



## EMC TEST REPORT

Test Report No. : KES-EM-22T0266  
Date of Issue : Mar. 24, 2022  
Product name : CCTV CAMERA  
Model/Type No. : PNM-7082RVD  
Variant Model : -  
Applicant : Hanwha Techwin Co., Ltd.  
Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,  
Gyeonggi-do, Republic of Korea  
Manufacturer : 1. HANWHA TECHWIN SECURITY VIETNAM CO.,LTD.  
2. D-TECH CO.,LTD.  
Manufacturer Address : 1. Lot O-2, Que Vo Industrial Zone extended area,  
Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam  
2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do,  
Korea (Suwon Industrial Complex)  
Equipment authorization : **Supplier's Declaration of Conformity**  
Date of Receipt : Feb. 23, 2022  
Test date : Mar. 02, 2022 ~ Mar. 04, 2022  
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 KS Q ISO/IEC 17025 and KOLAS.

**KES Co., Ltd.**

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**REPORT REVISION HISTORY**

Date	Test Report No.	Revision History
Mar. 24, 2022	KES-EM-22T0266	Issued

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## 1.0 General Product Description

### Main Specifications of EUT are :

Video	
Imaging Device	1/2.8" CMOS x 2CH
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.265/H.264: 2MP Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
NETD	None
Pixel Size	None
Min. Illumination	Color: 0.035lux(F2.2, 1/30sec, 30IRE) BW: 0.0035lux(F2.2, 1/30sec, 30IRE), 0lux(IR LED on)
Video Out	USB: micro USB Type B, 1280x720 for installation
Video Transmission Distance	None
Lens	
Focal Length (Zoom Ratio)	3~6mm(2x) motorized varifocal per CH
Max. Aperture Ratio	F2.2(Wide)~F3.1(Tele)
Angular Field of View	H: 107°(Wide)~56.3°(Tele) V: 57°(Wide)~31.5°(Tele) D: 126°(Wide)~64.3°(Tele)
Min. Object Distance	0.5m(1.64ft)
Focus Control	Simple focus
Lens Type	Fixed IRIS
Mount Type	None
Optional Lens	None
Pan / Tilt / Rotate	
Pan / Tilt / Rotate Range	0~355°/0~75°/0~180°
Pan Range	None
Pan Speed	None
Tilt Range	None
Tilt Speed	None
Rotate Range	None
Sequence	None
Preset Accuracy	None
Operational	
Camera Title	Displayed up to 85 characters
Direction Indicator	None
Day & Night	Auto(ICR)
Backlight Compensation	BLC, HLC, WDR, SDR
Wide Dynamic Range	extremeWDR(150dB)
Digital Noise Reduction	WiseNR, SSNRV
Digital Image Stabilization	None
Defog	Support
Motion Detection	8ea, 8point Polygonal zones
Privacy Masking	32ea, Quadrangle zones - Color: Grey/Green/Red/Blue/Black/White - Mosaic
Gain Control	Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC	Support

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Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~1/12,000sec)
Digital PTZ	None
Video Rotation	Flip, Mirror, Hallway view (90°/270°)
Analytics	Analytics events* - Defocus detection, Motion detection, Tampering, Virtual line(Crossing/Direction), Virtual area(Loitering/Enter/Exit)  * Support Audio detection, Sound classification via optional SPM-4210 I/O box
Business Intelligence	None
Serial Interface	None
Alarm I/O	* Support Alarm via optional SPM-4210 I/O box
Alarm Triggers	Analytics, Network disconnect, Alarm input via optional SPM-4210 I/O box
Alarm Events	When alarm trigger occurred - File upload(image) : e-mail/FTP - Notification : e-mail - Recording : SD/SDHC/SDXC or NAS recording at event triggers - Handover(PTZ preset, Send message by HTTP/HTTPS/TCP) - * Alarm output via optional SPM-4210 I/O box
Audio Streaming	None

Audio In	* Audio in via optional SPM-4210 I/O box
Audio Out	* Audio out via optional SPM-4210 I/O box
IR Viewable Length	WiseIR 15m(49.21ft)
IR Illuminator (Optional)	None
IR Radiation angle	None
IR LED	None
IR Wavelength	None
IR Operation	None
Water Removal	None
Auto Tracking	None
Coaxial Protocol	None
Color Palettes	None
<b>Radiometry</b>	
Temperature Detect Range	None
Temperature Accuracy	None
Temperature Detection	None
Additional	None
<b>Network</b>	
Ethernet	Metal shielded RJ-45 (10/100/1000BASE-T)
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression	None
Smart Codec	Manual(Sea area), WiseStreamII
Video Quality Adjustment	H.264/H.265: Target bitrate level control MJPEG: Target bitrate level control
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Protocol	IPv4, IPv6, 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, UPnP, Bonjour, LLDP, SRTP (TCP, UDP Unicast)
SIP support (VoIP, Peer-to-peer, SIP/P)	None
Security	TPM 2.0 (FIPS 140-2 level 2) HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device Certificate(Hanwha Techwin Root CA, pre-installed) Secure by default certificate Secure OS/Boot/Storage, Verify firmware forgery
Application Programming Interface	ONVIF Profile S/T SUNAPI(HTTP API) Open platform

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<b>General</b>	
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Greek, Hungarian
Web Viewer	None
Edge Storage	Micro SD/SDHC/SDXC 1slot Max. 512GB
Memory	4GB RAM, 512MB Flash
<b>Environmental &amp; Electrical</b>	
Operating Temperature / Humidity	-40°C~+55°C(-40°F ~ +131°F) / Less than 95% RH(Non-condensing) * Start up should be above at -35°C
Storage Temperature / Humidity	-50°C~+60°C (-58°F~+140°F) / Less than 95% RH(Non-condensing)
Certification	IP66, IK10, NEMA4X
Input Voltage	PoE+(IEEE802.3at, Class4)
Power Consumption	PoE+: Max 19W, typical 14.2W
<b>Mechanical</b>	
Color / Material	White / Aluminum Hard-coated dome bubble
RAL Code	RAL9003
Product Dimensions / Weight	215(W)x135(D)x93.2(H)mm(8.46"x5.31"x3.67") / 1330g
Compatible Conduit hole / Gangbox	3/4" (M25) single, double, 4" octagon, 4" square
Hanging Mount (Dome)	None
Skin Cover (Dome)	None
Weather Cap (Dome)	None
Power Module	None
Backbox	None
<b>Certifications &amp; Standards</b>	
Network	None
EMC	None
Safety	None
Environment	None
Video	None
<b>DORI (EN62676-4 standard)</b>	
Detect (25PPM/ 8PPF)	Wide: 28.4m(93.22ft) / Tele: 71.8m(235.45ft)
Observe (63PPM/ 19PPF)	Wide: 11.4m(37.29ft) / Tele: 28.7m(94.18ft)
Recognize (125PPM/ 38PPF)	Wide: 5.7m(18.64ft) / Tele: 14.4m(47.09ft)
Identify (250PPM/ 76PPF)	Wide: 2.8m(9.32ft) / Tele: 7.2m(23.55ft)

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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.

