

Application for FCC Certificate
On Behalf of
F.I.T CO., LTD.

Graphic Card

Model No.: FI5400E-1G4H512F(4-HDMI)

Serial No.: 20010061100005

FCC ID : YX5-FIT003

Prepared For : F.I.T CO., LTD.
3F UNION BLOG-ANNEX-24-5,
SHIN-YOKOHAMA, KOHOKU-KU,
YOKOHAMA-CITY, KANAGAWA
222-0033 JAPAN

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Report No. : ACI-F10145
Date of Test : Oct 14, 2010
Date of Report : Nov 02, 2010

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TEST REPORT FOR FCC CERTIFICATE

Applicant : F.I.T CO., LTD.
Manufacturer : Universal Electronics Co., Ltd.
EUT Description : Graphic Card
(A) Model No. : FI5400E-1G4H512F(4-HDMI)
(B) Serial No. : 20010061100005
(C) Test Voltage : AC 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2010
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) 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: FI5400E-1G4H512F(4-HDMI); S/N: 20010061100005) which was tested in 3m anechoic chamber on Oct 14, 2010 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 : Oct 14, 2010 Date of Report : Nov 02, 2010

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 / 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 2010 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2010 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	Graphic Card
Type of EUT	:	<input checked="" type="checkbox"/> Production <input type="checkbox"/> Pre-product <input type="checkbox"/> Pro-type
Model No.	:	FI5400E-1G4H512F(4-HDMI)
Serial No.	:	20010061100005
Max Resolution	:	HDMI 1920*1080P
Core (engine) clock	:	825MHz
Memory clock frequency	:	800MHz (1600Mbps data rate)
HDMI Cable	:	Shielded, Detachable, 1.5m
Applicant	:	F.I.T CO., LTD. 3F UNION BLOG-ANNEX-24-5, SHIN-YOKOHAMA, KOHOKU-KU, YOKOHAMA-CITY, KANAGAWA 222-0033 JAPAN
Manufacturer	:	Universal Electronics Co., Ltd. No.88 Lane 100. Chun Guang Road, Xinzhuang industrial Zone, Shanghai, China

Remark:

The EUT is a Graphic Card which input/output ports as follows:

- (1) One HDMI Port
: Connected with LCD Monitor #1
- (2) One HDMI Port
: Connected with LCD Monitor #2
- (3) One HDMI Port
: Connected with LCD Monitor #3
- (4) One HDMI Port
: Connected with LCD Monitor #3

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : Z400
Serial Number : CNG023W1BZ
Power Cord : Unshielded, Detachable, 1.80m
Certificate : VCCI, FCC DoC, CE, CCC (A000111)
MIC (E-A011-04-2659B)

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 : KU-0459
Serial Number : 7691402450604
Data Cable : Shielded, Undetachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.4 Mouse

Manufacturer : DELL
Model Number : MO56UO
Serial Number : 443048231
Data Cable : Shielded, Undetachable, 1.8m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC,
C-Tick, BSMI

2.2.5 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.80m
Certificate : CE/EMC, FCC DoC, CCC

2.2.6 LCD Monitor #1

Manufacturer : DELL
Model Number : 2408WFPt
Serial Number : CN-ONN-792-74261-82M-0ASS
Data Cable : Shielded, Detachable, 1.80m, with two cores
Certificate : FCC DoC, CE/EMC, BSMI, CCC, C-TICK,
MIC, VCCI

2.2.7 LCD Monitor #2

Manufacturer : BENQ
Model Number : FP241W
Serial Number : ET61700278CL0
Data Cable : Shielded, Detachable, 1.80m, with two cores
Certificate : CCC, FCC DoC, CE/EMC, VCCI,
BSMI ID: R43002

2.2.8 LCD Monitor #3

Manufacturer : Hisense
Model Number : LEDN24K15PAM
Data Cable : Shielded, Detachable, 1.80m, with two cores
Certificate : FCC ID, CE/EMC

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
July 26, 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

