

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

LCD Monitor

Model No.: L1942PKU

Serial No.: 911NDYG5H258

FCC ID : BEJL1942PKU

Prepared For : LG Electronics U.S.A., Inc.
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Report No. : ACI-F09128
Date of Test : Dec 17, 2009
Date of Report : Dec 21, 2009

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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. : L1942PKU
(B) Serial No. : 911NDYG5H258
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008
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: L1942PKU; S/N: 911NDYG5H258) which was tested in 3m anechoic chamber Dec 21, 2009 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 : Dec 17, 2009 Date of Report : Dec 21, 2009

Producer : Alan He
ALAN HE / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

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

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN / Assistant 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 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 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.	:	L1942PKU
Serial No.	:	911NDYG5H258
Note	:	The data at rotate 90 degree condition (only radiated emission) is also tested and recorded in this report. The mode tested was the worst case in normal condition.
Real Power	:	23.00W
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 : LG Display M/N : LM190E08 (TL) (J7)
Max Resolution	:	D-Sub 1280*1024@75Hz DVI 1280*1024@60Hz
D-Sub Cable #1	:	Shielded, Detachable, 1.85m, with two cores on cable
D-Sub Cable #2	:	Shielded, Detachable, 1.85m, with two cores in connector
DVI Cable #1	:	Shielded, Detachable, 1.85m, with two cores on cable
DVI Cable #2	:	Shielded, Detachable, 1.85m, with two cores in connector
Power Cord	:	Unshielded, Detachable, 1.80m
Note	:	After evaluation, the D-Sub cable#1 and DVI cable#1 were used in the test for they will cause the maximum emission.

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 Audio In Port : Connected with PC
- (4) One AC In Port : Connected with Power

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : dx6120MT
Serial Number : CNG53004J2
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 Printer

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

2.2.3 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

2.2.4 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Undetachable, 1.85m.
Certificate : FCC DoC, VCCI, CE/EMC, MIC, GS

2.2.5 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 = 1.26 dB
Radiated Emission Expanded Uncertainty :	U = 3.02 dB

3 CONDUCTED EMISSION TEST

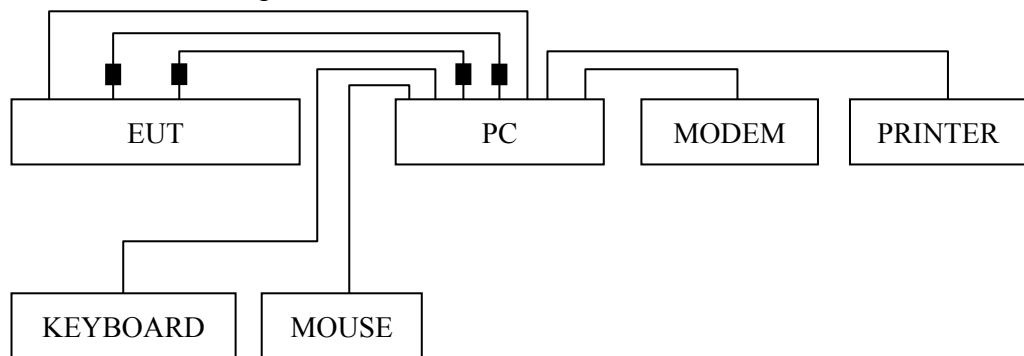
3.1.1 Test Equipment

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	Nov 21, 2009	Nov 21, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2009	Mar 19, 2010
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
6.	Software	Audix	E3	SET00200 9804M592	--	--

