TEST REPORT

KES Co., Ltd.
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Tel : +82-31-425-6200, Fax : +82-31-425-6200

1. Client

Applicant : Hanwha Vision Co., Ltd

Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

2. Sample Description

Product name : NETWORK THERMAL CAMERA

Model/Type No. : TNM-3620TDY

Variant Model : ANB-3620T, TNM-C3620TDR, TNM-C3622TDR

Manufacturer : 1. HANWHA VISION VIETNAM COMPANY LIMITED
2. D-TECH CO.,LTD.

Manufacturer Address : 1. Lot O-2, Que Vo Industrial Zone extended Area, Nam Son Ward, Bac Ninh City, Bac Ninh Province, Vietnam
2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea

3. Equipment authorization : Supplier's Declaration of Conformity

4. Date of Receipt : Nov. 14, 2023

5. Test date : Oct. 24, 2020

6. Date of Issue : Dec. 07, 2023

7. Test Results : In Compliance

Tested by

Min Seong, Kim
EMC Test Engineer

Reviewed by

Seong Min, Choi
EMC Technical Manager

This test report is not related to KS Q ISO/IEC 17025 and KOLAS.

REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Nov. 05, 2020	KES-EM-20T0772	Issued
Feb. 24, 2023	KES-EM-20T0772-R1	Change the Applicant and manufacturer at the request of the customer
Dec. 07, 2023	KES-EM-20T0772-R2	Addition of derivative model and change of product name

TABLE OF CONTENTS

1.0 General Product Description

Main Specifications of EUT are:

Video	Thermal	Visible
Imaging Device	Uncooled micro bolometer	1/2.8" 2MP CMOS
Effective Pixels	320(H)x240(V)	1945(H)x1109(V)
NETD	< 60mK	None
Pixel Size	12㎛	None
Min. Illumination	None	Color: 0.05 lux(F1.6, 1/30sec) B/W: 0.005 lux(F1.6, 1/30sec)
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB : Micro USB Type B, 1280x720 for installation	
Lens		
Focal Length (Zoom Ratio)	4.7mm fixed focal	4mm fixed focal
Max. Aperture Ratio	F1.0	F1.6
Angular Field of View	H: 50.0˚, V: 36.4˚, D: 65.3˚	H: 87.6, V: 46.4°, D: 104.5°
Min. Object Distance	1m(3.28ft)	None
Focus Control	Fixed	Fixed
Lens Type	None	
Mount Type	None	
Optional Lens	None	
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	None	
Pan Range	None	
Pan Speed	None	
Tilt Range	None	
Tilt Speed	None	
Rotate Range	None	
Sequence	None	
Preset Accuracy	None	
Azimuth	None	
Auto Tracking	None	
Operational		
IR Viewable Length	None	
Camera Title	Displayed up to 85 characters	
Day & Night	None	Auto(ICR)
Backlight Compensation	None	BLC, WDR, SSDR
Wide Dynamic Range	None	extreme WDR
Digital Noise Reduction	None	SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)	
Defog	None	None
Motion Detection	8ea, 8point polygonal zones	
Privacy Masking	32ea, polygonal zones - Color: Grey/Green/Red/Blue/Black/White - Mosaic	
Gain Control	None	Low / Middle / High
White Balance	None	ATW / AWC / Manual / Indoor / Outdoor
LDC	None	Support
Electronic Shutter Speed	None	Minimum / Maximum / Anti flicker(2~1/12,000sec)
Digital PTZ	None	None
Video Rotation	Flip, Mirror	

Analytics	Normal mode : Directional detection, Motion detection, Enter/Exit, Tampering, Virtual line, Audio detection, Temperature detection EBT mode : Temperature detection, Blackbody abnormal	
Business Intelligence	None	None
Serial Interface	None	None
Alarm I/O	Input 1ea / Output 2ea	
Alarm Triggers	Analytics, Network disconnect, Alarm input	
Alarm Events	File upload via FTP and e-mail Notification via e-mail SD/SDHC/SDXC or NAS recording at event triggers Alarm output Handover (Normal mode only) Audio playback Beep alarm (EBT mode only)	
Audio In	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm	
Audio Out	Line out, Max.output level: 1Vrms	
IR Illuminator (Optional)	None	None
Wiper	None	None
Coaxial Protocol	None	None
Video Transmission Distance	None	None
Color Palettes	Estimated Body Temperature Mode (Thermal Face detection) : Whitehot Estimated Body Temperature Mode (Visible Face detection) & Normal mode : Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom	None
Radiometry		
Temperature detect range	Estimated Body Temperature Mode : 30~45°C(86°F~113°F) Normal mode : -20~+130°C(-4°F~+266°F)	None
Temperature accuracy	Estimated Body Temperature Mode : ±0.5°C(±0.3°C with Blackbody) Normal mode : ±5°C(≤100°C), ±20%(>100°C)	None
Temperature detection	3ea rectanguler	None
Additional	Hybrid palettes (Normal mode), Spot temperature reading (Normal mode - Thermal image only), Estimated body temperature mode	None
Network		
Ethernet	RJ-45(10/100BASE-T)	
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG	
Resolution	320x240	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)	H.265/H.264 : Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 30fps/25fps(60Hz/50Hz)
Smart Codec	Manual(5ea area) (Visible image only), WiseStreamⅡ (Thermal & Visible)	
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 6 profiles)	

Audio Compression	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
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, 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) Device certificate(Hanwha Techwin Root CA)
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB
Application Programming Interface	ONVIF Profile S/T SUNAPI(HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS: Windows 7, 8.1, 10, Mac OS X 10.10, 10.11, 10.12, 10.13, 10.14 Recommended Browser: Google Chrome Supported Browser: MS Explorer11, MS Edge, Mozilla Firefox(Window 64bit only), Apple Safari(Mac OS X only)
Memory	4608MB RAM, 512MB Flash
Environmental	
Operating Temperature / Humidity	Body temperature simulation mode : +10°C~+35°C(+50°F~+95°F) / Less than 95% RH Normal mode : -10°C~+55°C(+14°F~+131°F) / Less than 95% RH
Storage Temperature / Humidity	-30°C~+60°C(-22°F~+140°F) / Less than 95% RH
Certification	None
Electrical	
Input Voltage	PoE+(IEEE802.3at), 12VDC
Power Consumption	PoE+: Max. 17.0W, typical 12.5W 12VDC: Max. 14.5W, typical 11.0W
Mechanical	
Color / Material	White / Aluminum
RAL Code	RAL-9003
Product dimensions / weight	135x75x188.5mm / 1.7Kg
Conduit hole	None
Hanging mount(Dome)	None
Skin cover(Dome)	None
Weather cap(Dome)	None
Power module	None
Backbox	None

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

1) Sales-specific management model : ANB-3620T
2) Fixed Lens difference : TNM-C3620TDR, TNM-C3622TDR

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK THERMAL CAMERA	TNM-3620TDY	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
AC / DC Adapter	2ACB022F	-	Channel Well Technology (Guangzhou) Co., Ltd.	-
PoE Adapter	GS728TPP	-	NETGEAR	-
Notebook	ProBook4430s	-	HP	-
Notebook Adapter	SeriesPPP0009H	-	CHICONY POWER TECHNOLOGY (SUZHOU) CO.,LTD,	-
Speaker	BR1000A Cuve Black 2	-	DONGGUAN EDIFIER TECHNOLOGY Co., Ltd	-
MIC	MP1000	-	-	-
Alarm	SIP-1201DD D0	-	SAMSUNG TECHWIN CO., LTD.	-
Button Alarm	-	-	-	-
Micro SD Card	-	-	SanDisk	16 GB
Smart Phone	LG-SU760	108KPQJ0186212	LG Electronics Co., Ltd.	-

1.6 External I/O Cabling

■ DC Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK THERMAL CAMERA (EUT)	PoE+	Notebook	RJ-45	3.0	U
	AUDIO OUT	Speaker	Line-Out (3.5 ㎜)	1.4	U
	LINE IN	MIC	XLR	1.4	U
	ALARM OUT	Alarm	ALARM IN	3.0	U
	ALARM IN	Button Alarm	ALARM OUT	3.0	U
	SLOT	Micro SD Card	SLOT	-	-
	Ground	Ground	Ground	2.0	U
Notebook	MIC	Smart Phone	3.5 ㎜	1.0	U

* Unshielded=U, Shielded=S

■ PoE Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK THERMAL CAMERA (EUT)	PoE+	PoE Adapter	PoE	3.0	U
	AUDIO OUT	Speaker	Line-Out (3.5 ㎜)	1.4	U
	LINE IN	MIC	XLR	1.4	U
	ALARM OUT	Alarm	ALARM IN	3.0	U
	ALARM IN	Button Alarm	ALARM OUT	3.0	U
	SLOT	Micro SD Card	SLOT	-	-
	Ground	Ground	Ground	2.0	U
Notebook	RJ-45	PoE Adapter	DATA	1.5	U
	MIC	Smart Phone	3.5 ㎜	1.0	U

* Unshielded=U, Shielded=S

1.7 EUT Operating Mode(s)

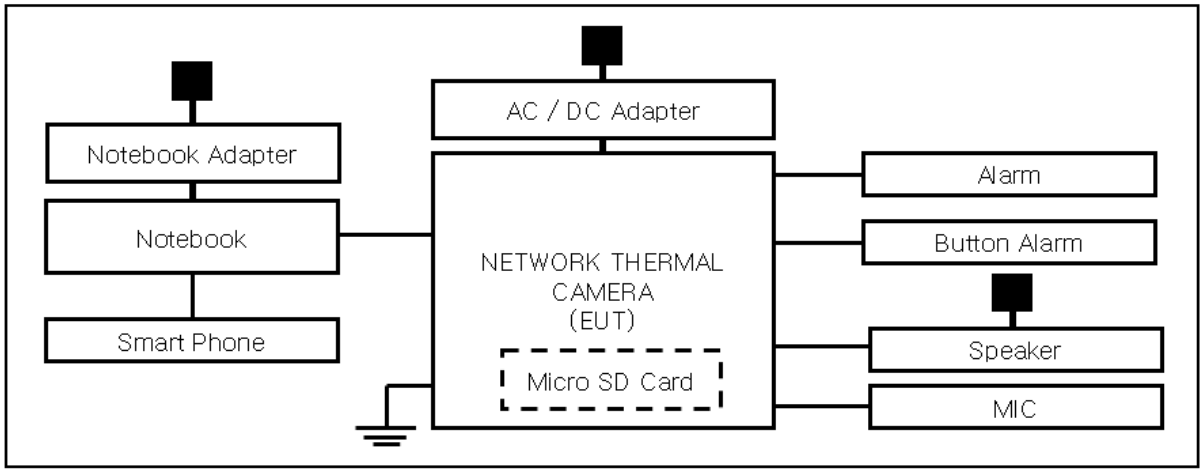
Test mode	operating
DC Mode, PoE Mode	Monitoring EUT Using Web Viewer, Ping Test

