

**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-E1-19T0793

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EMC TEST REPORT For VCCI

Test Report No. : KES-E1-19T0793

Date of Issue : Dec. 15, 2019

Product name : NVR

Model/Type No. : LRN-810S

Variant Model : -

Applicant : Hanwha Techwin Co., Ltd.

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

Manufacturer : 1. HANWHA TECHWIN(TIANJIN) CO., LTD.
2. HANWHA TECHWIN SECURITY VIETNAM CO.,LTD.
3. D-TECH CO.,LTD.

Manufacturer Address : 1. No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin,
300385, People's Republic of China
2. Lot O-2, Que Vo Industrial Zone extended area,
Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
3. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do,
Korea (Suwon Industrial Complex)

Date of Receipt : Nov. 19, 2019

Test date : Dec. 06, 2019

Test Results : ☒ In Compliance ☐ Not in Compliance

Tested by

Dong In, Kim
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Dec. 15, 2019	KES-E1-19T0793	Issued

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1.0 General Product Description

Main Specifications of EUT are:

		LRN-810S	Functions	
Performance			Item	IP address, Add profile edit, Bitrate, Compression, GOP, Quality, Camera MD setup, Wisestream, Dynamic GOV/FPS, VA Setup
Record	Compression	H.265, H.264, MJPEG		Camera video setup (Simple focus, Brightness/Contrast, Flip/Mirror, IRIS, WDR, D&N, SSNR, Shutter, SSDR, DIS), Fisheye Dewarping
	Record Rate(Analog)			Mode, Hallway View Setup, Camera Webpage
	Recording Bandwidth	Max. 50Mbps		
	Resolution	5MP ~ CIF		
	Mode	Normal, Schedule(Continuous/Event), Event (Pre/Post), Dual track Recording		
	Event Trigger	Alarm Input, Video Loss, Camera Event(Alarm, MD, Video Analytics, Defocus)		
Search & Play	Event Action	e-Mail, PTZ Preset, Buzzer, Monitor Out	PTZ	Control
	Playback Bandwidth	Max. 32Mbps(8CH simultaneously)	Smart phone	Support Model
	User	Max. 4 Users (Local 1, Remote 3)		Protocol Support
	Simultaneous playback	Max. 8CH(Local Monitor, Network)		Control
Storage	Fisheye Dewarping	WEB / CMS / Mobile		Live(Multi-Profile Support), Playback Search(3), Live Unicast(10)
	Supported HDD	Up to 6TB	Redundancy	Failover
	HDD Slot	SATA 1ea(Max. 6TB)		ARB
	External RAID			Support
Backup	File backup	BU/Exe(GUI), JPG/AVI(Network)	Easy configuration	
	Function	Multi channel(Upto 8CH) Play, Date-Time/Title display	Coaxial Control	
Network			Interface	
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), PPPoE, SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI(Server, Client)	HDMI	1EA
			VGA	
			Audio	
			Ethernet	RJ-45(10/100/1000BASE-T) x 1 RJ-45(PoE+) x 8
DDNS		Wisenet DDNS	Alarm	
Transmission Bandwidth		Max. 30Mbps	USB	2EA(Front 1, Rear 1)
Audio	Input/Output	8CH(network)	Power inlet	
	Compression	G.711, G.726, AAC(16/48KHz)	System	
Max Remote Users	Audio Communication	2-Way	System Control	Mouse, IR remocon, Web
		Search(3), Live Unicast(10), Multicast(20)	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
Security		HTTPS(SSL) Login Authentication	Environmental	
		Digest Login Authentication	Operating Temperature	0°C to +40°C(32°F to 104°F)
		IP Address Filtering	Operating Humidity	20% ~ 85% RH
		User access log	Electrical	
Viewer Software		802.1X Authentication(EAP-TLS, EAP-LEAP)	Power Input	54VDC / 1.67A
		Device Certificate(Hanwha Techwin Root CA)	Power Consumption	Max. 936.2W(1HDD, PoE on) Max. 14.1W(1HDD, PoE off)
			PoE Budget	Max. 65W
			Mechanical	
			Color / Material	Black / Metal
			Dimension (WxHxD)	W300.0 x H47.1 x D208.4 mm (11.8" x 1.85" x 8.2") (1U)
			Weight	1.01Kg (2.23lb)

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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.