☒ PoE

## 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
CCTV CAMERA	PNM-7082RVD	-	HANWHA TECHWIN SECURITY VIETNAM CO.,LTD.	EUT

## 1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
PoE Adapter	PT-PSE109GBRO-AH	-	Dongguan PROCET Network Technology Co.,Ltd	-
Notebook	P95G001	9JM8HT2	Wistron Corporation	-
Notebook Adapter	LA65NS2-01	-	LITE-ON TECHNOLOGY (CHANGZHOU)CO.,LTD.	-
Micro SD Card	-	-	DASHCAM7	32 GB



## 1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
CCTV CAMERA (EUT)	RJ-45	PoE Adapter	RJ-45	4.0	S
	Micro SD Card Slot	Micro SD Card	Micro SD Card Slot	-	-
Notebook	RJ-45	PoE Adapter	RJ-45	2.5	U
	DC Jack	Notebook Adapter	DC Jack	2.0	S

\* Unshielded=U, Shielded=S

## 1.7 EUT Operating Mode(s)

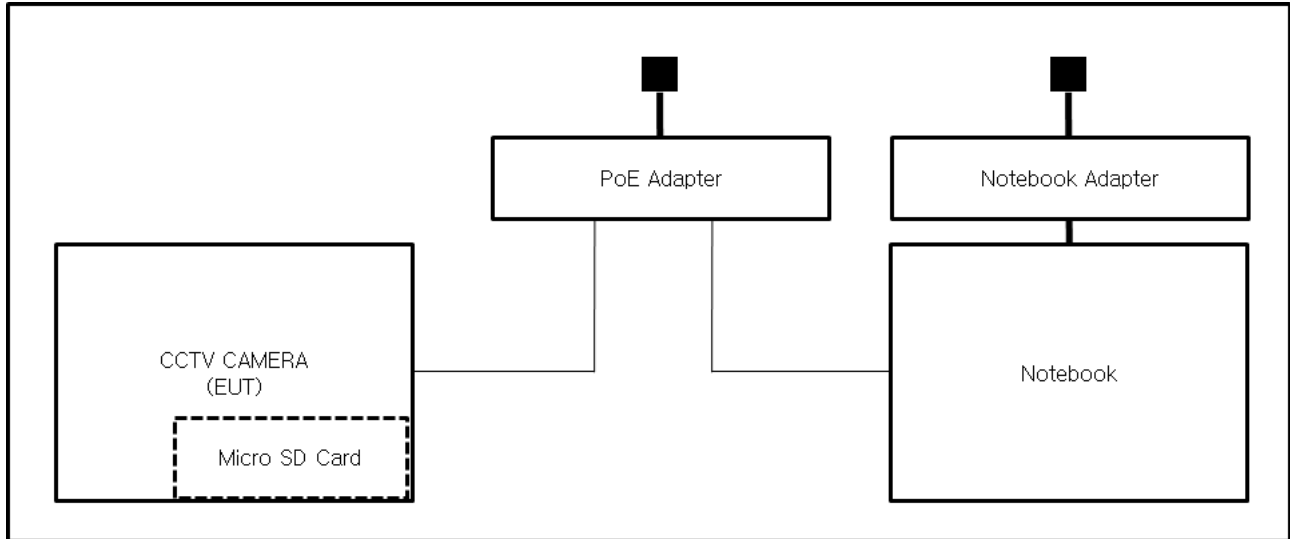
Test mode	operating
Operating Mode	EUT Monitoring, Ping Test

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



## 1.8 Configuration

■ AC Main  
□ DC Main



## 1.9 Remarks when standards applied

Micro 5 Pin port was excluded from the test as it is an unused port.







## 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 C63.4a-2017 and CISPR 16-1-4:2019

## 1.12 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	<b>RRA</b>	EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	<b>KOLAS</b>	EMI (3 m & 10 m Semi-Anechoic Chamber , and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	<b>FCC</b>	3 m & 10 m Semi-Anechoic Chamber, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	<b>ISED</b>	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	 23298-1
JAPAN	<b>VCCI</b>	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	 R-20056, C-20036, T-20040, G-20057
Europe	<b>TÜV SÜD</b>	EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 001633 0004



## 2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **47 CFR Part 15, Subpart B**

☐ CISPR 22:2009 +A1:2010

☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B

☒ **IC Regulation ICES-003 Issue 7**

☐ CAN/CSA-CISPR 32:17

☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B



## 2.1 Conducted Emissions at Mains Power Ports

### Test Date

Mar. 02, 2022

### Test Location

Electro wave Shieldroom #6

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
<input checked="" type="checkbox"/>	EMI Test S/W	EMC32	R & S	9.12.00	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESR3	R & S	101783	12, 28, 2022
<input checked="" type="checkbox"/>	LISN	ENV216	R & S	101787	12, 27, 2022
<input checked="" type="checkbox"/>	LISN	ESH2-Z5	R & S	100450	12, 27, 2022
<input checked="" type="checkbox"/>	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 27, 2022

### Test Conditions

Temperature: (23,3 ± 0,1) °C

Relative Humidity: (43,2 ± 0,1) % 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

See Appendix A for test data.



## 2.2 Radiated Electric Field Emissions(Below 1 GHz)

### Test Date

Mar. 02, 2022

### Test Location

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

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
<input checked="" type="checkbox"/>	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESU26	R & S	100551	04, 01, 2022
<input checked="" type="checkbox"/>	AMPLIFIER	SCU 01	R & S	100603	11, 24, 2022
<input checked="" type="checkbox"/>	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	12, 08, 2022
<input checked="" type="checkbox"/>	ATTENUATOR	8491A	HP	32173	03, 08, 2023

### Test Conditions

Temperature: (23,2 ± 0,2) °C  
Relative Humidity: (43,4 ± 0,1) % 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

### Remarks

See Appendix A for test data.



## 2.3 Radiated Electric Field Emissions(Above 1 GHz)

### Test Date

Feb. 04, 2022

### Test Location

SEMI ANECHOIC CHAMBER #5

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
<input checked="" type="checkbox"/>	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.120	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	04, 01, 2022
<input checked="" type="checkbox"/>	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	12, 16, 2022
<input checked="" type="checkbox"/>	PREAMPLIFIER	8449B	HP	3008A00538	06, 21, 2022

### Test Conditions

Temperature: (22,9 ± 0,1) °C

Relative Humidity: (43,2 ± 0,1) % 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.

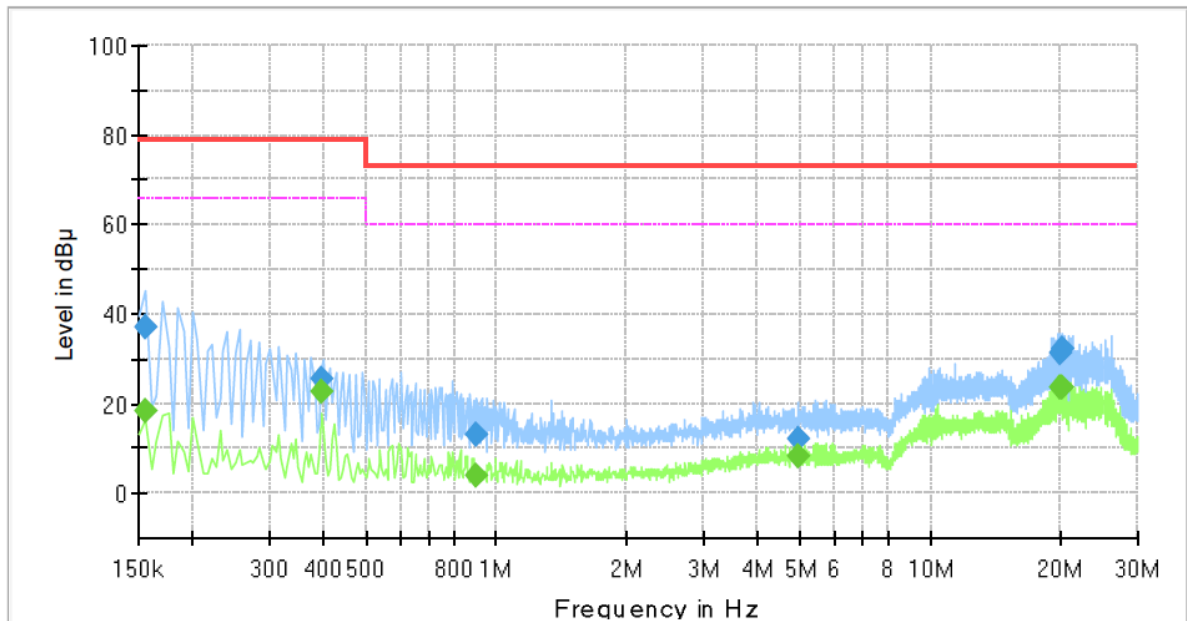
## APPENDIX A – TEST DATA

### Conducted Emissions at Mains Power Ports

HOT LINE

#### Common Information

Test Description:	Conducted Emission
Model No.:	PNM-7082RVD
Phase:	
Mode:	H
Operator Name:	KES



#### Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	---	18.34	66.00	47.66	1000.0	9.000	L1	19.4
0.155000	37.05	---	79.00	41.95	1000.0	9.000	L1	19.4
0.395000	---	22.88	66.00	43.12	1000.0	9.000	L1	19.6
0.395000	25.76	---	79.00	53.24	1000.0	9.000	L1	19.6
0.900000	---	3.89	60.00	56.11	1000.0	9.000	L1	20.1
0.900000	12.99	---	73.00	60.01	1000.0	9.000	L1	20.1
4.950000	---	8.48	60.00	51.52	1000.0	9.000	L1	19.6
4.950000	12.01	---	73.00	60.99	1000.0	9.000	L1	19.6
19.800000	---	23.60	60.00	36.40	1000.0	9.000	L1	20.1
19.800000	31.44	---	73.00	41.56	1000.0	9.000	L1	20.1
20.135000	---	23.51	60.00	36.49	1000.0	9.000	L1	20.1
20.135000	32.43	---	73.00	40.57	1000.0	9.000	L1	20.1

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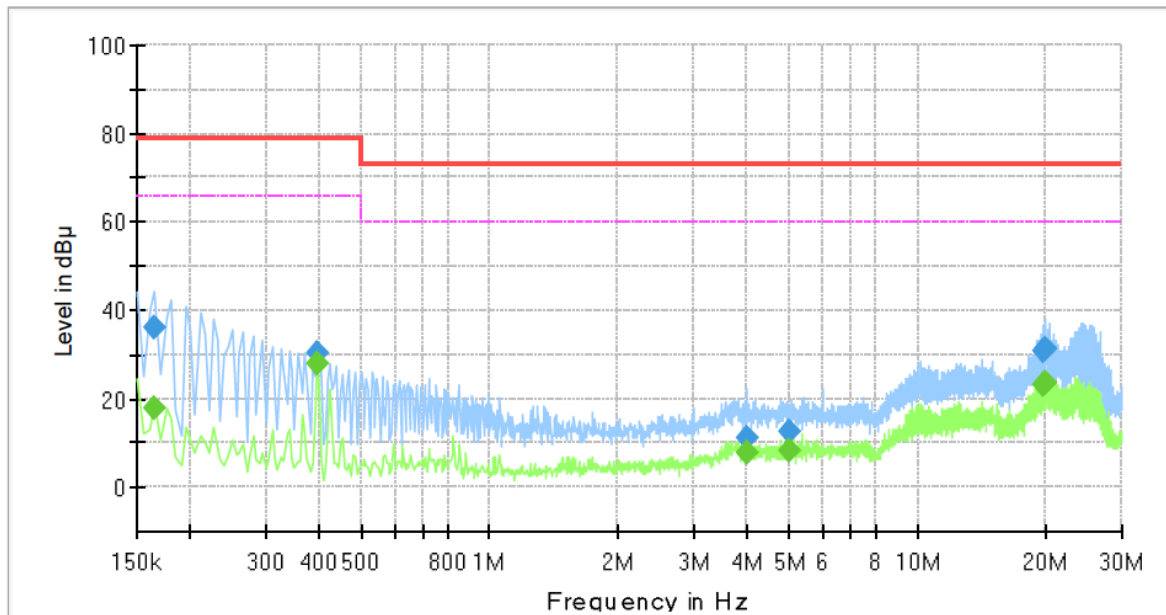
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### NEUTRAL LINE

## Common Information

Test Description: Conducted Emission  
Model No.: PNM-7082RVD  
Phase:  
Mode: N  
Operator Name: KES



## Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.165000	---	17.98	66.00	48.02	1000.0	9.000	N	19.4
0.165000	36.12	---	79.00	42.88	1000.0	9.000	N	19.4
0.395000	---	27.88	66.00	38.12	1000.0	9.000	N	19.6
0.395000	30.37	---	79.00	48.63	1000.0	9.000	N	19.6
3.980000	---	7.88	60.00	52.12	1000.0	9.000	N	19.9
3.980000	11.37	---	73.00	61.63	1000.0	9.000	N	19.9
5.040000	---	8.47	60.00	51.53	1000.0	9.000	N	19.6
5.040000	12.35	---	73.00	60.65	1000.0	9.000	N	19.6
19.750000	---	23.30	60.00	36.70	1000.0	9.000	N	20.1
19.750000	30.98	---	73.00	42.02	1000.0	9.000	N	20.1
19.880000	---	23.47	60.00	36.53	1000.0	9.000	N	20.2
19.880000	31.14	---	73.00	41.86	1000.0	9.000	N	20.2

### ◆ 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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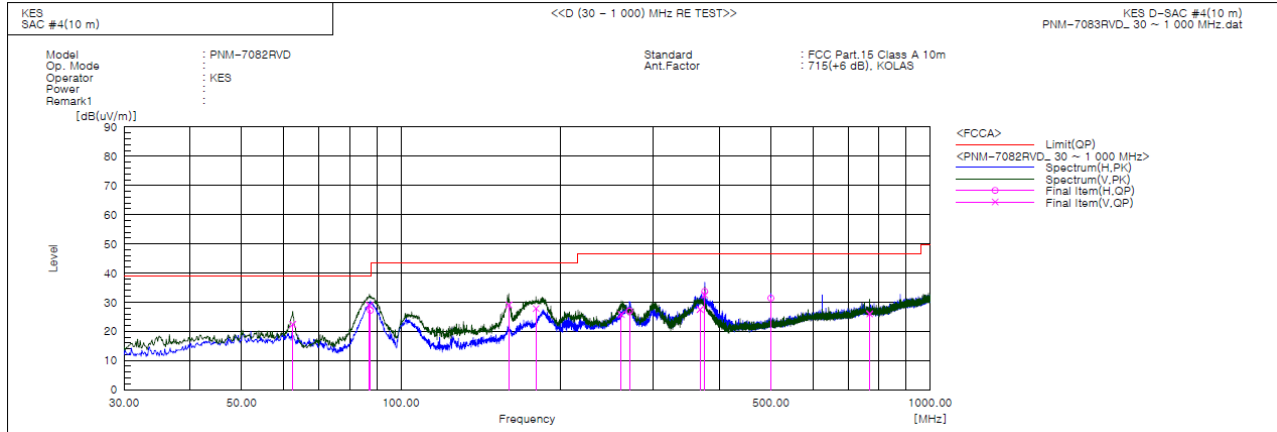
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## Radiated Electric Field Emissions(Below 1 GHz)

- 47 CFR Part 15, Subpart B



### 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	62.495	V	44.9	-22.5	22.4	39.0	16.6	110.0	66.0	
2	87.230	V	54.0	-25.1	28.9	39.0	10.1	150.0	247.0	
3	87.594	H	52.2	-25.0	27.2	39.0	11.8	400.0	342.0	
4	159.859	V	53.8	-24.7	29.1	43.5	14.4	114.0	176.0	
5	179.986	V	51.3	-23.5	27.8	43.5	15.7	124.0	258.0	
6	260.860	V	44.8	-19.0	25.8	46.5	20.7	109.0	235.0	
7	270.196	H	45.7	-18.8	26.9	46.5	19.6	386.0	39.0	
8	367.560	V	42.4	-14.9	27.5	46.5	19.0	105.0	138.0	
9	374.956	V	47.3	-14.8	32.5	46.5	14.0	100.0	164.0	
10	374.956	H	48.5	-14.8	33.7	46.5	12.8	289.0	17.0	
11	499.965	H	42.9	-11.5	31.4	46.5	15.1	395.0	353.0	
12	768.049	V	32.6	-6.6	26.0	46.5	20.5	152.0	356.0	

