

**KES Co., Ltd.**

3701, 40, Simin-daero 365beon-gil,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

Report No.:

KES-EM-23T0308

Page (1) of (29)

EMC TEST REPORT For RCM

Test Report No. : KES-EM-23T0308

Date of Issue : Apr. 12, 2023

Product name : NVR

Model/Type No. : ARN-1610S

Variant Model : -

Applicant : Hanwha Vision Co., Ltd

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

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 commune, Bac Ninh city, Bac Ninh province, Vietnam
2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do,
Korea (Suwon Industrial Complex)

Date of Receipt : Apr. 04, 2023

Test date : Apr. 10, 2023

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

Tested by

Dong In, Kim
EMC Test Engineer

Reviewed by

Dong Il, Lee
EMC Technical Manager

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

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Apr. 12, 2023	KES-EM-23T0308	Issued

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TABLE OF CONTENTS

1.0	General Product Description.....	4
1.1	Test Voltage & Frequency	6
1.2	Variant Model Differences	6
1.3	Device Modifications	6
1.4	Equipment Under Test.....	6
1.5	Support Equipments	6
1.6	External I/O Cabling	7
1.7	EUT Operating Mode(s)	7
1.8	Configuration.....	8
1.9	Remarks when standards applied	9
1.10	Calibration Details of Equipment Used for Measurement	9
1.11	Test Facility	9
1.12	Laboratory Accreditations and Listings	9
2.0	Test Regulations.....	10
2.1	Conducted Emissions at Mains Power Ports	11
2.2	Conducted Emissions at Telecommunication Ports.....	12
2.3	Radiated Electric Field Emissions(Below 1 GHz)	13
2.4	Radiated Electric Field Emissions(Above 1 GHz)	14
APPENDIX A – TEST DATA.....		15
Conducted Emissions at Mains Power Ports.....		15
Conducted Emissions at Telecommunication Ports		17
Radiated Electric Field Emissions(Below 1 GHz)		19
Radiated Electric Field Emissions(Above 1 GHz).....		20
Test Setup Photos and Configuration		21
Conducted Emissions at Mains Power Ports.....		21
Conducted Emissions at Telecommunication Ports		22
Radiated Electric Field Emissions(Below 1 GHz)		23
Radiated Electric Field Emissions(Above 1 GHz).....		24
EUT External Photographs		25
EUT Internal Photographs		26



1.0 General Product Description

Main Specifications of EUT are:

Display		
Network camera	Inputs	Max. 16CH
	Resolution	8MP ~ CIF
	Protocols	SUNAPI, ONVIF
Decoding	Local Display	HDMI, VGA(Clone)
	Multi Screen Display	[Local Monitor] 1/ 2V/ 2H/ 3V/ 4/ 6/ 8/ 9/ 13/ 16/ Sequence [Web] 1/ 2V/ 2H/ 3V/ 4/ 6/ 8/ 9
	Resolution	[Local Monitor] 8M(30fps), 1080p(120fps), 720P(120fps), D1(120fps)
Performance		
Operating System	Embedded	Linux
Record	Compression	H.265, H.264, MJPEG
	Recording Bandwidth	Max. 80Mbps
	Resolution	8MP ~ CIF
	Mode	Normal, Dual Stream, Schedule(Continuous/Event), Event (Pre/Post), Bookmark
	Event Trigger	Alarm Input, Video Loss, Camera Event(Sensor, MD, Video Analytics, Defocus, Audio), Dynamic Event
	Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out
Search & Play	Playback Bandwidth	Max. 32Mbps
	User	Max. 4 Users (Local 1, Remote 3)
	Simultaneous playback	Max. 16CH(Local 4CH, Remote 4CH per user)
	Mode	Date & Time(Calendar), Event list, Text Search, Smart Search
	Resolution	CIF ~ 8MP
	Playback Control	Fast/Slow Forward / Backward, Move one step Up / Down
Storage	Supported HDD	Up to 6TB
	HDD Slot	SATA 2ea(Max. 12TB)
Backup	File backup	BU/Exe(GUI), JPG/AVI(Network)
	Function	Multi channel(Up to 4CH) Play, Date-Time/Title display
Network		
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI(Server, Client)
DDNS		Hanwha DDNS
Transmission Bandwidth		Max. 80Mbps
Audio	Input/Output	16 CH(network)
	Compression	G.711, G.726, AAC(16/48KHz)
	Audio Communication	2-Way
Max Remote Users		Search(3), Live Unicast(10), Multicast(20)
Security		IP address filtering, User access Log, 802.1x, Encryption Device certificate(Hanwha Techwin Root CA), Signed firmware
Web viewer	Supported OS	Windows 10, macOS 10.13
	Supported browser	Google Chrome, Microsoft Edge, Mac Safari
Viewer Software		WAVE, SSM, Webviewer, Wisenet Viewer, Wisenet mobile Support CGI(SUNAPI) for integration to 3rd party VMS

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Report No.:

KES-EM-23T0308

Page (5) of (29)

Functions

Camera Setup	Register	Auto, Manual
	Item	IP address, Add profile edit, Bitrate, Compression, GOP, Quality, Camera MD setup (4, 8 point polygon) Camera video setup (Simple focus, Brightness/Contrast, Flip/Mirror, IRIS, WDR, D&N, SSNR, Shutter, SDDR, DIS), Fisheye Dewarping Mode, Hallway View Setup, Camera Webpage
PTZ	Control	Via GUI, Webviewer
	Preset	300 Presets
Smart phone	Support Model	iOS, Android
	Protocol Support	RTP, RTSP, HTTP, CGI(SUNAPI)
	Control	Live 4CH(Multi-Profile Support), Playback 4CH
	Max. Remote Users	Search(3), Live Unicast(10)
Redundancy	Failover	N+1
	ARB	Support
Easy configuration		P2P(QR code)

