

Application for FCC Certificate
On Behalf of
LG Electronics U.S.A., Inc.

LCD Monitor

Model No.: E2411PX

Serial No.: E1206718-01/01

FCC ID : BEJE2411PX

Prepared For : LG Electronics U.S.A., Inc.
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NJ 07632, United States

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Report No. : ACI-F12107
Date of Test : Jun 11 – 12, 2012
Date of Report : Jun 14, 2012

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TEST REPORT FOR FCC CERTIFICATE

Applicant : LG Electronics U.S.A., Inc.
Manufacturer : LG Electronics Nanjing Display Co., Ltd.
EUT Description : LCD Monitor
(A) Model No. : E2411PX
(B) Serial No. : E1206718-01/01
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2011
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) and ICES-003, Issue 4 February 2004 (CISPR 22:2002) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: E2411PX; S/N: E1206718-01/01) which was tested in 3m anechoic chamber Jun 11 – 12, 2012 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Jun 11 – 12, 2012 Date of Report : Jun 14, 2012

Producer : Yenny Yu.
YENNY YU / Assistant

Review : DIO YANG
DIO YANG / Assistant Manager

AUDIX® For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2011 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2011 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	: LCD Monitor
Type of EUT	: ☒ Production ☐ Pre-product ☐ Pro-type
Model No.	: E2411PX
Serial No.	: E1206718-01/01
Note	: The data of E2411PX at rotate 90 degree condition (only radiated emission) was also tested and recorded in this report. The mode tested was the worst case of E2411PX in normal condition.
Real Power	: 24.80W
Applicant	: LG Electronics U.S.A., Inc. 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, United States
Manufacturer	: LG Electronics Nanjing Display Co., Ltd. No.346, Yao Xin Road, Economic & Technical Development Zone, Nanjing, China
LCD Panel	: Manufacturer: AU Optronics M/N : M240HW01
Max Resolution	: 1920*1080@60Hz
D-Sub Cable #1	: Shielded, Detachable, 1.85m
D-Sub Cable #2	: Shielded, Detachable, 1.50m
DVI Cable #1	: Shielded, Detachable, 2.00m
DVI Cable #2	: Shielded, Detachable, 1.50m
Power Cord	: Unshielded, Detachable, 1.80m
Note	: The D-Sub cable #2 and DVI cable #2 were selected to be used in the test.

Remark:

The EUT is a LCD Monitor which input/output ports as follows:

- (1) One D-Sub Port : Connected with PC
- (2) One DVI Port : Connected with PC
- (3) One AC In Port : Connected with Power

2.2 Peripherals

2.2.1 PC

Manufacturer	:	HP
Model Number	:	dx7200MT
Serial Number	:	CNG622017W
Power Cord	:	Unshielded, Detachable, 1.8m
Certificate	:	FCC DoC; CE/EMC; VCCI; C-Tick; UL BSMI (R33001) 3C (A000111) MIC (E-A011-04-2659(B))

2.2.2 Graphics Card (Used in PC)

Manufacturer	:	ASUS
Model Number	:	EAH6670
Output port	:	DVI, D-Sub, HDMI

2.2.3 Printer

Manufacturer	:	HP
Model Number	:	C3990A
Serial Number	:	JPZX020487
Data Cable	:	Shielded, Detachable, 1.5m
Certificate	:	GS, CE/EMC, C-Tick, FCC DoC

2.2.4 Keyboard

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	7668200662248
Data Cable	:	Shielded, Undetachable, 1.8m
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.5 Mouse

Manufacturer	:	Microsoft
Model Number	:	RT2300
Serial Number	:	6965712071551
Data Cable	:	Shielded, Undetachable, 1.8m.
Certificate	:	CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI

2.2.6 Modem

Manufacturer	:	TP-LINK
Model Number	:	TM-EC5658V
Serial Number	:	07123301053
Data Cable	:	Shielded, Detachable, 1.8m
Certificate	:	FCC DoC, CE/EMC, CCC

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on Apr 29, 2009 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty:	U = 3.43 dB
Radiated Emission Expanded Uncertainty (30-200MHz):	U = 4.67 dB (Horizontal) U = 4.72 dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):	U = 4.81 dB (Horizontal) U = 4.69 dB (Vertical)
Radiated Emission Expanded Uncertainty (Above 1GHz) :	U= 4.50 dB (Horizontal) U= 4.16 dB (Vertical)

