

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:	SND-L6083RN
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, Sengsan-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-E1-15T0078

NETWORK CAMERA, Model SND-L6013RN 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-E1-15T0043

Date of Issue: 03. 16. 2015

Dong Hun, Jang
Technical Manager
Signature:



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EMI Test Report for FCC

DoC / Verification

Test Report No. : KES-E1-15T0078
Date of Issue : 03. 16. 2015
Description of Product : NETWORK CAMERA
Model No. : SND-L6083RN
Variant Model : -
Applicant : Samsung Techwin Co., Ltd.
Applicant's Address : 84, Jeongdong-ro, Sengsan-gu, Changwon-si, Gyeongsangnam-do, Korea
Manufacturer : TIANJIN SAMSUNG 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 : 02.26.2015
Test Date : 03.02.2015
Test Results : ☒ Pass ☐ Fail
The test results relate only to the items tested.

Tested by: 
Kang Hyeon, Kim
Test Engineer

Reviewed by: 
Dong Hun, Jang
Technical Manager



Testing Laboratories for Safety and RF 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: SND-L6013RN or the "E.U.T".

Main Specifications of EUT are

Video	
Imaging Device	1/2.9" 1.37M CMOS
Total Pixels	1,312(H) x 1,069(V)
Effective Pixels	1,305(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color: 0.07Lux(1/30sec, F1.4, 50IRE), 0.001Lux(2sec, 50IRE) C o l o r : 0 . 0 2 L u x (1 / 3 0 s e c , F 1 . 4 , 3 0 I R E) B/W : 0 Lux (IR LED on)
Lens	
Focal Length (Zoom Ratio)	3~10mm V/F
Max. Aperture Ratio	F1.4
Angular Field of View	H: 82.0°(Wide)~26.5°(Tele)(±5%), V: 59.7°(Wide)~19.9°(Tele) (±5%) D: 96.6°(Wide)~32.4°(Tele)
Min. Object Distance	0.5m
Focus Control	Manual
Lens Type	DC auto iris
Mount Type	Board type
Pan / Tilt / Rotate	
Pan Range	0~354°
Tilt Range	0~67°
Rotate Range	0~355°
Operational	
IR Viewable Length	10m
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	True Day & Night
Backlight Compensation	Off / BLC
Contrast Enhancement	SSDR(SamsungSuperDynamicRange) (Off / On)
Digital Noise Reduction	SSNR(Off / On)
Motion Detection	Off / On (4ea rectangler zones)
Privacy Masking	Off / On (6ea rectangler zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC(Lens distortion control)	On/Off (5 levels with Min/Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion Detection with metadata, Tampering
Alarm Triggers	Motiondetection, Tampering Detection, SD card error
Alarm Events	FileuploadviaFTPandE-Mail LocalstoragerecordingatEvent NotificationviaE-Mail
Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MJPEG

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Resolution	1280x1024/1280x960/ 1280x720 / 1024x768 / 800x600 / 720x576 / 640x480 / 320x240
Max. Framerate	H.264:Max30fpsatallresolutions MJPEG:Max1fpsat1280x1024/1280x960/1280x720,Max.15fpsatotherresolution
Video Quality Ajustment	H.264:TargetBitrateLevelControl MJPEG:QualityLevelControl
Bitrate control method	H.264:CBRorVBR MJPEG:VBR
Streaming Capability	Multiple Streaming(Up to 3 Profiles)
Audio I/O	Built-in Mic
Audio Compression Format	G.711u-law/G.726Selectable G.726(ADPCM)8KHz,G.7118KHz G.726:16Kbps,24Kbps,32Kbps,40Kbps
Audio Communication	Uni-directional
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>LoginAuthentication DigestLoginAuthentication IPAddressFiltering UseraccessLog 802.1XAuthentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at Unicast Mode
Edge storage	MicroSD/SDHCMax32G,NAS (MotionimagesrecordedintheSDmemorycardcanbedownloaded) (ManualrecordingatLocalPC)
Application Programming Interface	ONVIFProfileS,G SUNAPI(HTTPAPI)
Webpage Language	English,French,German,Spanish,Italian,Chinese,Korean, Russian,Japanese,Swedish,Denish,Portuguese,Turkish,Polish,Czech,Rumanian,Serbian,Dutch,Croatia,Hungary,Greek,Finnish,Norwegian
Web Viewer	SupportedOS:WindowsXP/VISTA/7/8/8.1,MACOSX10.7~10.10 SupportedBrowser:MicrosoftInternetExplorer(Ver.8~11),MozillaFirefox(Ver.9~35), Google Chrome (Ver. 15~40), Apple Safari (Ver. 8.0.2(Mac OS X 10.10), 8.0.2(Mac OS X 10.9), 6.0.2 (Mac OS X 10.8, 10.7 only), 5.1.7) * Mac OS X only
Central Management Software	SmartViewer
Environmental	
Operating Temperature / Humidity	-10°C ~ +55°C / Less than 90% RH
Storage Temperature / Humidity	-30°C~+60°C(-22°F~+140°F)/ Less than 90% RH
Ingress Protection	-
Vandal Resistance	-
Electrical	
Input Voltage / Current	PoE
Power Consumption	Max. 7.0W
Mechanical	
Color / Material	Ivory / Plastic
Dimension (WxHxD)	Φ119.8mm x 98mm
Weight	300g

