 60/50fps
Video Out	USB: Micro USB Type B, 1280x720 for installation
Video Transmission Distance	None
Lens	
Focal Length (Zoom Ratio)	2.8~12mm(4.3x) motorized varifocal
Max. Aperture Ratio	F1.4(Wide) ~ F3.6(Tele)
Angular Field of View	H : 120°(Wide) ~ 27°(Tele) V : 63°(Wide) ~ 15°(Tele) D : 143°(Wide) ~ 32°(Tele)
Min. Object Distance	0.5m(1.64ft)
Focus Control	Simple focus, Manual
Lens Type	DC auto iris with hall sensor
Mount Type	None
Optional Lens	None
Pan / Tilt / Rotate	
Pan / Tilt / Rotate Range	0°~360° / -45°~75° / 0°~355°
Pan Range	None
Pan Speed	None
Tilt Range	None
Tilt Speed	None
Rotate Range	None
Sequence	None
Preset Accuracy	None
Operational	
Camera Title	Displayed up to 85 characters
Direction Indicator	None
Day & Night	Auto(ICR)
Backlight Compensation	BLC, HLC, WDR, SDR
Wide Dynamic Range	extremeWDR (150dB)
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)
Defog	Support
Motion Detection	8ea, 8point Polygonal zones
Privacy Masking	32ea, 4point Quadrangle zones - Color : Gray, Green, Red, Blue, Black, White - Mosaic
Gain Control	Off / Max Gain / Manual

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White Balance	ATW / Narrow ATW / AWC / Manual / Indoor / Outdoor
LDC	Support (Fill/stretch mode)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2~1/12,000sec) prefer shutter control(Based on AI engine)
Digital PTZ	Support
Video Rotation	Flip, Mirror, Hallway view(90°/270°)
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, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)
Business Intelligence	Based on AI engine : People counting, Queue management, Heatmap
Serial Interface	None
Alarm I/O	2 configurable I/O ports
Alarm Triggers	Analytics, Network disconnect, Alarm input, App event, Time schedule
Alarm Events	When alarm trigger occurred - File upload(image) : e-mail/FTP - Notification : e-mail - Recording : SD/SDHC/SDXC or NAS recording at event triggers - Alarm output - Handover(PTZ preset, Send message by HTTP/HTTPS/TCP) - Audio clip playback
Audio In	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Audio Out	Line out, Max.output level: 1Vrms
IR Viewable Length	None
IR Illuminator (Optional)	None
Water Removal	None
Auto Tracking	None
Coaxial Protocol	None
Color Palettes	None
Radiometry	
Temperature Detect Range	None
Temperature Accuracy	None
Temperature Detection	None
Additional	None
Network	
Ethernet	Metal shielded RJ-45(10/100BASE-T)
Video Compression	H.265/H.264: Main/High, MJPEG
Audio Compression	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
Smart Codec	Manual(Sea area), WiseStreamII, WiseStreamIII(Based on AI engine)
Video Quality Adjustment	H.264/H.265: Target bitrate level control MJPEG: Target bitrate level control
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)
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, SRTP (TCP, UDP Unicast)

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Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device Certificate(Hanwha Techwin Root CA, pre-installed) Secure by default certificate HTPM (Hanwha Trusted platform module) Secure OS/Boot/Storage, Verify firmware forgery CyberSecurity assurance program UL CAP (UL 2900-1)
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform
General	
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Greek, Hungarian
Web Viewer	None
Edge Storage	Micro SD/SDHC/SDXC 1slot 512GB
Memory	2GB RAM, 512MB Flash
Environmental & Electrical	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) * Start up should be done at above -20°C +74°C/+165°F (Max) based on NEMA-TS 2(2.2.7) 0~95%RH(non-condensing) Humidity control /w AIR vent
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Certification	IP66/IP67/NEMA4X, IK10
Input Voltage	PoE(IEEE802.3af, Class3), 12VDC
Power Consumption	(TBD) PoE: Max 12.95W, typical 10.8W 12VDC: Max 12.5W, typical 10.0W
Mechanical	
Color / Material	White / Aluminum Hard-coated dome bubble
RAL Code	RAL9003
Product Dimensions / Weight	Ø160x118mm(Ø6.30x4.65"), 1450g(3.20 lb)
Compatible Conduit hole / Gangbox	1/2" (M20) single, double, 4" octagon, 4" square
Hanging Mount (Dome)	SBP-167HWW
Skin Cover (Dome)	None
Weather Cap (Dome)	SBV-161WCW
Power Module	None
Backbox	None
Certifications & Standards	
Network	None
EMC	EN 50121-4 FCC 47 CFR 15 Subpart B Class A ICES-3(A)/NMB-3(A) CE/UKCA - EN 55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3 VCCI CISPR 32 Class A RCM AS/NZS CISPR 32 Class A
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1
Environment	IEC/EN 63000 IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK10 NEMA 250 type 4X
Video	None

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DORI (EN62676-4 standard)	
Detect (25PPM/ 8PPF)	Wide: 22.2m(72.74ft) / Tele: 159.9m(524.76ft)
Observe (63PPM/ 19PPF)	Wide: 8.9m(29.09ft) / Tele: 64.0m(209.90ft)
Recognize (125PPM/ 38PPF)	Wide: 4.4m(14.55ft) / Tele: 32.0m(104.95ft)
Identify (250PPM/ 76PPF)	Wide: 2.2m(7.27ft) / Tele: 16.0m(52.48ft)

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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 240 V, 50 Hz ☒ PoE

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-C6083	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
AC/DC Adapter	FJ-SW1205000	-	Shenzhen Fujia Appliance Co, LTD.	-
PoE Injector	PT-PSE109GBRO-AH	PT1850221049	Dongguan PROCET Network Technology Co.,Ltd	-
Notebook	LG15N54	506NZGK000615	LG Electronics	-
Notebook Adapter	PA-1650-43(65W)	OF58U63849302 Y609	LG Electronics	-
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI- TECH GROUP.	-
MIC	MP1000	-	-	-
ALARM	PRO-SL	-	SENSOR PRO	-
Button ALARM	-	-	-	-
Smart Phone	SHV-E210L	R33D713KA3F	Samsung Electronics	-
Micro SD Card	-	-	SanDisk	16 GB



1.6 External I/O Cabling

■ DC Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (EUT)	DC Jack	AC/DC Adapter	DC Jack	1.4	U
	RJ-45	Notebook	RJ-45	3.0	U
	ALARM OUT	ALARM	ALARM IN	3.0	U
	ALARM IN	Button ALARM	ALARM OUT	3.0	U
	AUDIO OUT	Speaker	AUDIO OUT	1.0	U
	AUDIO IN	MIC	AUDIO IN	1.1	U
	SLOT	Micro SD Card	SLOT	-	-
Notebook	3.5 mm	Smart Phone	3.5 mm	1.0	U
	DC Jack	Notebook Adapter	DC Jack	1.3	U

* Unshielded=U, Shielded=S

■ PoE Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (EUT)	RJ-45 (PoE)	PoE Injector	RJ-45 (PoE)	3.0	U
	ALARM OUT	ALARM	Alarm In	3.0	U
	ALARM IN	Button ALARM	Alarm Out	3.0	U
	AUDIO OUT	Speaker	AUDIO OUT	1.0	U
	AUDIO IN	MIC	AUDIO IN	2.0	U
	SLOT	Micro SD Card	SLOT	-	-
Notebook	3.5 mm	Smart Phone	3.5 mm	1.0	U
	RJ-45 (LAN)	PoE Injector	RJ-45 (LAN)	2.0	U
	DC Jack	Notebook Adapter	DC Jack	1.5	U

* Unshielded=U, Shielded=S



1.7 EUT Operating Mode(s)

Test Mode	operating
DC, PoE Mode	RJ-45 : Monitoring EUT Using Web Viewer, Ping Test Audio In : After the test, check the normal operation of the MIC through the video on the Micro SD card Audio Out : Verified that the 1 kHz tone played on the smartphone is output normally to the speaker Alarm Out / In : Check normal operation with Alarm and Button Alarm Micro SD Card : After testing, check if the recording is normally done on the Micro SD card

