TEST REPORT

KES Co., Ltd.
#3002, #3503, #3701, 40, Simin-daero365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Republic of Korea
Tel : +82-31-425-6200, Fax : +82-31-381-3838

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 : BARCODE READER

Model/Type No. : TNS-7000M

Variant Model : -

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 (Suwon Industrial Complex)

3. Date of Receipt : May. 07, 2025

4. Test date : May. 18, 2025 ~ May. 21, 2025

5. Date of Issue : Jun. 05, 2025

6. Test Results : In Compliance

Tested by

[전은구]2025/06/05

Eun Gu, Jeon
EMC Test Engineer

Reviewed by

[장동훈]2025/06/05

Dong Hun, Jang
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
Jun. 05, 2025	KES-EM251642	Issued

TABLE OF CONTENTS

1.0 General Product Description

Main Specifications of EUT are:

Division		Specificity
Internal highest operating frequency		1.2 ㎓
Power	Rated Power	8 Pin (DC 24 V)
	Test Power	AC 240 V, 50 ㎐
Ports	I/O Port	8 Pin 1 EA, 12 Pin 1 EA, Micro SD Slot 1 EA
	Unused Port	EXTERNAL LIGHT(4 Pin) 1 EA
Components		Main Body 1 EA, Cable 1 EA
Ethernet Speed		100 Mbps

Video	
Imaging Device	Global Shutter Mono 1/3" CMOS
Resolution	Max 2048x1536
Max. Framerate	Max 50fps
NETD	None
Pixel Size	2.25μm(H)×2.25μm(V)
Min. Illumination	None
Video Out	None
Video Transmission Distance	None
Lens	
Optional Lens	6mm/8mm/12mm/16mm/25mm
Operational	
Camera Title	Displayed up to 85 characters
Direction Indicator	None
Day & Night	None
Backlight Compensation	None
WDR/HDR/LSC	HDR / LSC
Digital Noise Reduction	None
Electronic Shutter Speed	150us~33.3ms (sensor mode별 다름) LED 조명은 150us~3.5ms (shutter별 다름)
Digital PTZ	None
Video Rotation	Flip, Mirror
Analytics	Barcode recognition - Barcode type: 1D Code, Code128 / CODE39 / CODE93 / Codabar / ITF(Interleaved 2 of 5) / UPC / EAN 2D Code, QRcode / DataMatrix / Maxicode Stack Code, PDF417
Business Intelligence	None
Serial Interface	None
Alarm I/O	[WiseBCR App] Input 2EA, Output 2EA
Alarm Triggers	[WiseBCR App] Alarm input
Alarm Events	[WiseBCR App] Trigger On/Off, Read/NoRead
Light Type	Provides power and signal to Hanwha Vision LED Light LED Accessories (M12 Pin Connections), White/Red/Blue option

Light Viewable Length	None
IR Viewable Length	None
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
Radiometry	
Temperature Detect Range	None
Temperature Accuracy	None
Temperature Detection	None
Additional	None
Network	
Ethernet	M12 8pin connector (10/100/1000/BASE-T)
Video Compression	H.265/H.264: Main/High, MJPEG
Audio Compression	None
Smart Codec	None
Video Quality Adjustment	H.264/H.265: Target bitrate level control MJPEG: Quality Level control
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(6 users) / Multicast Multiple streaming(Up to 3 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, SRTP (TCP, UDP Unicast)
SIP support (VoIP, Peer-to-peer, SIP/PBX integration)	None
Security	None
Application Programming Interface	SUNAPI(HTTP API) Wisenet Open Platform ONVIF Profile M

Security	
OS / Firmware Protect	Secure boot, Signed firmware, Firmware encryption
User authentication	Digest Authentication, Privent brute-force attack
Network authentication	802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2)
Secure Communication	HTTPS, SRTP, WSS(Websocket secure)
Access Control	IP address filtering
Data Protect	Authentication information encryption, ZIP compression encryption
Audit	User Access/System/Event log
Device ID	Device Certificate(Root CA3, pre-installed)
Secure Storage	none
Security Certificate	Secure by default
General	
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Support
Edge Storage	SD/SDHC/SDXC
Memory	4GB RAM, 512MB Flash
NVIDIA Carrier Board	None
Environmental & Electrical	
Operating Temperature / Humidity	-40°C~+55°C / 0~95% RH * Start up should be done at above -30°C
Storage Temperature / Humidity	-40°C ~ +60°C(-40°F ~ +140°F) / Less than 95% RH
Wind Load	None
EPA(Effective Projected Area)	None
Certification	IP67, IP66, IK10(Exclude Lens cover)
Input Voltage	24VDC, M12 12pin connector
Power Consumption	Max 12.9W, Typical 6.7W * Max: LED On Typical: LED Off
Mechanical	
Color / Material	Black&White / Aluminum
RAL Code	RAL-9003
Product Dimensions / Weight	W74.4 x H77.4 x D59.4, 420g
Reset	HW Reset
Laser Aimer	None
Indicator LED	Support
Status LED	Support
Certifications & Standards	
EMC	FCC 47 CFR 15 Subpart B Class A ICES-3(A)/NMB-3(A) CE/UKCA - EN 55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3 KS C 9832 Class A, KS C 9835
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1
Environment	EN 60068-2-6 (variation resistance) EN 60068-2-27 (shock resistance) IEC/EN 60529 IP67 with cables and appropriate lens cover attached IEC/EN 60529 IP66 with cables and appropriate lens cover attached IEC/EN 62262 IK10 (Exclude Lens cover)
Video	None
Compatible Models	
Other Compatible Models	Pivot Mounting Bracket Clear filter cover

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.

☒ AC 240 V, 50 ㎐(AC/DC Adapter Input Power)

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
Barcode Reader	TNS-7000M	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
AC/DC Adapter	WTS-2405N(120W)	-	Sun Electronics Co., Ltd.	-
Laptop	P95G001	9JM8HT2	DELL INC.	-
Laptop AC/DC Adapter	HA65NM130	-	Chicony Power Technology(Suzhou)Co.,Ltd.	-
Micro SD Card	-	-	Sandisk	8 GB

1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	**I/O Port**	**Description**	**I/O Port**	**Length**	**Shield**
BARCODE READER (EUT)	8 Pin	AC/DC Adapter	Line	2.8	U
	Micro SD Slot	Micro SD Card	Micro SD Slot	-	-
	12 Pin	Laptop	RJ-45	5.0	S
Laptop	DC Jack	Laptop Adapter	Line	1.5	U

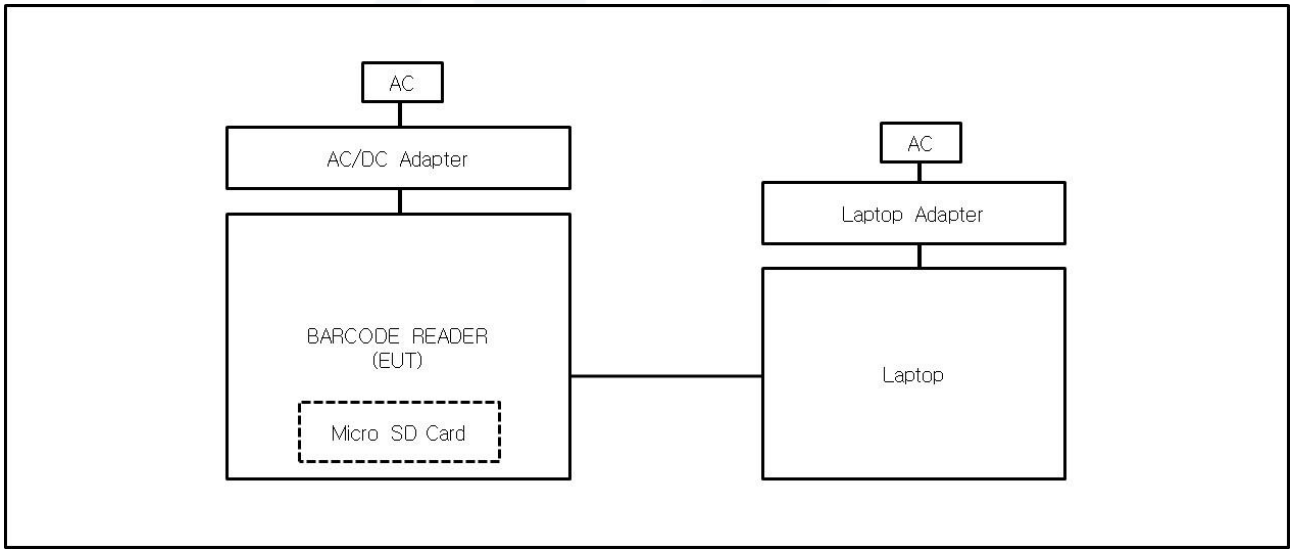
* Unshielded=U, Shielded=S

1.7 EUT Operating Mode(s)

Test mode	Normal operating	Test Voltages
Operating	- After connecting the EUT and the laptop by wire, check the camera operation status using the web viewer on the laptop and operate the barcode recognition function continuously to check the operation status. - Tested to confirm normal operation and communication through Ping Test.	AC 240 V, 50 Hz

EUT Test operating S/W		
Name	**Version**	**Manufacture Company**
Web Viewer	-	HANWHA VISION VIETNAM COMPANY LIMITED

1.8 Configuration



1.9 Remarks when standards applied

The EXTERNAL LIGHT(4 Pin) port of the EUT was unused or a management port, so the test was not applied.