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

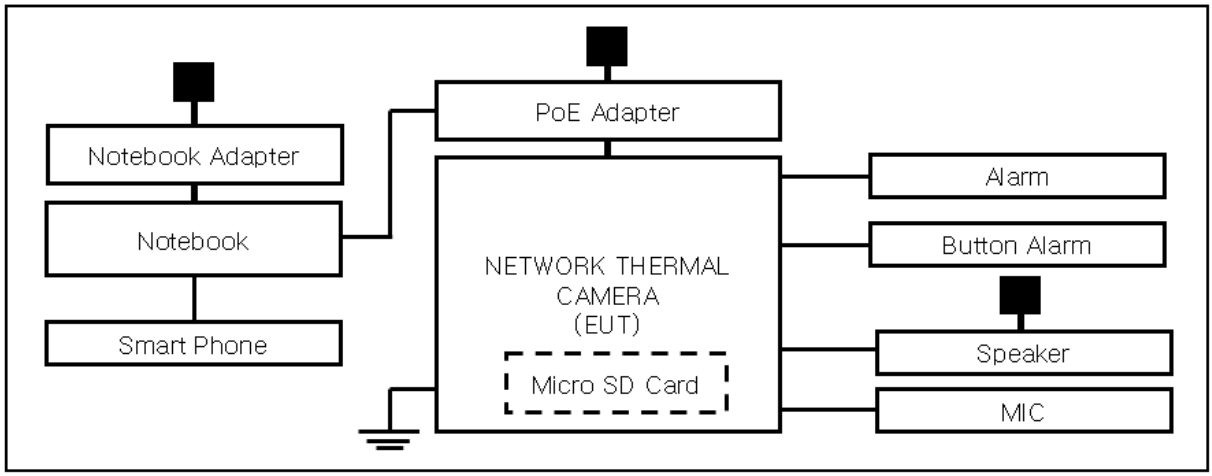
1.8 Configuration

■ AC Main
□ DC Main

■ DC Mode



■ PoE Mode



1.9 Remarks when standards applied

USB port and VIDEO port were excluded from testing as management ports.

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, Yeoju-si, Gyeonggi-do, 12658, Korea, Republic of. 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	**RRA**	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	KR0100
International	**KOLAS**	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	**FCC**	3 m & 10 m Semi-Anechoic Chamber Conducted test site to perform FCC Part 15/18 measurements.	KR0100
Canada	**ISED**	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	23298
JAPAN	**VCCI**	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)	C-20136, T-20137, R-20181, G-20176
Europe	**TÜV SÜD**	EMI (3 m & 10 m Semi-Anechoic Chamber 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 C63.4-2014	☒ 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

2.1 Conducted Emissions at Mains Power Ports

Test Date
Oct. 24, 2020

Test Location
Electro wave Shieldroom #6

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	101783	01, 20, 2021
☒	LISN	ENV216	R & S	101787	01, 02, 2021
☒	LISN	ESH2-Z5	R & S	100450	01, 02, 2021
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	01, 02, 2021

Test Conditions

Temperature: 23,5 ℃
Relative Humidity: 50,2 % R.H.

Frequency Range of Measurement
150 ㎑ to 30 ㎒

Instrument Settings
IF Band Width: 9 ㎑

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 ㎓)

Test Date
Oct. 24, 2020

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, 01, 2021
☒	AMPLIFIER	SCU 01	R & S	100603	11, 25, 2020
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 29, 2020
☒	ATTENUATOR	8491A	HP	32173	03, 10, 2021

Test Conditions
Temperature: 23,4 ℃
Relative Humidity: 50,0 % R.H.

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.

2.3 Radiated Electric Field Emissions(Above 1 ㎓)

Test Date
Oct. 24, 2020

Test Location
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, 01, 2021
☒	PREAMPLIFIER	8449B	AGILENT	3008A01742	01, 02, 2021
☐	ATTENUATOR	8491A	HP	35496	03, 10, 2021
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	12, 13, 2020

Test Conditions
Temperature: 23,4 ℃
Relative Humidity: 50,0 % R.H.

Frequency Range of Measurement
1 ㎓ to 5 ㎓

Instrument Settings
IF Band Width: 1 ㎒

Test Results
The requirements are:
☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

APPENDIX A – TEST DATA

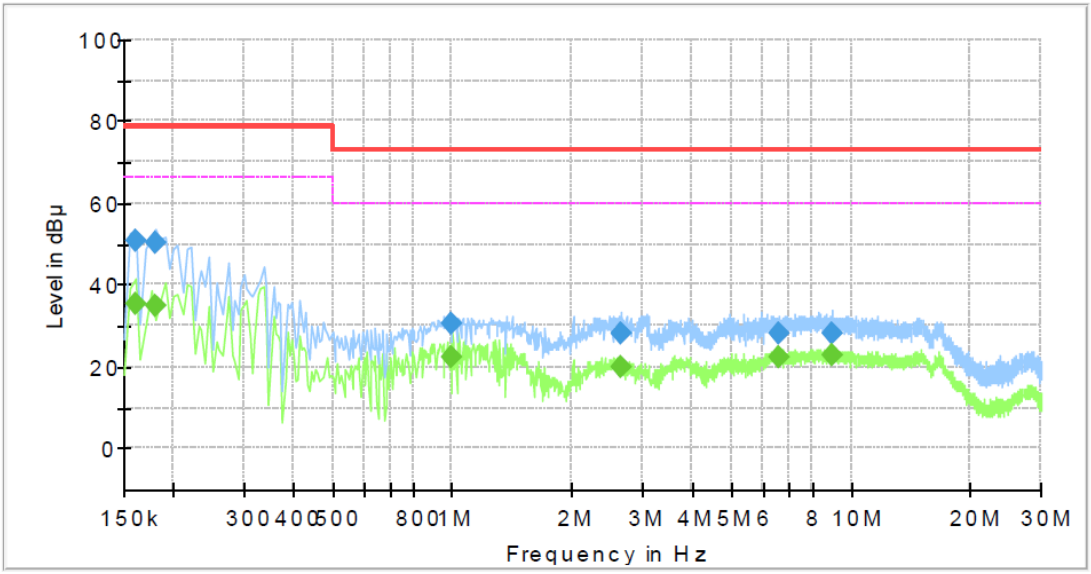
Conducted Emissions at Mains Power Ports

■ DC Mode

HOT LINE

Common Information

Test Description:	Conducted Emission
Model No.:	TNM-3620TDY
Phase:	H
Mode:	DC
Operator Name:	KES



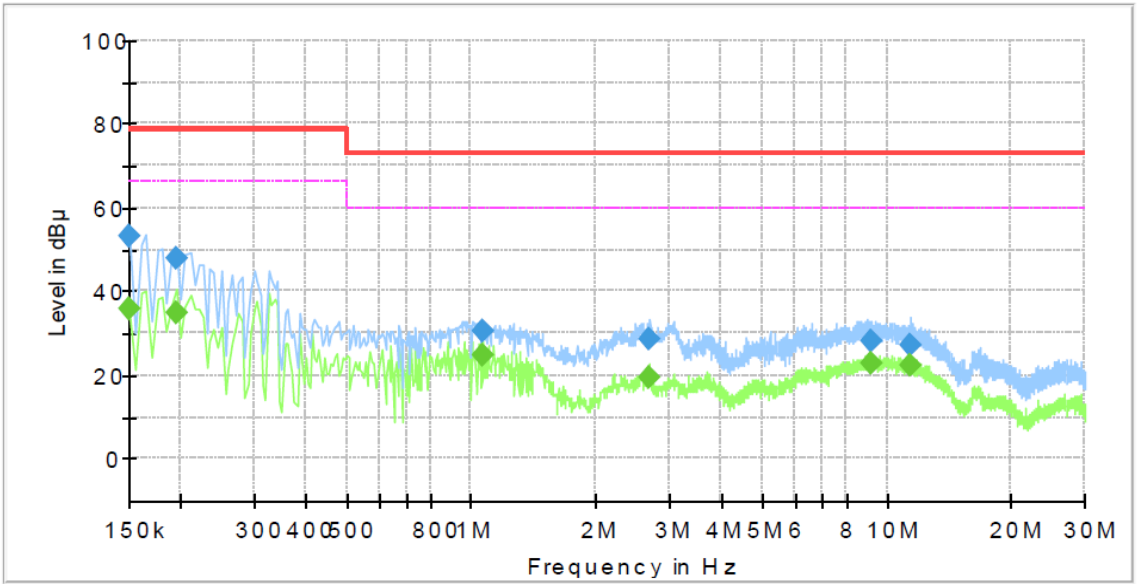
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.160000	---	35.54	66.00	30.46	1000.0	9.000	L1	19.5
0.160000	50.75	---	79.00	28.25	1000.0	9.000	L1	19.5
0.180000	---	34.89	66.00	31.11	1000.0	9.000	L1	19.5
0.180000	50.44	---	79.00	28.56	1000.0	9.000	L1	19.5
1.000000	---	22.33	60.00	37.67	1000.0	9.000	L1	20.1
1.000000	30.43	---	73.00	42.57	1000.0	9.000	L1	20.1
2.645000	---	20.14	60.00	39.86	1000.0	9.000	L1	20.1
2.645000	28.35	---	73.00	44.65	1000.0	9.000	L1	20.1
6.610000	---	22.49	60.00	37.51	1000.0	9.000	L1	19.5
6.610000	28.16	---	73.00	44.84	1000.0	9.000	L1	19.5
8.920000	---	23.01	60.00	36.99	1000.0	9.000	L1	19.8
8.920000	28.30	---	73.00	44.70	1000.0	9.000	L1	19.8

NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Model No.:	TNM-3620TDY
Phase:	N
Mode:	DC
Operator Name:	KES



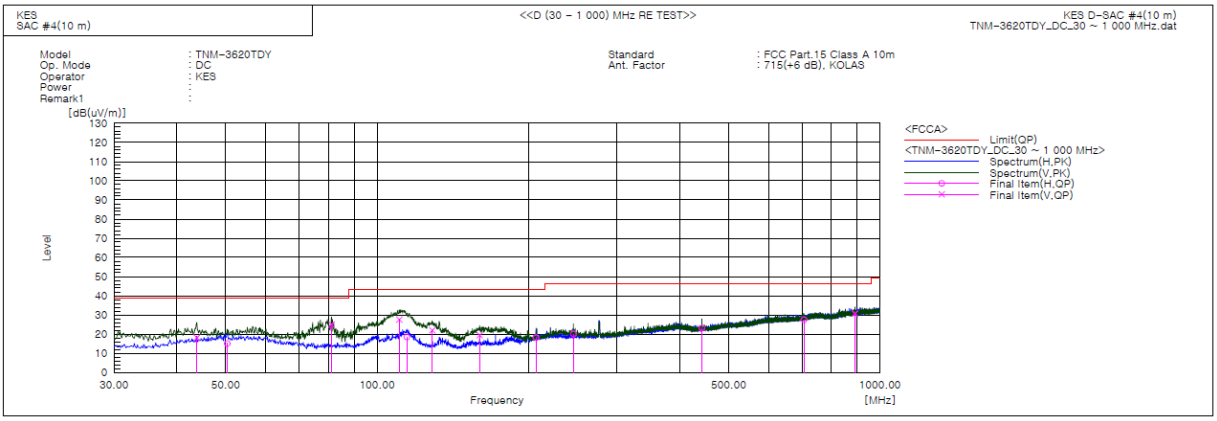
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	35.98	66.00	30.02	1000.0	9.000	N	19.4
0.150000	53.44	---	79.00	25.56	1000.0	9.000	N	19.4
0.195000	---	35.01	66.00	30.99	1000.0	9.000	N	19.5
0.195000	47.70	---	79.00	31.30	1000.0	9.000	N	19.5
1.070000	---	24.77	60.00	35.23	1000.0	9.000	N	20.1
1.070000	30.37	---	73.00	42.63	1000.0	9.000	N	20.1
2.690000	---	19.30	60.00	40.70	1000.0	9.000	N	20.1
2.690000	28.41	---	73.00	44.59	1000.0	9.000	N	20.1
9.130000	---	22.86	60.00	37.14	1000.0	9.000	N	19.8
9.130000	28.06	---	73.00	44.94	1000.0	9.000	N	19.8
11.425000	---	22.36	60.00	37.64	1000.0	9.000	N	20.0
11.425000	27.32	---	73.00	45.68	1000.0	9.000	N	20.0

♦ 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))

Radiated Electric Field Emissions(Below 1 ㎓)

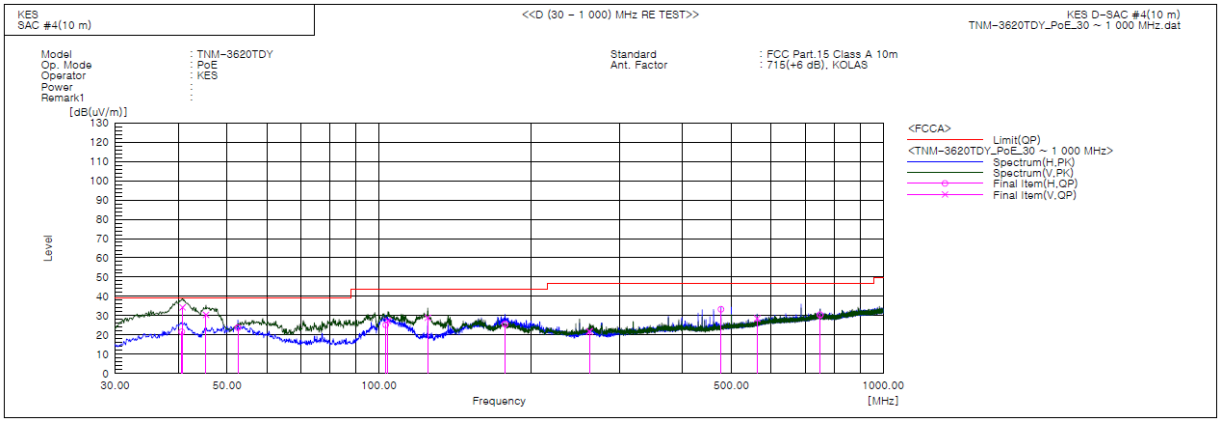
■ DC Mode



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	43.823	V	40.1	-22.0	18.1	39.0	20.9	123.0	54.0	
2	50.370	H	36.5	-21.4	15.1	39.0	23.9	334.0	230.0	
3	81.168	V	52.5	-27.5	25.0	39.0	14.0	127.0	270.0	
4	110.753	V	50.4	-22.8	27.6	43.5	15.9	112.0	300.0	
5	114.633	H	41.7	-23.2	18.5	43.5	25.0	400.0	120.0	
6	128.698	V	47.4	-25.4	22.0	43.5	21.5	100.0	260.0	
7	159.859	V	44.7	-25.2	19.5	43.5	24.0	132.0	213.0	
8	207.025	H	39.4	-21.3	18.1	43.5	25.4	400.0	309.0	
9	245.704	H	40.0	-20.0	20.0	46.5	26.5	327.0	210.0	
10	442.371	H	38.1	-14.8	23.3	46.5	23.2	239.0	314.0	
11	705.848	H	36.0	-8.5	27.5	46.5	19.0	400.0	120.0	
12	890.996	V	36.4	-5.7	30.7	46.5	15.8	100.0	13.0	

■ PoE Mode



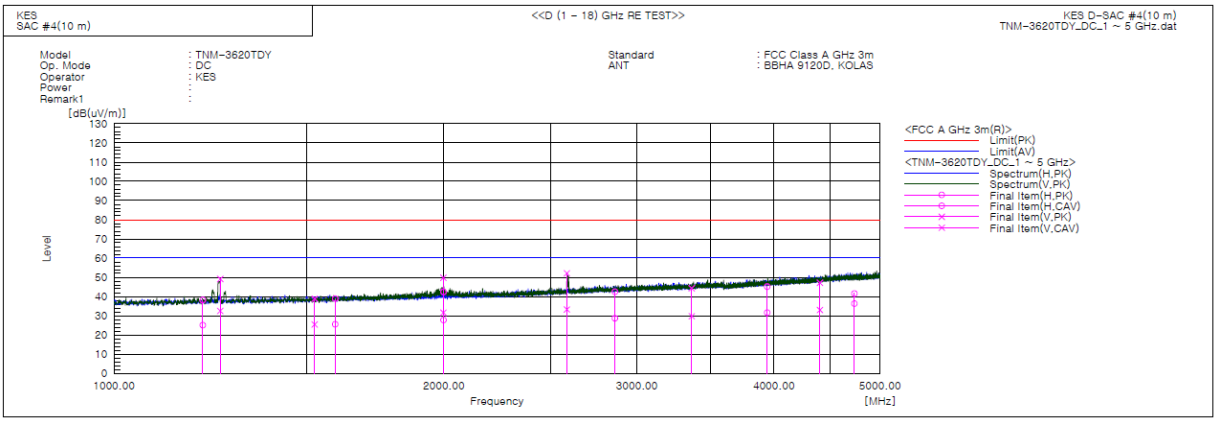
Final Result

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	40.670	H	44.2	-22.6	21.6	40.0	18.4	388.0	136.0	
2	40.791	V	56.9	-22.6	34.3	40.0	5.7	100.0	90.0	
3	45.399	V	52.2	-21.8	30.4	40.0	9.6	192.0	76.0	
4	52.553	H	45.2	-21.5	23.7	40.0	16.3	400.0	193.0	
5	103.114	H	47.7	-22.5	25.2	40.0	14.8	327.0	216.0	
6	104.205	V	49.7	-22.5	27.2	40.0	12.8	120.0	143.0	
7	124.939	V	53.7	-24.8	28.9	40.0	11.1	100.0	345.0	
8	177.804	H	49.6	-24.0	25.6	40.0	14.4	400.0	14.0	
9	261.588	V	41.6	-19.8	21.8	47.0	25.2	100.0	25.0	
10	476.564	H	46.9	-13.6	33.3	47.0	13.7	237.0	211.0	
11	562.530	V	39.8	-11.3	28.5	47.0	18.5	231.0	326.0	
12	750.104	H	37.8	-7.4	30.4	47.0	16.6	214.0	27.0	

♦ Calculation – SAC #4(10 m)
Result(QP) [dB(㎶/m)] = (Reading(QP)[dB(㎶)] + c.f[dB(1/m)]
Margin(QP)[dB] = Limit[dB(㎶/m)] - Result(QP) [dB(㎶/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

Radiated Electric Field Emissions(Above 1 ㎓)