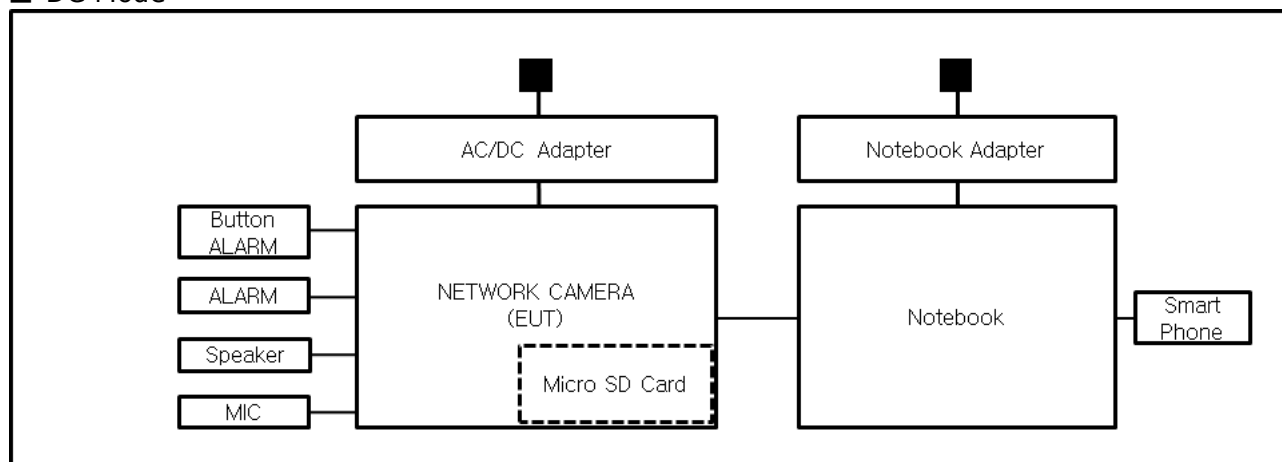
EUT Test operating S/W		
Name	Version	Manufacture Company
Web Viewer	-	-

1.8 Configuration

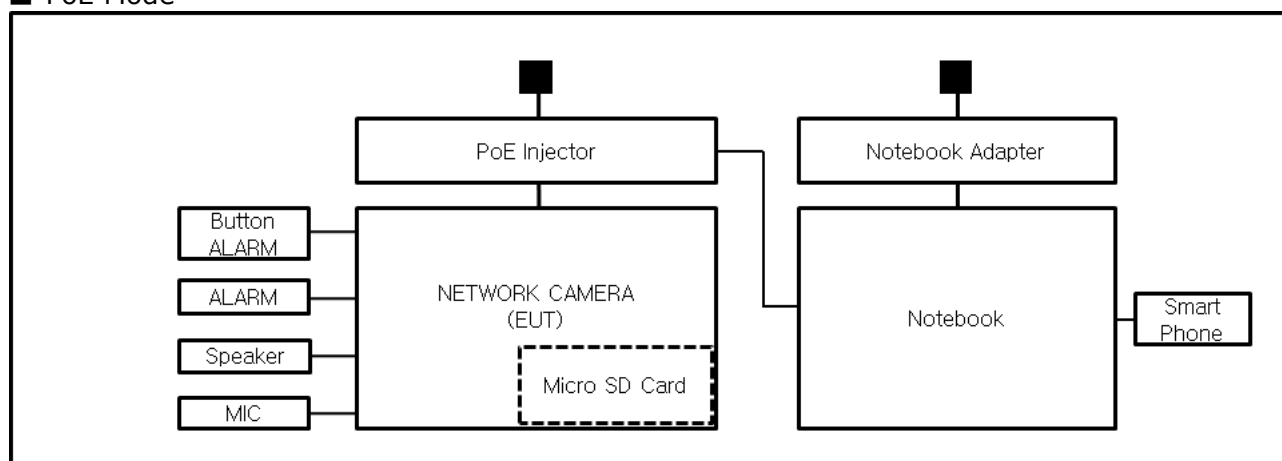
■ AC Main

□ DC Main

■ DC Mode



■ PoE Mode



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1.9 Remarks when standards applied

USB port is not used and is excluded from testing.

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



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2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **AS/NZS CISPR32:2015**

☒ Class A

☐ Class B

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2.1 Conducted Emissions at Mains Power Ports

Test Date

Jun. 27, 2022

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	12, 28, 2022
☒	LISN	ENV216	R & S	101787	12, 27, 2022
☒	LISN	ESH2-Z5	R & S	100450	12, 27, 2022
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 27, 2022

Test Conditions

Temperature: (24,3 ± 0,0) °C

Relative Humidity: (44,3 ± 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 Conducted Emissions at Telecommunication Ports

Test Date

Jun. 27, 2022

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	12, 28, 2022
☒	LISN	ENV216	R & S	101787	12, 27, 2022
☒	LISN	ESH2-Z5	R & S	100450	12, 27, 2022
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 27, 2022
☒	8-WIRE ISN CAT3,5	ENY81	R & S	100174	12, 28, 2022
☐	CDN	CDNS502A	TESEQ	40431	12, 27, 2022

Test Conditions

Temperature: (24,3 ± 0,0) °C

Relative Humidity: (44,4 ± 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.
- For Ethernet interfaces, measurements are required at the highest data rate supported by the interface.



2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Jun. 27, 2022

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, 31, 2023
☒	AMPLIFIER	SCU 01	R & S	100603	11, 24, 2022
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	12, 08, 2022
☒	ATTENUATOR	8491A	HP	32173	03, 08, 2023

Test Conditions

Temperature: (24,2 ± 0,2) °C
Relative Humidity: (44,5 ± 0,2) % 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.



2.4 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Jun. 28, 2022

Test Location

SEMI ANECHOIC CHAMBER #3

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	ESR7	R & S	101190	08, 03, 2022
☒	PREAMPLIFIER	8449B	AGILENT	3008A01967	04, 01, 2023
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM,INC	781	03, 03, 2023

Test Conditions

Temperature: (24,1 ± 0,1) °C

Relative Humidity: (44,0 ± 0,2) % 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.

APPENDIX A – TEST DATA

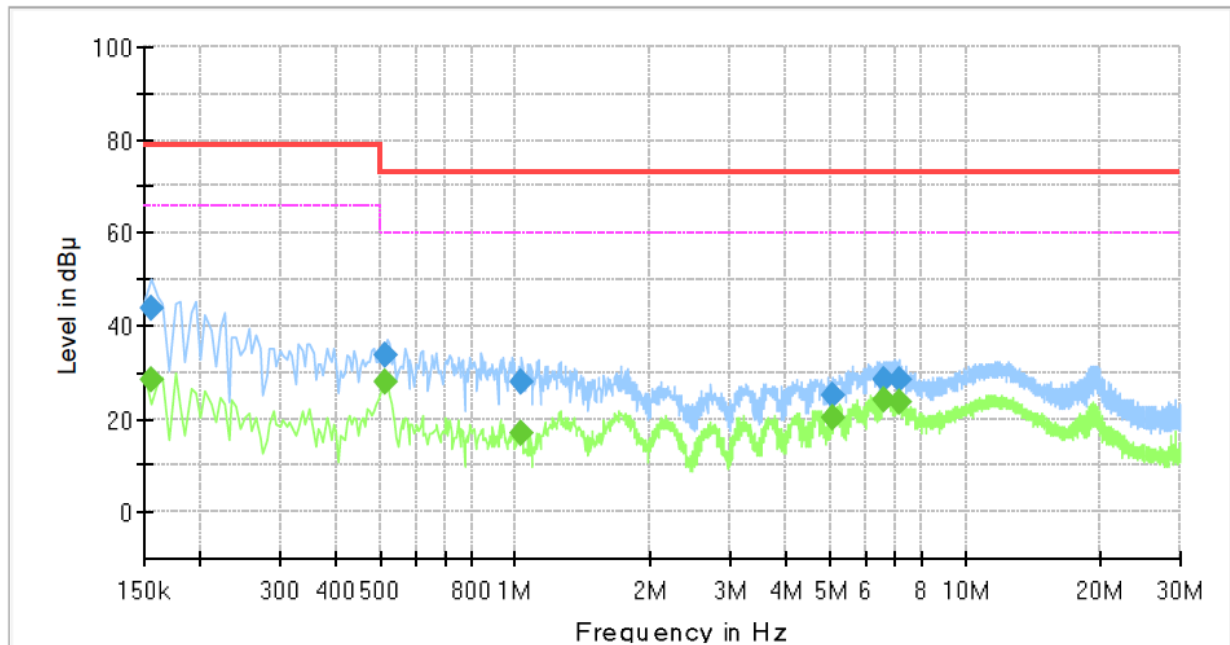
Conducted Emissions at Mains Power Ports