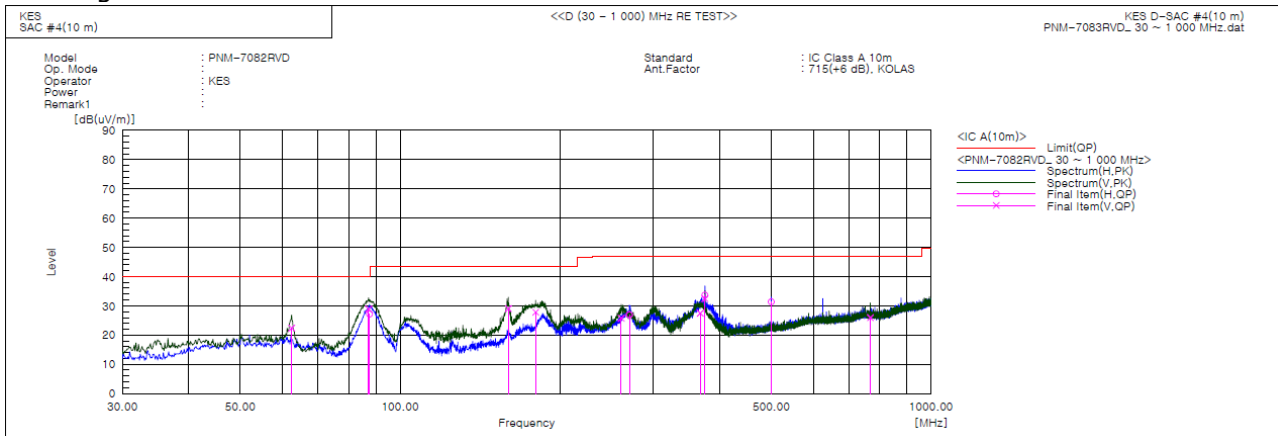


# KES Co., Ltd.

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KES-EM-22T0266  
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## - IC Regulation ICES-003 Issue 7



### 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	62.495	V	44.9	-22.5	22.4	40.0	17.6	110.0	66.0	
2	87.230	V	54.0	-25.1	28.9	40.0	11.1	150.0	247.0	
3	87.594	H	52.2	-25.0	27.2	40.0	12.8	400.0	342.0	
4	159.859	V	53.8	-24.7	29.1	43.5	14.4	114.0	176.0	
5	179.986	V	51.3	-23.5	27.8	43.5	15.7	124.0	258.0	
6	260.860	V	44.8	-19.0	25.8	47.0	21.2	109.0	235.0	
7	270.196	H	45.7	-18.8	26.9	47.0	20.1	386.0	39.0	
8	367.560	V	42.4	-14.9	27.5	47.0	19.5	105.0	138.0	
9	374.956	V	47.3	-14.8	32.5	47.0	14.5	100.0	164.0	
10	374.956	H	48.5	-14.8	33.7	47.0	13.3	289.0	17.0	
11	499.965	H	42.9	-11.5	31.4	47.0	15.6	395.0	353.0	
12	768.049	V	32.6	-6.6	26.0	47.0	21.0	152.0	356.0	

### ◆ 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



## KES Co., Ltd.

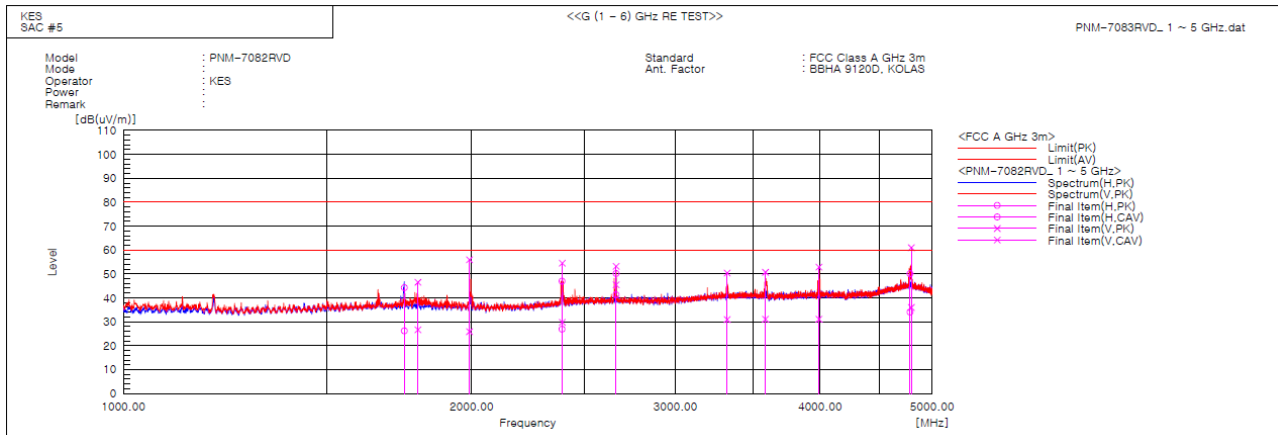
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Report No.:

KES-EM-22T0266

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## Radiated Electric Field Emissions(Above 1 GHz)



### 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	1748.894	H	48.2	30.1	-3.9	44.3	26.2	80.0	60.0	35.7	33.8	289.0	353.2	
2	1796.801	V	50.2	30.4	-3.7	46.5	26.7	80.0	60.0	33.5	33.3	398.0	227.0	
3	1990.998	V	58.8	28.8	-2.9	55.9	25.9	80.0	60.0	24.1	34.1	359.0	235.7	
4	2393.676	H	48.6	28.5	-1.6	47.0	26.9	80.0	60.0	33.0	33.1	400.0	301.9	
5	2394.900	V	56.1	31.4	-1.6	54.5	29.8	80.0	60.0	25.5	30.2	298.0	237.6	
6	2665.963	H	50.4	41.5	-0.2	50.2	41.3	80.0	60.0	29.8	18.7	354.0	146.6	
7	2666.105	V	53.4	45.7	-0.2	53.2	45.5	80.0	60.0	26.8	14.5	116.0	197.5	
8	3324.795	V	48.7	29.3	1.7	50.4	31.0	80.0	60.0	29.6	29.0	100.0	191.2	
9	3587.541	V	48.8	29.2	1.9	50.7	31.1	80.0	60.0	29.3	28.9	112.0	196.1	
10	3991.969	V	49.8	28.0	3.1	52.9	31.1	80.0	60.0	27.1	28.9	100.0	148.5	
11	4783.853	H	43.6	27.6	6.5	50.1	34.1	80.0	60.0	29.9	25.9	105.0	31.7	
12	4797.495	V	54.4	29.4	6.6	61.0	36.0	80.0	60.0	19.0	24.0	110.0	163.5	

