



TEST REPORT



Report No. : KES-EM260646

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KES Co., Ltd.

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1. Client

- Name : Hanwha Vision Co., Ltd.
- Address : 6, Pangyo-ro 319beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

2. Sample Description

- Product item : NETWORK THERMAL CAMERA
- Model name : TNO-C4080T
- Variant model : TNO-C4082T
- Manufacturer etc. : HANWHA VISION VIETNAM COMPANY LIMITED
- Manufacturer address : Lot O-2, Que Vo Industrial Zone Extended Area, Nam Son Ward, Bac Ninh Province, Vietnam
- Manufacturer etc. : D-TECH CO.,LTD.
- Manufacturer address : 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea (Suwon Industrial Complex)

3. Date of test : 2026. 03. 03. ~ 2026. 03. 15.

4. Location of Test : Permanent Testing Lab

- Address : 473-21, Gayeo-ro, Yeuju-si, Gyeonggi-do, 12658, Republic of Korea

5. Test method used : AS/NZS CISPR 32:2015/AMD1:2020

6. Test result : PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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This laboratory is not accredited for the test results marked *.

This test report is not related to KOLAS accreditation.

Affirmation	Tested by	Technical Manager by
	Name : JeongMin Won	Name : DongHun Jang

2026. 03. 20.

KES Co., Ltd.

**REPORT REVISION HISTORY**

Date	Test Report No.	Revision History
2026. 03. 20.	KES-EM260646	Issued

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Use of uncertainty of measurement for decisions on conformity (decision rule):

■ No decision rule is specified by the standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other (to be specified, for example when required by the standard or client)



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1 Laboratory Information

1.1 Test Location

Category	Details
Address	473-21, Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Republic of Korea
Telephone Number	031-883-5092
Facsimile Number	031-883-5169

The measurement facility is located at 473-21, Gayeo-ro, Yeosu-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

1.2 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 Test Summary

2.1 Class and Voltage

Test Class	Test Voltage
Class A	AC 240 V, 50 Hz

2.2 Summary of Test Results

Test Item	Test Standard	Test Result	Remark
Conducted Emissions at Mains Power Ports	AS/NZS CISPR 32:2015/AMD1:2020	PASS	NOTE 1
Conducted Emissions at Telecommunication Ports		PASS	-
Radiated Emissions(Below 1 GHz)		PASS	-
Radiated Emissions(Above 1 GHz)		PASS	-
* N/A: Not Applicable			
(NOTE 1) PoE port is considered a wired network port, so power-related test items are excluded.			

2.3 Remarks when standards applied

N/A

2.4 Variant Model Differences

Image frame specification (SW) difference

2.5 Device Modifications

N/A



3 General Product Description

		TNO-C4080T
Video		
Imaging Device	Size	None
Resolution		1280x960, 640x480, 640x360, 320x240
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps
	Others	None
Spectral Range		8~14 μ m
Pixel Size		17 μ m
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	None
	BW(1/30sec, 30IRE)	None
Video Out		USB: USB Type C. Preview and installation ONLY. Requires WiFi dongle.
Video Transmission Distance		None
Lens		
Focal Length (mm)		60
Zoom Ratio	Optical	None
	Digital	None
Max Aperture Ratio (F number)	Wide	1.15
	Tele	None
Angular Field of View	Horizontal	10.3°
	Vertical	7.7°
	Diagonal	12.8°
iFoV		0.28 mRad
Min. Object Distance		92m(301.8ft)
Focus Control		Fixed
Lens Type		Athermalized
Mount Type		None
Optional Lens		None
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~350°
	Tilt	0°~90°
	Rotate	0°~350°
	Others	None



Operational		
Direction Indicator		None
Day & Night		None
Backlight Compensation		None
Wide Dynamic Range (dB)		None
Digital Noise Reduction		SSNR2
Digital Image Stabilization		None
Defog		None
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones
Privacy Masking	Quantity	32ea
	Shape	8point Polygonal zones
	Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow
Gain Control		None
White Balance		None
LDC		None
Electronic Shutter	Mode	None
	Speed Range	None
Digital PTZ		None
Video Rotation		Flip, Mirror, Hallway view(90°/270°)
Serial Interface		RS-485
Alarm Interface	In/Out	2 configurable I/O ports
	Others	Support extra alarm I/O via optional I/O box
Alarm Triggers		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription, Case tampering
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP/SFTP, File upload(video clip): FTP/SFTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers, Alarm output, Handover: PTZ preset, send message by HTTP/HTTPS/TCP, Audio clip playback, MQTT: publication
Audio Streaming		None
Audio In		Selectable(mic in/line in)
Audio Out		Line out
Light Type		None
Light Viewable Length	Warm Light	None
	IR	None
IR Wavelength		None
Water Removal		None
Auto Tracking		None
Coaxial Protocol		None
Color Pallettes		Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom



Analytics		
Classified Object Type		Person, Vehicle, Vessel
Attributes	Person	None
	Vehicle	None
	Face	None
Thumbnail		BestShot
Analytics Events	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Motion detection, Sound classification
	Normal	Tampering, Audio detection, Shock detection, Temperature change detection
Business Intelligence	Based on AI Engine	None
	Normal	None
Network		
Ethernet		Metal shielded RJ-45(10/100/1000BASE-T)
Video Compression		H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression		G.711(PCM): 8kHz(64kbps), G.726(ADPCM): 8kHz(16/24/32/40kbps), AAC-LC: 16kHz(48kbps), OPUS: 16kHz(64kbps)
Smart Codec		WiseStream(Based on AI engine)
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR
Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, Syslog
SIP support (VoIP, Peer-to-peer, SIP/PBX integration)		None
Application Programming Interface	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection		Support
Security		
OS / Firmware Protect		Encrypted firmware, Secure boot, Signed firmware
User authentication		Digest authentication, Prevent brute-force attack
Network authentication		IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
Secure Communication		HTTPS, WSS(WebSocket Secure), SRTP
Access Control		IP-based access control, MAC-based access control, Auto logout
Data Protect		Encryption credentials, Encrypt compress for live recording file export
Audit		Access / System / Event Log management
Device ID		Device certificate(Hanwha Vision Root CA)
Secure Storage		SDcard partition encrypt(AES-256), Secure element
Supply Chain Security		SBOM
Security Certificate		Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645)



General		
SoC	Type	Wisenet 8
Memory	RAM	4GB
	Flash	8GB eMMC
Edge Storage	Micro SD/SDHC/SDXC	Max. 1TB x 1slot
	SSD	None
Edge Storage(OnCloud)	Micro SD/SDHC/SDXC	Max. 1TB x 1slot *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording.
Environmental & Electrical		
Operating Condition	Temperature	-40°C~+60°C(-40°F~+140°F)
	Humidity	0~95% RH(non-condensing)
	Others	+74°C(+165°F)(Max) based on NEMA-TS 2(2.2.7)
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~95% RH(non-condensing)
Wind Load		None
EPA(Effective Projected Area)		None
Input Voltage		PoE(IEEE802.3af, Class3), 12VDC
Power Consumption	PoE	Max. 10.8W, typical 9W
	12VDC	Max. 9.4W, typical 7.7W
	24VAC	None
Power Redundance Failover		None
Mechanical		
Color		White
Material		Aluminum, PC(Polycarbonate)
RAL Code		RAL9003
Product Dimensions		ø107.3 x 275mm(ø4.22/10.83")
Product Weight		2100g(4.6 lb)
Compatible Conduit Hole		Support conduit compatibility via optional adaptor
Compatible Gang Box		Single, Double, 4" Octagon, Square