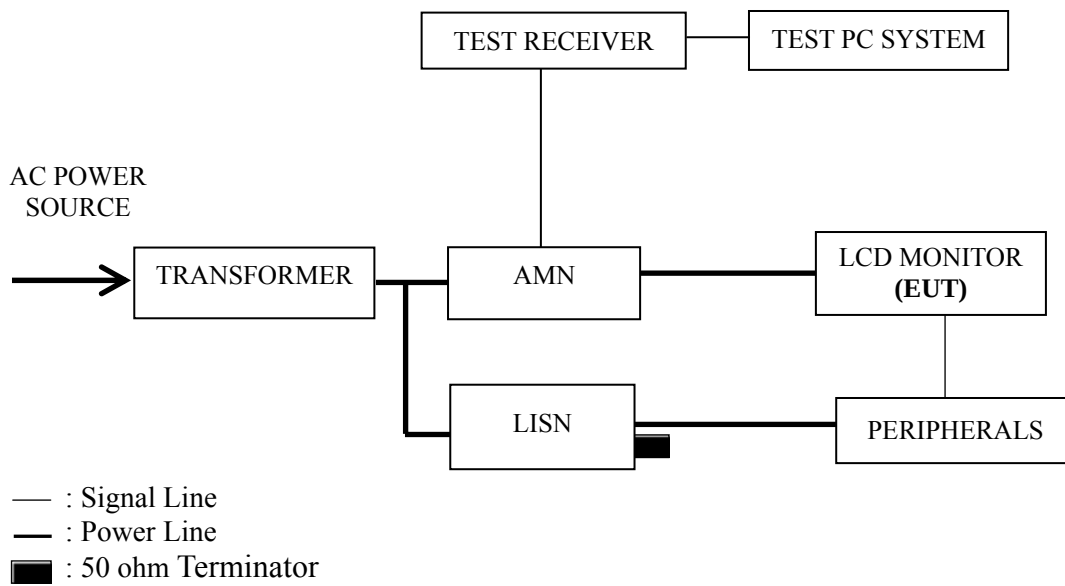
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■: Ferrite core

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, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub or DVI Input).

3.5.5 PC system played music and sent audio signal to EUT through the audio in port of EUT.

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

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

3.5.8 The test modes are as follows:

M/N	Test Mode
L1942PKU	D-Sub 640*480@60Hz
	D-Sub 1024*768@60Hz
	D-Sub 1280*1024@75Hz
	DVI 640*480@60Hz
	DVI 1024*768@60Hz
	DVI 1280*1024@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.

M/N	Test Mode	Data Page
L1942PKU	D-Sub 640*480@60Hz	P12
	D-Sub 1024*768@60Hz	P13
	D-Sub 1280*1024@75Hz	P14
	DVI 640*480@60Hz	P15
	DVI 1024*768@60Hz	P16
	DVI 1280*1024@60Hz	P17