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1.5 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	SND-L6083RN	-	TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD	EUT

1.6 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Notebook	NT63025J	JK9091EF400432X	SAMSUNG	-
AC/DC Adaptor	A13-040N2A	CN60BA4400313A D0N843KO243	Chicony Power Technology (suzhou) Co., Ltd.	-
POE Switch	ANY4805C-LT1	10H300002	ANY ELECTRONICS CO., LTD	-
Micro SD Card	-	-	SANDISK	-

1.7 External I/O Cabling

Description	Length (m)	Port / From	Port/To	Remarks
NETWORK CAMERA	-	Micro SD slot / NETWORK CAMERA	Micro SD Card slot / Micro SD Card Card	-
NETWORK CAMERA	3.0	RJ-45 / NETWORK CAMERA	RJ-45 / POE Switch	Unshielded
POE Switch	3.0	RJ-45 / POE Switch	RJ-45 / Notebook	Unshielded

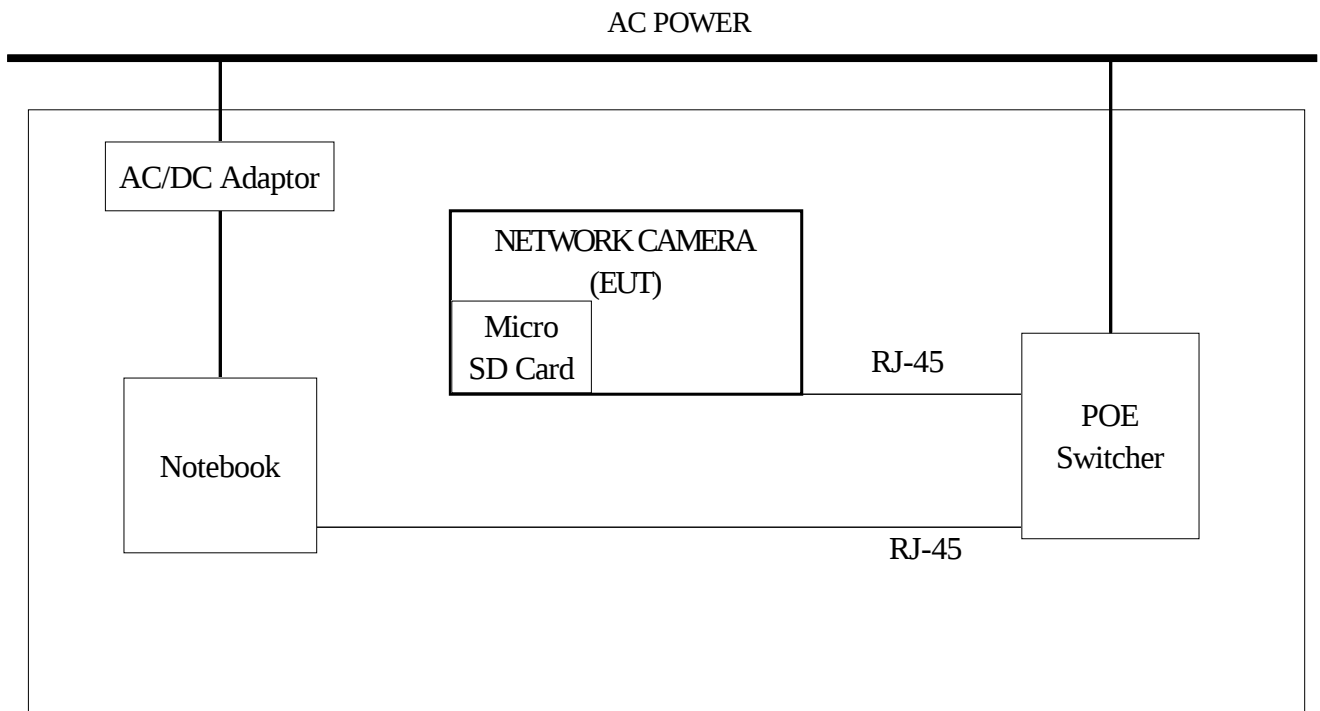
1.8 Special Accessories

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



Wooden Table

※ Test Operating Mode

- Ping test
- web view 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	-
Electro wave Shieldroom	SEMITEC	-	-	-

2.1.3 Test Environments

Ambient Temperatures	Relative Humidity
see the data	see the data

2.1.4 Test Limits

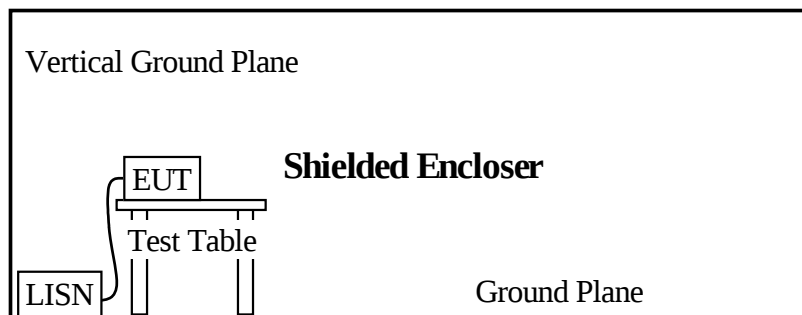
Frequency (MHz)	15.107 Conducted limits			
	Class B (dB μ V)		Class A (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.50	66.0 to 56.0	56.0 to 46.0	79.0	66.0
0.50 to 5.00	56.0	46.0	73.0	60.0
5.00 to 30.00	60.0	50.0	73.0	60.0

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 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