■ DC Mode

HOT LINE

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-C6083
Phase:	L1
Mode:	DC
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	---	28.33	66.00	37.67	1000.0	9.000	L1	19.4
0.155000	43.80	---	79.00	35.20	1000.0	9.000	L1	19.4
0.515000	---	28.03	60.00	31.97	1000.0	9.000	L1	19.7
0.515000	33.48	---	73.00	39.52	1000.0	9.000	L1	19.7
1.030000	---	17.11	60.00	42.89	1000.0	9.000	L1	20.1
1.030000	27.88	---	73.00	45.12	1000.0	9.000	L1	20.1
5.090000	---	20.34	60.00	39.66	1000.0	9.000	L1	19.6
5.090000	25.06	---	73.00	47.94	1000.0	9.000	L1	19.6
6.615000	---	23.90	60.00	36.10	1000.0	9.000	L1	19.5
6.615000	28.51	---	73.00	44.49	1000.0	9.000	L1	19.5
7.110000	---	23.59	60.00	36.41	1000.0	9.000	L1	19.5
7.110000	28.28	---	73.00	44.72	1000.0	9.000	L1	19.5

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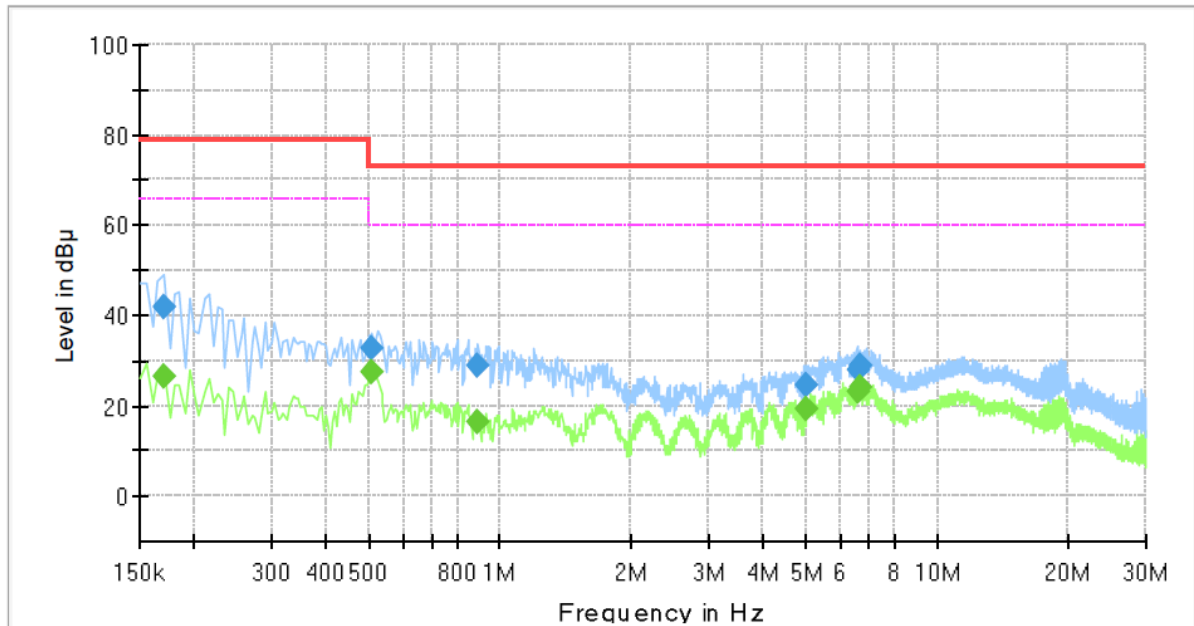
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NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-C6083
Phase:	N
Mode:	DC
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.170000	---	26.40	66.00	39.60	1000.0	9.000	N	19.4
0.170000	41.65	---	79.00	37.35	1000.0	9.000	N	19.4
0.510000	---	27.50	60.00	32.50	1000.0	9.000	N	19.7
0.510000	32.98	---	73.00	40.02	1000.0	9.000	N	19.7
0.890000	---	16.60	60.00	43.40	1000.0	9.000	N	20.1
0.890000	28.68	---	73.00	44.32	1000.0	9.000	N	20.1
5.030000	---	19.26	60.00	40.74	1000.0	9.000	N	19.6
5.030000	24.40	---	73.00	48.60	1000.0	9.000	N	19.6
6.555000	---	23.17	60.00	36.83	1000.0	9.000	N	19.5
6.555000	28.12	---	73.00	44.88	1000.0	9.000	N	19.5
6.660000	---	24.10	60.00	35.90	1000.0	9.000	N	19.5
6.660000	28.75	---	73.00	44.25	1000.0	9.000	N	19.5

◆ 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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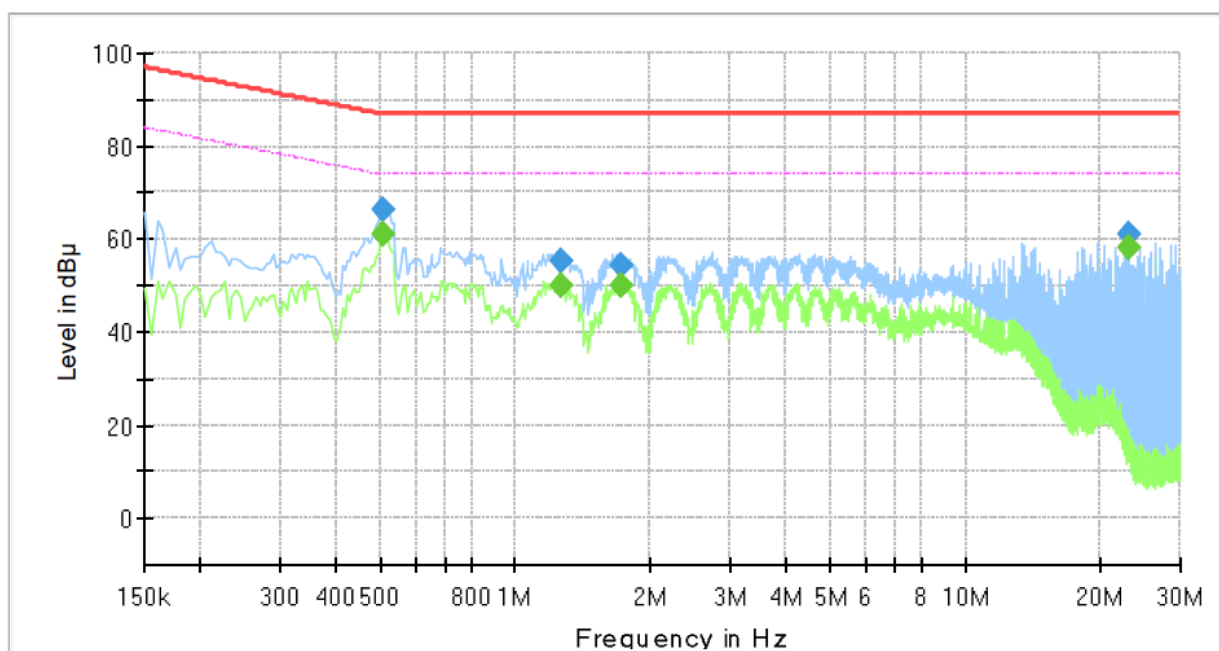
Conducted Emissions at Telecommunication Ports

■ DC Mode

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-C6083
Mode :	DC
Speed :	100 Mbps
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.510000	---	61.10	74.00	12.90	1000.0	9.000	Single Line	19.8
0.510000	66.44	---	87.00	20.56	1000.0	9.000	Single Line	19.8
1.265000	---	50.26	74.00	23.74	1000.0	9.000	Single Line	20.0
1.265000	55.11	---	87.00	31.89	1000.0	9.000	Single Line	20.0
1.710000	---	50.03	74.00	23.97	1000.0	9.000	Single Line	20.2
1.710000	54.42	---	87.00	32.58	1000.0	9.000	Single Line	20.2
23.130000	---	57.99	74.00	16.01	1000.0	9.000	Single Line	20.1
23.130000	61.15	---	87.00	25.85	1000.0	9.000	Single Line	20.1