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 0008

2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **AS/NZS CISPR 32:2015 AMD 1:2020** ☒ Class A ☐ Class B

2.1 Conducted Emissions at Mains Power Ports

Test Date
May. 18, 2025

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	11, 06, 2025
☒	LISN	ENV216	R & S	101786	01, 09, 2026
☒	LISN	ESH2-Z5	R & S	100450	11, 06, 2025
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 06, 2025

Test Conditions
Temperature: (23,1 ± 0,1) ℃
Relative Humidity: (46,4 ± 0,1) % 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 Conducted Emissions at Telecommunication Ports

Test Date
May. 18, 2025

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	11, 06, 2025
☒	LISN	ENV216	R & S	101786	01, 09, 2026
☒	ARTIFICIAL MAINS NETWORK	ESH2-Z5	R & S	100450	11, 06, 2025
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 06, 2025
☒	ISN	ISN S8	SCHWARZBECK	ISN-S8-0019	02, 27, 2026

Test Conditions
Temperature: (23,1 ± 0,1) ℃
Relative Humidity: (46,4 ± 0,1) % 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.

2.3 Radiated Electric Field Emissions(Below 1 ㎓)

Test Date
May. 18, 2025

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

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	ESW8	R & S	101319	03, 24, 2026
☒	AMPLIFIER	SCU 01	R & S	100603	11, 06, 2025
☒	BILOG ANTENNA	VULB 9168	SCHWARZBECK	9168-461	05, 09, 2026
☒	ATTENUATOR	6806.17.A	HUBER+SUHNER	-	02, 13, 2026

Test Conditions
Temperature: (23,0 ± 0,1) ℃
Relative Humidity: (47,2 ± 0,1) % 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.

2.4 Radiated Electric Field Emissions(Above 1 ㎓)

Test Date
May. 21, 2025

Test Location
SEMI ANECHOIC CHAMBER #5

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	ES10/RE	TOYO Corporation	2022.01.000	-
☒	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	02, 13, 2026
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	11, 04, 2025
☒	PREAMPLIFIER	8449B	HP	3008A00899	03, 05, 2026
☒	ATTENUATOR	8491B	HP	23094	02, 13, 2026

Test Conditions
Temperature: (23,0 ± 0,1) ℃
Relative Humidity: (47,3 ± 0,1) % R.H.

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.

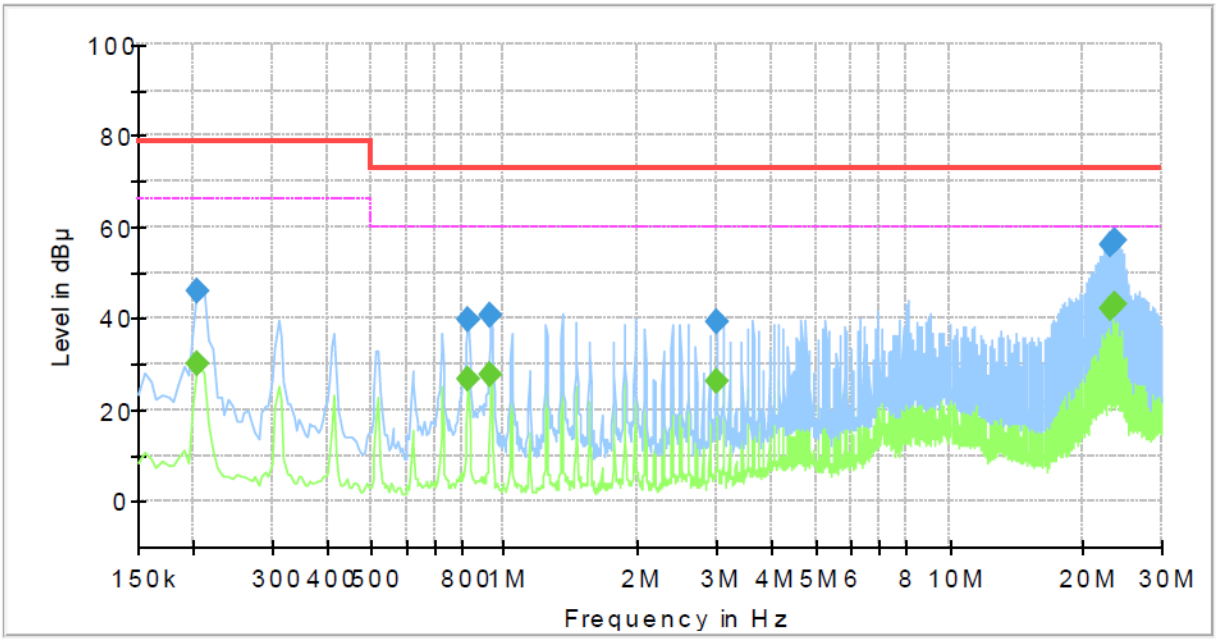
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

HOT LINE

Common Information

Test Description:	Conducted Emission
Job No.:	KES-EM251642
Phase:	L
Mode:	
Operator Name:	KES



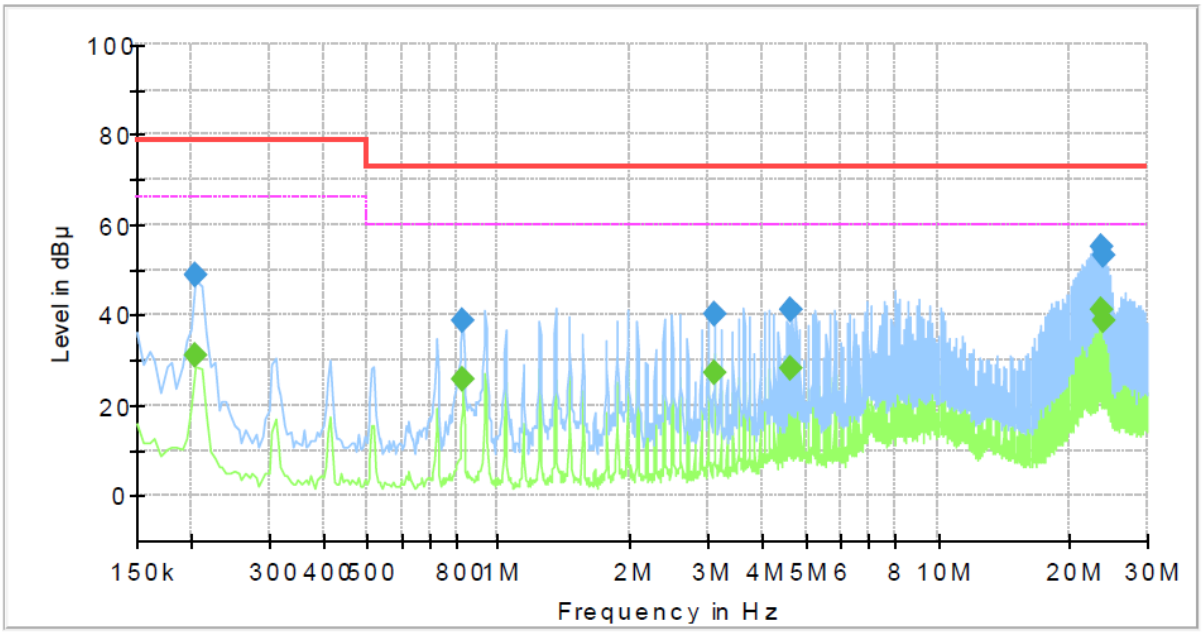
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.205000	---	30.05	66.00	35.95	1000.0	9.000	L1	19.5
0.205000	45.96	---	79.00	33.04	1000.0	9.000	L1	19.5
0.830000	---	26.44	60.00	33.56	1000.0	9.000	L1	19.6
0.830000	39.46	---	73.00	33.54	1000.0	9.000	L1	19.6
0.930000	---	27.59	60.00	32.41	1000.0	9.000	L1	19.6
0.930000	40.75	---	73.00	32.25	1000.0	9.000	L1	19.6
3.000000	---	26.34	60.00	33.66	1000.0	9.000	L1	19.7
3.000000	39.40	---	73.00	33.60	1000.0	9.000	L1	19.7
23.175000	---	42.02	60.00	17.98	1000.0	9.000	L1	20.5
23.175000	56.25	---	73.00	16.75	1000.0	9.000	L1	20.5
23.485000	---	43.07	60.00	16.93	1000.0	9.000	L1	20.5
23.485000	57.29	---	73.00	15.71	1000.0	9.000	L1	20.5

NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Job No.:	KES-EM251642
Phase:	N
Mode:	
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.205000	---	31.20	66.00	34.80	1000.0	9.000	N	19.5
0.205000	48.80	---	79.00	30.20	1000.0	9.000	N	19.5
0.830000	---	25.55	60.00	34.45	1000.0	9.000	N	19.6
0.830000	38.52	---	73.00	34.48	1000.0	9.000	N	19.6
3.105000	---	27.16	60.00	32.84	1000.0	9.000	N	19.7
3.105000	40.20	---	73.00	32.80	1000.0	9.000	N	19.7
4.655000	---	28.18	60.00	31.82	1000.0	9.000	N	19.8
4.655000	41.07	---	73.00	31.93	1000.0	9.000	N	19.8
23.485000	---	41.26	60.00	18.74	1000.0	9.000	N	20.5
23.485000	55.30	---	73.00	17.70	1000.0	9.000	N	20.5
24.005000	---	38.89	60.00	21.11	1000.0	9.000	N	20.5
24.005000	53.21	---	73.00	19.79	1000.0	9.000	N	20.5

