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:	XNV-6010N
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:	Hanwha Techwin Co., Ltd.
Applicant Address:	Changwon-dareri, Seongsan-gu Changwon-si, Gyeongsangn am-do
Manufacturer Name:	Tianjin Samsung Techwin Opto-Eletronic Co.,Ltd.
Manufacturer Address:	No.11 Weiliu Rd,Micro-Electronic Industrial Park,TEDA,Tianjin,300385,People's Republic of China
Test Report Reference No.:	KES-E1-16T0645

NETWORK CAMERA, Model **XNV-6010N** 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-E1-16T0645

Date of Issue: 12. 14, 2016

Dong Hun, Jang
Technical Manager
Signature:



KES.Co., Ltd.
C-3701, 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do,431-716, Korea
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EMC TEST REPORT For FCC

Test Report No.	:	KES-E1-16T0645
Date of Issue	:	Dec. 14, 2016
Product name	:	NETWORK CAMERA
Model/Type No.	:	XNV-6010N
Variant Model	:	-
Applicant	:	Hanwha Techwin Co., Ltd.
Applicant Address	:	Changwon-daero, Seongsan-gu Changwon-si, Gyeongsangnam-do
Manufacturer	:	Tianjin Samsung Techwin Opto-Eletronic Co.,Ltd.
Manufacturer Address	:	No.11 Weiliu Rd,Micro-Electronic Industrial Park,TEDA,Tianjin,300385,People's Republic of China
Equipment authorization	:	☐ **Declaration of Conformity** ☒ **Verification** ☐ **Certification**
Date of Receipt	:	Nav, 30, 2016
Test date	:	Dec. 06, 2016
Test Results	:	☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Jin Bae Lee
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Dec. 14, 2016	KES-E1-16T0645	Issued

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1.0 General Product Description

Main Specifications of EUT are:

Video	
Imaging Device	1/2.8" 2M CMOS (IMX291)
Total Pixels	1945(H) x 1109(V) 2.16M
Effective Pixels	1945(H) x 1097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.07 lux (TBD)
S / N Ratio	50dB
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for installation USB : Micro USB type B, 1920 x 1080(TBD), for installation
Lens	
Focal Length (Zoom Ratio	2.5mm Fixed
Max. Aperture Ratio	F2.0
Angular Field of View	H: 139°, V:73°, D: 167°
Min. Object Distance	0.4m
Focus Control	Manual
Lens Type	Fixed
Mount Type	Board-in type(M12)
Pan / Tilt / Rotate	
Pan / Tilt / Rotate range	0° ~ 354° / 0° ~ 85°(TBD) / 0° ~ 355°
Operational	
IR LED	-
Viewable Length	-
Camera Title	Off / On (Displayed up to 55 characters) - W/W : English/Numeric/Special Characters - China : English/Numeric/Special/Chinese Characters - Common : Multi-line (Max 6), Color (Grey/Green/Red/Blue/Black/White), Transparency, Auto Scale by Resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC(Masking/Dimming), WDR(Seamless transition TBD)
Wide Dynamic Range	150dB(TBD)
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR5 (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Auto(input from fog&Dust detection) / Manual / Off
Motion Detection	Yes(8ea, 4point Polygonal zones)
Privacy Masking	Off / On (32ea, polygonal zones) - Color : Grey/Green/Red/Blue/Black/White - Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor((included Mercury & Sodium)
Contrast	level adjustment
LDC	On/Off (5 levels with Min/Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec →TBD)
Digital PTZ	24X, 'Digital PTZ(Preset, Group)
Flip / Mirror	Flip : On/Off Mirror : On/Off Hallway view : 90°/270°
Intelligent Video Analytics	Tampering, Loitering, Directional Detection, Defocus Detection, Fog&Dust Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Motion Detection, Digital Auto Tracking, Sound Classification, Heatmap, People counting, Queue management
Alarm I/O	Input 1ea / Output 1ea
Remote Control Interface	-
RS-485 Protocol	-

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Alarm Triggers	Alarm Input, Motion Detection, Intelligent Video Analytics, Network Disconnect
Alarm events	File upload via FTP, E-Mail Notification via E-Mail local storage(SD/SDHC/SDXC) or NAS recording at Event Triggers External output DPTZ preset
Audio In	Selectable (Mic IN/Line IN), Built-in MIC. Max output level : 1Vrms Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out, Max output level: 1 Vrms
Fan / Heater	-
Pixel Counter	Support
Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Forma	H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High , Motion JPEG
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x450, 720x576, 640x480, 640x360, 320x240, 320x180
Max. Framerate	H.265/H.264 : Max. 60fps at all resolutions Motion JPEG : Max. 30fps
Smart Codec	Manual Mode (area-based : 5EA)
Video Quality Adjustment	H.264/H.265 : Target Bitrate Level Control MJPEG : Target Bitrate Level Control
Bitrate Control Method	H.264/H.265 : CBR or VBR, ※ WiseStream 멀도항목으로 분리 MJPEG : VBR
Streaming Capability	Multiple Streaming (Up to 10 Profiles)
Audio Compression Forma	G.711 u-law /G.726 Selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC : 48Kbps at 8/16/32/48KHz
Audio Communication	Bi-dierctional (2-Way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1X Authentication (EAP-TLS, EAP-LEAP) - Streaming Encryption 기능구현
Streaming Method	Streaming Method
Max. User Access	20 users at Unicast Mode(TBD)
Edge Storage	SD/SDHC/SDXC 2slot (up to 512 GB) - Continuous recording(1'st slot to 2'nd slot) - (TBD) Redundant recording - Motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. NAS(Network Attached Storage) Local PC for Instant Recording
Application Programming I	ONVIF Profile S/G SUNAPI(HTTP API) Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Denish, Portuguese, Czech, Polish, Turkish, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek, Norsk, Finnish