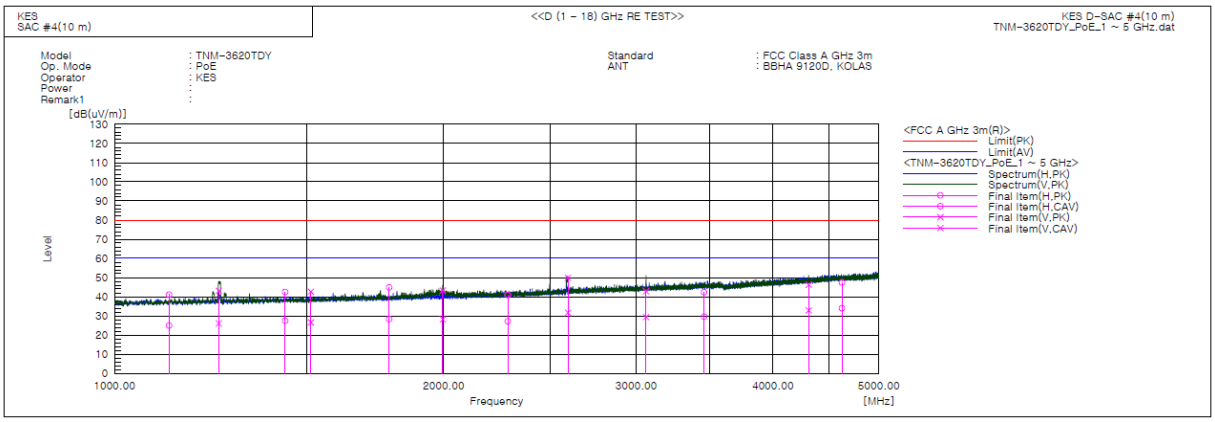
■ DC Mode



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	1204.825	H	42.4	29.3	-4.2	38.2	25.1	80.0	60.0	41.8	34.9	288.0	222.0	
2	1249.835	V	53.1	36.4	-3.9	49.2	32.5	80.0	60.0	30.8	27.5	134.0	323.0	
3	1524.180	V	41.4	28.0	-2.5	38.9	25.5	80.0	60.0	41.1	34.5	100.0	313.0	
4	1591.545	H	41.1	27.8	-2.2	38.9	25.6	80.0	60.0	41.1	34.4	389.0	198.0	
5	1997.345	V	50.2	32.0	-0.4	49.8	31.6	80.0	60.0	30.2	28.4	105.0	94.0	
6	1997.840	H	42.9	28.2	-0.4	42.5	27.8	80.0	60.0	37.5	32.2	400.0	358.0	
7	2588.990	V	49.5	30.7	2.6	52.1	33.3	80.0	60.0	27.9	26.7	100.0	23.0	
8	2864.480	H	38.6	24.8	3.9	42.5	28.7	80.0	60.0	37.5	31.3	337.0	284.0	
9	3365.450	V	38.8	24.3	5.5	44.3	29.8	80.0	60.0	35.7	30.2	147.0	234.0	
10	3945.030	H	37.1	23.6	8.0	45.1	31.6	80.0	60.0	34.9	28.4	344.0	141.0	
11	4405.612	V	37.3	23.1	9.9	47.2	33.0	80.0	60.0	32.8	27.0	100.0	273.0	
12	4736.500	H	30.4	25.1	11.2	41.6	36.3	80.0	60.0	38.4	23.7	314.0	243.0	

■ 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	1121.330	H	45.8	29.7	-4.7	41.1	25.0	80.0	60.0	38.9	35.0	337.0	355.0	
2	1245.175	V	47.0	30.0	-3.9	43.1	26.1	80.0	60.0	36.9	33.9	100.0	298.0	
3	1432.024	H	45.4	30.4	-2.9	42.5	27.5	80.0	60.0	37.5	32.5	286.0	251.0	
4	1511.500	V	45.2	29.2	-2.5	42.7	26.7	80.0	60.0	37.3	33.3	137.0	247.0	
5	1783.084	H	46.2	29.6	-1.3	44.9	28.3	80.0	60.0	35.1	31.7	337.0	200.0	
6	1995.786	V	43.7	28.6	-0.4	43.3	28.2	80.0	60.0	36.7	31.8	100.0	103.0	
7	2288.969	H	40.0	26.3	0.9	40.9	27.2	80.0	60.0	39.1	32.8	400.0	89.0	
8	2597.885	V	47.3	29.1	2.6	49.9	31.7	80.0	60.0	30.1	28.3	100.0	6.0	
9	3062.911	V	38.3	24.8	4.6	42.9	29.4	80.0	60.0	37.1	30.6	107.0	290.0	
10	3459.544	H	36.8	24.0	5.6	42.4	29.6	80.0	60.0	37.6	30.4	400.0	46.0	
11	4313.787	V	36.8	23.4	9.5	46.3	32.9	80.0	60.0	33.7	27.1	100.0	243.0	
12	4625.750	H	36.4	23.0	11.0	47.4	34.0	80.0	60.0	32.6	26.0	286.0	89.0	

♦ 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

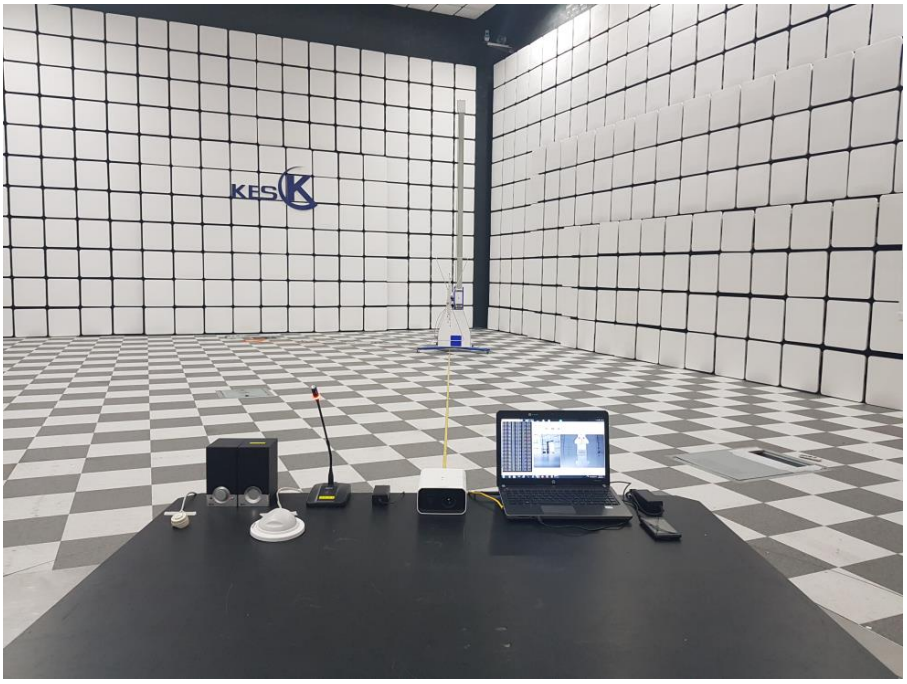
Test Setup Photos and Configuration

Conducted Emissions at Mains Power Ports

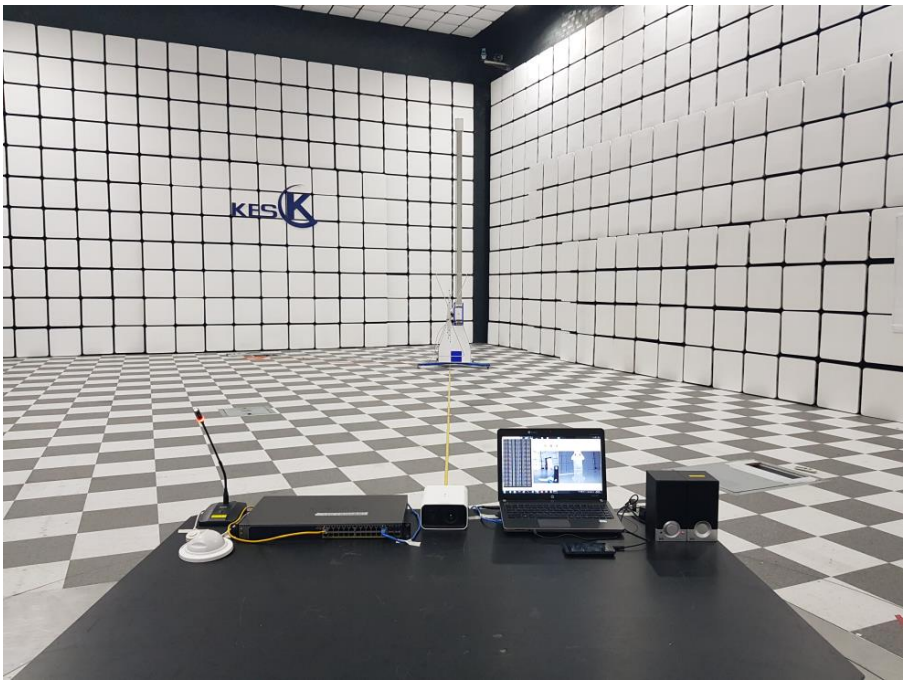
■ DC Mode

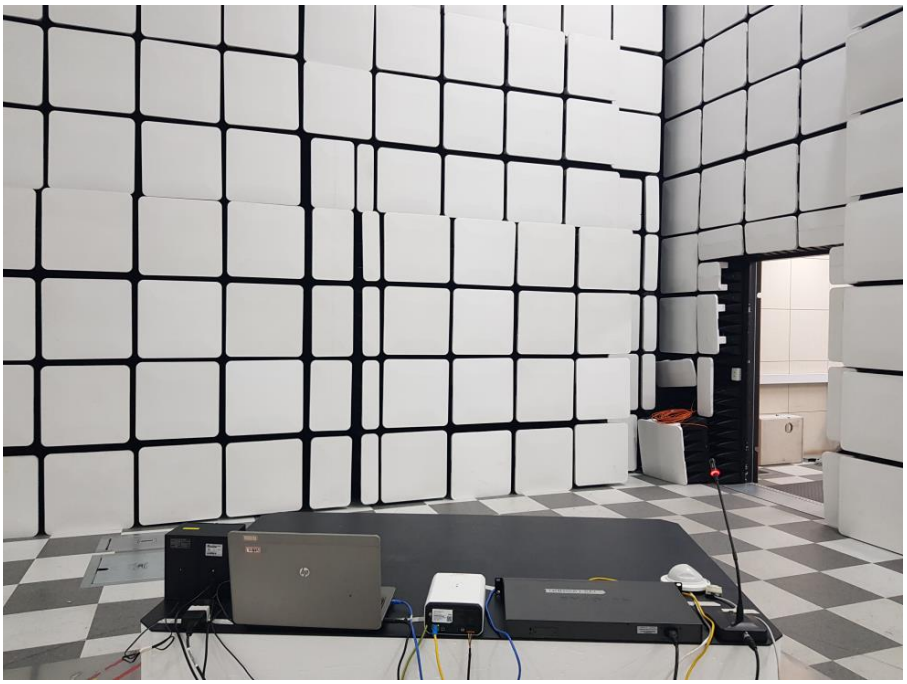
Radiated Electric Field Emissions(Below 1 ㎓)

