

DECLARATION OF CONFORMITY

We; Hanwha Techwin Co., Ltd.

DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT;

Report No: KES-E1-16T0321

**Type of
equipment:** NETWORK CAMERA

Model Name: QNO-6070RP

Variant Model: -

Applicant: Hanwha Techwin Co., Ltd.

Address: 1204,Changwon-daero, Seongsan-gu,
Chang-won-si, Gyeongsangnam-do,Korea

Manufacturer : Tianjin Samsung Techwin Opto-
Electronic Co.,Ltd.

Address: No.11 Weiliu Rd, Micro-Electronic
Industrial Park, TEDA, Tianjin, 300385,
People's Republic of China

Test standards : AS/NZS CISPR22:2009+A1:2010

Classification: C-Tick

The above equipment was tested by EMC compliance Testing Laboratory for with the requirements of C-tick Rules and Regulations. The results of testing in this report apply to the product / system which was tested only.

Jul. 06, 2016
(Date of issue)

(Name and signature of authorized person)



EMC TEST REPORT For C-TICK

Test Report No. : KES-E1-16T0321
Date of Issue : Jul. 06, 2016
Product name : NETWORK CAMERA
Model/Type No. : QNO-6070RP
Variant Model : -
Applicant : Hanwha Techwin Co., Ltd.
Applicant Address : 1204, Changwon-daero, Seongsan-gu, Changwon-si,
Gyeongsangnam-do, Korea
Manufacturer : Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.
Manufacturer Address : No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin,
300385, People's Republic of China
Date of Receipt : Jun. 16, 2016
Test date : Jun. 30, 2016 ~ Jul. 04, 2016
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Dea Jung, choi
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

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Test report No.:
KES-E1-16T0321
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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Jul. 06, 2016	KES-E1-16T0321	Issued

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1.0 General Product Description

Main Specifications of EUT are:

Video		Video	
Imaging Device	1/2.9" 2.19M CMOS	Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)	Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)	Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive	Scanning System	Progressive
Min. Illumination	Color : 0.095Lux, B/W : 0Lux	Min. Illumination	Color : 0.095Lux, B/W : 0Lux
Lens		Lens	
Focal Length (Zoom Ratio)	Manual 2.8~12mm	Focal Length (Zoom Ratio)	Manual 2.8~12mm
Max. Aperture Ratio	F1.4	Max. Aperture Ratio	F1.4
Angular Field of View	H 103.8~32.4° / V 53.7~18.4° / D 121.9~37.1°	Angular Field of View	H 103.8~32.4° / V 53.7~18.4° / D 121.9~37.1°
Min. Object Distance	-	Min. Object Distance	-
Lens Type	Manual	Lens Type	Manual
Focus control	DC auto iris	Focus control	DC auto iris
Mount Type	Board type	Mount Type	Board type
Pan / Tilt / Rotate		Pan / Tilt / Rotate	
Pan Range	0	Pan Range	0
Tilt Range	0	Tilt Range	0
Rotate Range	0	Rotate Range	0
Operational		Operational	
IR Viewable Length	30m	IR Viewable Length	30m
Camera Title	Off / On (Displayed up to 20 characters per line) - 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	Camera Title	Off / On (Displayed up to 20 characters per line) - 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	True Day & Night	Day & Night	True Day & Night
Backlight Compensation	Off / BLC	Backlight Compensation	Off / BLC
Wide Dynamic Range	120dB	Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR(Off / On)	Digital Noise Reduction	SSNR(Off / On)
Motion Detection	Off / On (4ea polygon zones)	Motion Detection	Off / On (4ea polygon zones)
Privacy Masking	Off / On (6ea rectangular zones)	Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High	Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor	White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC(Lens distortion control)	On/Off (5 levels with Min/Max)	LDC(Lens distortion control)	On/Off (5 levels with Min/Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker	Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view	Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion Detection with metadata, Tampering, Defocus	Intelligent Video Analytics	Motion Detection with metadata, Tampering, Defocus
Alarm I/O	Input 1 / Output 1	Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering Detection, SD card error, NAS error, Alarm input, Defocus detection	Alarm Triggers	Motion detection, Tampering Detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-Mail Local storage recording at Event Notification via E-Mail External output	Alarm Events	File upload via FTP and E-Mail Local storage recording at Event Notification via E-Mail External output
Pixel Counter	Support (plug-in viewer only)	Pixel Counter	Support (plug-in viewer only)

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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 ☐ 110 Vac ☐ 230 Vac ☒ PoE ☒ 12 Vdc

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	QNO-6070RP	-	Hanwha Techwin Co., Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Notebook	RT3290LE	5CD242B043	HP	-
Notebook Adapter	Series PPP009L-E	WCNWVOA3U3G31S	LITE-ON TECHNOLOGY (CHANGZHOU) Co., Ltd.	-
Alarm Jig	-	-	-	-
PoE Adapter	PD3001GC/AC	RD9356082016964200	Power Dsine	-
MIC	CMK-303	-	CAMAC	-
Micro 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
	Audio IN	MIC	Audio IN	1.7	U
	Alarm	Alarm Jig	Alarm	3.0	U
	Micro SD Card slot	Micro SD Card	-	-	-

- PoE Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (E.U.T)	RJ-45	PoE Adapter	RJ-45	3.0	U
	Audio In	MIC	Audio Out	1.7	U
	Alarm	Alarm Jig	-	3.0	U
	Micro SD Card slot	Micro SD Card	-	-	-
PoE Adapter	RJ-45	Notebook	RJ-45	3.0	U

* Unshielded=U, Shielded=S

1.7 EUT Operating Mode(s)

Equipment under test was operated during the measurement under the following conditions:

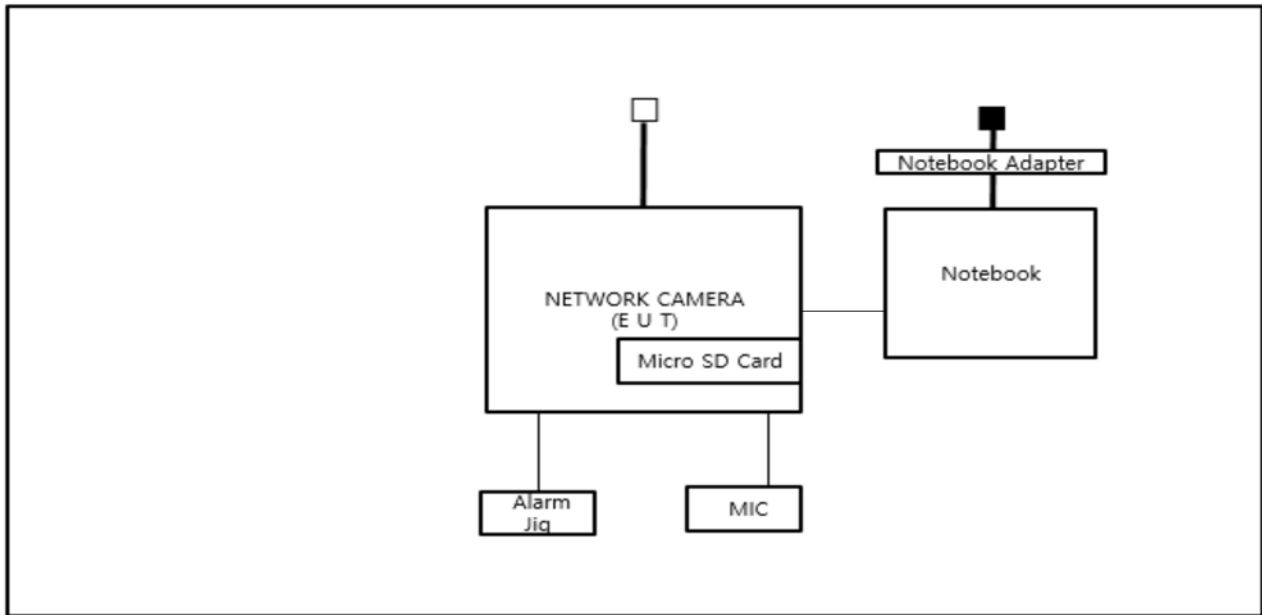
Test mode	Normal operating
OP	MONITORING Network ping test

