



EMC TEST REPORT

Test Report No. : KES-E1-18T0565

Date of Issue : Oct. 11, 2018

Product name : Network Camera

Model/Type No. : PNM-9030V

Variant Mode : -

Applicant : Hanwha Techwin Co., Ltd.

Applicant Address : 6, Pangyo-ro 319 Beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13488, KOREA

Manufacturer : 1. Hanwha Techwin (Tianjin) Co.,Ltd.
2. HANWHA TECHWIN SECURITY VIETNAM CO.,LTD.
3. D-TECH CO.,LTD.

Manufacturer Address : 1. No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin,
300385, People's Republic of China
2. Lot O-2, Que Vo Industrial Zone extended area,
Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
3. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do,
Korea (Suwon Industrial Complex)

Equipment authorization : **Supply's Declaration of Conformity**

Date of Receipt : Sep. 21, 2018

Test date : Oct. 03, 2018 ~ Oct. 04, 2018

Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Dong Hyun, Won
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

This test report is not related to KOLAS.

**KES Co., Ltd.**

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Oct. 11, 2018	KES-E1-18T0565	Issued

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1.0 General Product Description

Main Specifications of EUT are:

	PNM-9030V
Video	
Imaging Device	1/2.8" 5M CMOS x 4CH
Total Pixels	2,704(H) x 2,104(V) 5.69M x 4CH
Effective Pixels	2,616(H) x 1,964(V) 5M x 4CH
Scanning System	Progressive
Min. Illumination	Color: 0.15lux, B/W:0.01lux
S / N Ratio	N/A
Video Out	Micro USB Type B
Lens	
Focal Length (Zoom Ratio)	4mm
Max. Aperture Ratio	F2.0
Angular Field of View	[180° mode] H : 180°, V : 70°, D : [220° mode] H : 220°, V : 52°, D :
Min. Object Distance	0.5m(1.64ft)
Focus Control	Fixed
Lens Type	-
Mount Type	Board-in type (M12)
Pan / Tilt / Rotate	
Pan Range	355°
Tilt Range	60°
Rotate Range	-
Operational	
Camera Title	Off / On (Displayed up to 85 characters) - 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	Auto (ICR) / Color / B/W / Schedule
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR!!! (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	Off / On
LDC	Support
Motion Detection	Off/ On(8ea, 8point Polygonal zones), Handover
Privacy Masking	Off / On (16ea, rectangle zones) - Color : Grey/Green/Red/Blue/Black/White

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Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Contrast	Level adjustment
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Defog	Off / Manual / Auto
Digital zoom	24X
Rotate Image	Flip : On/Off Mirror : On/Off
Digital PTZ	Support
Flip / Mirror	Off / On
Intelligent Video Analytics	Tampering, Loitering, Directional detection, Virtual line, Enter/Exit, (Dis)Appear, Audio detection, Motion detection, Sound classification, Heatmap
Alarm I/O	Input 1ea / Output 1ea
Audio In	Line in Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out (3.5mm stereo mini jack)
Alarm Triggers	Alarm input, Motion detection, Video&Audio 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
Network	
Ethernet	RJ-45(1000BASE-T)
Video Compression Format	H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High MJPEG
Resolution	[180° mode] 6096x2540, 5760x2400, 5472x2280, 5184x2160, 4800x2000, 4560x1900, 4096x1706, 3840x1600, 2688x1120, 2560x1066, 2048x852, 1920x800, 1280x532 [220° mode] 7744x1936, 6096x1524, 5760x1440, 5472x1368, 5184x1296, 4800x1200, 4560x1140, 4096x1024, 3840x960, 2688x672, 2560x640, 2048x512, 1920x480, 1280x320
Max. Framerate	H.265/H.264 : Max. 30fps at all resolutions
Smart Codec	Manual Mode (area-based : 5EA)
WiseStream II	Support
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, Motion JPEG : VBR

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Streaming Capability	Multiple Streaming (Up to 5 Profiles for each CH)
Audio Compression Format	G.711 u-law /G.726 Selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional (2-Way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, LLDP
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1X Authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	10 users at Unicast Mode
Edge Storage	SD/SDHC/SDXC 2slot (up to 256GB) - motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. - camera can detect automatically when the memory is connected - memory status display (normal/error/active/formatting/lock) NAS(Network Attached Storage) Local PC for Instant Recording
Application Programming Interface	ONVIF Profile S/G SUNAPI(HTTP API) Wisenet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer Supported Browser : Google Chrome 63, MS Edge 41, Mozilla Firefox 57 (Window 64bit only), Apple Safari 11 (Mac OS X only)
Pixel Counter	support
Environmental	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	PoE+(IEEE802.3at), DC12V
Power Consumption	Max 25.5W (PoE+), Max 21.0W (DC12V)
Mechanical	
Color / Material	Ivory / Aluminum
Dimension (WxHxD)	Ø253(9.96") x H165mm (6.5")
Weight	3.2Kg