4 EUT Setup and Operation Mode

4.1 EUT Configuration

Product Name	Model Number	Serial Number	Manufacturer	Remarks
NETWORK THERMAL CAMERA	TNO-C4080T	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT
Adapter	2ACB022F	-	Channel Well Technology (Guangzhou) Co., Ltd.	-
Fiber PoE Injector	PT-PSE109GBRO-AH-S	-	Dongguan PROCET Network Technology Co.,Ltd	-
Laptop	NT500R5W	-	Samsung Electronics Vietnam Co., Ltd.	-
Laptop Adapter	A13-040N2A	-	Chicony Power Technology Co., Ltd..	-
Micro SD card	-	-	SanDisk	32 GB
Alarm	PRO-SL	-	SENSOR PRO	-
Button Alarm	-	-	-	-
Controller	SPC-1010	-	SamSung Techwin Co.,Ltd.	-
Controller Adapter	FJ-SW1161200500DK	-	SHENZHEN FUJIA APPLIANCE CO., LTD.	-
Earphone	-	-	-	-
Smartphone	SM-N960N	-	LG	-

4.2 System Configuration

Product Name	Model Number	Serial Number	Manufacturer	Remarks
-	-	-	-	-



4.3 External I/O Cabling

Mode 1

Start		End		Cable Spec.	
Product Name	I/O Port	Product Name	I/O Port	Length(m)	Shield
EUT	DC IN	Adapter	Line	1.5	U
	RJ-45	Laptop	RJ-45	3.1	U
	Micro SD card slot	Micro SD Card	Micro SD card slot	-	-
	Alarm OUT	Alarm	Alarm IN	3.4	U
	Alarm IN	Button Alarm	Alarm OUT	3.5	U
	RS485	Controller	RS485	3.2	U
	SPEAKER	Earphone	Line	2.0	U
	MIC	Smartphone	3.5 mm	1.4	U
Laptop	DC Jack	Laptop Adapter	Line	1.6	U
Controller	DC Jack	Controller Adapter	Line	1.4	U

Mode 2

Start		End		Cable Spec.	
Product Name	I/O Port	Product Name	I/O Port	Length(m)	Shield
EUT	RJ-45 (PoE)	Fiber PoE Injector	RJ-45 (PoE)	3.1	U
	Micro SD card slot	Micro SD Card	Micro SD card slot	-	-
	Alarm OUT	Alarm	Alarm IN	3.4	U
	Alarm IN	Button Alarm	Alarm OUT	3.5	U
	RS485	Controller	RS485	3.2	U
	SPEAKER	Earphone	Line	2.0	U
	MIC	Smartphone	3.5 mm	1.4	U
Laptop	DC Jack	Laptop Adapter	Line	1.6	U
	RJ-45	Fiber PoE Injector	RJ-45	1.3	U
Fiber PoE Injector	Ground Port	Ground	Ground Port	1.6	-
Controller	DC Jack	Controller Adapter	Line	1.4	U

* Unshielded=U, Shielded=S



4.4 EUT Operating Mode(s)

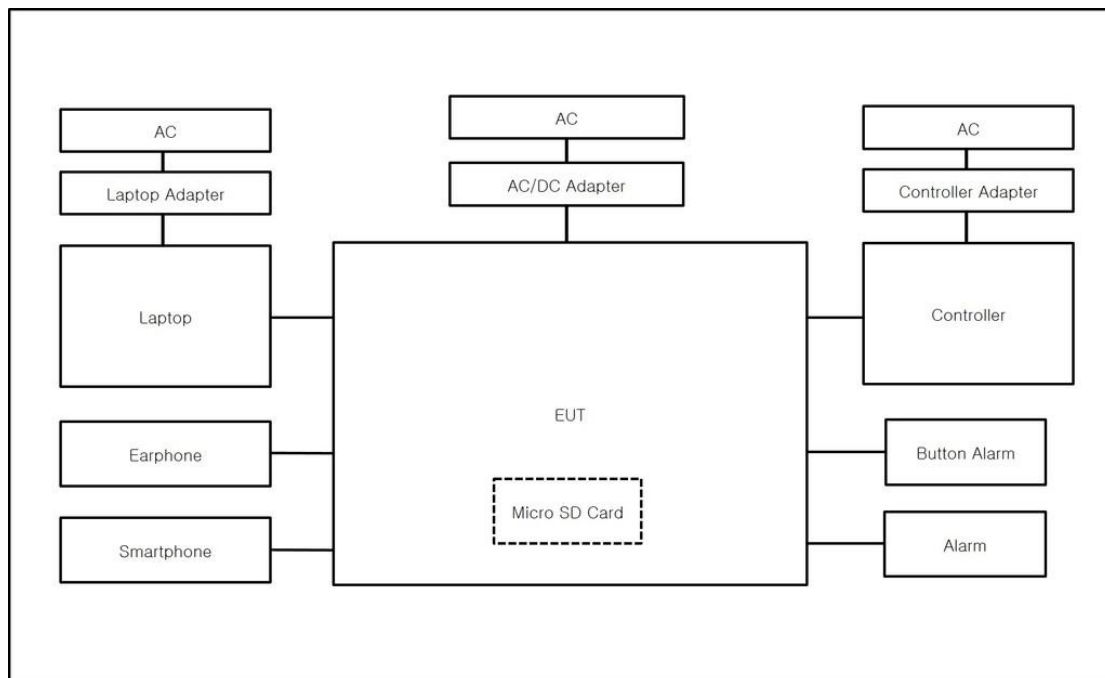
Category	Mode	Operating
Mode 1	DC 12 V	1. After running the ping test on the laptop, verify that the network of the EUT is operating normally, and verify that the images of the EUT are output normally through the Web Viewer.
Mode 2	PoE	2. Verified that the 1 kHz tone sound played on the smartphone is normally output to the earphone through the EUT. 3. Press Button Alarm to verify that the Alarm is operating normally, and operate the controller to verify that the EUT is operating normally. 4. After the test, the micro SD card was checked for normal rusting of the image.

4.5 Test operating S/W

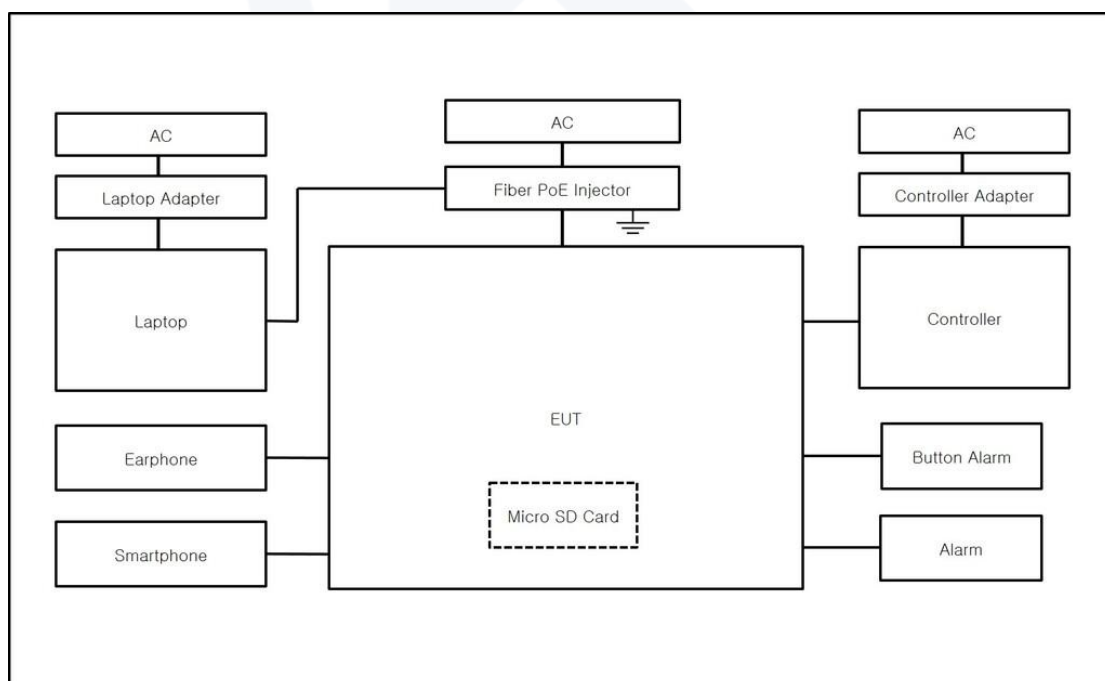
Name	Version	Manufacture Company
Web Viewer	-	Hanwha Vision Co., Ltd.