Interface

Front	Indicator	Power, Record, Network
Reset		Support
HDMI		1EA 3840x2160 30Hz
VGA		1920x1080 30Hz
Ethernet		PoE RJ-45(LAN, 10/100) 16 ea, RJ-45 1ea (WAN, 1Gbps)
USB		2EA(Front 2 x USB 2.0)
Power inlet		SMPS

System

Log	Log List	Max. 100,000 (System Log, Event Log each)
System Control		Mouse, Web
Language		English, French, German, Italian, Spanish, Russian, Turkish, Polish, Dutch, Swedish, Czech, Portuguese, Danish, Rumanian, Serbian, Croatian, Hungarian, Greek, Norwegian, Finnish, Korean, Chinese, Japanese, Thai, Vietnamese

Environmental

Operating Temperature	0°C to +40°C(32°F to 104°F)
Operating Humidity	20% ~ 85% RH

Electrical

Power Input	100 ~ 240 VAC $\pm$ 10%; 50/60 Hz
Power Consumption	Max 188.2W (2HDD, PoE On)
PoE Budget	130W

Mechanical

Color / Material	Black / Metal
Dimension (WxHxD)	W370.0 x H44.0 x D320 mm (14.57" x 1.73" x 12.6") (1U)
Weight	2.88Kg

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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.

☒ AC 240 V, 50 Hz

1.2 Variant Model Differences

Not applicable

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NVR	ARN-1610S	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT
Mouse	MOKJUO	CD04-001028	Primax Electronics Ltd.	-

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Laptop	P95G001	8KM8HT2	DELL INC.	-
Laptop Adapter	HA65NM130	-	Chicony Power Technology(Suzhou)Co.,L td.	-
Monitor 1	SMT-2232	C95V67VF900025B	Weihai Daewoo Electronics Co., Ltd.	-
Monitor 2	24M47VQ	704NTUW78718	LG	-
Monitor 2 Adapter	ADS-40FSG-19	HH3UD627686214500	Shenzhen Honor Electronic Co.,Ltd.	-
Network Camera	ANV-L7012R	-	HANWHA VISION VIETNAM COMPANY LIMITED	-
HDD	WD1600AAJS- 00L7A0	WCAV36146633	Western Digital®	-

1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NVR (EUT)	RJ-45(LAN)	Laptop	RJ-45(LAN)	3.5	U
	D-SUB	Monitor 1	D-SUB	1.5	S
	HDMI	Monitor 2	HDMI	1.5	S
	RJ-45(PoE)	Network Camera	RJ-45(PoE)	3.5	U
	USB	Mouse (EUT)	USB	1.4	U
	External ground	Ground	External ground	1.8	U
	SATA	HDD	SATA	0.5	U
Laptop	DC Jack	Laptop Adapter	DC Jack	1.4	U
Monitor 2	DC Jack	Monitor 2 Adapter	DC Jack	1.4	U

* Unshielded = U, Shielded = S

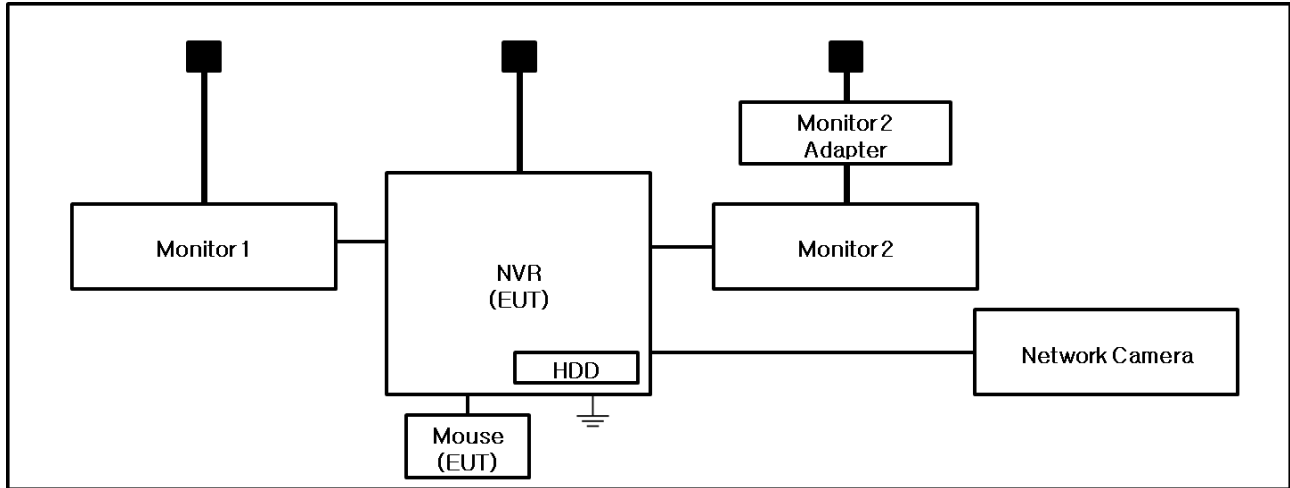
1.7 EUT Operating Mode(s)

Test mode	operating
OPERATE	Network ping test on the EUT and laptop. Check operation status of Network Camera with EUT Check the storage device for the recorded screen after the test.