3 CONDUCTED EMISSION TEST

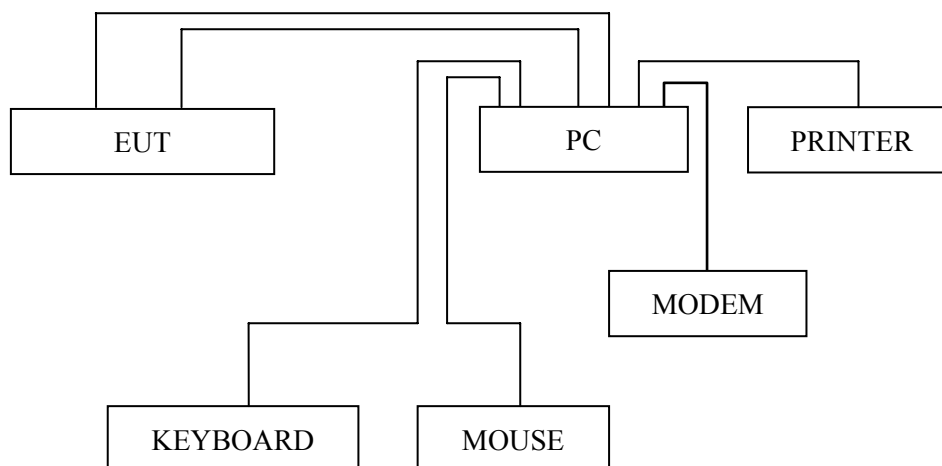
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

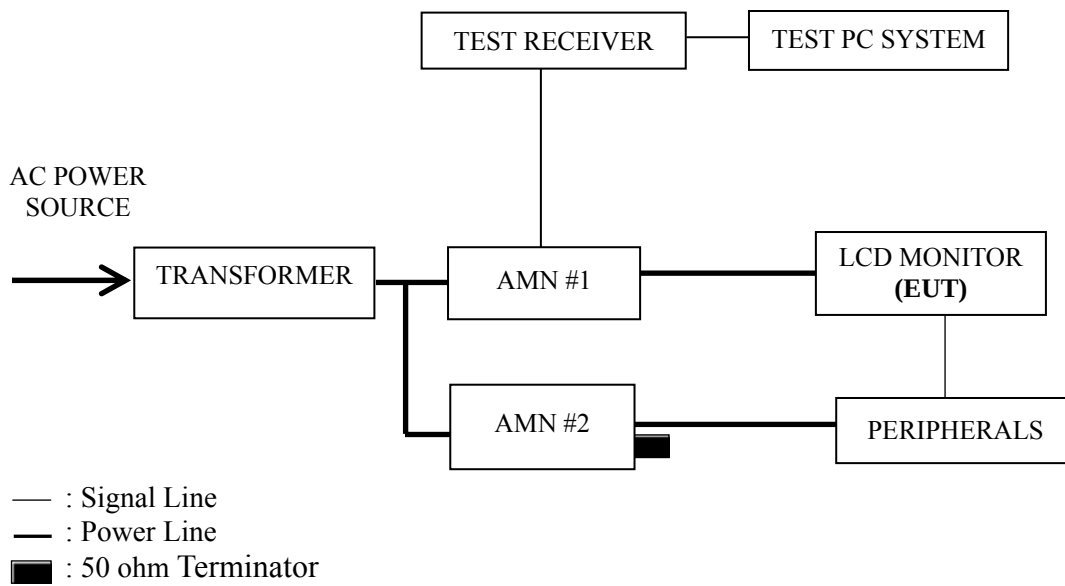
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 22, 2012	Mar 22, 2013
2.	Artificial Mains Network (AMN #1)	R&S	ESH2-Z5	843890/011	Feb 13, 2012	Feb 13, 2013
3.	Artificial Mains Network (AMN #2)	R&S	ENV4200	100125	Mar 22, 2012	Mar 22, 2013
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2012	Sep 18, 2012
5.	50 Ω Terminator	Anritsu	BNC	001	Mar 22, 2012	Mar 22, 2013
6.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE 1 – The lower limit shall apply at the transition frequencies. NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz		

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program "EMC Test" by windows XP and sent "H" characters to EUT through graphic card (we use white letters on a black background to represent all colors), the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-Sub/DVI Input).

3.5.5 Repeat above procedure from 3.5.3 to 3.5.4 for difference test mode.

3.5.6 The other peripherals devices were driven and operated during the test.

3.5.7 The test modes are as follows:

Test Mode
D-Sub 1920*1080@60Hz
DVI 1920*1080@60Hz
DVI 1680*1050@60Hz
DVI 1280*1024@75Hz
DVI 640*480@60Hz

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Data Page
D-Sub 1920*1080@60Hz	P12
DVI 1920*1080@60Hz	P13
DVI 1680*1050@60Hz	P14
DVI 1280*1024@75Hz	P15
DVI 640*480@60Hz	P16

NOTE 1 – The **bold test mode** listed above means the worst test mode.