4.6 Configuration



Mode 1



Mode 2



5 Measurement Procedure

- Conducted Emissions

The conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable). The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. If the conducted emission exceed the average limit with the instrument set to the quasi-peak mode, the measurements are made in the average mode. The emission spectrum was scanned from 150 kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded. Quasi-peak readings are distinguished with a "QP".

- Radiated Electric Field Emissions

The test was done at a SEMI ANECHOIC CHAMBER with quasi-peak detector. The final test data was measured using a Quasi-Peak detector below 1 GHz at 10 m or 3 m distance and a Peak and Average detector above 1 GHz at 3 m distance. Test was proceeded worst case test mode and cable configuration. Measurements were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height was varied from 1 m to 4 m (Radiated Emissions(Below 1 GHz)) and 1 m (Radiated Emissions(Above 1 GHz)) and the EUT was rotated 360° to find the maximum emitting point for each frequency.

Measurement procedures was In accordance with ANSI C63.4 or CISPR 32.

◆ Calculation

- Conducted Emissions

$\text{QuasiPeak[dBuV]} / \text{CAverage[dBuV]} = \text{Reading Value[dBuV]} + \text{Corr. [dB]}$

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

- Radiated Emissions(Below 1 GHz)

$\text{Result(QP) [dB(μV/m)]} = (\text{Reading(QP)[dB(μV)]} + \text{c.f[dB(1/m)]})$

$\text{Margin(QP)[dB]} = \text{Limit[dB(μV/m)]} - \text{Result(QP) [dB(μV/m)]}$

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

- Radiated Emissions(Above 1 GHz)

$\text{Result(PK/CAV) [dB(μV/m)]} = (\text{Reading(PK/CAV)[dB(μV)]} + \text{c.f[dB(1/m)]})$

$\text{Margin(PK/CAV)[dB]} = \text{Limit[dB(μV/m)]} - \text{Result(PK/CAV) [dB(μV/m)]}$

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



6 Test Item

6.1 Conducted Emissions at Mains Power Ports

6.1.1 Test Equipment

Equipment Name	Model Number	Manufacturer	Serial No.	Cal. Date	Next Cal. Date	Used
SHIELD ROOM #6	-	DYMSTEC	-	-	-	■
EMC32 Measurement Software	EMC32	R&S	9.12.00	-	-	■
EMI TEST RECEIVER	ESR3	Rohde & Schwarz	101783	2025-11-03	2026-11-03	■
LISN	ENV216	Rohde & Schwarz	101786	2026-01-08	2027-01-08	■
ARTIFICIAL MAINS NETWORK	ESH2-Z5	Rohde & Schwarz	100450	2025-11-03	2026-11-03	■
PULSE LIMITER	ESH3-Z2	Rohde & Schwarz	101915	2025-11-03	2026-11-03	■

6.1.2 Test Location : SHIELD ROOM #6

6.1.3 Test Conditions :

Temperature	Relative Humidity
(22.6 ~ 22.7) °C	(36.3 ~ 36.4) % R.H.



6.1.4 Test Result

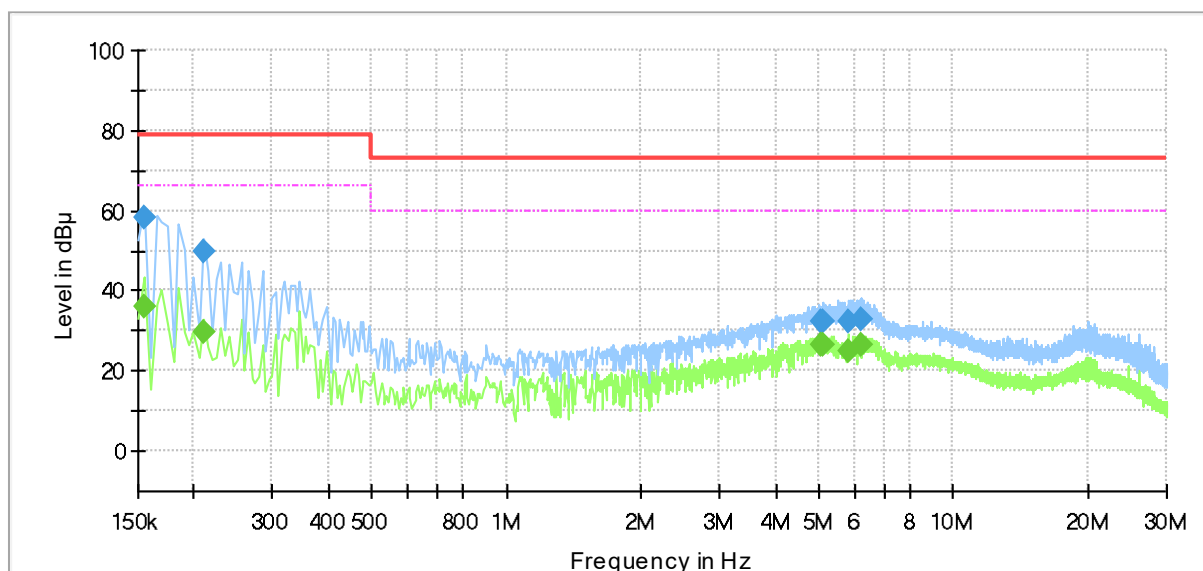
○ Test Date : 2026-03-03

● Test Mode : Mode 1

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Test Description: Conducted Emission
Job No.: KES-EM260646
Phase: L
Mode: Mode 1
Operator Name: KES



Final_Result

Frequency (MHz)	QuasiPeak (dB μV)	CAverage (dB μV)	Limit (dB μV)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	—	35.87	66.00	30.13	1000.0	9.000	L1	19.4
0.155000	58.06	—	79.00	20.94	1000.0	9.000	L1	19.4
0.210000	—	29.47	66.00	36.53	1000.0	9.000	L1	19.4
0.210000	49.92	—	79.00	29.08	1000.0	9.000	L1	19.4
5.050000	—	26.54	60.00	33.46	1000.0	9.000	L1	19.8
5.050000	32.45	—	73.00	40.55	1000.0	9.000	L1	19.8
5.115000	—	26.60	60.00	33.40	1000.0	9.000	L1	19.8
5.115000	32.57	—	73.00	40.43	1000.0	9.000	L1	19.8
5.835000	—	25.05	60.00	34.95	1000.0	9.000	L1	19.8
5.835000	32.49	—	73.00	40.51	1000.0	9.000	L1	19.8
6.240000	—	26.29	60.00	33.71	1000.0	9.000	L1	19.9
6.240000	32.99	—	73.00	40.01	1000.0	9.000	L1	19.9



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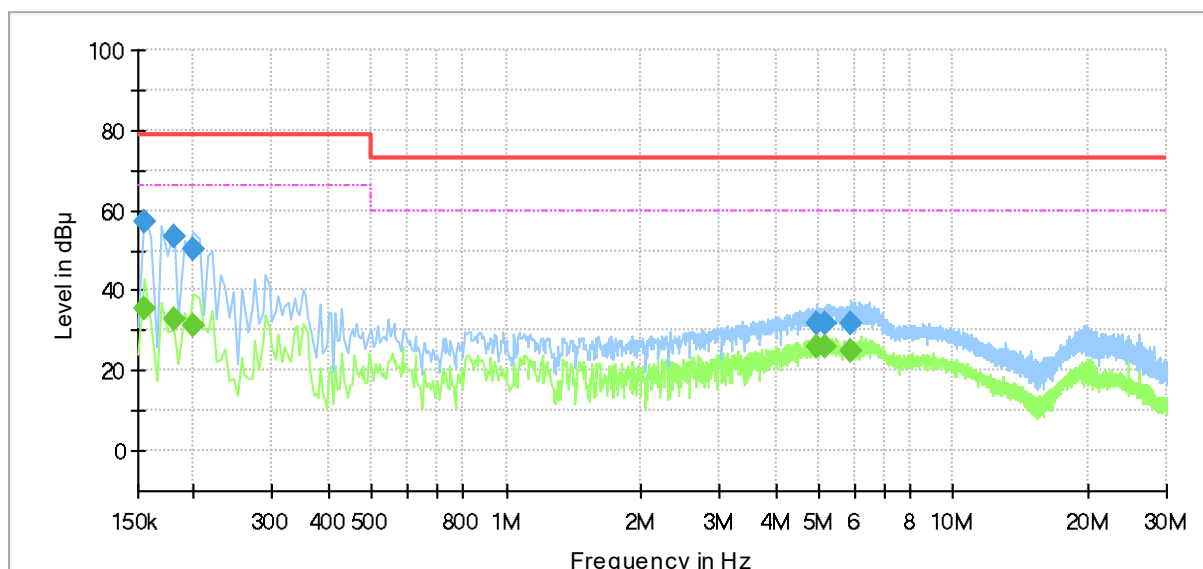
○ Test Date : 2026-03-03