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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 ☐ 230 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	PNM-9030V	-	Hanwha Techwin (Tianjin) Co.,Ltd.	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
PoE Adaptor	GS728TPP	-	NETGEAR®	-
Notebook	LG15N54	410NZET022292	LG Electronics	-
Notebook Adaptor	PA-1900-08	9702591703	Dongguang Lite Power 2nd Plant	-
Speaker	BR-1000A CUVE	-	DONGGUAN EDFIER TECHNOLOGY CO, LTD	-
MIC	CMK-303	-	CAMAC	-
Alarm 1	SIP-1201DD D0	-	SAMSUNG TECHWIN CO., LTD.	-
Alarm 2	-	-	-	-
Micro SD Card	-	-	SanDisk	4 GB
Cellular phone	SHV-E210L	R33D713KA3F	SAMSUNG	-



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 (EUT)	RJ-45	Notebook	RJ-45	3.0	U
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	Alarm Out	Alarm 1	Alarm In	3.0	U
	Alarm In	Alarm 2	Alarm Out	3.0	U
	SLOT	Micro SD Card	SLOT	-	-
Notebook	3.5 mm	Cellular phone	3.5 mm	1.0	U

* Unshielded=U, Shielded=S

■ POE MODE

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (EUT)	RJ-45	PoE Adaptor	RJ-45	3.0	U
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	Alarm Out	Alarm 1	Alarm In	3.0	U
	Alarm In	Alarm 2	Alarm Out	3.0	U
	SLOT	Micro SD Card	SLOT	-	-
Notebook	3.5 mm	Cellular phone	3.5 mm	1.0	U
	RJ-45	PoE Adaptor	RJ-45	3.0	U

* Unshielded=U, Shielded=S



1.7 EUT Operating Mode(s)

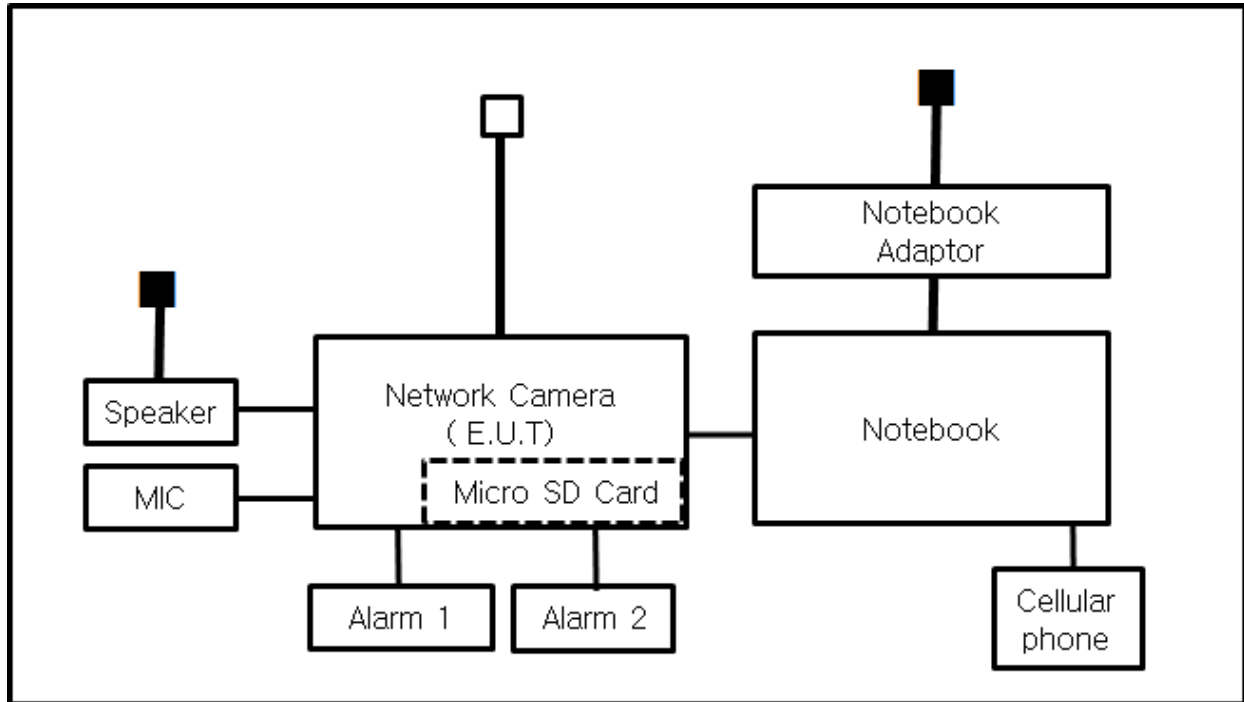
Test mode	operating
DC 12 V	EUT Monitoring, Ping Test
POE	EUT Monitoring, Ping Test