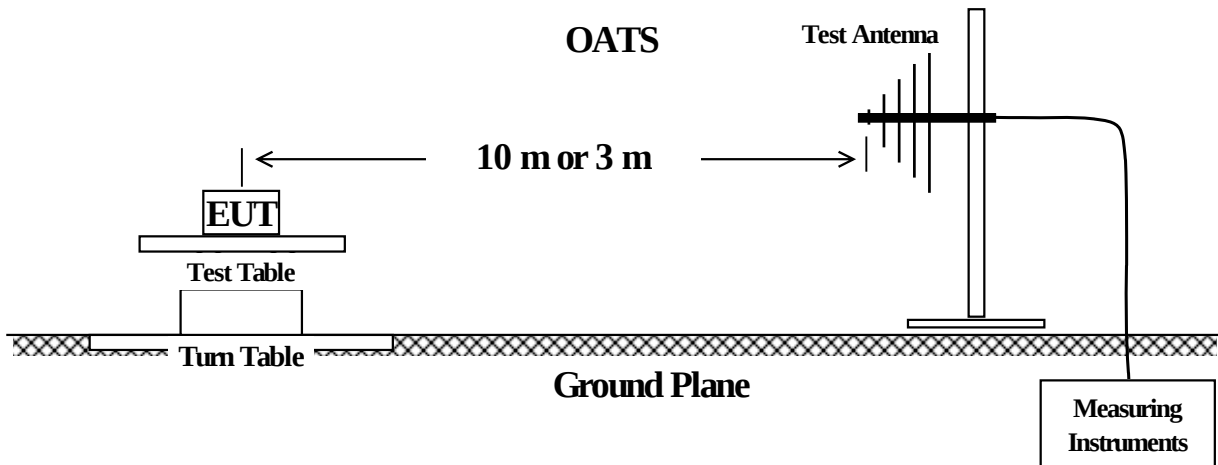
A.G= Amplifier Gain

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

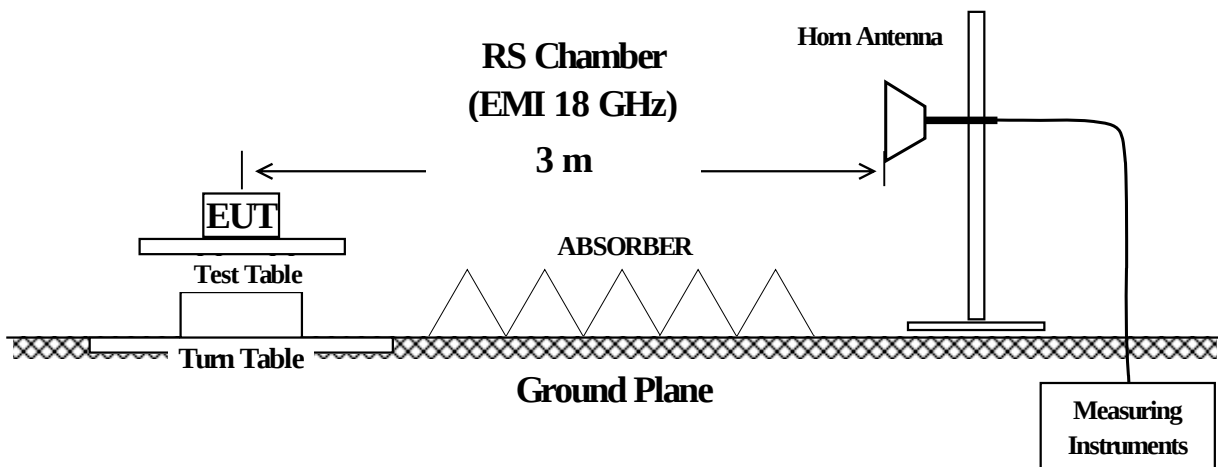
* Above 1 GHz : $F.S(dB\mu V/m) = M.R(dB\mu V) + [A.F(dB/m) + C.L(dB)] - A.G(dB)$

2.2.7 Test Configuration

* Below 1 GHz



* Above 1 GHz



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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**

Temperature: 2.0 °C Humidity: 57.0 % R.H. Test Date: 03. 02. 2015 Tested by: Kang Hyeon, Kim

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)			
49.424	17.500	V	1.170	13.630	1.610	32.740	39.000	6.260
186.127	17.200	H	3.250	11.150	3.290	31.640	43.500	11.860
259.859	16.900	V	1.000	12.080	3.970	32.950	46.400	13.450
334.258	18.200	H	4.000	14.150	4.640	36.990	46.400	9.410
371.444	19.400	V	1.860	14.960	4.920	39.280	46.400	7.120
409.217	18.100	H	3.580	15.780	5.210	39.090	46.400	7.310
446.131	17.100	V	1.900	16.580	5.500	39.180	46.400	7.220
557.684	16.700	H	3.050	18.820	6.280	41.800	46.400	4.600