● Test Mode : Mode 1

Test Report

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Test Description: Conducted Emission
Job No.: KES-EM260644
Phase: N
Mode: Mode 1
Operator Name: KES



Final_Result

Frequency (MHz)	QuasiPeak (dB μ V)	CAverage (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	---	35.47	66.00	30.53	1000.0	9.000	N	19.4
0.155000	57.32	---	79.00	21.68	1000.0	9.000	N	19.4
0.180000	---	32.72	66.00	33.28	1000.0	9.000	N	19.4
0.180000	53.33	---	79.00	25.67	1000.0	9.000	N	19.4
0.200000	---	31.40	66.00	34.60	1000.0	9.000	N	19.4
0.200000	50.40	---	79.00	28.60	1000.0	9.000	N	19.4
4.955000	---	26.16	60.00	33.84	1000.0	9.000	N	19.8
4.955000	31.72	---	73.00	41.28	1000.0	9.000	N	19.8
5.180000	---	26.13	60.00	33.87	1000.0	9.000	N	19.8
5.180000	32.01	---	73.00	40.99	1000.0	9.000	N	19.8
5.920000	---	24.92	60.00	35.08	1000.0	9.000	N	19.9
5.920000	31.90	---	73.00	41.10	1000.0	9.000	N	19.9

6.1.5 Remark

Complies with the test requirements.



6.2 Conducted Emissions at Telecommunication Ports

6.2.1 Test Equipment

Equipment Name	Model Number	Manufacturer	Serial No.	Cal. Date	Next Cal. Date	Used
SHIELD ROOM #6	-	DYMSTEC	-	-	-	■
EMC32 Measurement Software	EMC32	R&S	9.12.00	-	-	■
EMI TEST RECEIVER	ESR3	Rohde & Schwarz	101783	2025-11-03	2026-11-03	■
LISN	ENV216	Rohde & Schwarz	101786	2026-01-08	2027-01-08	■
ARTIFICIAL MAINS NETWORK	ESH2-Z5	Rohde & Schwarz	100450	2025-11-03	2026-11-03	■
PULSE LIMITER	ESH3-Z2	Rohde & Schwarz	101915	2025-11-03	2026-11-03	■
8-WIRE ISN CAT6	ENY81-CAT6	Rohde & Schwarz	101666	2026-02-24	2027-02-24	■

6.2.2 Test Location : SHIELD ROOM #6

6.2.3 Test Conditions :

Temperature	Relative Humidity
(22.6 ~ 22.7) °C	(36.3 ~ 36.4) % R.H.



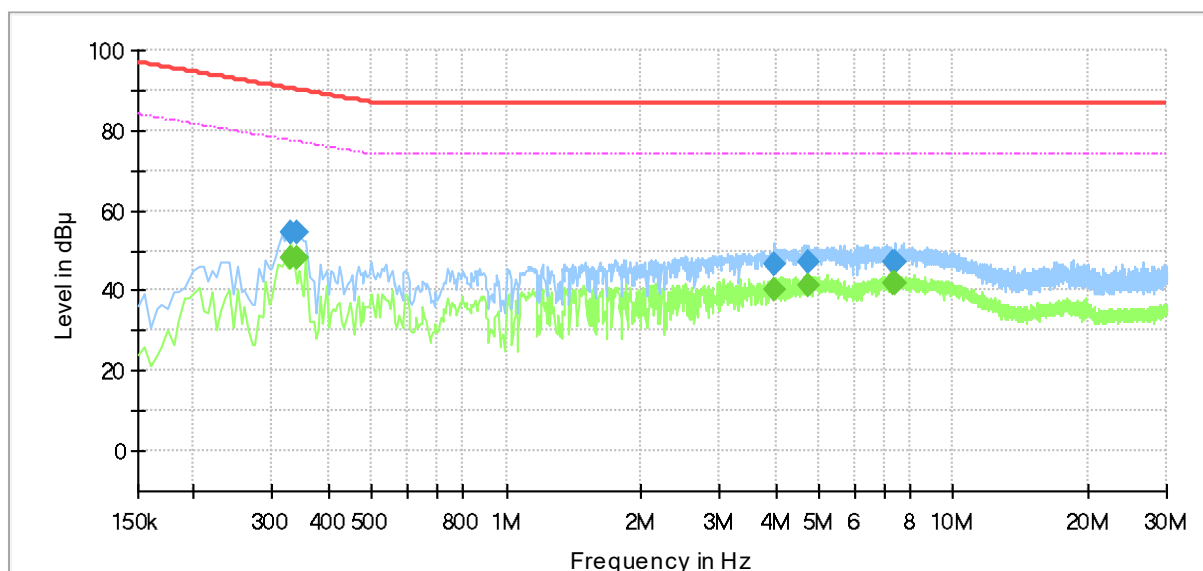
6.2.4 Test Result

- Test Date : 2026-03-03
- Test Mode : Mode 1

Test Report

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Test Description: Telecommunication Emission
Job No.: KES-EM260646
Mode : Mode 1
Speed : 1 000 Mbps
Operator Name: KES



Final_Result

Frequency (MHz)	QuasiPeak (dB μV)	CAverage (dB μV)	Limit (dB μV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.330000	---	48.13	77.45	29.32	1000.0	9.000	Single Line	19.4
0.330000	54.34	---	90.45	36.11	1000.0	9.000	Single Line	19.4
0.340000	---	48.31	77.20	28.89	1000.0	9.000	Single Line	19.4
0.340000	54.44	---	90.20	35.76	1000.0	9.000	Single Line	19.4
3.970000	---	40.49	74.00	33.51	1000.0	9.000	Single Line	19.4
3.970000	46.60	---	87.00	40.40	1000.0	9.000	Single Line	19.4
4.740000	---	41.44	74.00	32.56	1000.0	9.000	Single Line	19.4
4.740000	47.27	---	87.00	39.73	1000.0	9.000	Single Line	19.4
7.325000	---	41.66	74.00	32.34	1000.0	9.000	Single Line	19.5
7.325000	47.13	---	87.00	39.87	1000.0	9.000	Single Line	19.5
7.390000	---	41.85	74.00	32.15	1000.0	9.000	Single Line	19.5
7.390000	47.20	---	87.00	39.80	1000.0	9.000	Single Line	19.5