NOTE 2 – Factor = Cable Loss + AMN Factor.

NOTE 3 – Emission Level = Meter Reading + Factor.

NOTE 4 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 5 – The worst case is for DVI 1920*1080@60Hz test mode. The worst emission is detected at 3.293 MHz (Average Value) with corrected signal level of 31.73 dB (μV) (limit is 46.00 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 48%RH

Serial No. : E1206718-01/01 Date of Test : Jun 11, 2012

Test Mode : D-Sub 1920*1080@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.152	44.01	0.23	44.24	65.91	21.67	QP
	0.242	34.47	0.25	34.72	62.04	27.32	
	0.627	31.61	0.21	31.82	56.00	24.18	
	3.107	36.59	0.42	37.01	56.00	18.99	
	9.204	36.09	0.72	36.81	60.00	23.19	
	27.708	40.11	1.24	41.35	60.00	18.65	
	0.152	33.30	0.23	33.53	55.91	22.38	AV
	0.242	25.20	0.25	25.45	52.04	26.59	
	0.627	22.91	0.21	23.12	46.00	22.88	
	3.107	27.40	0.42	27.82	46.00	18.18	
	9.204	27.10	0.72	27.82	50.00	22.18	
	27.708	31.39	1.24	32.63	50.00	17.37	
Neutral	0.194	42.66	0.12	42.78	63.84	21.06	QP
	0.247	34.74	0.11	34.85	61.86	27.01	
	0.417	30.96	0.17	31.13	57.51	26.38	
	3.293	30.71	0.31	31.02	56.00	24.98	
	8.822	32.05	0.51	32.56	60.00	27.44	
	27.416	39.01	1.11	40.12	60.00	19.88	
	0.194	33.50	0.12	33.62	53.84	20.22	AV
	0.247	25.60	0.11	25.71	51.86	26.15	
	0.417	21.19	0.17	21.36	47.51	26.15	
	3.293	21.70	0.31	22.01	46.00	23.99	
	8.822	23.20	0.51	23.71	50.00	26.29	
	27.416	30.19	1.11	31.30	50.00	18.70	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 48%RH

Serial No. : E1206718-01/01 Date of Test : Jun 11, 2012

Test Mode : DVI 1920*1080@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.153	47.65	0.23	47.88	65.82	17.94	QP
	0.240	39.94	0.25	40.19	62.08	21.89	
	0.417	36.53	0.34	36.87	57.51	20.64	
	3.293	39.92	0.43	40.35	56.00	15.65	
	9.352	40.25	0.73	40.98	60.00	19.02	
	28.003	43.82	1.25	45.07	60.00	14.93	
	0.153	37.80	0.23	38.03	55.82	17.79	AV
	0.240	30.70	0.25	30.95	52.08	21.13	
	0.417	27.60	0.34	27.94	47.51	19.57	
	3.293	31.30	0.43	31.73	46.00	14.27	
	9.352	31.50	0.73	32.23	50.00	17.77	
	28.003	34.10	1.25	35.35	50.00	14.65	
Neutral	0.153	47.18	0.13	47.31	65.82	18.51	QP
	0.247	38.77	0.11	38.88	61.86	22.98	
	0.417	34.46	0.17	34.63	57.51	22.88	
	3.107	38.53	0.25	38.78	56.00	17.22	
	9.654	39.18	0.49	39.67	60.00	20.33	
	28.755	41.79	1.13	42.92	60.00	17.08	
	0.153	37.90	0.13	38.03	55.82	17.79	AV
	0.247	29.60	0.11	29.71	51.86	22.15	
	0.417	25.39	0.17	25.56	47.51	21.95	
	3.107	30.13	0.25	30.38	46.00	15.62	
	9.654	30.20	0.49	30.69	50.00	19.31	
	28.755	32.40	1.13	33.53	50.00	16.47	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 48%RH