■ DC Mode



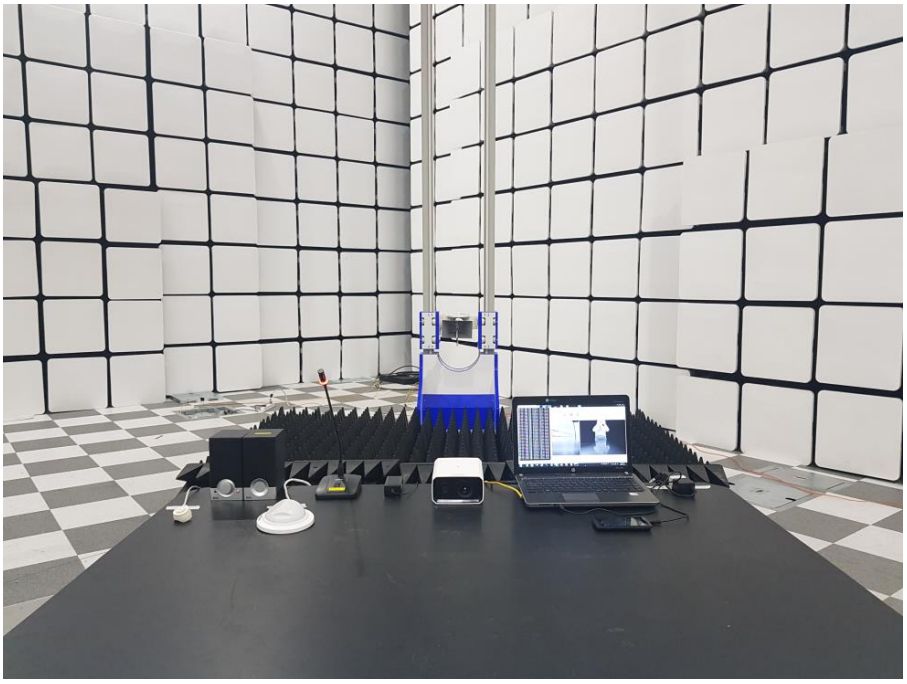
■ PoE Mode

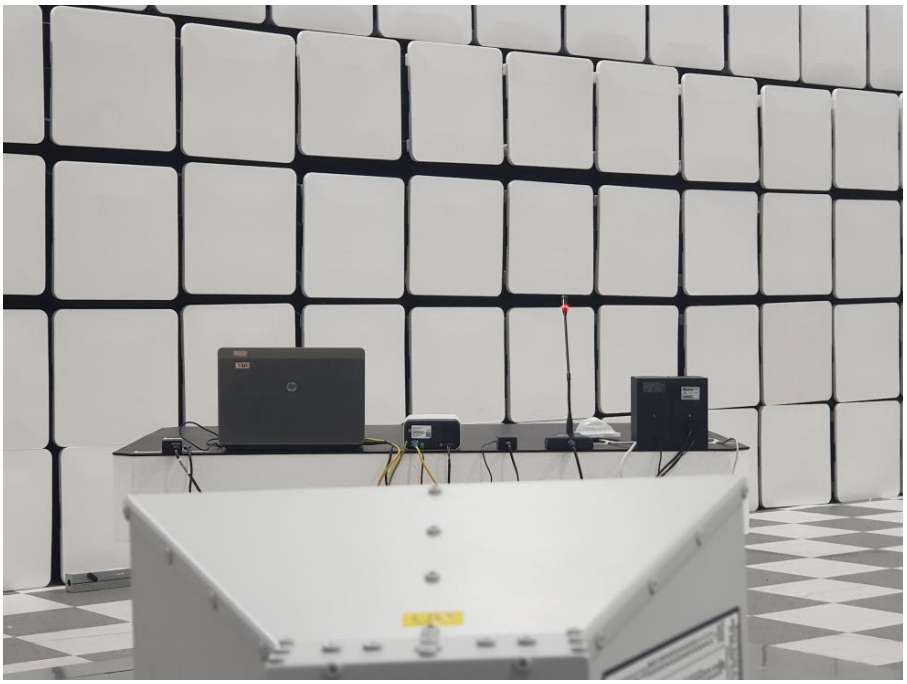




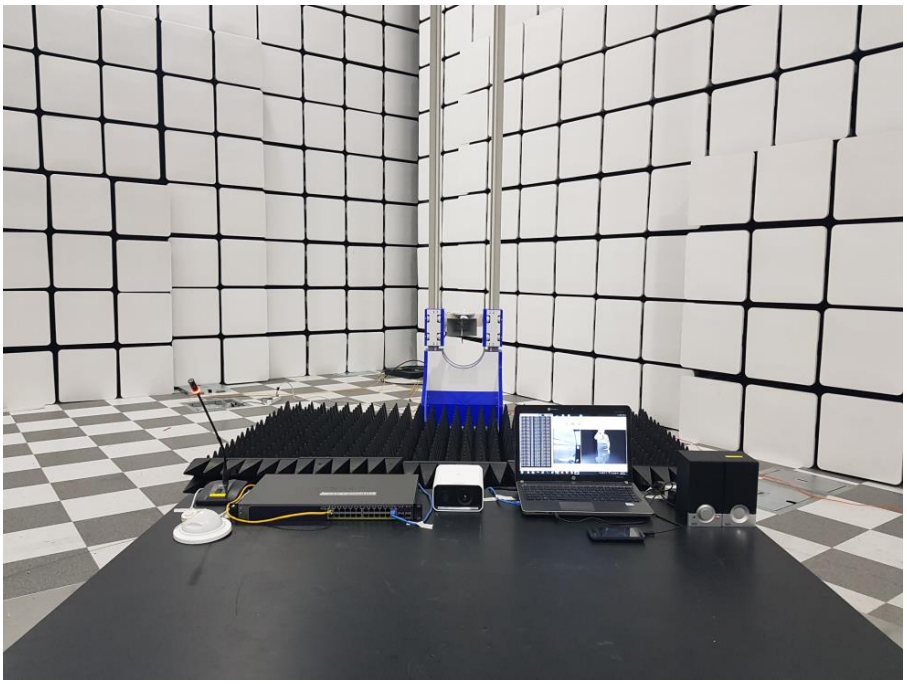
Radiated Electric Field Emissions(Above 1 ㎓)

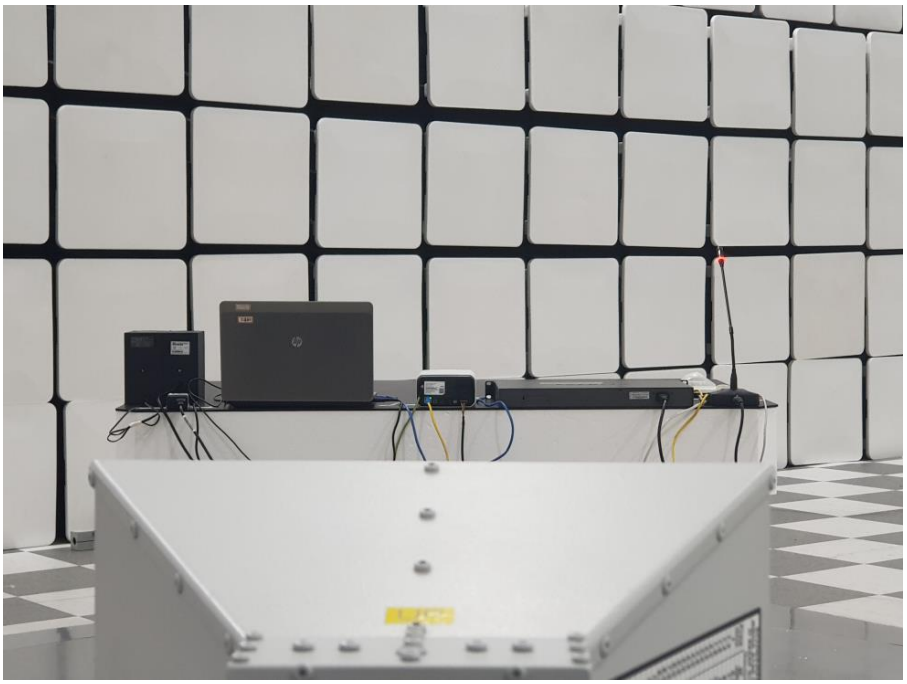
■ DC Mode





■ PoE Mode





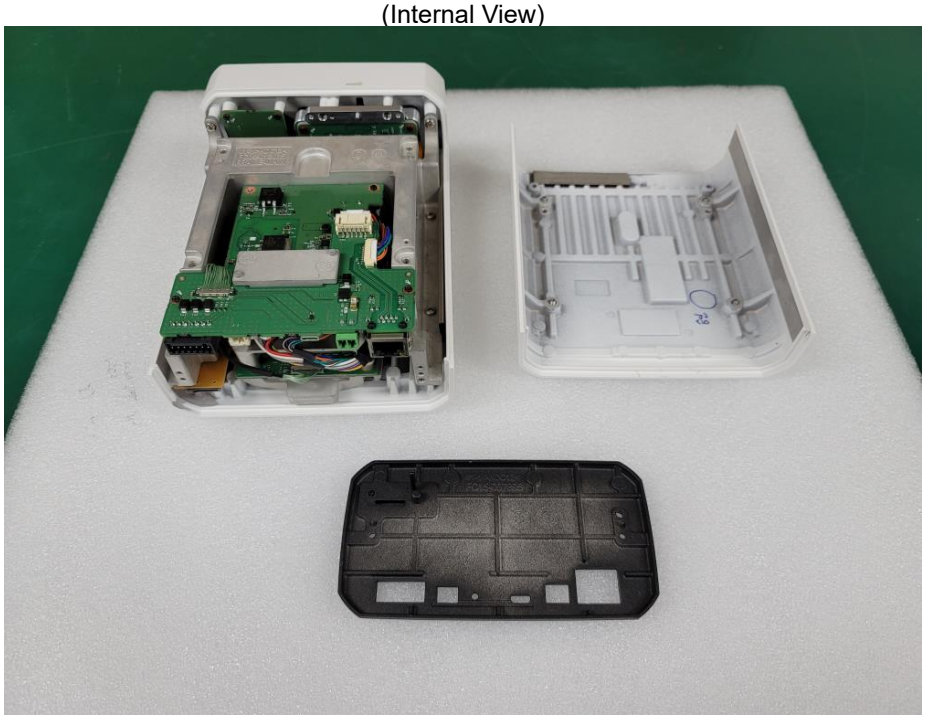
EUT External Photographs

(Top)