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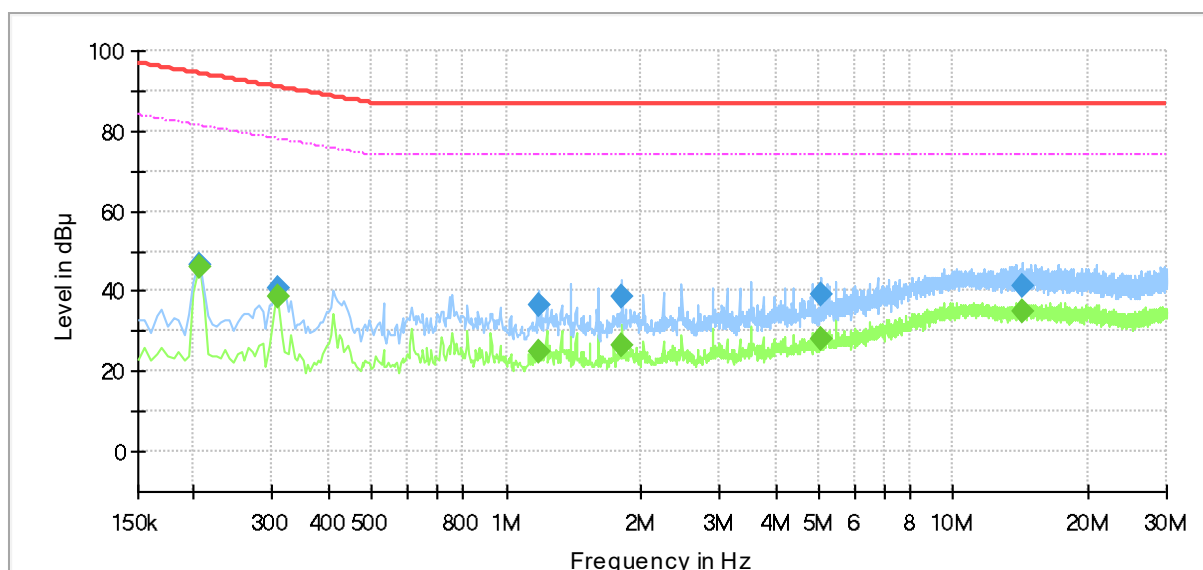
○ Test Date : 2026-03-03

● Test Mode : Mode 2

Test Report

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Test Description: Telecommunication Emission
Job No.: KES-EM260646
Mode : Mode 2
Speed : 1 000 Mbps
Operator Name: KES



Final_Result

Frequency (MHz)	QuasiPeak (dB μV)	CAverage (dB μV)	Limit (dB μV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.205000	---	46.32	81.41	35.09	1000.0	9.000	Single Line	19.6
0.205000	46.73	---	94.41	47.68	1000.0	9.000	Single Line	19.6
0.310000	---	38.48	77.97	39.49	1000.0	9.000	Single Line	19.4
0.310000	40.76	---	90.97	50.21	1000.0	9.000	Single Line	19.4
1.180000	---	24.99	74.00	49.01	1000.0	9.000	Single Line	19.3
1.180000	36.39	---	87.00	50.61	1000.0	9.000	Single Line	19.3
1.820000	---	26.50	74.00	47.50	1000.0	9.000	Single Line	19.3
1.820000	38.82	---	87.00	48.18	1000.0	9.000	Single Line	19.3
5.035000	---	28.12	74.00	45.88	1000.0	9.000	Single Line	19.4
5.035000	38.96	---	87.00	48.04	1000.0	9.000	Single Line	19.4
14.235000	---	35.13	74.00	38.87	1000.0	9.000	Single Line	19.7
14.235000	41.04	---	87.00	45.96	1000.0	9.000	Single Line	19.7

6.2.5 Remark

Complies with the test requirements.



6.3 Radiated Emissions(Below 1 GHz)

6.3.1 Test Equipment

Equipment Name	Model Number	Manufacturer	Serial No.	Cal. Date	Next Cal. Date	Used
SEMI ANECHOIC CHAMBER #4(10 m)	-	DYMSTEC	-	-	-	■
EP5/RE Software	EP5/RE	TOYO	6.0.0	-	-	■
EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100551	2026-02-12	2027-02-12	■
AMPLIFIER	SCU 01	Rohde & Schwarz	100603	2025-11-03	2026-11-03	■
BILOG ANTENNA	VULB 9168	SCHWARZBEC K	9168-461	2024-05-09	2026-05-09	■
ATTENUATOR	6806.17.A	HUBER+SUHNE R	-	2026-02-12	2027-02-12	■

6.3.2 Test Location : SEMI ANECHOIC CHAMBER #4(10 m) Measurement Distance : □ 3 m, ■ 10 m

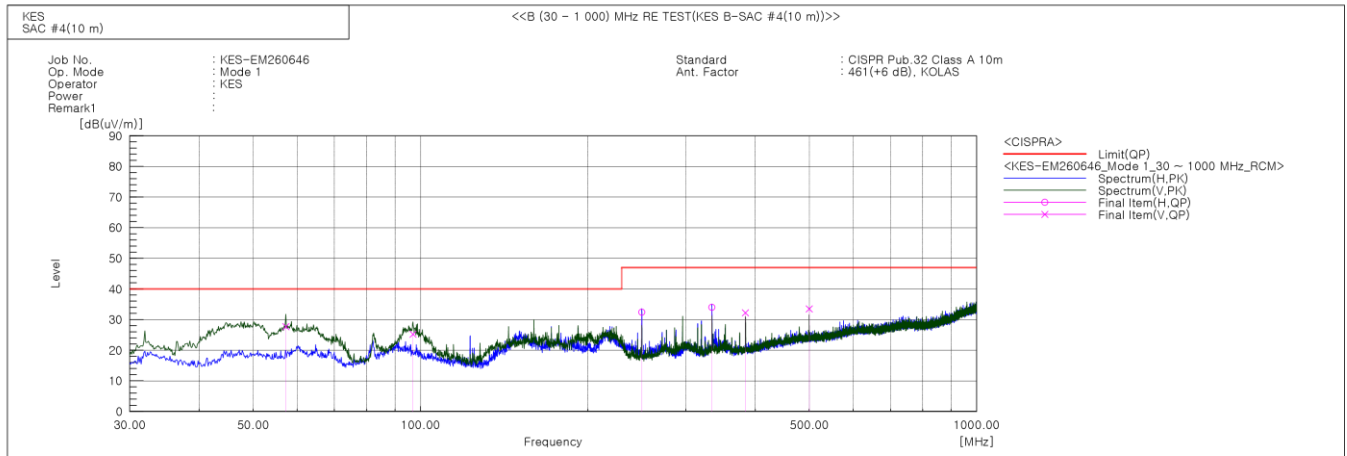
6.3.3 Test Conditions :

Temperature	Relative Humidity
(22.6 ~ 22.7) °C	(35.2 ~ 35.3) % R.H.



6.3.4 Test Result

- Test Date : 2026-03-04
- Test Mode : Mode 1



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	57.281	V	48.4	-20.7	27.7	40.0	12.3	115.0	287.0	
2	96.930	V	50.4	-25.2	25.2	40.0	14.8	137.0	298.0	
3	249.948	H	51.9	-19.5	32.4	47.0	14.6	356.0	306.0	
4	334.216	H	49.8	-15.8	34.0	47.0	13.0	362.0	318.0	
5	383.929	V	46.2	-14.0	32.2	47.0	14.8	106.0	185.0	
6	500.086	V	43.2	-9.7	33.5	47.0	13.5	118.0	70.0	

※ The data is the result measured by the detector in Quasi-Peak mode on the Peak graph.