Serial No. : E1206718-01/01 Date of Test : Jun 11, 2012

Test Mode : DVI 1680*1050@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.153	42.87	0.23	43.10	65.82	22.72	QP
	0.240	33.57	0.25	33.82	62.08	28.26	
	0.417	31.25	0.34	31.59	57.51	25.92	
	3.293	30.05	0.43	30.48	56.00	25.52	
	8.822	30.30	0.72	31.02	60.00	28.98	
	28.603	37.19	1.26	38.45	60.00	21.55	
	0.153	33.70	0.23	33.93	55.82	21.89	AV
	0.240	24.70	0.25	24.95	52.08	27.13	
	0.417	23.20	0.34	23.54	47.51	23.97	
	3.293	21.70	0.43	22.13	46.00	23.87	
	8.822	21.30	0.72	22.02	50.00	27.98	
	28.603	28.40	1.26	29.66	50.00	20.34	
Neutral	0.157	43.40	0.13	43.53	65.60	22.07	QP
	0.244	34.32	0.11	34.43	61.95	27.52	
	0.417	33.09	0.17	33.26	57.51	24.25	
	3.241	35.79	0.31	36.10	56.00	19.90	
	9.204	36.62	0.50	37.12	60.00	22.88	
	26.418	39.17	1.07	40.24	60.00	19.76	
	0.157	34.50	0.13	34.63	55.60	20.97	AV
	0.244	25.70	0.11	25.81	51.95	26.14	
	0.417	24.09	0.17	24.26	47.51	23.25	
	3.241	26.79	0.31	27.10	46.00	18.90	
	9.204	27.50	0.50	28.00	50.00	22.00	
	26.418	30.30	1.07	31.37	50.00	18.63	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 48%RH

Serial No. : E1206718-01/01 Date of Test : Jun 11, 2012

Test Mode : DVI 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.150	44.96	0.23	45.19	66.00	20.81	QP
	0.242	36.96	0.25	37.21	62.04	24.83	
	0.627	32.69	0.21	32.90	56.00	23.10	
	3.293	36.93	0.43	37.36	56.00	18.64	
	9.204	38.22	0.72	38.94	60.00	21.06	
	27.708	40.96	1.24	42.20	60.00	17.80	
	0.150	35.00	0.23	35.23	56.00	20.77	AV
	0.242	27.50	0.25	27.75	52.04	24.29	
	0.627	23.11	0.21	23.32	46.00	22.68	
	3.293	27.50	0.43	27.93	46.00	18.07	
	9.204	28.30	0.72	29.02	50.00	20.98	
	27.708	31.19	1.24	32.43	50.00	17.57	
Neutral	0.182	41.47	0.12	41.59	64.42	22.83	QP
	0.242	32.23	0.11	32.34	62.04	29.70	
	0.417	31.07	0.17	31.24	57.51	26.27	
	3.276	30.63	0.31	30.94	56.00	25.06	
	8.822	30.06	0.51	30.57	60.00	29.43	
	27.127	39.38	1.09	40.47	60.00	19.53	
	0.182	32.60	0.12	32.72	54.42	21.70	AV
	0.242	25.20	0.11	25.31	52.04	26.73	
	0.417	24.29	0.17	24.46	47.51	23.05	
	3.276	22.40	0.31	22.71	46.00	23.29	
	8.822	21.60	0.51	22.11	50.00	27.89	
	27.127	30.90	1.09	31.99	50.00	18.01	

TEST ENGINEER: SAWEN LI

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 48%RH

Serial No. : E1206718-01/01 Date of Test : Jun 11, 2012

Test Mode : DVI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	42.21	0.24	42.45	65.34	22.89	QP
	0.244	35.15	0.25	35.40	61.95	26.55	
	0.627	32.35	0.21	32.56	56.00	23.44	
	3.328	36.45	0.43	36.88	56.00	19.12	
	9.352	36.51	0.73	37.24	60.00	22.76	
	27.127	40.85	1.21	42.06	60.00	17.94	
	0.162	32.70	0.24	32.94	55.34	22.40	AV
	0.244	26.20	0.25	26.45	51.95	25.50	
	0.627	23.21	0.21	23.42	46.00	22.58	
	3.328	27.50	0.43	27.93	46.00	18.07	
	9.352	26.80	0.73	27.53	50.00	22.47	
	27.127	31.21	1.21	32.42	50.00	17.58	
Neutral	0.150	44.50	0.13	44.63	66.00	21.37	QP
	0.249	34.28	0.11	34.39	61.78	27.39	
	0.627	31.38	0.19	31.57	56.00	24.43	
	0.839	28.61	0.22	28.83	56.00	27.17	
	9.204	30.17	0.50	30.67	60.00	29.33	
	28.003	39.01	1.12	40.13	60.00	19.87	
	0.150	35.40	0.13	35.53	56.00	20.47	AV
	0.249	25.31	0.11	25.42	51.78	26.36	
	0.627	22.50	0.19	22.69	46.00	23.31	
	0.839	19.20	0.22	19.42	46.00	26.58	
	9.204	22.40	0.50	22.90	50.00	27.10	
	28.003	31.80	1.12	32.92	50.00	17.08	

