

EMC TEST REPORT For RCM

Test Report No. : KES-EM-23T0174

Date of Issue : Mar. 06, 2023

Product name : NVR

Model/Type No. : XRN-820S

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 : Feb. 10, 2023

Test date : Feb. 22, 2023 ~ Feb. 23, 2023

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

Tested by

Dong Hyun, Won
EMC Test Engineer

Reviewed by

Dong Hun, Jang
EMC Technical Manager

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

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Mar. 06, 2023	KES-EM-23T0174	Issued

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1.0 General Product Description

Main Specifications of EUT are:

Display		
Network camera	Inputs	Max. 8CH
	Resolution	32MP ~ CIF
	Protocols	SUNAPI, ONVIF
Decoding	Local Display	FHD : HDMI & VGA Dual monitor UHD : HDMI Single monitor
	Multi Screen Display	[Local Monitor] - Dynamic layout, Virtual channel view - Up to 16 Division [Web] 1/ 2H/ 2V/ 3V/ 4/ 6/ 8/ 9
	Resolution	[Local Monitor] FHD Clone mode : 32M(15fps, H.265 Only), 12M(30fps, H.265 Only), 8.3M(50fps), 1080p(240fps), D1(480fps) UHD Single mode : 32M(15fps, H.265 Only), 12M(30fps, H.265 Only), 8.3M(50fps), 1080p(240fps), D1(270fps) FHD Expand mode : 32M(12fps, H.265 Only), 12M(25fps, H.265 Only), 8.3M(30fps), 1080p(90fps), D1(200fps)
Performance		
Operating System	Embedded	Linux
Record	Compression	H.265, H.264, MJPEG
	Recording Bandwidth	Max. 120Mbps
	Resolution	32MP ~ 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, User Event
	Event Action	e-Mail, Event Push, PTZ Preset, Alarm Out, Buzzer, Monitor Out, FTP, SUNAPI Command, Shutdown
Search & Play	Playback Bandwidth	Max. 32Mbps
	User	Max. 4 Users (Local 1, Remote 3)
	Simultaneous playback	Max. 32CH(Local 8CH, Remote 8CH per user)
	Fisheye Dewarping	CMS
	Mode	Date & Time(Calendar), Event list, Text Search, Smart Search
	Resolution	CIF ~ 32MP (Up to H.264 8.3MP, H.265 32MP)
	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/AVI(GUI), JPG/AVI(Network)
	Function	Multi channel(Up to 8CH) 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. 120Mbps
Audio	GUI	8 CH(network)
	Web	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

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Supported browser		Google Chrome, Microsoft Edge, Mac Safari
Viewer Software	WAVE, SSM, Webviewer, Smart Viewer, Wisenet mobile Support CGI(SUNAPI) for integration to 3'rd party VMS	
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, SPC-2000
	Preset	300 Presets
Smart phone	Support Model	iOS, Android
	Protocol Support	RTP, RTSP, HTTP, CGI(SUNAPI)
	Control	Live 8CH(Multi-Profile Support), Playback 4CH
	Max. Remote Users	Search(3), Live Unicast(10)
Redundancy	Fallover	N+1
	ARB	Support
Easy configuration	P2P(QR code)	
Interface		
Front	Indicator	HDD, Alarm, Power, Record, Backup, Network
Storage	OK	
HDMI	1EA 3840x2160 30Hz	
VGA	1EA 1920x1080 60Hz	
Audio	Out 1EA (3.5mm Audio Jack)	
Ethernet	PoE+ RJ-45 8EA (LAN, 10/100), RJ-45 2ea (LAN/WAN 1Gbps)	
Alarm	In 4EA, Out 2EA	
USB	3EA(Front 2 x USB 2.0, Rear 1 x USB 3.0)	
Power Inlet	AC 1EA	
System		
Log	Log List	Max. 100,000 (System Log, Event Log each)
System Control	Mouse, Keyboard, Web, Controller (SPC-2000)	
Language	English, French, German, Italian, Spanish, Russian, Turkish, Polish, Dutch, 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 ± 10%; 50/60 Hz	
Power Consumption	Max 160W	
PoE Budget	100W	
Mechanical		
Color / Material	Black / Metal	
Dimension (WxHxD)	370 x 50.7 x 324.3 mm (14.57 x 2 x 12.77 inch)	
Weight	2.7Kg (5.95lb)	
Intelligent Analysis		
AI Search	Object Attribute	Compatible for Wisenet AI Camera

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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	XRN-820S	-	HANWHA VISION VIETNAM COMPANY LIMITED	EUT
Mouse	MOKJUO	-	Primax Electronics Ltd.	-
SWITCHING POWER SUPPLY	DPS-200PB-185 C	-	Delta Electronics Power (Dongguan) Co., Ltd.	-

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Notebook	LG15N54	503NZWY038929	LG Electronics Inc.	-
Notebook Adapter	PA-1900-14	OF2R263348701776 4	LITE-ON TECHNOLOGY COPORATION	-
Monitor 1	-	-	DELL INC.	-
Monitor 2	HSTND-7041-L	6CM6020YQQ	HP Inc.	-
Camera	QNV-6023R	-	HANWHA VISION VIETNAM COMPANY LIMITED	-
Alarm	PRO-SL	-	SENSOR PRO	-
Button Alarm	-	-	-	-
Headset	HD 202	-	SENNHEISER	-
Smartphone	SM-G991N	-	Samsung Electronics Inc.	-
USB Memory 1	-	-	SanDisk	32 GB
USB Memory 2	-	-	SanDisk	32 GB
HDD	WD63PURU- 64BFEY0	-	WD Purple™	6 TB

1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NVR (EUT)	USB	Mouse (EUT)	USB	1.8	U
	RJ-45 (LAN)	Notebook	RJ-45 (LAN)	3.2	U
	HDMI	Monitor 1	HDMI	2.0	S
	D-SUB	Monitor 2	D-SUB	2.2	S
	RJ-45 (PoE)	Camera	RJ-45 (PoE)	10.0	U
	3 Pin	Alarm	3 Pin	3.5	U
	2 Pin	Button Alarm	2 Pin	4.0	U
	3.5 mm	Headset	Line	2.8	U
	USB	USB Memory 1	USB	-	-
	USB	USB Memory 2	USB	-	-
	SATA	HDD	SATA	0.2	U
	Ground	External Ground	Ground	2.2	U
Notebook	DC Jack	Notebook Adapter	DC Jack	2.0	U
	3.5 mm	Smartphone	USB Type C	1.6	U