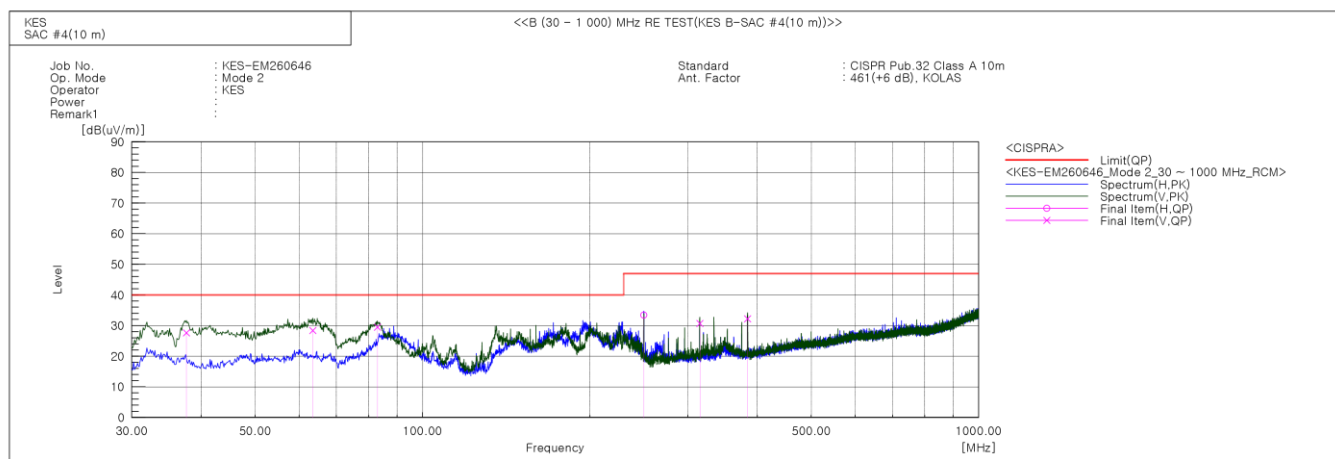


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○ Test Date : 2026-03-04

● Test Mode : Mode 2



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	37.639	V	49.1	-21.5	27.6	40.0	12.4	118.0	312.0	
2	63.465	V	49.7	-21.3	28.4	40.0	11.6	131.0	296.0	
3	82.986	V	55.2	-25.7	29.5	40.0	10.5	106.0	210.0	
4	249.948	H	52.9	-19.5	33.4	47.0	13.6	362.0	284.0	
5	315.180	V	47.1	-16.4	30.7	47.0	16.3	109.0	218.0	
6	384.050	V	46.2	-14.0	32.2	47.0	14.8	126.0	237.0	

※ The data is the result measured by the detector in Quasi-Peak mode on the Peak graph.

6.3.5 Remark

Complies with the test requirements.



6.4 Radiated Emissions(Above 1 GHz)

6.4.1 Test Equipment

Equipment Name	Model Number	Manufacturer	Serial No.	Cal. Date	Next Cal. Date	Used
SEMI ANECHOIC CHAMBER #5	-	SY Corporation	-	-	-	■
ES10/RE Software	ES10/RE	TOYO	2022.01.000	-	-	■
EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	2026-02-12	2027-02-12	■
PREAMPLIFIER	8449B	HP	3008A00538	2025-04-30	2026-04-30	■
HORN ANTENNA	BBHA 9120D	SCHWARZBEC K	9120D-1802	2025-11-05	2026-11-05	■
ATTENUATOR	8491B	HP	23094	2026-02-12	2027-02-12	■

6.4.2 Test Location : SEMI ANECHOIC CHAMBER #5

6.4.3 Test Conditions :

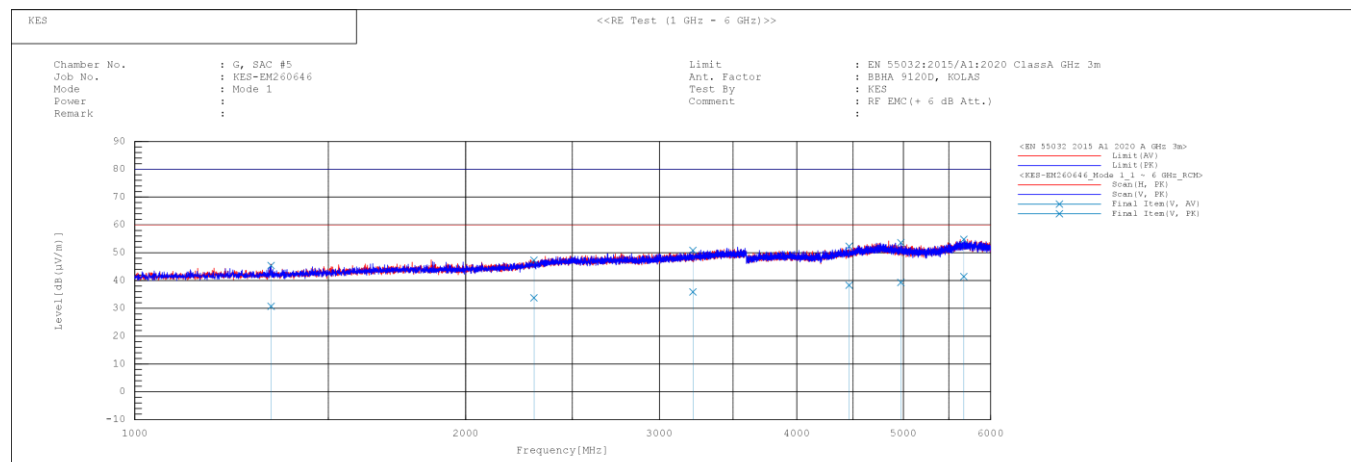
Temperature	Relative Humidity
(23.9 ~ 24.0) °C	(37.9 ~ 38.0) % R.H.



6.4.4 Test Result

○ Test Date : 2026-03-15

● Test Mode : Mode 1



Final Result

No.	Frequency [MHz]	Pol	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result AV [dB(μV/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Angle [deg]	Remark
1	1330.853	V	30.2	44.9	0.5	30.7	45.4	60.0	80.0	29.3	34.6	39.1	
2	2307.218	V	29.0	42.5	4.8	33.8	47.3	60.0	80.0	26.2	32.7	0.0	
3	3218.652	V	28.7	43.6	7.2	35.9	50.8	60.0	80.0	24.1	29.2	208.6	
4	4462.257	V	27.2	41.2	11.1	38.3	52.3	60.0	80.0	21.7	27.7	315.9	
5	4974.026	V	26.3	40.6	13.0	39.3	53.6	60.0	80.0	20.7	26.4	262.2	
6	5674.393	V	27.6	41.0	13.8	41.4	54.8	60.0	80.0	18.6	25.2	2.3	

※ The data is the result of measured by the detector in PK and CISPR Average on the Peak graph.

※ The Average of the test data is the cispr average result.

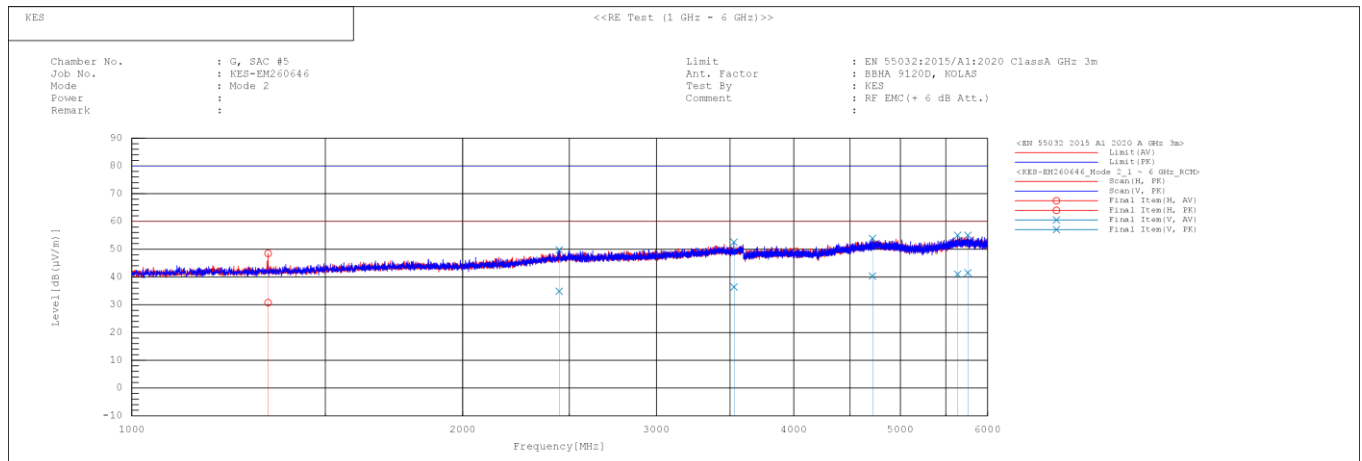


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○ Test Date : 2026-03-15

● Test Mode : Mode 2



※ The data is the result of measured by the detector in PK and CISPR Average on the Peak graph.

※ The Average of the test data is the cispr average result.

6.4.5 Remark

Complies with the test requirements.