Voltage ☐ 230 Vac ☒ 120 Vac ☐ 24 Vac ☐ 12 Vdc ☐ PoE

Frequency ☒ 50 Hz ☐ 60 Hz ☐ 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	LRN-810S	-	HANWHA TECHWIN (TIANJIN) CO., LTD	EUT
NVR Adaptor	FSP090-AWAN2	-	FSP TECHNOLOGY INC.	-
HDD	WD10EURX-63C57Y0	-	Western Digital	-

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Notebook	NT730U3E	JJRE91CF200065A	SAMSUNG	-
Notebook Adaptor	PA-1600-66	AD-6019P	LITEON	-
Monitor	24M47VQ	702NTQDA3604	LG	-
Monitor Adaptor	ADS-40FSG-19 19025GPG-1	EAY62768621	Shenzhen Honor Electronic Co., Ltd.	-
Network Camera	QNV-6023R	-	HANWHA TECHWIN (TIANJIN) CO., LTD	-
Mouse	-	-	-	-
USB Memory	-	-	Transcend	16G



1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NVR (EUT)	NETWORK 2	Notebook	NETWORK 2	3.0	U
	HDMI	Monitor	HDMI	1.4	S
	NETWORK 1	Network Camera	NETWORK 1	3.0	U
	USB Slot	Mouse	USB	1.2	U
	USB Slot	USB Memory	USB	-	U

* Unshielded=U, Shielded=S

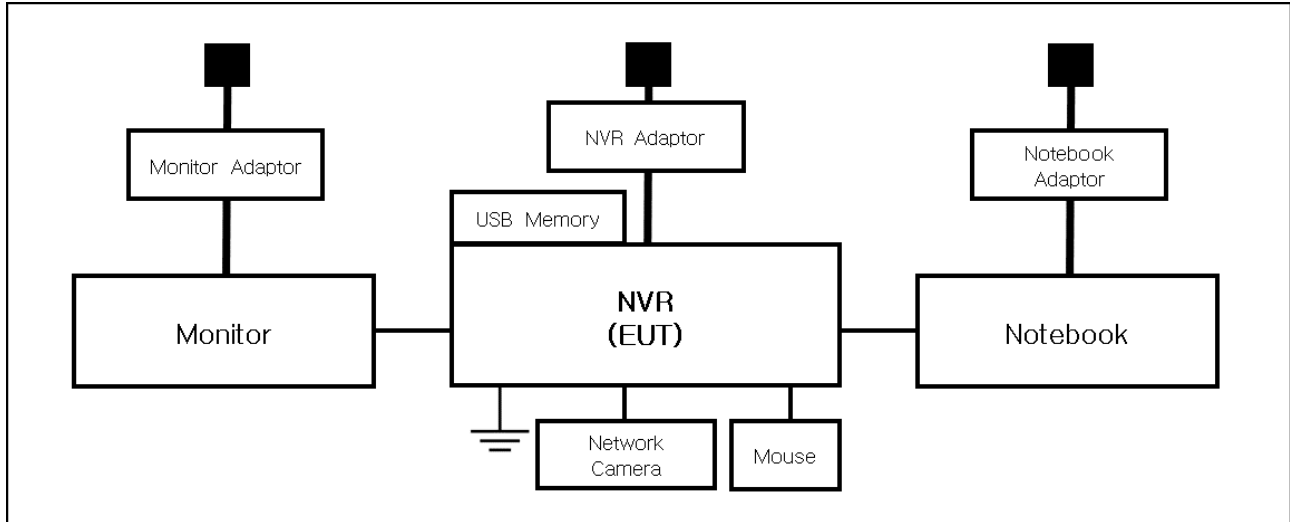
1.7 EUT Operating Mode(s)

Test mode	operating
Operate	Monitoring EUT, Ping Test

EUT Test operating S/W		
Name	Version	Manufacture Company
-	-	-

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. The sites are constructed in conformance with the requirements of ANSI C63.4:2014 and CISPR 16-1-4:2012

1.12 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	RRA	EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area 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, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	 23298-1
JAPAN	VCCI	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	 R-20056, C-20036, T-20040, G-20057
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 001633 0003



2.0 Test Regulations

The emissions tests were performed according to following regulations:

☐ EMC – Directive 2014/30/EU

☐ EN 61000-6-3:2011

☐ EN 61000-6-1:2007

☐ EN 61000-6-4:2007 +A1:2011

☐ EN 61000-6-2:2005

☐ EN 55011:2007 +A1:2010

☐ Group 1
☐ Class A

☐ Group 2
☐ Class B

☐ EN 55014-1:2006 +A2:2011

☐ EN 55014-2:1997 +A2:2008

☐ EN 55015:2013

☐ EN 61547 :2009

☐ EN 55032:2015

☐ Class A

☐ Class B

☐ EN 55024:2010 +A1:2015

☐ EN 50130-4:2011 +A1:2014

☐ EN 61000-3-2:2014

☐ EN 61000-3-3:2013

☐ EN 61326-1:2013



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- | | | |
|--|---|----------------------------------|
| ☒ VCCI-CISPR 32:2016 | ☒ Class A | ☐ Class B |
| ☐ AS/NZS CISPR32:2015 | ☐ Class A | ☐ Class B |
| ☐ 47 CFR Part 15, Subpart B | | |
| ☐ CISPR 22:2009 +A1:2010 | ☐ Class A | ☐ Class B |
| ☐ ANSI C63.4-2009 | | |
| ☐ IC Regulation ICES-003 : 2016 | | |
| ☐ CAN/CSA CISPR 22-10 | ☐ Class A | ☐ Class B |
| ☐ ANSI C63.4-2014 | | |
|
 | | |
| ☐ RE- Directive 2014 / 53 / EU | | |
|
 | | |
| ☐ EN 301 489-1 V1.9.2 | | |
| ☐ Equipment for fixed use | | |
| ☐ Equipment for vehicular use | | |
| ☐ Equipment for portable use | | |
| ☐ EN 301 489-3 V1.6.1 | | |
| ☐ EN 301 489-17 V2.2.1 | | |
| ☐ EN 60945:2002 | | |