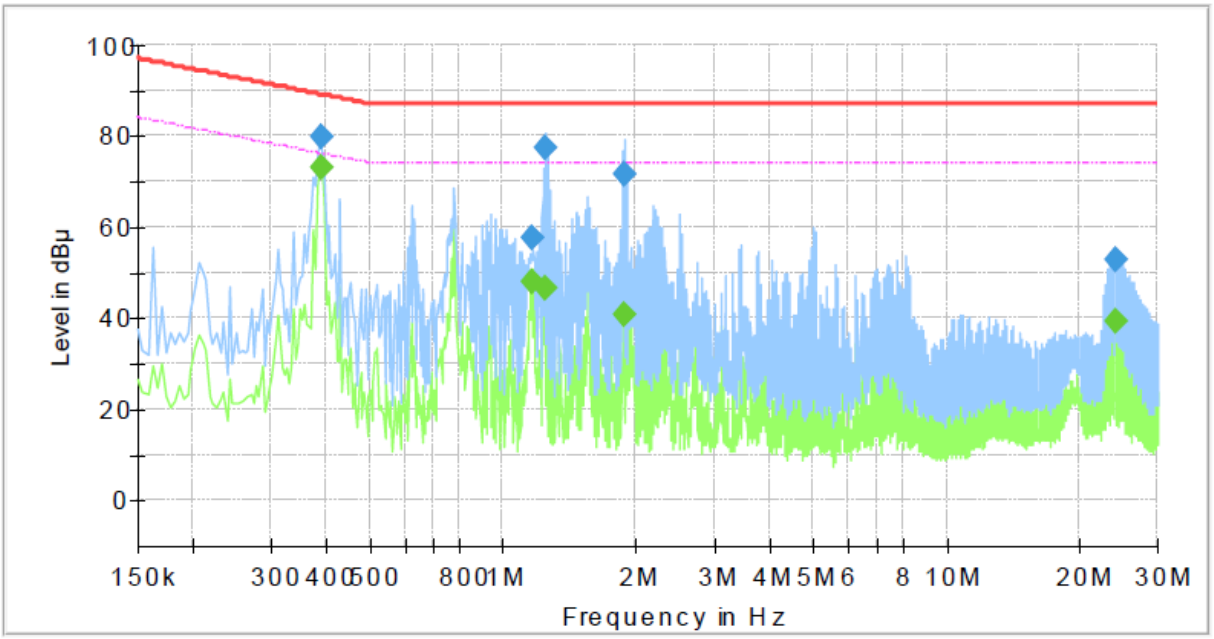
♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

Conducted Emissions at Telecommunication Ports

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Job No.:	KES-EM251642
Mode :	
Speed :	100 Mbps
Operator Name:	KES

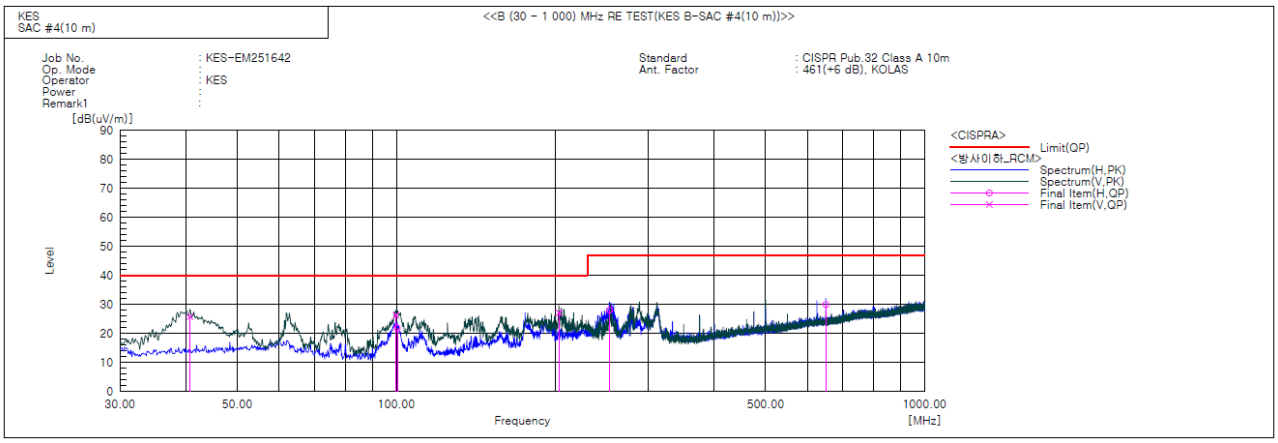


Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.390000	79.67	---	89.06	9.39	1000.0	9.000	Single Line	19.4
0.390000	---	73.16	76.06	2.90	1000.0	9.000	Single Line	19.4
1.166000	57.63	---	87.00	29.37	1000.0	9.000	Single Line	19.4
1.166000	---	48.01	74.00	25.99	1000.0	9.000	Single Line	19.4
1.254000	77.49	---	87.00	9.51	1000.0	9.000	Single Line	19.4
1.254000	---	46.22	74.00	27.78	1000.0	9.000	Single Line	19.4
1.886000	---	40.54	74.00	33.46	1000.0	9.000	Single Line	19.4
1.886000	71.69	---	87.00	15.31	1000.0	9.000	Single Line	19.4
24.106000	---	39.10	74.00	34.90	1000.0	9.000	Single Line	20.4
24.106000	52.68	---	87.00	34.32	1000.0	9.000	Single Line	20.4

♦ 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 (ISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

Radiated Electric Field Emissions(Below 1 ㎓)

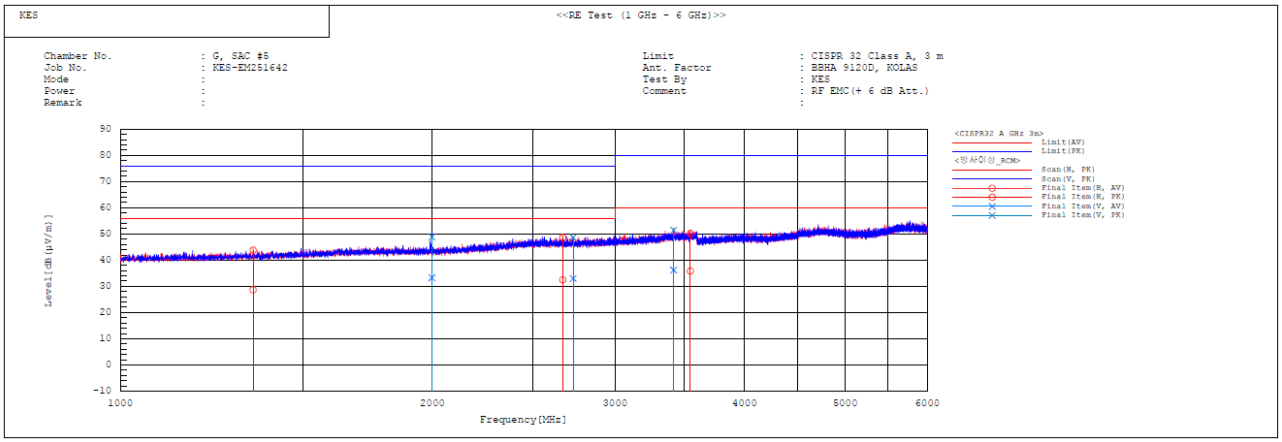


Final Result

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	V	47.6	-21.8	25.8	40.0	14.2	166.0	320.0	
2	99.840	V	51.2	-24.9	26.3	40.0	13.7	100.0	49.0	
3	100.446	H	46.6	-24.8	21.8	40.0	18.2	316.0	174.0	
4	203.145	V	48.9	-21.8	27.1	40.0	12.9	105.0	351.0	
5	253.104	H	47.4	-19.3	28.1	47.0	18.9	315.0	190.0	
6	650.073	H	36.2	-6.2	30.0	47.0	17.0	355.0	339.0	

♦ Calculation
Result(QP) [㏈(㎶/m)] = (Reading(QP)[㏈(㎶)] + c.f[㏈(1/m)]
Margin(QP)[㏈] = Limit[㏈(㎶/m)] - Result(QP) [㏈(㎶/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 ㎓)



Final Result

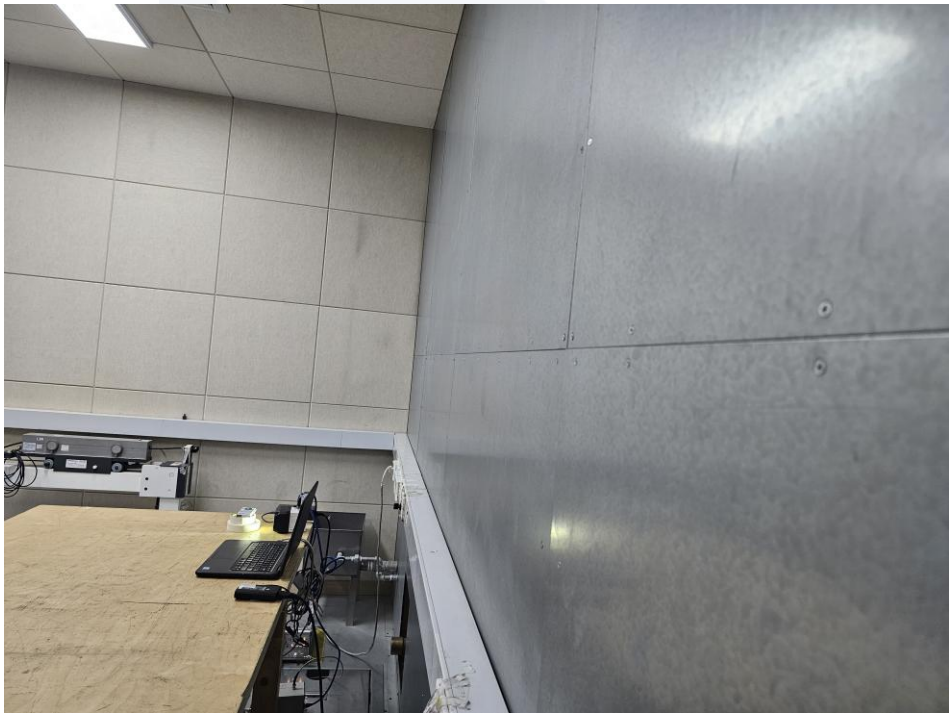
No.	Frequency [MHz]	Pol	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]	Remark
1	1343.506	H	28.5	43.6	0.2	43.8	56.0	76.0	27.3	32.2	100.0	204.9	
2	1998.041	V	30.4	45.9	2.9	48.8	56.0	76.0	22.7	27.2	100.0	209.7	
3	2671.741	H	27.0	43.1	5.5	48.6	56.0	76.0	23.5	27.4	100.0	5.4	
4	2733.239	V	27.3	42.9	5.7	48.6	56.0	76.0	23.0	27.4	100.0	53.8	
5	3417.023	V	29.0	44.2	7.2	51.4	60.0	80.0	23.8	28.6	100.0	126.1	
6	3546.841	H	28.4	42.8	7.4	50.2	60.0	80.0	24.2	29.8	100.0	218.0	