EUT Test operating S/W		
Name	Version	Manufacture Company
WebViewer	-	Hanwha Techwin Co., Ltd.

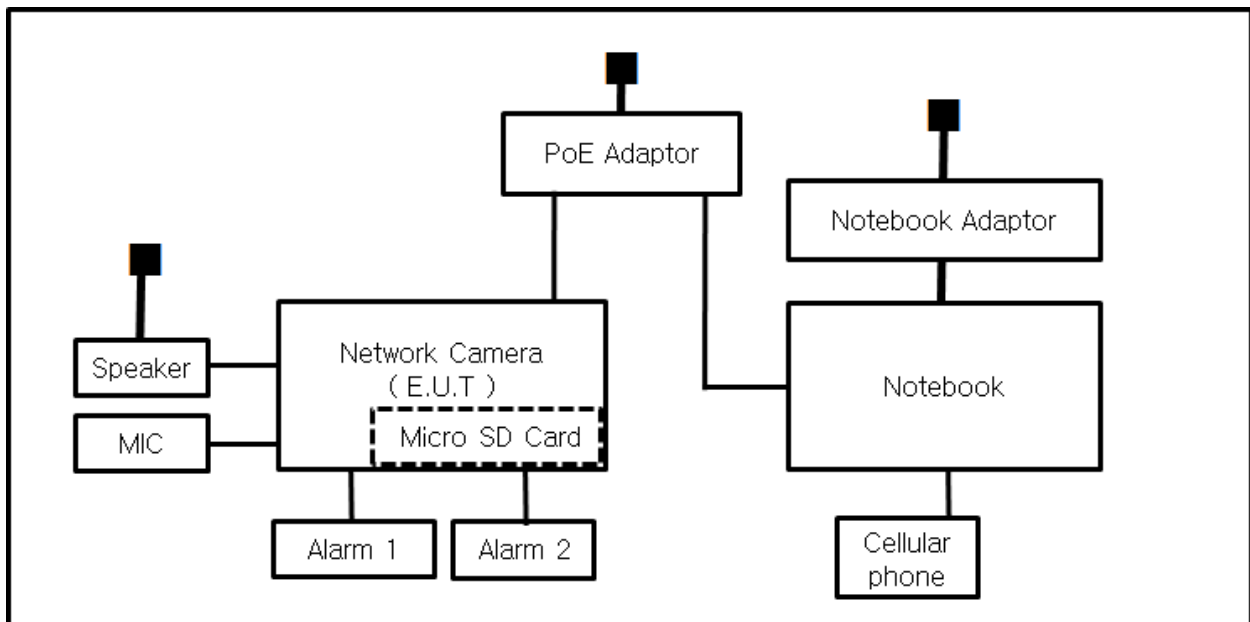
1.8 Configuration

■ AC Main
 □ DC Main

■ DC 12 V MODE



■ POE MODE



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1.9 Remarks when standards applied

N/A

1.10 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

1.11 Test Facility

The measurement facility is located at 473-21 Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea. The sites are constructed in conformance with the requirements of ANSI C63.4:2014 and CISPR 16-1-4:2012

1.12 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	RRA	EMI (3 m & 10 m Semi-Aechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	KOLAS	EMI (3 m & 10 m Semi-Aechoic Chamber , and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	FCC	3 m & 10 m Semi-Aechoic Chamber, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Aechoic Chamber and Conducted test site	 23298-1
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
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Aechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 17 07 01633 001

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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 55032:2015

☐ 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:2013**

☐ 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

☒ Class A

☐ Class B

☐ **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 S/W	EMC32	R & S	9.12.00	-
☐	EMI TEST RECEIVER	ESR3	R & S	101781	04, 25, 2019
☐	LISN	ENV216	R & S	101787	01, 05, 2019
☐	LISN	ESH2-Z5	R & S	100450	04, 25, 2019
☐	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 27, 2018

Test Conditions

Temperature:

°C

Relative Humidity:

% R.H.