* Unshielded = U, Shielded = S

1.7 EUT Operating Mode(s)

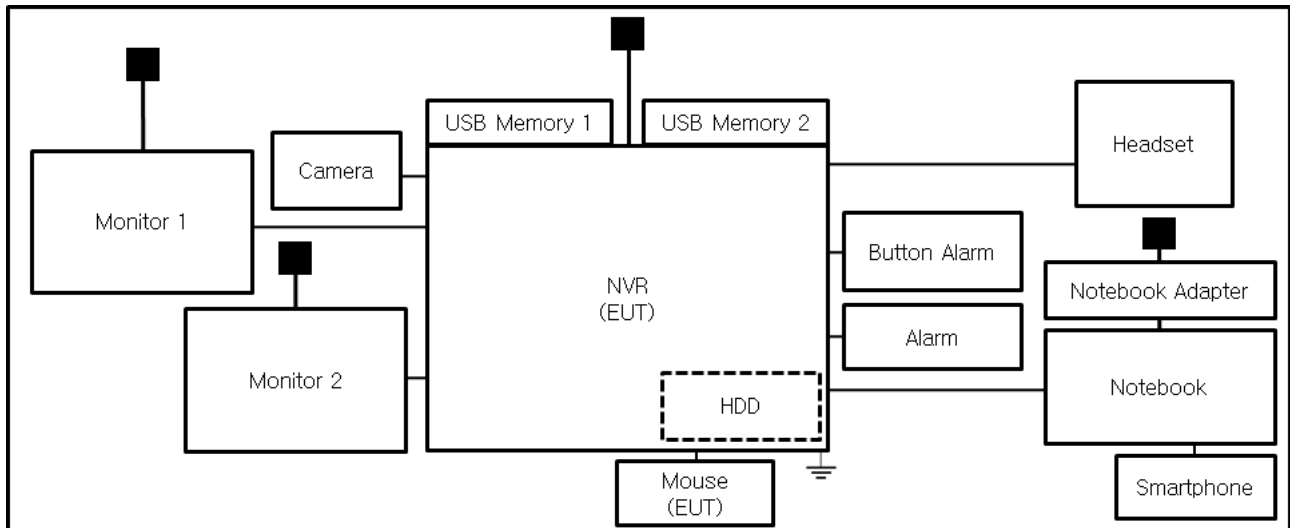
Test mode	operating
Operating	EUT Monitoring, Ping Test after testing, check if the recording is normally done on the HDD and USB Memory 1, 2, Check the status 1 khz tone in Headset

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

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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

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

Feb. 22, 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: (22,9 ± 0,1) °C

Relative Humidity: (45,3 ± 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

RemarksSee Appendix A for test data.

2.2 Conducted Emissions at Telecommunication Ports

Test Date

Feb. 22, 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: (22,9 ± 0,1) °C

Relative Humidity: (45,3 ± 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

Feb. 23, 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, 31, 2023
☒	AMPLIFIER	SCU 01	R & S	100603	11, 10, 2023
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 17, 2024
☒	ATTENUATOR	8491A	HP	32173	03, 08, 2023

Test Conditions

Temperature: (22,7 ± 0,1) °C

Relative Humidity: (45,2 ± 0,1) % R.H.

Frequency Range of Measurement

30 MHz to 1 GHz

Instrument Settings

IF Band Width: 120 kHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

RemarksSee Appendix A for test data.

2.4 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Feb. 23, 2023

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	03, 31, 2023
☒	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	11, 08, 2023
☒	PREAMPLIFIER	8449B	HP	3008A00538	06, 02, 2023
☒	ATTENUATOR	8491B	HP	23094	04, 21, 2023

Test Conditions

Temperature: (22,5 ± 0,2) °C

Relative Humidity: (42,9 ± 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

RemarksSee Appendix A for test data.

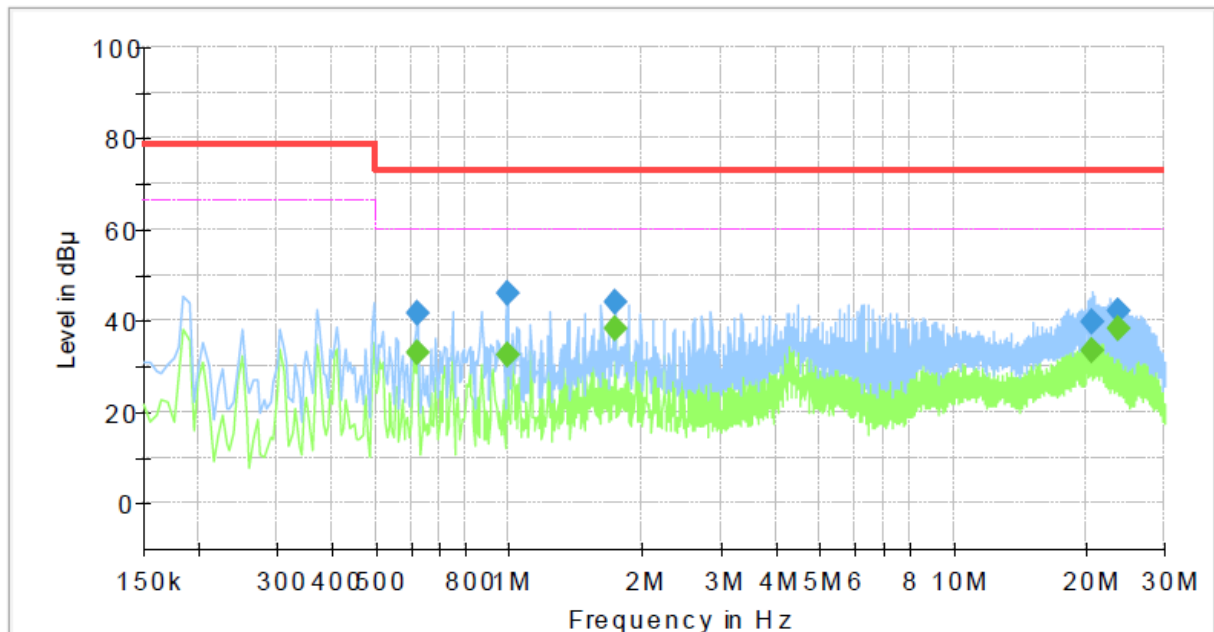
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