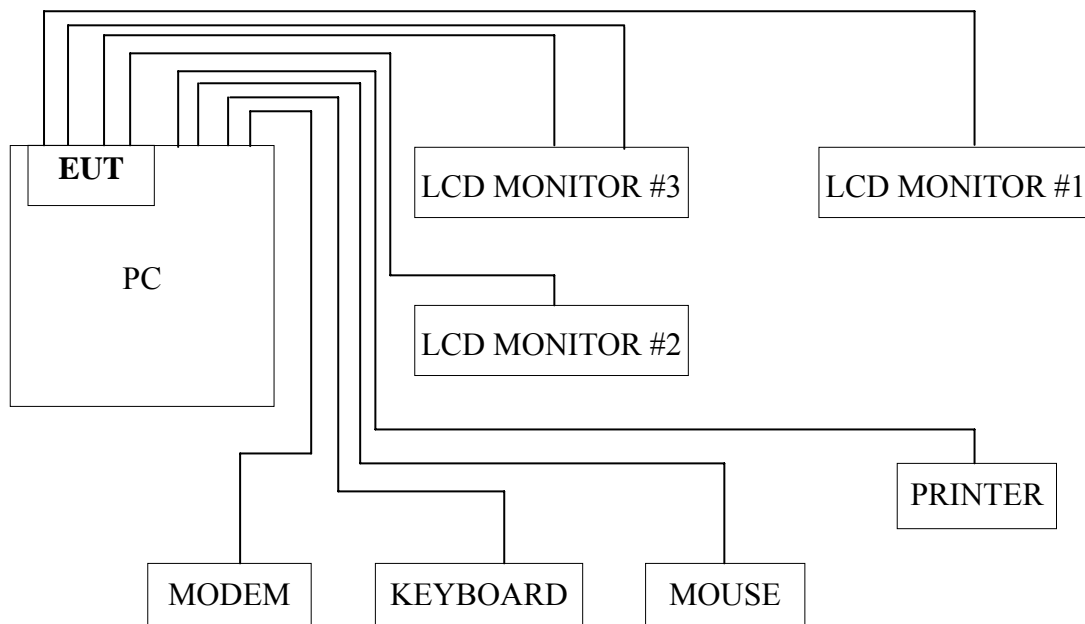
3.1 Test Equipment

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

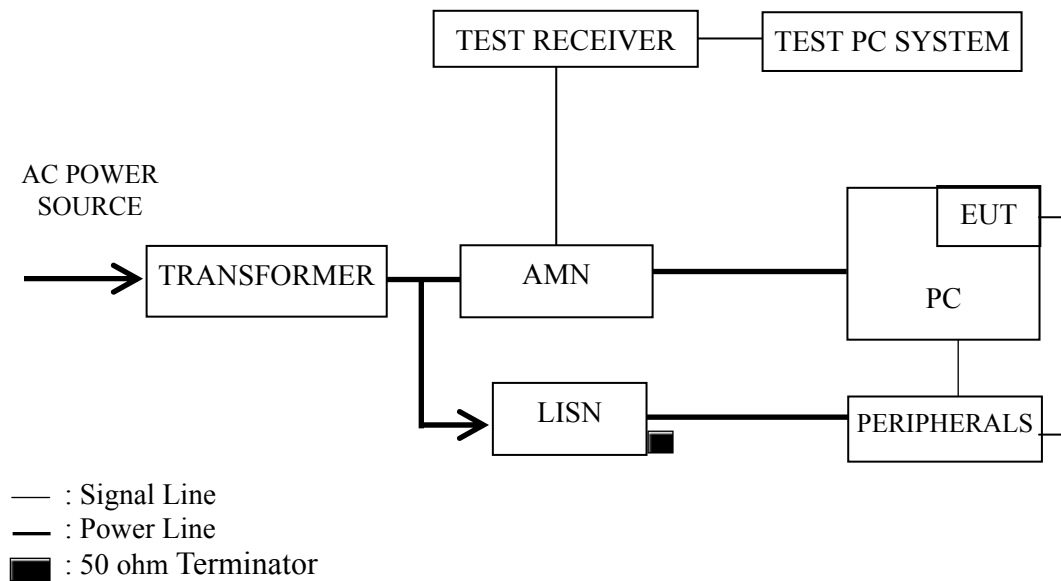
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Oct 15, 2010	Oct 15, 2011
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2010	Apr 02, 2011
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2010	Apr 02, 2011
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 19, 2010	Mar 19, 2011
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2010	Apr 02, 2011
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 monitor to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to monitors through EUT, the monitors' screen displayed and filled with “H” pattern by its resolution. (Via HDMI output).