♦ Calculation
Result(PK/CAV) [dB(㎶/m)] = (Reading(PK/CAV)[dB(㎶)] + c.f[dB(1/m)]
Margin(PK/CAV)[dB] = Limit[dB(㎶/m)] - Result(PK/CAV) [dB(㎶/m)]
Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value
Limit(PK/CAV) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

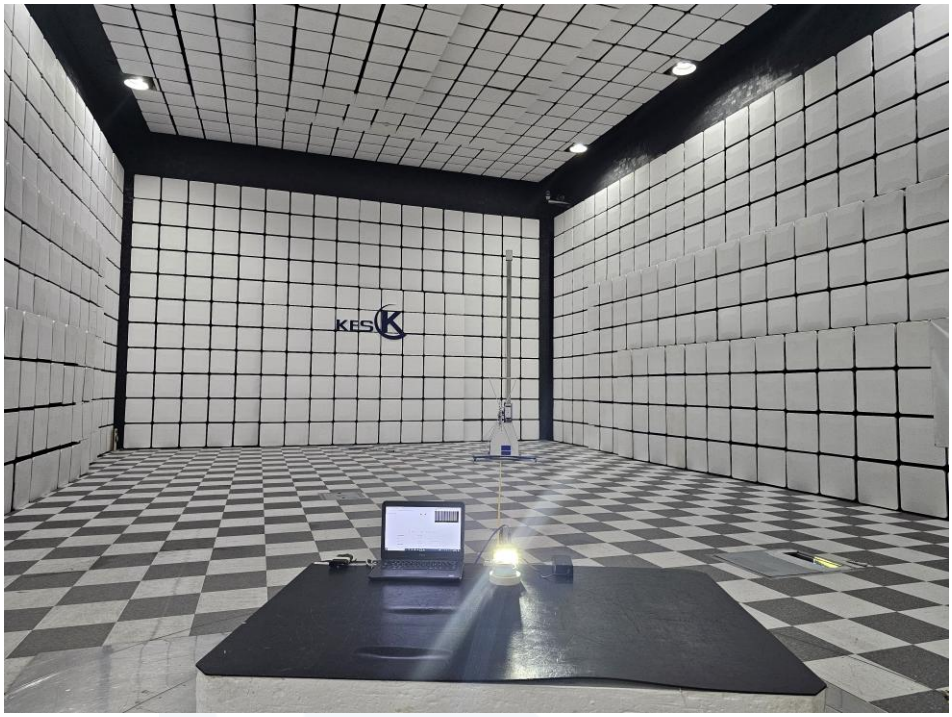
Test Setup Photos and Configuration

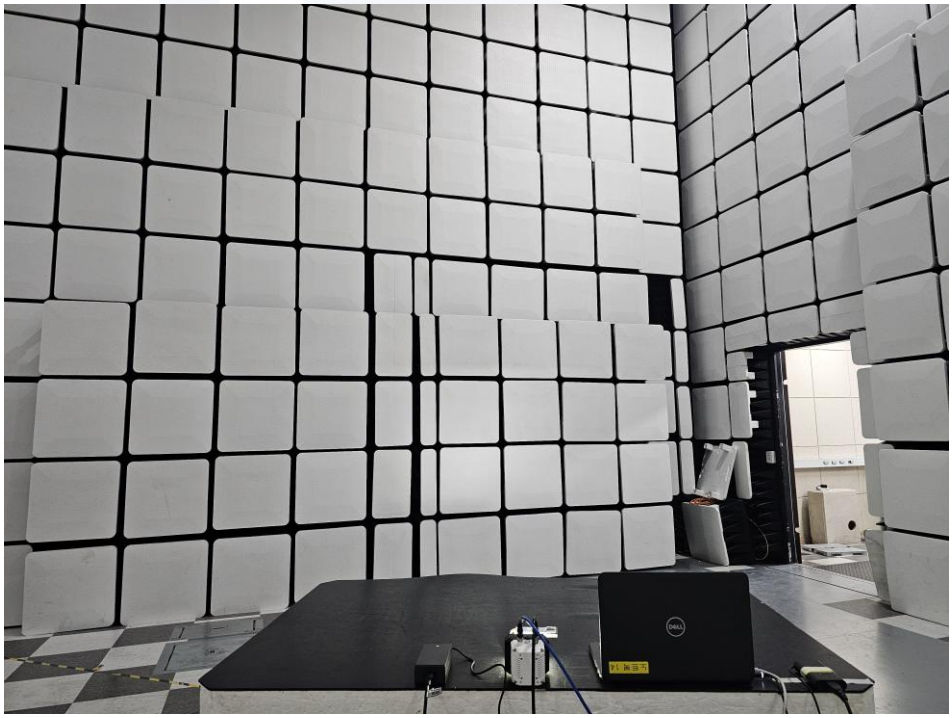
Conducted Emissions at Mains Power Ports

Conducted Emissions at Telecommunication Ports

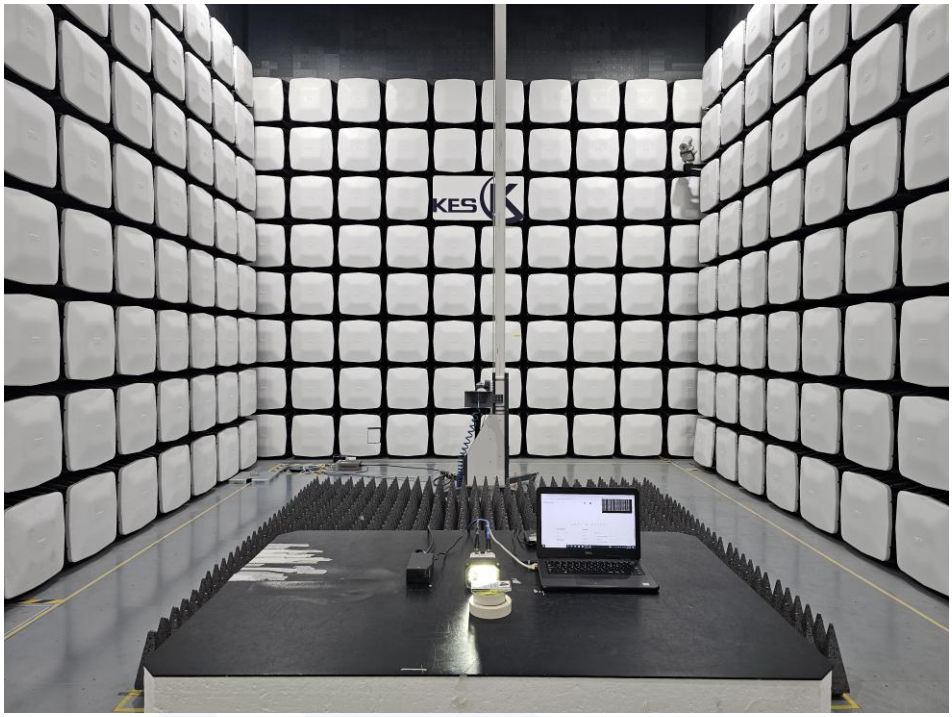


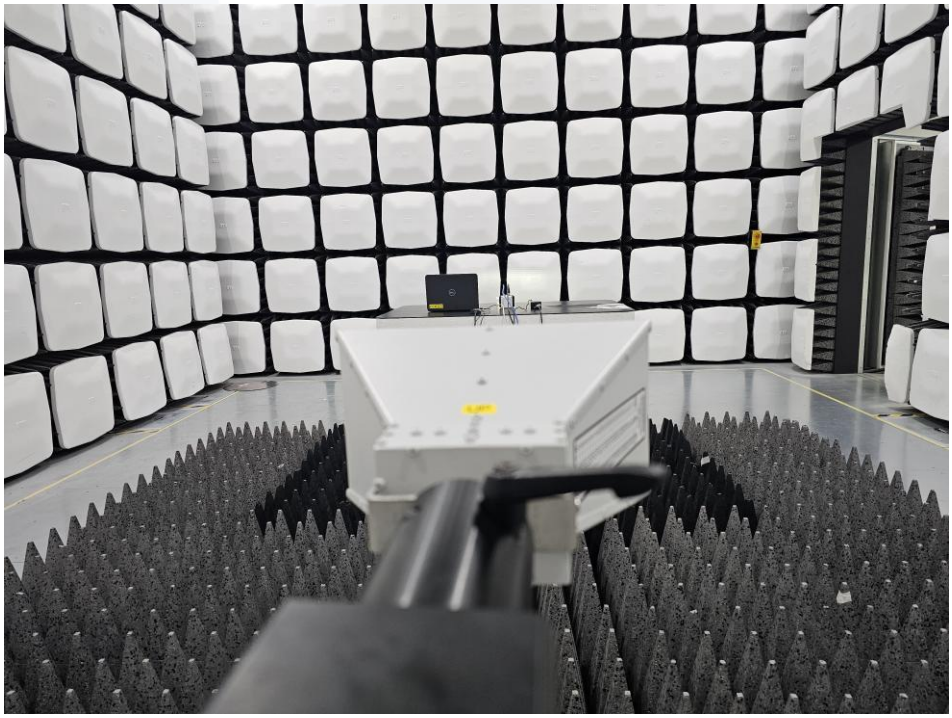
Radiated Electric Field Emissions(Below 1 ㎓)