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2.1 Conducted Emissions Mains Power Ports

Test Date
Dec. 06, 2019

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	101781	04, 22, 2020
☒	LISN	ENV216	R & S	101787	01, 04, 2020
☒	LISN	ESH2-Z5	R & S	100450	04, 22, 2020
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 25, 2020

Test Conditions

Temperature: 21,9 °C
Relative Humidity: 49,6 % 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
Dec. 06, 2019

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	101781	04, 22, 2020
☒	LISN	ENV216	R & S	101787	01, 04, 2020
☒	LISN	ESH2-Z5	R & S	100450	04, 22, 2020
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	11, 25, 2020
☐	8-WIRE ISN CAT3,5	ENY81	R & S	100174	01, 07, 2020
☒	8-WIRE ISN CAT6	ENY81-CAT6	R & S	101665	01, 07, 2020

Test Conditions

Temperature: 21,9 °C
Relative Humidity: 49,6 % 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.

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2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Dec. 06, 2019

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	ESU26	R & S	100551	04, 09, 2020
☒	AMPLIFIER	SCU 01	R & S	100603	11, 25, 2020
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	11, 29, 2020
☒	ATTENUATOR	8491A	HP	32173	03, 11, 2020

Test Conditions

Temperature: 21,8 °C

Relative Humidity: 50,5 % 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

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2.4 Radiated Electric Field Emissions(Above 1 GHz)

Test Date
Dec. 06, 2019

Test Location
SEMI ANECHOIC CHAMBER #3

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	ESR7	R & S	101190	08, 06, 2020
☒	PREAMPLIFIER	8449B	AGILENT	3008A01967	05, 27, 2020
☐	ATTENUATOR	8491A	HP	35496	03, 11, 2020
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM, INC	781	03, 12, 2020

Test Conditions
Temperature: 22,4 °C
Relative Humidity: 50,2 % 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.



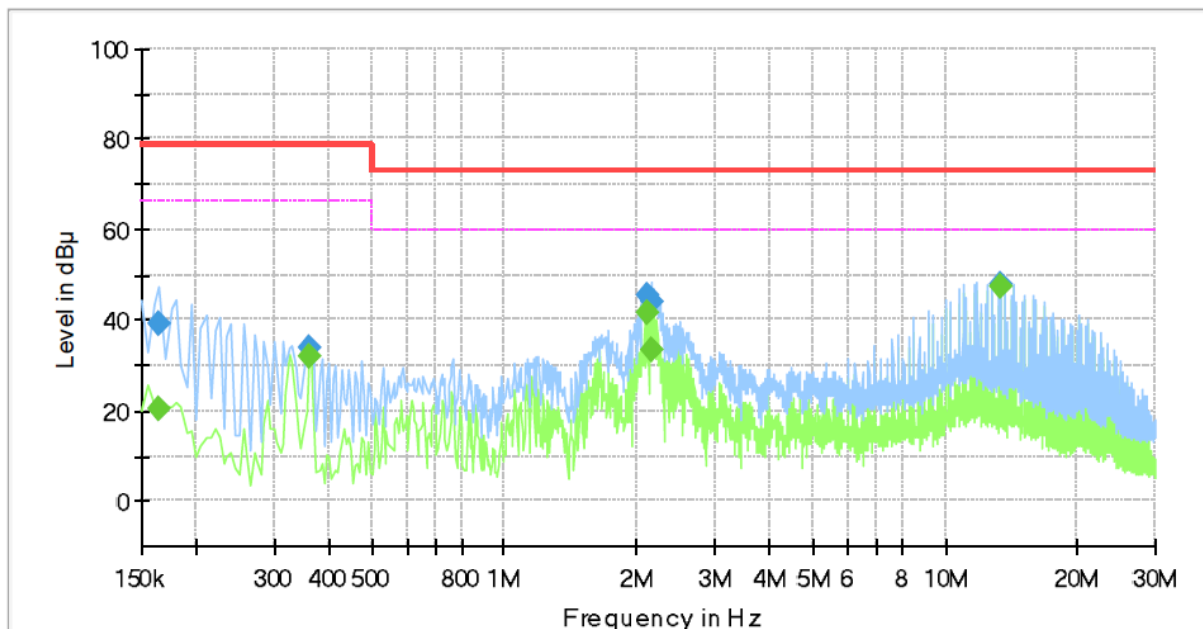
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