(Bottom)

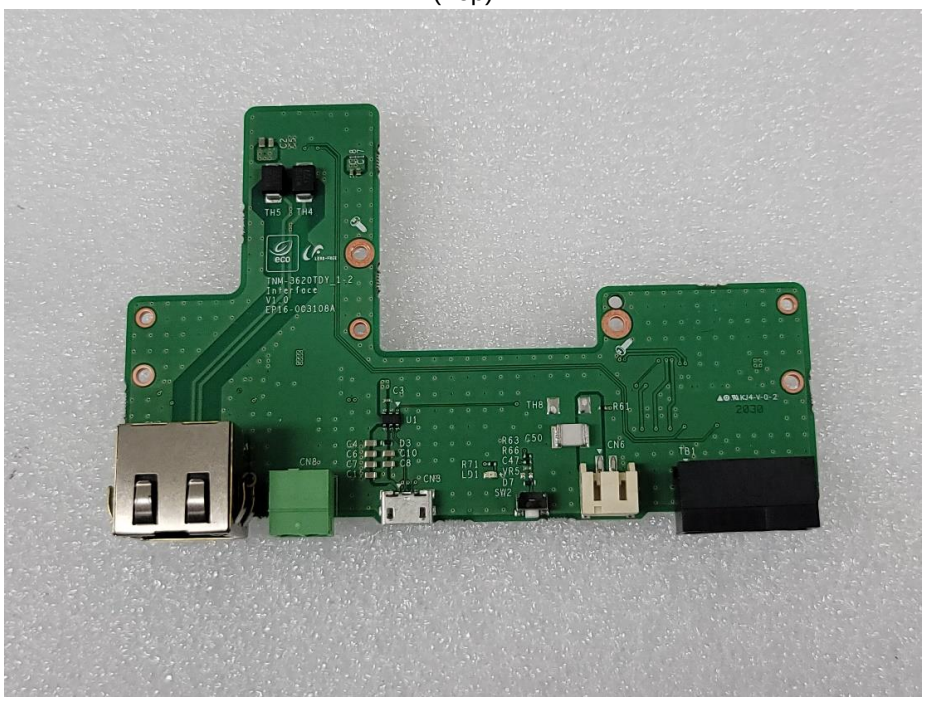
EUT Internal Photographs

(Internal View)

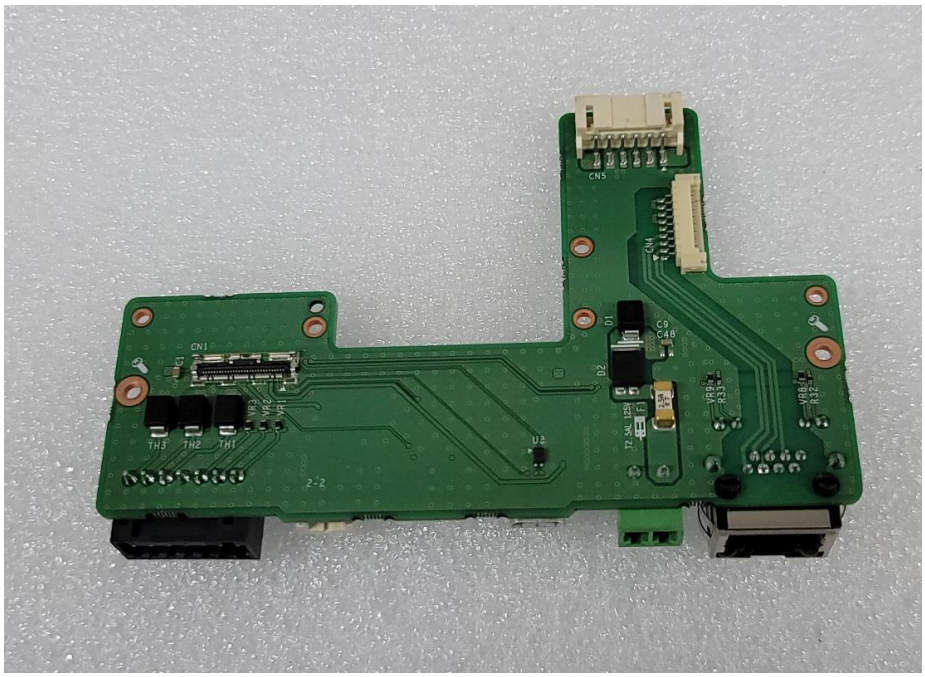


EUT Internal View – Interface Board

(Top)



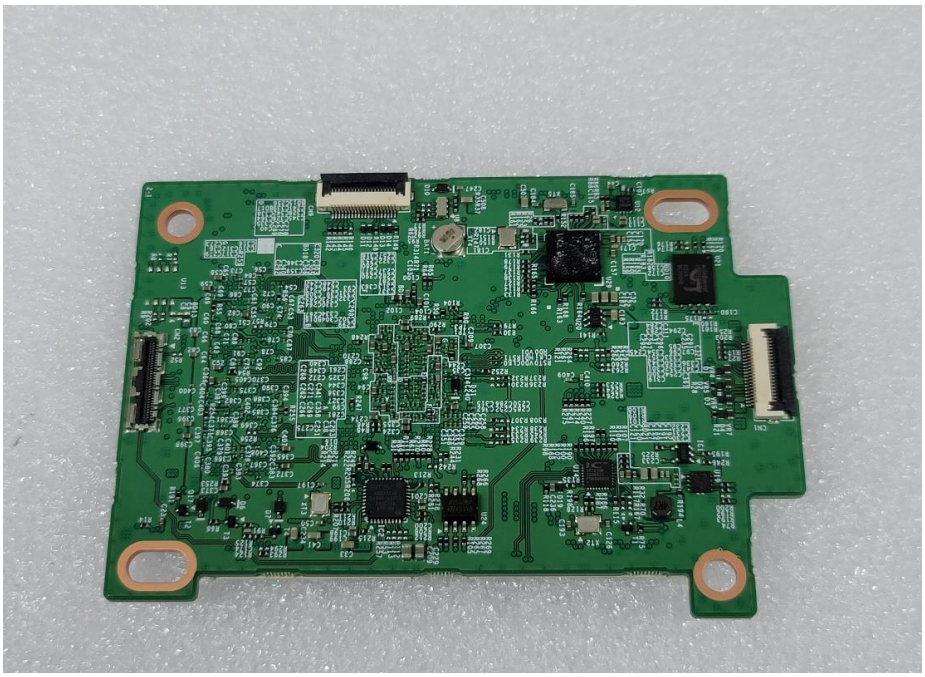
(Bottom)



EUT Internal View – NETWORK Board

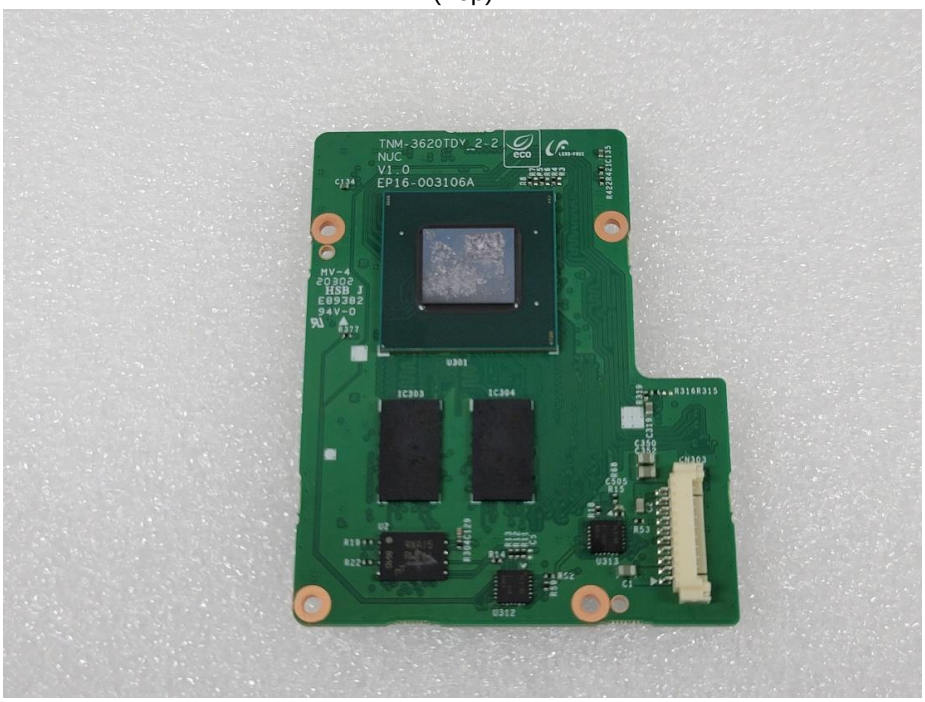
(Top)

