

VERIFICATION OF FCC PART 15 COMPLIANCE

*KES hereby verify that the subject product complies with all the
electromagnetic emission specified in the FCC Rule Part 15*

Product Description:	NETWORK CAMERA
Model/Brand Name:	SNB-6011N
Variant Model:	-
FCC Rule Part(s):	FCC 47CFR Part 15 Subpart B Class A Part 15.107(b) & Part 15.109(b)
FCC Procedure:	Verification
Applicant Name:	Samsung Techwin Co., Ltd.
Applicant Address:	84, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
Manufacturer Name:	TIANJIN SANSUNG TECHWIN OPTO- ELECTRONIC CO.,LTD.
Manufacturer Address:	No.11 Weiliu Road. Micro-Electronic Industrial Park Jingang Road Tianjin 300385, China
Test Report Reference No.:	KES-E1-15T0042

NETWORK CAMERA, Model SNB-6011N has been tested in accordance with the measurement procedures specified in FCC 47CFR Part 15 Subpart B class A and has been shown to be complied with the electromagnetic emission limits specified in FCC Rule Part 15 Subpart B class A. A testing of the sample product has been valid for the sample tested based on the reference test report, KES-E1-15T0042

Date of Issue: 02. 26. 2015

Dong Hun, Jang
Technical Manager
Signature:



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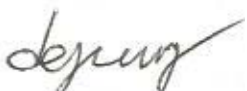
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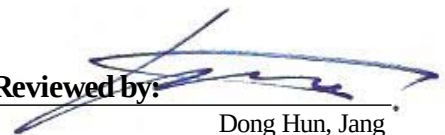
EMI Test Report for FCC

DoC / Verification

Test Report No. : KES-E1-15T0042
Date of Issue : 02. 26. 2015
Description of Product : NETWORK CAMERA
Model No. : SNB-6011N
Variant Model : -
Applicant : Samsung Techwin Co., Ltd.
Applicant's Address : 84, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
Manufacturer : TIANJIN SANSUNG TECHWIN OPTO-ELECTRONIC CO.,LTD
Manufacturer's Address : No.11 Weiliu Road. Micro-Electronic Industrial Park Jingang Road Tianjin 300385, China
Standards : FCC Part 15 Subpart B
- Part 15.107(b) : Conducted Emission
- Part 15.109(b) : Radiated Emission
Date of Receipt : 02.09.2015
Test Date : 02.11.2015
Test Results : ☒ Pass ☐ Fail

The test results relate only to the items tested.

Tested by: 
Dae Jung, Choi
Test Engineer

Reviewed by: 
Dong Hun, Jang
Technical Manager



Testing Laboratories for Safety and RF Compliance
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Testing Laboratories for EMC Compliance
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1. General Information

1.1 Introduction

The EMI Test Report of Information Technology Equipment is prepared on behalf of named applicant in accordance with the ANSI C63.4-2009. The test results reported in this document relate only to the item that was tested.

The detailed description of the measurement facility was found to be in compliance with the requirement of Section 2.948 of the FCC Rules. The Federal Communications Commission has the reports on file and is listed under Registration Number. The scope of the accreditation covers the FCC Method - 47 CFR Part 15 or 18 of the Commission's Rules.

All measurements contained in this report were conducted in accordance with ANSI C63.4-2009. The instrumentation utilized for the measurements conforms with CISPR16 Specification for Radio Disturbance and Immunity Measuring Apparatus and Methods. Some accessories are used to increase sensitivity and prevent overloading of the measuring instrument. Calibration checks are performed yearly on the instruments by a local calibration laboratories.

All radiated and conducted emission measurements are performed manually at KES Co., Ltd. (hereinafter referred to as "KES"), 473-29, Gayeo-ro, Yeosu-si, Gyeonggi-do, 469-803 Korea

The radiated emission measurements required by the FCC Rules were performed on 3 meter or 10 meter, Open Area Test Site, test range maintained by KES. Complete ANSI 63.4-2009 description and site attenuation measurement data records are maintained at the test facility and have been placed on file with the Federal Communications Commission. The power line conducted emission measurements were performed in a shielded enclosure also located at the same facility.

The KES EMC test facilities in Yeosu-si are designated testing laboratory according to ISO/IEC 17025 by Radio Research Agency(RRA), Korea Communications Commission.

1.2 Geographic location



KES Office Latitude : 37°23'54.59"N, Longitude : 126°58'14.66"E



KES OATS Latitude : 37°13'58.03"N, Longitude : 127°37'21.95"E

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1.3 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.	
KOREA	KCC	EMC (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site)	 KR0100
Canada	IC	3 & 10 meter Open Area Test Sites and one conducted site	 4769B-1
Europe	TUV_SUD	EMC EN 55011, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 55014-1, EN 61326 EN 50130-4, EN 55024, EN 55014-2 EN 61204-3, EN 60601-1-2, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11	

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1.4 Product Description

Samsung Techwin Co., Ltd., NETWORK CAMERA, Model No: SNB-6011N or the "E.U.T".

Main Specifications of EUT are

Video	
Imaging Device	1/2.8" PS 2.38M CMOS
Total Pixels	1952(H) x 1116(V)
Effective Pixels	1944(H) x 1104(V)
Scanning System	Progressive
Min. Illumination(50IRE)	Color : 0.3Lux (1/30sec, F2.0, 50IRE)
S / N Ratio	-
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for installation - DIP connector type
Lens	
Focal Length (Zoom Ratio)	2.4mm
Max. Aperture Ratio	2
Angular Field of View	H : 134.3° / V : 70.9°
Min. Object Distance	0.3m
Focus Control	-
Lens Type	-
Mount Type	RJ-12 connected with main unit
Operational	
Camera Title	Off / On (Displayed up to 45 characters)
Day & Night	Auto(S/W) / Color / B/W / Schedule
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Samsung Super Dynamic Range)
Digital Noise Reduction	SSNR3 (2D + 3D noise filter)(Off/On)
Digital Image Stabilization	Off / On
Defog	Off / Auto / Manual
Motion Detection	Off / On (4ea 4 Points Polygonal zones)
Privacy Masking	Off / On (32 Zones with 4 Points of Polygonal)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	-
Flip / Mirror	Off / On
Intelligent Video Analytics	Tampering, Virtual Line, Enter/Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea
Serial Interface	-
Alarm Triggers	Motion detection, Alarm Input, Video Analytics, Network Disconnection
Alarm events	File upload via FTP and E-Mail Notification via E-Mail local storage(SD/SDHC/SDXC) or NAS recording at Event (Alarm Triggers) External output

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Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264 (MPEG-4 Part 10/AVC), Motion JPEG
Resolution	1920x1080 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 800x450 / 640x480 / 640x360 / 320x240 / 320x180
Max. Framerate	H.264 : Max. 30fps at all resolutions MJPEG : 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768 : Max. 15fps 800 x 600, 800 x 450, 640 x 480, 640 x 360, 320 x 240, 320 x 180 : Max. 30fps
Smart Codec	-
Video Quality Adjustment	H.264 : Compression Level, Target Bitrate Level Control MJPEG : Quality Level Control
Bitrate Control Method	H.264 : CBR or VBR Motion JPEG : VBR
Streaming Capability	Multiple Streaming (Up to 10 Profiles)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL, 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
Streaming Method	Unicast / Multicast
Max. User Access	15 users at Unicast Mode
Memory Slot	Micro SD/SDHC/SDXC - motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded.
Application Programming Interface	ONVIF Profile S HTTP API(SUNAPI) 2.0 SVNP 1.2
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek, Finnish, Norwegian
Web Viewer	- Supported OS : Windows XP / VISTA / 7 / 8 / 8.1, MAC OS X 10.7 - Supported Browser : Microsoft Internet Explorer (Ver. 11 ~ 8) Mozilla Firefox (Ver. 19 ~ 9) ※ Windows Only Google Chrome (Ver. 25 ~ 15) ※ Windows Only Apple Safari (Ver. 6.0.2(Mac OS X 10.8, 10.7only), 5.1.7) ※ Mac OS X only
Central Management Software	SmartViewer, SSM

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Environmental	
Operating Temperature / Humidity	-10°C ~ +55°C(+14°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Electrical	
Input Voltage / Current	DC12V, PoE(IEEE802.3af)
Power Consumption	PoE : 7.5W DC12V : 6.5W
Mechanical	
Color / Material	Camera Unit : Black / Plastic Main Unit : Ivory / Plastic
Dimension (WxHxD)	Camera Header : Φ24×50mm Main unit : W121.2xH28xD76mm
Weight	Camera Header (Include Cable) : 315g Main unit : 290g

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1.5 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	SNB-6011N	-	TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD	EUT

1.6 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Switching Adapter 1	ADS-30SI-12-2 12022GN	-	SHENZHEN HONOR ELECTRONIC CO., LTD	-
POE Switch	PD3001GC/AC	RD93560820169 64200	Power Dsine	-
Notebook	RT3290LE	5CD242B043	HP	-
Switching Adapter 2	Series PPP009L-E	WCNWVOA3U 3G31S	LITE-ON TECHNOLOGY (CHANGZHOU) Co., Ltd.	-
Monitor	SMT-2232	C95V67VF9000 15Y	Weihai Daewoo Electronics Co., Ltd.	-
JIG	-	-	-	-
Micro SD Card	-	-	-	-

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1.7 External I/O Cabling

- 12 V (dc)

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA	Power	Switching Adapter 1	Power	1.2	Unshielded
	Camera	CAMERA (EUT)	Camera	8.0	Unshielded
	BNC	Monitor	BNC	5.0	Unshielded
	Alarm	JIG	Alarm	3.5	Unshielded
	Micro SD	Micro SD Card	Micro SD	-	-
	LAN(RJ-45)	Notebook	LAN(RJ-45)	4.0	Unshielded