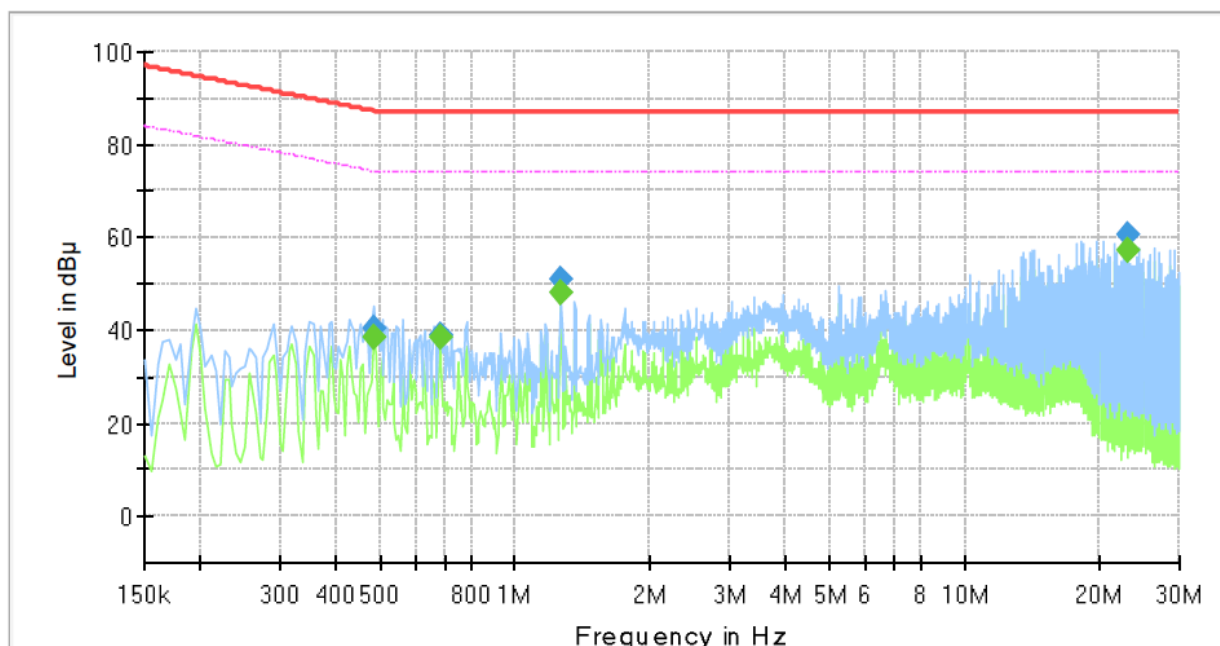
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PoE Mode
[100 Mbps]
Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-C6083
Mode :	PoE
Speed :	100 Mbps
Operator Name:	KES


Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.485000	---	38.57	74.25	35.68	1000.0	9.000	Single Line	19.7
0.485000	40.20	---	87.25	47.05	1000.0	9.000	Single Line	19.7
0.680000	---	38.44	74.00	35.56	1000.0	9.000	Single Line	19.9
0.680000	39.21	---	87.00	47.79	1000.0	9.000	Single Line	19.9
1.265000	---	48.27	74.00	25.73	1000.0	9.000	Single Line	20.0
1.265000	51.08	---	87.00	35.92	1000.0	9.000	Single Line	20.0
23.130000	---	57.33	74.00	16.67	1000.0	9.000	Single Line	20.1
23.130000	60.83	---	87.00	26.17	1000.0	9.000	Single Line	20.1

◆ Calculation

$$\text{QuasiPeak [dBuV]} / \text{CAverage [dBuV]} = \text{Reading Value [dBuV]} + \text{Corr. [dB]}$$

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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



KES Co., Ltd.

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Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
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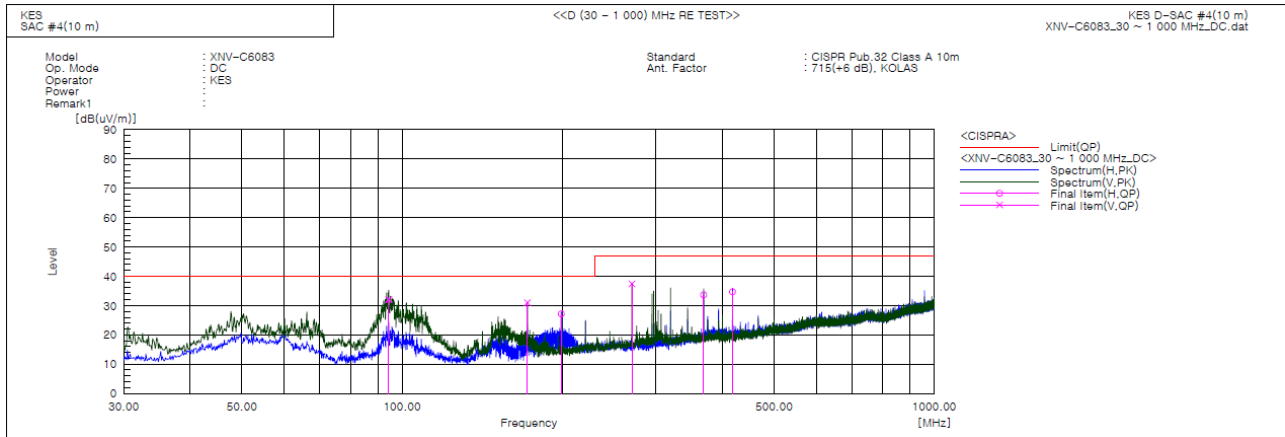
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KES-EM-22T0572-R1

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Radiated Electric Field Emissions(Below 1 GHz)

■ DC Mode



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	94.384	V	55.7	-23.6	32.1	40.0	7.9	145.0	50.2	
2	171.984	V	55.1	-24.1	31.0	40.0	9.0	121.0	3.2	
3	199.144	H	48.2	-21.0	27.2	40.0	12.8	357.0	185.1	
4	270.318	V	56.2	-18.8	37.4	47.0	9.6	136.0	131.6	
5	368.651	H	48.6	-14.9	33.7	47.0	13.3	368.0	32.5	
6	417.758	H	48.5	-13.8	34.7	47.0	12.3	396.0	123.2	

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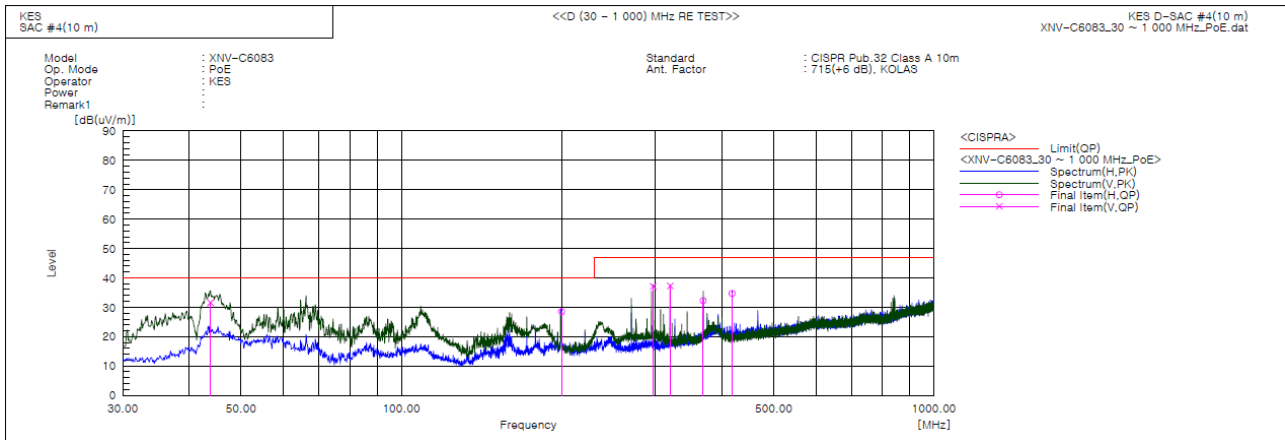
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Report No.:

KES-EM-22T0572-R1

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PoE Mode



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	43.823	V	53.2	-21.6	31.6	40.0	8.4	105.0	35.0	
2	199.871	H	49.5	-21.0	28.5	40.0	11.5	354.0	155.0	
3	296.993	V	55.2	-18.1	37.1	47.0	9.9	141.0	216.8	
4	319.545	V	54.1	-16.8	37.3	47.0	9.7	136.0	107.6	
5	368.651	H	47.2	-14.9	32.3	47.0	14.7	396.0	108.7	
6	417.758	H	48.5	-13.8	34.7	47.0	12.3	387.0	199.7	

◆ Calculation

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

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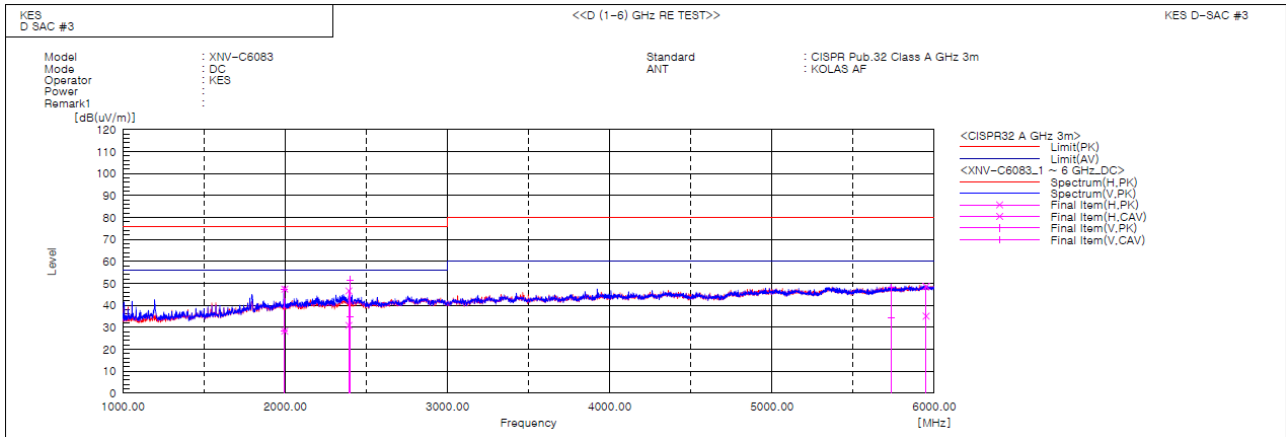
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Radiated Electric Field Emissions(Above 1 GHz)

■ DC Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1994.458	V	48.5	29.6	-1.1	47.4	28.5	76.0	56.0	28.6	27.5	100.0	133.5	
2	1997.234	H	48.4	29.3	-1.0	47.4	28.3	76.0	56.0	28.6	27.7	100.0	169.0	
3	2392.700	H	45.4	29.7	1.2	46.6	30.9	76.0	56.0	29.4	25.1	100.0	101.5	
4	2398.706	V	50.4	33.4	1.2	51.6	34.6	76.0	56.0	24.4	21.4	100.0	229.8	
5	5733.630	V	37.9	24.3	10.1	48.0	34.4	80.0	60.0	32.0	25.6	100.0	55.4	
6	5949.998	H	37.6	24.1	11.0	48.6	35.1	80.0	60.0	31.4	24.9	100.0	247.4	

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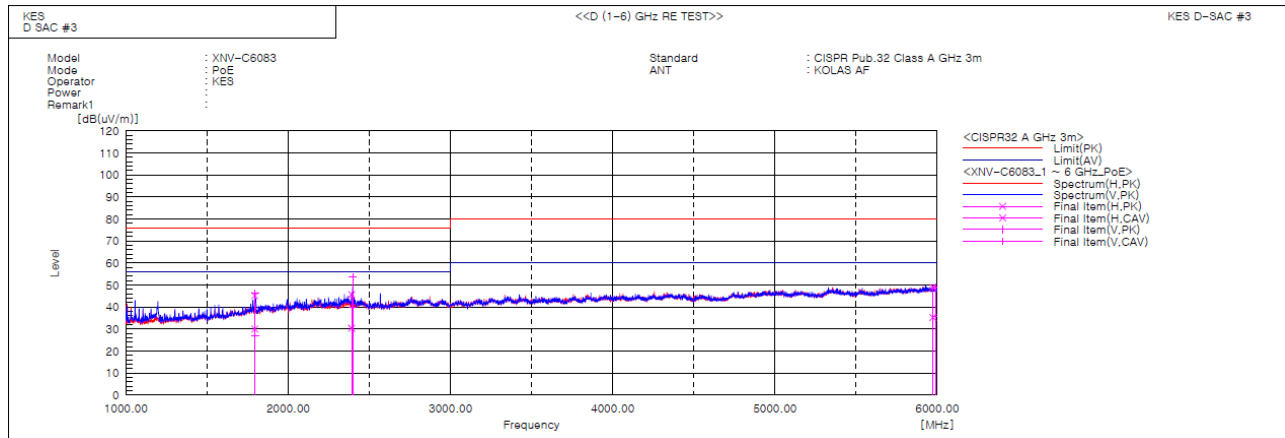
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Report No.:

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PoE Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1794.391	H	47.4	32.2	-2.2	45.2	30.0	76.0	56.0	30.8	26.0	100.0	193.2	
2	1797.373	V	48.3	29.3	-2.2	46.1	27.1	76.0	56.0	29.9	28.9	100.0	216.3	
3	2390.682	H	44.5	29.2	1.2	45.7	30.4	76.0	56.0	30.3	25.6	100.0	94.4	
4	2397.727	V	52.4	38.7	1.2	53.6	39.9	76.0	56.0	22.4	16.1	100.0	206.2	
5	5972.760	H	37.8	24.2	11.1	48.9	35.3	80.0	60.0	31.1	24.7	100.0	234.6	
6	5990.795	V	38.0	24.4	11.2	49.2	35.6	80.0	60.0	30.8	24.4	100.0	11.5	

Calculation

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

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

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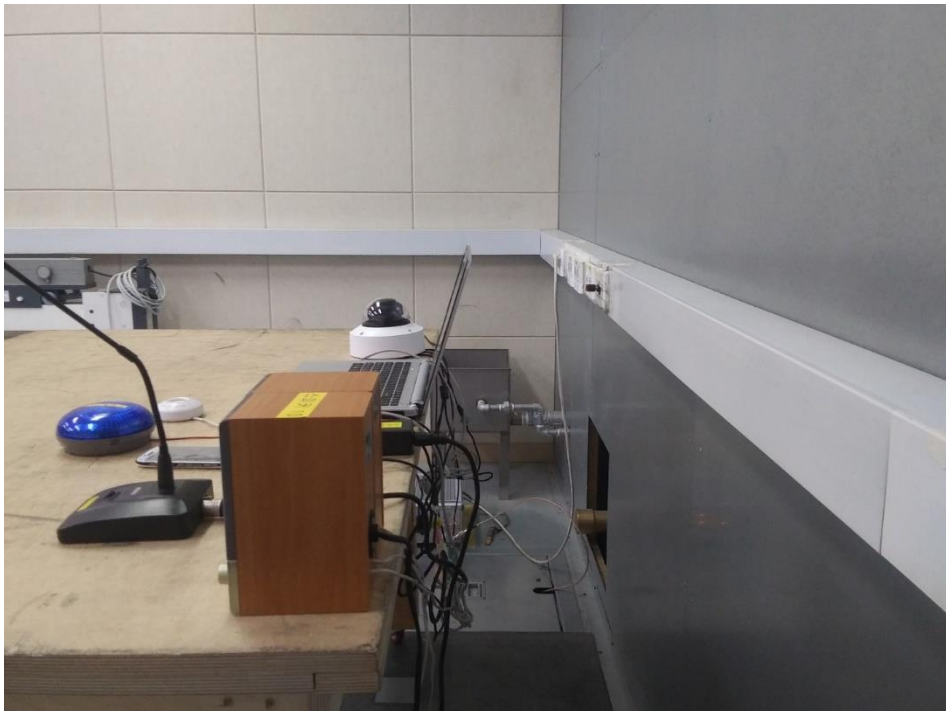
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Test Setup Photos and Configuration