(Bottom)



EUT Internal View – NUC Board

(Top)



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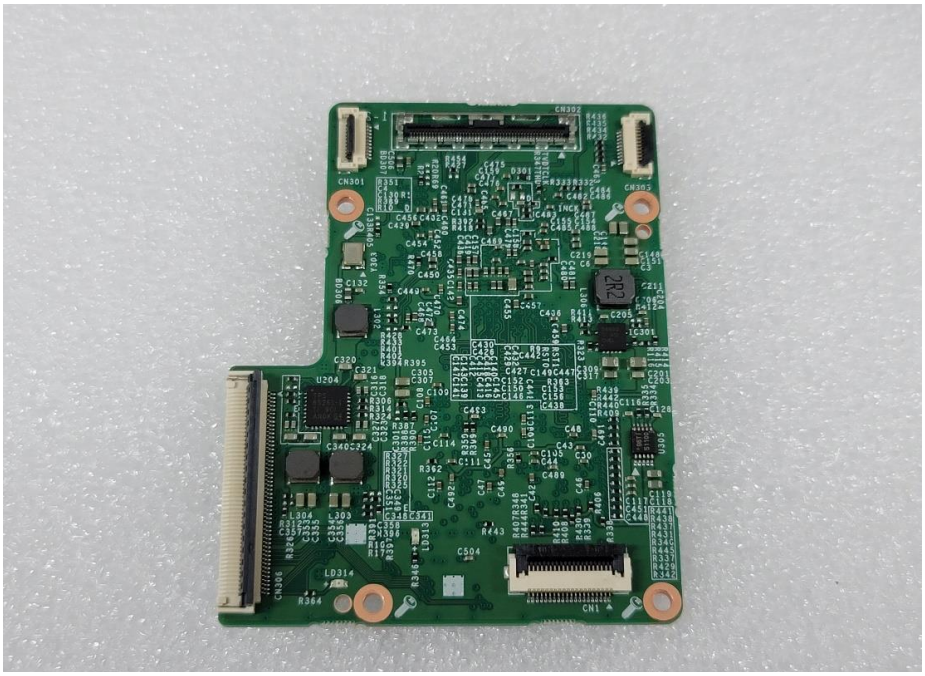
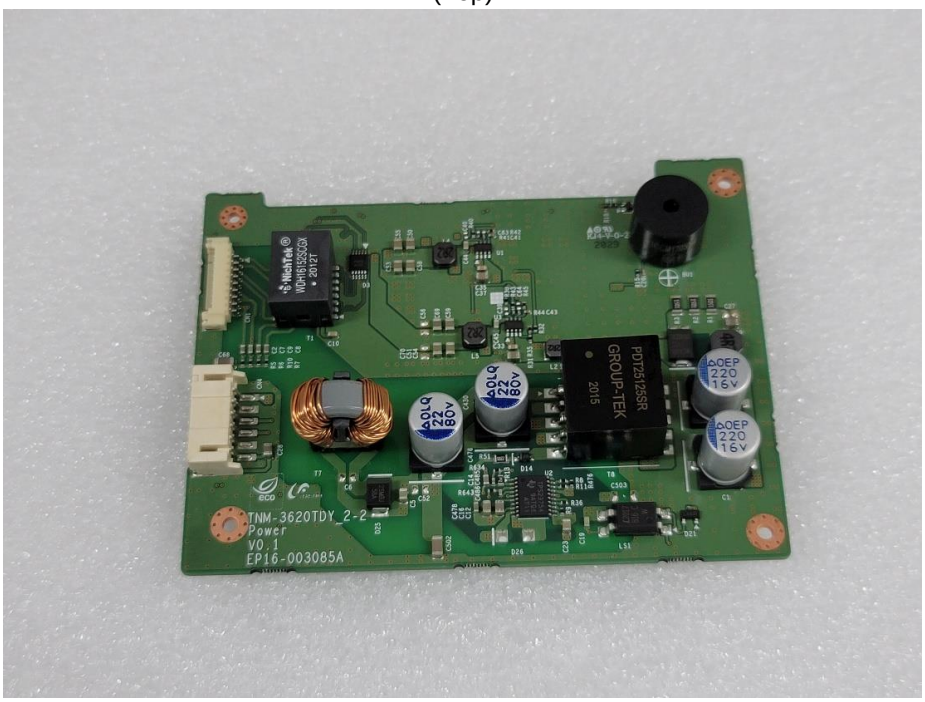
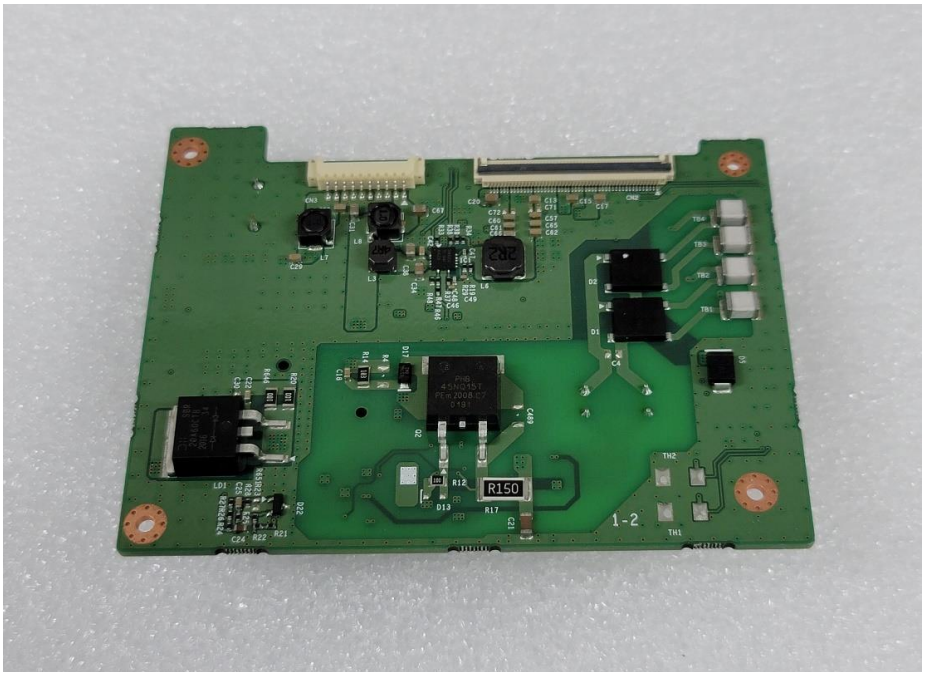


EUT Internal View – Power Board

(Top)



(Bottom)



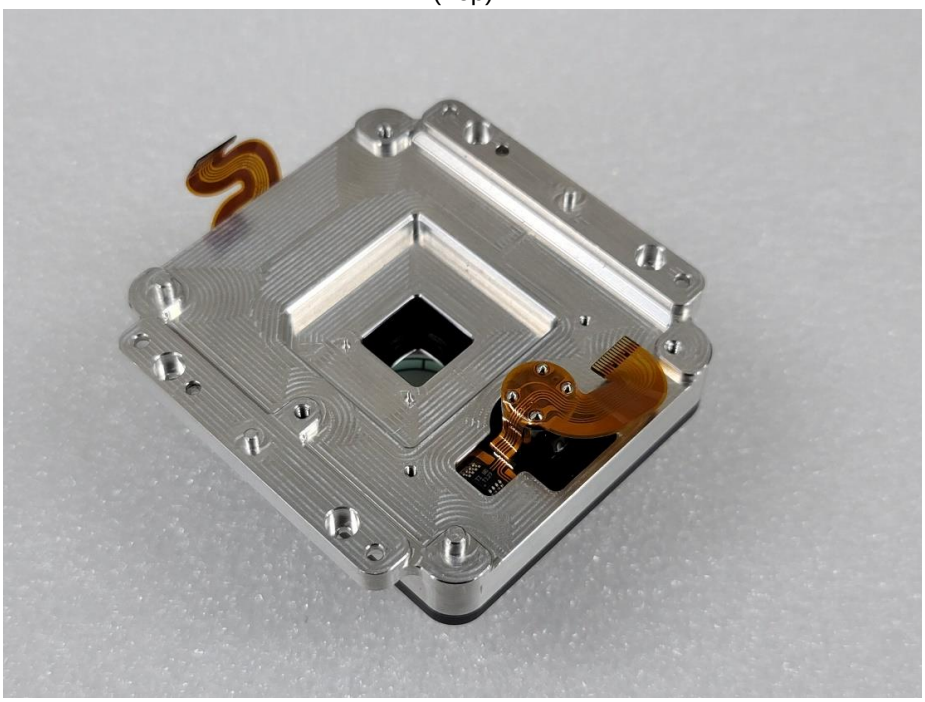
EUT Internal View – SD Board

(Top)