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Results

The requirements are:

- ☐ PASS
☐ NOT PASS
☒ NOT APPLICABLE

Remarks

N/A

2.2 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Oct. 03, 2018

Test Location☐ OPEN AREA TEST SITE #2 ☒ SEMI ANECHOIC CHAMBER #4(10 m)**Test Equipment**

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
☒	EMI TEST RECEIVER	ESU26	R & S	100551	04, 11, 2019
☒	AMPLIFIER	SCU 01	R & S	100603	11, 27, 2018
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	714	11, 28, 2018

Test ConditionsTemperature: 23,8 °C
Relative Humidity: 51,4 % R.H.**Frequency Range of Measurement**

30 MHz to 1 GHz

Instrument Settings

IF Band Width: 120 kHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

RemarksSee Appendix A for test data.



2.3 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Oct. 04, 2018

Test Location

SEMI ANECHOIC CHAMBER #3

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
☒	EMI TEST RECEIVER	ESR7	R & S	101190	08, 06, 2019
☒	PREAMPLIFIER	8449B	AGILENT	3008A01967	05, 31, 2019
☐	ATTENUATOR	8491A	HP	35496	03, 21, 2019
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM,INC	781	05, 02, 2019

Test Conditions

Temperature: 23,2 °C
Relative Humidity: 54,2 % R.H.

Frequency Range of Measurement

1 GHz to 5 GHz

Instrument Settings

IF Band Width: 1 MHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

See Appendix A for test data.



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APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

HOT LINE

N/A

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NEUTRAL LINE

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 + Pulse Limiter FACTOR))

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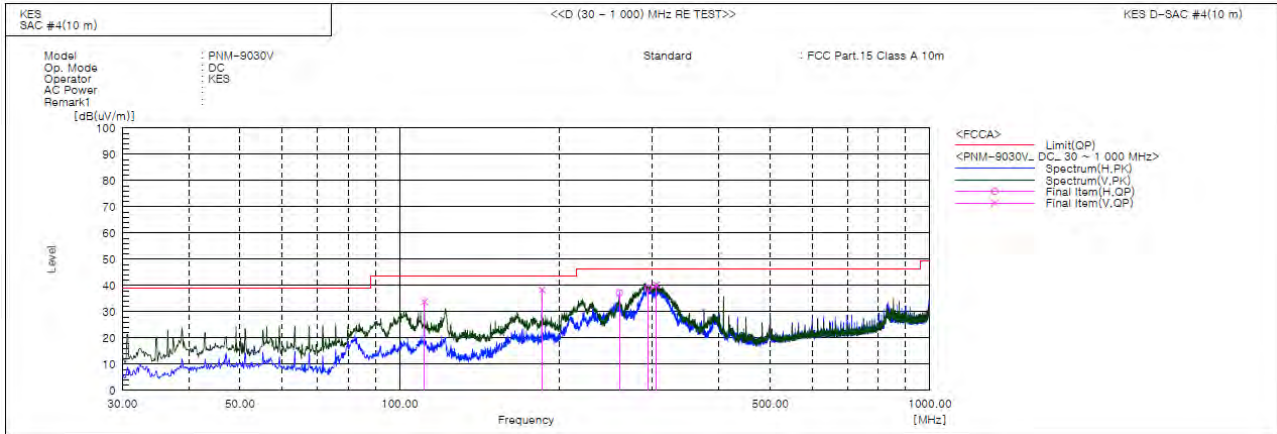
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Radiated Electric Field Emissions(Below 1 GHz)

■ DC 12 V MODE



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	111.359	V	63.9	-30.1	33.8	43.5	9.7	112.0	270.0	
2	185.604	V	67.8	-29.4	38.4	43.5	5.1	100.0	60.0	
3	259.890	H	63.2	-26.0	37.2	46.5	9.3	346.0	229.0	
4	294.568	H	64.1	-25.0	39.1	46.5	7.4	358.0	97.0	
5	304.995	V	64.9	-24.7	40.2	46.5	6.3	105.0	36.0	