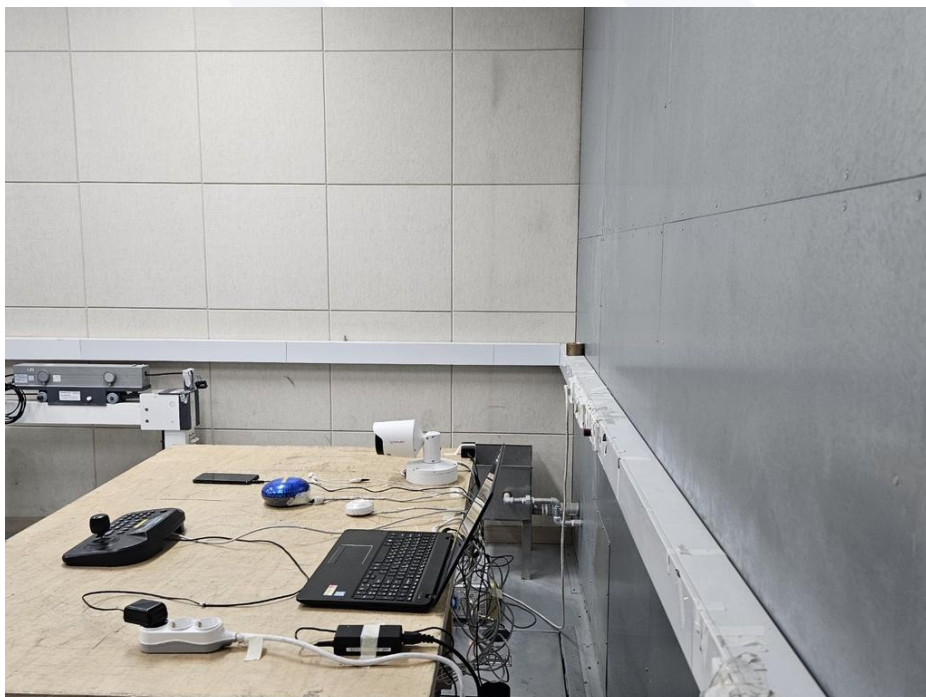


7 Test Setup Photos and EUT Photographs

7.1 Test Setup Photos



<Conducted Emissions at Mains Power Ports - Front> Mode 1



<Conducted Emissions at Mains Power Ports - Rear> Mode 1



<Conducted Emissions at Telecommunication Ports - Front> Mode 1



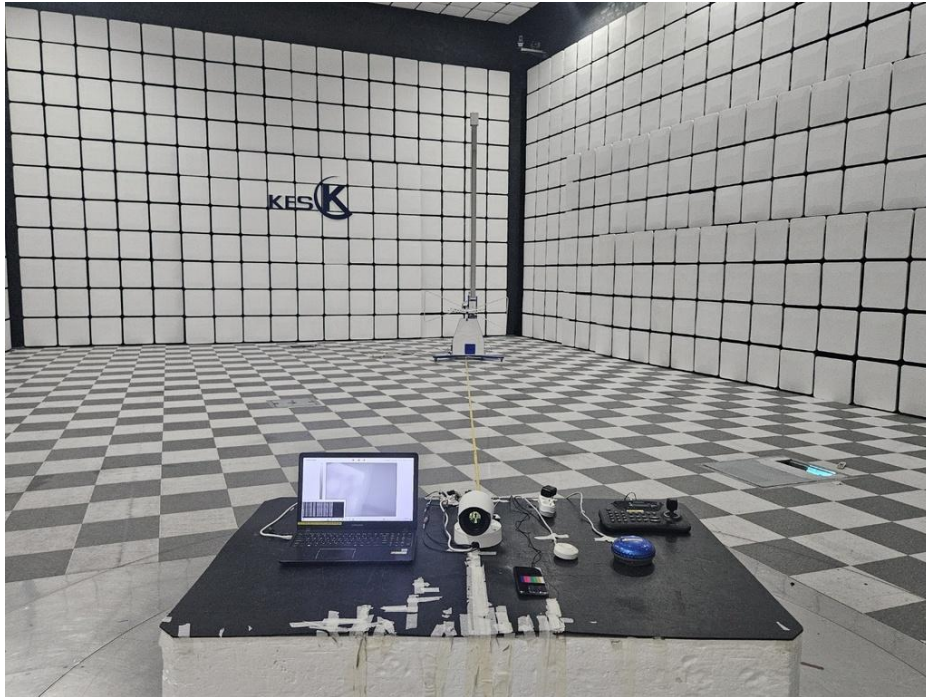
<Conducted Emissions at Telecommunication Ports - Rear> Mode 1



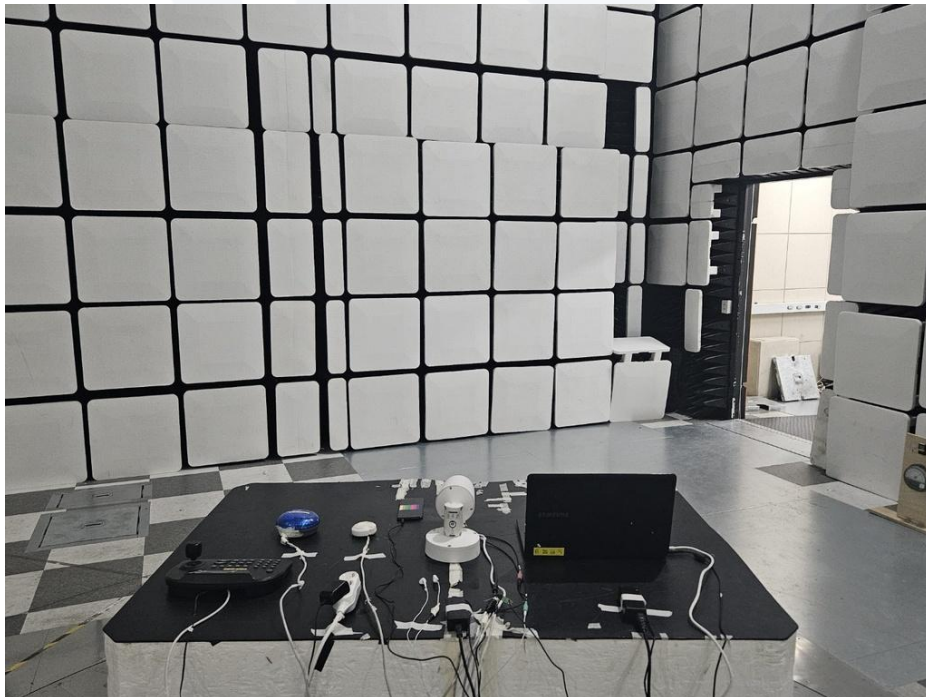
<Conducted Emissions at Telecommunication Ports - Front> Mode 2



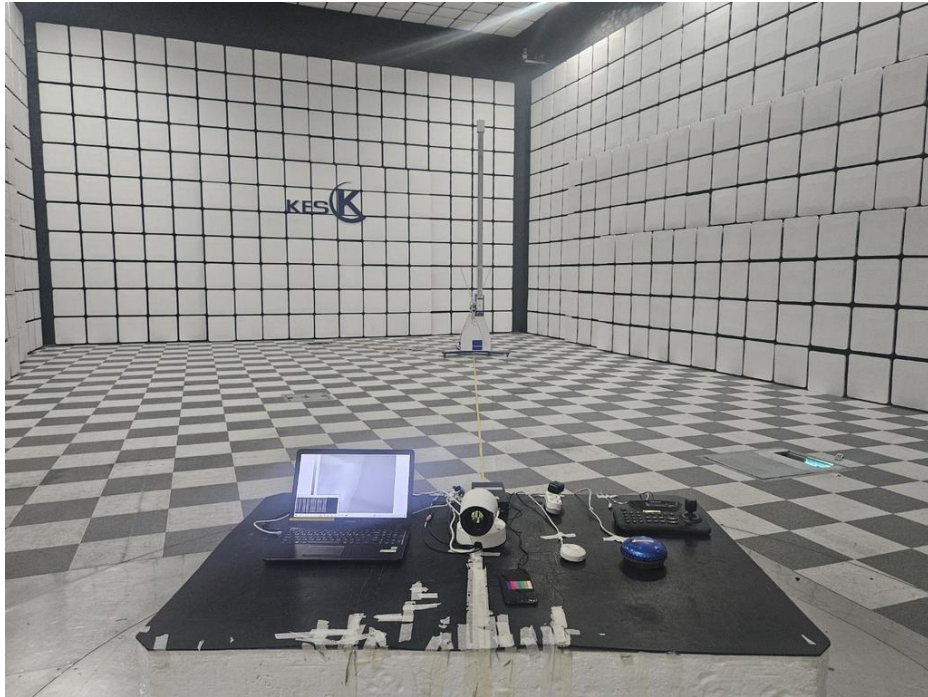
<Conducted Emissions at Telecommunication Ports - Rear> Mode 2