HOT LINE

Common Information

Test Description: Conducted Emission
Model No.: LRN-810S
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)
0.165000	---	20.27	66.00	45.73	1000.0	9.000	L1	19.5
0.165000	39.30	---	79.00	39.70	1000.0	9.000	L1	19.5
0.360000	---	32.15	66.00	33.85	1000.0	9.000	L1	19.7
0.360000	34.04	---	79.00	44.96	1000.0	9.000	L1	19.7
2.115000	---	41.53	60.00	18.47	1000.0	9.000	L1	20.4
2.115000	45.47	---	73.00	27.53	1000.0	9.000	L1	20.4
2.160000	---	33.25	60.00	26.75	1000.0	9.000	L1	20.4
2.160000	43.98	---	73.00	29.02	1000.0	9.000	L1	20.4
13.410000	---	47.61	60.00	12.39	1000.0	9.000	L1	20.1
13.410000	47.98	---	73.00	25.02	1000.0	9.000	L1	20.1



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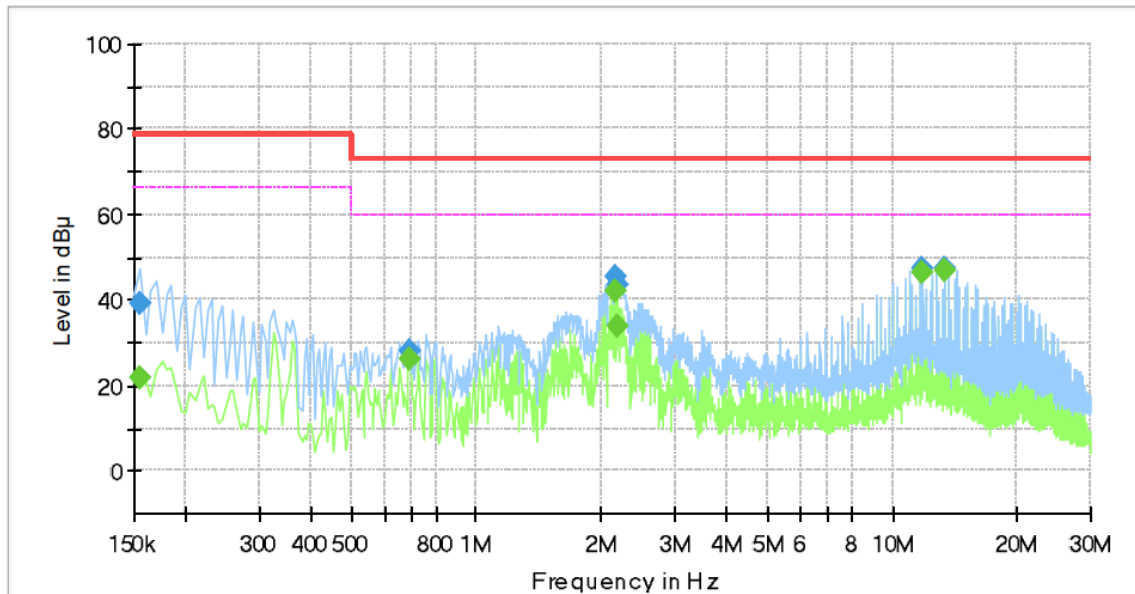
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NEUTRAL LINE

Common Information

Test Description: Conducted Emission
Model No.: LRN-810S
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)
0.155000	---	21.94	66.00	44.06	1000.0	9.000	N	19.5
0.155000	39.23	---	79.00	39.77	1000.0	9.000	N	19.5
0.690000	---	26.16	60.00	33.84	1000.0	9.000	N	20.1
0.690000	28.08	---	73.00	44.92	1000.0	9.000	N	20.1
2.150000	---	42.01	60.00	17.99	1000.0	9.000	N	20.4
2.150000	45.35	---	73.00	27.65	1000.0	9.000	N	20.4
2.195000	---	33.97	60.00	26.03	1000.0	9.000	N	20.4
2.195000	43.53	---	73.00	29.47	1000.0	9.000	N	20.4
11.845000	---	46.53	60.00	13.47	1000.0	9.000	N	20.1
11.845000	47.45	---	73.00	25.55	1000.0	9.000	N	20.1
13.410000	---	47.15	60.00	12.85	1000.0	9.000	N	20.2
13.410000	47.41	---	73.00	25.59	1000.0	9.000	N	20.2

◆ 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))