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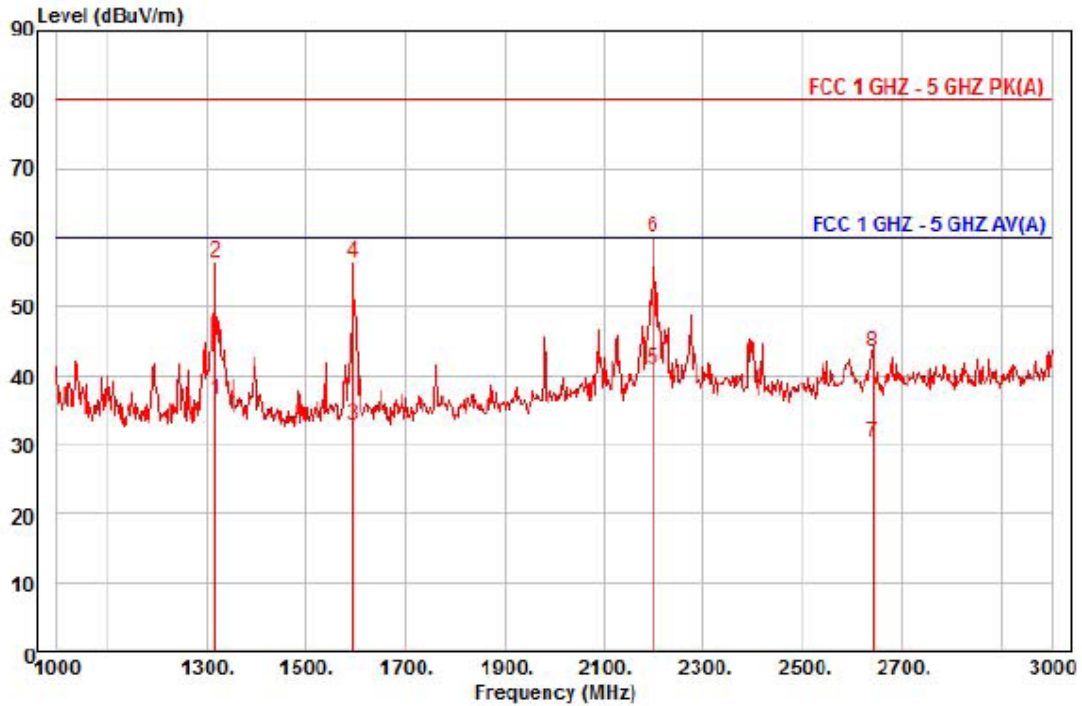
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* Above 1 GHz

Temperature: 19.5 °C Humidity: 36.4 % R.H. Test Date: 03. 02. 2015 Tested by: Kang Hyeon, Kim



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 : SND-L5083R
Mode : FCC
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	1320.00	41.79	24.29	6.21	35.67	223	60.00	-23.38	horizontal	Average
2	1320.00	61.58	24.29	6.21	35.67	223	80.00	-23.59	horizontal	Peak
3	1594.00	35.67	25.62	6.88	35.21	177	60.00	-27.04	horizontal	Average