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 640*480@60Hz test mode. The worst emission is detected at 0.393 MHz (Average Value) with corrected signal level of 35.34 dB (μV) (limit is 47.99 dB (μV)), when the Line the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 48%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : D-Sub 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.197	44.42	0.22	44.64	63.76	19.12	QP
	0.264	36.16	0.24	36.40	61.29	24.89	
	1.172	31.62	0.32	31.94	56.00	24.06	
	1.900	29.60	0.36	29.96	56.00	26.04	
	5.867	29.13	0.45	29.58	60.00	30.42	
	22.535	21.90	0.84	22.74	60.00	37.26	
	0.197	37.35	0.22	37.57	53.76	16.19	AV
	0.264	32.75	0.24	32.99	51.29	18.30	
	1.172	30.32	0.32	30.64	46.00	15.36	
	1.900	23.77	0.36	24.13	46.00	21.87	
	5.867	13.68	0.45	14.13	50.00	35.87	
	22.535	9.38	0.84	10.22	50.00	39.78	
Neutral	0.150	44.78	0.20	44.98	66.00	21.02	QP
	0.197	42.82	0.20	43.02	63.76	20.74	
	1.172	31.59	0.32	31.91	56.00	24.09	
	2.883	25.99	0.41	26.40	56.00	29.60	
	5.826	28.80	0.46	29.26	60.00	30.74	
	7.935	26.17	0.49	26.66	60.00	33.34	
	0.150	31.26	0.20	31.46	56.00	24.54	AV
	0.197	36.13	0.20	36.33	53.76	17.43	
	1.172	30.16	0.32	30.48	46.00	15.52	
	2.883	12.87	0.41	13.28	46.00	32.72	
	5.826	11.76	0.46	12.22	50.00	37.78	
	7.935	15.36	0.49	15.85	50.00	34.15	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 48%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : D-Sub 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.199	43.82	0.22	44.04	63.67	19.63	QP
	0.262	36.88	0.24	37.12	61.38	24.26	
	0.654	33.55	0.27	33.82	56.00	22.18	
	1.172	30.73	0.32	31.05	56.00	24.95	
	5.867	18.08	0.45	18.53	60.00	41.47	
	22.063	18.91	0.85	19.76	60.00	40.24	
	0.199	38.82	0.22	39.04	53.67	14.63	AV
	0.262	34.29	0.24	34.53	51.38	16.85	
	0.654	32.28	0.27	32.55	46.00	13.45	
	1.172	30.24	0.32	30.56	46.00	15.44	
	5.867	13.38	0.45	13.83	50.00	36.17	
	22.063	9.66	0.85	10.51	50.00	39.49	
Neutral	0.199	44.01	0.20	44.21	63.67	19.46	QP
	0.393	33.28	0.25	33.53	57.99	24.46	
	0.716	28.79	0.28	29.07	56.00	26.93	
	1.236	27.91	0.32	28.23	56.00	27.77	
	5.867	29.18	0.46	29.64	60.00	30.36	
	7.935	24.92	0.49	25.41	60.00	34.59	
	0.199	35.38	0.20	35.58	53.67	18.09	AV
	0.393	27.16	0.25	27.41	47.99	20.58	
	0.716	26.96	0.28	27.24	46.00	18.76	
	1.236	23.09	0.32	23.41	46.00	22.59	
	5.867	13.78	0.46	14.24	50.00	35.76	
	7.935	15.17	0.49	15.66	50.00	34.34	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 48%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : D-Sub 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.199	43.86	0.22	44.08	63.67	19.59	QP
	0.393	35.47	0.28	35.75	57.99	22.24	
	1.172	30.75	0.32	31.07	56.00	24.93	
	2.033	26.04	0.36	26.40	56.00	29.60	
	5.867	26.84	0.45	27.29	60.00	32.71	
	23.140	20.42	0.83	21.25	60.00	38.75	
	0.199	39.10	0.22	39.32	53.67	14.35	AV
	0.393	34.80	0.28	35.08	47.99	12.91	
	1.172	30.29	0.32	30.61	46.00	15.39	
	2.033	24.13	0.36	24.49	46.00	21.51	
	5.867	21.05	0.45	21.50	50.00	28.50	
	23.140	11.52	0.83	12.35	50.00	37.65	
Neutral	0.199	42.20	0.20	42.40	63.67	21.27	QP
	0.264	34.40	0.22	34.62	61.29	26.67	
	1.249	26.81	0.32	27.13	56.00	28.87	
	3.145	26.20	0.41	26.61	56.00	29.39	
	6.488	28.97	0.47	29.44	60.00	30.56	
	7.935	25.22	0.49	25.71	60.00	34.29	
	0.199	36.19	0.20	36.39	53.67	17.28	AV
	0.264	29.41	0.22	29.63	51.29	21.66	
	1.249	24.50	0.32	24.82	46.00	21.18	
	3.145	8.71	0.41	9.12	46.00	36.88	
	6.488	20.69	0.47	21.16	50.00	28.84	
	7.935	16.53	0.49	17.02	50.00	32.98	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 48%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