HOT LINE

Common Information

Test Description:	Conducted Emission
Model No.:	XRN-820S
Phase:	
Mode:	H
Operator Name:	KES



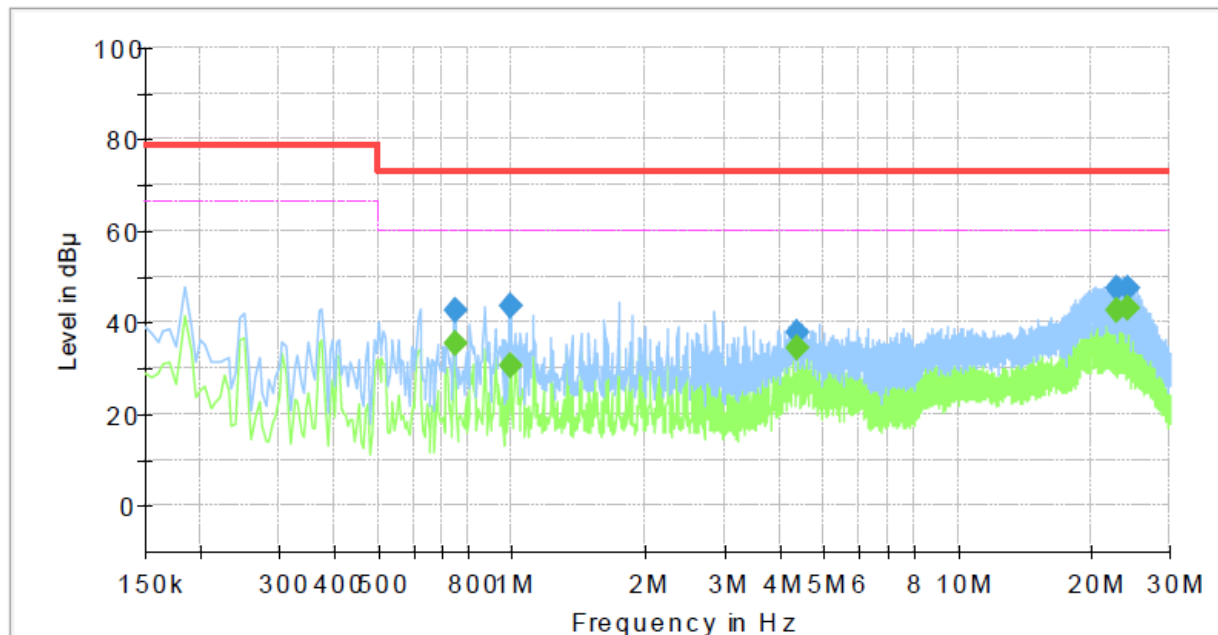
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.620000	---	32.72	60.00	27.28	1000.0	9.000	L1	19.8
0.620000	41.77	---	73.00	31.23	1000.0	9.000	L1	19.8
0.990000	---	32.35	60.00	27.65	1000.0	9.000	L1	20.1
0.990000	45.85	---	73.00	27.15	1000.0	9.000	L1	20.1
1.735000	---	38.02	60.00	21.98	1000.0	9.000	L1	20.3
1.735000	43.84	---	73.00	29.16	1000.0	9.000	L1	20.3
20.580000	---	33.44	60.00	26.56	1000.0	9.000	L1	20.2
20.580000	39.52	---	73.00	33.48	1000.0	9.000	L1	20.2
23.535000	---	38.39	60.00	21.61	1000.0	9.000	L1	20.3
23.535000	42.06	---	73.00	30.94	1000.0	9.000	L1	20.3

NEUTRAL LINE

Common Information

Test Description:	Conducted Emission
Model No.:	XRN-820S
Phase:	
Mode:	N
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.745000	---	35.44	60.00	24.56	1000.0	9.000	N	19.9
0.745000	42.47	---	73.00	30.53	1000.0	9.000	N	19.9
0.995000	---	30.63	60.00	29.37	1000.0	9.000	N	20.1
0.995000	43.38	---	73.00	29.62	1000.0	9.000	N	20.1
4.380000	---	34.53	60.00	25.47	1000.0	9.000	N	19.8
4.380000	37.53	---	73.00	35.47	1000.0	9.000	N	19.8
22.925000	---	42.35	60.00	17.65	1000.0	9.000	N	20.2
22.925000	47.29	---	73.00	25.71	1000.0	9.000	N	20.2
24.045000	---	42.87	60.00	17.13	1000.0	9.000	N	20.4
24.045000	47.43	---	73.00	25.57	1000.0	9.000	N	20.4

◆ 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 (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

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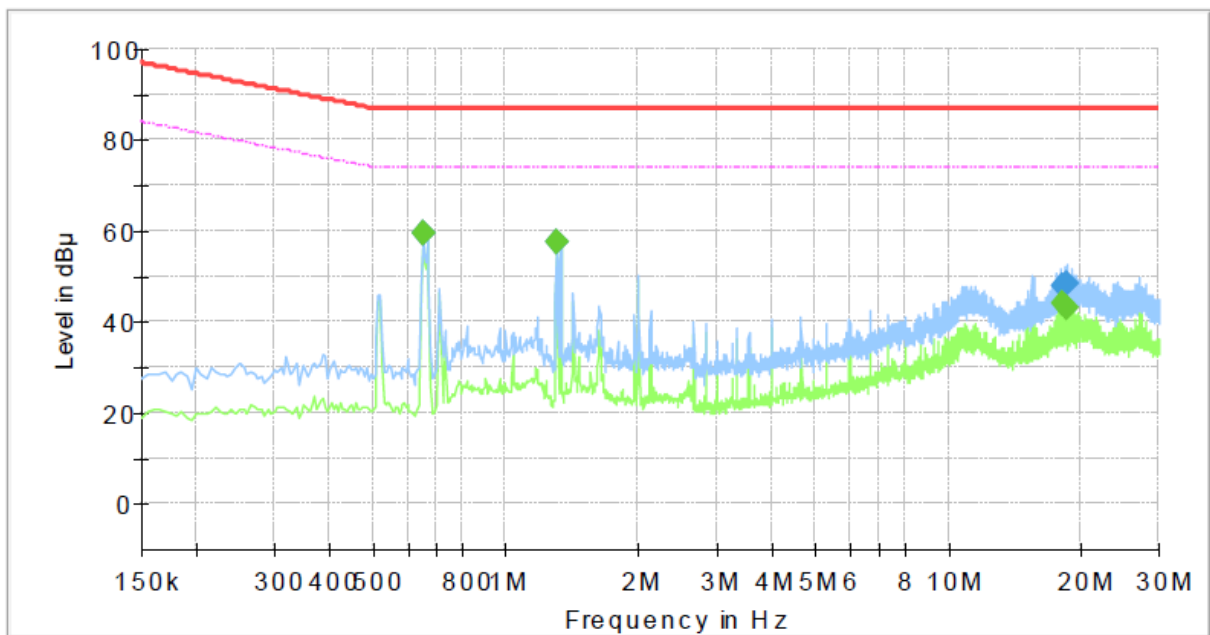
Conducted Emissions at Telecommunication Ports