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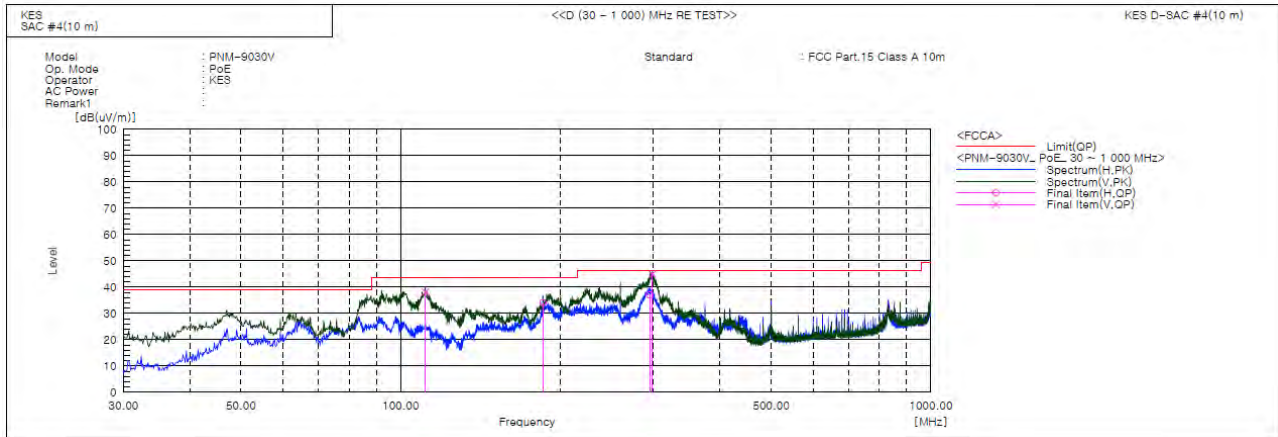


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POE MODE



Final Result

No.	Frequency	(P)	Reading	c.f	Result	Limit	Margin	Height	Angle	Remark
	[MHz]		QP		QP	QP	QP			
			[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	111.359	V	68.3	-30.1	38.2	43.5	5.3	155.0	189.0	
2	185.564	H	63.5	-29.4	34.1	43.5	9.4	394.0	91.0	
3	294.931	H	62.1	-25.0	37.1	46.5	9.4	371.0	127.0	
4	298.569	V	69.8	-24.9	44.9	46.5	1.6	117.0	150.0	

◆ Calculation – SAC #4(10 m)

Result(QP) [dB(μV/m)] = (Reading(QP)[dB(μV)] + c.f[dB(1/m)])

Margin(QP)[dB] = Limit[dB(μV/m)] - Result(QP) [dB(μV/m)]

Reading(QP) : Reading value, Result(QP) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value



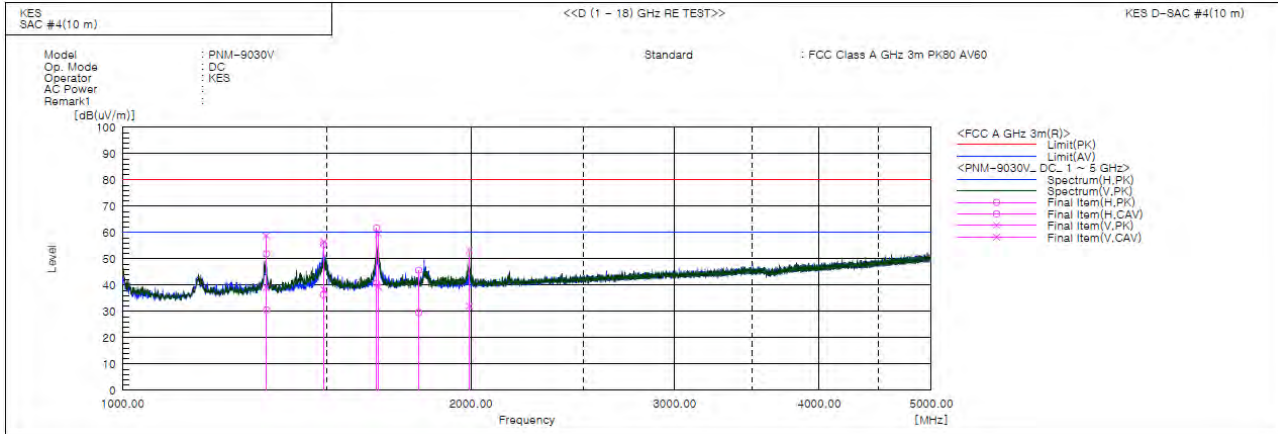
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KES-E1-18T0565
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Radiated Electric Field Emissions(Above 1 GHz)