TEST ENGINEER: SAWEN LI

4 RADIATED EMISSION TEST

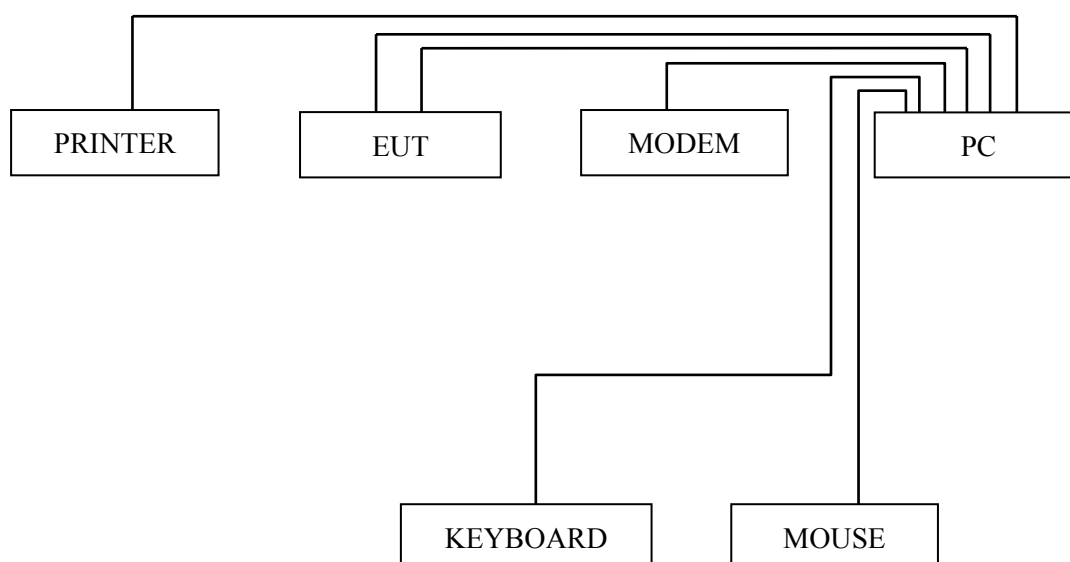
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2012	Mar 22, 2013
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 18, 2012	Sep 18, 2012
3.	Preamplifier	HP	8449B	3008A00864	Mar 22, 2012	Mar 22, 2013
4.	Bi-log Antenna	TESEQ	CBL6112D	23192	Dec 01, 2011	Dec 01, 2012
5.	Horn Antenna	EMCO	3115	9607-4878	May 06, 2012	May 06, 2013
6.	Spectrum	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
7.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Mar 18, 2012	Sep 18, 2012
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

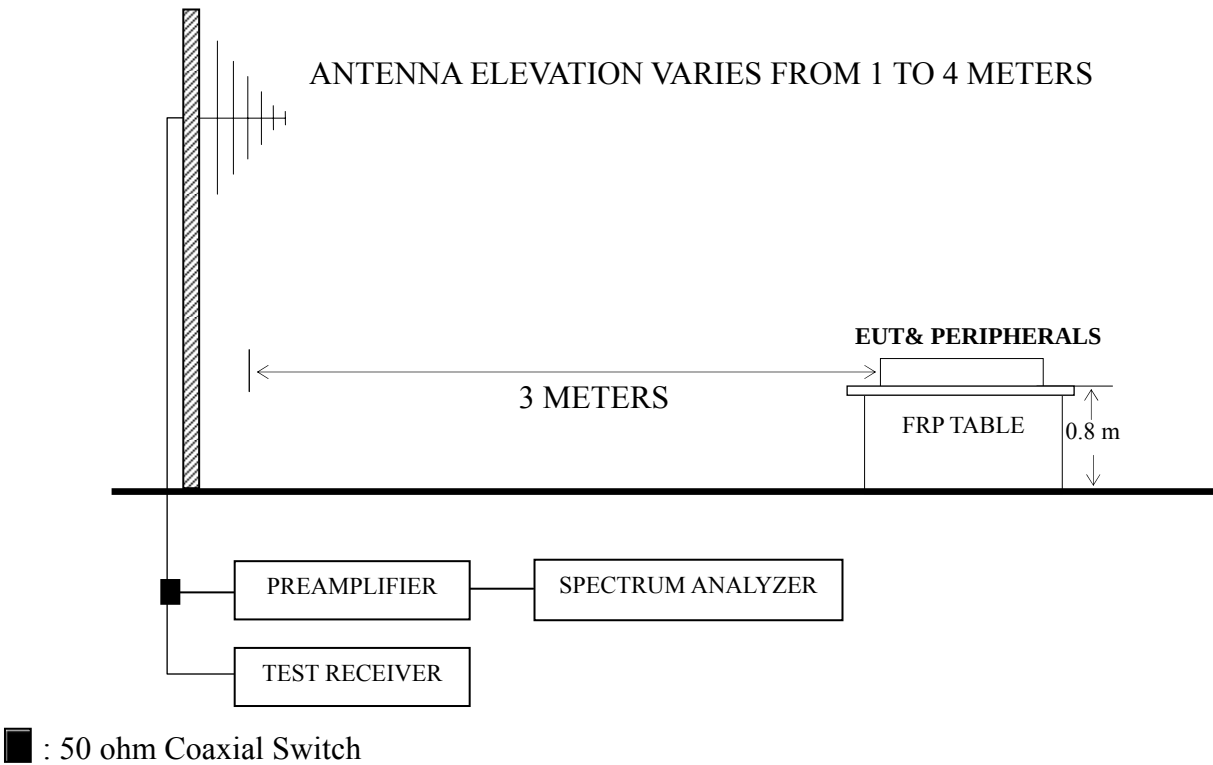
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals

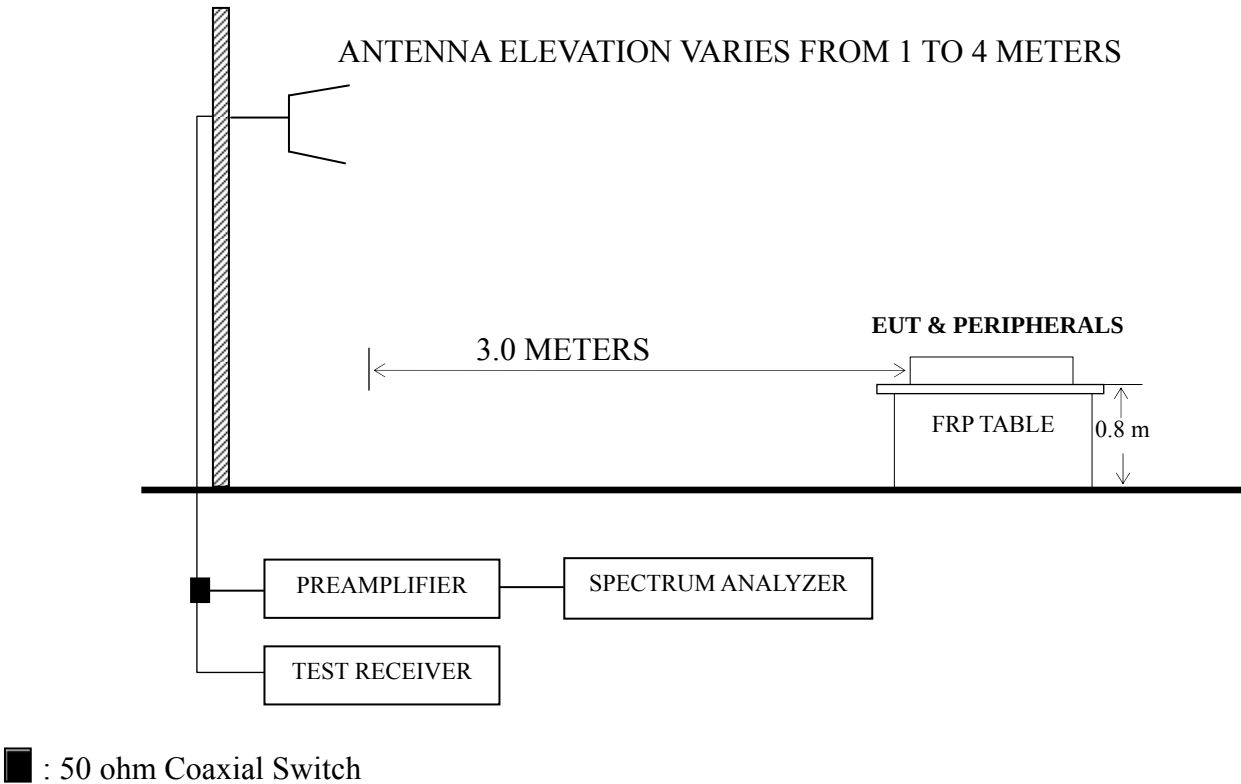


4.2.2 Radiated emission test setup

4.2.2.1 Below 1GHz



4.2.2.2 Above 1GHz



4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$) NOTE 2 - The tighter limit applies at the band edges. NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz. NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.			