Radiated Electric Field Emissions(Above 1 ㎓)

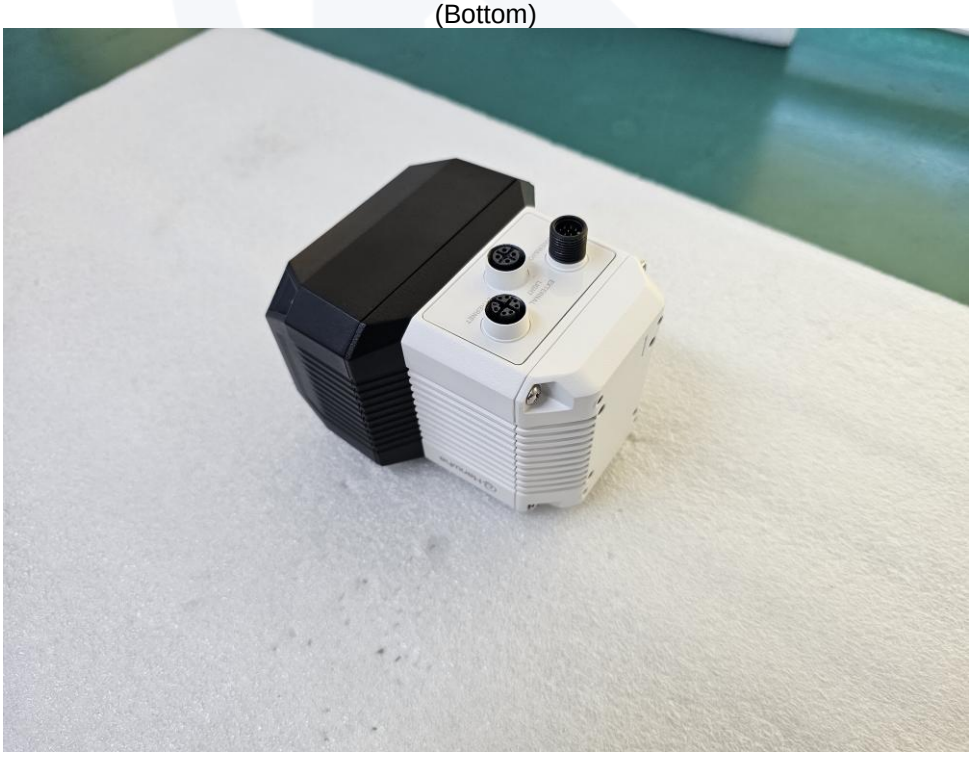




EUT External Photographs

(Top)

(Bottom)

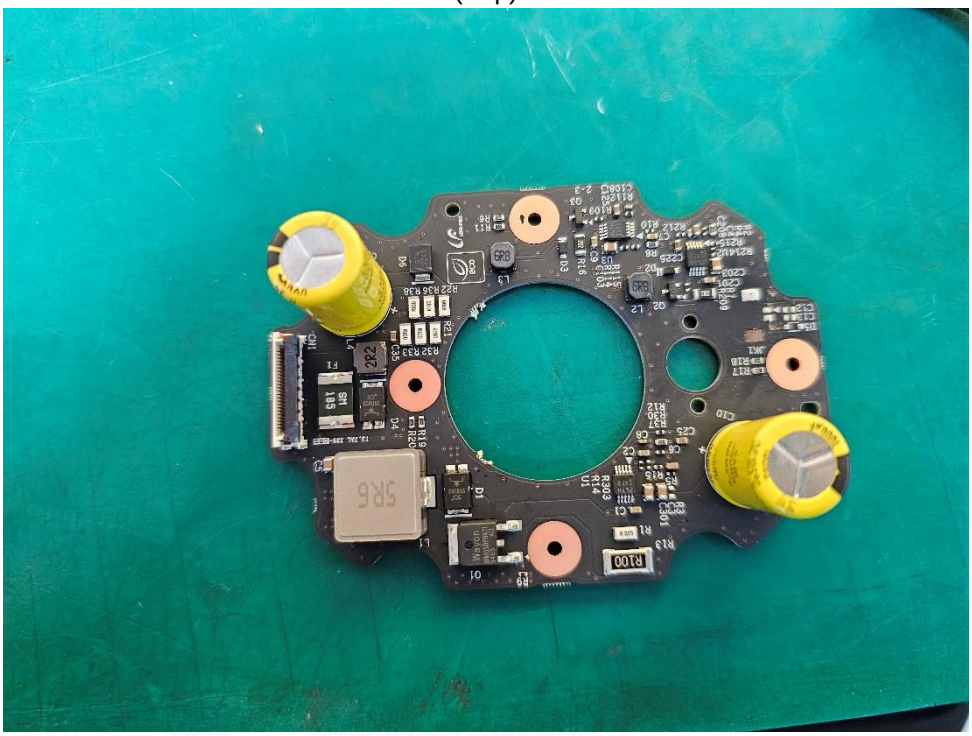


EUT Internal Photographs

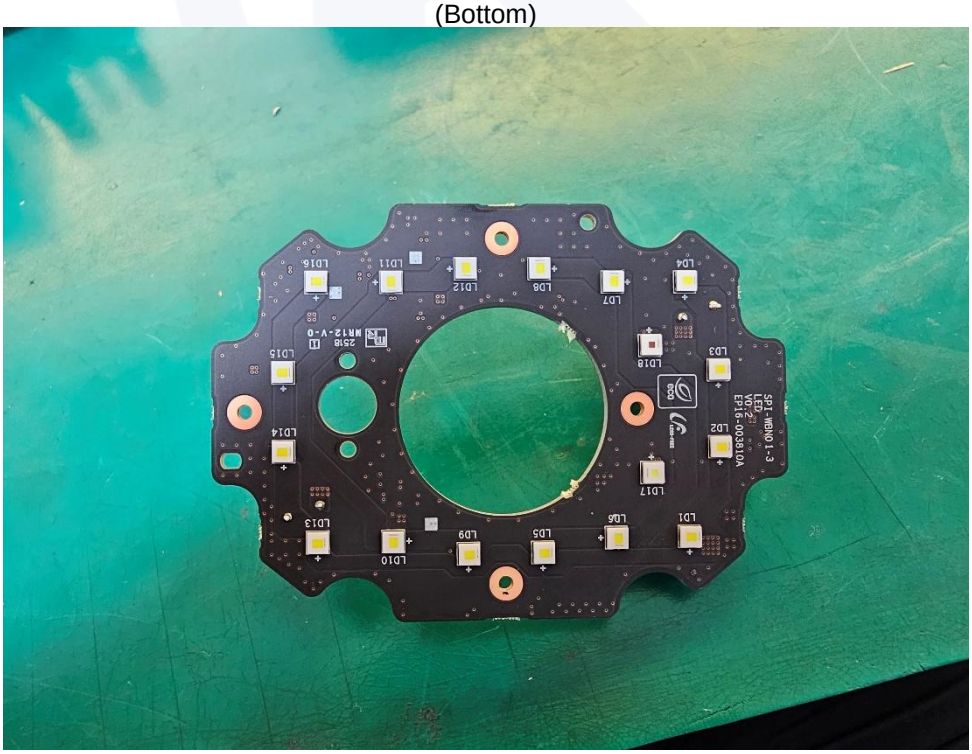
(Internal View)

EUT Internal View – Board 1

(Top)

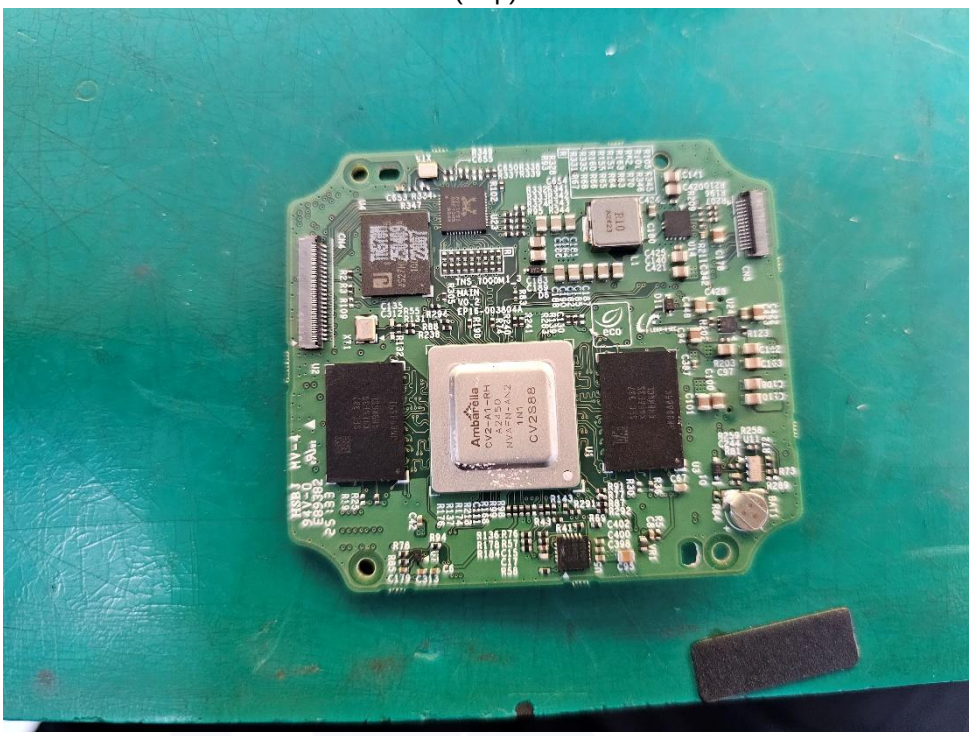


(Bottom)