### ◆ Calculation

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

Margin(PK/CAV)[dB] = Limit[dB(μV/m)] - Result(PK/CAV) [dB(μV/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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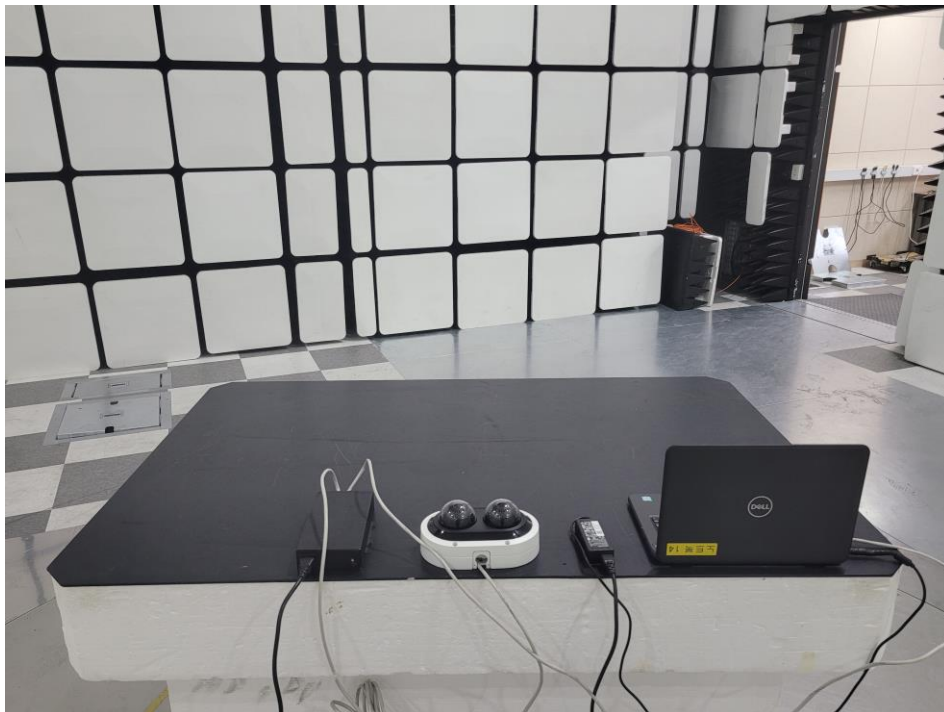
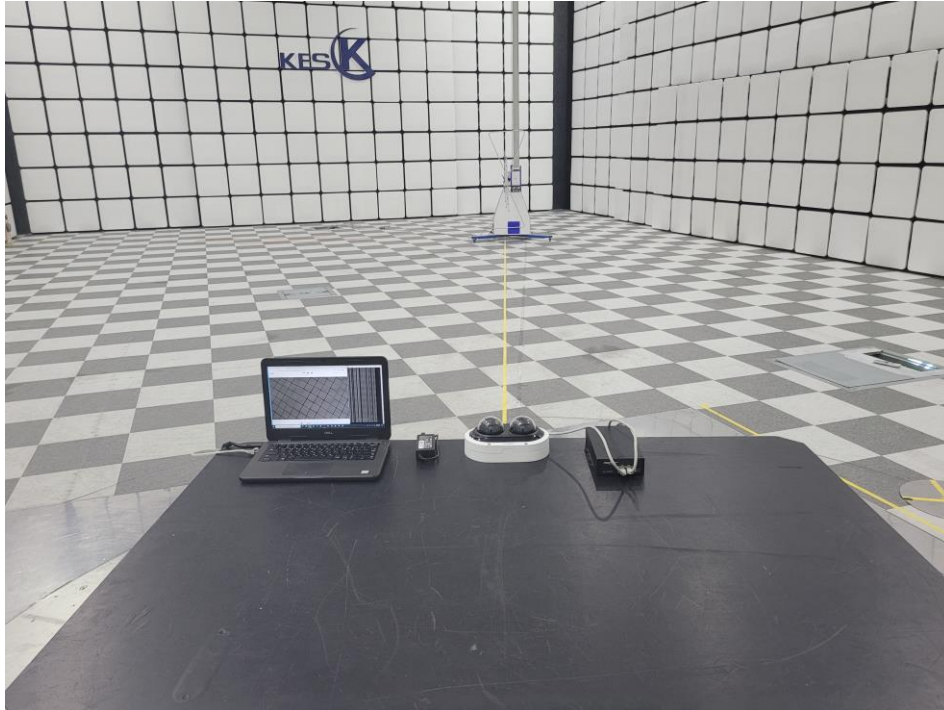
## Test Setup Photos and Configuration

### Conducted Emissions at Mains Power Ports



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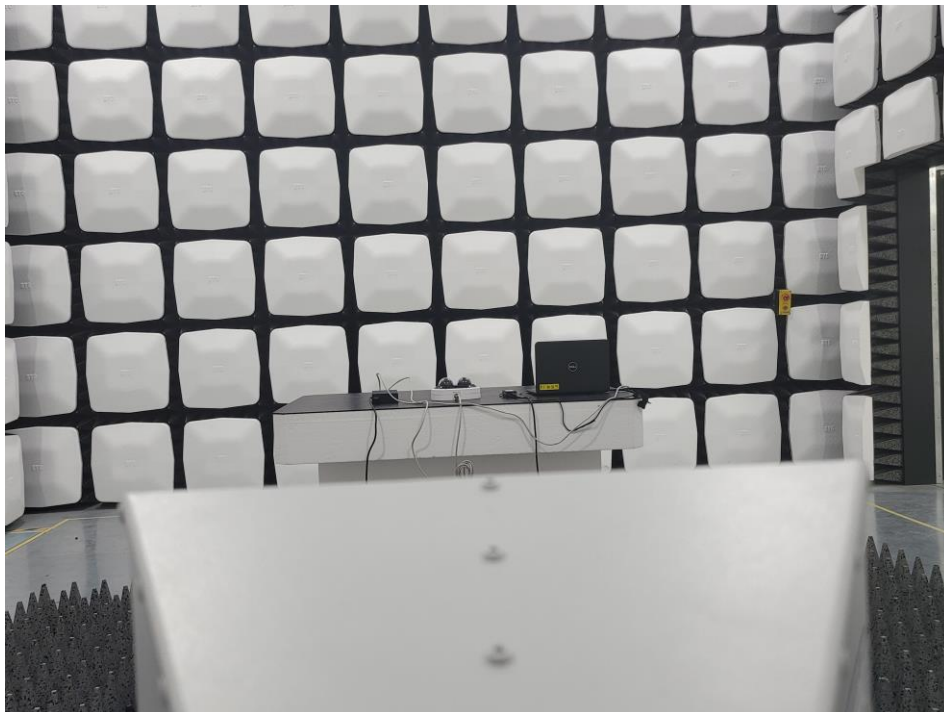
## Radiated Electric Field Emissions(Below 1 GHz)



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## Radiated Electric Field Emissions(Above 1 GHz)



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## EUT External Photographs

(Top)



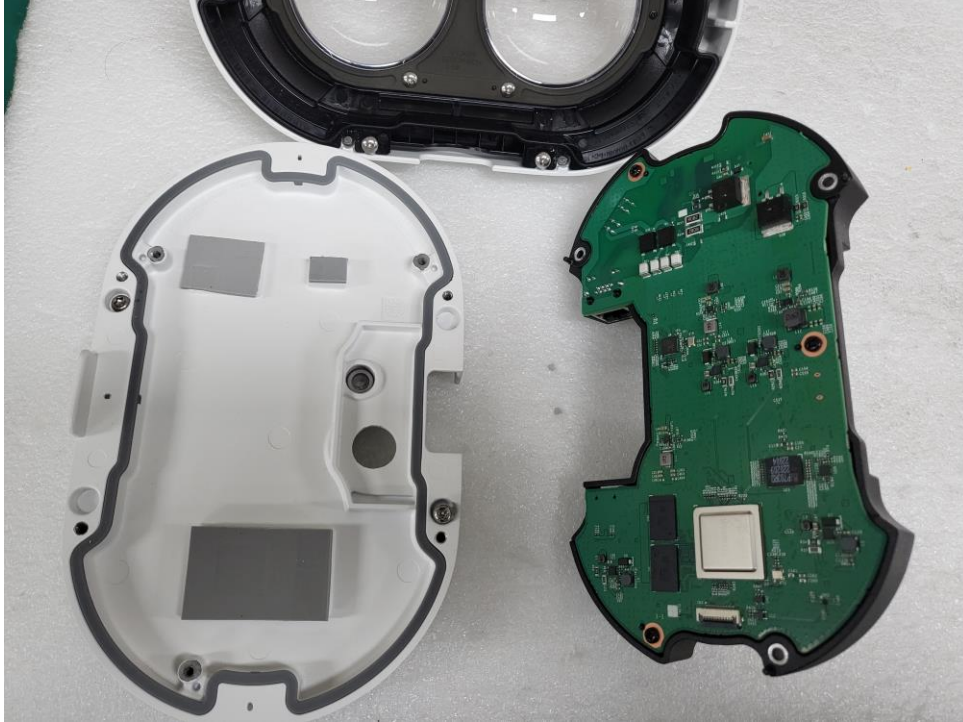
(Bottom)