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Web Viewer	Supported OS: Windows 7, 8, 10, Mac OS X 10.8. 10.9. 10.10. 10.11 **Non-plugin Webviewer** Supported Browser: Google Chrome 47, MS Edge 20 Support Codec : Video : H.264, MJPEG (MAX 1M 15FPS) Audio : G.711 **Plug-in Webviewer** Supported Browser : MS Explore 11 , Mozilla Firefox 43 , Apple Safari 9 * Mac OS X only
Central Management Soft	SmartViewer, SSM
Environmental	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH *Start up should be done at above -20°C
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67(TBD), IP66
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	DC12V,PoE(IEEE802.3af,Class3)
Power Consumption	TBD
Mechanical	
Color / Material	Ivory / Metal
Dimension (WxHxD)	ϕ120 x H92
Weight	TBD

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1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

Voltage ☐ 100 Vac ☐ 120 Vac ☐ 24 Vac ☒ 12 Vdc ☒ PoE

Frequency ☐ 50 Hz ☐ 60 Hz ☐ Hz

1.2 Variant Model Differences

Not applicable

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	XNV-6010N	-	Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
POE Adapter	PD-3001GC/AC	RD9356082016964200	Power Dsine	-
Notebook	X56K	HN11N5151FJ0045W	HANSUNG	-
Notebook Adapter	A12-120P1A	F180271552011758	CHICONY POWER TECHNOLOGY CO.,LTD.	-
Phone	A1530	-	APPLE	-
MIC	CMK-303	-	CAMAC	1.7 m
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI-TECH GROUP.	1.6 m
Alarm	-	-	-	-

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1.6 External I/O Cabling

- DC 12 V Mode

Start		END		Cable Spec.	
Description	**I/O Port**	**Description**	**I/O Port**	**Length**	**Shield**
NETWORK CAMERA (E.U.T)	RJ-45	Notebook	RJ-45	3.0	U
	7 Pin	MIC	3.5 ㎜	1.7	U
		Speaker	3.5 ㎜	1.6	U
		Alarm	2 pin	2.5	U
Notebook	Audio in	Phone	Audio out	1.7	U

- PoE Mode

Start		END		Cable Spec.	
Description	**I/O Port**	**Description**	**I/O Port**	**Length**	**Shield**
NETWORK CAMERA (E.U.T)	RJ-45 (POE)	POE Adapter	RJ-45 (POE)	3.0	U
	7 Pin	MIC	3.5 ㎜	1.7	U
		Speaker	3.5 ㎜	1.6	U
		Alarm	2 pin	2.5	U
Notebook	Audio in	Phone	Audio out	1.7	U
	RJ-45 (DATA)	POE Adapter	RJ-45 (DATA)	3.0	U

* Unshielded = U, Shielded = S

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1.7 EUT Operating Mode(s)

operating
E.U.T Monitoring , Ping test, 1 kHz

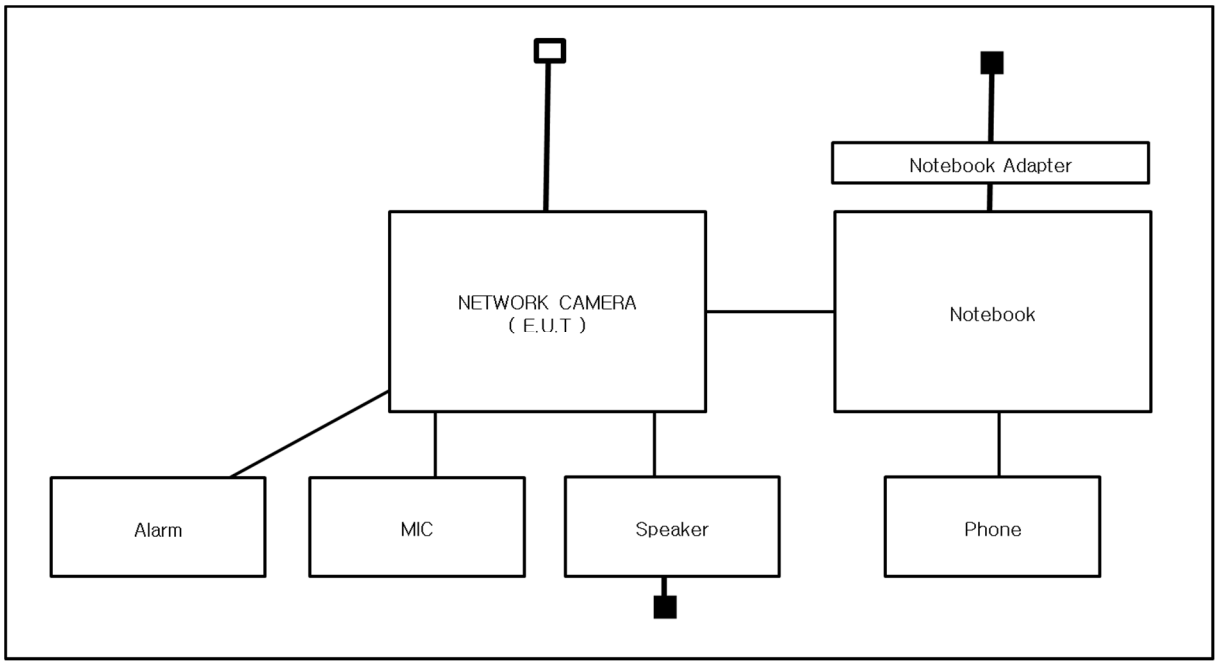
E.U.T Test operating S/W		
Name	Version	Manufacture Company
SmartViewer	-	Hanwha Techwin Co., Ltd.