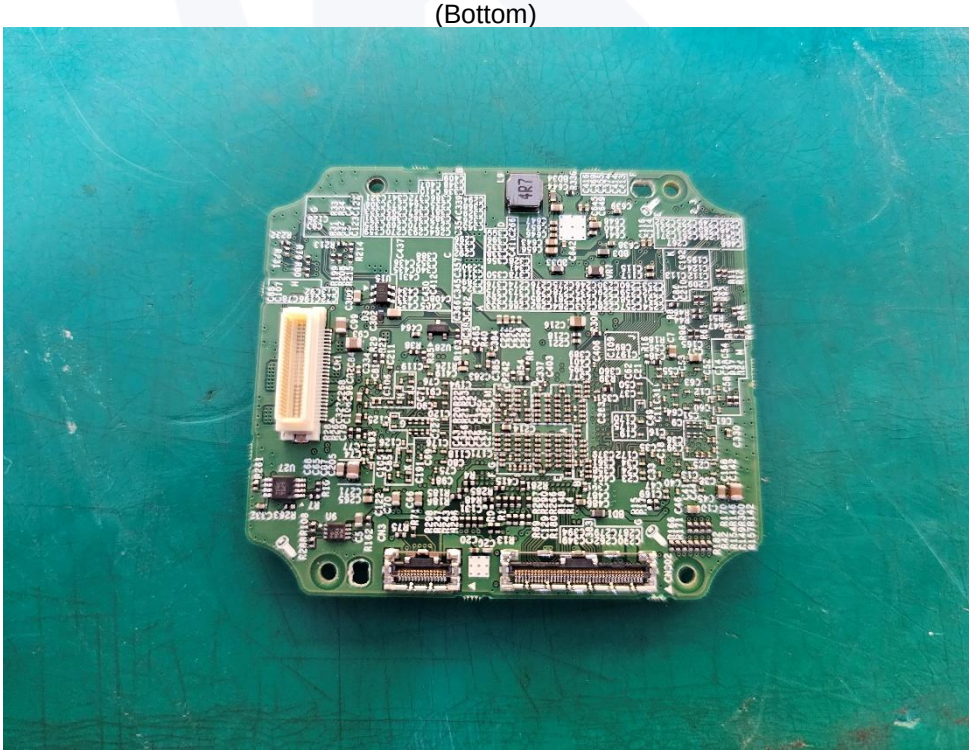


EUT Internal View – Board 2

(Top)



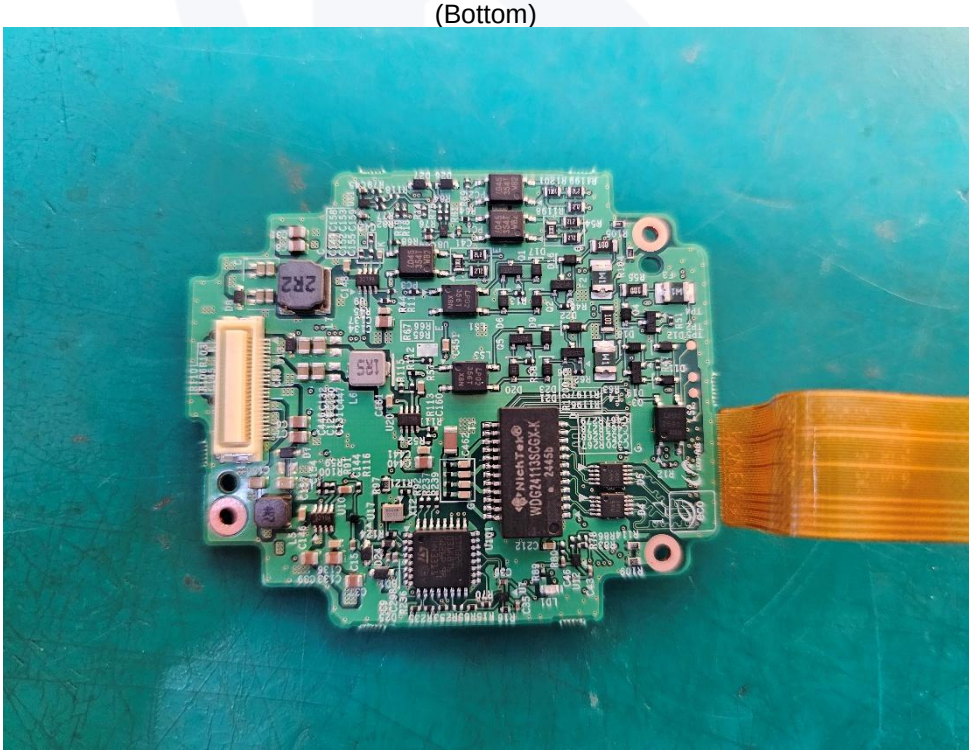
(Bottom)



EUT Internal View – Board 3

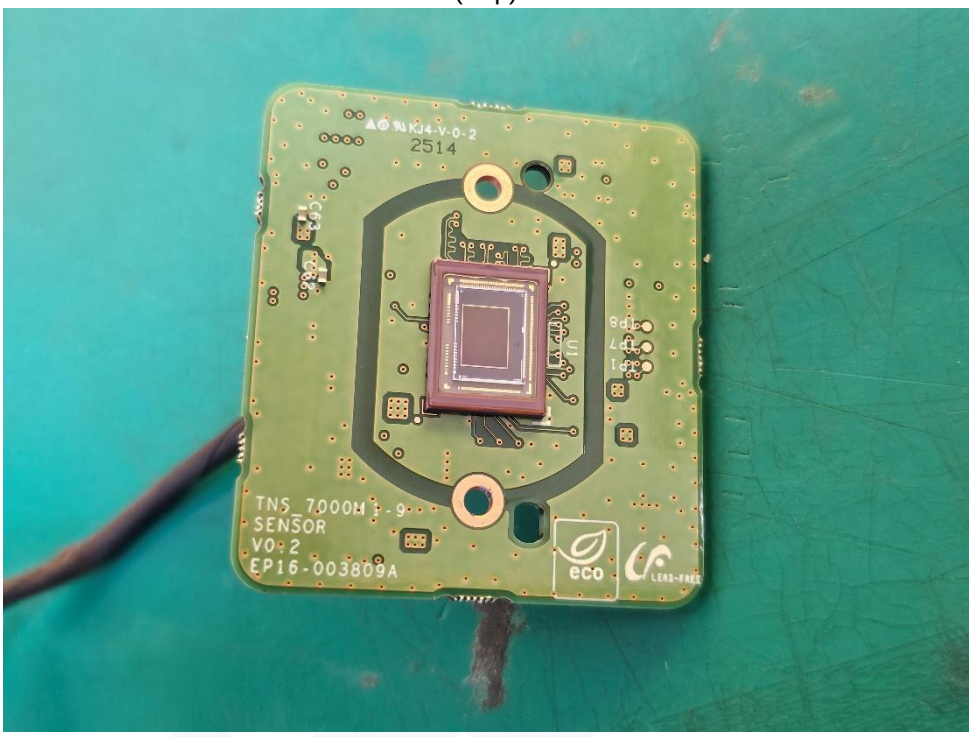
(Top)

(Bottom)

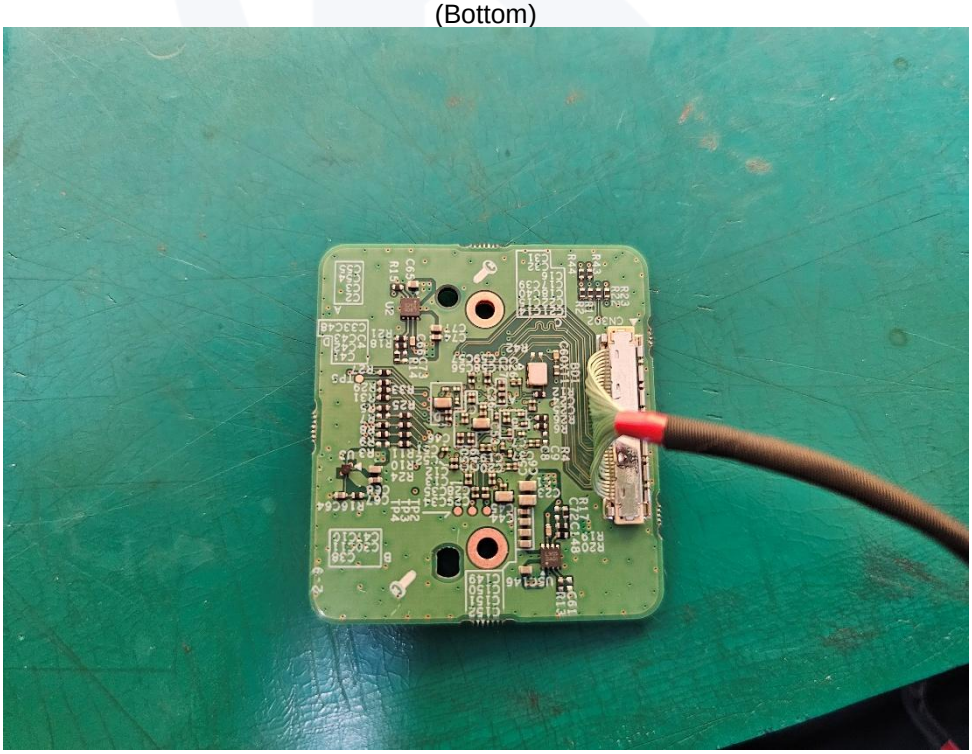


EUT Internal View – Board 4

(Top)