- PoE

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA	Camera	CAMERA (EUT)	Camera	8.0	Unshielded
	BNC	Monitor	BNC	5.0	Unshielded
	Alarm	JIG	Alarm	3.5	Unshielded
	Micro SD	Micro SD Card	Micro SD	-	-
	LAN(PoE)	POE Switch	LAN(PoE)	5.0	Unshielded
	LAN(RJ-45)	Notebook	LAN(RJ-45)	4.0	Unshielded

1.8 Special Accessories

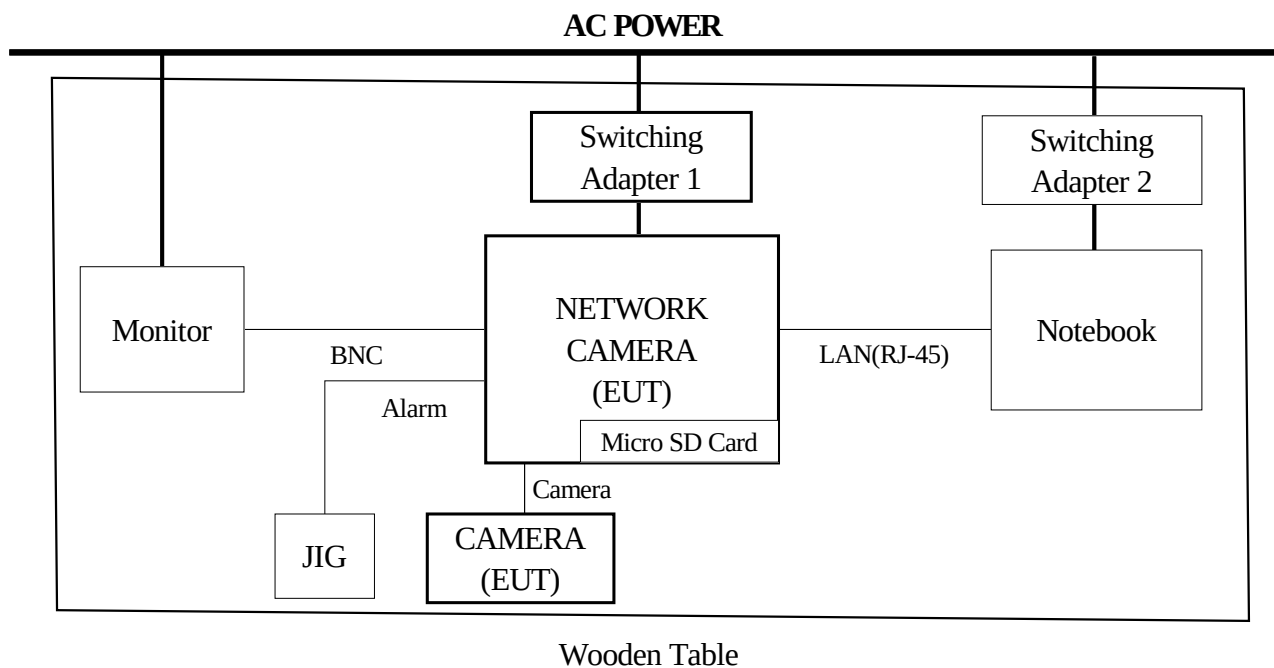
As shown in section 1.10, all interface cables used for compliance testing are shielded as normally supplied or by use respective component manufacturers.

1.9 E.U.T Modifications

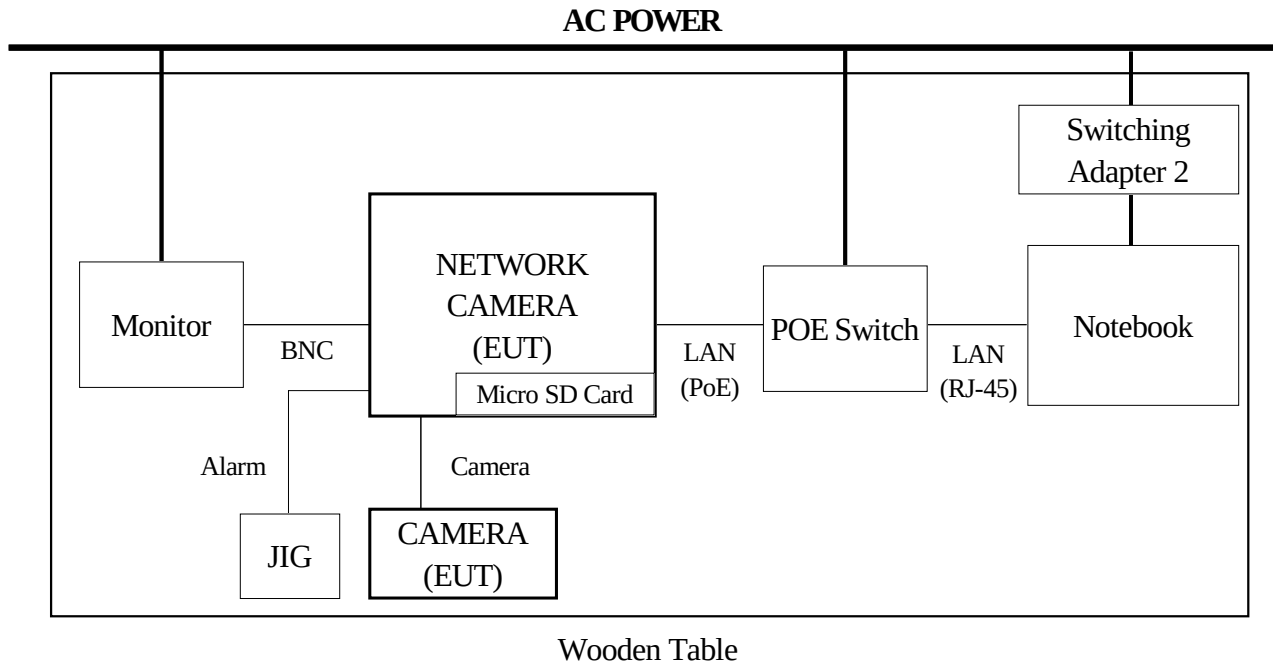
No modifications were made to the E.U.T in order to achieve and maintain compliance to the standards described in this report.

1.10 Configuration of Test System

- 12 V (dc)



- **PoE**



※ Test Operating Mode

- Ping test
- web view monitoring
- Alarm test
- Monitor monitoring

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2. Summary of Tests

FCC Part Section(s)	Parameter	Test Condition	Status (note 1)
15.109(b)	Emission limits	Radiated	C
15.107(b)	Conducted limits	Conducted	N/A

Note 1 : C=Complies N/C=Not Complies N/T=Not Tested N/A=Not Applicable

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2.1 Conducted Emission Measurements

2.1.1 Test Methods

The power line conducted emission measurements were performed in a shielded enclosure, using the setup in accordance with ANSI C63.4-2009 conducted emission measurement procedure.

2.1.2 Test Equipments

Description	Manufacturer	Model Number	Serial Number	Cal. Due
EMI Receiver/Signal Analyzer	Narda S.T.S / PMM	PMM 9010F	020WW31006	04. 04. 2015
LISN	R&S	ENV216	101137	02. 10. 2016
LISN	EMCO	3810/2	2228	02. 21. 2015
Electro wave Shieldroom	SEMITEC	-	-	-

2.1.3 Test Environments

Ambient Temperatures	Relative Humidity
-	-

2.1.4 Test Limits

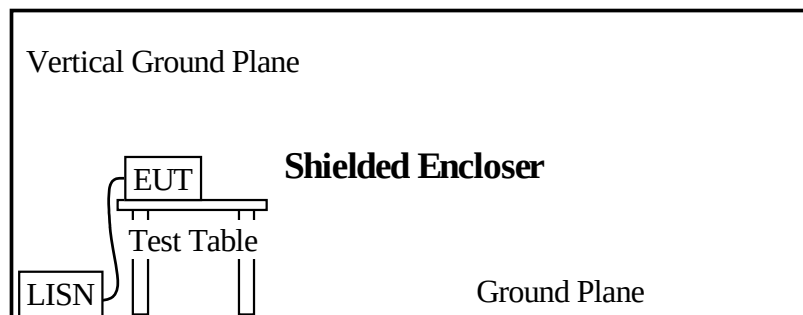
Frequency (MHz)	15.107 Conducted limits			
	Class B (dB μ V)		Class A (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.50	66.0 to 56.0	56.0 to 46.0	79.0	66.0
0.50 to 5.00	56.0	46.0	73.0	60.0
5.00 to 30.00	60.0	50.0	73.0	60.0

2.1.5 Test Procedure

Conducted emission levels were measured on each current-carrying line with the EMI TEST Receiver operating in the CISPR quasi-peak mode (or peak mode if applicable). The Receiver's 6 dB bandwidth was set to 9 kHz. The initial step in collecting conducted data is a EMI TEST Receiver peak scan of the measurement range. If the conducted emission exceed the average limit with the instrument set to the quasi-peak mode, the measurements are made in the average mode. The emission spectrum was scanned from 150 kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded. Quasi-peak readings are distinguished with a "QP".

The conducted emission test was performed with the E.U.T exercise program loaded, and the emissions were scanned between 150 kHz to 30 MHz on the HOT side and NEUTRAL side, herein referred to as H and N, respectively.

2.1.6 Test Configuration



2.1.7 Test Results

N/A : This E.U.T operate by 12 V (dc) and PoE power.



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2.1.8 Test Data

Temperature: °C Humidity: % R.H. Test Date: Tested by:
Polarization: HOT

N/A

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Polarization: NEUTRAL

N/A

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2.2 Radiated Emission Measurements

2.2.1 Test Methods

The radiated emission measurements were performed in a Open Area Test Site (OATS) and 3 m full chamber, using the setup in accordance with ANSI C63.4-2009 radiated emission measurement procedure.