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	0.199	44.46	0.22	44.68	63.67	18.99	QP
	0.393	35.60	0.28	35.88	57.99	22.11	
	1.172	32.07	0.32	32.39	56.00	23.61	
	2.893	24.10	0.40	24.50	56.00	31.50	
	5.908	29.30	0.45	29.75	60.00	30.25	
	21.780	19.00	0.86	19.86	60.00	40.14	
	0.199	36.39	0.22	36.61	53.67	17.06	AV
	0.393	35.06	0.28	35.34	47.99	12.65	
	1.172	31.81	0.32	32.13	46.00	13.87	
	2.893	13.27	0.40	13.67	46.00	32.33	
	5.908	20.32	0.45	20.77	50.00	29.23	
	21.780	9.49	0.86	10.35	50.00	39.65	
Neutral	0.199	42.75	0.20	42.95	63.67	20.72	QP
	0.262	36.07	0.22	36.29	61.38	25.09	
	0.716	27.41	0.28	27.69	56.00	28.31	
	1.172	32.29	0.32	32.61	56.00	23.39	
	6.557	29.00	0.48	29.48	60.00	30.52	
	7.880	26.00	0.49	26.49	60.00	33.51	
	0.199	33.19	0.20	33.39	53.67	20.28	AV
	0.262	31.19	0.22	31.41	51.38	19.97	
	0.716	27.16	0.28	27.44	46.00	18.56	
	1.172	31.50	0.32	31.82	46.00	14.18	
	6.557	23.03	0.48	23.51	50.00	26.49	
	7.880	18.93	0.49	19.42	50.00	30.58	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 48%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : DVI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.200	44.68	0.22	44.90	63.62	18.72	QP
	0.262	39.06	0.24	39.30	61.38	22.08	
	0.654	34.70	0.27	34.97	56.00	21.03	
	1.172	34.01	0.32	34.33	56.00	21.67	
	5.899	31.00	0.45	31.45	60.00	28.55	
	23.387	22.07	0.82	22.89	60.00	37.11	
	0.200	34.93	0.22	35.15	53.62	18.47	AV
	0.262	34.48	0.24	34.72	51.38	16.66	
	0.654	33.00	0.27	33.27	46.00	12.73	
	1.172	31.60	0.32	31.92	46.00	14.08	
	5.899	22.56	0.45	23.01	50.00	26.99	
	23.387	10.10	0.82	10.92	50.00	39.08	
Neutral	0.199	42.53	0.20	42.73	63.67	20.94	QP
	0.262	35.91	0.22	36.13	61.38	25.25	
	1.172	31.94	0.32	32.26	56.00	23.74	
	2.886	17.83	0.41	18.24	56.00	37.76	
	6.488	29.39	0.47	29.86	60.00	30.14	
	21.373	18.89	0.83	19.72	60.00	40.28	
	0.199	36.02	0.20	36.22	53.67	17.45	AV
	0.262	32.60	0.22	32.82	51.38	18.56	
	1.172	31.60	0.32	31.92	46.00	14.08	
	2.886	15.29	0.41	15.70	46.00	30.30	
	6.488	24.04	0.47	24.51	50.00	25.49	
	21.373	10.16	0.83	10.99	50.00	39.01	

TEST ENGINEER: HUGH HUANG

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 48%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : DVI 1280*1024@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.199	44.89	0.22	45.11	63.67	18.56	QP
	0.262	38.99	0.24	39.23	61.38	22.15	
	1.172	35.07	0.32	35.39	56.00	20.61	
	1.901	29.70	0.36	30.06	56.00	25.94	
	5.959	30.60	0.45	31.05	60.00	28.95	
	23.520	22.30	0.82	23.12	60.00	36.88	
	0.199	39.02	0.22	39.24	53.67	14.43	AV
	0.262	33.79	0.24	34.03	51.38	17.35	
	1.172	31.76	0.32	32.08	46.00	13.92	
	1.901	24.91	0.36	25.27	46.00	20.73	
	5.959	21.85	0.45	22.30	50.00	27.70	
	23.520	11.28	0.82	12.10	50.00	37.90	
Neutral	0.197	43.10	0.20	43.30	63.76	20.46	QP
	0.393	31.01	0.25	31.26	57.99	26.73	
	0.716	28.54	0.28	28.82	56.00	27.18	
	1.172	32.87	0.32	33.19	56.00	22.81	
	5.993	29.72	0.46	30.18	60.00	29.82	
	7.812	28.00	0.49	28.49	60.00	31.51	
	0.197	35.64	0.20	35.84	53.76	17.92	AV
	0.393	25.09	0.25	25.34	47.99	22.65	
	0.716	27.29	0.28	27.57	46.00	18.43	
	1.172	31.61	0.32	31.93	46.00	14.07	
	5.993	22.58	0.46	23.04	50.00	26.96	
	7.812	19.09	0.49	19.58	50.00	30.42	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