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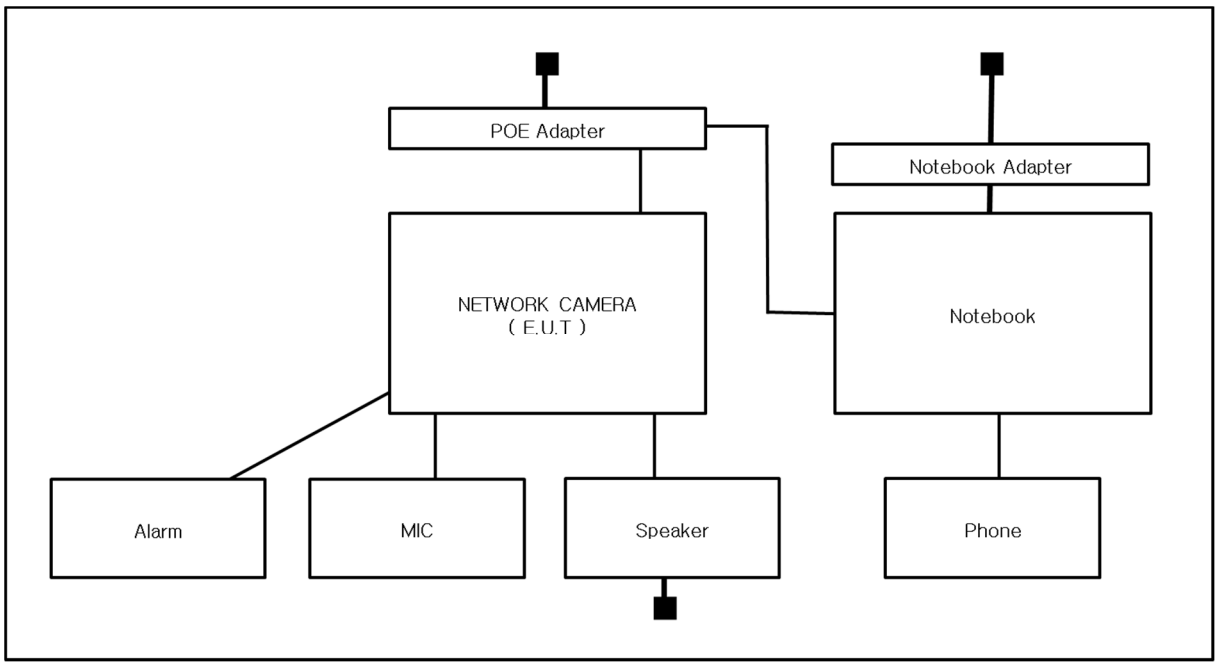
1.8 Configuration

■ 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 473-21 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.	
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)	

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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

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☐ **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 C63.4-2014 ☒ Class A ☐ Class B

☐ **IC Regulation ICES-003 : 2016**

- ☐ CAN/CSA CISPR 22-10 ☐ Class A ☐ Class B
- ☐ ANSI C63.4-2014

☐ **MEDICAL – Directive 93/42/EEC**

- ☐ EN 60601-1-2 :2007

☐ **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

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2.1 Conducted Emissions at Mains Power Ports

Test Date
N/A

Test Location
Electro wave Shieldroom

Test Equipment

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

Test Conditions
Temperature: ℃
Relative Humidity: %

Frequency Range of Measurement
150 ㎑ to 30 ㎒

Instrument Settings
IF Band Width: 9 ㎑

Test Results
The requirements are:

☐ PASS
☐ NOT PASS
☒ NOT APPLICABLE

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

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2.2 Radiated Electric Field Emissions(Below 1 ㎓)

Test Date
Dec, 06, 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	ESR3	R&S	101781	05, 03, 2017
☒	Trilog-Broadband ANT	VULB 9163	Schwarzbeck	9163-713	05, 15, 2017
☒	OATS	-	KES	-	-
☒	Antenna Mast	-	DAEIL EMC	-	-
☒	Turn Table	-	DAEIL EMC	-	-
☒	EMI Test S/W	-	-	-	-