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

1.8 Configuration

■ AC Main
 □ DC Main



1.9 Remarks when standards applied

N/A

1.10 Calibration Details of Equipment Used for Measurement

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

1.11 Test Facility

The measurement facility is located at 473-21, Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea, 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



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Report No.:
KES-EM-23T0308
Page (10) of (29)

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

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2.1 Conducted Emissions at Mains Power Ports

Test Date

Apr. 10, 2023

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, 11, 2023
☒	LISN	ENV216	R & S	101787	11, 10, 2023
☒	LISN	ESH2-Z5	R & S	100450	11, 10, 2023
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 10, 2023

Test Conditions

Temperature: (24,1 ± 0,0) °C

Relative Humidity: (42,7 ± 0,0) % 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 Conducted Emissions at Telecommunication Ports

Test Date

Apr. 10, 2023

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, 11, 2023
☒	LISN	ENV216	R & S	101787	11, 10, 2023
☒	LISN	ESH2-Z5	R & S	100450	11, 10, 2023
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 10, 2023
☒	8-WIRE ISN CAT3,5	ENY81	R & S	100174	11, 22, 2023
☒	8-WIRE ISN CAT6	ENY81-CAT6	R & S	101665	11, 22, 2023
☐	CDN	CDNS502A	TESEQ	40431	11, 10, 2023

Test Conditions

Temperature: (24,1 ± 0,0) °C

Relative Humidity: (42,7 ± 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.

- For Ethernet interfaces, measurements are required at the highest data rate supported by the interface.

2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Apr. 10, 2023

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	03, 21, 2024
☒	AMPLIFIER	SCU 01	R & S	100603	11, 10, 2023
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 17, 2024
☒	ATTENUATOR	8491A	HP	32173	03, 03, 2024

Test Conditions

Temperature: (23,7 ± 0,0) °C

Relative Humidity: (43,6 ± 0,0) % 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.

2.4 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Apr. 10, 2023

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	03, 21, 2024
☒	PREAMPLIFIER	8449B	AGILENT	3008A01742	11, 07, 2023
☒	ATTENUATOR	8491A	HP	35496	03, 03, 2024
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	11, 08, 2023

Test Conditions

Temperature: (23,8 ± 0,0) °C

Relative Humidity: (43,4 ± 0,1) % R.H.

Frequency Range of Measurement

1 GHz to 6 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.

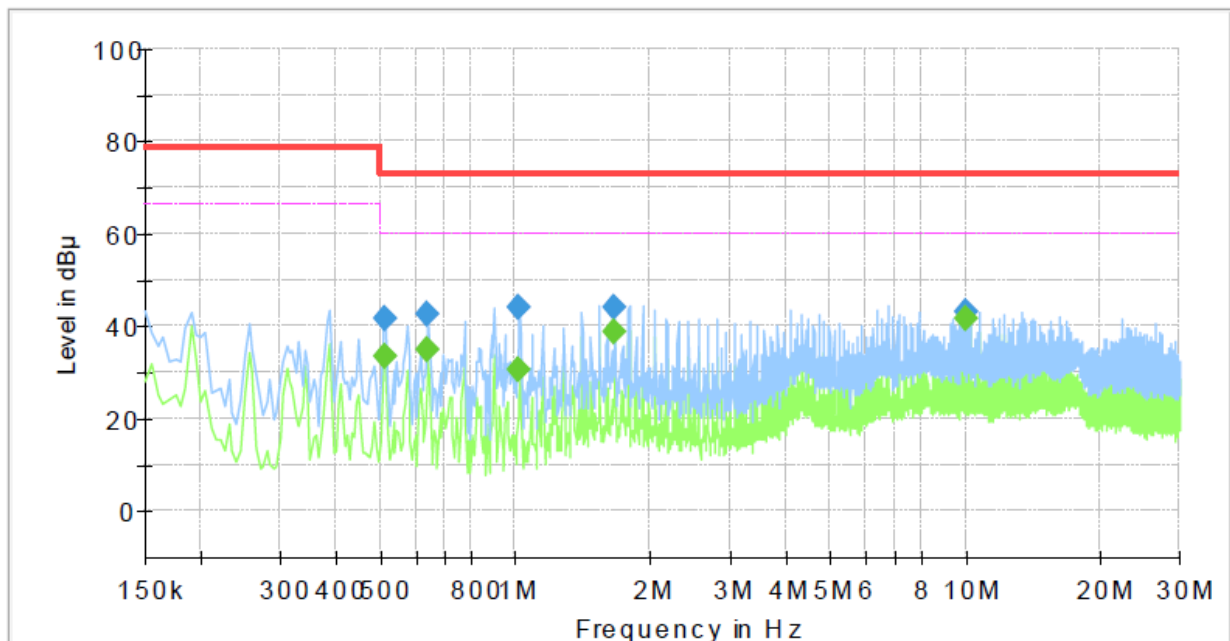
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

HOT LINE

Common Information

Test Description:	Conducted Emission
Model No.:	ARN-1610S
Phase:	L1
Mode:	
Operator Name:	KES