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

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

3.5.7 The test modes are as follows:

Test Mode
HDMI 640*480P
HDMI 1280*1024P
HDMI 1680*1050P
HDMI 1920*1080P

3.6 Test Procedures

The PC was connected to the power mains through an Artificial Mains Network (AMN). The EUT was installed in PC. The other peripheral devices power cord was connected to the power mains through a line impedance stabilization network (L.I.S.N). 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 I.F. bandwidth of 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
HDMI 640*480P	P12
HDMI 1280*1024P	P13
HDMI 1680*1050P	P14
HDMI 1920*1080P	P15

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst case is for HDMI 640*480P test mode. The worst emission is detected at 0.494MHz (Quasi-Peak Value) with corrected signal level of 45.09 dB (μV) (limit is 56.10 dB (μV)), when the Neutral of the PC is connected to AMN.

EUT : Graphic Card Temperature : 25°C

Model No. : FI5400E-1G4H512F Humidity : 55%RH
(4-HDMI)

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 640*480P

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.162	48.42	0.38	48.80	65.34	16.54	QP
	0.360	44.91	0.46	45.37	58.74	13.37	
	0.621	42.74	0.52	43.26	56.00	12.74	
	0.984	42.07	0.54	42.61	56.00	13.39	
	17.199	39.71	1.43	41.14	60.00	18.86	
	19.326	40.70	1.57	42.27	60.00	17.73	
	0.162	32.64	0.38	33.02	55.34	22.32	AV
	0.360	32.16	0.46	32.62	48.74	16.12	
	0.621	31.24	0.52	31.76	46.00	14.24	
	0.984	31.24	0.54	31.78	46.00	14.22	
	17.199	28.13	1.43	29.56	50.00	20.44	
	19.326	30.25	1.57	31.82	50.00	18.18	
Neutral	0.164	50.03	0.32	50.35	65.25	14.90	QP
	0.494	44.60	0.49	45.09	56.10	11.01	
	0.621	43.35	0.49	43.84	56.00	12.16	
	0.984	41.87	0.51	42.38	56.00	13.62	
	17.199	39.82	1.61	41.43	60.00	18.57	
	19.326	40.79	1.73	42.52	60.00	17.48	
	0.164	40.25	0.32	40.57	55.25	14.68	AV
	0.494	32.64	0.49	33.13	46.10	12.97	
	0.621	33.24	0.49	33.73	46.00	12.27	
	0.984	31.24	0.51	31.75	46.00	14.25	
	17.199	28.54	1.61	30.15	50.00	19.85	
	19.326	30.25	1.73	31.98	50.00	18.02	

TEST ENGINEER: WENCY YANG

EUT : Graphic Card Temperature : 25°C

Model No. : FI5400E-1G4H512F Humidity : 55%RH
(4-HDMI)

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1280*1024P

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.164	48.38	0.38	48.76	65.25	16.49	QP
	0.360	44.99	0.46	45.45	58.74	13.29	
	0.621	42.51	0.52	43.03	56.00	12.97	
	0.984	42.18	0.54	42.72	56.00	13.28	
	17.199	39.69	1.43	41.12	60.00	18.88	
	19.326	40.57	1.57	42.14	60.00	17.86	
	0.164	32.15	0.38	32.53	55.25	22.72	AV
	0.360	32.16	0.46	32.62	48.74	16.12	
	0.621	32.15	0.52	32.67	46.00	13.33	
	0.984	32.12	0.54	32.66	46.00	13.34	
	17.199	28.53	1.43	29.96	50.00	20.04	
	19.326	30.25	1.57	31.82	50.00	18.18	
Neutral	0.164	50.12	0.32	50.44	65.25	14.81	QP
	0.360	44.68	0.42	45.10	58.74	13.64	
	0.621	43.21	0.49	43.70	56.00	12.30	
	0.890	41.42	0.51	41.93	56.00	14.07	
	17.199	39.97	1.61	41.58	60.00	18.42	
	19.326	40.72	1.73	42.45	60.00	17.55	
	0.164	40.23	0.32	40.55	55.25	14.70	AV
	0.360	32.14	0.42	32.56	48.74	16.18	
	0.621	33.24	0.49	33.73	46.00	12.27	
	0.890	31.23	0.51	31.74	46.00	14.26	
	17.199	28.14	1.61	29.75	50.00	20.25	
	19.326	31.26	1.73	32.99	50.00	17.01	