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## EUT Internal Photographs

(Internal View)

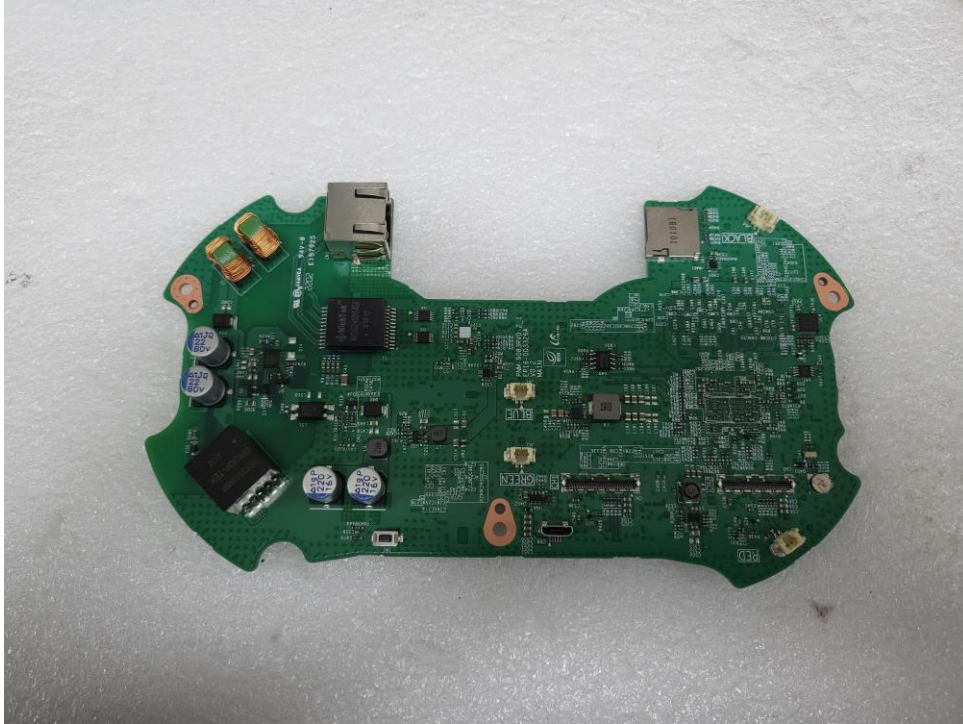


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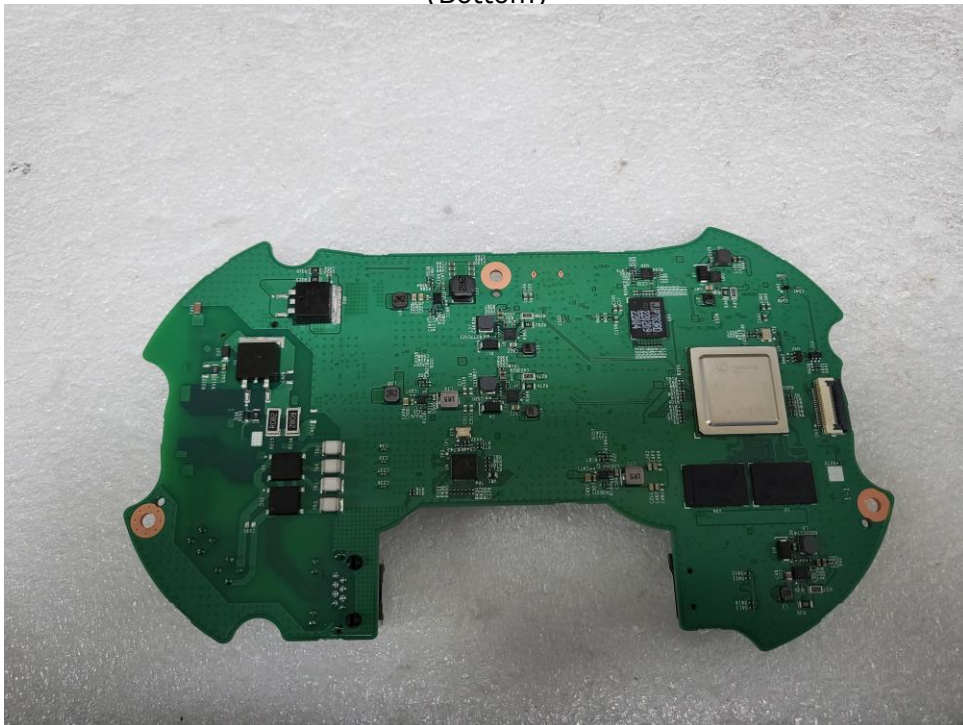


## EUT Internal View – Board 1

(Top)



(Bottom)



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## EUT Internal View – Board 2

(Top)



(Bottom)

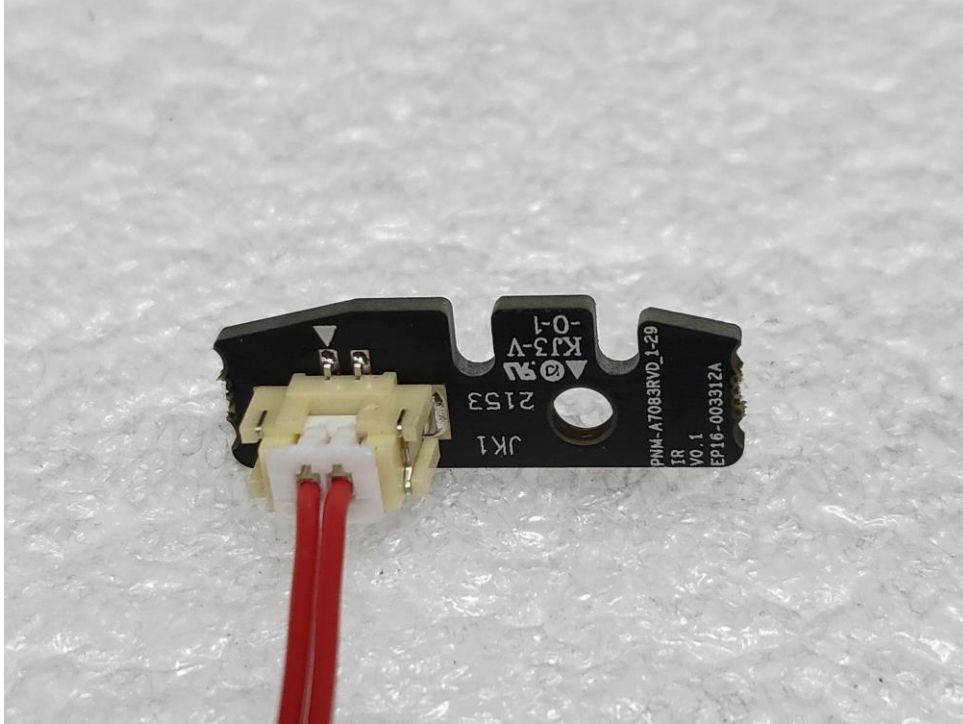


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## EUT Internal View – Board 3

(Top)