■ DC 12 V MODE



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1331.870	H	56.6	35.3	-4.7	51.9	30.6	80.0	60.0	28.1	29.4	159.0	152.0	
2	1330.885	V	63.6	43.9	-4.8	58.8	39.1	80.0	60.0	21.2	20.9	136.0	26.0	
3	1491.630	H	58.9	39.7	-3.4	55.5	36.3	80.0	60.0	24.5	23.7	244.0	173.0	
4	1493.420	V	59.8	41.6	-3.4	56.4	38.2	80.0	60.0	23.6	21.8	100.0	26.0	
5	1658.110	H	64.1	43.1	-2.4	61.7	40.7	80.0	60.0	18.3	19.3	244.0	240.0	
6	1664.005	V	61.9	41.6	-2.3	59.6	39.3	80.0	60.0	20.4	20.7	208.0	230.0	
7	1802.860	H	47.3	31.2	-1.6	45.7	29.6	80.0	60.0	34.3	30.4	175.0	25.0	
8	1994.030	V	54.1	32.7	-0.7	53.4	32.0	80.0	60.0	26.6	28.0	132.0	350.0	

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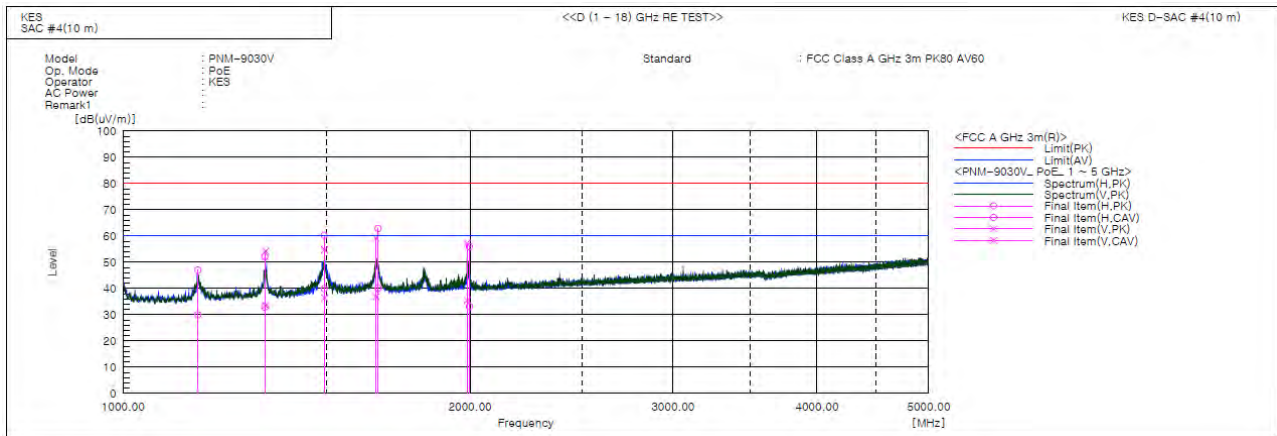


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POE MODE



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1161.505	H	53.3	36.2	-6.3	47.0	29.9	80.0	60.0	33.0	30.1	177.0	215.0	
2	1329.225	V	59.0	38.4	-4.8	54.2	33.6	80.0	60.0	25.8	26.4	100.0	314.0	
3	1327.355	H	57.0	37.7	-4.8	52.2	32.9	80.0	60.0	27.8	27.1	109.0	194.0	
4	1495.725	V	58.2	39.9	-3.4	54.8	36.5	80.0	60.0	25.2	23.5	114.0	24.0	
5	1494.520	H	63.7	43.4	-3.4	60.3	40.0	80.0	60.0	19.7	20.0	101.0	227.0	
6	1657.590	V	61.6	39.2	-2.4	59.2	36.8	80.0	60.0	20.8	23.2	155.0	227.0	
7	1664.590	H	65.1	42.4	-2.3	62.8	40.1	80.0	60.0	17.2	19.9	190.0	22.0	
8	1987.750	V	57.9	36.2	-0.7	57.2	35.5	80.0	60.0	22.8	24.5	100.0	21.0	
9	1997.540	H	56.6	33.8	-0.7	55.9	33.1	80.0	60.0	24.1	26.9	101.0	21.0	

Calculation

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

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

Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

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Test Setup Photos and Configuration