4	1594.00	59.10	25.62	6.88	35.21	177	80.00	-23.61	horizontal	Peak
5 pp	2200.00	38.52	28.62	8.28	34.39	218	60.00	-18.97	horizontal	Average
6 pk	2200.00	57.56	28.62	8.28	34.39	218	80.00	-19.93	horizontal	Peak
7	2642.00	25.76	29.54	9.21	34.09	68	60.00	-29.58	horizontal	Average
8	2642.00	38.68	29.54	9.21	34.09	68	80.00	-36.66	horizontal	Peak

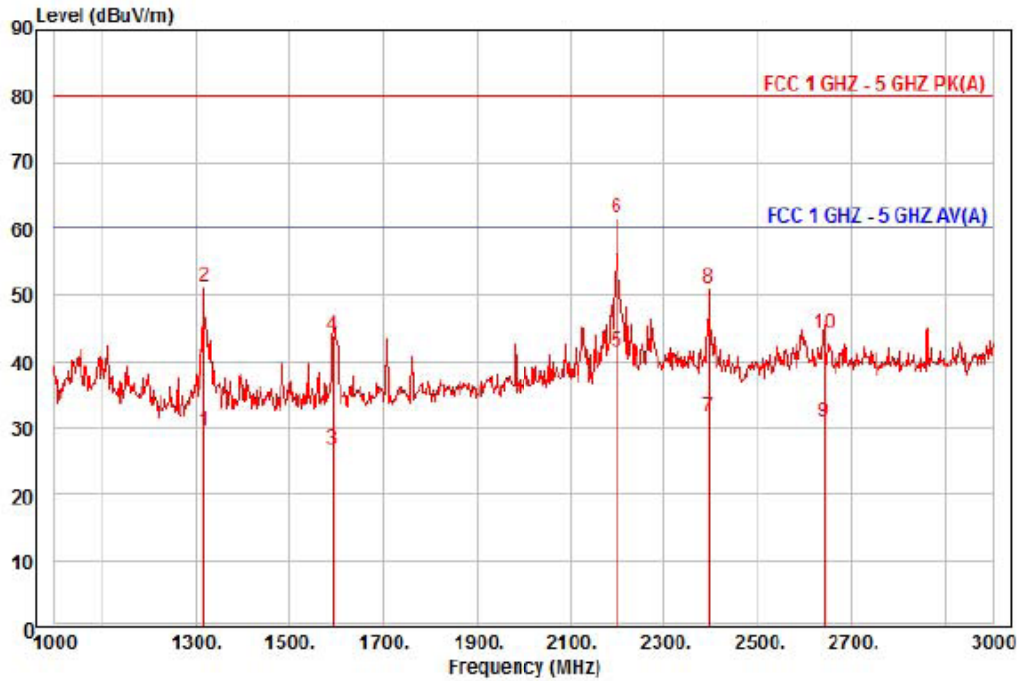
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Site : chamber
Condition: FCC 1 GHz - 5 GHz PK(A) 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SND-L5083R
Mode : FCC
Memo : 1 - 3 GHz