2.2.2 Test Equipments

Description	Manufacturer	Model Number	Serial Number	Cal. Due
EMI TEST Receiver	R & S	ESVS10	826008/014	04. 04. 2015
Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-385	05. 09. 2015
OATS	KES	-	-	-
Antenna Mast	DAEIL EMC	-	-	-
Turn Table	DAEIL EMC	-	-	-
EMI TEST Receiver	R & S	ESR7	101190	08. 13. 2015
PREAMPLIFIER	8449B	H.P	3008A00538	07. 23. 2015
Double Ridged Horn Antenna	A-H-SYSTEM,INC	SAS-571	781	05. 13. 2015
RS Chamber (EMI 18GHz)	SEMITEC	-	-	-
Antenna Mast	AUDIX	-	-	-
Turn Table	AUDIX	-	-	-

2.2.3 Test Environments

Ambient Temperatures	Relative Humidity
see the data	see the data

2.2.4 Test Limits

Frequency (MHz)	15.109 Radiated emission limits			
	Class B @ 3 m		Class A @ 10 m	
	(dB μ V/m)	(μ V/m)	(dB μ V/m)	(μ V/m)
30 to 88	40.0	100	39.0	90
88 to 216	43.5	150	43.5	150
216 to 960	46.0	200	46.4	210
above 960	54.0	500	49.5	300

Frequency (MHz)	CISPR Publication 22			
	Class B @ 3 m (dB μ V/m)		Class A @ 3 m (dB μ V/m)	
	PK	AV	PK	AV
above 1 000	74	54	80	60

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2.2.5 Test Procedure

Before final measurements of radiated emission were made at the OATS, the E.U.T was scanned in semi-anechoic chamber in order to determine its emission spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the E.U.T's emission in amplitude, direction and frequency. This process was repeated during final radiated emission measurements at the OATS range, at each frequency, in order to ensure that maximum emissions amplitudes were attained.

The radiated emission test was performed with E.U.T exercise program loaded, and the emissions were scanned between 30 MHz to 1 000 MHz using a R&S ESVS10 EMI TEST Receiver and 1 000 MHz to 6 000 MHz using a spectrum analyzer. The EMI TEST Receiver's 6 dB bandwidth was set to 120 kHz and 1 MHz, and EMI TEST Receiver was operated in the CISPR quasi-peak detection mode. At each frequency, the E.U.T was rotated 360 degrees, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum emission levels. Measurements were taken using both HORIZONTAL and VERTICAL antenna polarization, herein referred to as H and V, respectively.

- above 1 GHz : Antenna height is fixed to 1.00 m

2.2.6 Field Strength Calculation

F.S = Field Strength

M.R = Meter Reading

A.F = Antenna Factor

C.L = Cable Loss

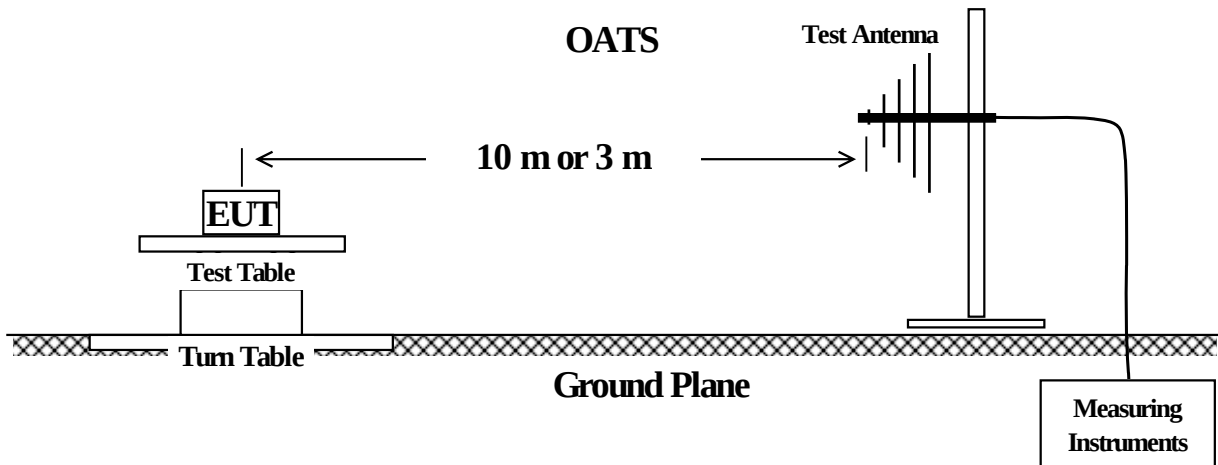
A.G= Amplifier Gain

* Below 1 GHz : $F.S(dB\mu V/m) = M.R(dB\mu V) + [A.F(dB/m) + C.L(dB)]$

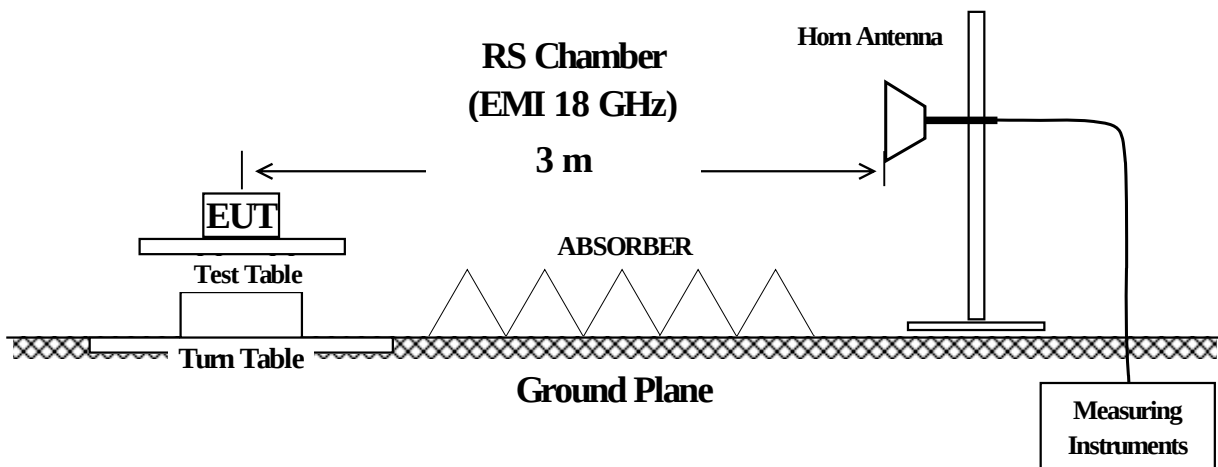
* Above 1 GHz : $F.S(dB\mu V/m) = M.R(dB\mu V) + [A.F(dB/m) + C.L(dB)] - A.G(dB)$

2.2.7 Test Configuration

* Below 1 GHz



* Above 1 GHz





2.2.8 Test Results

Below 1 GHz : According to the data in section 2.2.9, the E.U.T complied with the FCC 15.109 limits.

Above 1 GHz :According to the data in section 2.2.9, the E.U.T complied with the CISPR22 standards.

2.2.9 Test Data

* Below 1 GHz

- 12 V (dc)

Temperature: 9.0 °C Humidity: 39.0 % R.H. Test Date: 02. 11. 2015 Tested by: Dae Jung Choi

Frequency (MHz)	Amplitude (dB μ V/m)	Antenna		Correction Factor		Corrected Amplitude (dB μ V/m)	Applicable Limit (dB μ V/m)	Margin (dB)
		Polar. (H/V)	Height (m)	Ant. (dB)	Cable (dB)			
48.310	18.300	V	1.000	13.610	1.580	33.490	39.000	5.510
51.273	19.000	V	1.000	13.580	1.640	34.220	39.000	4.780
445.612	15.800	H	2.800	16.570	5.490	37.860	46.400	8.540
519.735	15.300	H	3.580	18.120	6.040	39.460	46.400	6.940
519.741	14.700	V	1.100	18.120	6.040	38.860	46.400	7.540
666.159	11.300	V	1.000	20.420	7.050	38.770	46.400	7.630
666.173	11.500	H	3.250	20.420	7.050	38.970	46.400	7.430

- PoE

Temperature: 9.0 °C Humidity: 39.0 % R.H. Test Date: 02. 11. 2015 Tested by: Dae Jung Choi

Frequency (MHz)	Amplitude (dB μ V/m)	Antenna		Correction Factor		Corrected Amplitude (dB μ V/m)	Applicable Limit (dB μ V/m)	Margin (dB)
		Polar. (H/V)	Height (m)	Ant. (dB)	Cable (dB)			
48.318	20.500	V	1.000	13.610	1.580	35.690	39.000	3.310
51.281	20.300	V	1.000	13.570	1.640	35.510	39.000	3.490
445.623	16.100	H	2.650	16.570	5.490	38.160	46.400	8.240
445.626	15.400	V	1.000	16.570	5.490	37.460	46.400	8.940
519.741	15.700	H	3.200	18.120	6.040	39.860	46.400	6.540
519.745	16.300	V	1.000	18.120	6.040	40.460	46.400	5.940
668.198	12.100	H	1.650	20.440	7.060	39.600	46.400	6.800



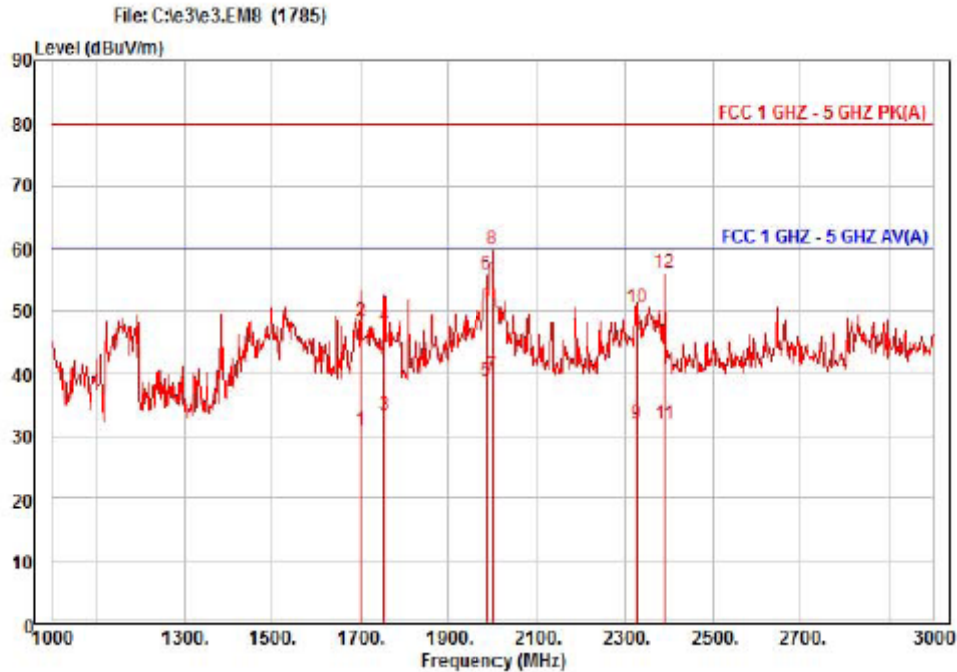
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* Above 1 GHz - 12 V (dc)