Conducted Voltage Emissions

N/A

N/A

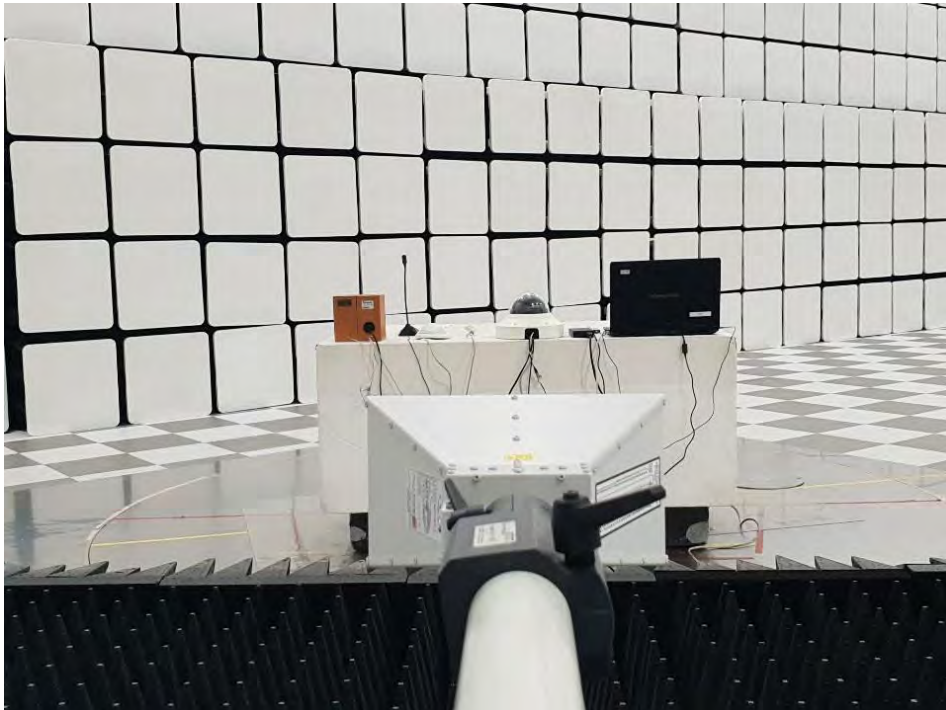
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Radiated Electric Field Emissions(Below 1 GHz)



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Radiated Electric Field Emissions(Above 1 GHz)



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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)



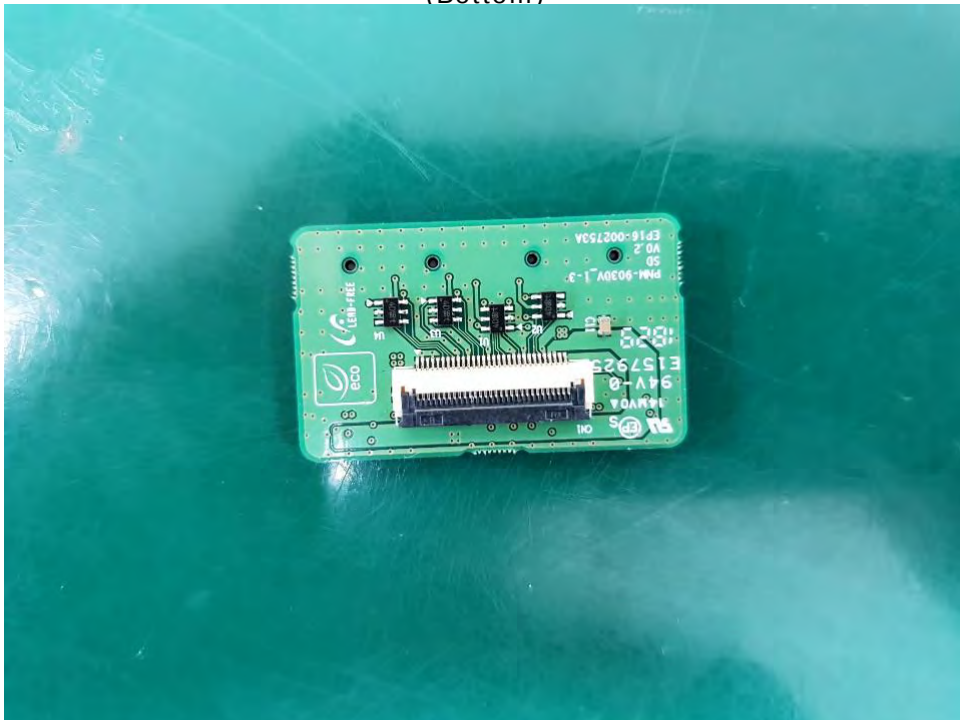
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EUT Internal View – Board 2

(Top)