		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	1320.00	34.62	24.29	6.21	35.67	9	60.00	-30.55	vertical	Average
2	1320.00	56.48	24.29	6.21	35.67	9	80.00	-28.69	vertical	Peak
3	1592.00	29.50	25.60	6.87	35.21	43	60.00	-33.24	vertical	Average
4	1592.00	46.56	25.60	6.87	35.21	43	80.00	-36.18	vertical	Peak
5 av	2200.00	38.86	28.62	8.28	34.39	32	60.00	-18.63	vertical	Average
6 pp	2200.00	59.00	28.62	8.28	34.39	32	80.00	-18.49	vertical	Peak
7	2396.00	28.27	29.04	8.69	34.26	223	60.00	-28.26	vertical	Average
8	2396.00	47.62	29.04	8.69	34.26	223	80.00	-28.91	vertical	Peak
9	2642.00	26.16	29.54	9.21	34.09	86	60.00	-29.18	vertical	Average
10	2642.00	39.41	29.54	9.21	34.09	86	80.00	-35.93	vertical	Peak

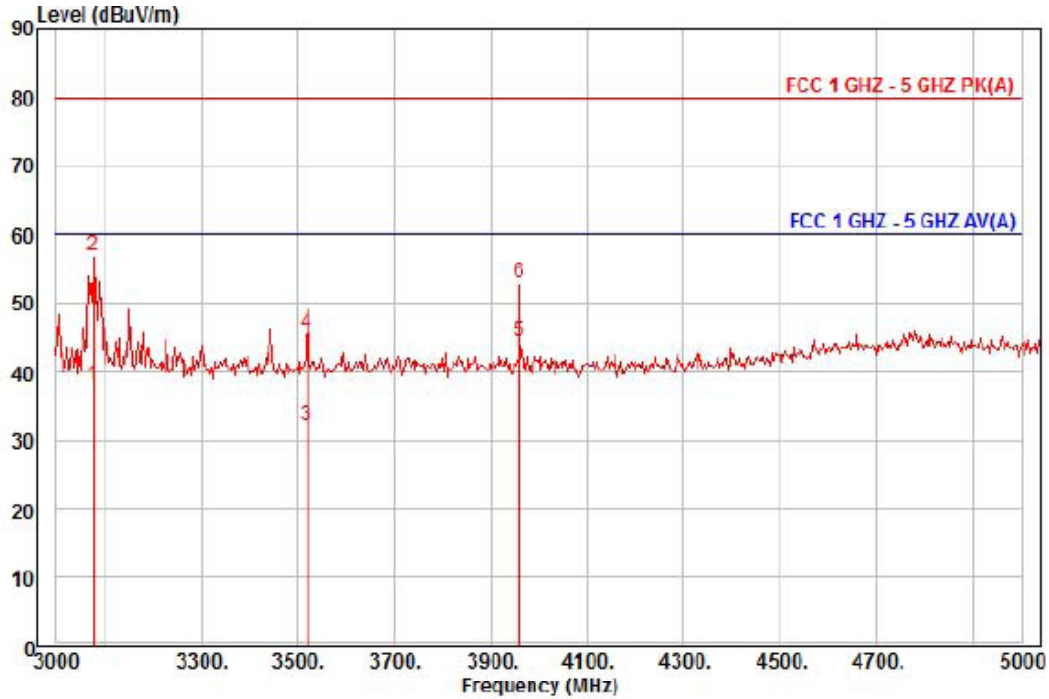
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Site : chamber
Condition: FCC 1 GHz - 5 GHz PK(A) 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SND-L5083R
Mode : FCC
Memo : 3 - 6 GHz