TEST ENGINEER: WENCY YANG

EUT : Graphic Card Temperature : 25°C

Model No. : FI5400E-1G4H512F Humidity : 55%RH
(4-HDMI)

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1680*1050P

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.164	48.12	0.38	48.50	65.25	16.75	QP
	0.360	44.99	0.46	45.45	58.74	13.29	
	0.621	42.52	0.52	43.04	56.00	12.96	
	0.984	42.52	0.54	43.06	56.00	12.94	
	17.199	39.72	1.43	41.15	60.00	18.85	
	19.326	40.51	1.57	42.08	60.00	17.92	
	0.164	32.15	0.38	32.53	55.25	22.72	AV
	0.360	32.26	0.46	32.72	48.74	16.02	
	0.621	32.54	0.52	33.06	46.00	12.94	
	0.984	32.47	0.54	33.01	46.00	12.99	
	17.199	28.53	1.43	29.96	50.00	20.04	
	19.326	32.51	1.57	34.08	50.00	15.92	
Neutral	0.164	50.50	0.32	50.82	65.25	14.43	QP
	0.360	44.72	0.42	45.14	58.74	13.60	
	0.621	43.46	0.49	43.95	56.00	12.05	
	0.890	43.13	0.51	43.64	56.00	12.36	
	17.199	40.10	1.61	41.71	60.00	18.29	
	19.326	40.73	1.73	42.46	60.00	17.54	
	0.164	40.21	0.32	40.53	55.25	14.72	AV
	0.360	32.64	0.42	33.06	48.74	15.68	
	0.621	33.24	0.49	33.73	46.00	12.27	
	0.890	33.53	0.51	34.04	46.00	11.96	
	17.199	30.24	1.61	31.85	50.00	18.15	
	19.326	30.27	1.73	32.00	50.00	18.00	

TEST ENGINEER: WENCY YANG

EUT : Graphic Card Temperature : 25°C

Model No. : FI5400E-1G4H512F Humidity : 55%RH
(4-HDMI)

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1920*1080P

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.197	47.86	0.38	48.24	63.76	15.52	QP
	0.360	44.82	0.46	45.28	58.74	13.46	
	0.621	43.36	0.52	43.88	56.00	12.12	
	0.984	41.64	0.54	42.18	56.00	13.82	
	17.199	39.81	1.43	41.24	60.00	18.76	
	19.326	40.51	1.57	42.08	60.00	17.92	
	0.197	31.26	0.38	31.64	53.76	22.12	AV
	0.360	34.22	0.46	34.68	48.74	14.06	
	0.621	33.24	0.52	33.76	46.00	12.24	
	0.984	31.24	0.54	31.78	46.00	14.22	
	17.199	28.44	1.43	29.87	50.00	20.13	
	19.326	31.24	1.57	32.81	50.00	17.19	
Neutral	0.164	50.28	0.32	50.60	65.25	14.65	QP
	0.360	44.64	0.42	45.06	58.74	13.68	
	0.621	43.23	0.49	43.72	56.00	12.28	
	0.984	41.55	0.51	42.06	56.00	13.94	
	17.199	40.00	1.61	41.61	60.00	18.39	
	19.326	40.65	1.73	42.38	60.00	17.62	
	0.164	40.36	0.32	40.68	55.25	14.57	AV
	0.360	32.16	0.42	32.58	48.74	16.16	
	0.621	33.27	0.49	33.76	46.00	12.24	
	0.984	31.27	0.51	31.78	46.00	14.22	
	17.199	30.25	1.61	31.86	50.00	18.14	
	19.326	30.25	1.73	31.98	50.00	18.02	