Temperature: 22.0 °C Humidity: 37.6 % R.H. Test Date: 02. 11. 2015 Tested by: Dae Jung Choi



Site : chamber
Condition: FCC 1 GHZ - 5 GHZ PK(A) 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : 12 V(dc)
Memo : (1 - 3) GHz

	Read	Ant	Cable	Preamp	TPos	Limit	Over		
	Freq	Level	Factor	Loss	Factor	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB	
1	1702.00	32.45	26.30	7.14	35.03	30	60.00	-29.14	horizontal Average
2	1702.00	49.99	26.30	7.14	35.03	30	80.00	-31.60	horizontal Peak
3	1754.00	34.50	26.63	7.26	34.94	28	60.00	-26.55	horizontal Average
4	1754.00	48.70	26.63	7.26	34.94	28	80.00	-32.35	horizontal Peak
5	1988.00	37.38	28.11	7.83	34.55	35	60.00	-21.23	horizontal Average
6	1988.00	54.46	28.11	7.83	34.55	35	80.00	-24.15	horizontal Peak
7 av	2002.00	38.18	28.19	7.86	34.53	125	60.00	-20.30	horizontal Average
8 pp	2002.00	58.31	28.19	7.86	34.53	125	80.00	-20.17	horizontal Peak
9	2326.00	28.71	28.89	8.54	34.31	213	60.00	-28.17	horizontal Average
10	2326.00	47.48	28.89	8.54	34.31	213	80.00	-29.40	horizontal Peak
11	2390.00	28.46	29.02	8.68	34.26	43	60.00	-28.10	horizontal Average
12	2390.00	52.72	29.02	8.68	34.26	43	80.00	-23.84	horizontal Peak

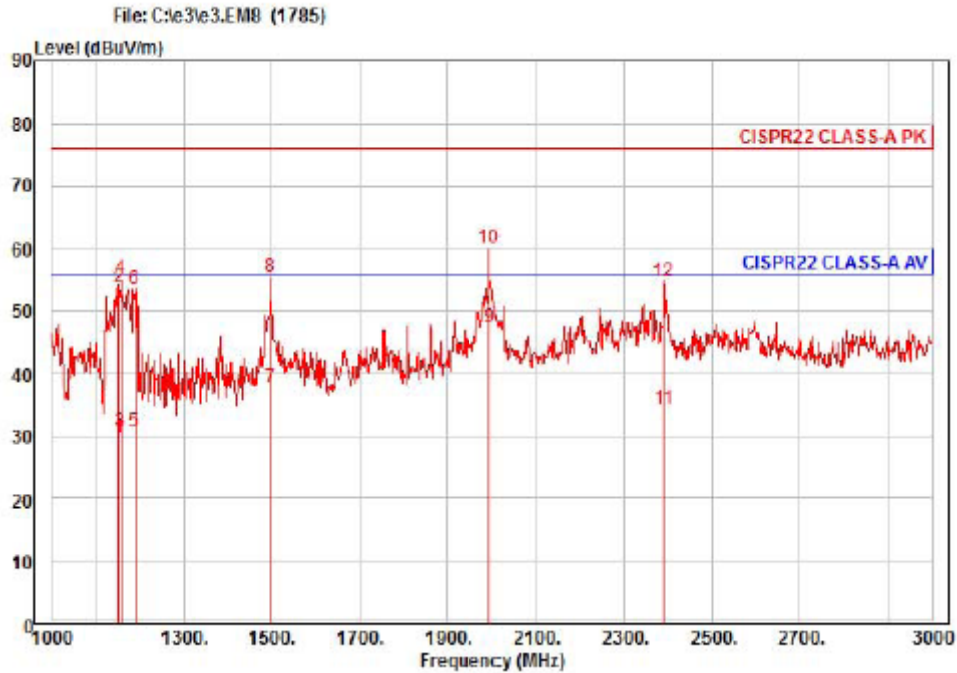
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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011P
Mode : 12 V(dc)
Memo : (1 - 3) GHz

	Read	Ant	Cable	Preamp	TPos	Limit	Over		
Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1152.00	36.27	23.61	5.81	35.95	20	56.00	-26.26	vertical Average
2	1152.00	60.15	23.61	5.81	35.95	20	76.00	-22.38	vertical Peak
3	1158.00	37.04	23.63	5.82	35.94	10	56.00	-25.45	vertical Average
4	1158.00	61.71	23.63	5.82	35.94	10	76.00	-20.78	vertical Peak
5	1188.00	36.88	23.75	5.89	35.89	8	56.00	-25.37	vertical Average
6	1188.00	59.63	23.75	5.89	35.89	8	76.00	-22.62	vertical Peak
7	1498.00	41.41	25.01	6.65	35.37	57	56.00	-18.30	vertical Average
8	1498.00	59.23	25.01	6.65	35.37	57	76.00	-20.48	vertical Peak
9 pp	1998.00	45.89	28.18	7.86	34.53	245	56.00	-8.60	vertical Average
10 pk	1998.00	58.60	28.18	7.86	34.53	245	76.00	-15.89	vertical Peak
11	2390.00	30.91	29.02	8.68	34.26	319	56.00	-21.65	vertical Average
12	2390.00	51.28	29.02	8.68	34.26	319	76.00	-21.28	vertical Peak

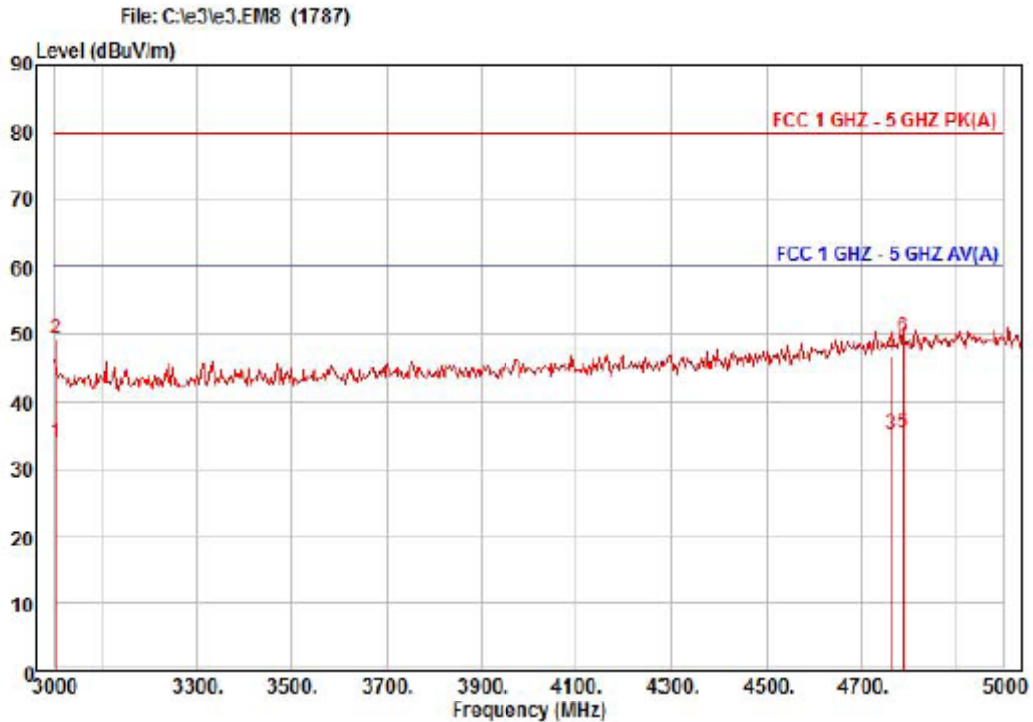
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Site : chamber
Condition: FCC 1 GHz - 5 GHz PK(A) 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : 12 V(dc)
Memo : (3 - 5) GHz

	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	3003.00	27.51	30.25	9.96	33.84	218	60.00	-26.12	horizontal	Average
2	3003.00	42.87	30.25	9.96	33.84	218	80.00	-30.76	horizontal	Peak
3	4764.00	22.89	32.93	12.78	33.63	69	60.00	-25.03	horizontal	Average
4	4764.00	34.83	32.93	12.78	33.63	69	80.00	-33.09	horizontal	Peak
5	4788.00	23.15	33.01	12.82	33.58	253	60.00	-24.60	horizontal	Average
6	4788.00	37.31	33.01	12.82	33.58	253	80.00	-30.44	horizontal	Peak