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) or Horn Antenna was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 2 GHz was checked for maximum resolution modes.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Data Page
D-Sub 1920*1080@60Hz	P22
DVI 1920*1080@60Hz	P23
DVI 1680*1050@60Hz	P24
DVI 1280*1024@75Hz	P25-P26
DVI 640*480@60Hz	P27
DVI 1280*1024@75Hz (Rotation)	P28

NOTE 1 – **The bold test mode** listed above means the worst test mode.

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading. (< 1GHz)

NOTE 3 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading. (> 1GHz)

NOTE 4 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 5 – The emission levels that are 20dB below the official limit are not reported.

NOTE 6 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 7 – The worst case is for DVI 1280*1024@75Hz test mode. The worst emission at horizontal polarization was detected at 177.440 MHz with corrected signal level of 31.30 dB (μV/m) (limit is 43.50 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 105°. The worst emission at vertical polarization was detected at 31.940 MHz with corrected signal level of 37.81 dB (μV/m) (limit is 40.00 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 330°.

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : D-Sub 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	31.940	9.13	17.29	0.82	27.24	40.00	12.76
	58.130	7.02	9.02	1.14	17.18	40.00	22.82
	90.140	7.90	11.00	1.73	20.63	43.50	22.87
	111.480	10.82	11.15	1.96	23.93	43.50	19.57
	179.380	20.58	10.00	2.35	32.93	43.50	10.57
	361.740	7.74	15.45	2.91	26.10	46.00	19.90
Vertical	31.940	19.34	17.29	0.82	37.45	40.00	2.55
	58.130	19.01	9.02	1.14	29.17	40.00	10.83
	84.320	12.86	10.75	1.64	25.25	40.00	14.75
	126.030	15.42	10.89	2.07	28.38	43.50	15.12
	361.740	10.52	15.45	2.91	28.88	46.00	17.12
	424.790	11.51	16.62	3.06	31.19	46.00	14.81

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : DVI 1920*1080@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	31.940	7.73	17.29	0.82	25.84	40.00	14.16
	56.190	9.51	8.88	1.08	19.47	40.00	20.53
	92.080	13.84	11.08	1.75	26.67	43.50	16.83
	177.440	20.04	10.02	2.35	32.41	43.50	11.09
	266.680	9.83	12.66	2.66	25.15	46.00	20.85
	361.740	11.35	15.45	2.91	29.71	46.00	16.29
Vertical	31.940	19.54	17.29	0.82	37.65	40.00	2.35
	56.190	20.33	8.88	1.08	30.29	40.00	9.71
	92.080	17.92	11.08	1.75	30.75	43.50	12.75
	126.030	14.38	10.89	2.07	27.34	43.50	16.16
	218.180	14.76	10.52	2.50	27.78	46.00	18.22
	444.190	9.59	16.90	3.11	29.60	46.00	16.40

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : DVI 1680*1050@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	31.940	8.46	17.29	0.82	26.57	40.00	13.43
	56.190	8.01	8.88	1.08	17.97	40.00	22.03
	85.290	8.43	10.80	1.66	20.89	40.00	19.11
	111.480	10.46	11.15	1.96	23.57	43.50	19.93
	177.440	22.32	10.02	2.35	34.69	43.50	8.81
	211.390	13.84	10.26	2.47	26.57	43.50	16.93
Vertical	31.940	19.25	17.29	0.82	37.36	40.00	2.64
	38.730	13.30	13.40	0.86	27.56	40.00	12.44
	58.130	19.07	9.02	1.14	29.23	40.00	10.77
	126.030	14.12	10.89	2.07	27.08	43.50	16.42
	177.440	17.45	10.02	2.35	29.82	43.50	13.68
	436.430	10.38	16.79	3.09	30.26	46.00	15.74