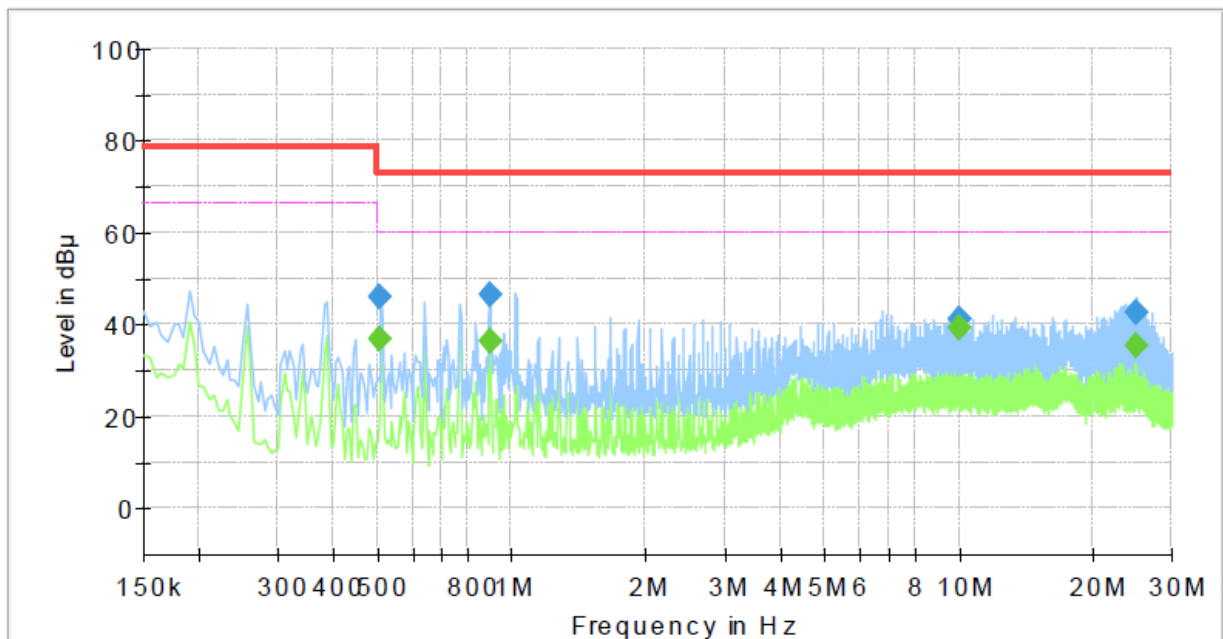
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.515000	---	33.51	60.00	26.49	5000.0	9.000	L1	19.7
0.515000	41.45	---	73.00	31.55	5000.0	9.000	L1	19.7
0.640000	---	34.71	60.00	25.29	5000.0	9.000	L1	19.9
0.640000	42.81	---	73.00	30.19	5000.0	9.000	L1	19.9
1.020000	---	30.51	60.00	29.49	5000.0	9.000	L1	20.1
1.020000	44.11	---	73.00	28.89	5000.0	9.000	L1	20.1
1.660000	---	38.66	60.00	21.34	5000.0	9.000	L1	20.3
1.660000	44.21	---	73.00	28.79	5000.0	9.000	L1	20.3
10.060000	---	41.51	60.00	18.49	5000.0	9.000	L1	19.9
10.060000	43.04	---	73.00	29.96	5000.0	9.000	L1	19.9

NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Model No.:	ARN-1610S
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)
0.510000	---	36.94	60.00	23.06	5000.0	9.000	N	19.7
0.510000	45.99	---	73.00	27.01	5000.0	9.000	N	19.7
0.895000	---	36.53	60.00	23.47	5000.0	9.000	N	20.0
0.895000	46.60	---	73.00	26.40	5000.0	9.000	N	20.0
10.060000	---	38.97	60.00	21.03	5000.0	9.000	N	19.9
10.060000	41.16	---	73.00	31.84	5000.0	9.000	N	19.9
24.900000	---	35.59	60.00	24.41	5000.0	9.000	N	20.4
24.900000	42.41	---	73.00	30.59	5000.0	9.000	N	20.4

◆ Calculation

QuasiPeak [dBμV] / CAverage [dBμV] = Reading Value [dBμV] + Corr. [dB]

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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

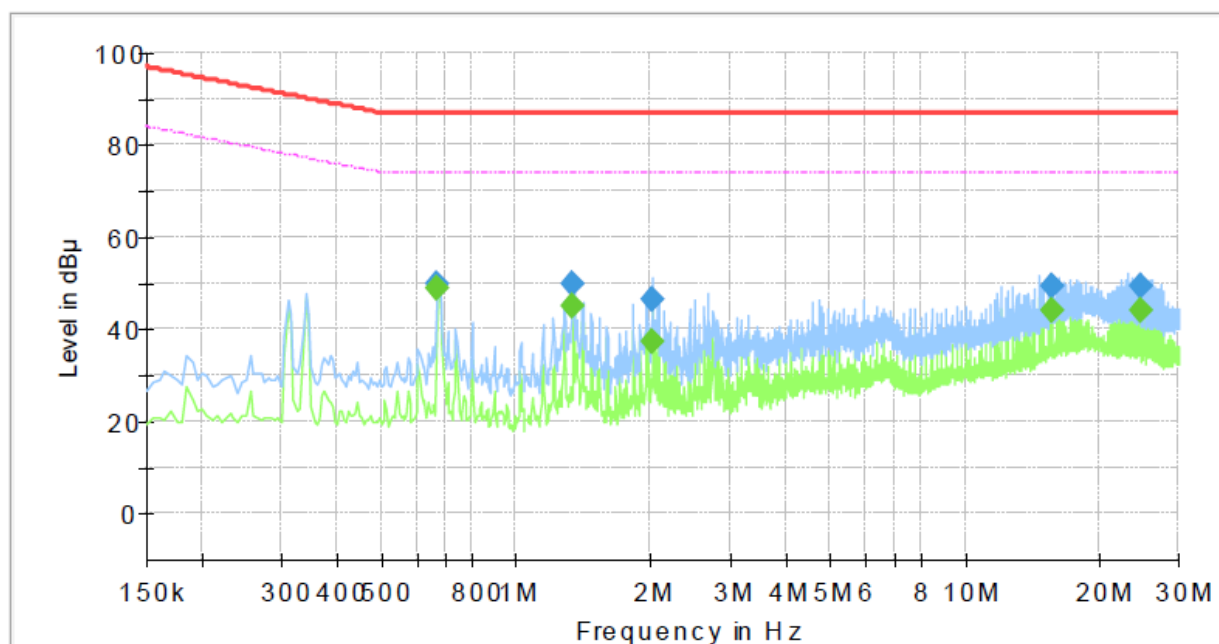
Conducted Emissions at Telecommunication Ports