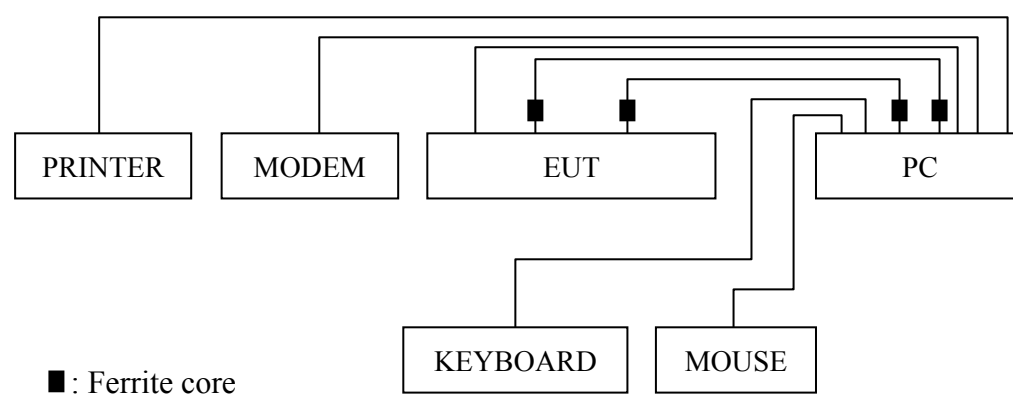
4.1 Test Equipment

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

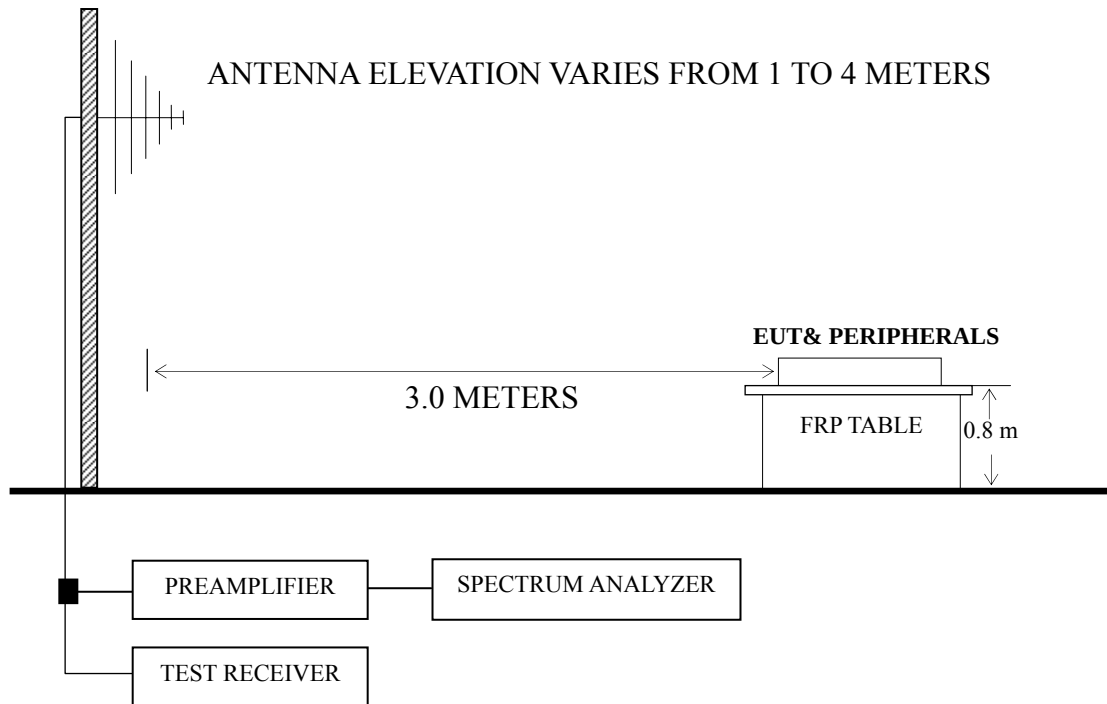
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
3.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2009	Apr 29, 2010
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2010
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
6.	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