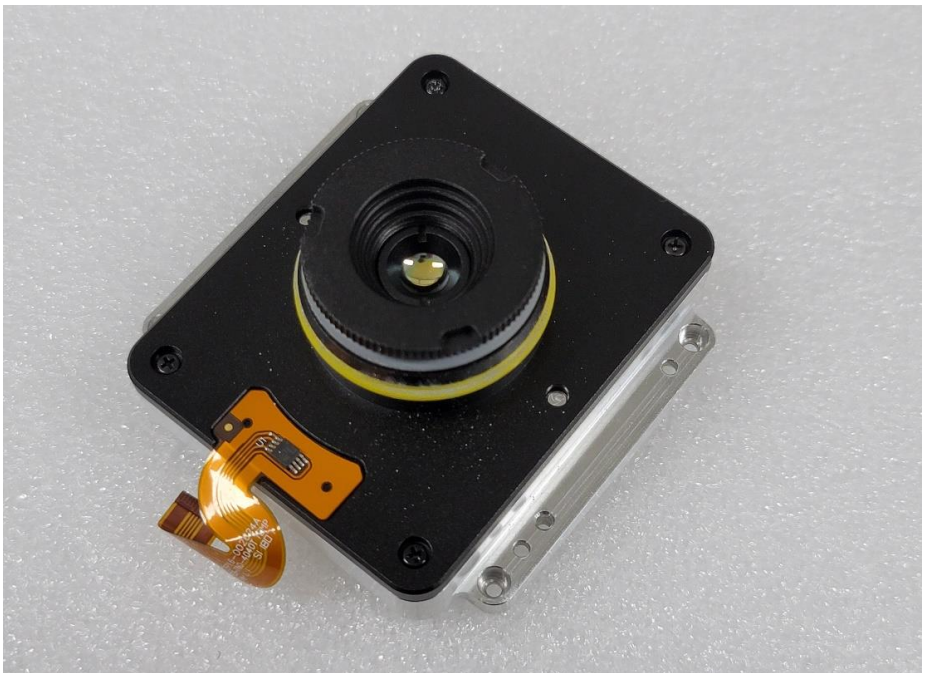
(Bottom)

EUT Internal View – SENSOR Board Lens

(Top)

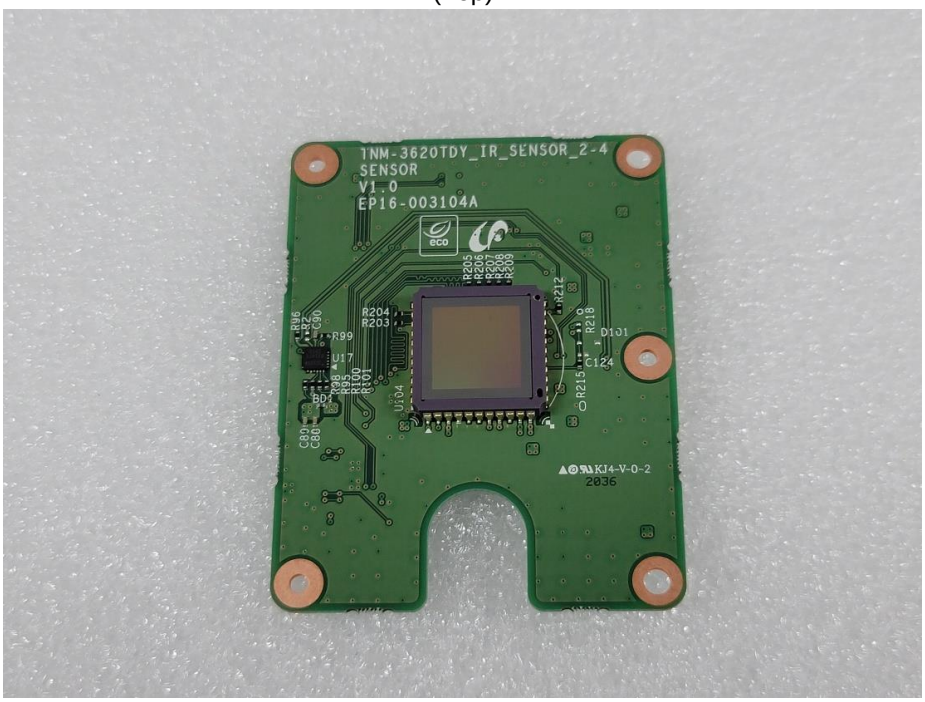


(Bottom)



EUT Internal View – SENSOR Board

(Top)



(Bottom)

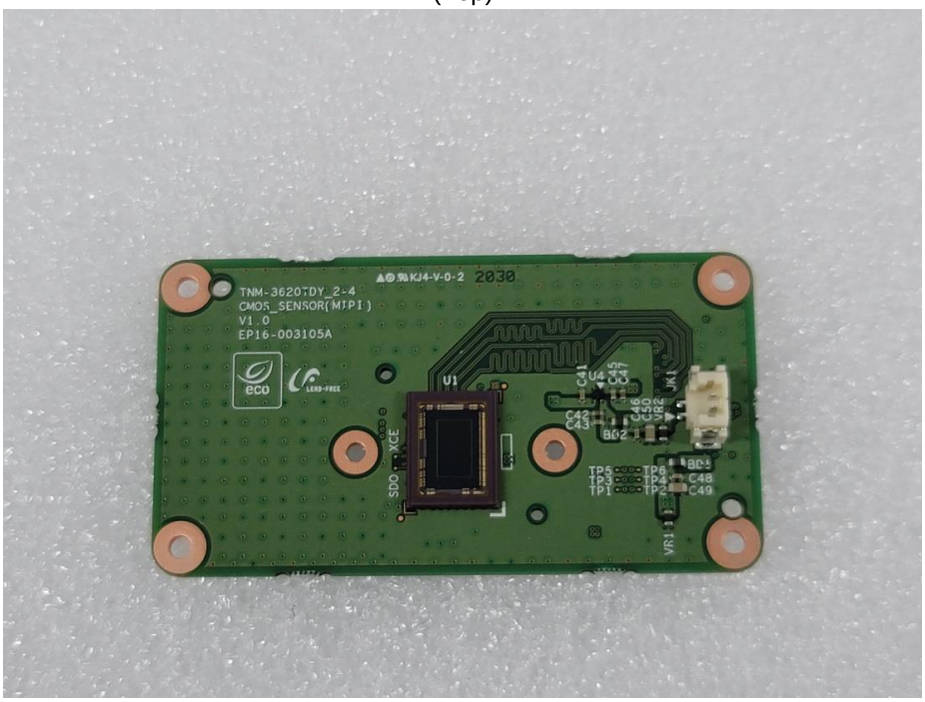
EUT Internal View – CMOS_SENSOR Lens

(Top)

(Bottom)

EUT Internal View – CMOS_SENSOR Board

(Top)



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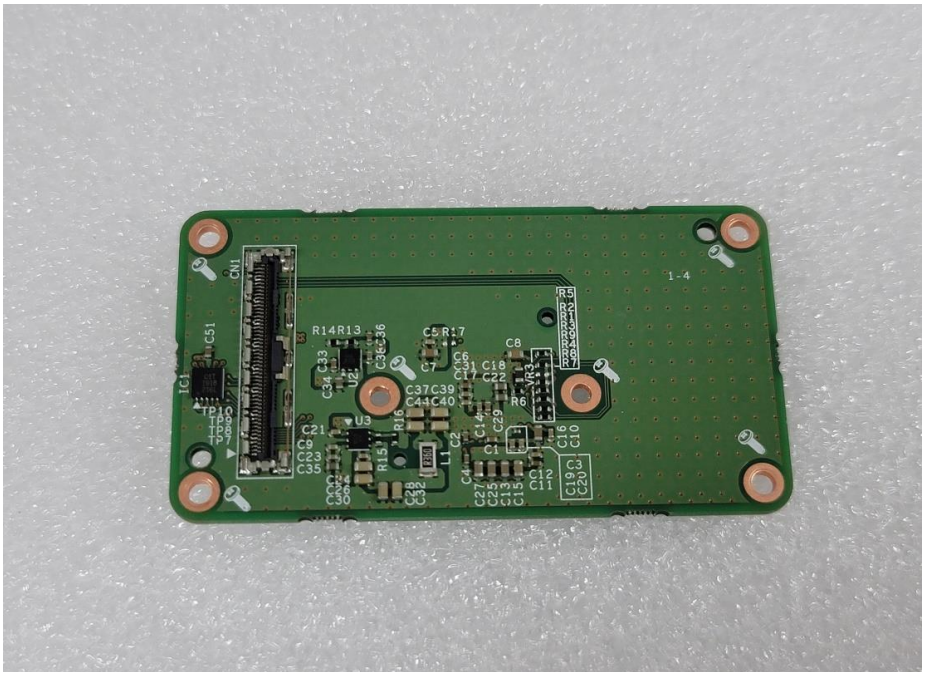
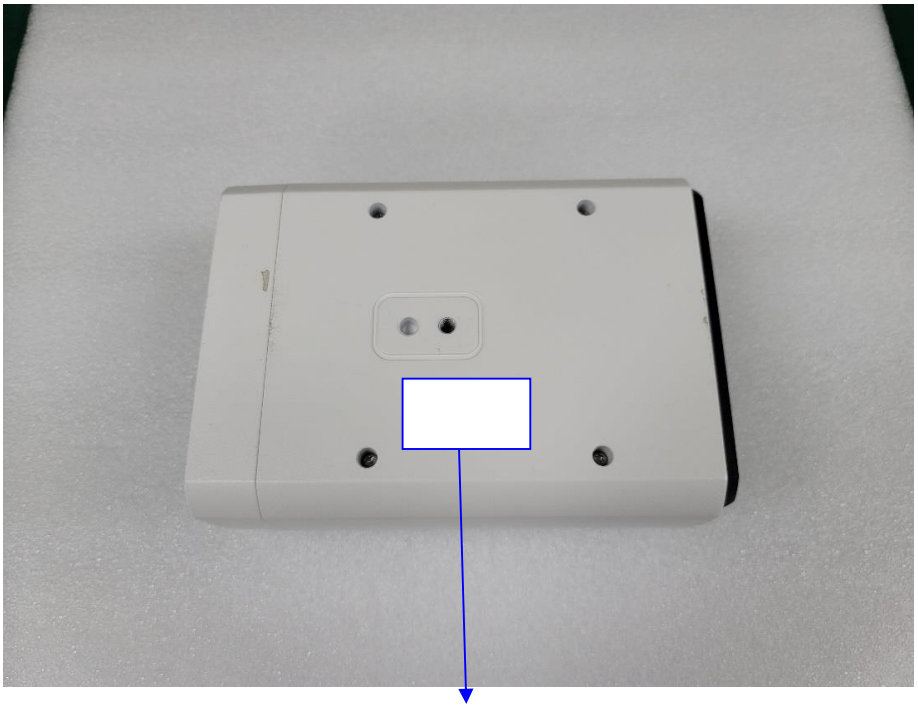


Label Photographs



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.