	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	3078.00	31.49	30.28	10.08	33.93	132	60.00	-22.08	horizontal	Average
2 pk	3078.00	50.58	30.28	10.08	33.93	132	80.00	-22.99	horizontal	Peak
3	3519.00	25.29	30.49	10.77	34.43	312	60.00	-27.88	horizontal	Average
4	3519.00	38.85	30.49	10.77	34.43	312	80.00	-34.31	horizontal	Peak
5 pp	3960.00	35.96	31.80	11.46	34.92	219	60.00	-15.70	horizontal	Average
6	3960.00	44.52	31.80	11.46	34.92	219	80.00	-27.14	horizontal	Peak
7	5934.00	20.19	35.07	17.34	33.34	42	60.00	-20.74	horizontal	Average
8	5934.00	32.40	35.07	17.34	33.34	42	80.00	-28.53	horizontal	Peak

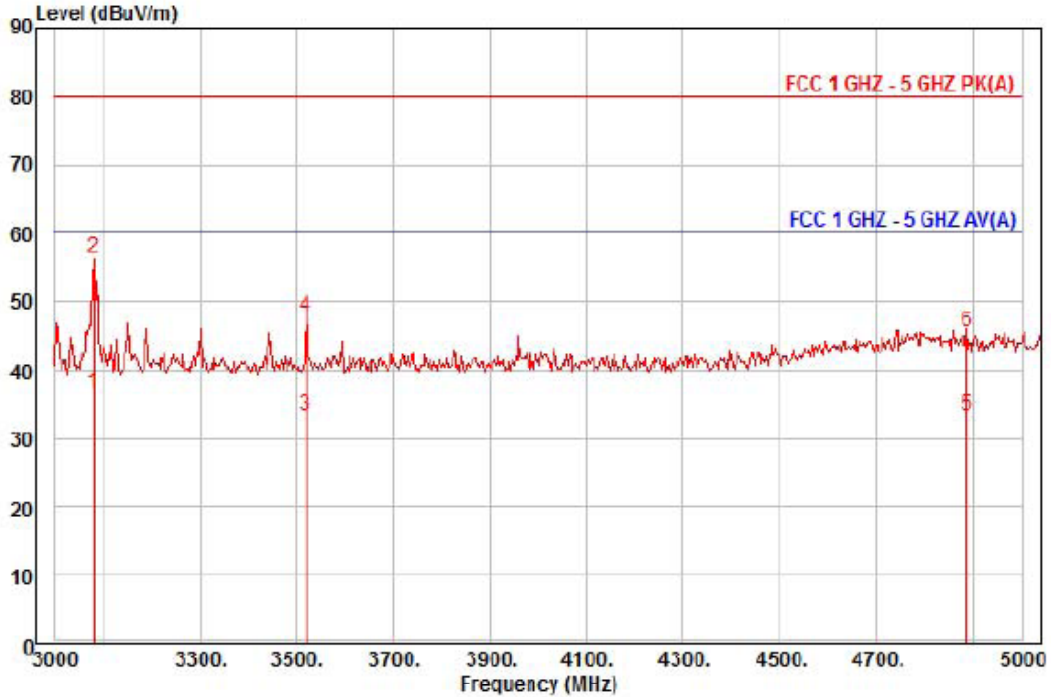
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Site : chamber
Condition: FCC 1 GHZ - 5 GHZ PK(A) 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
EUT : SND-L5083R
Mode : FCC
Memo : 3 - 6 GHz

	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	3081.00	30.18	30.28	10.09	33.93	122	60.00	-23.38	vertical	Average
2 pk	3081.00	49.92	30.28	10.09	33.93	122	80.00	-23.64	vertical	Peak
3	3519.00	26.44	30.49	10.77	34.43	268	60.00	-26.73	vertical	Average
4	3519.00	41.04	30.49	10.77	34.43	268	80.00	-32.13	vertical	Peak
5	4887.00	20.49	33.35	12.98	33.41	334	60.00	-26.59	vertical	Average
6	4887.00	32.60	33.35	12.98	33.41	334	80.00	-34.48	vertical	Peak
7 pp	5877.00	24.98	34.89	17.09	33.33	247	60.00	-16.37	vertical	Average
8	5877.00	34.85	34.89	17.09	33.33	247	80.00	-26.50	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 fol-lowing two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference re-ceived, 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