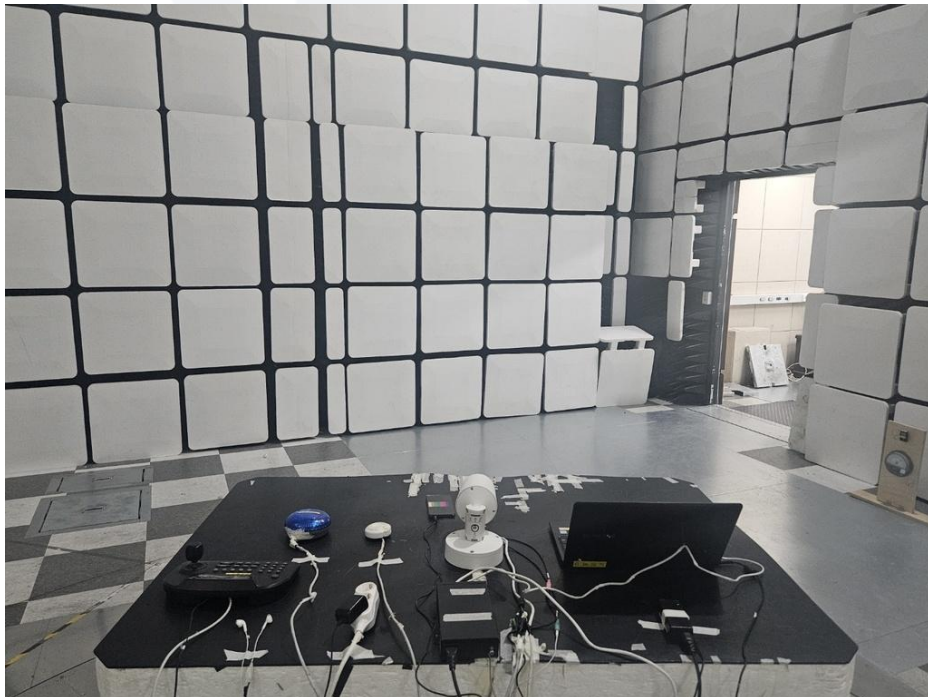
<Radiated Emissions(Below 1 GHz) - Front> Mode 1



<Radiated Emissions(Below 1 GHz) - Rear> Mode 1



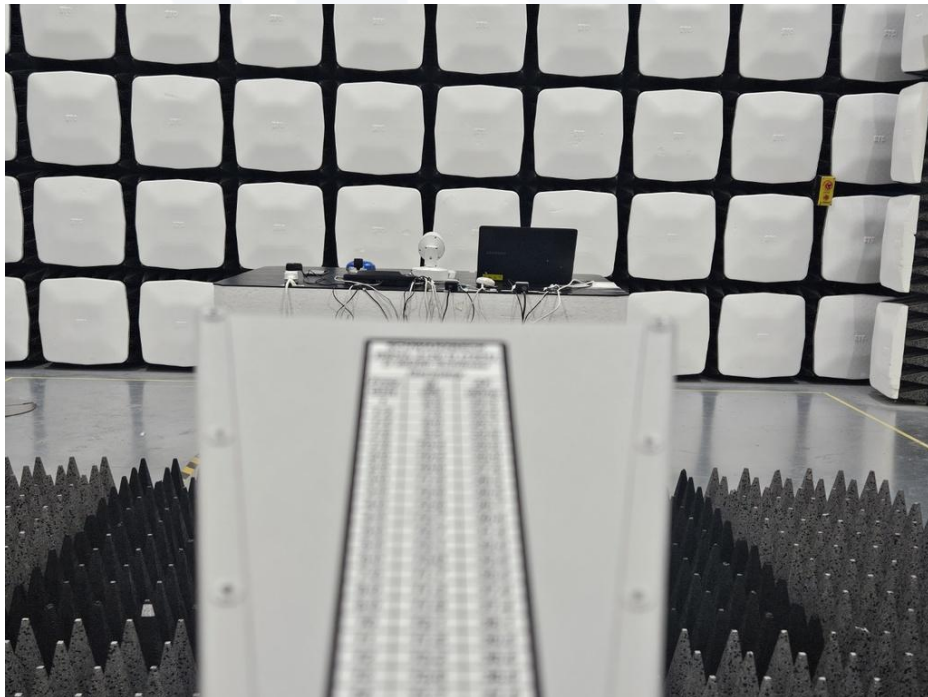
<Radiated Emissions(Below 1 GHz) - Front> Mode 2



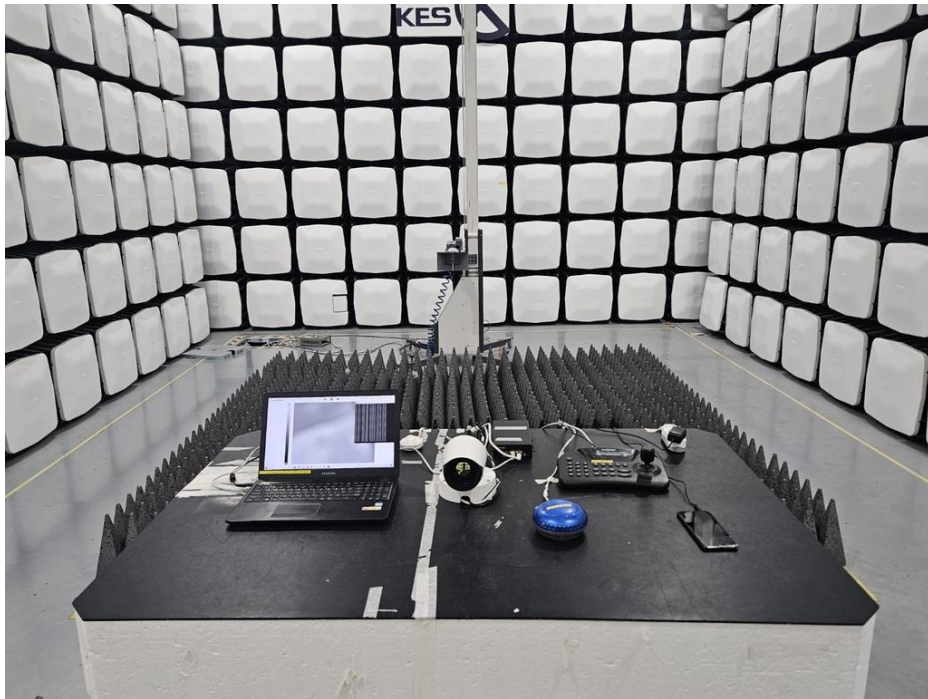
<Radiated Emissions(Below 1 GHz) - Rear> Mode 2



<Radiated Emissions(Above 1 GHz) - Front> Mode 1



<Radiated Emissions(Above 1 GHz) - Rear> Mode 1



<Radiated Emissions(Above 1 GHz) - Front> Mode 2



<Radiated Emissions(Above 1 GHz) - Rear> Mode 2



7.2 EUT Photographs



<EUT External Photographs - Top>



<EUT External Photographs - Bottom>



<Components>



<Port-1>



<Port-2>



<Port-3>



<EUT Internal Photographs>



7.3 Label



Name : Hanwha Vision Co., Ltd.
Product item : NETWORK THERMAL CAMERA
Model name : TNO-C4080T

The End.