Test Conditions
Temperature: 4,4 ℃
Relative Humidity: 39,0 %

Frequency Range of Measurement
30 ㎒ to 1 ㎓

Instrument Settings
IF Band Width: 120 ㎑

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

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2.3 Radiated Electric Field Emissions(Above 1 ㎓)

Test Date
Dec, 06, 2016

Test Location
Semi Anechoic Chamber #1

Test Equipment

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

Test Conditions
Temperature: 19,7 ℃
Relative Humidity: 49,5 %

Frequency Range of Measurement
1 ㎓ to 6 ㎓

Instrument Settings
IF Band Width: 1 ㎒

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

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APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

[HOT]

N/A

♦ Calculation
QuasiPeak[㏈uV] / CAverage [㏈uV] = Reading Value[㏈uV] + Corr. [㏈]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (LISN FACTOR+ Cable Loss)

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[NEUTRAL]

N/A

♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (LISN FACTOR+ Cable Loss)

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Radiated Electric Field Emissions(Below 1 ㎓)

- DC 12 V Mode

Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[㎒]	[dB㎶]		[m]	ANT. [dB/m]	Cable [dB]	[dB㎶/m]	[dB㎶/m]	[dB]
51.27	11.78	V	1.00	13.79	2.11	27.68	39.00	11.32
225.83	8.80	H	3.62	11.87	4.43	25.10	46.40	21.30
334.52	7.09	V	1.18	14.18	5.49	26.76	46.40	19.64
398.10	8.87	H	3.29	15.66	6.15	30.68	46.40	15.72
449.82	7.14	V	1.24	16.40	6.80	30.34	46.40	16.06
464.77	7.68	H	3.78	16.61	6.86	31.15	46.40	15.25
600.58	6.15	V	1.00	19.30	7.83	33.28	46.40	13.12

* H : Horizontal, V : Vertical

♦ Calculation
Corrected Amplitude [㏈uV] = Amplitude[㏈uV] + Correction Factor [㏈]
Corrected Amplitude : The Final Value, Amplitude : Reading Value,
Correction Factor : ANT FACTOR + Cable loss

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- PoE Mode

Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[㎒]	[dBμV]		[m]	ANT. [dB/m]	Cable [dB]	[dBμV/m]	[dBμV/m]	[dB]
66.16	8.39	H	3.72	10.84	2.33	21.56	40.00	18.44
221.34	8.42	V	1.45	11.77	4.37	24.56	40.00	15.44
250.87	6.18	H	3.92	12.43	4.73	23.34	47.00	23.66
461.61	7.70	H	4.00	16.56	6.85	31.11	47.00	15.89
484.82	9.01	V	1.34	16.89	6.94	32.84	47.00	14.16
680.33	13.44	V	1.00	19.62	8.38	41.44	47.00	5.56

* H : Horizontal, V : Vertical

♦ Calculation
Corrected Amplitude [㏈uV] = Amplitude[㏈uV] + Correction Factor [㏈]
Corrected Amplitude : The Final Value, Amplitude : Reading Value,
Correction Factor : ANT FACTOR + Cable loss

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Radiated Electric Field Emissions(Above 1 ㎓)

- DC 12 V Mode

- PK

	Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin [dB]
	[㎒]	[dBμV]		[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	
1	134.000	71.180	H	1.000	21.170	3.290	43.640	52.000	76.000	24.000
1	147.000	67.370	V	1.000	21.240	3.310	43.640	48.280	76.000	27.720
1	596.000	59.190	H	1.000	23.540	3.860	43.660	42.930	76.000	33.070
1	596.000	60.060	V	1.000	23.540	3.860	43.660	43.800	76.000	32.200
1	737.000	62.950	V	1.000	24.260	4.160	43.700	47.670	76.000	28.330
2	044.000	54.800	H	1.000	25.780	4.490	43.800	41.270	76.000	34.730
2	051.000	56.750	V	1.000	25.810	4.500	43.800	43.260	76.000	32.740
2	346.000	54.650	H	1.000	27.050	4.870	43.940	42.630	76.000	33.370
2	743.000	54.050	H	1.000	28.710	5.250	44.100	43.910	76.000	32.090
2	750.000	59.910	V	1.000	28.740	5.250	44.110	49.790	76.000	26.210
4	884.000	50.610	H	1.000	33.020	7.000	44.310	46.320	80.000	33.680
4	903.000	49.770	V	1.000	33.050	6.990	44.320	45.490	80.000	34.510