- Input power condition during the measurements was 12 V (dc) , PoE

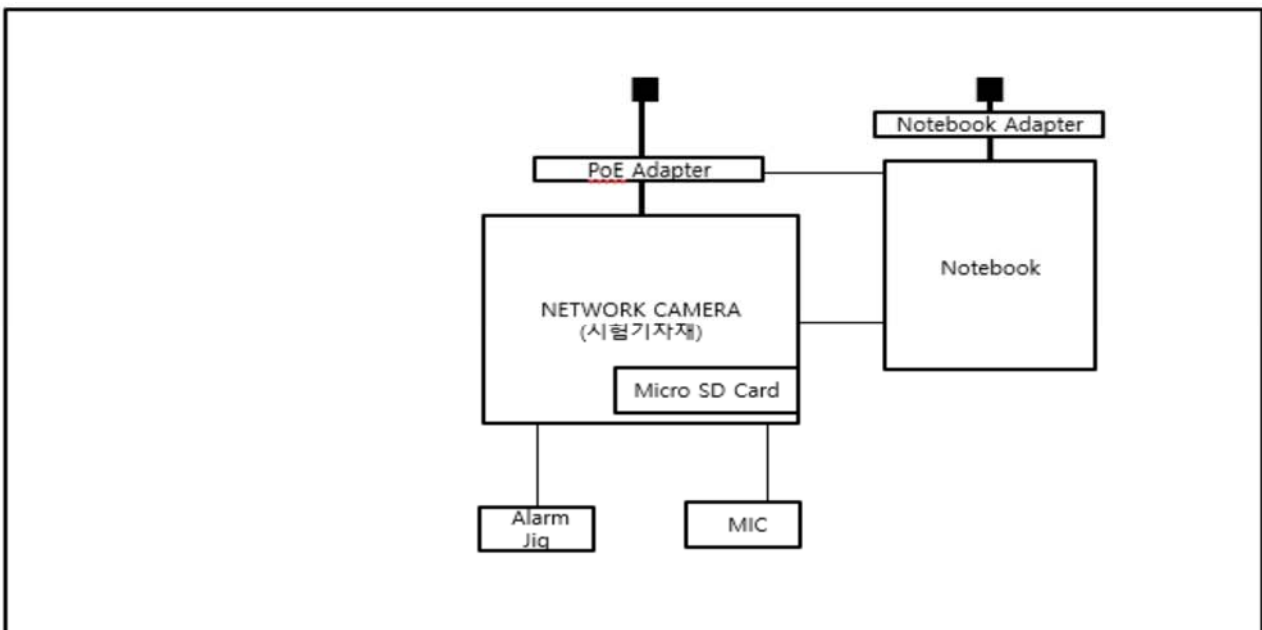
1.8 Configuration

■ AC Main
□ DC Main

- DC 12 V Mode



- PoE Mode



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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 473-29 Gayeo-ro, Yeoju-si, Gyeonggi-do, 12658, Korea. The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22.

1.11 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3 & 10 meter Open Area Test Sites and one conducted site to perform FCC Part 15/18 measurements.	 R-4308, C-4798, T-2311, G-914
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-4308, C-4798, T-2311, G-914
KOREA	MSIP	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
Canada	IC	3 & 10 meter Open Area Test Sites and one conducted site	 4769B-1
Europe	CE	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	
International	KOLAS	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	



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 55022:2010

☐ 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



☐ **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 C63.4-2009

☐ **IC Regulation ICES-003 : 2016**

☐ CISPR 22:2009 +A1:2010

☐ 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



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	-	AONE SHIELD	-	-

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

Because the E.U.T power is 12 V (dc) power and PoE, limits are not specified

2.2 Conducted Emissions at Telecommunication Ports

Test Date

Jul. 04, 2016

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
☒	8-Wire ISN CAT3	CAT3 8158	Schwarzbeck Mess	8158-0019	04. 01. 2017
☒	8-Wire ISN CAT5	CAT5 8158	Schwarzbeck Mess	8158-0030	04. 01. 2017
☐	8-Wire ISN CAT6	NTFM 8158	Schwarzbeck Mess	8158-0029	08. 14. 2016
☒	Electro wave Shieldroom	-	SEMITEC	-	-

Test Conditions

Temperature: 23,3 °C

Relative Humidity: 58,2 %

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.

2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Jun. 30, 2016

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	ESU26	R&S	100551	04, 18, 2017
☒	Trilog-Broadband Antenna	VULB 9163	SCHWARZBECK	9163-715	04, 14, 2017
☒	Open Area Test Site	-	KES	-	-
☒	Antenna Mast	1070/1080	EMCO	-	-
☒	Turn Table	-	DAEIL EMC	-	-

Test Conditions

Temperature: 21,3 °C

Relative Humidity: 67,0 %

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

RemarksSee Appendix A for test data.

2.4 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Jul. 01, 2016

Test Location

Semi Anchoic Chamber #2

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test Receiver	ESU26	R&S	100551	04, 18, 2017
☒	Broadband Coaxial Preamplifier	BBV 9718	Schwarzbeck Mess - Elektronik	9718-246	10. 23. 2016
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM,INC	781	05. 07. 2017
☒	Semi Anchoic Chamber #2	-	SEMITEC	-	-
☒	Antenna Mast	-	AUDIX	-	-
☒	Turn Table	-	AUDIX	-	-

Test Conditions

Temperature: 21,3 °C

Relative Humidity: 54,8 %

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

RemarksSee Appendix A for test data.



APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

[HOT]

N/A



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[NEUTRAL]

N/A

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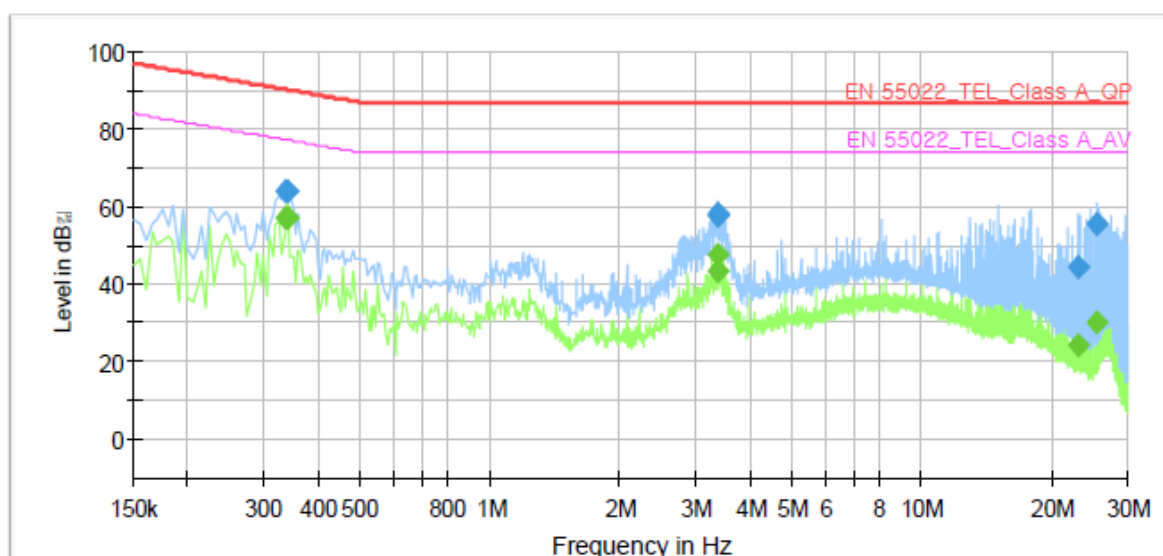
Conducted Emissions at Telecommunication Ports

- DC 12 V Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	QNO-6070RP
Mode	DC12V_LAN_10M
Operator Name:	KES