■ LAN

[1 000 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	ARN-1610S
Mode :	LAN
Speed :	1 000 Mbps
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	C-Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.670000	---	48.76	74.00	25.24	1000.0	9.000	Single Line	19.8
0.670000	49.86	---	87.00	37.14	1000.0	9.000	Single Line	19.8
1.340000	---	44.96	74.00	29.04	1000.0	9.000	Single Line	20.0
1.340000	49.85	---	87.00	37.15	1000.0	9.000	Single Line	20.0
2.010000	---	37.28	74.00	36.72	1000.0	9.000	Single Line	20.1
2.010000	46.29	---	87.00	40.71	1000.0	9.000	Single Line	20.1
15.720000	---	43.95	74.00	30.05	1000.0	9.000	Single Line	19.6
15.720000	49.55	---	87.00	37.45	1000.0	9.000	Single Line	19.6
24.835000	---	43.99	74.00	30.01	1000.0	9.000	Single Line	20.1
24.835000	49.25	---	87.00	37.75	1000.0	9.000	Single Line	20.1

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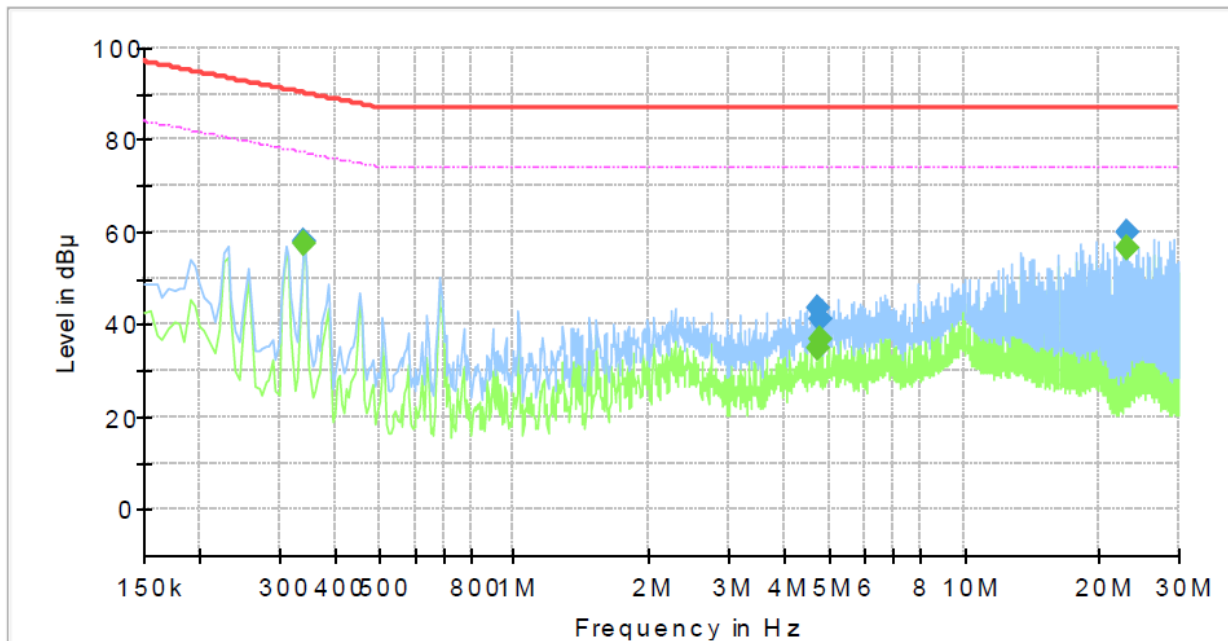
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■ PoE

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	ARN-1610S
Mode :	PoE
Speed :	100 Mbps
Operator Name:	KES



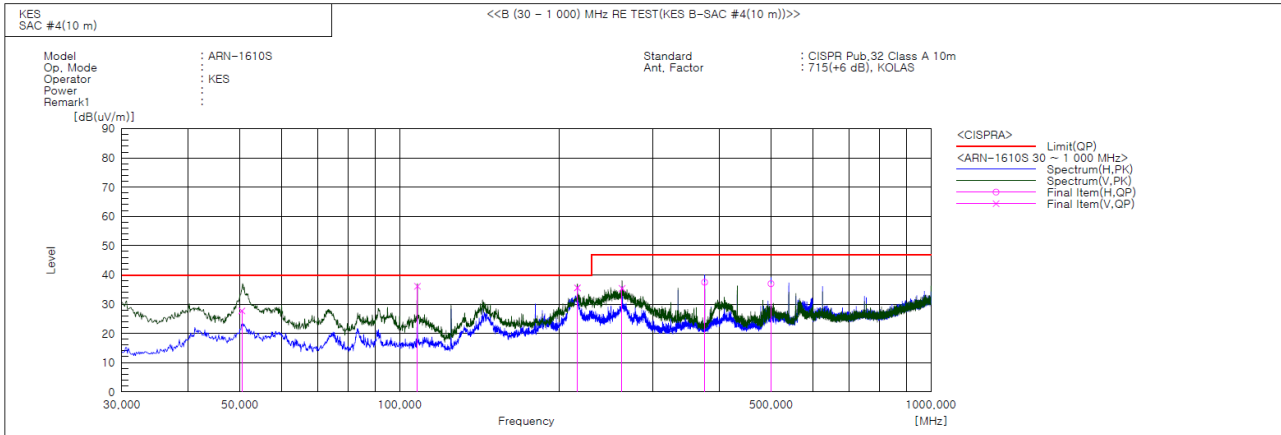
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.340000	---	57.70	77.20	19.50	1000.0	9.000	Single Line	19.7
0.340000	58.04	---	90.20	32.16	1000.0	9.000	Single Line	19.7
4.720000	---	34.96	74.00	39.04	1000.0	9.000	Single Line	19.5
4.720000	43.78	---	87.00	43.22	1000.0	9.000	Single Line	19.5
4.785000	---	36.86	74.00	37.14	1000.0	9.000	Single Line	19.5
4.785000	41.19	---	87.00	45.81	1000.0	9.000	Single Line	19.5
23.130000	---	56.77	74.00	17.23	1000.0	9.000	Single Line	20.1
23.130000	60.07	---	87.00	26.93	1000.0	9.000	Single Line	20.1