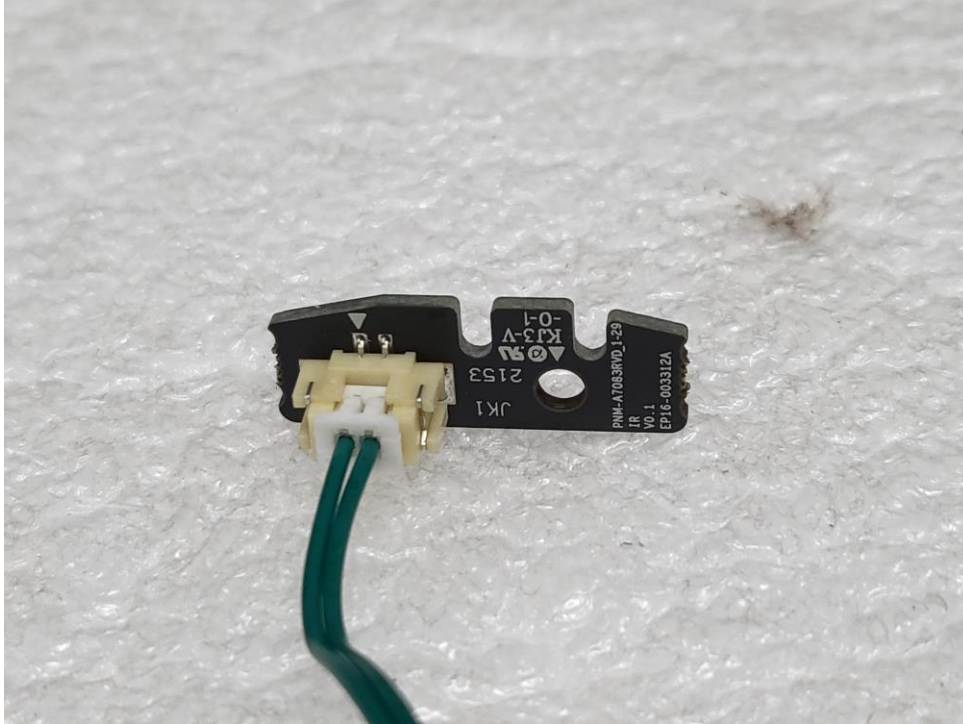
(Bottom)



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## EUT Internal View – Board 4

(Top)



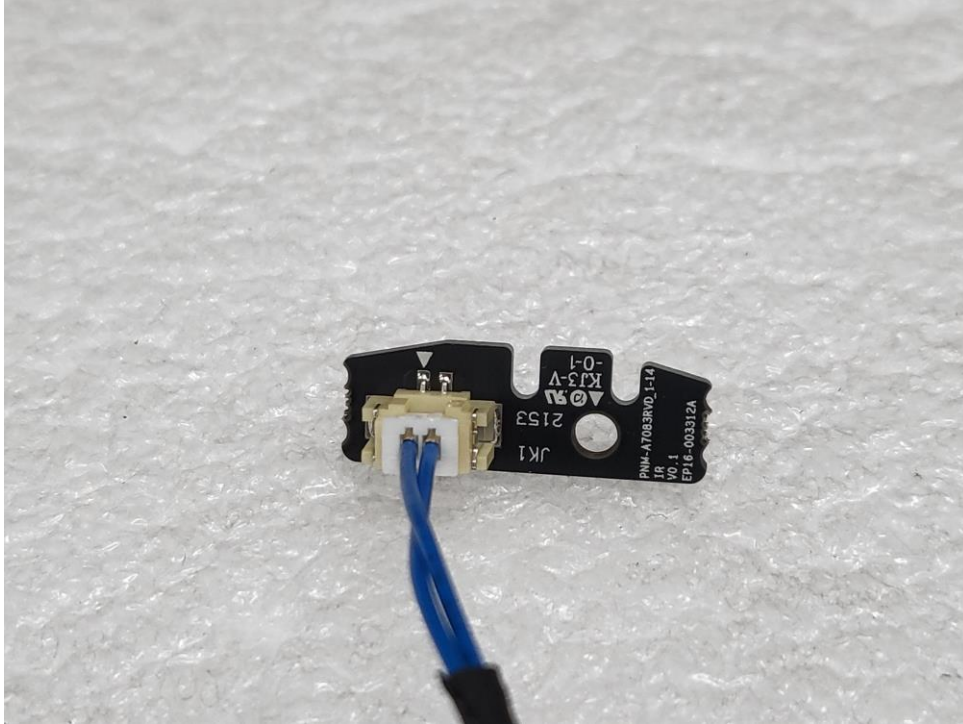
(Bottom)



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## EUT Internal View – Board 5

(Top)



(Bottom)

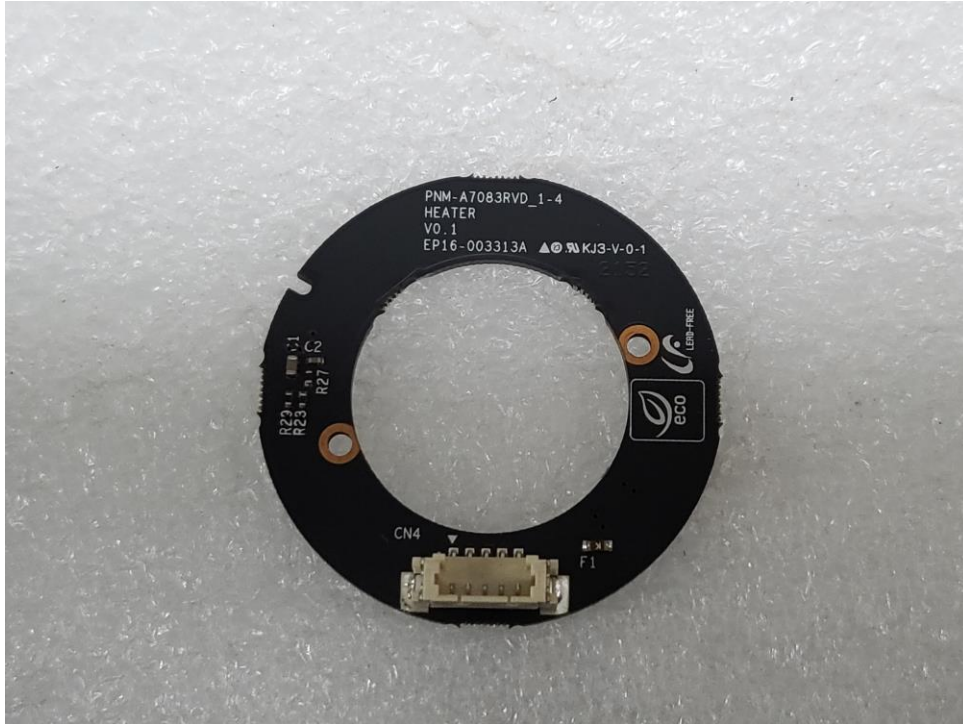


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## EUT Internal View – Board 6

(Top)



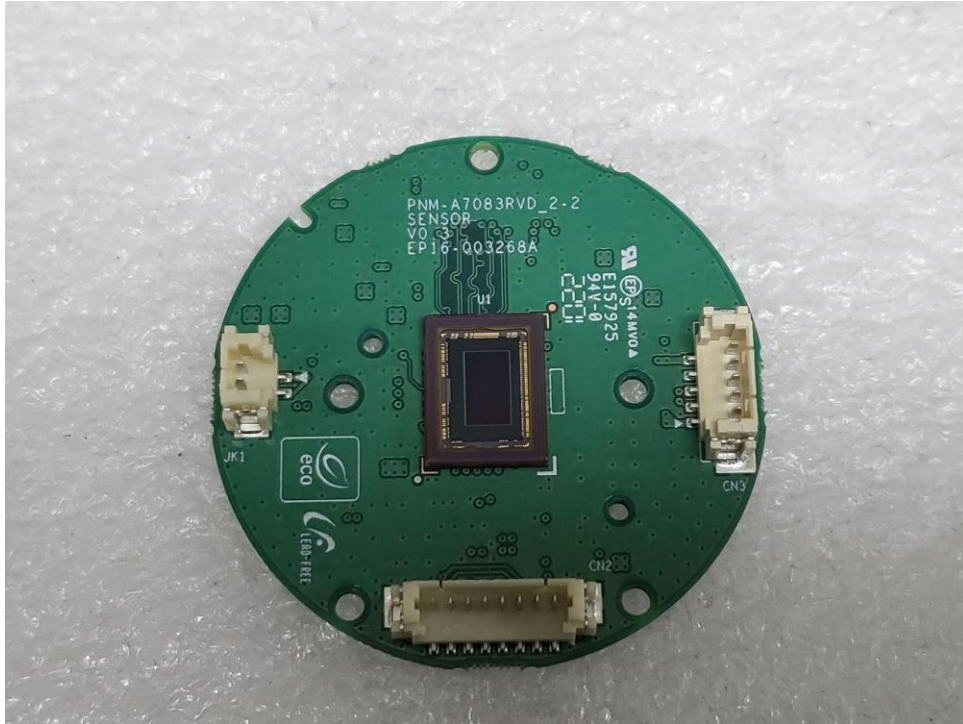
(Bottom)