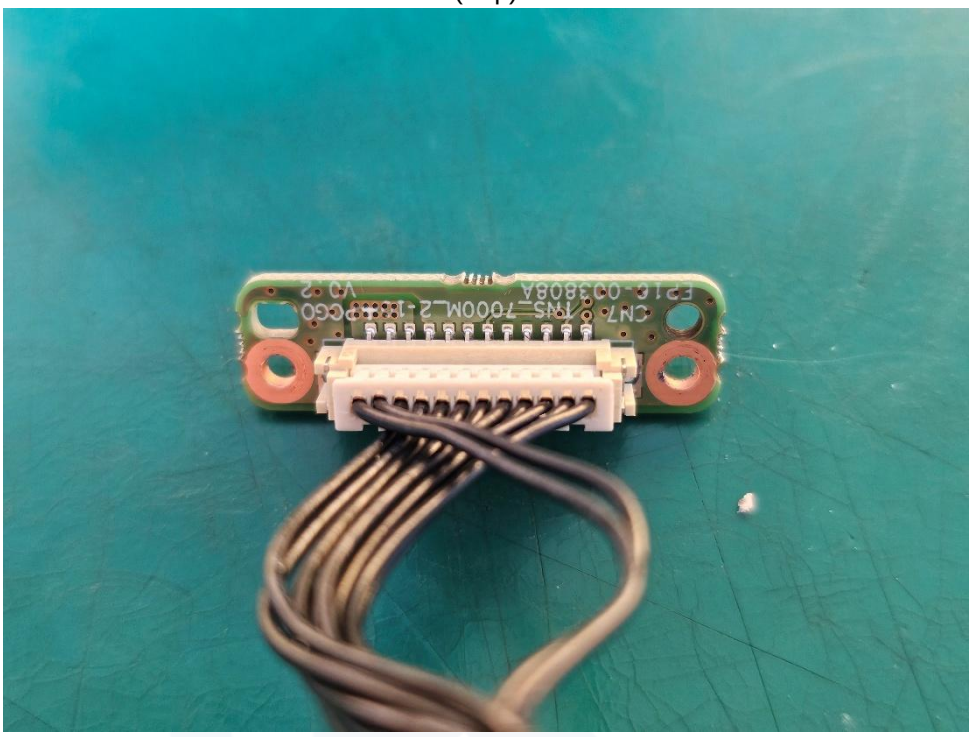


(Bottom)

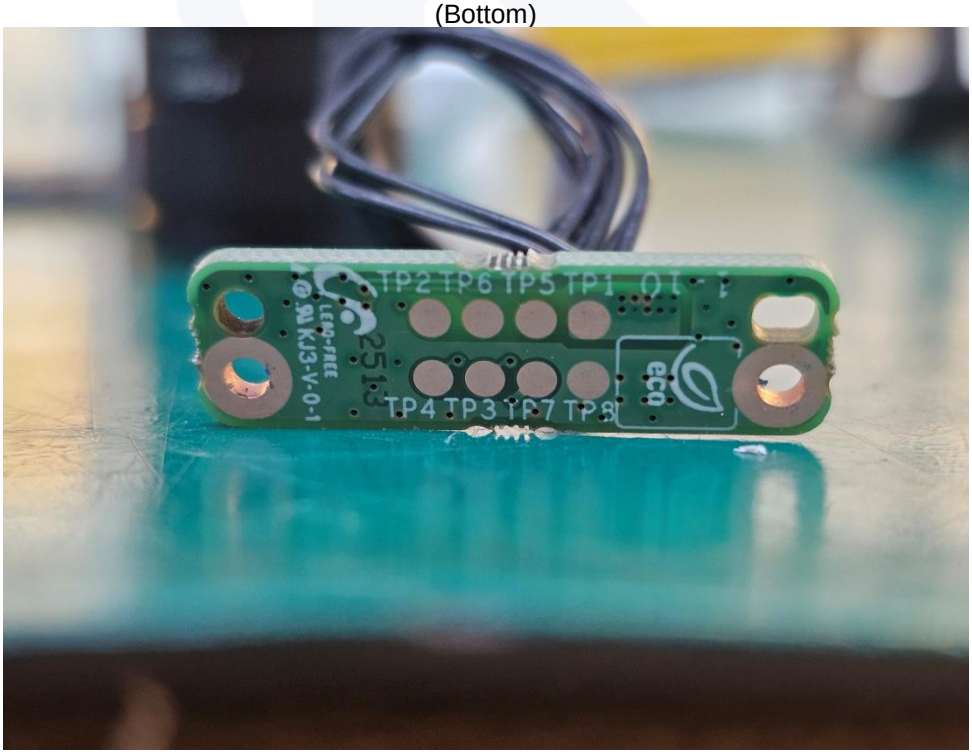


EUT Internal View – Board 5

(Top)

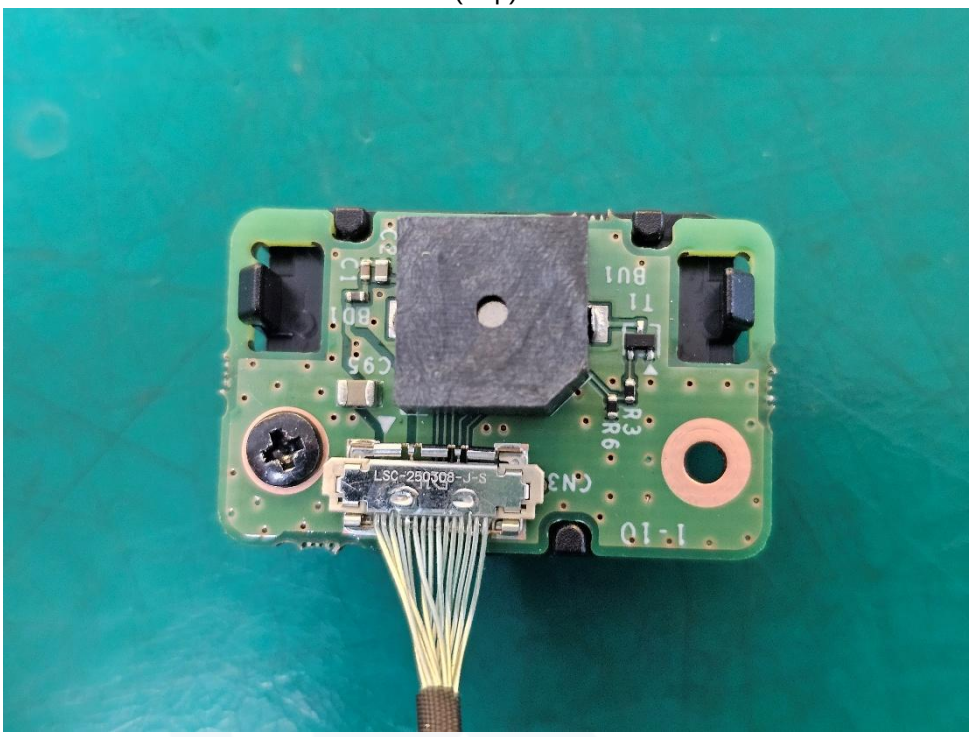


(Bottom)

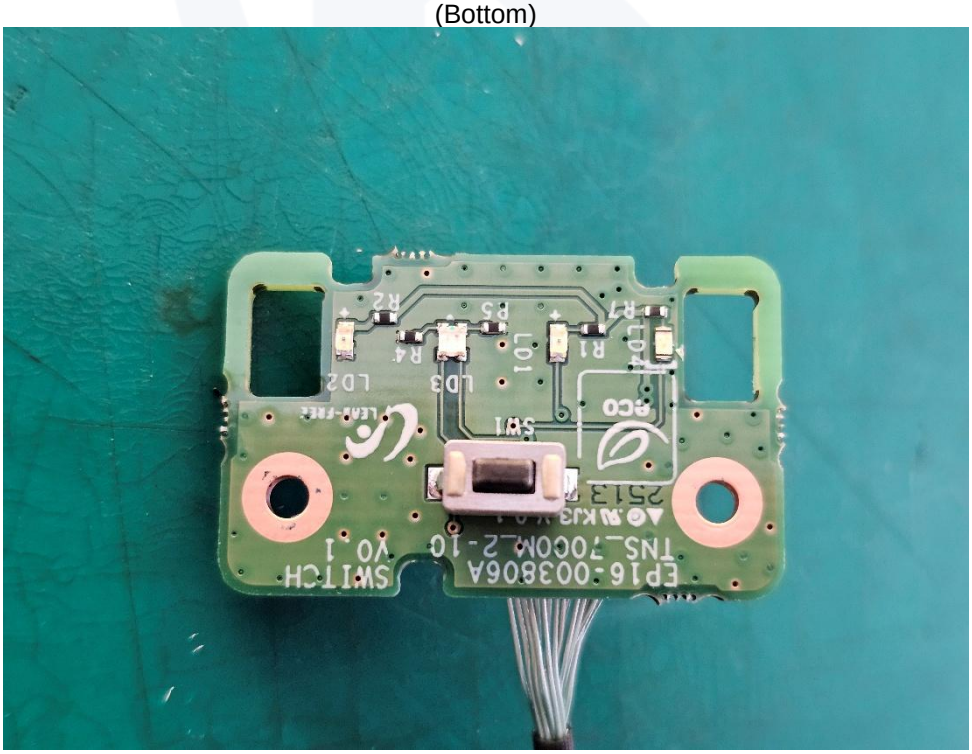


EUT Internal View – Board 6

(Top)