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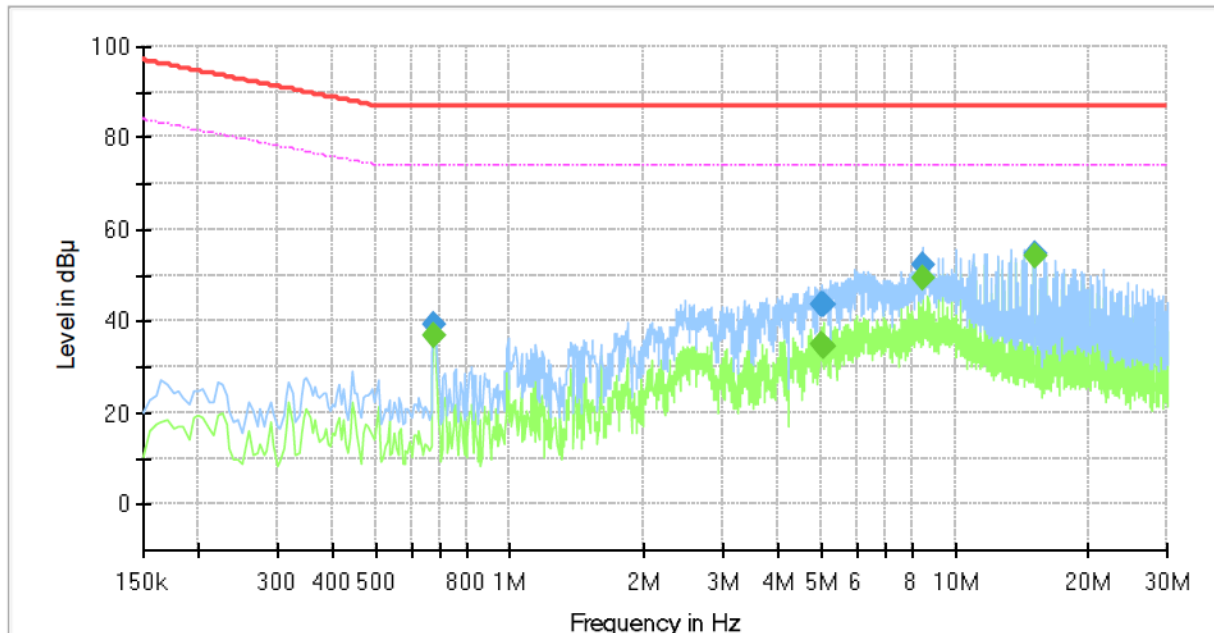
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Conducted Emissions at Telecommunication Ports

■ NETWORK 1 [1 000 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	LRN-810S
Mode :	NETWORK 1
Speed :	1 000 Mbps
Operator Name:	KES



Final Result

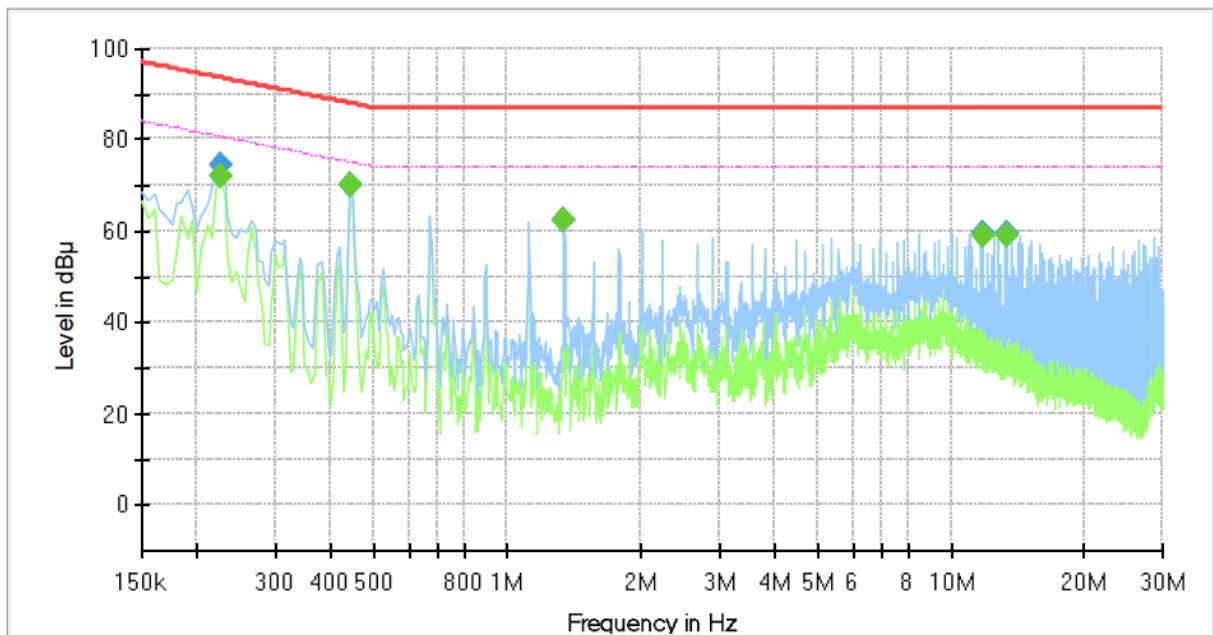
Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.675000	---	36.73	74.00	37.27	1000.0	9.000	Single Line	19.6
0.675000	38.98	---	87.00	48.02	1000.0	9.000	Single Line	19.6
5.025000	---	34.95	74.00	39.05	1000.0	9.000	Single Line	19.5
5.025000	43.68	---	87.00	43.32	1000.0	9.000	Single Line	19.5
5.090000	---	34.19	74.00	39.81	1000.0	9.000	Single Line	19.5
5.090000	43.58	---	87.00	43.42	1000.0	9.000	Single Line	19.5
8.490000	---	49.14	74.00	24.86	1000.0	9.000	Single Line	19.5
8.490000	52.15	---	87.00	34.85	1000.0	9.000	Single Line	19.5
15.190000	---	54.19	74.00	19.81	1000.0	9.000	Single Line	19.6
15.190000	54.47	---	87.00	32.53	1000.0	9.000	Single Line	19.6