■ : 50 ohm Coaxial Switch

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) 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 bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz

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 D-Sub 1280*1024@75Hz & DVI 1280*1024@60Hz 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.

M/N	Test Mode	Data Page
L1942PEU	D-Sub 640*480@60Hz	P22
	D-Sub 1024*768@60Hz	P23
	D-Sub 1280*1024@75Hz	P24
	DVI 640*480@60Hz	P25
	DVI 1024*768@60Hz	P26
	DVI 1280*1024@60Hz	P27
	DVI 1280*1024@60Hz (Rotate 90 degree)	P28

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

NOTE 2 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.($< 1\text{GHz}$)

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

NOTE 4 – The emission levels that are 20dB below the official limit are not reported.

NOTE 5 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 6 – The worst case is for DVI 1280*1024@60Hz test mode. The worst emission at horizontal polarization was detected at 540.220 MHz with corrected signal level of 38.24 dB ($\mu\text{V/m}$) (limit is 46.00dB ($\mu\text{V/m}$)), when the antenna was 1.30 m height and the turntable was at 150° . The worst emission at vertical polarization was detected at 431.580 MHz with corrected signal level of 40.96 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 65° .

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : D-Sub 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	135.730	15.33	12.28	1.18	28.79	43.50	14.71
	167.740	20.65	10.27	1.31	32.23	43.50	11.27
	224.000	21.43	11.85	1.55	34.83	46.00	11.17
	334.580	12.90	14.86	1.84	29.60	46.00	16.40
	486.870	7.50	17.75	2.22	27.47	46.00	18.53
	730.340	6.88	20.00	2.75	29.63	46.00	16.37
Vertical	30.000	12.92	19.60	0.62	33.14	40.00	6.86
	135.730	14.51	12.28	1.18	27.97	43.50	15.53
	210.420	17.02	11.18	1.48	29.68	43.50	13.82
	281.230	19.22	13.57	1.68	34.47	46.00	11.53
	486.870	15.62	17.75	2.22	35.59	46.00	10.41
	856.440	11.45	21.28	2.98	35.71	46.00	10.29

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : D-Sub 1024*768@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	87.230	10.44	8.96	0.99	20.39	40.00	19.61
	135.730	16.14	12.28	1.18	29.60	43.50	13.90
	209.450	23.47	11.13	1.48	36.08	43.50	7.42
	322.940	14.16	14.54	1.84	30.54	46.00	15.46
	486.870	9.55	17.75	2.22	29.52	46.00	16.48
	730.340	6.94	20.00	2.75	29.69	46.00	16.31
Vertical	30.000	12.78	19.60	0.62	33.00	40.00	7.00
	43.580	16.44	11.88	0.69	29.01	40.00	10.99
	87.230	16.83	8.96	0.99	26.78	40.00	13.22
	135.730	15.70	12.28	1.18	29.16	43.50	14.34
	217.210	20.92	11.48	1.49	33.89	46.00	12.11
	321.970	17.50	14.50	1.84	33.84	46.00	12.16