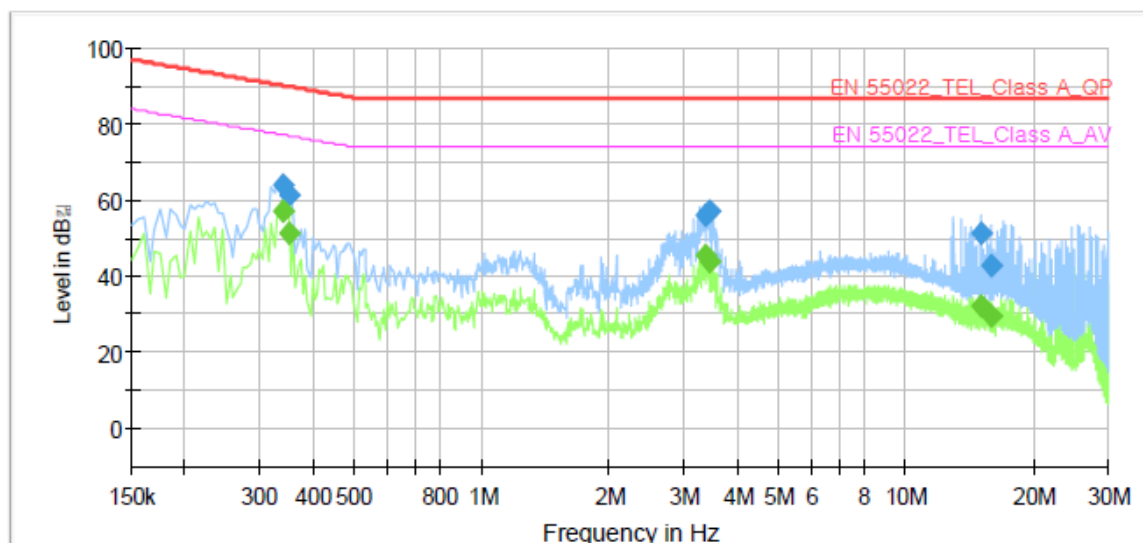
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.335000	---	57.37	77.33	19.96	1000.0	9.000	Single Line	10.0
0.335000	63.87	---	90.33	26.46	1000.0	9.000	Single Line	10.0
0.340000	---	57.28	77.20	19.92	1000.0	9.000	Single Line	10.0
0.340000	64.13	---	90.20	26.07	1000.0	9.000	Single Line	10.0
3.360000	---	47.73	74.00	26.27	1000.0	9.000	Single Line	9.8
3.360000	58.24	---	87.00	28.76	1000.0	9.000	Single Line	9.8
3.375000	---	43.48	74.00	30.52	1000.0	9.000	Single Line	9.8
3.375000	57.85	---	87.00	29.15	1000.0	9.000	Single Line	9.8
23.125000	---	24.54	74.00	49.46	1000.0	9.000	Single Line	10.0
23.125000	44.35	---	87.00	42.65	1000.0	9.000	Single Line	10.0
25.340000	---	30.38	74.00	43.62	1000.0	9.000	Single Line	10.0
25.340000	55.43	---	87.00	31.57	1000.0	9.000	Single Line	10.0

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	QNO-6070RP
Mode	DC12V_LAN_100M
Operator Name:	KES



Final Result

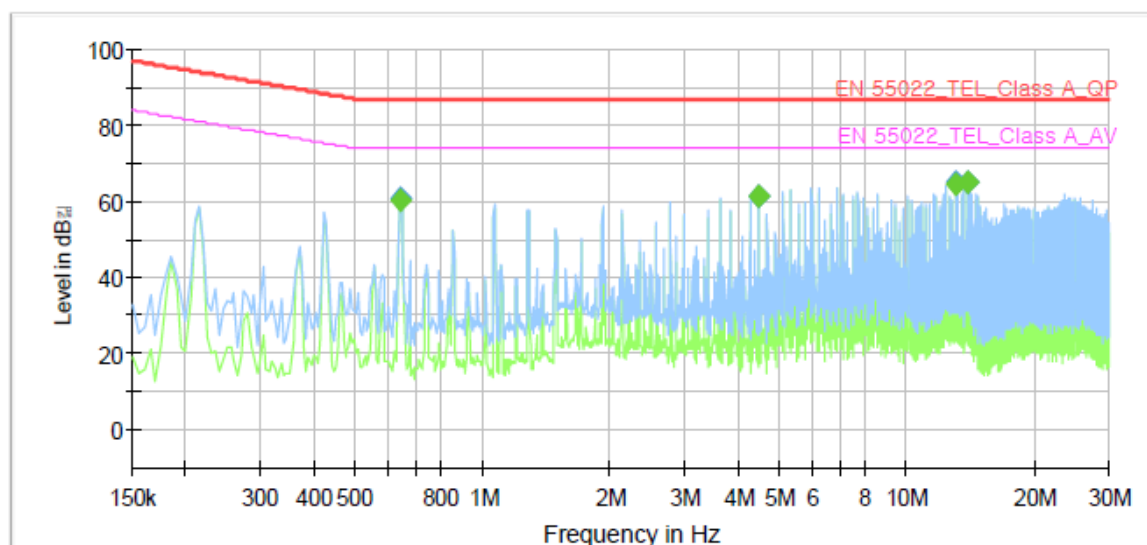
Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.340000	---	57.28	77.20	19.92	1000.0	9.000	Single Line	9.5
0.340000	63.99	---	90.20	26.21	1000.0	9.000	Single Line	9.5
0.350000	---	51.31	76.96	25.65	1000.0	9.000	Single Line	9.5
0.350000	61.55	---	89.96	28.41	1000.0	9.000	Single Line	9.5
3.360000	---	45.50	74.00	28.50	1000.0	9.000	Single Line	9.3
3.360000	55.98	---	87.00	31.02	1000.0	9.000	Single Line	9.3
3.460000	---	44.15	74.00	29.85	1000.0	9.000	Single Line	9.3
3.460000	57.38	---	87.00	29.62	1000.0	9.000	Single Line	9.3
15.020000	---	32.26	74.00	41.74	1000.0	9.000	Single Line	9.6
15.020000	51.47	---	87.00	35.53	1000.0	9.000	Single Line	9.6
15.920000	---	29.87	74.00	44.13	1000.0	9.000	Single Line	9.6
15.920000	42.71	---	87.00	44.29	1000.0	9.000	Single Line	9.6

- PoE Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	QNO-6070RP
Mode	PoE_LAN_10M
Operator Name:	KES



Final Result

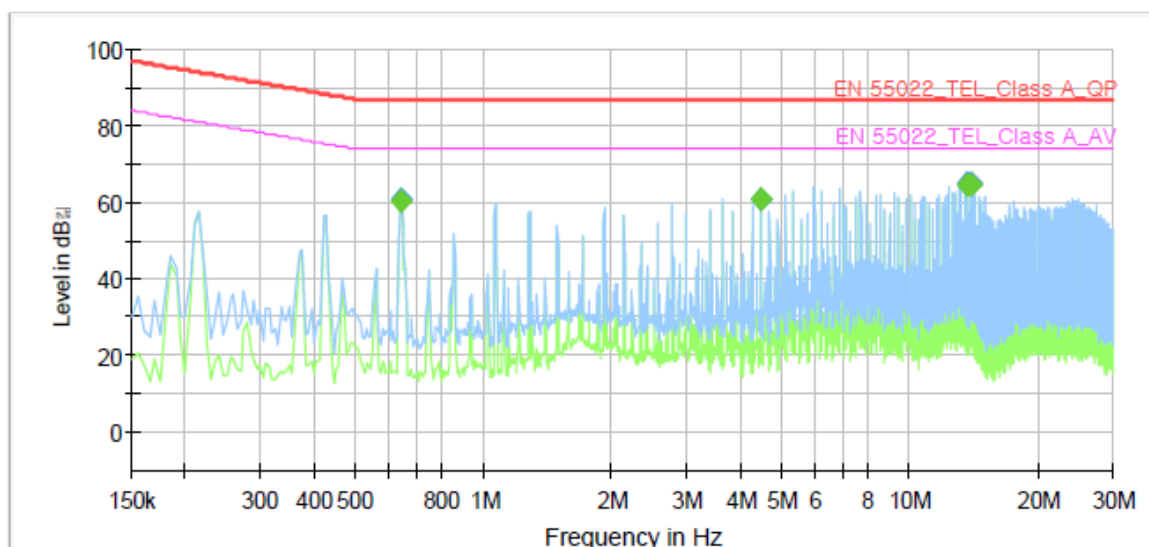
Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.640000	---	60.26	74.00	13.74	1000.0	9.000	Single Line	9.9
0.640000	60.88	---	87.00	26.12	1000.0	9.000	Single Line	9.9
4.490000	---	61.31	74.00	12.69	1000.0	9.000	Single Line	9.8
4.490000	61.35	---	87.00	25.65	1000.0	9.000	Single Line	9.8
13.040000	---	64.81	74.00	9.19	1000.0	9.000	Single Line	10.1
13.040000	65.07	---	87.00	21.93	1000.0	9.000	Single Line	10.1
13.895000	---	64.98	74.00	9.02	1000.0	9.000	Single Line	10.1
13.895000	65.16	---	87.00	21.84	1000.0	9.000	Single Line	10.1

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[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	QNO-6070RP
Mode	PoE_LAN_100M
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.640000	---	60.27	74.00	13.73	1000.0	9.000	Single Line	9.4
0.640000	60.91	---	87.00	26.09	1000.0	9.000	Single Line	9.4
4.490000	---	60.90	74.00	13.10	1000.0	9.000	Single Line	9.3
4.490000	60.95	---	87.00	26.05	1000.0	9.000	Single Line	9.3
13.680000	---	64.45	74.00	9.55	1000.0	9.000	Single Line	9.6
13.680000	65.06	---	87.00	21.94	1000.0	9.000	Single Line	9.6
13.895000	---	64.76	74.00	9.24	1000.0	9.000	Single Line	9.6
13.895000	65.00	---	87.00	22.00	1000.0	9.000	Single Line	9.6