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- AV

Frequency		Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin [dB]
[㎒]		[dBμV]		[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	
1	141.000	59.010	V	1.000	21.210	3.300	43.640	39.880	56.000	16.120
1	147.000	59.020	H	1.000	21.240	3.310	43.640	39.930	56.000	16.070
1	224.000	50.940	V	1.000	21.630	3.410	43.640	32.340	56.000	23.660
1	596.000	47.020	H	1.000	23.540	3.860	43.660	30.760	56.000	25.240
1	596.000	47.470	V	1.000	23.540	3.860	43.660	31.210	56.000	24.790
1	993.000	45.570	H	1.000	25.560	4.400	43.780	31.750	56.000	24.250
2	051.000	44.500	V	1.000	25.810	4.500	43.800	31.010	56.000	24.990
2	064.000	44.490	H	1.000	25.870	4.520	43.810	31.070	56.000	24.930
2	737.000	46.600	H	1.000	28.690	5.250	44.100	36.440	56.000	19.560
2	750.000	46.920	V	1.000	28.740	5.250	44.110	36.800	56.000	19.200
4	903.000	38.800	H	1.000	33.050	6.990	44.320	34.520	60.000	25.480
4	903.000	38.830	V	1.000	33.050	6.990	44.320	34.550	60.000	25.450

♦ Calculation

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

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

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- PoE Mode

- PK

	Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin [dB]
	[㎒]	[dBμV]		[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	
1	134.000	70.860	V	1.000	21.170	3.290	43.640	51.680	76.000	24.320
1	141.000	69.900	H	1.000	21.210	3.300	43.640	50.770	76.000	25.230
1	596.000	57.830	H	1.000	23.540	3.860	43.660	41.570	76.000	34.430
1	698.000	59.570	H	1.000	24.060	4.080	43.690	44.020	76.000	31.980
2	000.000	64.780	H	1.000	25.600	4.400	43.780	51.000	76.000	25.000
2	000.000	56.480	V	1.000	25.600	4.400	43.780	42.700	76.000	33.300
2	051.000	56.050	V	1.000	25.810	4.500	43.800	42.560	76.000	33.440
2	397.000	58.780	H	1.000	27.260	4.900	43.960	46.980	76.000	29.020
2	737.000	65.930	H	1.000	28.690	5.250	44.100	55.770	76.000	20.230
2	743.000	60.990	V	1.000	28.710	5.250	44.100	50.850	76.000	25.150
2	801.000	58.050	V	1.000	28.960	5.270	44.120	48.160	76.000	27.840
4	903.000	50.040	V	1.000	33.050	6.990	44.320	45.760	80.000	34.240

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- AV

Frequency		Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor			Corrected Amplitude	Applicable Limit	Margin [dB]
[㎒]		[dBμV]		[m]	ANT. [dB /m]	Cable [dB]	AMP [dB]	[dBμV/m]	[dBμV/m]	
1	141.000	59.980	V	1.000	21.210	3.300	43.640	40.850	56.000	15.150
1	147.000	59.940	H	1.000	21.240	3.310	43.640	40.850	56.000	15.150
1	596.000	44.630	V	1.000	23.540	3.860	43.660	28.370	56.000	27.630
1	993.000	52.130	H	1.000	25.560	4.400	43.780	38.310	56.000	17.690
1	993.000	43.830	V	1.000	25.560	4.400	43.780	30.010	56.000	25.990
2	057.000	50.760	H	1.000	25.840	4.510	43.810	37.300	56.000	18.700
2	057.000	43.360	V	1.000	25.840	4.510	43.810	29.900	56.000	26.100
2	288.000	46.320	H	1.000	26.810	4.840	43.910	34.060	56.000	21.940
2	737.000	54.910	H	1.000	28.690	5.250	44.100	44.750	56.000	11.250
2	750.000	49.640	V	1.000	28.740	5.250	44.110	39.520	56.000	16.480
4	903.000	38.850	H	1.000	33.050	6.990	44.320	34.570	60.000	25.430
4	903.000	39.000	V	1.000	33.050	6.990	44.320	34.720	60.000	25.280

♦ Calculation

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

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

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Test Setup Photos and Configuration

Conducted Voltage Emissions

N/A

N/A

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Radiated Electric Field Emissions(Below 1 ㎓)