◆ Calculation

$\text{QuasiPeak [dBuV]} / \text{CAverage [dBuV]} = \text{Reading Value [dBuV]} + \text{Corr. [dB]}$
 QuasiPeak / CAverage : The Final Value
 Reading Value : Not shown in the table.
 Corr. : Correction values (ISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

Radiated Electric Field Emissions(Below 1 GHz)



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	50.442	V	48.3	-20.6	27.7	40.0	12.3	102.0	175.0	
2	107.998	V	58.8	-22.7	36.1	40.0	3.9	108.0	280.0	
3	216.024	V	55.7	-20.1	35.6	40.0	4.4	122.0	56.0	
4	262.208	V	54.5	-19.1	35.4	47.0	11.6	118.0	194.0	
5	374.998	H	51.9	-14.4	37.5	47.0	9.5	384.0	91.0	
6	500.035	H	48.1	-11.1	37.0	47.0	10.0	371.0	38.0	

◆ Calculation

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

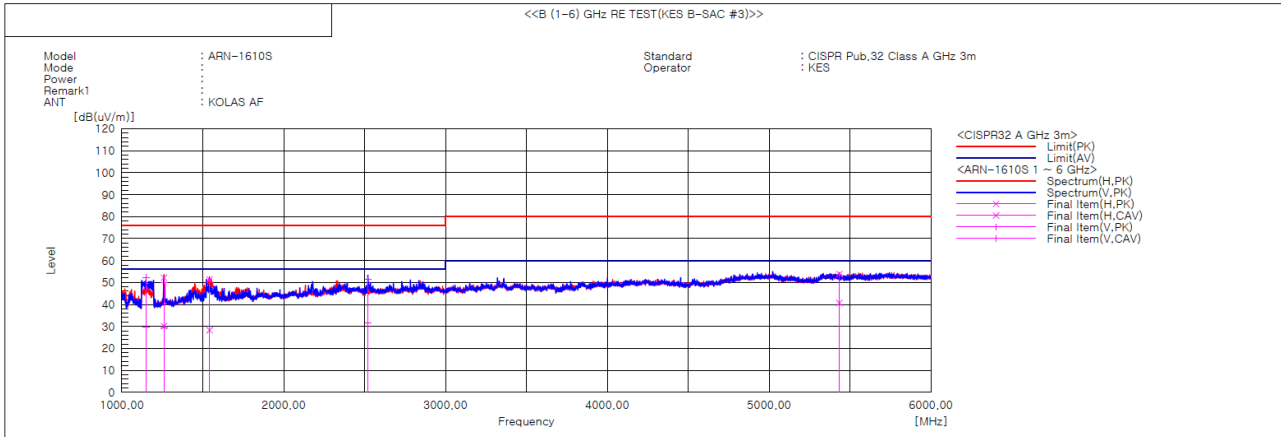
Margin(QP)[dB] = Limit[dB(μV/m)] - Result(QP) [dB(μV/m)]

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



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	1148.380	V	55.2	32.8	-2.9	52.3	29.9	76.0	56.0	23.7	26.1	100.0	11.8	
2	1260.032	V	52.0	31.1	-1.9	50.1	29.2	76.0	56.0	25.9	26.8	100.0	340.5	
3	1259.994	H	54.1	32.0	-1.9	52.2	30.1	76.0	56.0	23.8	25.9	100.0	337.1	
4	1541.232	H	51.3	28.2	0.1	51.4	28.3	76.0	56.0	24.6	27.7	100.0	63.9	
5	2520.982	V	45.3	25.5	6.2	51.5	31.7	76.0	56.0	24.5	24.3	100.0	267.2	
6	5432.933	H	38.0	24.8	15.9	53.9	40.7	80.0	60.0	26.1	19.3	100.0	14.4	