Conducted Emissions at Mains Power Ports

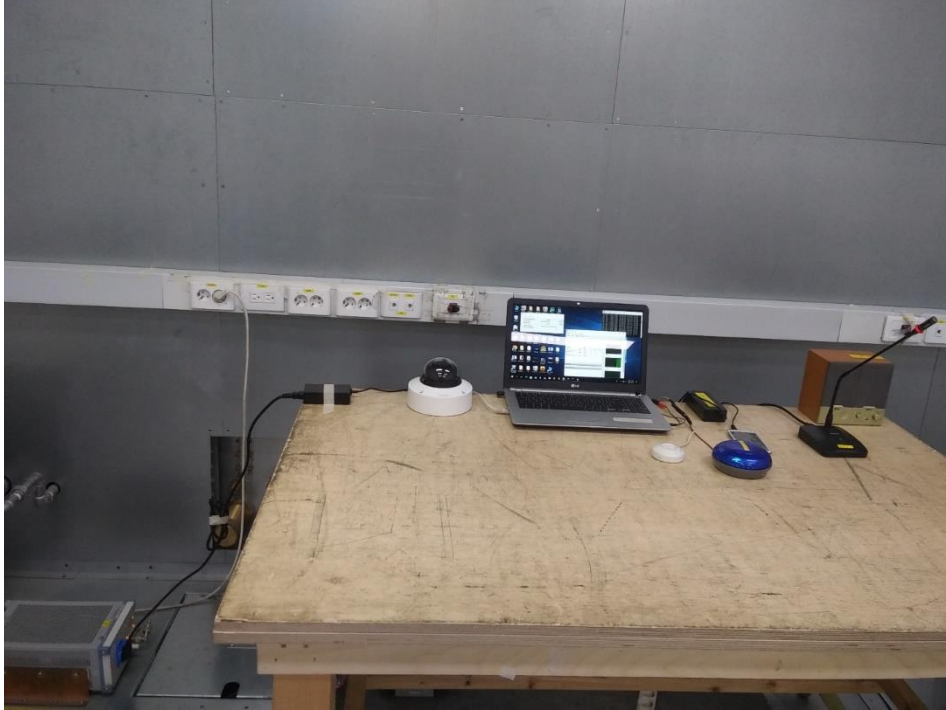
■ DC Mode



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Conducted Emissions at Telecommunication Ports

■ DC Mode



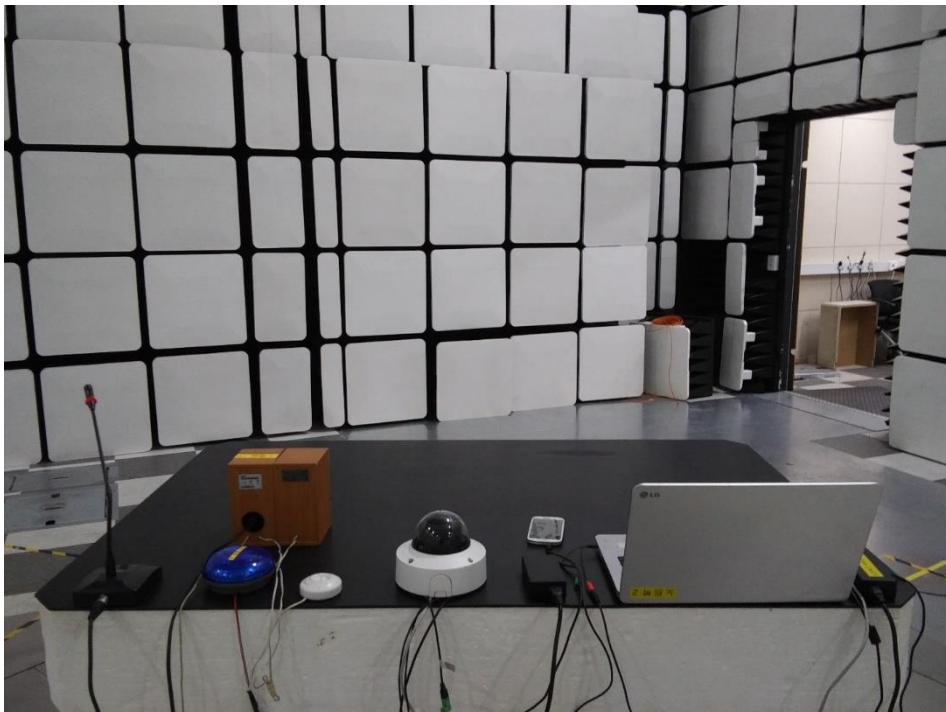
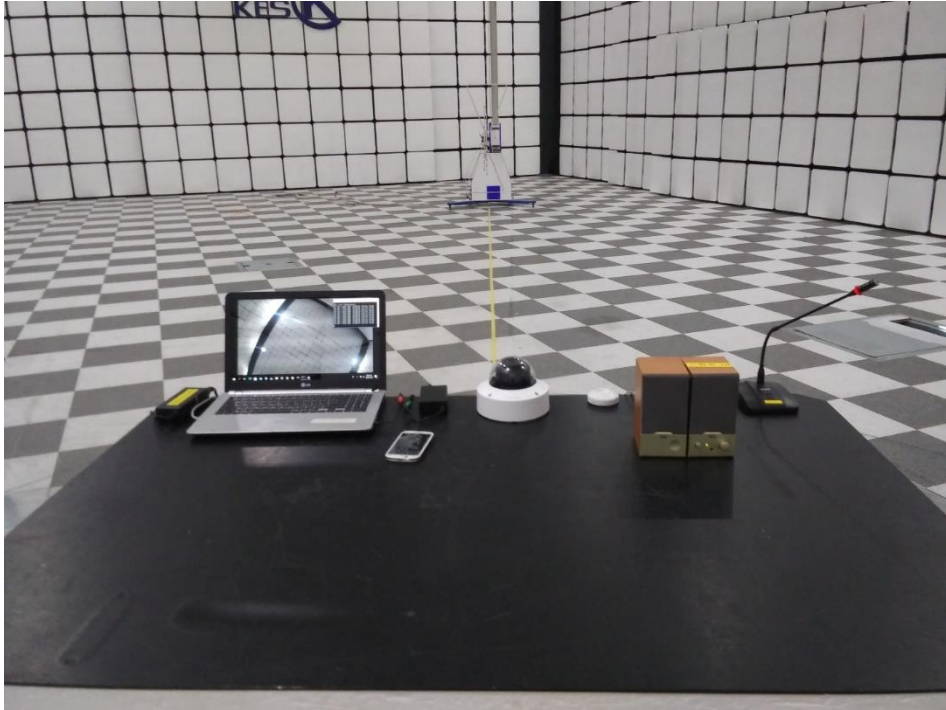
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■ PoE Mode