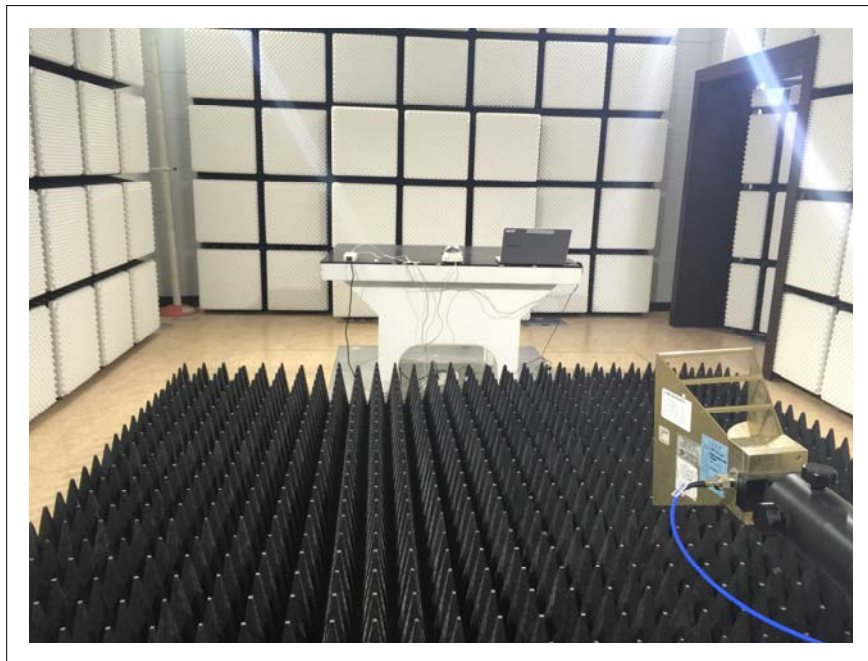
4.2 Radiated Emission

- Below 1 GHz



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- Above 1 GHz



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

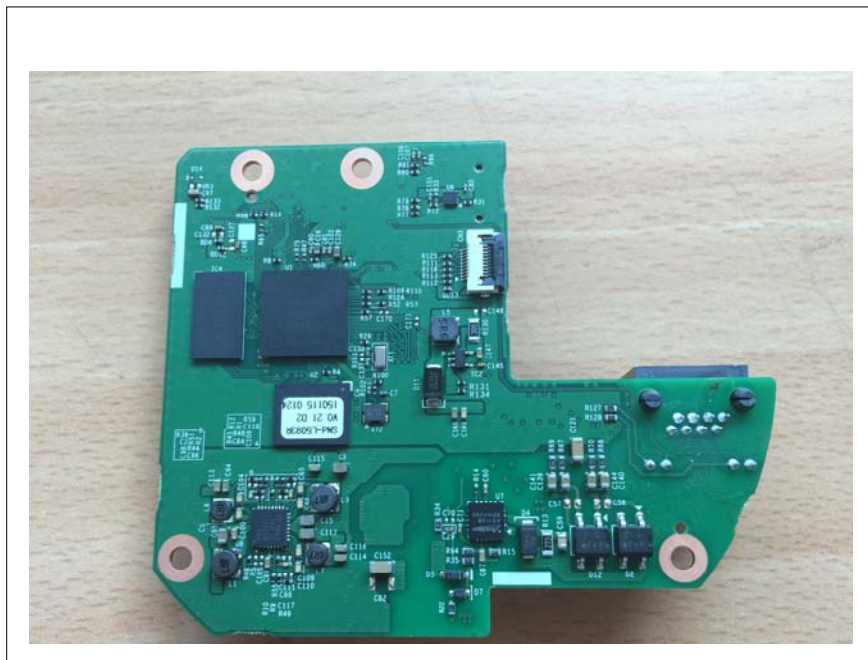


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6.2 E.U.T: Internal View(Top) - Main Board



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



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6.3 E.U.T: Internal View(Top) - LED Board



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



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



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



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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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