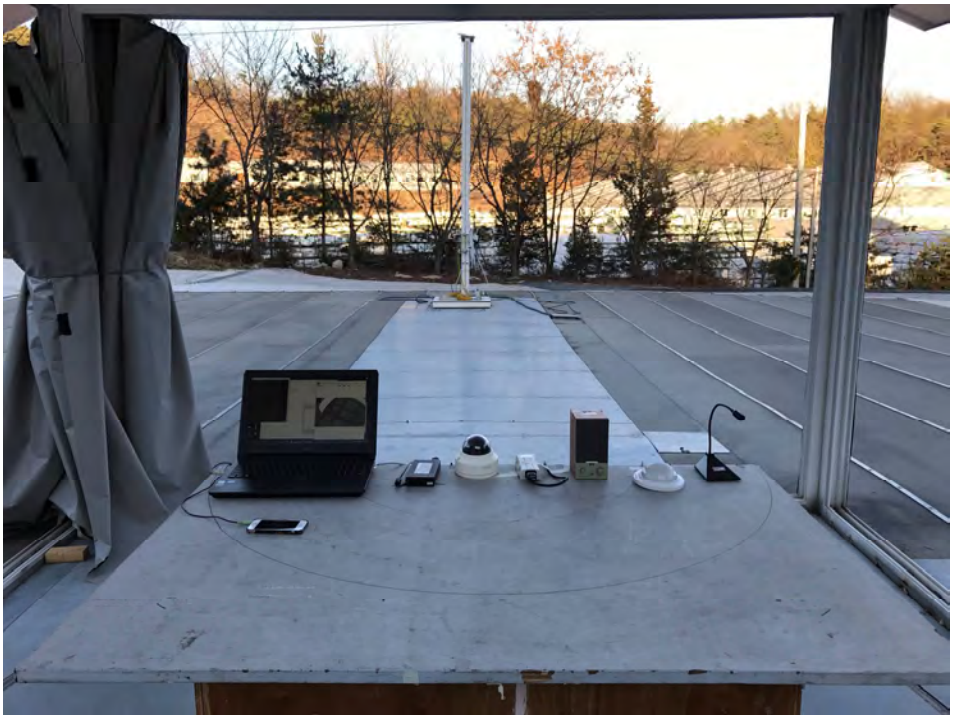
- DC 12 V Mode





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- PoE Mode



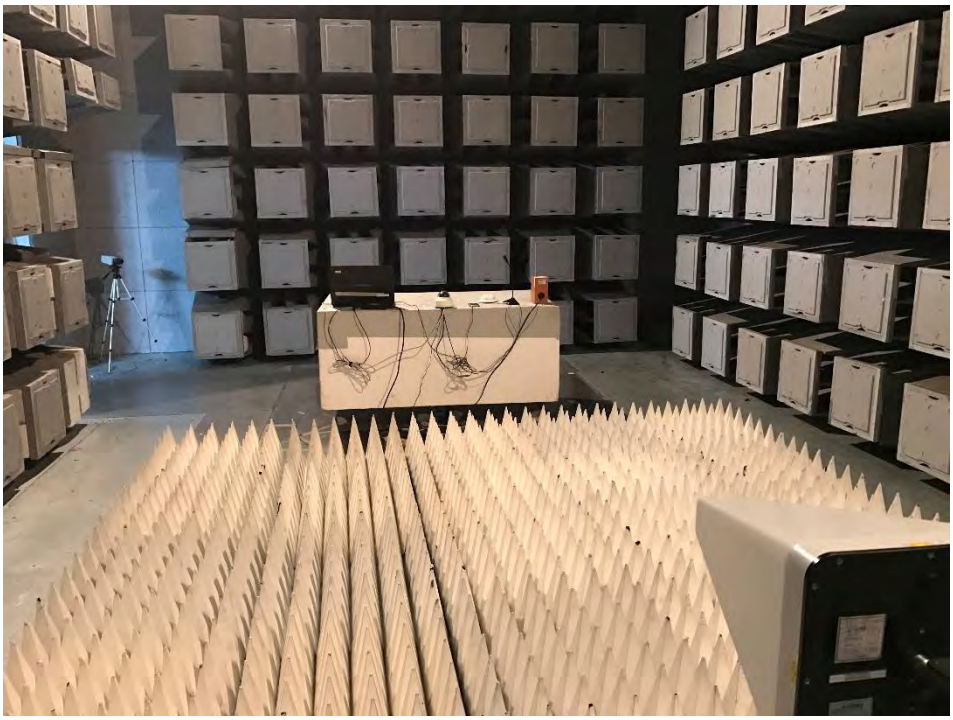


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Radiated Electric Field Emissions(Above 1 ㎓)

- DC 12 V Mode

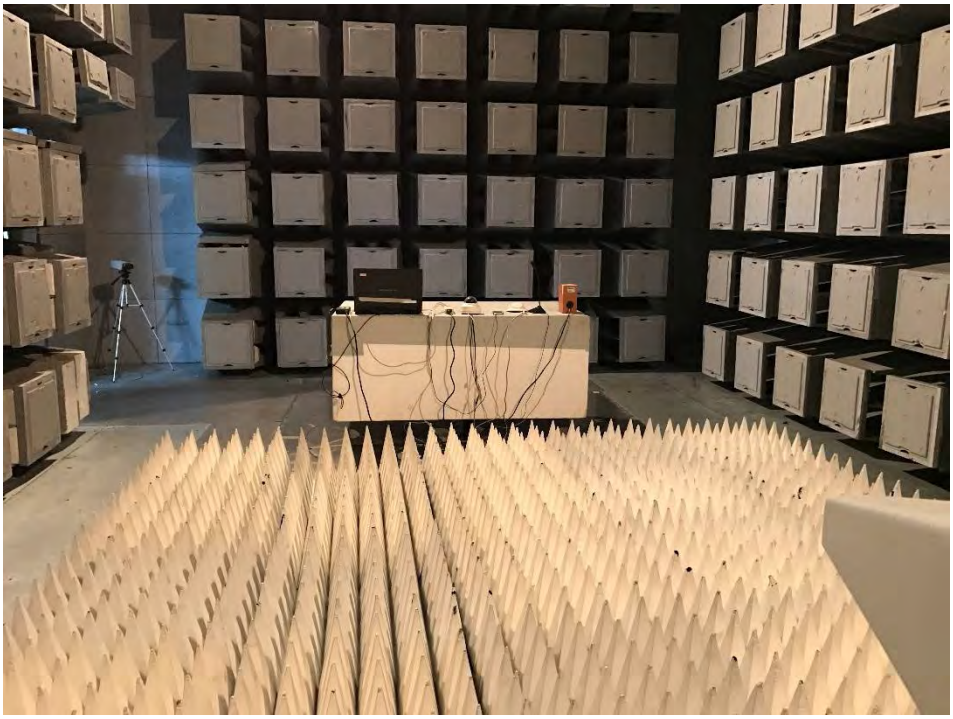




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- PoE Mode





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EUT External Photographs

(Top)