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■ NETWORK 2
 [1 000 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	LRN-810S
Mode :	NETWORK 2
Speed :	1 000 Mbps
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.225000	---	72.20	80.63	8.43	1000.0	9.000	Single Line	19.8
0.225000	74.59	---	93.63	19.04	1000.0	9.000	Single Line	19.8
0.445000	---	70.02	74.97	4.95	1000.0	9.000	Single Line	19.6
0.445000	70.03	---	87.97	17.94	1000.0	9.000	Single Line	19.6
1.340000	---	62.28	74.00	11.72	1000.0	9.000	Single Line	19.5
1.340000	62.26	---	87.00	24.74	1000.0	9.000	Single Line	19.5
11.840000	---	59.09	74.00	14.91	1000.0	9.000	Single Line	19.5
11.840000	59.36	---	87.00	27.64	1000.0	9.000	Single Line	19.5
13.405000	---	59.21	74.00	14.79	1000.0	9.000	Single Line	19.6
13.405000	59.52	---	87.00	27.48	1000.0	9.000	Single Line	19.6

◆ 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))

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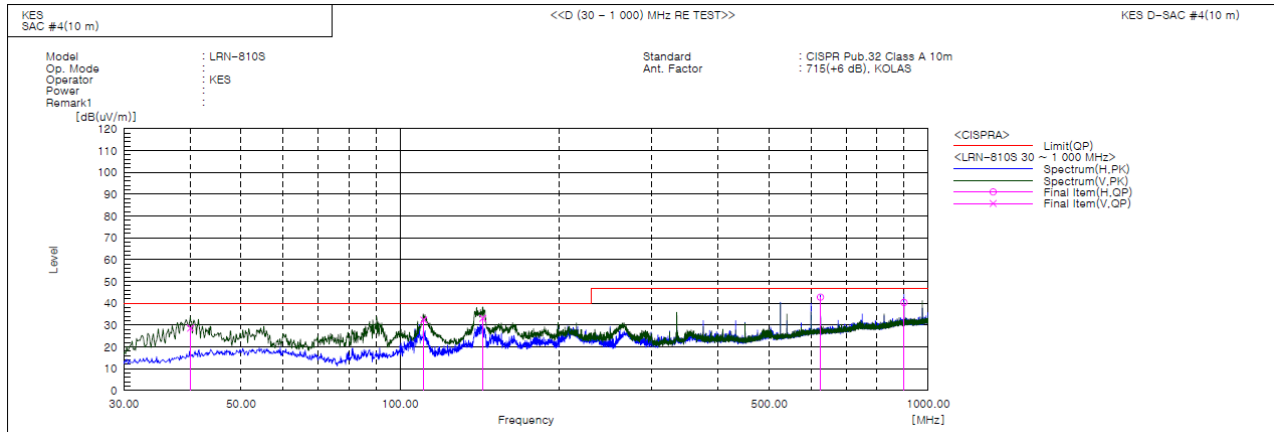
3701, 40, Simin-daero 365beon-gil,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

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KES-E1-19T0793

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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	40.109	V	51.4	-22.8	28.6	40.0	11.4	100.0	144.0	
2	110.847	V	55.0	-22.6	32.4	40.0	7.6	106.0	188.0	
3	143.409	V	59.1	-26.0	33.1	40.0	6.9	115.0	163.0	
4	624.969	H	52.3	-9.5	42.8	47.0	4.2	372.0	338.0	
5	899.915	H	46.0	-5.6	40.4	47.0	6.6	352.0	222.0	

◆ Calculation

Corrected Amplitude [dBuV] = Amplitude[dBuV] + Correction Factor [dB]