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## EUT Internal View – Board 7

(Top)



(Bottom)

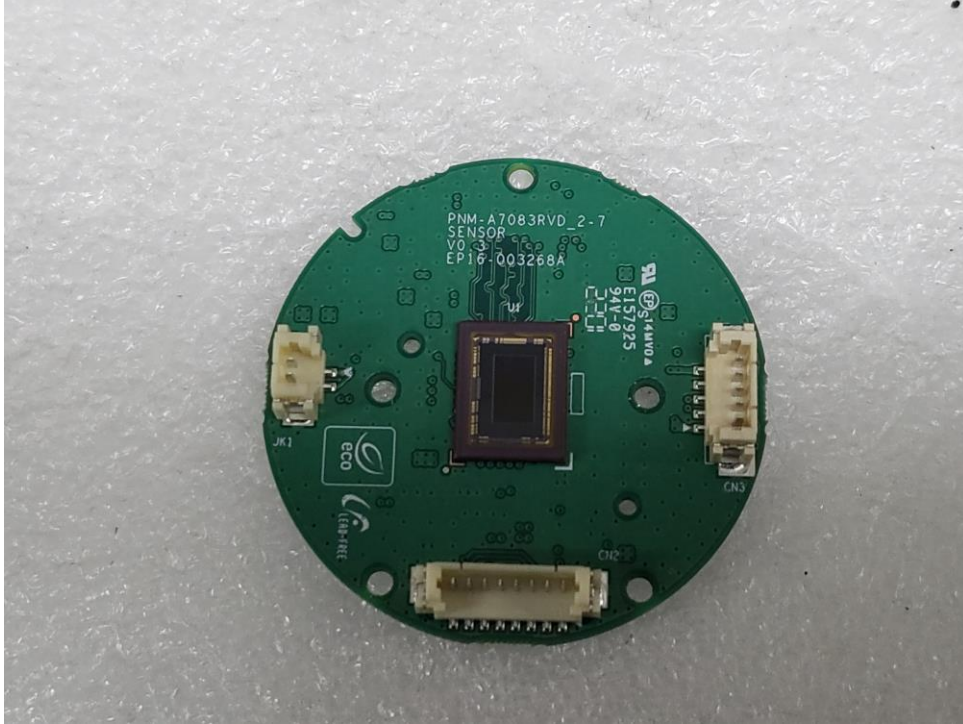


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## EUT Internal View – Board 8

(Top)



(Bottom)

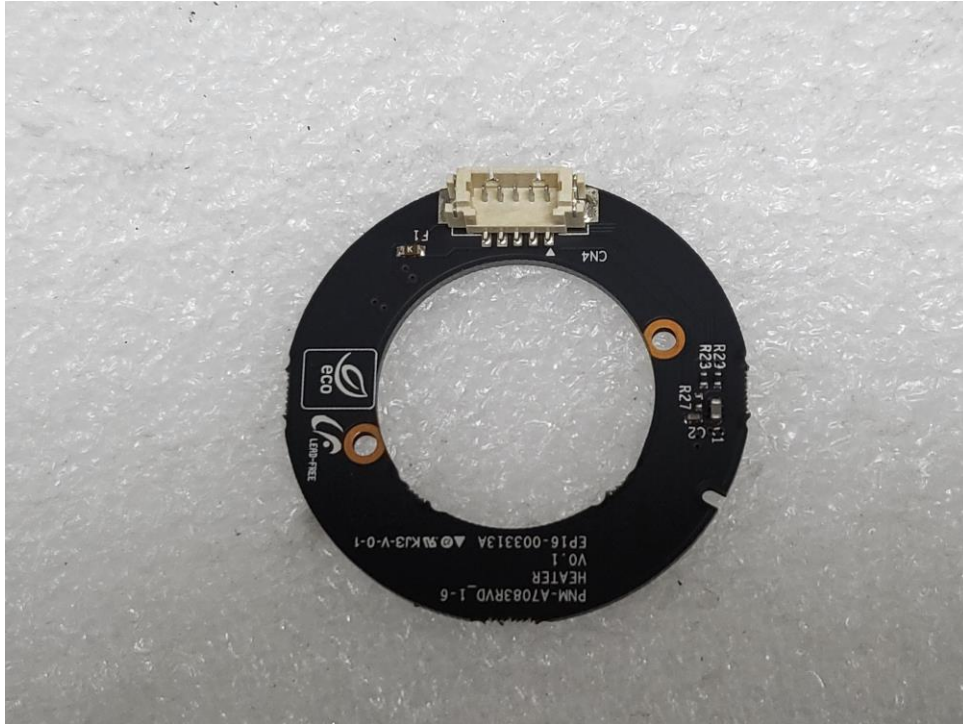


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## EUT Internal View – Board 9

(Top)



(Bottom)



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## EUT Internal View – Lens 1

(Top)



(Bottom)



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## EUT Internal View – Lens 2

(Top)



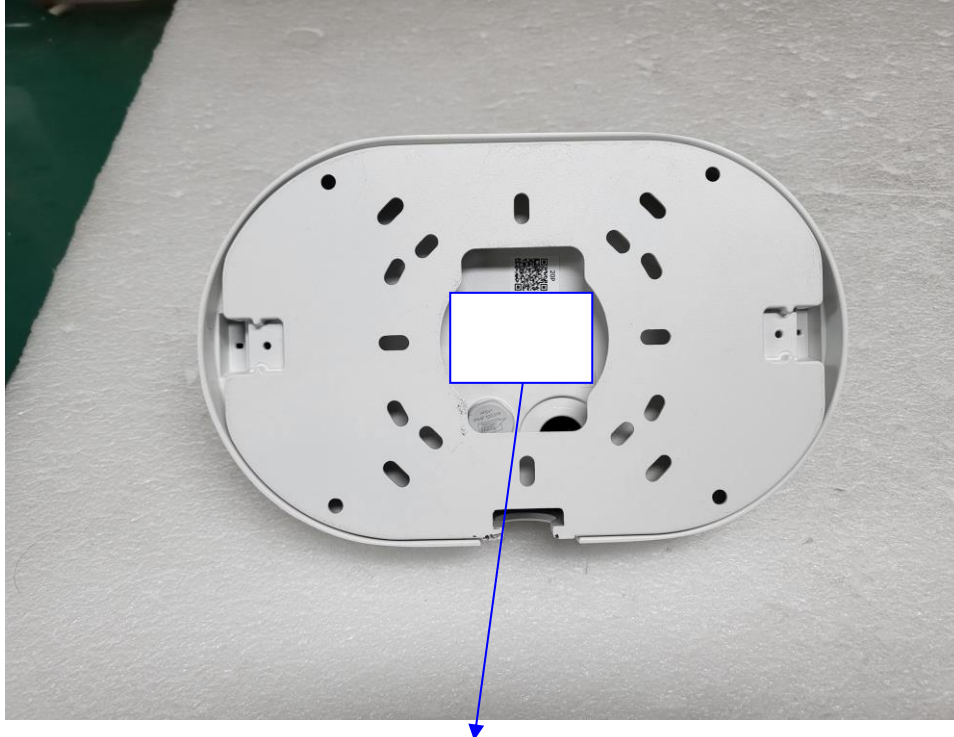
(Bottom)



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## Label Photographs



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

This device complies with part 15 of the FCC Rules. Operation is 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

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.