**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]
222.74	20.65	V	1.00	11.96	3.08	35.69	40.00	4.31
297.03	20.46	H	3.96	13.35	3.69	37.50	47.00	9.50
371.25	19.96	V	1.12	14.95	4.03	38.94	47.00	8.06
408.34	11.67	H	3.19	15.71	4.28	31.66	47.00	15.34
445.51	10.83	H	2.44	16.36	4.55	31.74	47.00	15.26
482.63	15.82	V	1.00	17.00	4.82	37.64	47.00	9.36

* H : Horizontal, V : Vertical

- PoE Mode

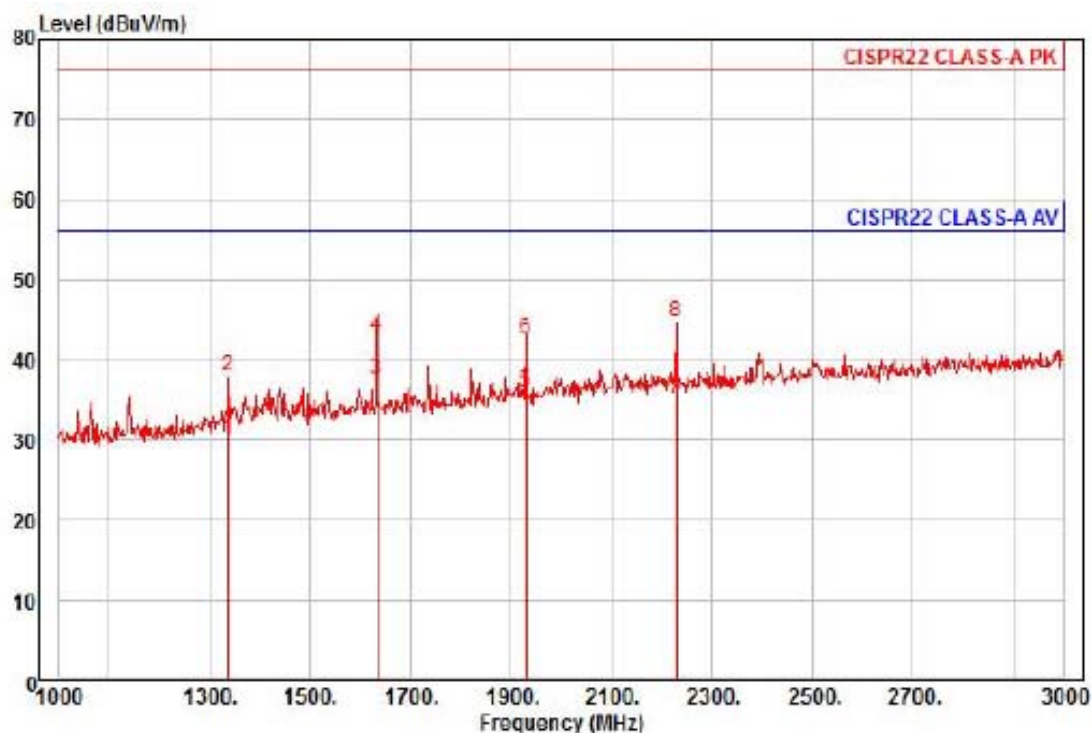
Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dB μ V]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dB μ V/m]	[dB μ V/m]	[dB]
222.73	21.78	V	1.06	11.96	3.08	36.82	40.00	3.18
296.99	16.22	H	4.00	13.35	3.69	33.26	47.00	13.74
371.25	19.66	H	3.29	14.95	4.03	38.64	47.00	8.36
445.74	17.56	H	3.52	16.36	4.55	38.47	47.00	8.53
446.32	17.53	V	1.00	16.37	4.56	38.46	47.00	8.54
482.81	17.90	V	1.17	17.00	4.82	39.72	47.00	7.28

* H : Horizontal, V : Vertical



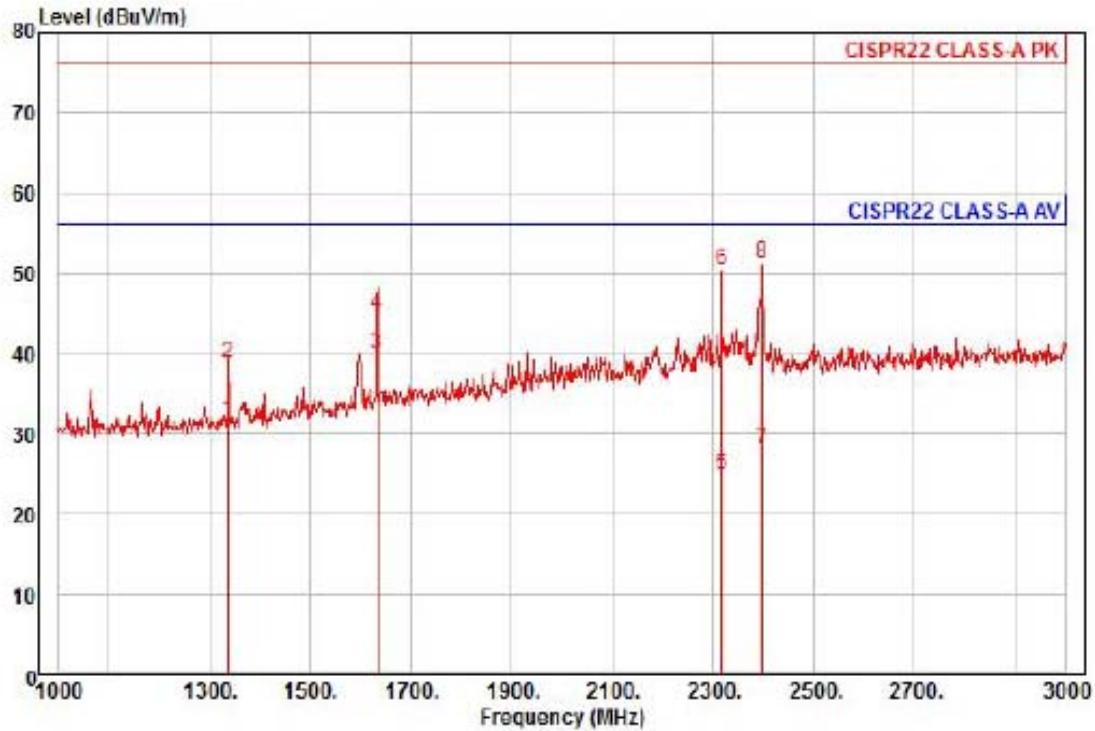
Radiated Electric Field Emissions(Above 1 GHz)

- DC 12 V Mode



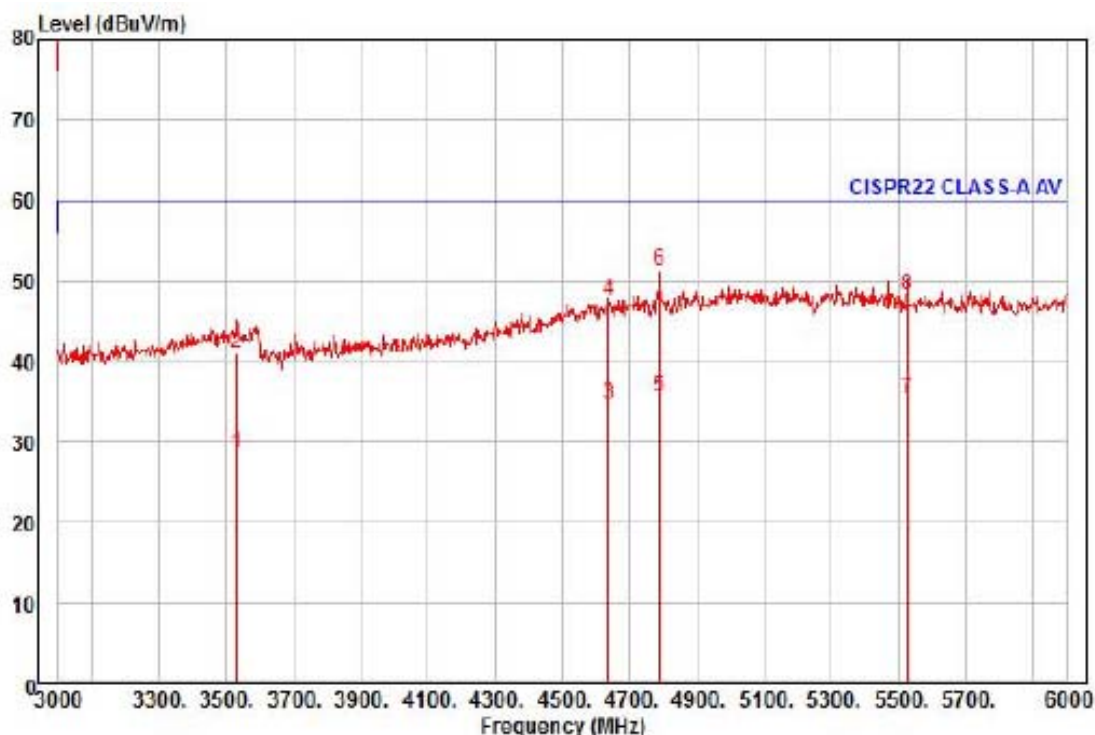
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : DC12V
Memo : 1 ~ 3 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1336.00	37.23	25.24	7.48	39.96	256	56.00	-26.01	horizontal	Average
2	1336.00	45.10	25.24	7.48	39.96	256	76.00	-38.14	horizontal	Peak
3 pp	1634.00	42.58	26.43	8.34	39.81	152	56.00	-18.46	horizontal	Average
4	1634.00	48.03	26.43	8.34	39.81	152	76.00	-33.01	horizontal	Peak
5	1930.00	38.80	27.60	9.16	39.66	123	56.00	-20.10	horizontal	Average
6	1930.00	45.48	27.60	9.16	39.66	123	76.00	-33.42	horizontal	Peak
7	2228.00	36.72	28.44	9.70	39.76	129	56.00	-20.90	horizontal	Average
8 pk	2228.00	46.22	28.44	9.70	39.76	129	76.00	-31.40	horizontal	Peak