(Bottom)



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EUT Internal Photographs

(Internal View)



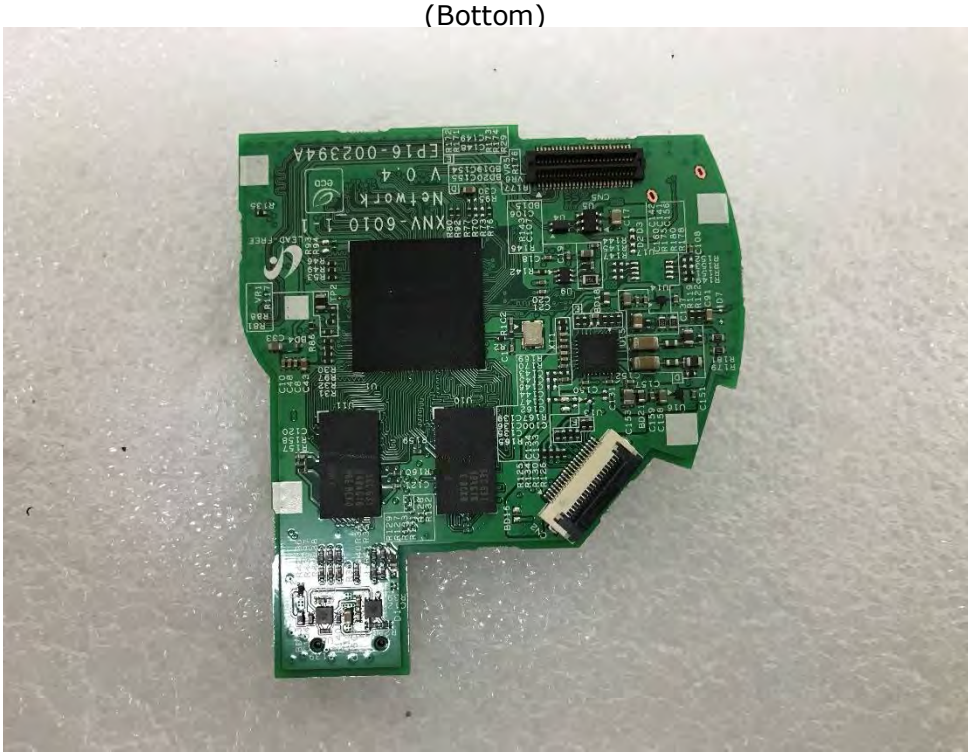
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EUT Internal View – board 1

(Top)



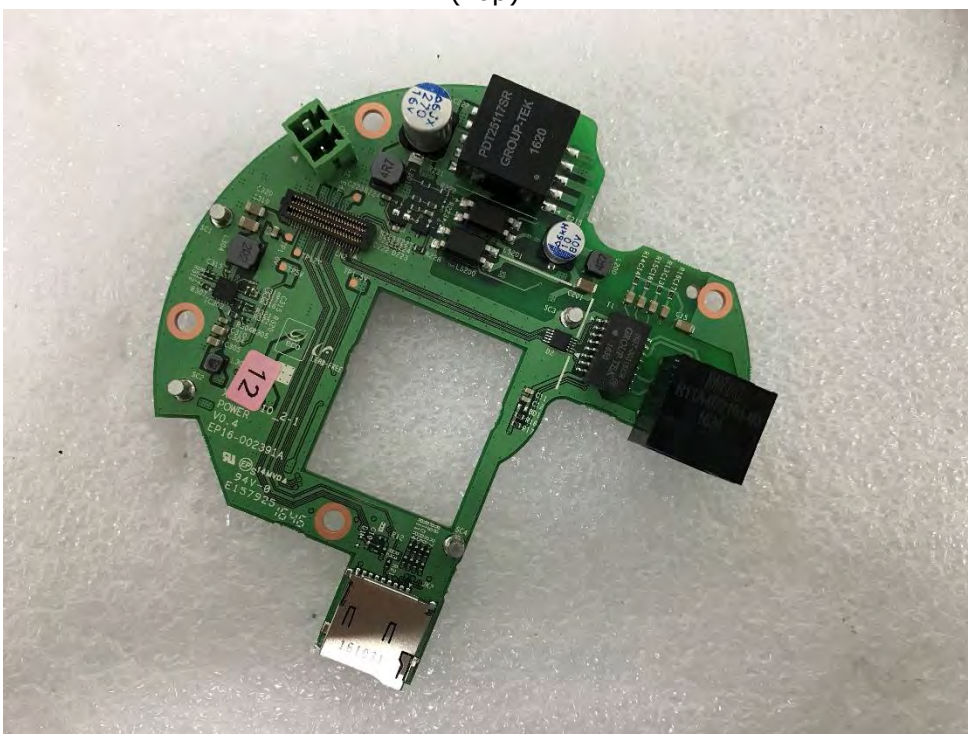
(Bottom)