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : D-Sub 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	71.710	20.66	6.69	0.90	--	28.25	40.00	11.75	QP
	135.730	17.24	12.28	1.18	--	30.70	43.50	12.80	
	213.330	23.24	11.30	1.48	--	36.02	43.50	7.48	
	288.020	15.67	13.71	1.71	--	31.09	46.00	14.91	
	486.870	9.78	17.75	2.22	--	29.75	46.00	16.25	
	730.340	6.73	20.00	2.75	--	29.48	46.00	16.52	
	1060.000	45.33	22.82	3.85	34.10	37.90	74.00	36.10	PK
	1215.000	48.88	23.82	4.23	34.12	42.81	74.00	31.19	
	1301.000	47.34	24.54	4.41	34.13	42.16	74.00	31.84	
	1406.000	46.50	25.24	4.62	34.14	42.22	74.00	31.78	
	1543.000	46.57	26.07	4.88	34.16	43.36	74.00	30.64	
	1664.000	47.58	26.56	5.12	34.17	45.09	74.00	28.91	
Vertical	35.820	17.82	16.45	0.67	--	34.94	40.00	5.06	QP
	71.710	24.78	6.69	0.90	--	32.37	40.00	7.63	
	167.740	22.61	10.27	1.31	--	34.19	43.50	9.31	
	281.230	21.19	13.57	1.68	--	36.44	46.00	9.56	
	486.870	17.38	17.75	2.22	--	37.35	46.00	8.65	
	856.440	12.30	21.28	2.98	--	36.56	46.00	9.44	
	1155.000	49.40	23.45	4.10	34.11	42.84	74.00	31.16	PK
	1263.000	49.93	24.23	4.33	34.13	44.36	74.00	29.64	
	1424.000	48.34	25.34	4.65	34.14	44.19	74.00	29.81	
	1629.000	46.07	26.47	5.05	34.16	43.43	74.00	30.57	
	1751.000	46.36	26.78	5.30	34.18	44.26	74.00	29.74	
	1941.000	44.51	27.76	5.54	34.20	43.61	74.00	30.39	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

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	35.820	-0.26	16.45	0.67	16.86	40.00	23.14
	126.030	14.63	12.71	1.15	28.49	43.50	15.01
	223.030	23.04	11.80	1.52	36.36	46.00	9.64
	341.370	10.15	15.07	1.85	27.07	46.00	18.93
	486.870	10.32	17.75	2.22	30.29	46.00	15.71
	702.210	7.31	19.73	2.71	29.75	46.00	16.25
Vertical	38.730	9.77	14.62	0.66	25.05	40.00	14.95
	126.030	18.24	12.71	1.15	32.10	43.50	11.40
	224.000	17.87	11.85	1.55	31.27	46.00	14.73
	281.230	21.50	13.57	1.68	36.75	46.00	9.25
	486.870	15.11	17.75	2.22	35.08	46.00	10.92
	856.440	11.05	21.28	2.98	35.31	46.00	10.69

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : DVI 1024*768@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	30.970	-1.09	19.03	0.62	18.56	40.00	21.44
	135.730	13.26	12.28	1.18	26.72	43.50	16.78
	215.270	24.51	11.39	1.48	37.38	43.50	6.12
	324.880	17.43	14.58	1.85	33.86	46.00	12.14
	486.870	9.55	17.75	2.22	29.52	46.00	16.48
	702.210	10.10	19.73	2.71	32.54	46.00	13.46
Vertical	35.820	16.98	16.45	0.67	34.10	40.00	5.90
	54.250	15.35	7.92	0.78	24.05	40.00	15.95
	129.910	13.58	12.52	1.13	27.23	43.50	16.27
	218.180	18.55	11.52	1.50	31.57	46.00	14.43
	324.880	21.01	14.58	1.85	37.44	46.00	8.56
	486.870	15.63	17.75	2.22	35.60	46.00	10.40