TEST ENGINEER: WENCY YANG

4 RADIATED EMISSION TEST

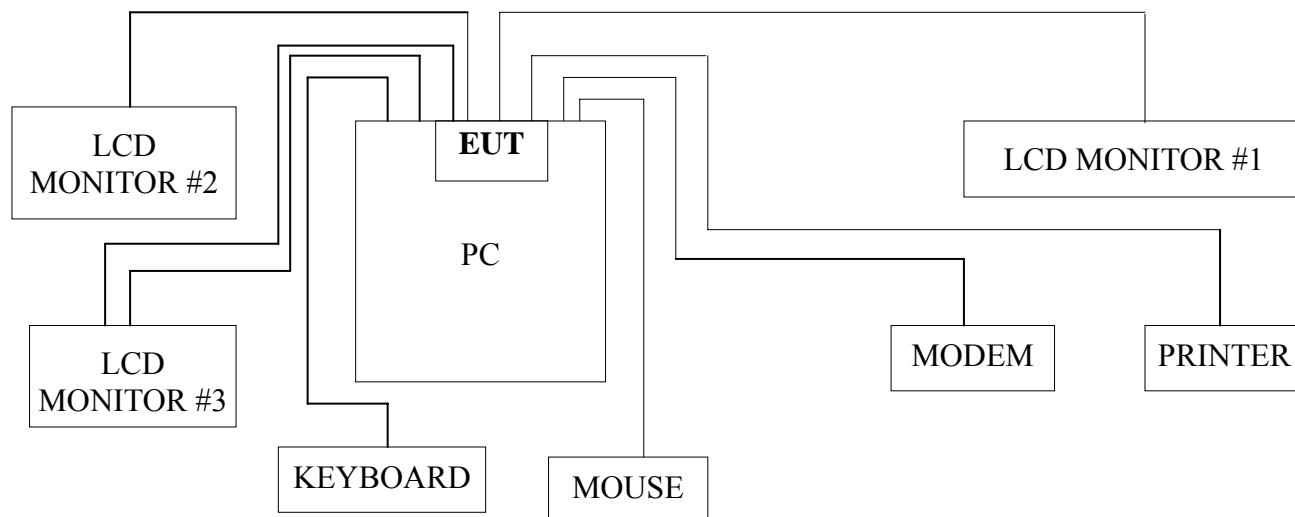
4.1 Test Equipment

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

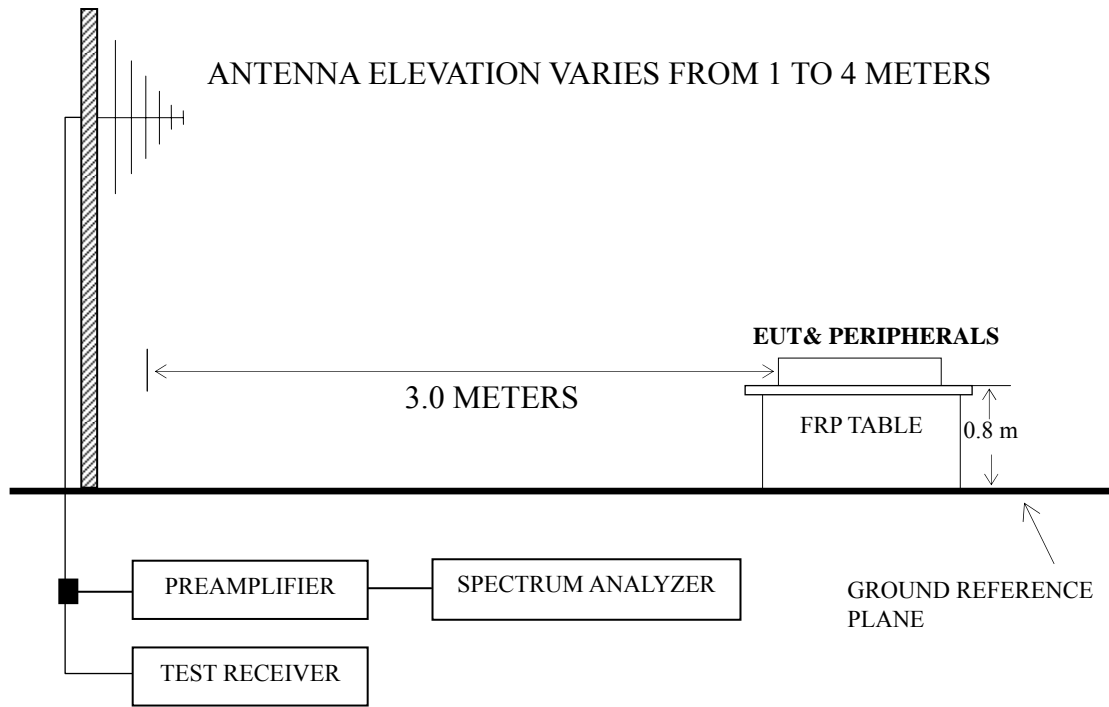
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2010	Mar 07, 2011
2.	Bilog Antenna	TESEQ	CBL6112D	23192	Dec 01, 2009	Dec 01, 2010
3.	Horn Antenna	EMCO	3115	9607-4878	May 13, 2010	May 13, 2011
4.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2010	May 19, 2011
5.	50ΩCoaxial Switch	Anritsu	MP59B	6200426390	Sep 19, 2010	Mar 19, 2011
6.	Amplifier	HP	8447D	2944A10548	Sep 19, 2010	Mar 19, 2011
7.	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 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 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 1 GHz was checked for all test modes.