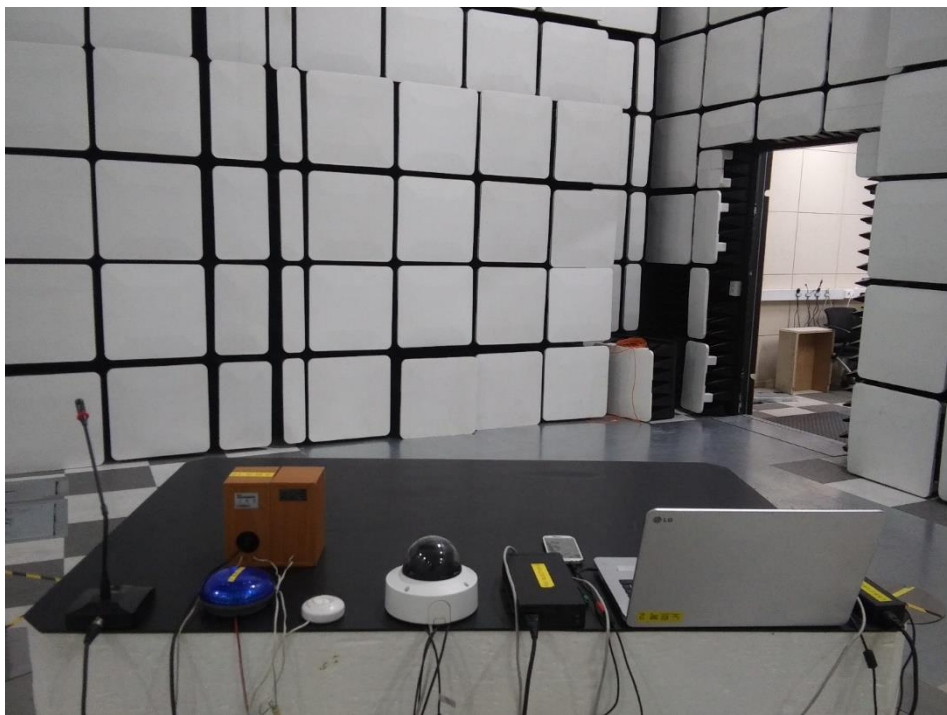
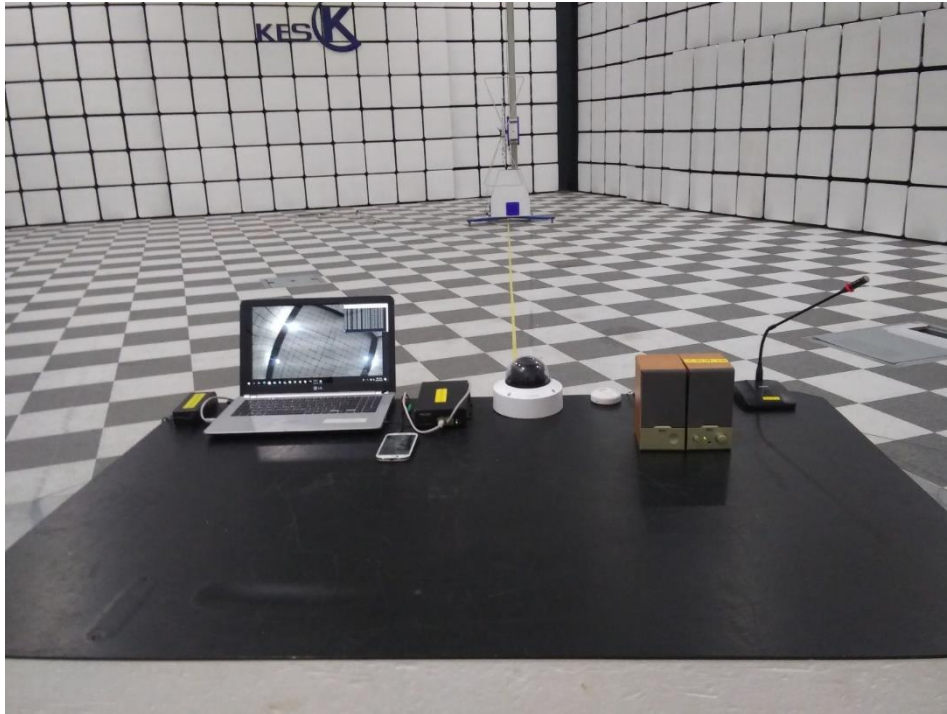
Radiated Electric Field Emissions(Below 1 GHz)

■ DC Mode



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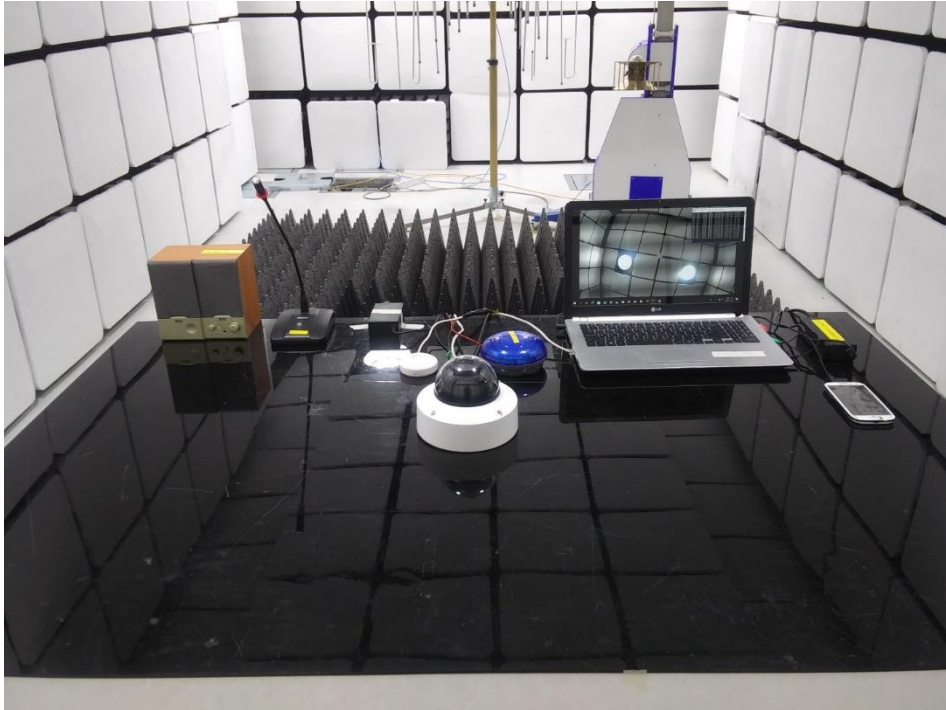
■ PoE Mode



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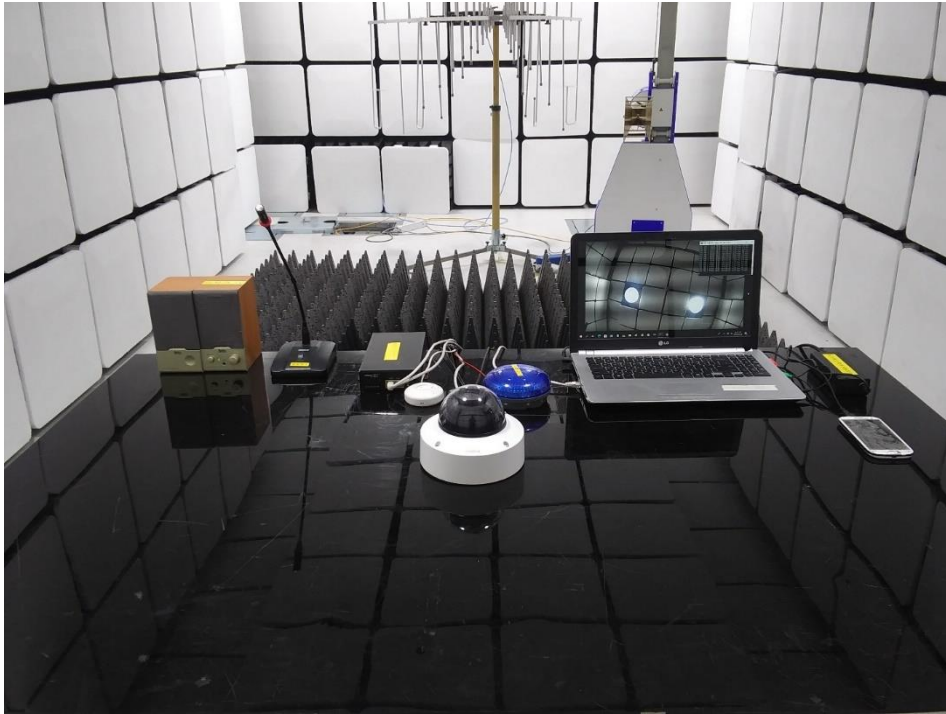
Radiated Electric Field Emissions(Above 1 GHz)

■ DC Mode



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■ PoE Mode



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EUT External Photographs

(Top)



(Bottom)



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EUT Internal Photographs

(Internal View)



EUT Internal View – Board 1

(Top)