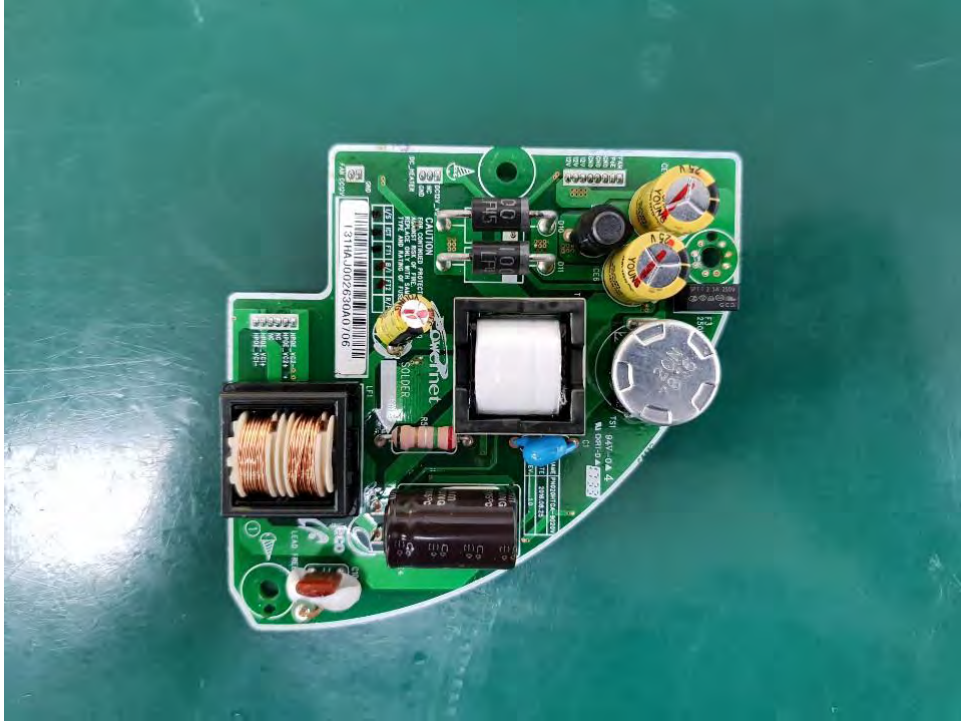
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EUT Internal View – Board 3

(Top)



(Bottom)



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EUT Internal View – LENS

(Top)



(Bottom)



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EUT Internal View – LENS Board

(Top)

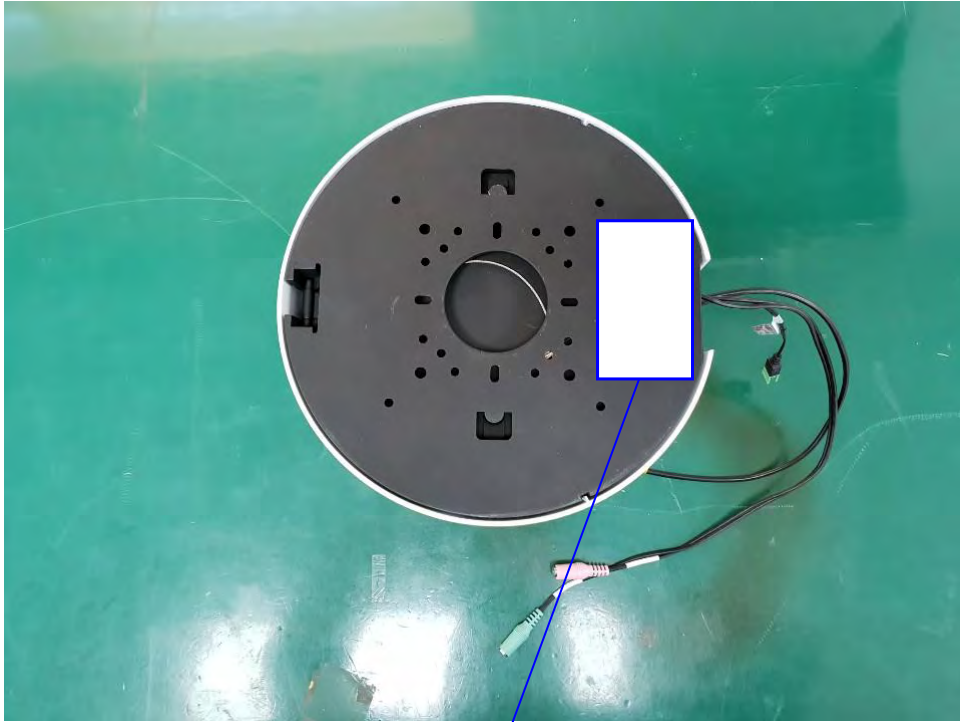


(Bottom)



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Label Photographs



CAN ICES-3(A) / NMB-3(A)