■ LAN

[1 000 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XRN-820S
Mode :	LAN_ 1 000 MHz
Speed :	
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.650000	---	59.47	74.00	14.53	1000.0	9.000	Single Line	19.8
0.650000	59.46	---	87.00	27.54	1000.0	9.000	Single Line	19.8
1.300000	---	57.35	74.00	16.65	1000.0	9.000	Single Line	20.0
1.300000	57.42	---	87.00	29.58	1000.0	9.000	Single Line	20.0
18.165000	---	43.89	74.00	30.11	1000.0	9.000	Single Line	19.7
18.165000	48.10	---	87.00	38.90	1000.0	9.000	Single Line	19.7
18.500000	---	42.86	74.00	31.14	1000.0	9.000	Single Line	19.8
18.500000	48.39	---	87.00	38.61	1000.0	9.000	Single Line	19.8

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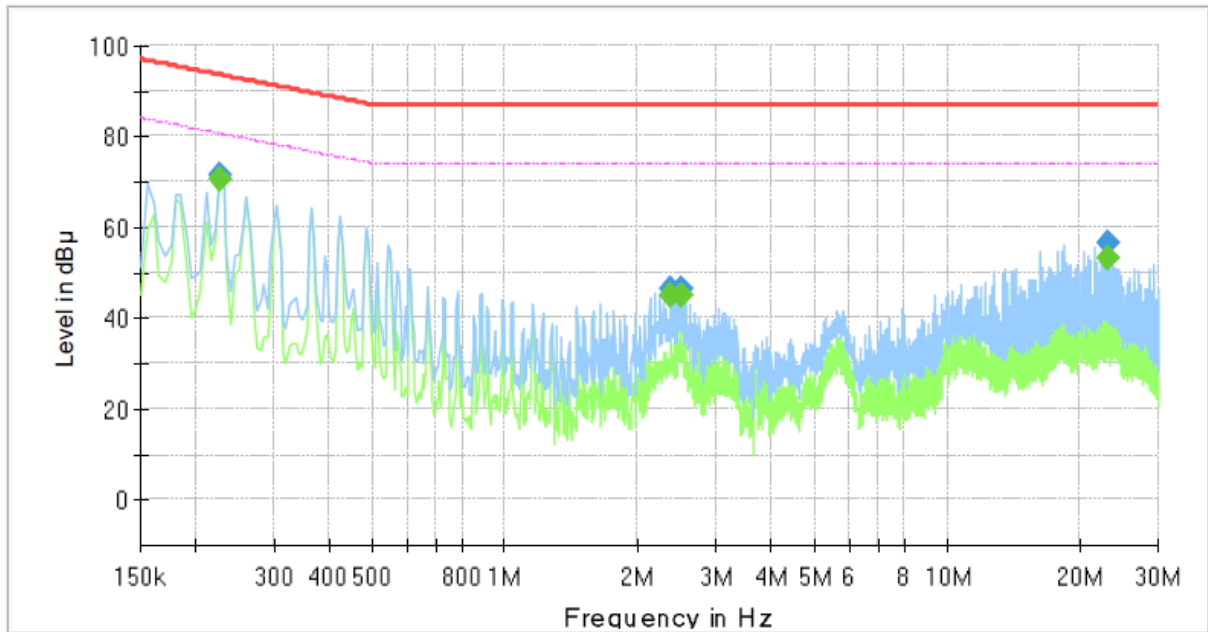
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■ PoE

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XRN-820S
Mode :	PoE_ 100 MHz
Speed :	
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.225000	---	70.46	80.63	10.17	1000.0	9.000	Single Line	19.7
0.225000	71.34	---	93.63	22.29	1000.0	9.000	Single Line	19.7
2.370000	---	45.05	74.00	28.95	1000.0	9.000	Single Line	20.0
2.370000	46.56	---	87.00	40.44	1000.0	9.000	Single Line	20.0
2.490000	---	45.09	74.00	28.91	1000.0	9.000	Single Line	20.0
2.490000	46.58	---	87.00	40.42	1000.0	9.000	Single Line	20.0
23.130000	---	53.41	74.00	20.59	1000.0	9.000	Single Line	19.9
23.130000	56.63	---	87.00	30.37	1000.0	9.000	Single Line	19.9

◆ Calculation

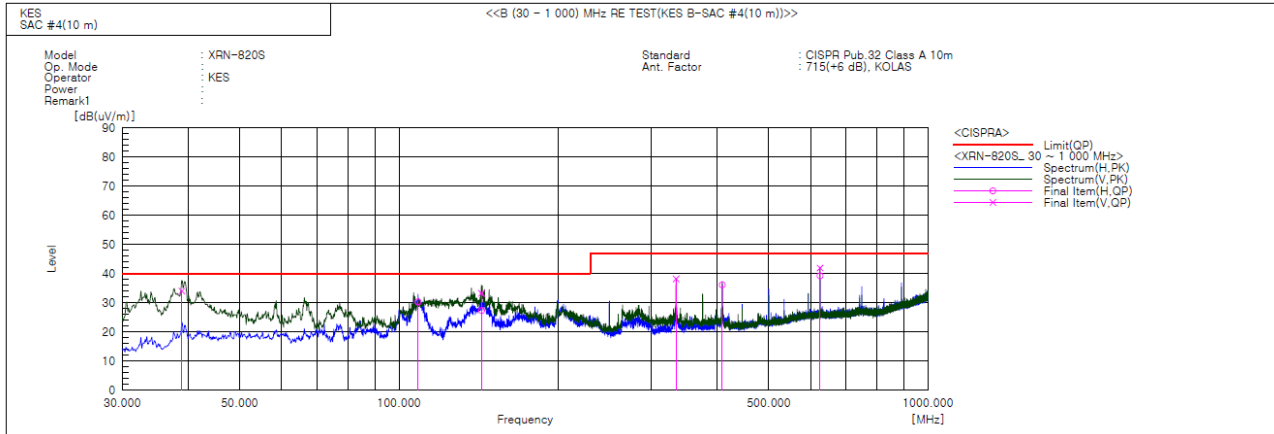
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]