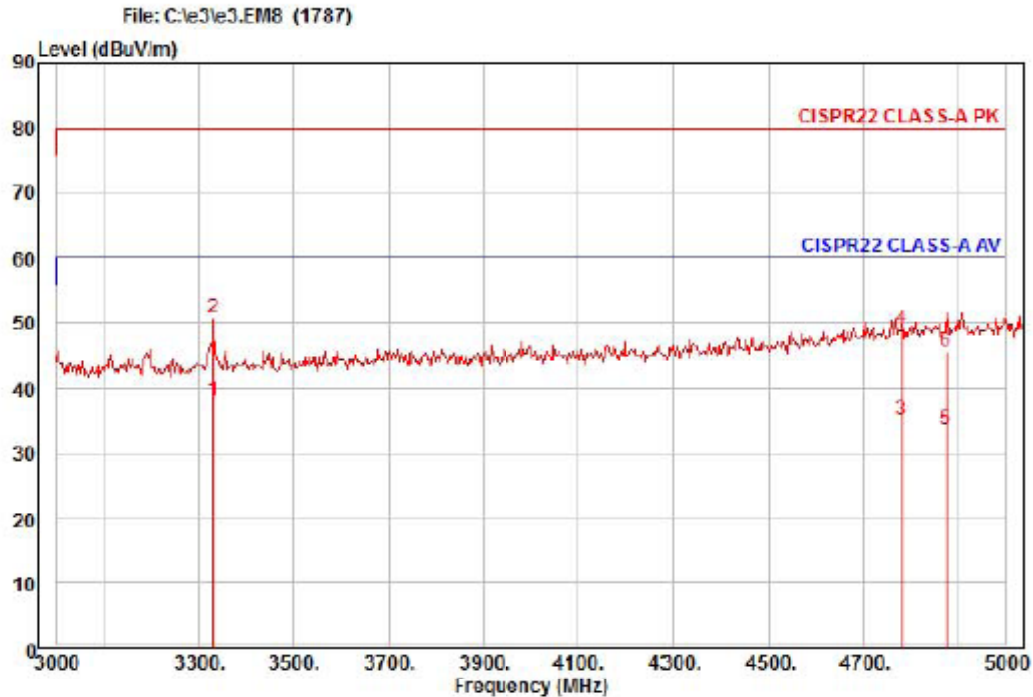
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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : 12 V(dc)
Memo : (3 - 5) GHz

		Read	Ant	Cable	Preamp	TPos	Limit	Over		
	Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3330.00	31.46	30.37	10.47	34.21	194	60.00	-21.91	vertical	Average
2	3330.00	44.07	30.37	10.47	34.21	194	80.00	-29.30	vertical	Peak
3	4782.00	22.97	32.99	12.81	33.59	181	60.00	-24.82	vertical	Average
4	4782.00	36.89	32.99	12.81	33.59	181	80.00	-30.90	vertical	Peak
5	4875.00	20.64	33.31	12.96	33.43	73	60.00	-26.52	vertical	Average
6	4875.00	32.86	33.31	12.96	33.43	73	80.00	-34.30	vertical	Peak

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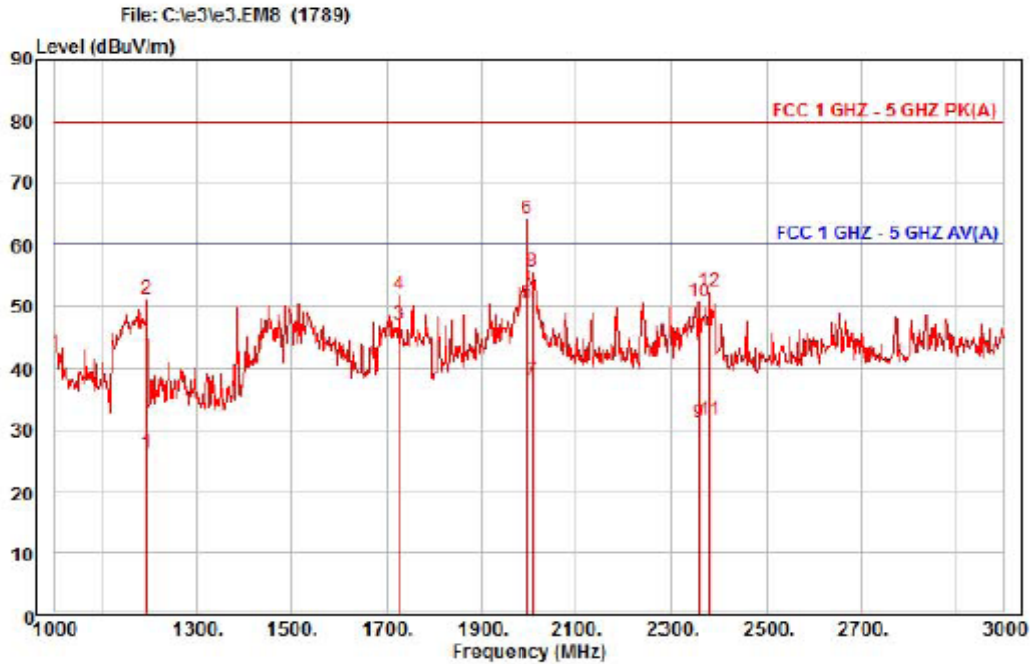
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- PoE

Temperature: 22.0 °C Humidity: 37.6 % R.H. Test Date: 02. 11. 2015 Tested by: Dae Jung Choi



Site : chamber
Condition: FCC 1 GHZ - 5 GHZ PK(A) 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : PoE
Memo : (1 - 3) GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamplifier	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1194.00	32.49	23.78	5.91	35.88	336	60.00	-33.70	horizontal	Average
2	1194.00	57.42	23.78	5.91	35.88	336	80.00	-28.77	horizontal	Peak
3	1728.00	48.45	26.47	7.20	34.98	30	60.00	-12.86	horizontal	Average
4	1728.00	53.30	26.47	7.20	34.98	30	80.00	-28.01	horizontal	Peak
5 pp	1998.00	49.08	28.18	7.86	34.53	225	60.00	-9.41	horizontal	Average
6 pk	1998.00	62.71	28.18	7.86	34.53	225	80.00	-15.78	horizontal	Peak
7	2010.00	36.35	28.21	7.88	34.52	101	60.00	-22.08	horizontal	Average
8	2010.00	54.01	28.21	7.88	34.52	101	80.00	-24.42	horizontal	Peak
9	2358.00	27.85	28.96	8.61	34.28	26	60.00	-28.86	horizontal	Average
10	2358.00	47.43	28.96	8.61	34.28	26	80.00	-29.28	horizontal	Peak
11	2380.00	28.13	29.00	8.66	34.27	43	60.00	-28.48	horizontal	Average
12	2380.00	49.05	29.00	8.66	34.27	43	80.00	-27.56	horizontal	Peak

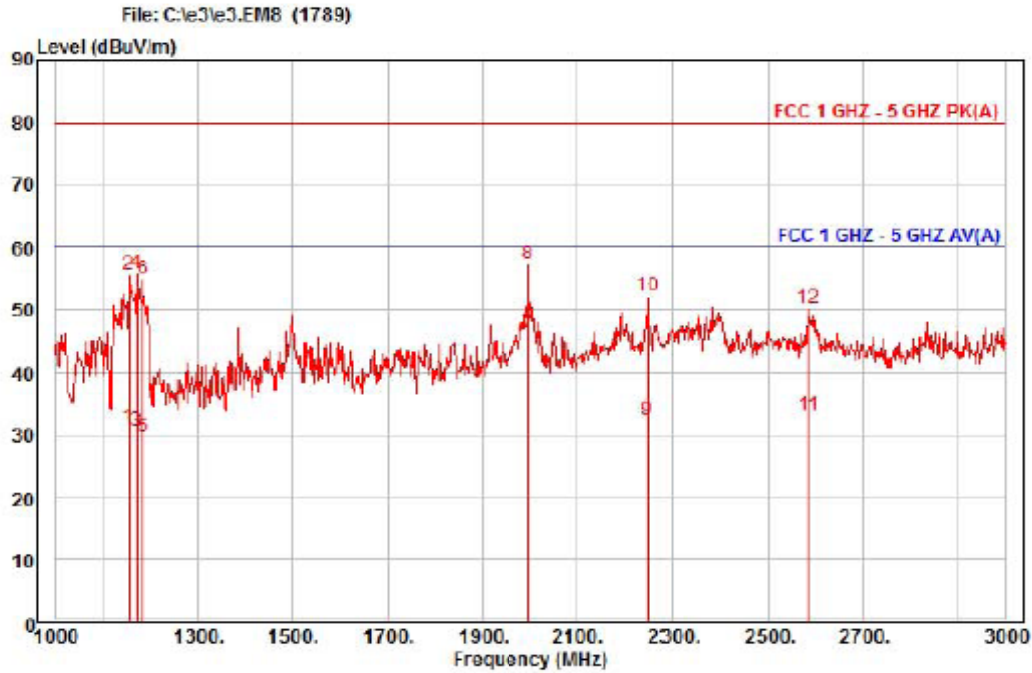
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Site : chamber
Condition: FCC 1 GHz - 5 GHz PK(A) 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : PoE
Memo : (1 - 3) GHz

	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	1154.00	37.62	23.62	5.81	35.94	10	60.00	-28.89	vertical	Average
2	1154.00	62.10	23.62	5.81	35.94	10	80.00	-24.41	vertical	Peak
3	1172.00	37.00	23.69	5.86	35.91	13	60.00	-29.36	vertical	Average
4	1172.00	62.39	23.69	5.86	35.91	13	80.00	-23.97	vertical	Peak
5	1184.00	36.00	23.74	5.89	35.89	13	60.00	-30.26	vertical	Average
6	1184.00	61.13	23.74	5.89	35.89	13	80.00	-25.13	vertical	Peak
7 pp	1998.00	44.75	28.18	7.86	34.53	136	60.00	-13.74	vertical	Average
8 pk	1998.00	55.80	28.18	7.86	34.53	136	80.00	-22.69	vertical	Peak
9	2250.00	29.49	28.73	8.39	34.36	324	60.00	-27.75	vertical	Average
10	2250.00	49.57	28.73	8.39	34.36	324	80.00	-27.67	vertical	Peak
11	2586.00	28.80	29.43	9.09	34.13	153	60.00	-26.81	vertical	Average
12	2586.00	45.77	29.43	9.09	34.13	153	80.00	-29.84	vertical	Peak