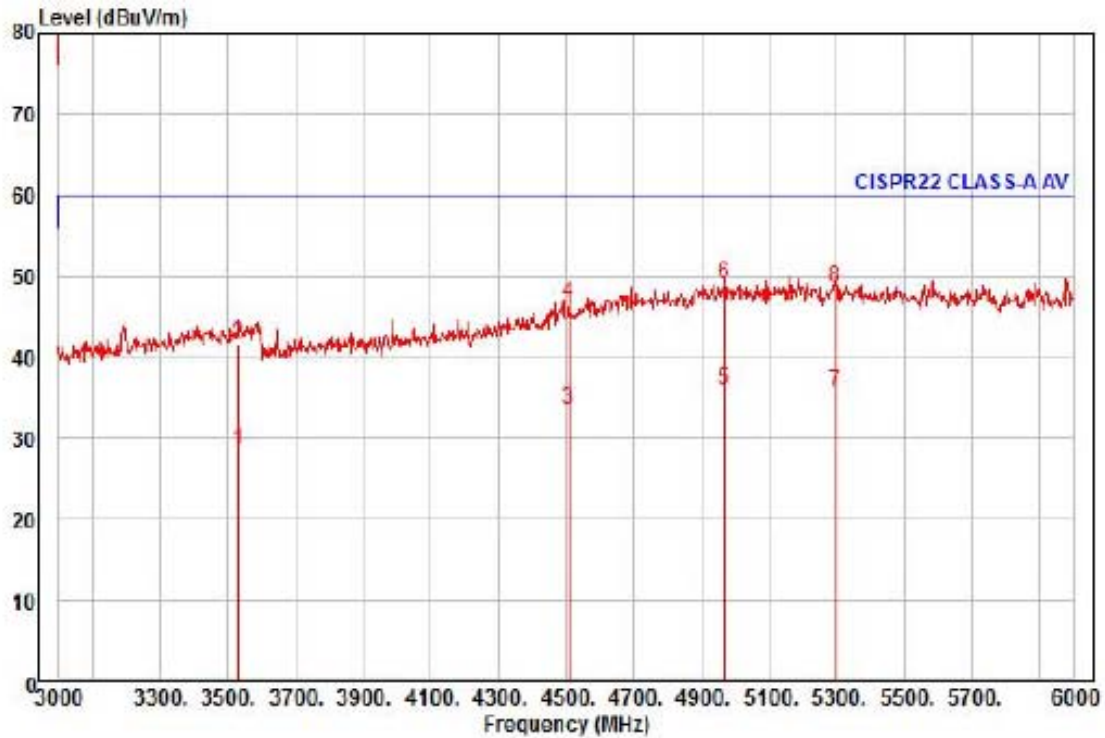
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : DC12V
Memo : 1 ~ 3 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1336.00	38.89	25.24	7.48	39.96	199	56.00	-24.35	vertical	Average
2	1336.00	46.03	25.24	7.48	39.96	199	76.00	-37.21	vertical	Peak
3 pp	1634.00	44.83	26.43	8.34	39.81	133	56.00	-16.21	vertical	Average
4	1634.00	49.91	26.43	8.34	39.81	133	76.00	-31.13	vertical	Peak
5	2318.00	26.15	28.66	9.84	39.81	340	56.00	-31.16	vertical	Average
6	2318.00	51.69	28.66	9.84	39.81	340	76.00	-25.62	vertical	Peak
7	2398.00	29.16	28.86	9.96	39.86	179	56.00	-27.88	vertical	Average
8 pk	2398.00	52.16	28.86	9.96	39.86	179	76.00	-24.88	vertical	Peak



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : DC12V
Memo : 3 ~ 6 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3531.00	25.01	31.22	12.57	40.32	329	60.00	-31.52	horizontal	Average
2	3531.00	37.62	31.22	12.57	40.32	329	80.00	-38.91	horizontal	Peak
3	4638.00	24.64	35.65	14.68	40.41	124	60.00	-25.44	horizontal	Average
4	4638.00	37.65	35.65	14.68	40.41	124	80.00	-32.43	horizontal	Peak
5 pp	4788.00	24.53	36.51	14.95	40.41	255	60.00	-24.42	horizontal	Average
6 pk	4788.00	40.16	36.51	14.95	40.41	255	80.00	-28.79	horizontal	Peak
7	5526.00	23.08	36.66	15.97	40.34	283	60.00	-24.63	horizontal	Average
8	5526.00	35.99	36.66	15.97	40.34	283	80.00	-31.72	horizontal	Peak



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : DC12V
Memo : 3 ~ 6 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3531.00	25.13	31.22	12.57	40.32	0	60.00	-31.40	vertical	Average
2	3531.00	38.21	31.22	12.57	40.32	0	80.00	-38.32	vertical	Peak
3	4509.00	24.62	34.92	14.45	40.41	158	60.00	-26.42	vertical	Average
4	4509.00	37.70	34.92	14.45	40.41	158	80.00	-33.34	vertical	Peak
5 pp	4968.00	23.47	37.54	15.27	40.41	223	60.00	-24.13	vertical	Average
6 pk	4968.00	36.56	37.54	15.27	40.41	223	80.00	-31.04	vertical	Peak
7	5298.00	23.38	37.12	15.68	40.37	236	60.00	-24.19	vertical	Average
8	5298.00	36.12	37.12	15.68	40.37	236	80.00	-31.45	vertical	Peak