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 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	38.851	V	56.8	-22.8	34.0	40.0	6.0	148.0	209.0	
2	108.691	H	53.1	-22.8	30.3	40.0	9.7	400.0	90.0	
3	143.248	V	58.6	-25.4	33.2	40.0	6.8	121.0	176.0	
4	143.369	H	52.7	-25.4	27.3	40.0	12.7	298.0	266.0	
5	334.129	V	54.2	-16.0	38.2	47.0	8.8	115.0	115.0	
6	408.300	H	49.8	-13.7	36.1	47.0	10.9	384.0	217.0	
7	624.996	V	49.9	-8.0	41.9	47.0	5.1	150.0	357.0	
8	624.999	H	47.2	-8.0	39.2	47.0	7.8	356.0	1.0	

◆ Calculation

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

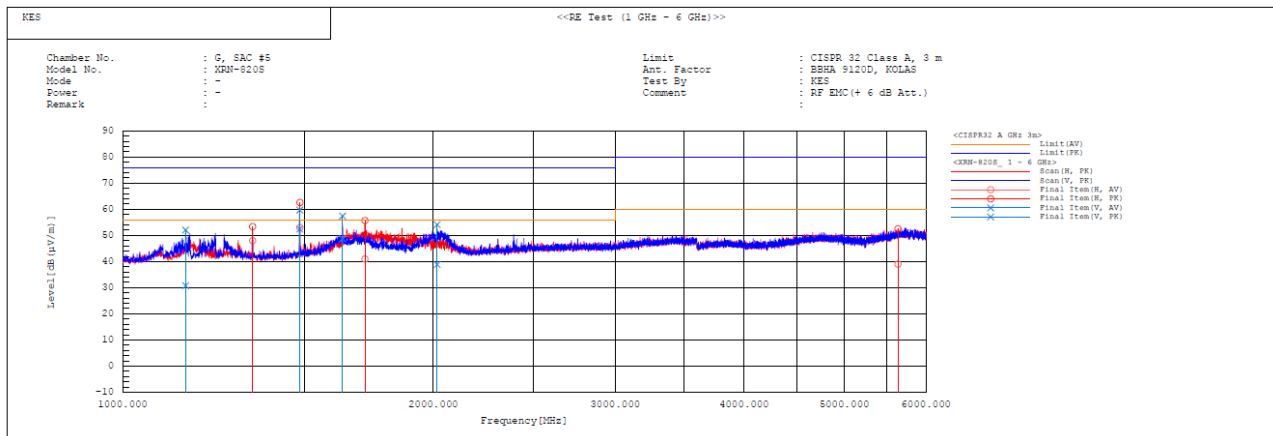
Margin(QP)[dB] = Limit[dB(μV/m)] - Result(QP) [dB(μV/m)]

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	Pol	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin	Height	Angle	Remark
	[MHz]		AV	PK		AV	PK	AV	PK	AV	PK	[cm]	[deg]	
			[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]			
1	1151.146	V	32.3	53.5	-1.5	30.8	52.0	56.0	76.0	25.2	24.0	100.0	9.2	
2	1336.695	H	48.3	53.7	-0.3	48.0	53.4	56.0	76.0	8.0	22.6	100.0	359.9	
3	1484.996	V	52.2	59.5	0.2	52.4	59.7	56.0	76.0	3.6	16.3	100.0	344.3	
4	1485.051	H	52.8	62.4	0.2	53.0	62.6	56.0	76.0	3.0	13.4	100.0	24.4	
5	1633.508	V	48.1	56.8	0.6	48.7	57.4	56.0	76.0	7.3	18.6	100.0	355.3	
6	1716.759	H	39.8	54.5	1.2	41.0	55.7	56.0	76.0	15.0	20.3	100.0	39.1	
7	2017.433	V	36.8	52.0	2.1	38.9	54.1	56.0	76.0	17.1	21.9	100.0	359.2	
8	5636.135	H	27.2	40.7	11.8	39.0	52.5	60.0	80.0	21.0	27.5	100.0	1.2	