The frequency range from 1 GHz to 5 GHz was checked for HDMI 1280*1024P, HDMI 1680*1050P and HDMI 1920*1080P 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
HDMI 640*480P	P20
HDMI 1280*1024P	P21 – P22
HDMI 1680*1050P	P23 – P24
HDMI 1920*1080P	P25 – P26

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

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

NOTE 3 – The emission levels that are 20dB below the official limit are not reported.

NOTE 4 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 5 – All readings are Quasi-Peak values below or equal to 1GHz, Peak & Average values above 1GHz.

NOTE 6 – The worst case is for HDMI 1280*1024P test mode. The worst emission at horizontal polarization was detected at 206.540 MHz with corrected signal level of 41.60 dB (μV/m) (limit is 43.50 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 220°. The worst emission at vertical polarization was detected at 113.420 MHz with corrected signal level of 38.16 dB (μV/m) (limit is 43.50 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 0°.

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 640*480P

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	56.190	16.66	7.46	0.82	24.94	40.00	15.06
	189.080	26.64	10.24	1.41	38.29	43.50	5.21
	224.970	24.23	11.89	1.53	37.65	46.00	8.35
	300.630	22.94	13.93	1.77	38.64	46.00	7.36
	335.550	20.87	14.90	1.88	37.65	46.00	8.35
	870.990	8.05	21.42	2.98	32.45	46.00	13.55
Vertical	53.280	26.45	8.14	0.80	35.39	40.00	4.61
	189.080	25.45	10.24	1.41	37.10	43.50	6.40
	239.520	19.45	12.52	1.57	33.54	46.00	12.46
	335.550	17.60	14.90	1.88	34.38	46.00	11.62
	457.770	10.68	17.35	2.18	30.21	46.00	15.79
	852.560	12.53	21.24	2.97	36.74	46.00	9.26

TEST ENGINEER: RAVEN JIN

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1280*1024P

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	113.420	9.78	12.58	1.10	--	23.46	43.50	20.04	QP
	156.100	15.43	10.79	1.27	--	27.49	43.50	16.01	
	189.080	27.01	10.24	1.41	--	38.66	43.50	4.84	
	206.540	29.16	10.97	1.47	--	41.60	43.50	1.90	
	300.630	22.22	13.93	1.77	--	37.92	46.00	8.08	
	335.550	21.26	14.90	1.88	--	38.04	46.00	7.96	
	1180.000	42.93	25.71	4.51	37.05	36.10	74.00	37.90	PK
	1595.000	42.87	27.08	4.56	36.11	38.40	74.00	35.60	
	2465.000	37.56	29.48	5.43	35.47	37.00	74.00	37.00	
	3160.000	35.81	31.97	6.30	35.25	38.83	74.00	35.17	
	3770.000	36.44	32.78	7.23	35.13	41.32	74.00	32.68	
	4980.000	32.27	36.56	8.15	34.99	41.99	74.00	32.01	
	1180.000	31.93	25.71	4.51	37.05	25.10	54.00	28.90	AV
	1595.000	23.87	27.08	4.56	36.11	19.40	54.00	34.60	
	2465.000	21.56	29.48	5.43	35.47	21.00	54.00	33.00	
	3160.000	15.81	31.97	6.30	35.25	18.83	54.00	35.17	
	3770.000	20.44	32.78	7.23	35.13	25.32	54.00	28.68	
	4980.000	17.27	36.56	8.15	34.99	26.99	54.00	27.01	