Corrected Amplitude : The Final Value, Amplitude : Reading Value,

Correction Factor : ANT FACTOR + Cable loss

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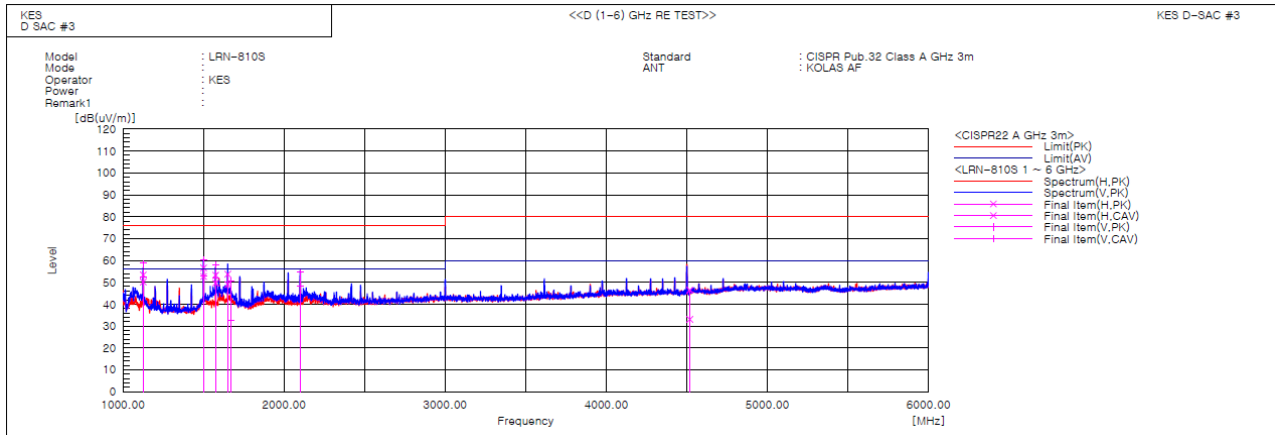
3701, 40, Simin-daero 365beon-gil,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
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Report No.:

KES-E1-19T0793

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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	1124.610	V	67.5	61.5	-8.9	58.6	52.6	76.0	56.0	17.4	3.4	100.0	226.1	
2	1124.960	H	62.2	59.0	-8.9	53.3	50.1	76.0	56.0	22.7	5.9	100.0	311.3	
3	1500.110	V	66.8	59.4	-6.5	60.3	52.9	76.0	56.0	15.7	3.1	100.0	202.1	
4	1499.800	H	63.1	59.2	-6.5	56.6	52.7	76.0	56.0	19.4	3.3	100.0	219.9	
5	1575.100	V	63.8	58.0	-6.0	57.8	52.0	76.0	56.0	18.2	4.0	100.0	155.1	
6	1574.710	H	59.3	55.6	-6.0	53.3	49.6	76.0	56.0	22.7	6.4	100.0	213.2	
7	1670.966	V	55.5	37.6	-5.0	50.5	32.6	76.0	56.0	25.5	23.4	100.0	226.6	
8	1650.010	H	59.0	54.3	-5.3	53.7	49.0	76.0	56.0	22.3	7.0	100.0	271.9	
9	2099.910	V	56.0	50.0	-1.5	54.5	48.5	76.0	56.0	21.5	7.5	100.0	188.5	
10	4518.636	H	40.4	27.1	6.0	46.4	33.1	80.0	60.0	33.6	26.9	100.0	115.3	

◆ 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)]

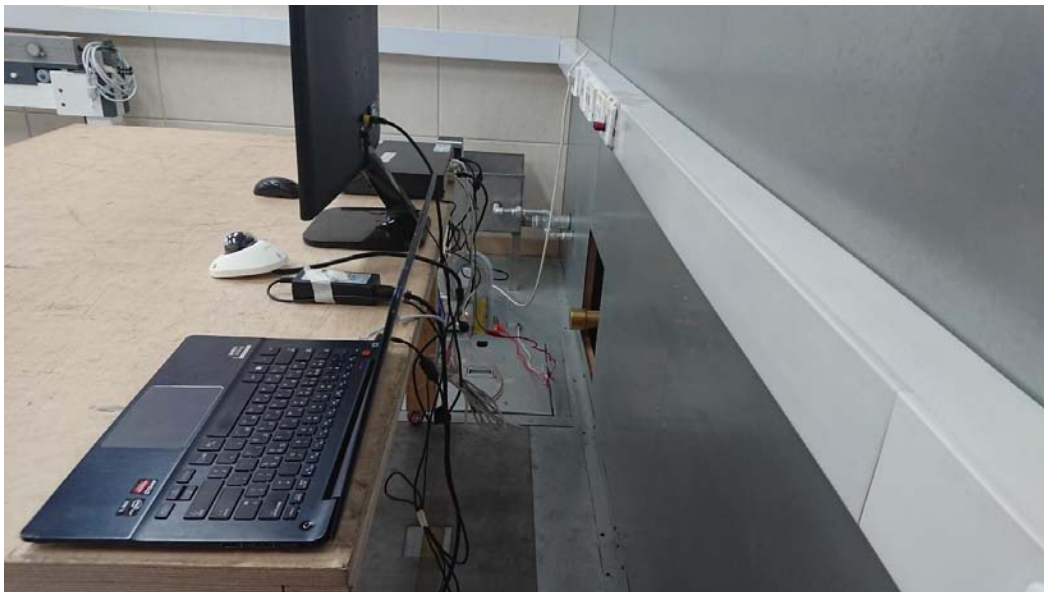
Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