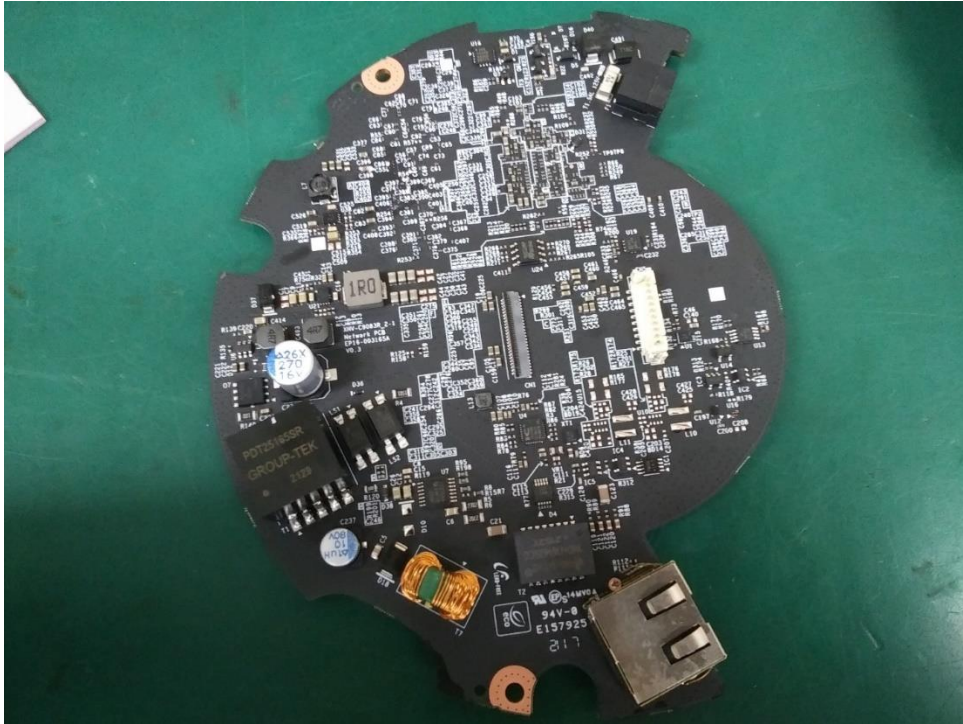
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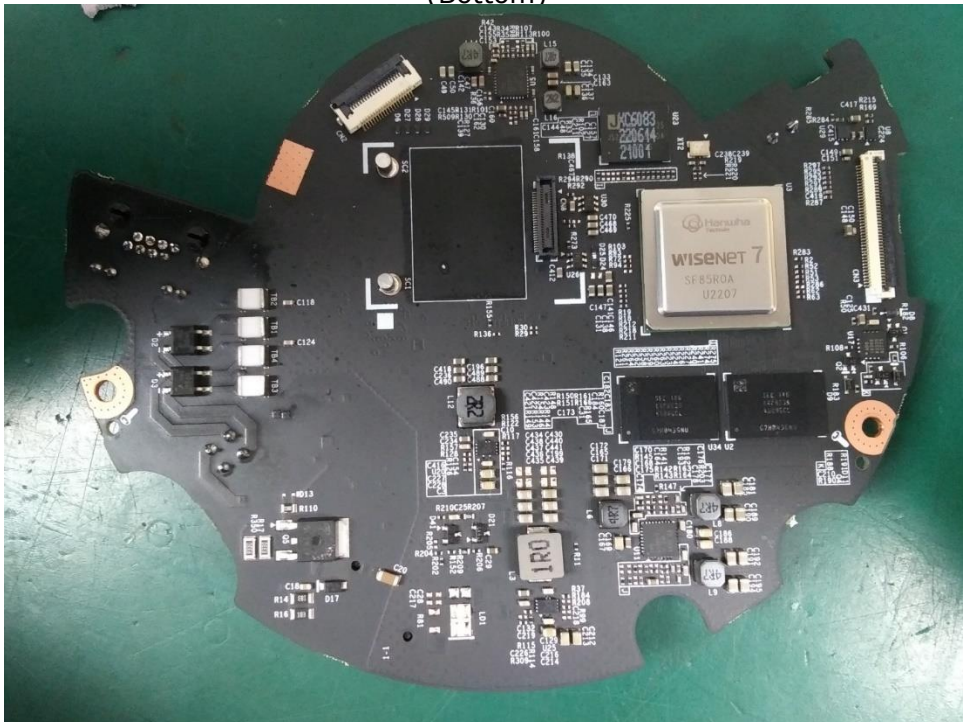
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EUT Internal View – Board 2

(Top)



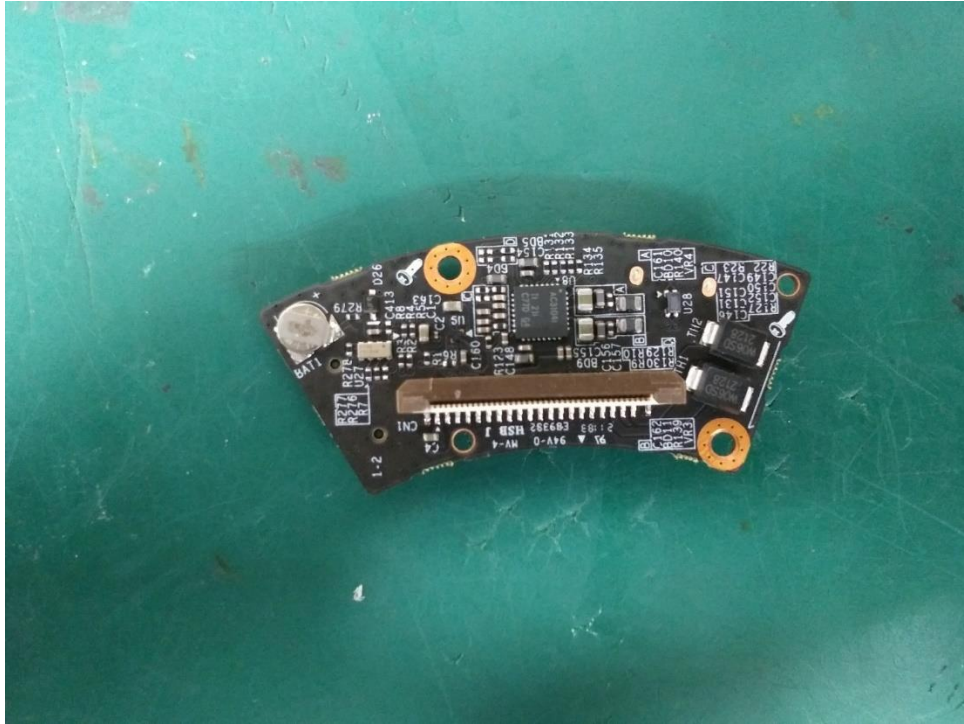
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EUT Internal View – Board 3

(Top)



(Bottom)



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EUT Internal View – Board 4

(Top)



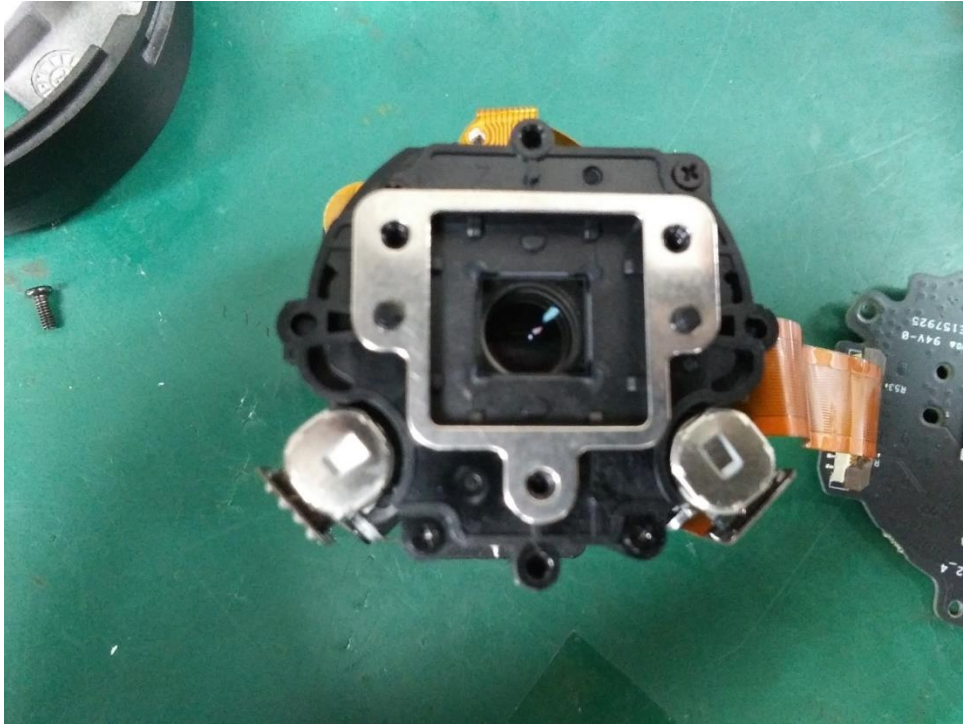
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EUT Internal View – Lens

(Top)



(Bottom)



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