◆ 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

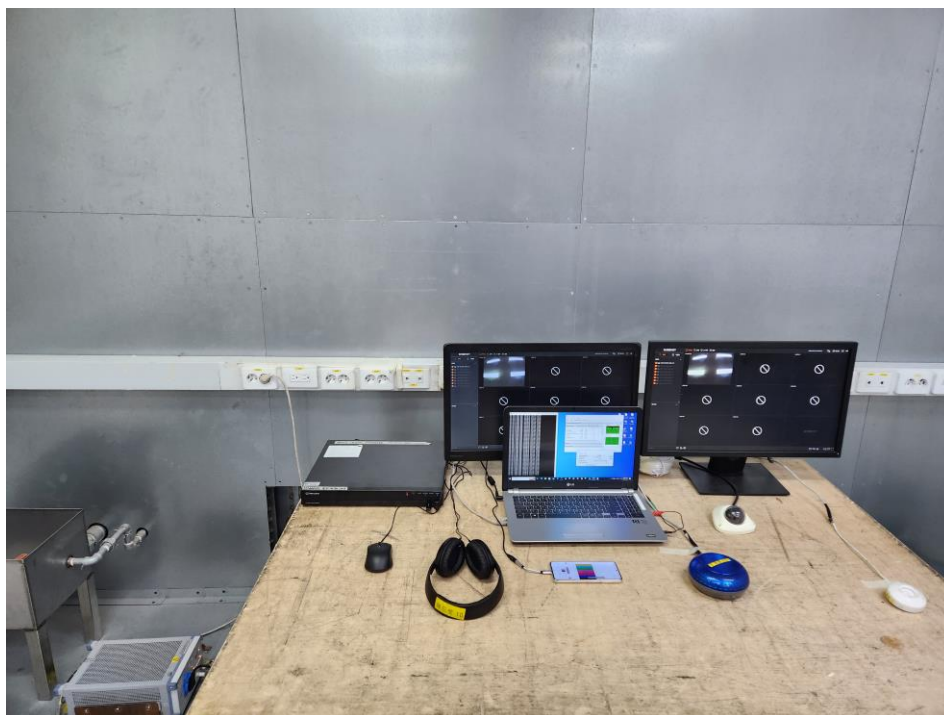
Test Setup Photos and Configuration

Conducted Emissions at Mains Power Ports



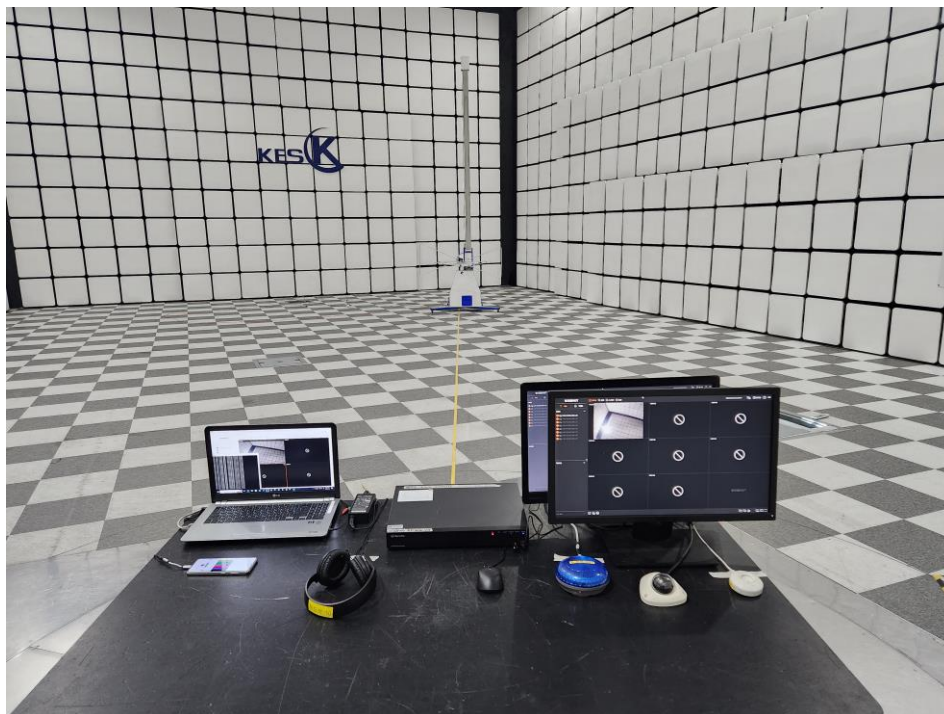
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Conducted Emissions at Telecommunication Ports



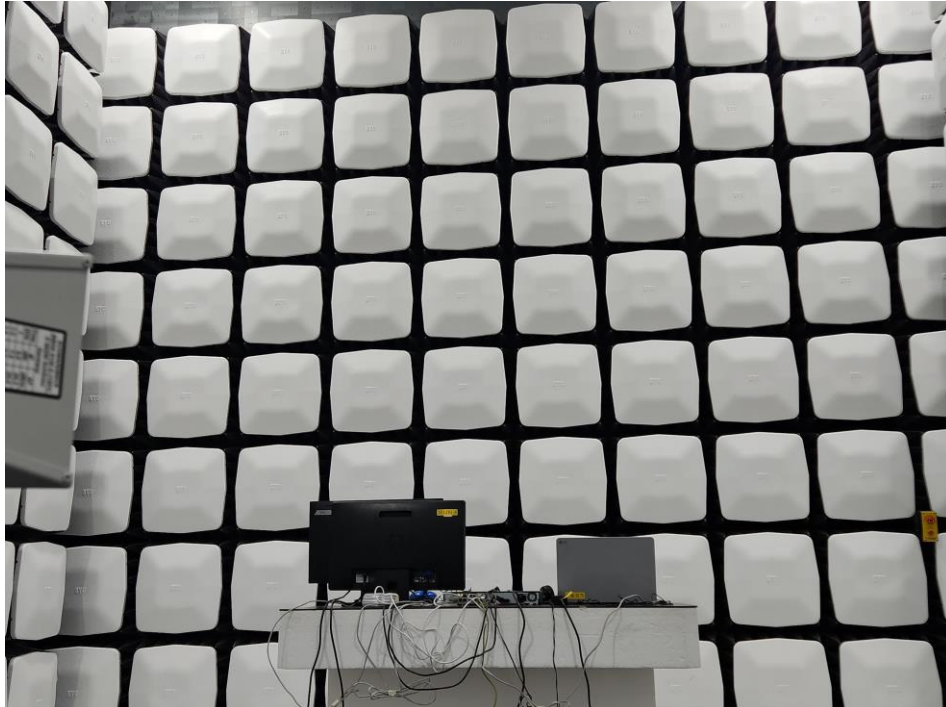
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Radiated Electric Field Emissions(Below 1 GHz)



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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

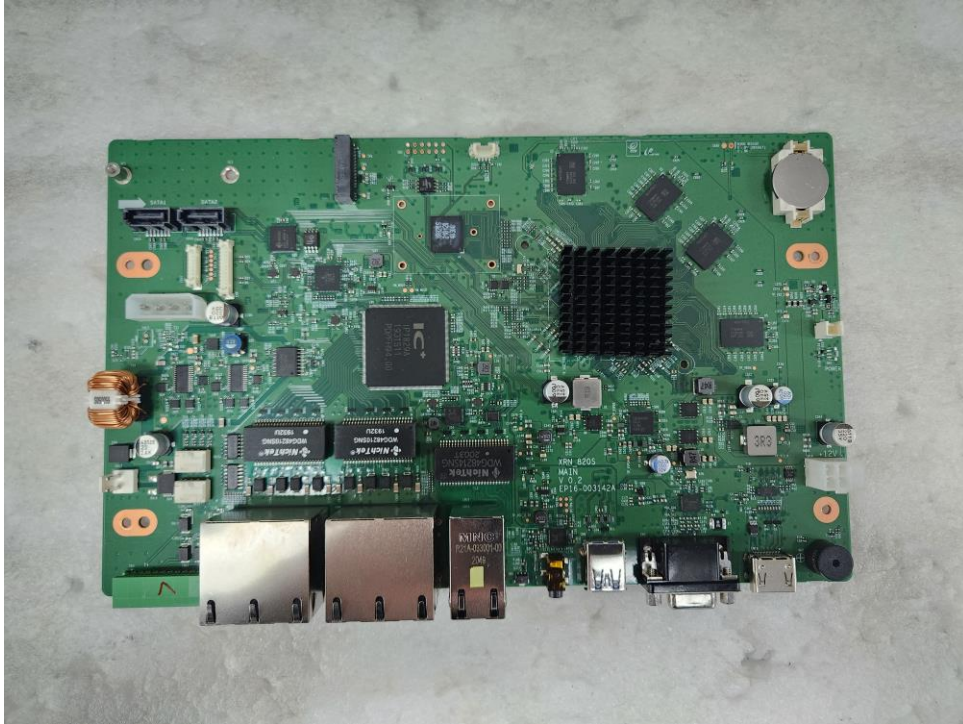
(Internal View)