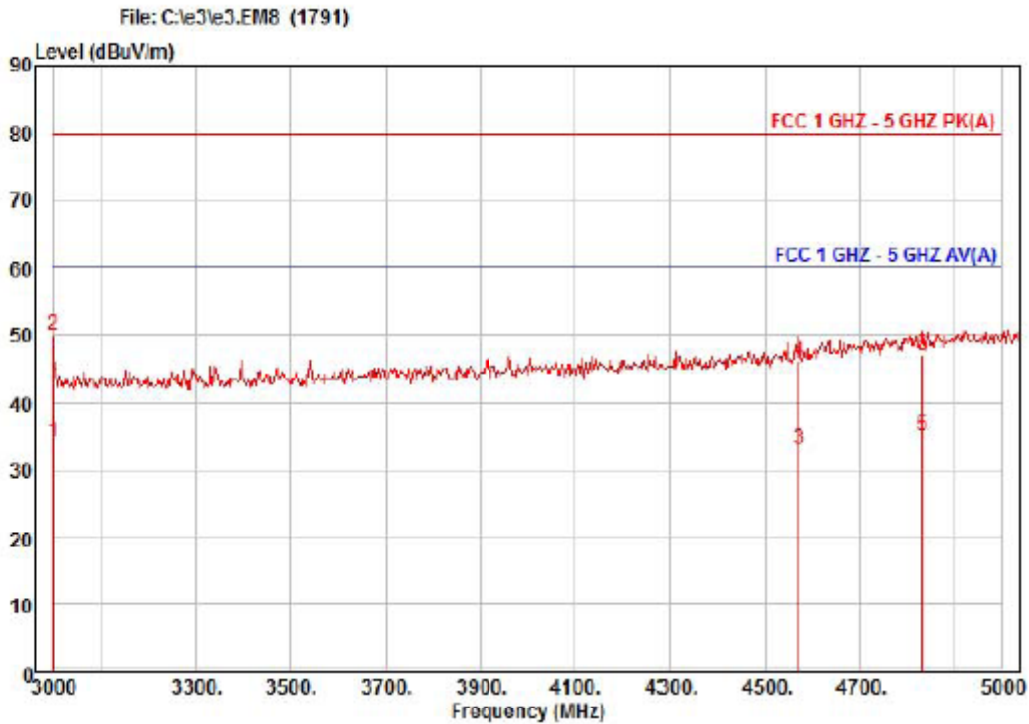
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Site : chamber
Condition: FCC 1 GHz - 5 GHz PK(A) 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : PoE
Memo : (3 - 5) GHz

	Read	Ant	Cable	Preamp	TPos	Limit	Over		
Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3000.00	27.63	30.25	9.96	33.84	220	60.00	-26.00	horizontal Average
2	3000.00	43.71	30.25	9.96	33.84	220	80.00	-29.92	horizontal Peak
3	4572.00	22.37	32.28	12.46	33.96	167	60.00	-26.85	horizontal Average
4	4572.00	35.29	32.28	12.46	33.96	167	80.00	-33.93	horizontal Peak
5	4833.00	22.48	33.17	12.89	33.50	330	60.00	-24.96	horizontal Average
6	4833.00	34.45	33.17	12.89	33.50	330	80.00	-32.99	horizontal Peak

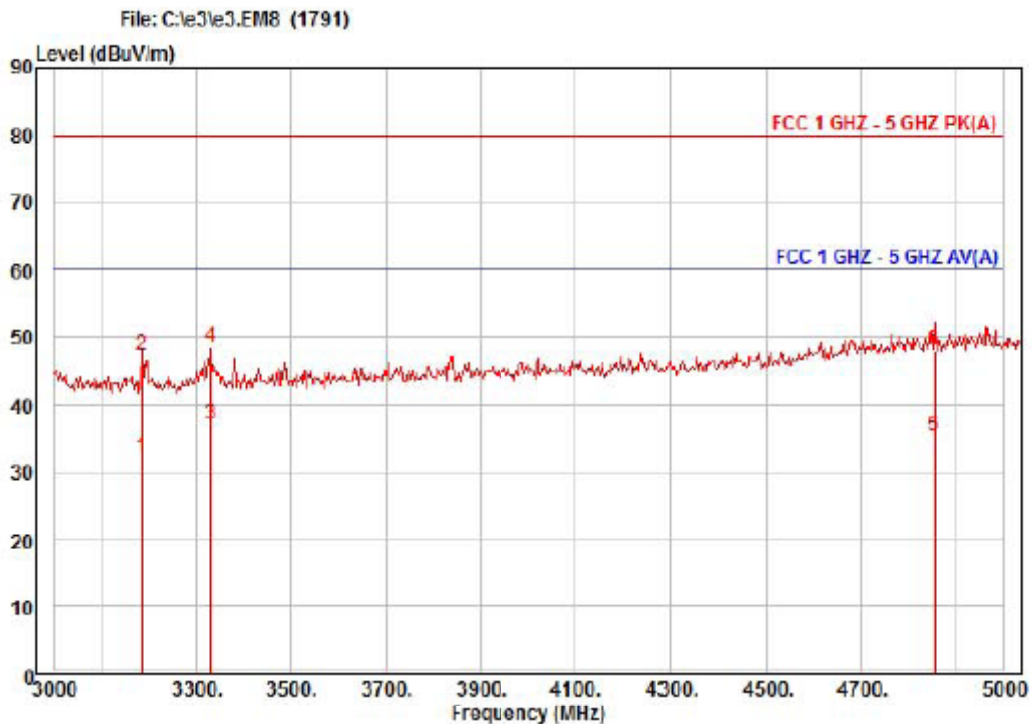
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Site : chamber
Condition: FCC 1 GHZ - 5 GHZ PK(A) 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SNB-6011N
Mode : PoE
Memo : (3 - 5) GHz

	Read	Ant	Cable	Preamp	TPos	Limit	Over		
Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3186.00	25.57	30.32	10.25	34.05	167	60.00	-27.91 vertical	Average
2	3186.00	40.91	30.32	10.25	34.05	167	80.00	-32.57 vertical	Peak
3	3330.00	30.49	30.37	10.47	34.21	167	60.00	-22.88 vertical	Average
4	3330.00	41.87	30.37	10.47	34.21	167	80.00	-31.50 vertical	Peak
5	4854.00	22.62	33.24	12.93	33.47	348	60.00	-24.68 vertical	Average
6	4854.00	35.44	33.24	12.93	33.47	348	80.00	-31.86 vertical	Peak

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3. Product Labelling Requirements

3.1 FCC Statement

Product shall be labelled the following statement on the user's manual:

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

Note : When the device is so small or for such use that it is not practicable to place the statement on it, the information shall be placed in prominent location in the instruction manual or pamphlet supplied to the user. However, the FCC identifier or unique identifier, as appropriate, must be displayed on the device.



4. Test Setup Photographs

4.1 Conducted Emission

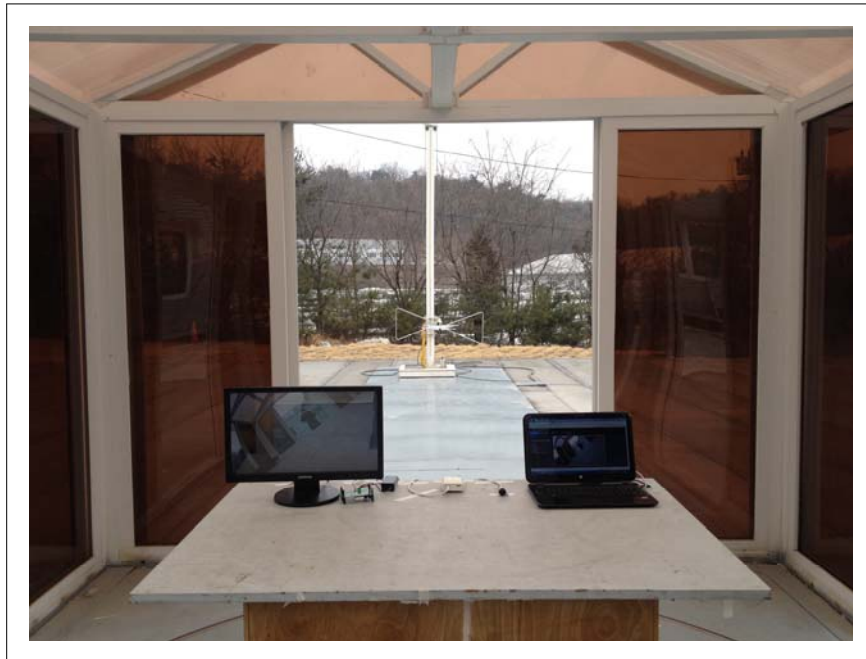
N/A

N/A

4.2 Radiated Emission

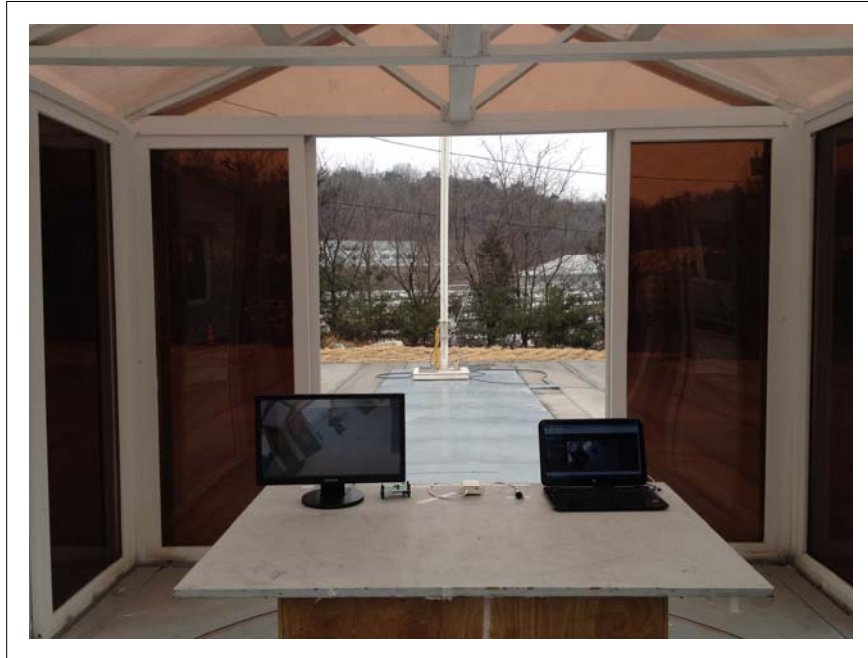
- Below 1 GHz

- 12 V (dc)