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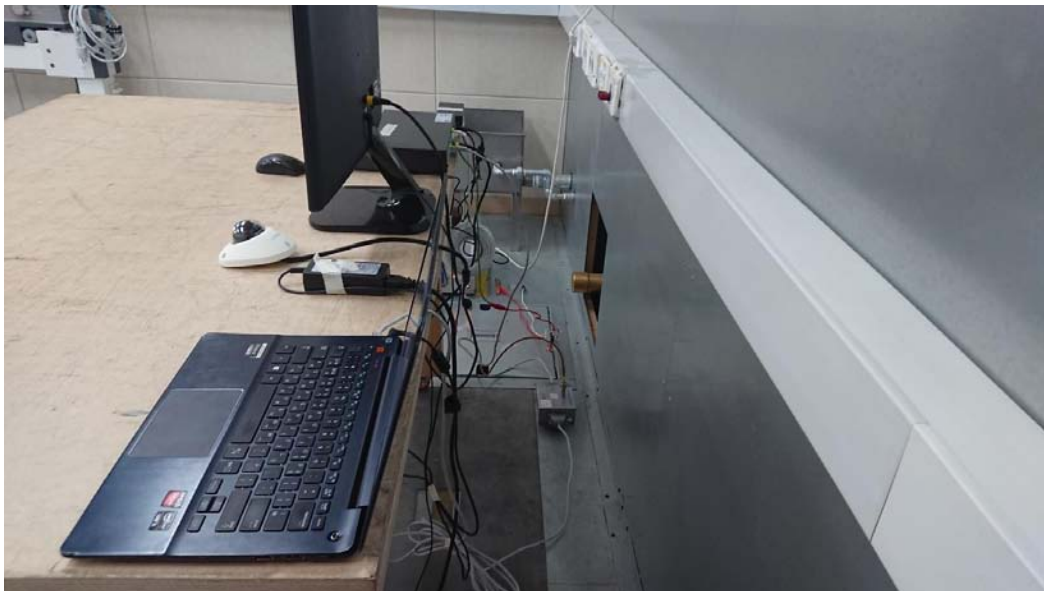
Test Setup Photos and Configuration

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)



EUT Internal Photographs

(Internal View)



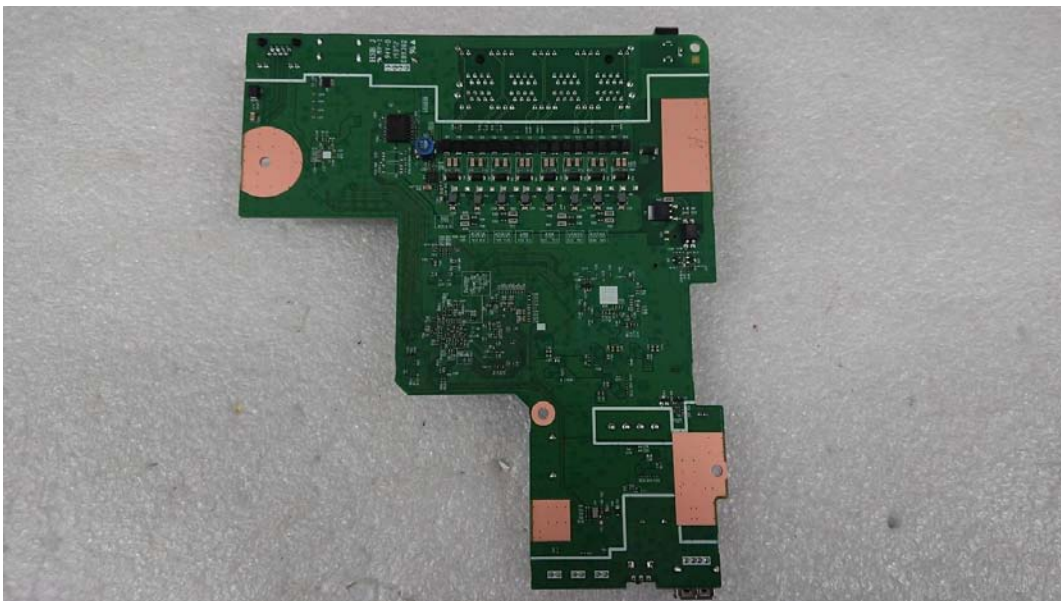
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EUT Internal View – Main Board

(Top)



(Bottom)



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EUT Internal View – HDD

(Top)



(Bottom)



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Label Photographs



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