TEST ENGINEER: RAVEN JIN

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1280*1024P

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	55.220	25.98	7.69	0.81	--	34.48	40.00	5.52	QP
	113.420	24.48	12.58	1.10	--	38.16	43.50	5.34	
	189.080	24.33	10.24	1.41	--	35.98	43.50	7.52	
	239.520	18.85	12.52	1.57	--	32.94	46.00	13.06	
	324.880	15.71	14.58	1.84	--	32.13	46.00	13.87	
	852.560	13.67	21.24	2.97	--	37.88	46.00	8.12	
	1080.000	48.21	25.24	4.50	37.25	40.70	74.00	33.30	PK
	1760.000	46.03	27.23	4.58	35.86	41.98	74.00	32.02	
	2445.000	43.16	29.40	5.39	35.48	42.47	74.00	31.53	
	2755.000	41.57	30.87	5.78	35.38	42.84	74.00	31.16	
	3895.000	37.45	33.07	7.35	35.11	42.76	74.00	31.24	
	4610.000	36.06	34.50	7.93	35.04	43.45	74.00	30.55	
	1080.000	38.21	25.24	4.50	37.25	30.70	54.00	23.30	AV
	1760.000	26.03	27.23	4.58	35.86	21.98	54.00	32.02	
	2445.000	26.16	29.40	5.39	35.48	25.47	54.00	28.53	
	2755.000	25.57	30.87	5.78	35.38	26.84	54.00	27.16	
	3895.000	23.45	33.07	7.35	35.11	28.76	54.00	25.24	
	4610.000	24.06	34.50	7.93	35.04	31.45	54.00	22.55	

TEST ENGINEER: RAVEN JIN

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1680*1050P

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	56.190	18.42	7.46	0.82	--	26.70	40.00	13.30	QP
	94.990	12.86	10.45	1.02	--	24.33	43.50	19.17	
	189.080	27.46	10.24	1.41	--	39.11	43.50	4.39	
	216.240	27.60	11.43	1.50	--	40.53	46.00	5.47	
	300.630	22.18	13.93	1.77	--	37.88	46.00	8.12	
	335.550	20.50	14.90	1.88	--	37.28	46.00	8.72	
	1120.000	44.08	25.42	4.50	37.17	36.83	74.00	37.17	PK
	1475.000	44.00	26.93	4.55	36.35	39.13	74.00	34.87	
	2060.000	40.98	27.66	4.90	35.58	37.96	74.00	36.04	
	2805.000	37.00	31.11	5.82	35.36	38.57	74.00	35.43	
	3765.000	36.73	32.78	7.23	35.13	41.61	74.00	32.39	
	5100.000	33.86	36.66	8.26	34.98	43.80	74.00	30.20	
	1120.000	36.08	25.42	4.50	37.17	28.83	54.00	25.17	AV
	1475.000	27.00	26.93	4.55	36.35	22.13	54.00	31.87	
	2060.000	24.98	27.66	4.90	35.58	21.96	54.00	32.04	
	2805.000	23.00	31.11	5.82	35.36	24.57	54.00	29.43	
	3765.000	21.73	32.78	7.23	35.13	26.61	54.00	27.39	
	5100.000	21.86	36.66	8.26	34.98	31.80	54.00	22.20	

TEST ENGINEER: RAVEN JIN

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1680*1050P

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	53.280	22.68	8.14	0.80	--	31.62	40.00	8.38	QP
	62.980	27.64	6.57	0.86	--	35.07	40.00	4.93	
	104.690	20.39	11.88	1.06	--	33.33	43.50	10.17	
	189.080	24.11	10.24	1.41	--	35.76	43.50	7.74	
	239.520	19.44	12.52	1.57	--	33.53	46.00	12.47	
	457.770	10.33	17.35	2.18	--	29.86	46.00	16.14	
	1175.000	46.81	25.69	4.51	37.06	39.95	74.00	34.05	PK
	1335.000	45.24	26.47	4.53	36.70	39.54	74.00	34.46	
	1765.000	44.40	27.23	4.58	35.86	40.35	74.00	33.65	
	2445.000	41.24	29.40	5.39	35.48	40.55	74.00	33.45	
	3555.000	34.91	32.24	7.05	35.17	39.03	74.00	34.97	
	4105.000	35.79	33.41	7.56	35.09	41.67	74.00	32.33	
	1175.000	37.81	25.69	4.51	37.06	30.95	54.00	23.05	AV
	1335.000	27.24	26.47	4.53	36.70	21.54	54.00	32.46	
	1765.000	30.40	27.23	4.58	35.86	26.35	54.00	27.65	
	2445.000	23.24	29.40	5.39	35.48	22.55	54.00	31.45	
	3555.000	18.91	32.24	7.05	35.17	23.03	54.00	30.97	
	4105.000	22.79	33.41	7.56	35.09	28.67	54.00	25.33	