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : DVI 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	31.940	8.11	17.29	0.82	--	26.22	40.00	13.78	QP
	58.130	7.02	9.02	1.14	--	17.18	40.00	22.82	
	87.230	8.38	10.88	1.70	--	20.96	40.00	19.04	
	114.390	10.32	11.10	1.97	--	23.39	43.50	20.11	
	177.440	18.93	10.02	2.35	--	31.30	43.50	12.20	
	531.490	8.41	17.78	3.33	--	29.52	46.00	16.48	
	1130.000	55.49	24.21	5.30	37.90	47.10	74.00	26.90	PK
	1236.000	50.75	24.70	5.40	37.65	43.20	74.00	30.80	
	1535.000	55.18	25.96	5.83	36.82	50.15	74.00	23.85	
	1563.000	56.58	26.30	5.90	36.76	52.02	74.00	21.98	
	1796.000	54.66	29.11	6.20	36.35	53.62	74.00	20.38	
	1982.000	51.95	30.87	6.41	36.12	53.11	74.00	20.89	
	1132.400	25.90	24.22	5.30	37.90	17.52	54.00	36.48	AV
	1235.400	28.90	24.70	5.40	37.65	21.35	54.00	32.65	
	1534.800	25.81	25.96	5.83	36.83	20.77	54.00	33.23	
	1562.400	30.70	26.25	5.90	36.76	26.09	54.00	27.91	
	1795.800	30.90	29.11	6.20	36.35	29.86	54.00	24.14	
	1980.200	31.50	30.82	6.41	36.12	32.61	54.00	21.39	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : DVI 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Vertical	31.940	19.70	17.29	0.82	--	37.81	40.00	2.19	QP
	58.130	20.44	9.02	1.14	--	30.60	40.00	9.40	
	85.290	12.01	10.80	1.66	--	24.47	40.00	15.53	
	126.030	15.28	10.89	2.07	--	28.24	43.50	15.26	
	225.940	12.94	10.88	2.52	--	26.34	46.00	19.66	
	419.940	8.46	16.55	3.04	--	28.05	46.00	17.95	
	1200.000	50.13	24.53	5.35	37.74	42.27	74.00	31.73	PK
	1461.000	49.22	25.50	5.72	37.01	43.43	74.00	30.57	
	1535.000	53.14	25.96	5.83	36.82	48.11	74.00	25.89	
	1596.000	51.00	26.66	5.93	36.70	46.89	74.00	27.11	
	1795.000	53.30	29.05	6.20	36.35	52.20	74.00	21.80	
	1912.000	50.49	30.25	6.32	36.20	50.86	74.00	23.14	
	1201.400	35.90	24.53	5.35	37.74	28.04	54.00	25.96	AV
	1460.200	27.90	25.50	5.72	37.01	22.11	54.00	31.89	
	1536.400	31.40	26.01	5.83	36.82	26.42	54.00	27.58	
	1597.500	28.70	26.66	5.93	36.69	24.60	54.00	29.40	
	1794.700	30.60	29.05	6.20	36.35	29.50	54.00	24.50	
	1910.800	30.10	30.25	6.32	36.20	30.47	54.00	23.53	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : DVI 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	31.940	7.32	17.29	0.82	25.43	40.00	14.57
	67.830	6.44	9.70	1.36	17.50	40.00	22.50
	82.380	7.46	10.67	1.63	19.76	40.00	20.24
	111.480	9.29	11.15	1.96	22.40	43.50	21.10
	177.440	17.27	10.02	2.35	29.64	43.50	13.86
	361.740	9.86	15.45	2.91	28.22	46.00	17.78
Vertical	31.940	19.20	17.29	0.82	37.31	40.00	2.69
	57.160	18.12	8.96	1.12	28.20	40.00	11.80
	85.290	10.57	10.80	1.66	23.03	40.00	16.97
	126.030	14.42	10.89	2.07	27.38	43.50	16.12
	221.090	11.51	10.68	2.51	24.70	46.00	21.30
	455.830	8.93	17.06	3.15	29.14	46.00	16.86

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : E2411PX Humidity : 60%RH

Serial No. : E1206718-01/01 Date of Test : Jun 12, 2012

Test Mode : DVI 1280*1024@75Hz
(Rotation)

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	31.940	7.25	17.29	0.82	25.36	40.00	14.64
	58.130	6.57	9.02	1.14	16.73	40.00	23.27
	85.290	9.32	10.80	1.66	21.78	40.00	18.22
	140.580	9.82	10.60	2.18	22.60	43.50	20.90
	179.380	14.00	10.00	2.35	26.35	43.50	17.15
	526.640	5.13	17.76	3.33	26.22	46.00	19.78
Vertical	31.940	18.82	17.29	0.82	36.93	40.00	3.07
	58.130	17.82	9.02	1.14	27.98	40.00	12.02
	85.290	14.17	10.80	1.66	26.63	40.00	13.37
	126.030	16.16	10.89	2.07	29.12	43.50	14.38
	182.290	15.80	9.97	2.36	28.13	43.50	15.37
	361.740	5.96	15.45	2.91	24.32	46.00	21.68

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.