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EUT Internal View – Main Board

(Top)



(Bottom)



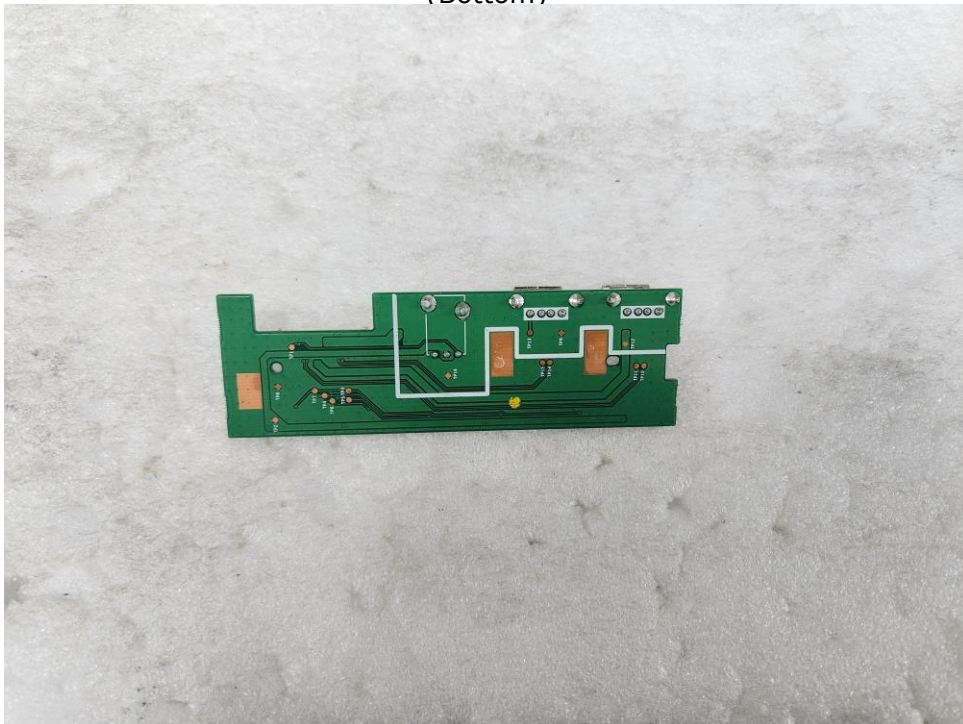
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EUT Internal View – Port Board

(Top)



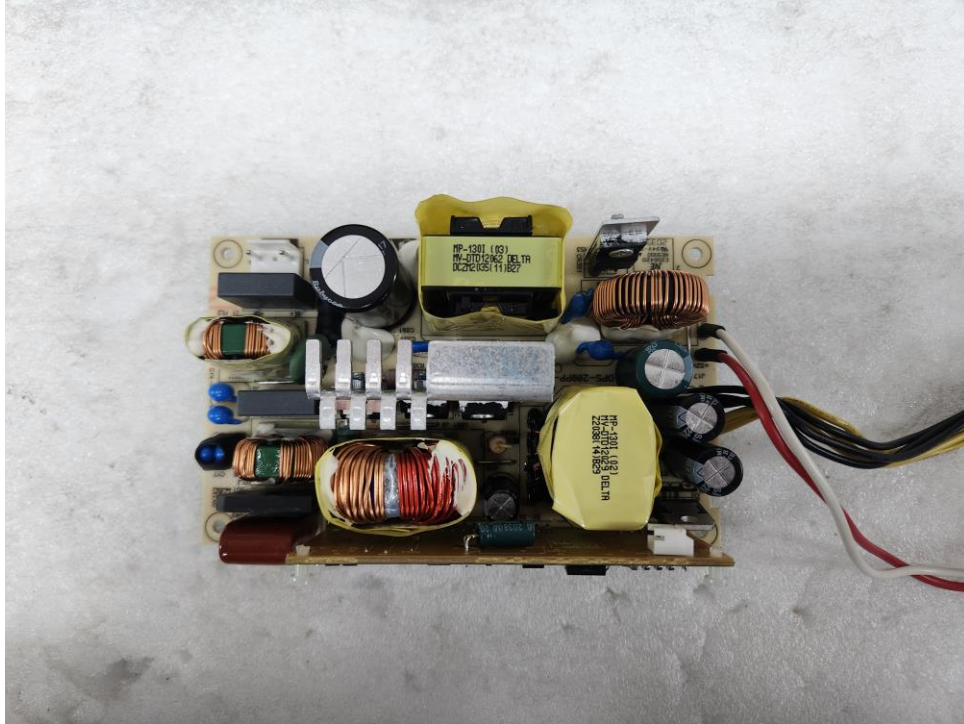
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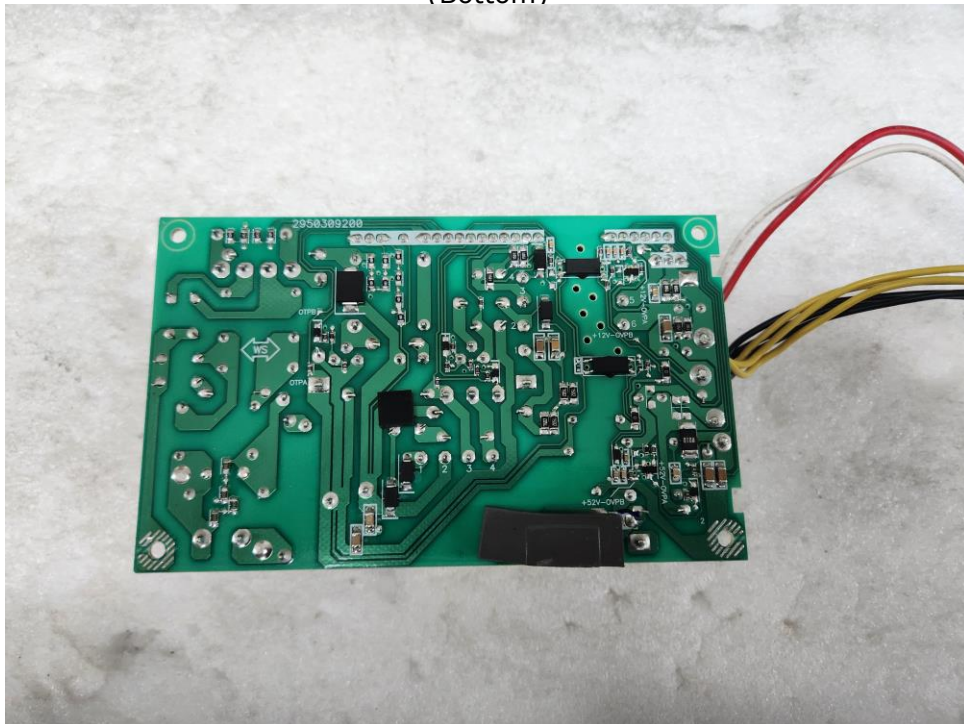
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EUT Internal View – SMPS Board 1