◆ Calculation

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

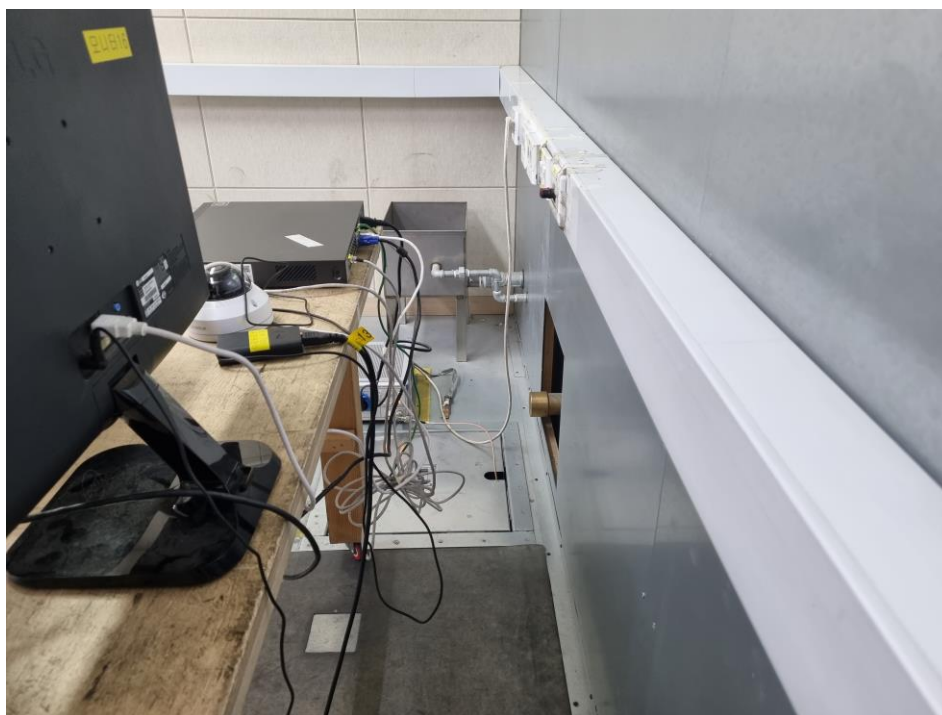
Margin(PK/CAV)[dB] = Limit[dB(μ V/m)] - Result(PK/CAV) [dB(μ V/m)]

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

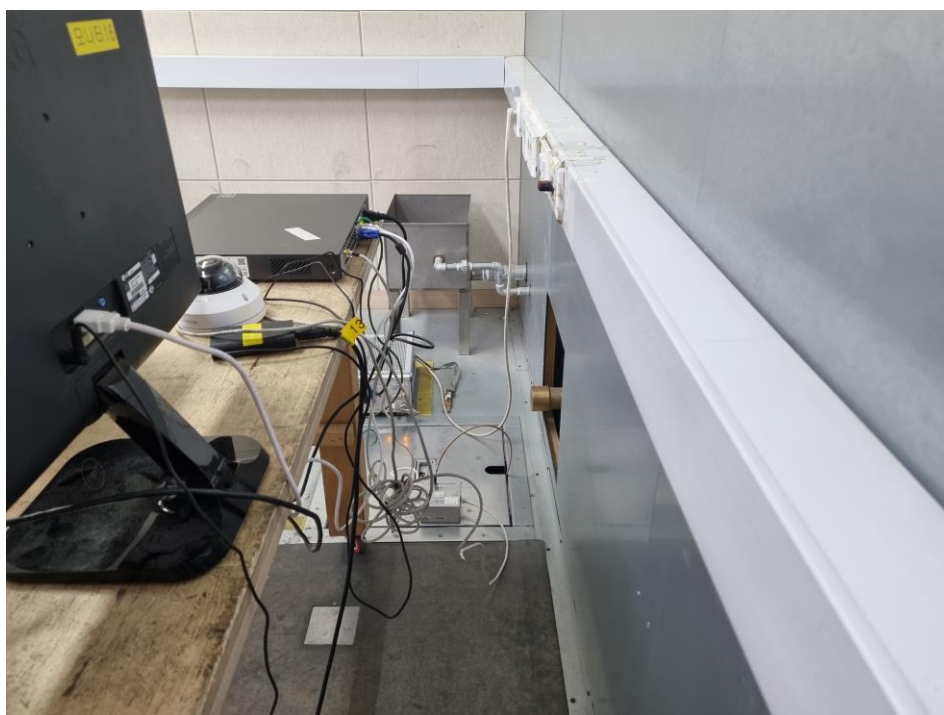
Test Setup Photos and Configuration

Conducted Emissions at Mains Power Ports



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Conducted Emissions at Telecommunication 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

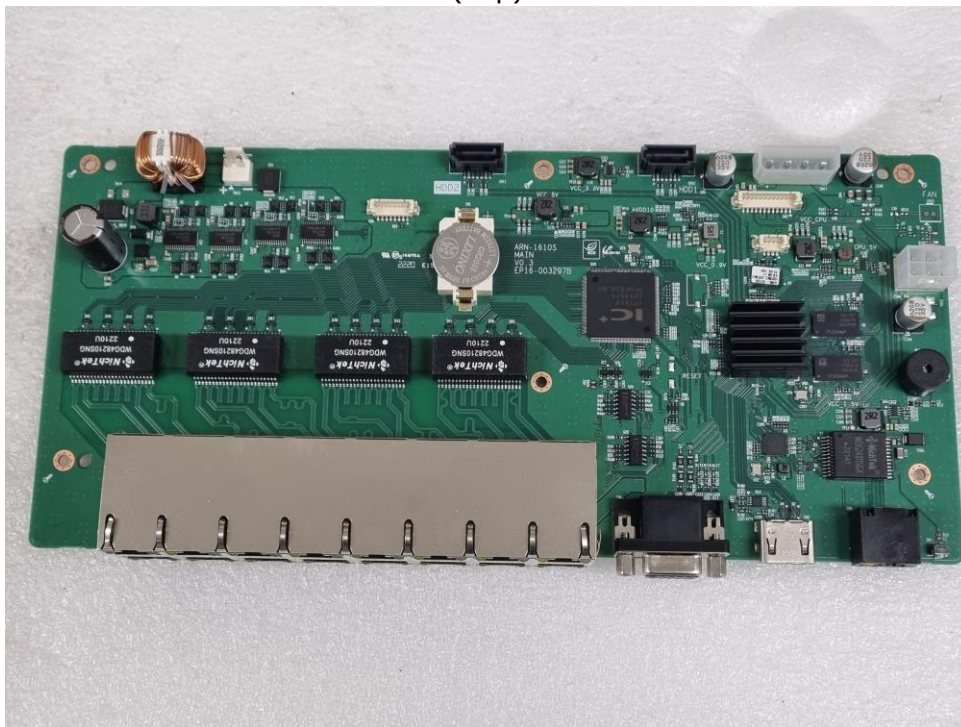
(Internal View)