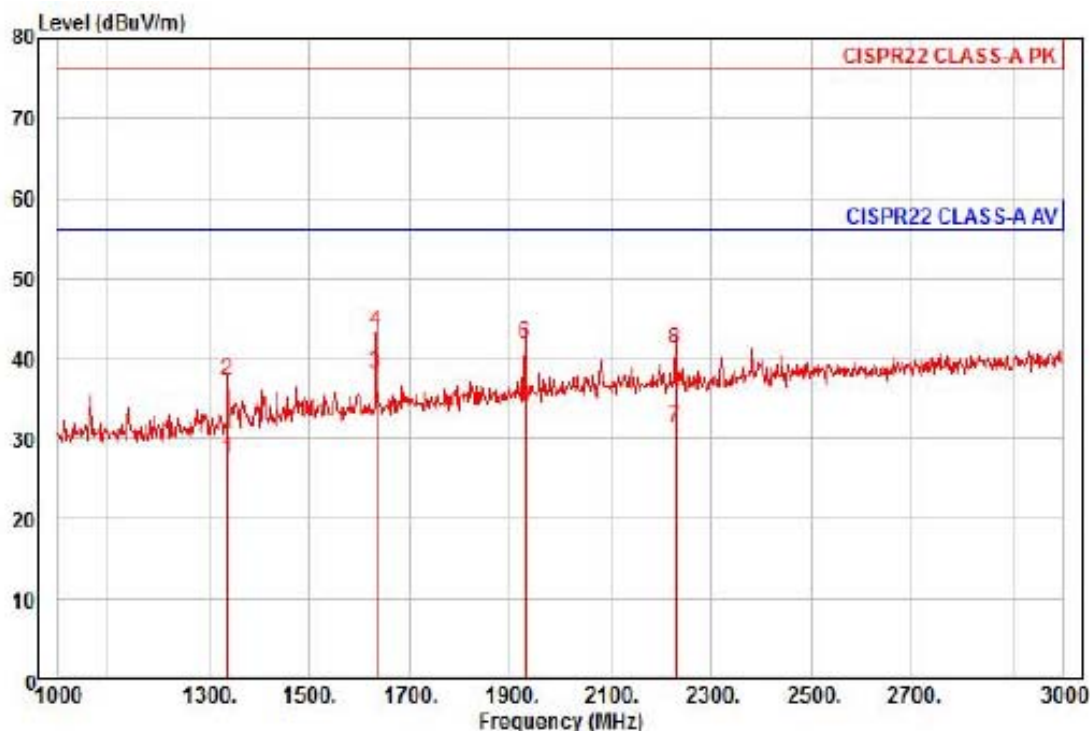


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Test report No.:
KES-E1-16T0321
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- PoE Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : PoE
Memo : 1 ~ 3 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1336.00	34.73	25.24	7.48	39.96	131	56.00	-28.51	horizontal	Average
2	1336.00	44.45	25.24	7.48	39.96	131	76.00	-38.79	horizontal	Peak
3 pp	1634.00	43.17	26.43	8.34	39.81	154	56.00	-17.87	horizontal	Average
4 pk	1634.00	48.34	26.43	8.34	39.81	154	76.00	-32.70	horizontal	Peak
5	1930.00	36.99	27.60	9.16	39.66	119	56.00	-21.91	horizontal	Average
6	1930.00	44.65	27.60	9.16	39.66	119	76.00	-34.25	horizontal	Peak
7	2228.00	33.05	28.44	9.70	39.76	349	56.00	-24.57	horizontal	Average
8	2228.00	42.86	28.44	9.70	39.76	349	76.00	-34.76	horizontal	Peak

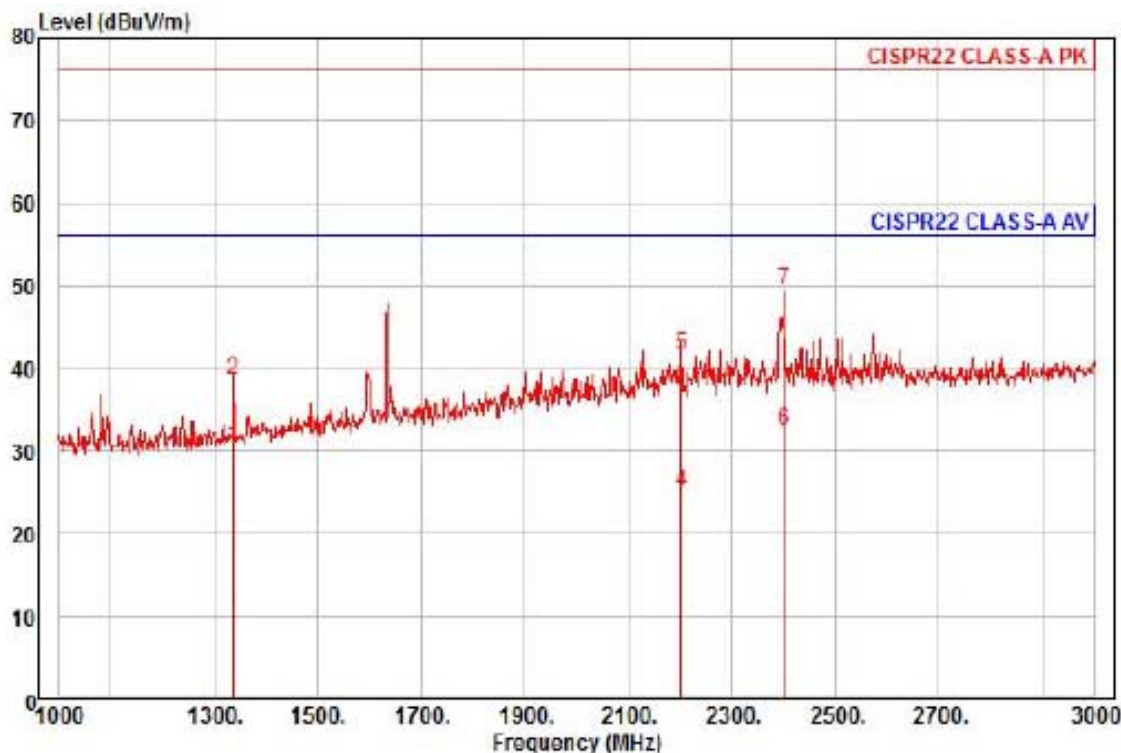
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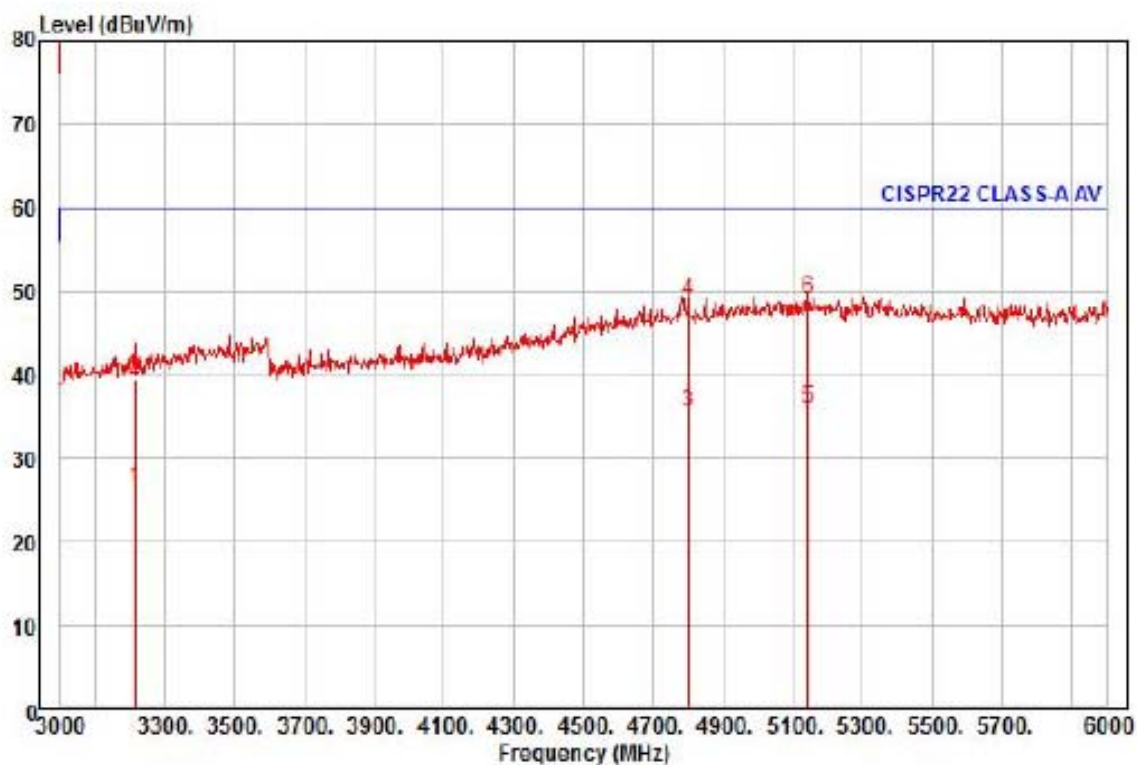
Test report No.:
KES-E1-16T0321
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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : PoE
Memo : 1 ~ 3 GHz