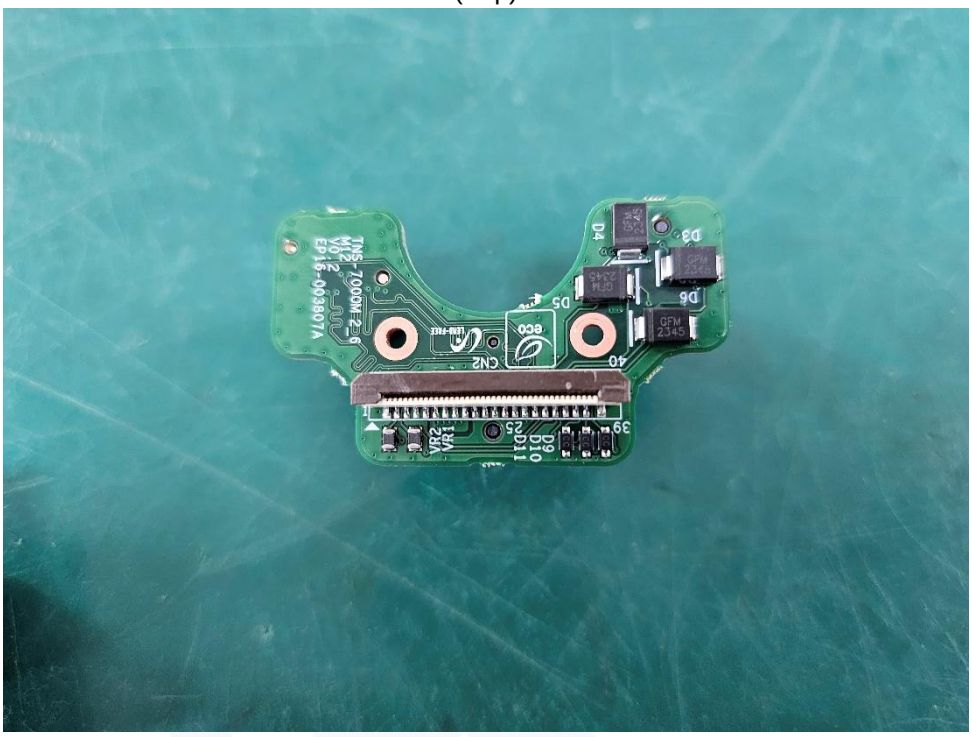


(Bottom)

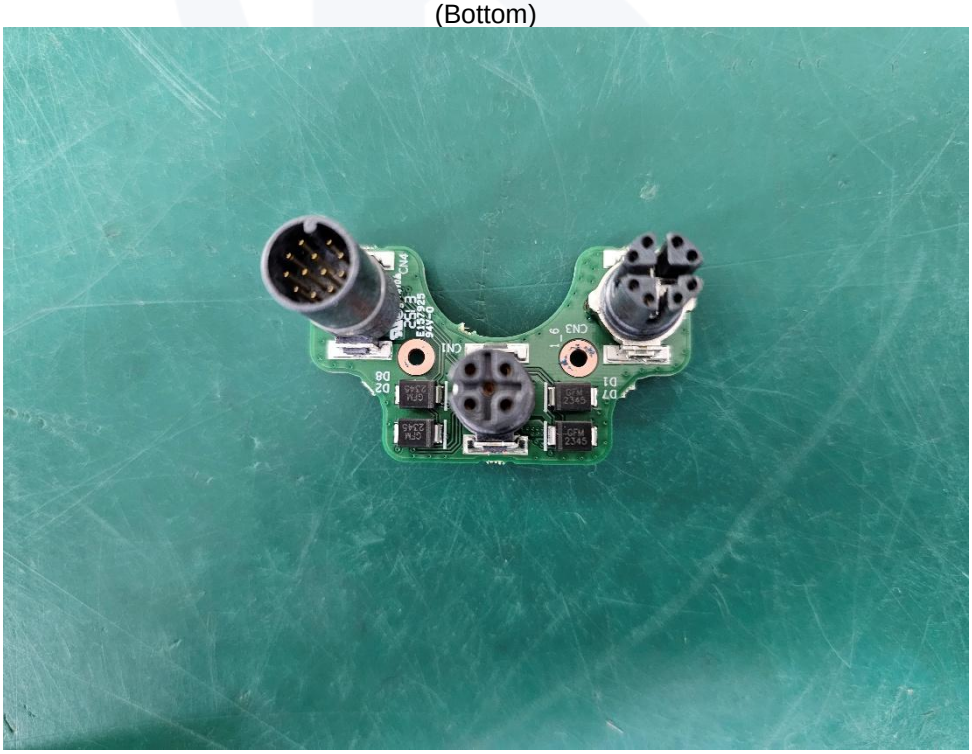


EUT Internal View – Board 7

(Top)

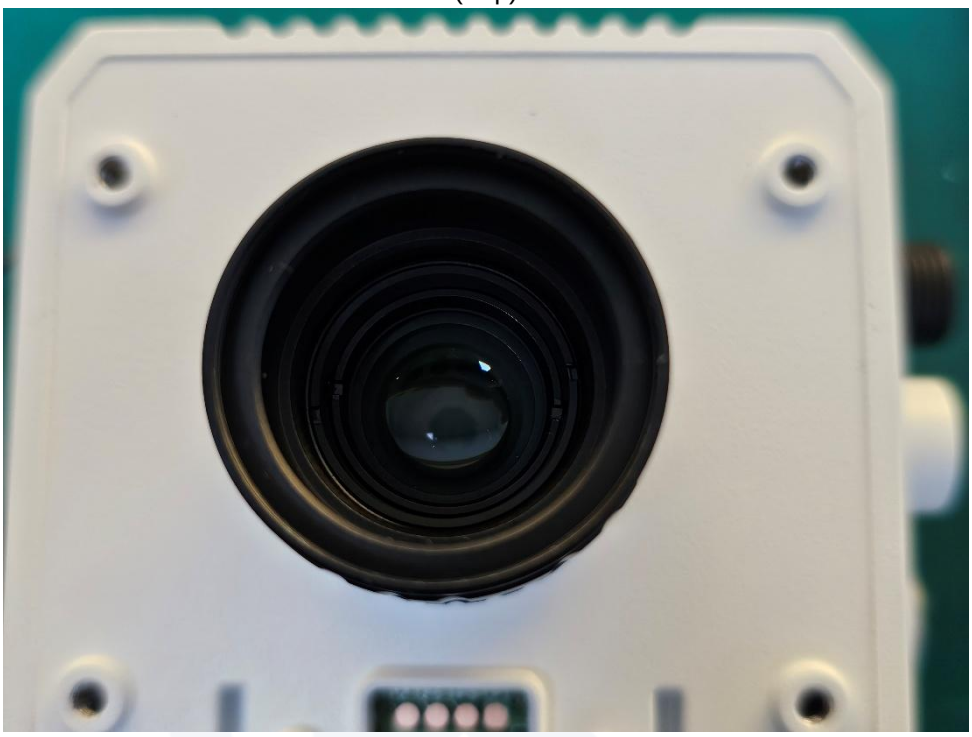


(Bottom)



EUT Internal View – Lens

(Top)



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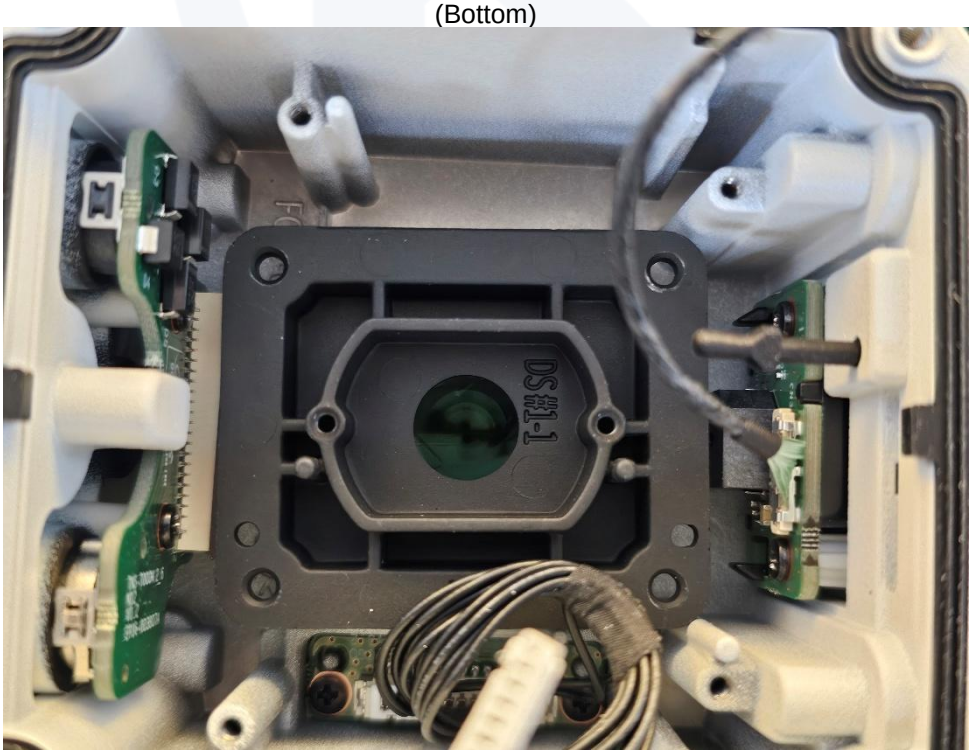

The End.