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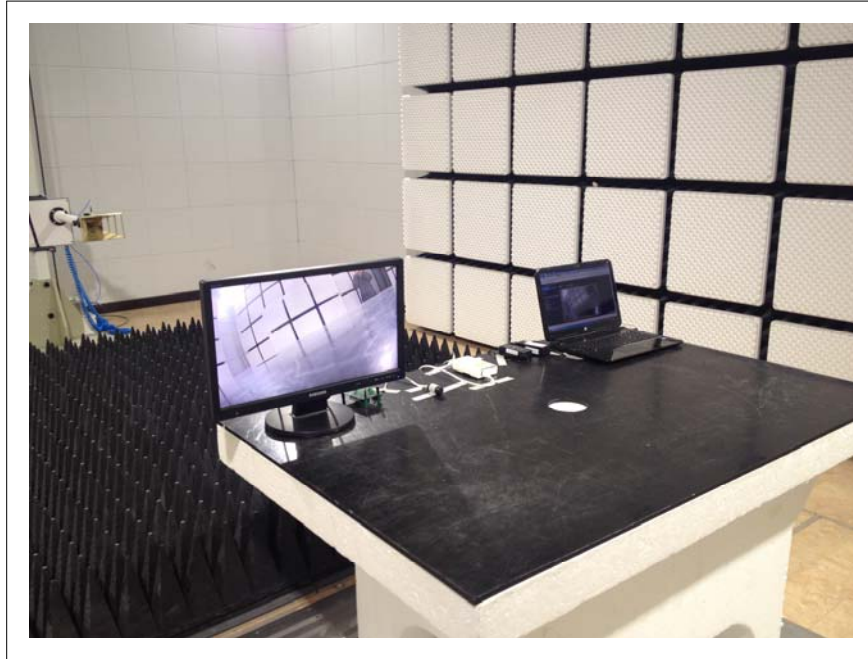
- PoE



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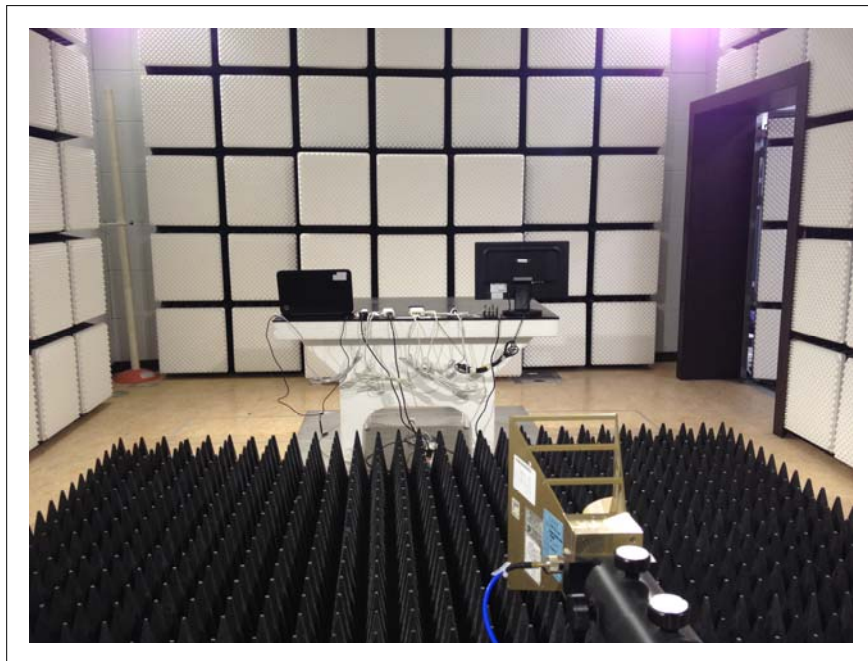
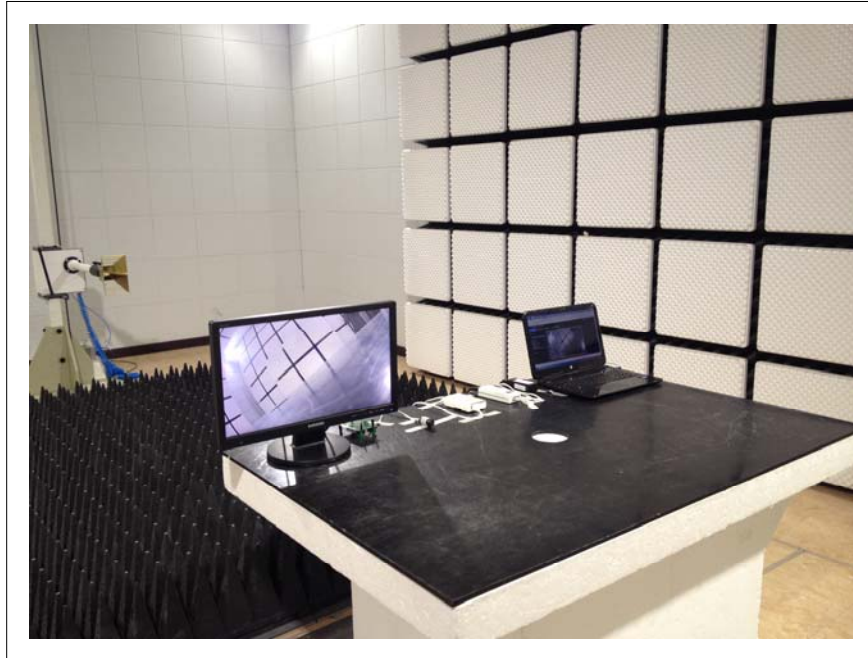
- Above 1 GHz

- 12 V (dc)