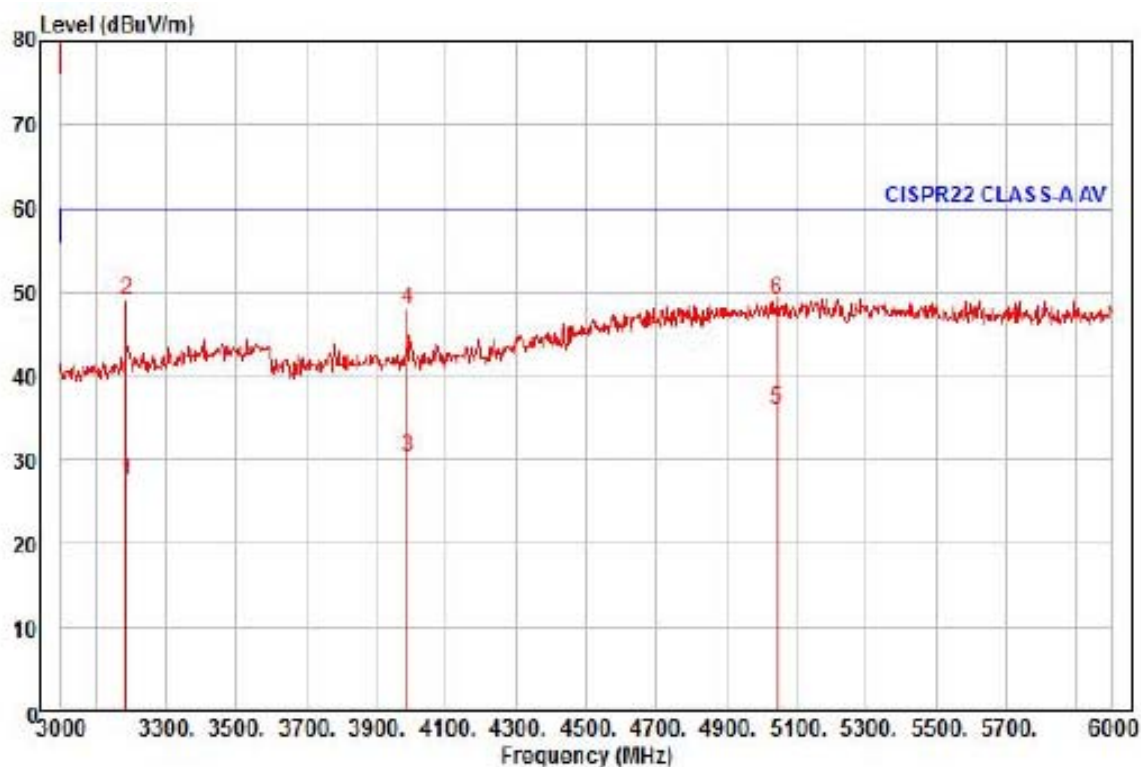
	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1336.00	37.69	25.24	7.48	39.96	18	56.00	-25.55	vertical	Average
2	1336.00	45.82	25.24	7.48	39.96	18	76.00	-37.42	vertical	Peak
3	1634.00	0.00	26.43	8.34	39.81	126	76.00	-81.04	vertical	Peak
4	2202.00	26.75	28.37	9.66	39.75	62	56.00	-30.97	vertical	Average
5	2202.00	43.36	28.37	9.66	39.75	62	76.00	-34.36	vertical	Peak
6 pp	2400.00	33.60	28.86	9.96	39.86	178	56.00	-23.44	vertical	Average
7 pk	2400.00	50.63	28.86	9.96	39.86	178	76.00	-26.41	vertical	Peak

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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : PoE
Memo : 3 ~ 6 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3216.00	24.18	30.69	11.78	40.25	7	60.00	-33.60	horizontal	Average
2	3216.00	37.15	30.69	11.78	40.25	7	80.00	-40.63	horizontal	Peak
3	4800.00	24.35	36.58	14.97	40.41	223	60.00	-24.51	horizontal	Average
4	4800.00	37.66	36.58	14.97	40.41	223	80.00	-31.20	horizontal	Peak
5 pp	5142.00	23.37	37.43	15.50	40.39	310	60.00	-24.09	horizontal	Average
6 pk	5142.00	36.56	37.43	15.50	40.39	310	80.00	-30.90	horizontal	Peak



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : QNO-6070RP
Mode : PoE
Memo : 3 ~ 6 GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3186.00	25.29	30.64	11.70	40.25	37	60.00	-32.62	vertical	Average
2	3186.00	46.95	30.64	11.70	40.25	37	80.00	-30.96	vertical	Peak
3	3990.00	25.19	31.99	13.49	40.41	48	60.00	-29.74	vertical	Average
4	3990.00	42.94	31.99	13.49	40.41	48	80.00	-31.99	vertical	Peak
5 pp	5046.00	23.44	37.63	15.38	40.40	305	60.00	-23.95	vertical	Average
6 pk	5046.00	36.47	37.63	15.38	40.40	305	80.00	-30.92	vertical	Peak



Test Setup Photos and Configuration

Conducted Voltage Emissions

N/A

N/A



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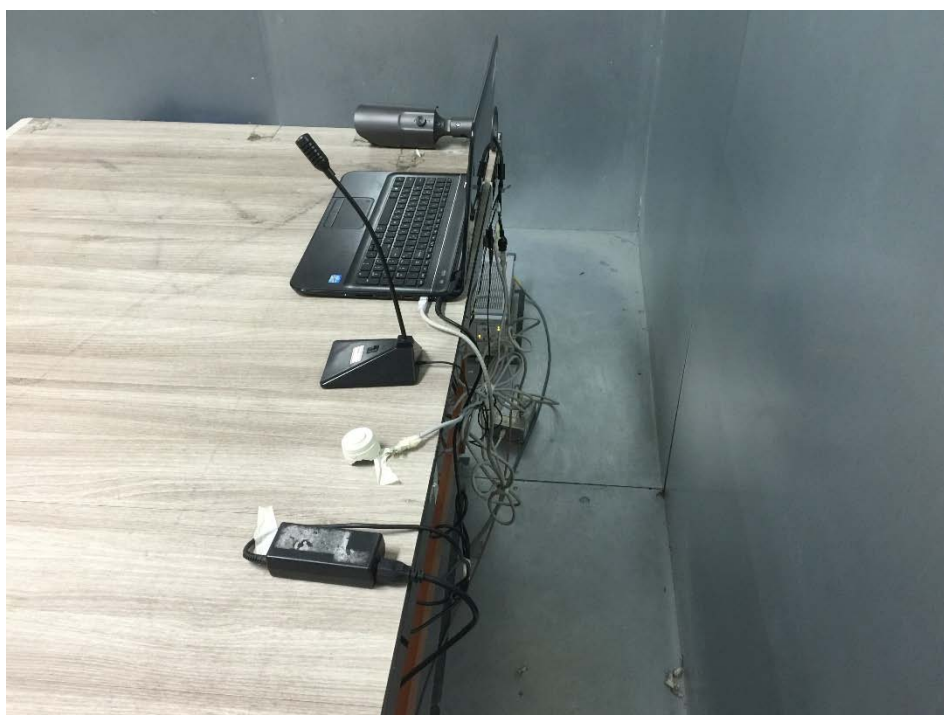
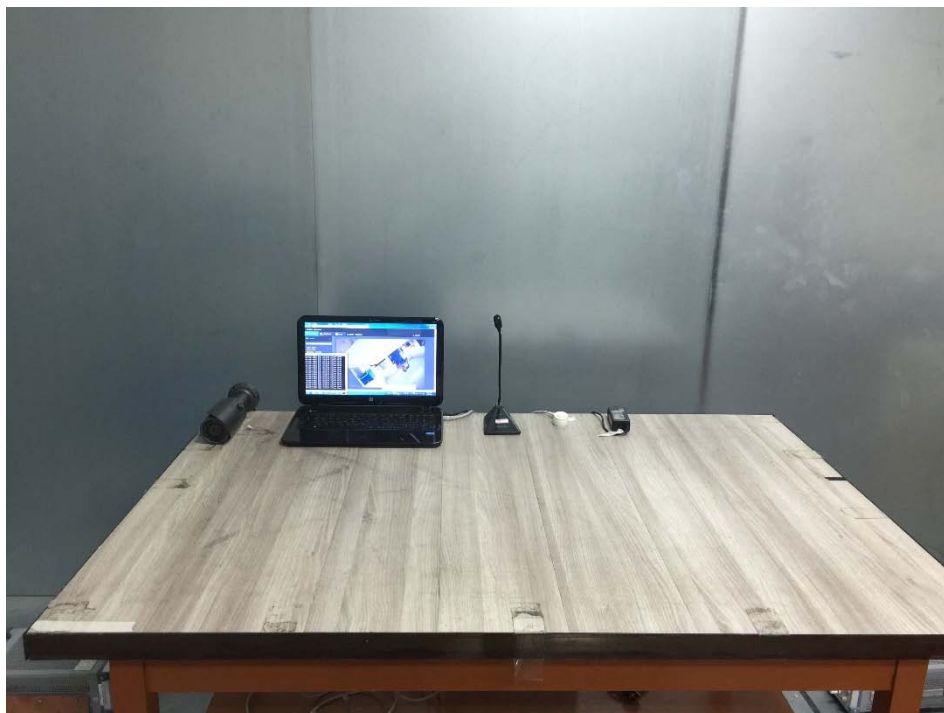
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Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
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Test report No.:
KES-E1-16T0321
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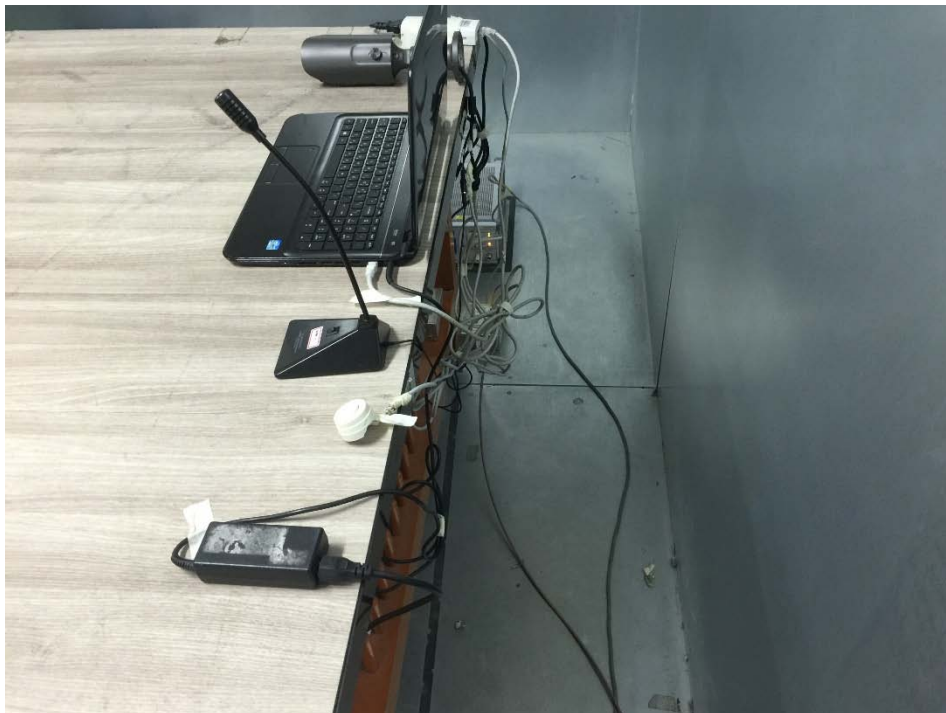
Conducted Telecommunication Emissions