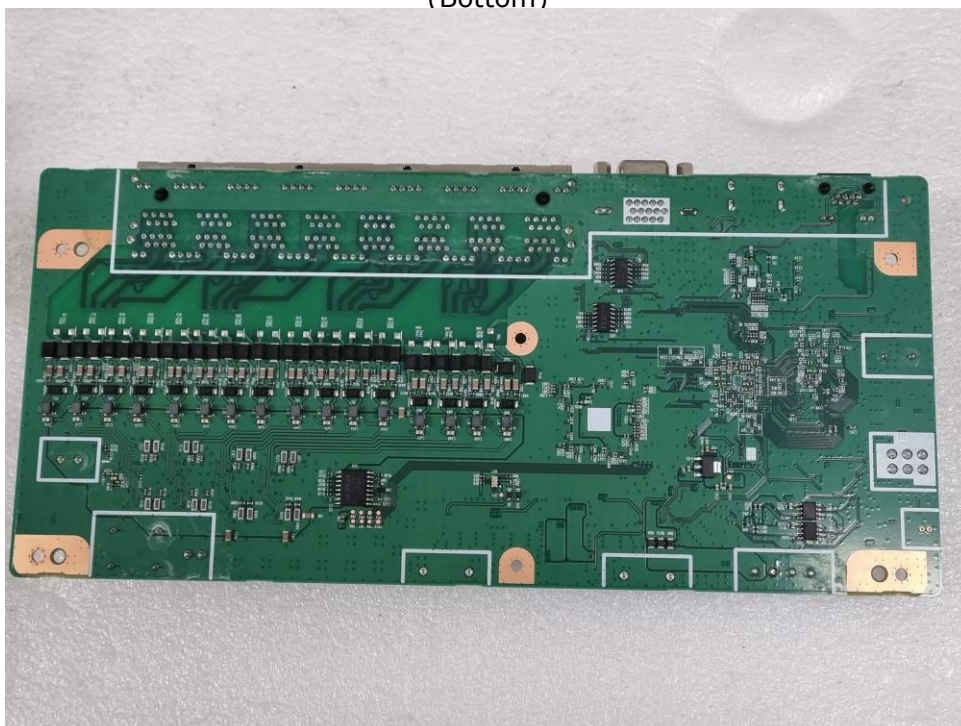
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EUT Internal View – Main Board

(Top)



(Bottom)



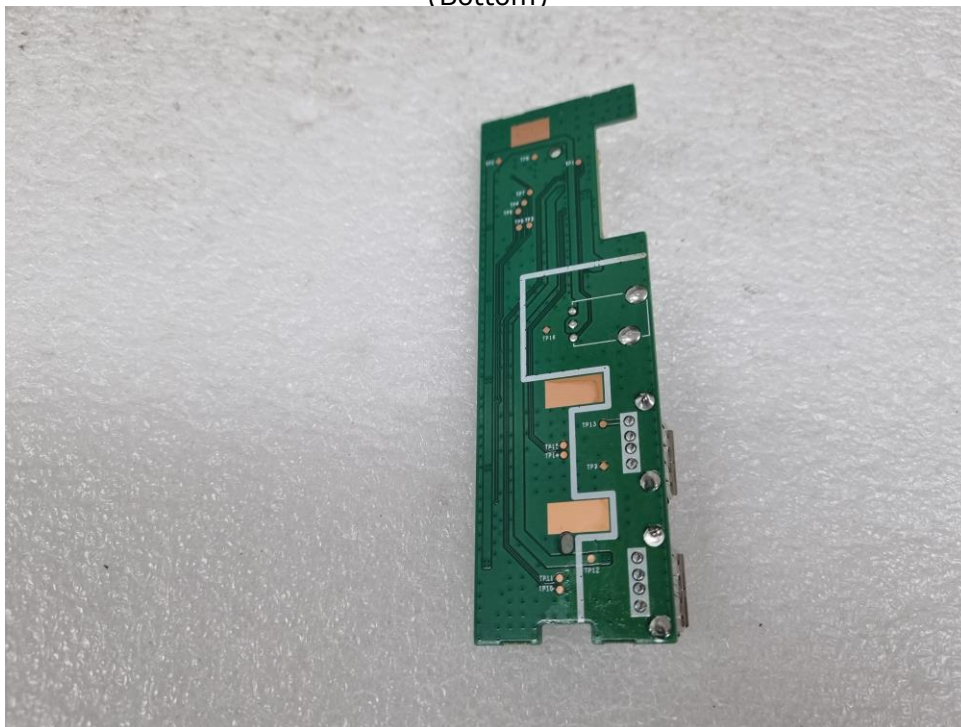
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EUT Internal View – Sub Board

(Top)



(Bottom)



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EUT Internal View – PSU

(Top)



(Bottom)



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