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- PoE



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5. External Photographs

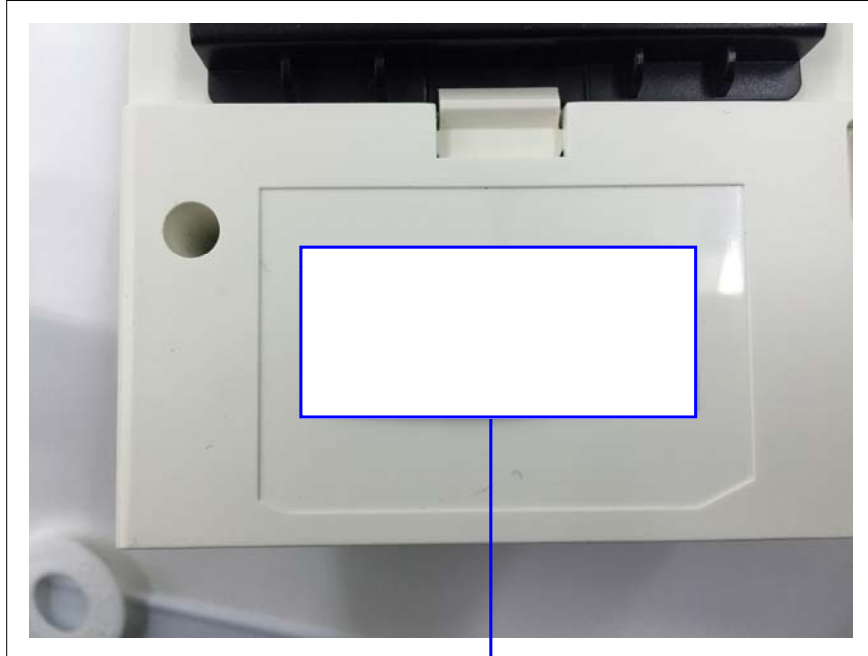
5.1 E.U.T: Front View



5.2 E.U.T: Rear View



5.3 E.U.T: Label View (Location)



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

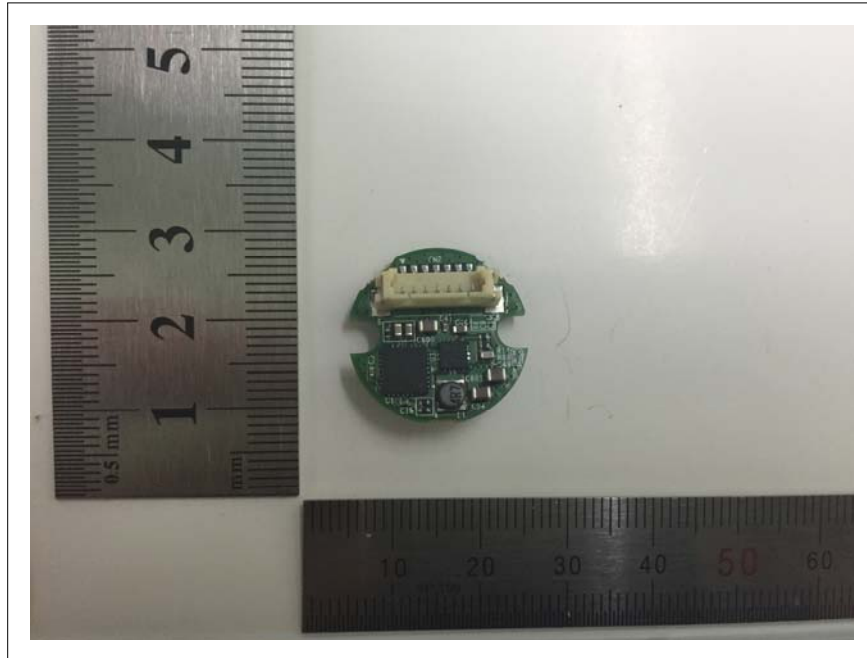
6. Internal Photographs

6.1 E.U.T: Internal View

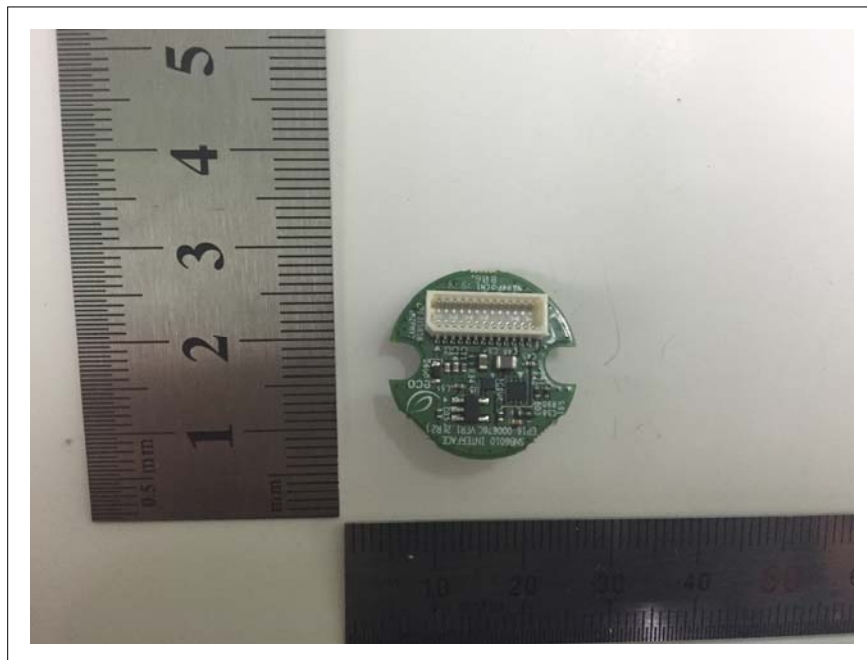


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6.2 E.U.T: Internal View(Top) - Camera Unit Main Board

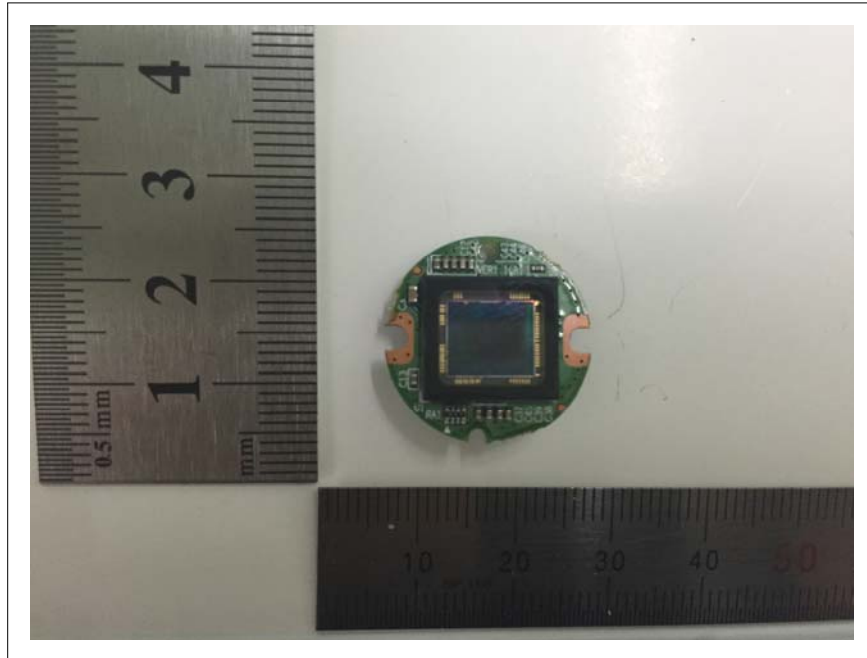


E.U.T: Internal View(Bottom) - Camera Unit Main Board

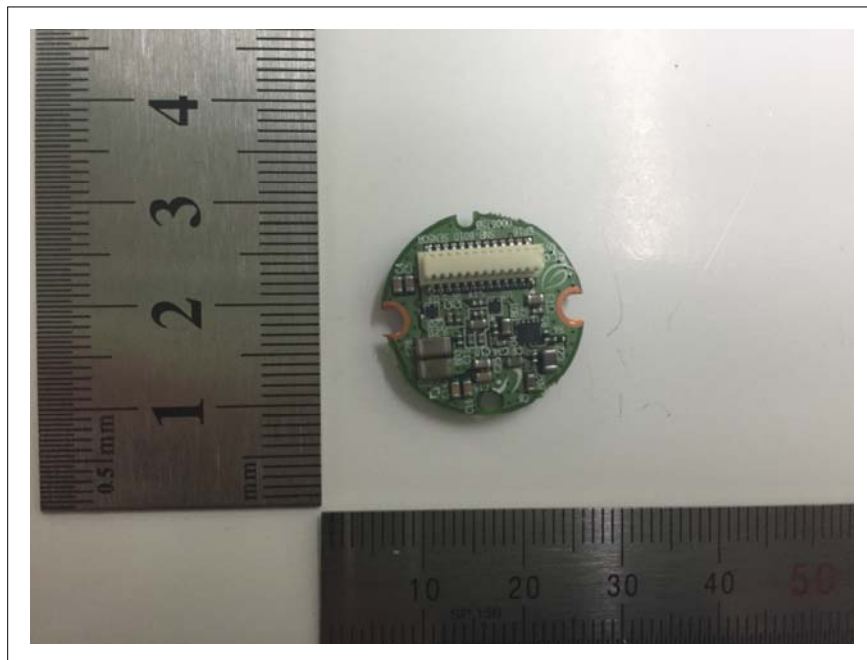


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6.3 E.U.T: Internal View(Top) - Camera Unit Sub Board

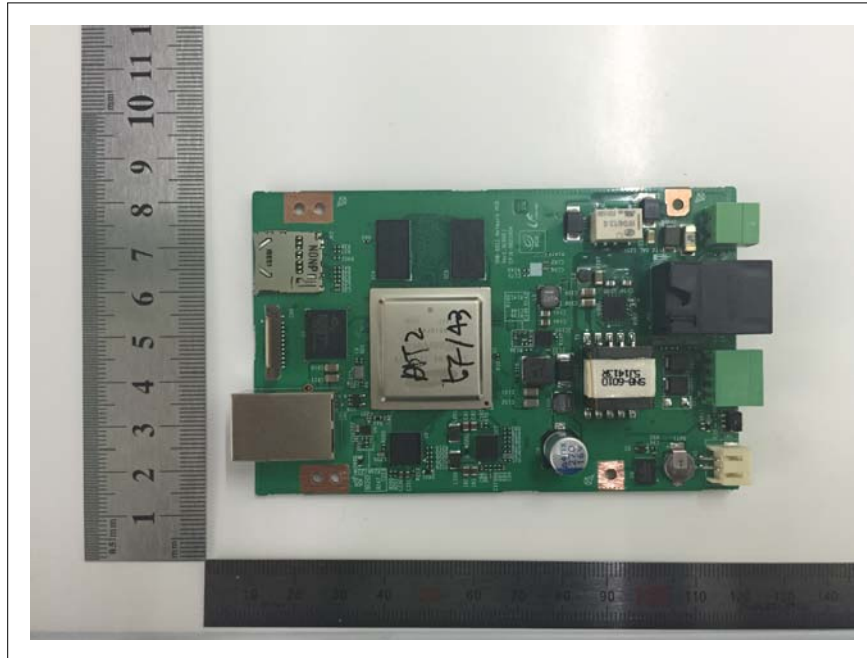


E.U.T: Internal View(Bottom) - Camera Unit Sub Board

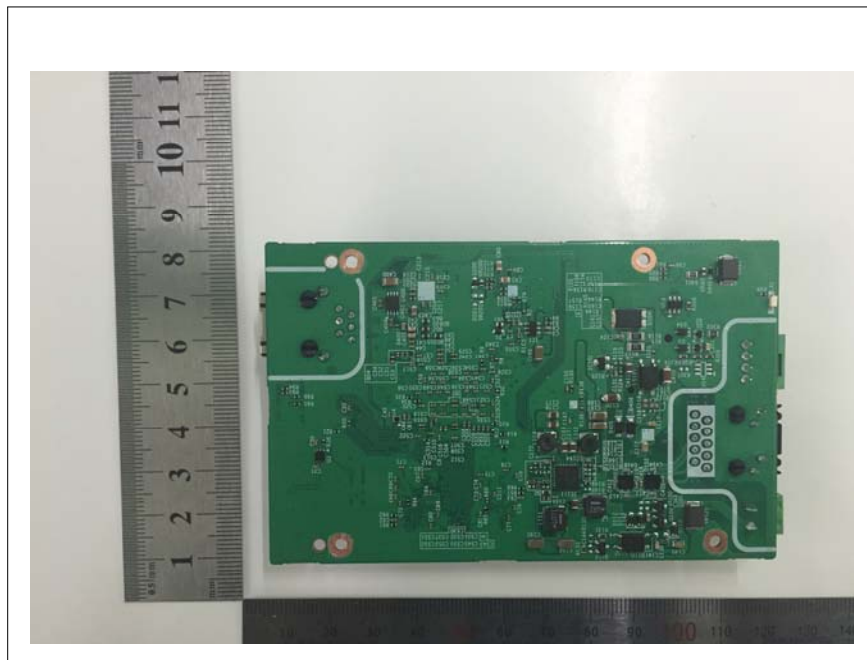


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6.4 E.U.T: Internal View(Top) - Main Unit Main Board



E.U.T: Internal View(Bottom) - Main Unit Main Board



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6.5 E.U.T: Internal View(Top) - Adapter



E.U.T: Internal View(Bottom) - Adapter



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6.6 E.U.T: Internal View(Top) - Adapter Label



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Appendix A - Schematics/Block Diagram

Please see attached document(s).

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Appendix B - User's Manual

Please see attached document(s).

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