- DC 12 V Mode



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- PoE Mode



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Radiated Electric Field Emissions(Below 1 GHz)

- DC 12 V Mode



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- PoE Mode



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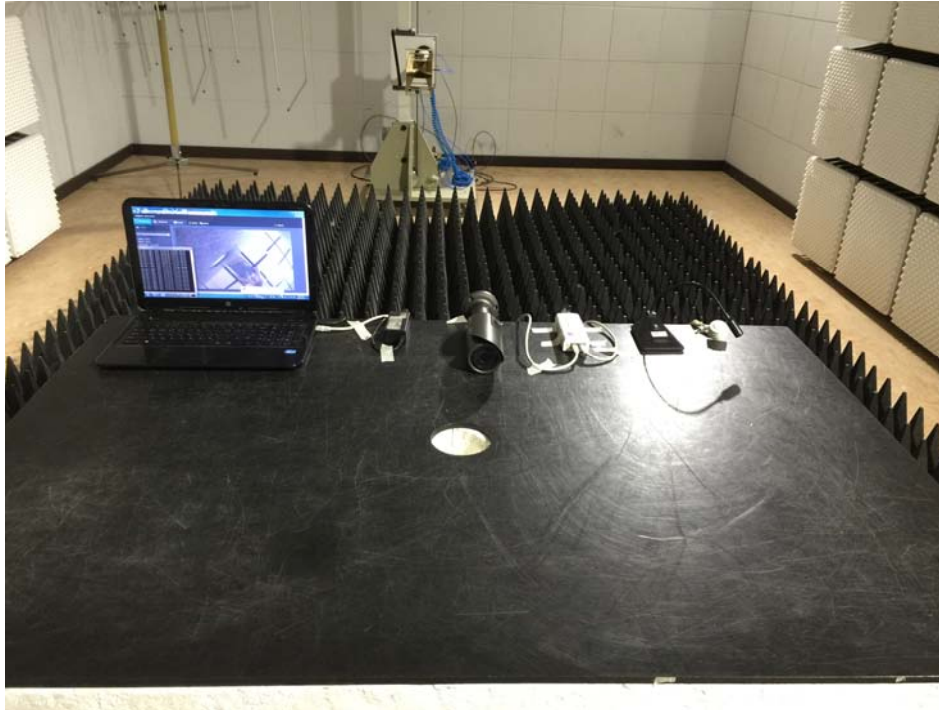
Radiated Electric Field Emissions(Above 1 GHz)

- DC 12 V Mode



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- PoE Mode



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EUT External Photographs

(Top)



(Bottom)



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EUT Internal Photographs

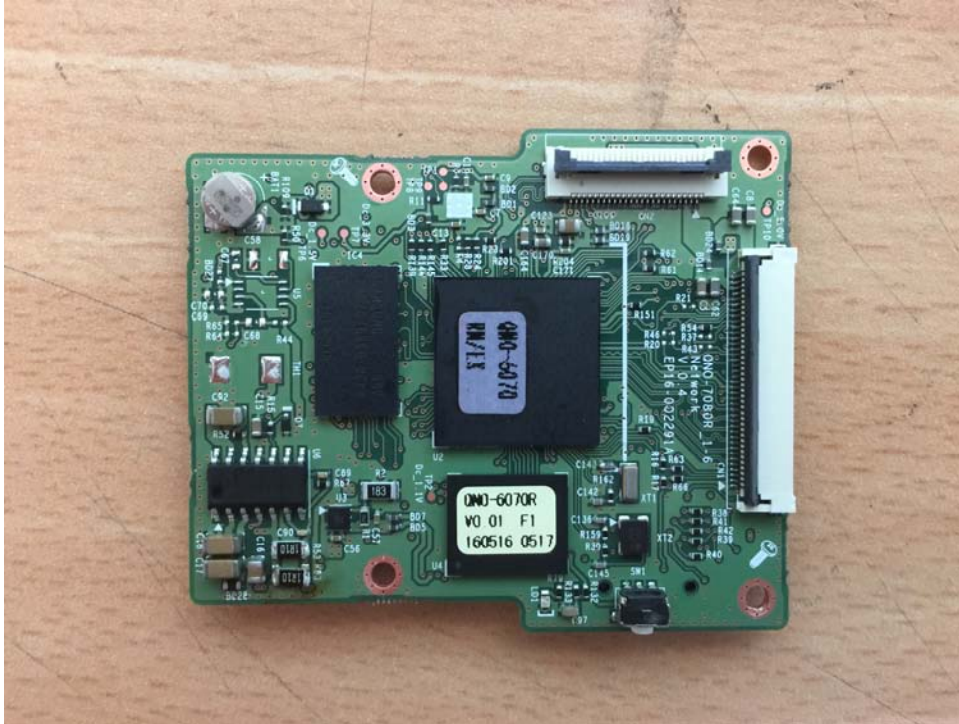
(Internal View)



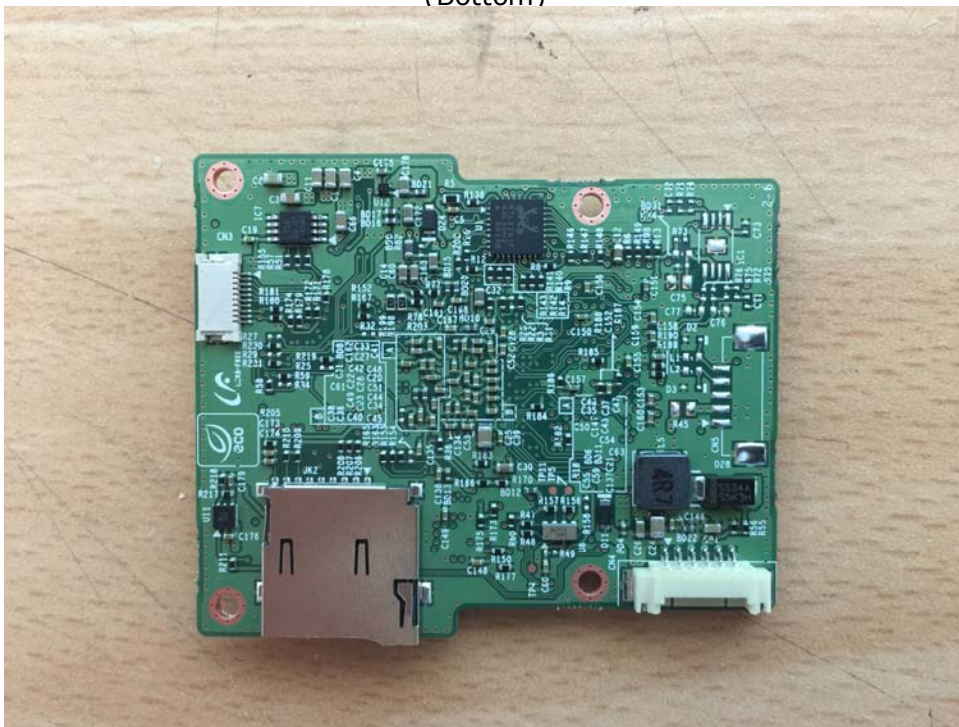
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EUT Internal View – MAIN BOARD

(Top)



(Bottom)



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EUT Internal View – POWER BOARD

(Top)



(Bottom)



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EUT Internal View – SENSOR BOARD

(Top)



(Bottom)



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