(Top)



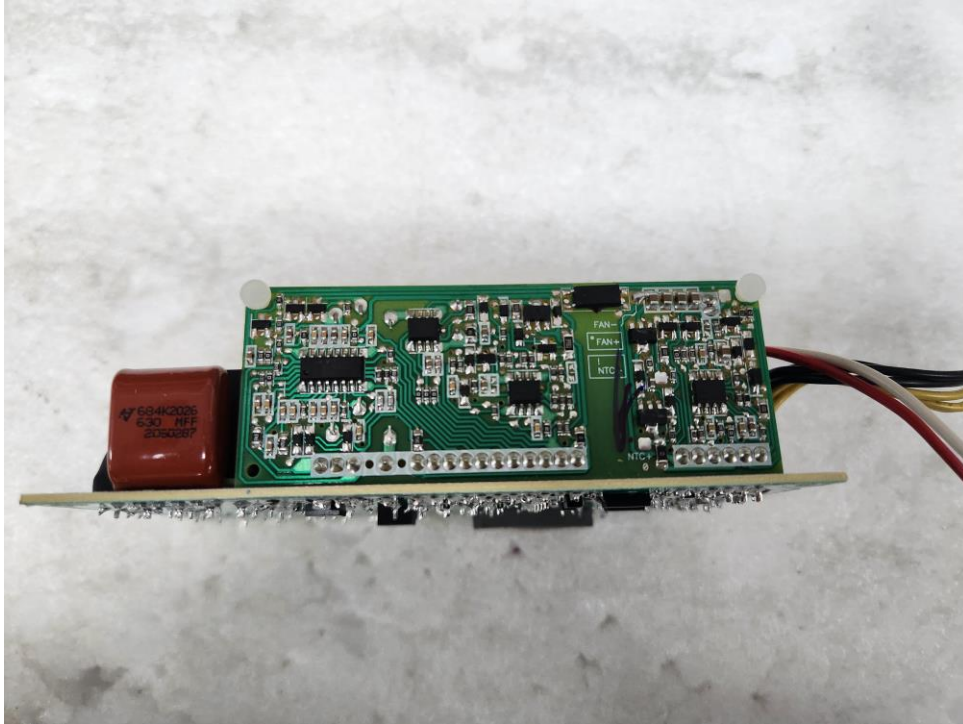
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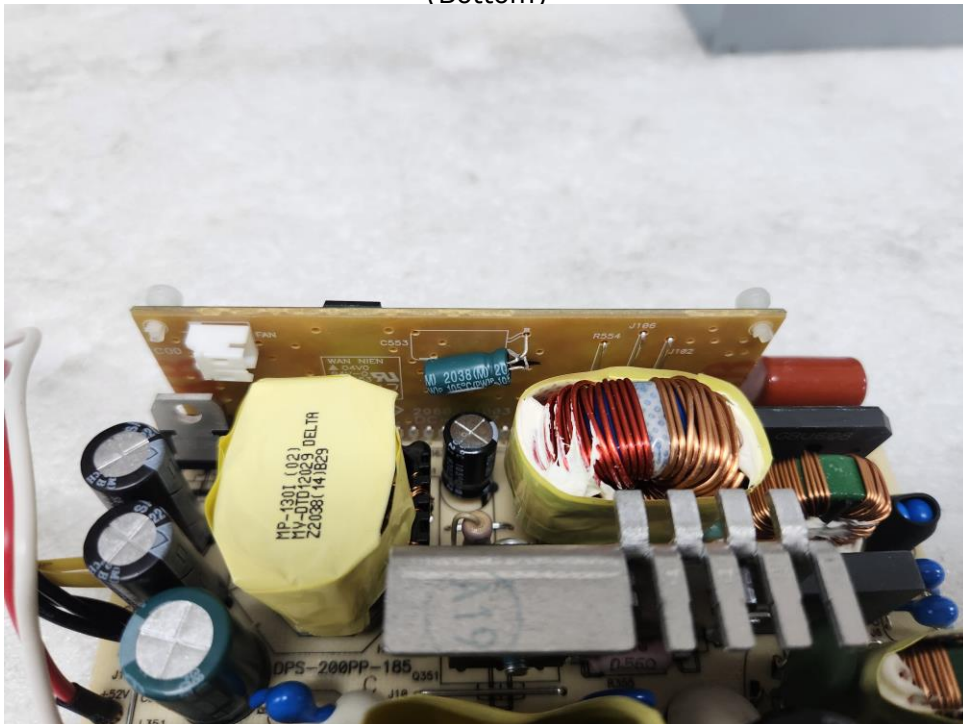
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EUT Internal View – SMPS Board 2

(Top)



(Bottom)



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EUT Internal View – SMPS PAN

(Top)



(Bottom)



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EUT Internal View – FAN

(Top)



(Bottom)