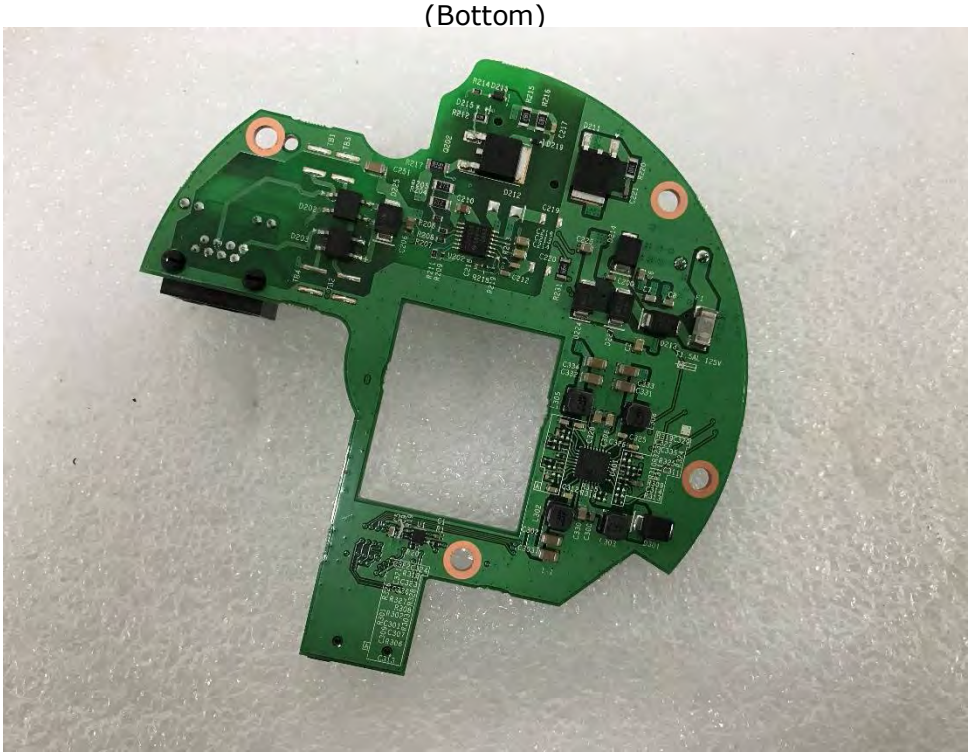
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EUT Internal View – board 2

(Top)



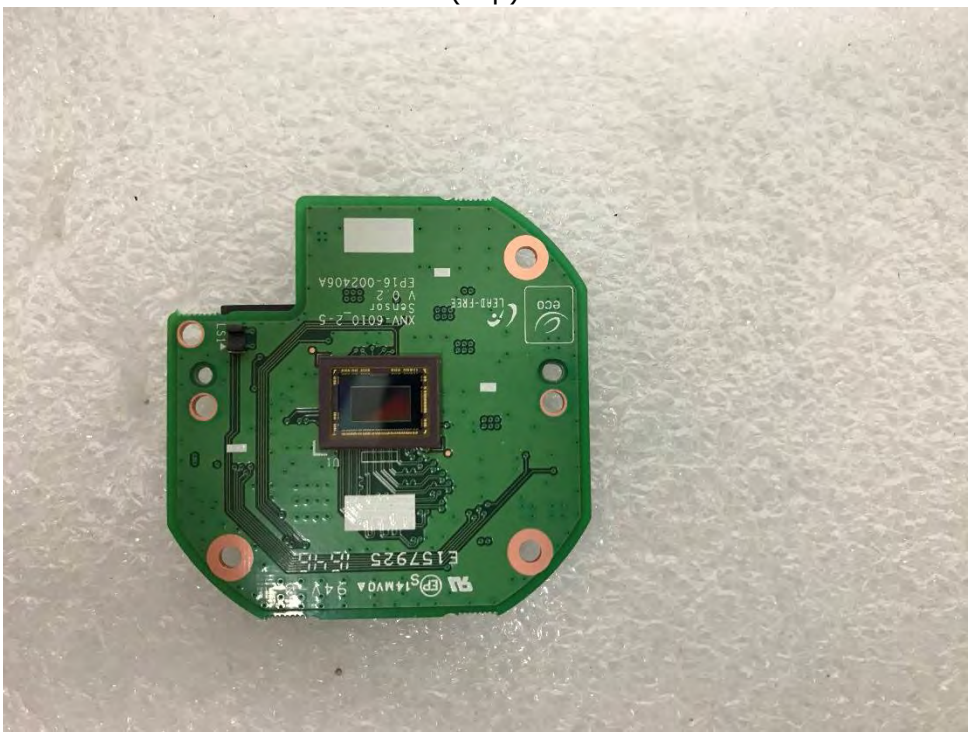
(Bottom)



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EUT Internal View – board 3

(Top)



(Bottom)



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Label Photographs



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

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