TEST ENGINEER: RAVEN JIN

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1920*1080P

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	62.980	23.50	6.57	0.86	--	30.93	40.00	9.07	QP
	112.450	16.46	12.51	1.10	--	30.07	43.50	13.43	
	191.990	26.85	10.37	1.42	--	38.64	43.50	4.86	
	216.240	26.90	11.43	1.50	--	39.83	46.00	6.17	
	300.630	22.27	13.93	1.77	--	37.97	46.00	8.03	
	335.550	20.72	14.90	1.88	--	37.50	46.00	8.50	
	1075.000	41.82	25.21	4.50	37.26	34.27	74.00	39.73	PK
	1365.000	36.94	26.59	4.54	36.62	31.45	74.00	42.55	
	1760.000	36.87	27.23	4.58	35.86	32.82	74.00	41.18	
	2445.000	33.89	29.40	5.39	35.48	33.20	74.00	40.80	
	3135.000	33.49	31.95	6.30	35.25	36.49	74.00	37.51	
	4055.000	33.55	33.35	7.52	35.09	39.33	74.00	34.67	
	1075.000	21.82	25.21	4.50	37.26	14.27	54.00	39.73	AV
	1365.000	18.94	26.59	4.54	36.62	13.45	54.00	40.55	
	1760.000	18.87	27.23	4.58	35.86	14.82	54.00	39.18	
	2445.000	18.89	29.40	5.39	35.48	18.20	54.00	35.80	
	3135.000	19.49	31.95	6.30	35.25	22.49	54.00	31.51	
	4055.000	23.55	33.35	7.52	35.09	29.33	54.00	24.67	

TEST ENGINEER: RAVEN JIN

EUT : Graphic Card Temperature : 22°C

Model No. : FI5400E-1G4H512F(4-HDMI) Humidity : 60%RH

Serial No. : 20010061100005 Date of Test : Oct 14, 2010

Test Mode : HDMI 1920*1080P

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	35.820	15.15	16.45	0.68	--	32.28	40.00	7.72	QP
	40.670	19.85	13.62	0.72	--	34.19	40.00	5.81	
	60.070	30.49	6.60	0.84	--	37.93	40.00	2.07	
	68.800	26.00	6.51	0.89	--	33.40	40.00	6.60	
	189.080	24.53	10.24	1.41	--	36.18	43.50	7.32	
	335.550	16.58	14.90	1.88	--	33.36	46.00	12.64	
	1315.000	44.23	26.39	4.53	36.75	38.40	74.00	35.60	PK
	1760.000	47.77	27.23	4.58	35.86	43.72	74.00	30.28	
	2850.000	40.95	31.29	5.86	35.34	42.76	74.00	31.24	
	3160.000	41.17	31.97	6.30	35.25	44.19	74.00	29.81	
	4580.000	38.94	34.26	7.93	35.04	46.09	74.00	27.91	
	5830.000	37.06	36.43	8.90	34.91	47.48	74.00	26.52	
	1315.000	28.23	26.39	4.53	36.75	22.40	54.00	31.60	AV
	1760.000	32.77	27.23	4.58	35.86	28.72	54.00	25.28	
	2850.000	25.95	31.29	5.86	35.34	27.76	54.00	26.24	
	3160.000	24.17	31.97	6.30	35.25	27.19	54.00	26.81	
	4580.000	24.94	34.26	7.93	35.04	32.09	54.00	21.91	
	5830.000	31.06	36.43	8.90	34.91	41.48	54.00	12.52	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.