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : DVI 1280*1024@60Hz

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	132.820	9.19	12.40	1.20	--	22.79	43.50	20.71	QP
	209.450	20.46	11.13	1.48	--	33.07	43.50	10.43	
	323.910	19.00	14.58	1.84	--	35.42	46.00	10.58	
	431.580	16.49	16.95	2.11	--	35.55	46.00	10.45	
	540.220	17.47	18.42	2.35	--	38.24	46.00	7.76	
	702.210	10.15	19.73	2.71	--	32.59	46.00	13.41	
	1144.000	45.65	23.39	4.08	34.11	39.01	74.00	34.99	PK
	1276.000	49.61	24.32	4.35	34.13	44.15	74.00	29.85	
	1383.000	39.91	25.09	4.57	34.14	35.43	74.00	38.57	
	1498.000	40.50	25.80	4.80	34.15	36.95	74.00	37.05	
	1664.000	43.58	26.56	5.12	34.17	41.09	74.00	32.91	
	1759.000	42.48	26.80	5.31	34.18	40.41	74.00	33.59	
Vertical	48.430	16.19	9.62	0.75	--	26.56	40.00	13.44	QP
	135.730	12.73	12.28	1.18	--	26.19	43.50	17.31	
	216.240	19.09	11.43	1.48	--	32.00	46.00	14.00	
	323.910	22.16	14.58	1.84	--	38.58	46.00	7.42	
	431.580	21.90	16.95	2.11	--	40.96	46.00	5.04	
	540.220	19.77	18.42	2.35	--	40.54	46.00	5.46	
	1003.000	45.28	22.43	3.71	34.10	37.32	74.00	36.68	PK
	1126.000	48.46	23.27	4.03	34.11	41.65	74.00	32.35	
	1255.000	48.05	24.14	4.31	34.12	42.38	74.00	31.62	
	1383.000	46.34	25.09	4.57	34.14	41.86	74.00	32.14	
	1526.000	45.16	26.00	4.85	34.15	41.86	74.00	32.14	
	1793.000	44.91	26.88	5.39	34.18	43.00	74.00	31.00	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1942PKU Humidity : 60%RH

Serial No. : 911NDYG5H258 Date of Test : Dec 17, 2009

Test Mode : DVI 1280*1024@60Hz
(Rotate 90 degree)

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	108.570	20.29	1.11	12.17	--	33.57	43.50	9.93	QP
	167.740	18.67	1.34	10.27	--	30.28	43.50	13.22	
	210.420	17.26	1.57	11.18	--	30.01	43.50	13.49	
	274.440	17.46	1.79	13.43	--	32.68	46.00	13.32	
	303.540	20.60	1.89	14.00	--	36.49	46.00	9.51	
	497.540	14.23	2.42	17.88	--	34.53	46.00	11.47	
	1029.000	46.32	22.60	3.77	34.10	38.59	74.00	35.41	PK
	1211.000	43.89	23.82	4.22	34.12	37.81	74.00	36.19	
	1453.000	44.24	25.53	4.71	34.14	40.34	74.00	33.66	
	1651.000	41.60	26.52	5.09	34.17	39.04	74.00	34.96	
	1900.000	42.09	27.50	5.50	34.19	40.90	74.00	33.10	
	1965.000	43.92	27.91	5.57	34.20	43.20	74.00	30.80	
Vertical	37.760	19.99	0.66	15.20	--	34.85	40.00	5.15	QP
	43.580	20.60	0.68	11.88	--	33.16	40.00	6.84	
	51.340	20.86	0.71	8.61	--	30.18	40.00	9.82	
	173.560	20.58	1.38	10.09	--	32.05	43.50	11.45	
	213.330	18.83	1.58	11.30	--	31.71	43.50	11.79	
	372.410	22.04	2.12	15.92	--	40.08	46.00	5.92	
	1027.000	46.55	22.57	3.76	34.10	38.78	74.00	35.22	PK
	1168.000	46.49	23.54	4.13	34.12	40.04	74.00	33.96	
	1300.000	44.76	24.49	4.41	34.13	39.53	74.00	34.47	
	1440.000	42.26	25.45	4.68	34.14	38.25	74.00	35.75	
	1655.000	43.85	26.54	5.10	34.17	41.32	74.00	32.68	
	1845.000	42.39	27.17	5.45	34.19	40.82	74.00	33.18	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

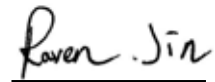
6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Aluminum foil	T-308	50*30	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix Internal Figure 15

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:



(RAVEN JIN)