Verification of Compliance

Product Name	:	**EPIC Express Board**
Model Number	:	**xxxxxEPIC-HD07-xxxxxx(Where x is 0-9 , A-Z , -or blank)**
		for marketing purpose
Applicant	:	**AAEON Technology Inc.**
Address	:	**5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien Dist,**
		New Taipei City, Taiwan, R.O.C.
Report Number	:	**F-U070-1204-130**
Issue Date	:	**April 24, 2012**

Applicable Standards : **FCC Part 15, Subpart B Class A ITE**
ANSI C63.4:2003
Industry Canada ICES-003 Issue 4
CSA-IEC CISPR22: 02 Class A ITE

One sample of the designated product has been tested in our laboratory and found to be in compliance with the FCC rules cited above.

NVLAP LAB CODE 200575-0

TAF 0905
FCC CAB Code TW1053
IC Code 4699A
VCCI Accep. No. R-1527, C-1609, T-1441, G-10

Central Research Technology Co.
EMC Test Laboratory
11, Lane 41, Fushuen St., Jungshan Chiu,
Taipei, Taiwan, 104, R.O.C.
Tel : 886-2-25984568
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(Tsun-Yu Shih/ General Manager)

Date: April 24, 2012

FCC Test Report

for

EPIC Express Board

Model Number	**:**	**xxxxxEPIC-HD07-xxxxxx**
		(Where x is 0-9，A-Z，-or blank)
		for marketing purpose
Report Number	**:**	**F-U070-1204-130**
Date of Receipt	**:**	**April 11, 2012**
Date of Report	**:**	**April 24, 2012**

Prepared for

AAEON Technology Inc.

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien Dist, New Taipei City, Taiwan, R.O.C.

Prepared by

Central Research Technology Co.
EMC Test Laboratory

11, Lane 41, Fushuen St., Jungshan Chiu, Taipei, Taiwan, 104, R.O.C.

NVLAP LAB CODE 200575-0

Verification of Compliance

Equipment Under Test	**:**	EPIC Express Board
Model No.	**:**	xxxxxEPIC-HD07-xxxxxx (Where x is 0-9，A-Z，-or blank) for marketing purpose
Applicant	**:**	AAEON Technology Inc.
Address	**:**	5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien Dist, New Taipei City, Taiwan, R.O.C.
Applicable Standards	**:**	**FCC Part 15, Subpart B Class A ITE** **ANSI C63.4:2003** **Industry Canada ICES-003 Issue 4** **CSA-IEC CISPR22: 02 Class A ITE**
Date of Testing	**:**	April 13~20, 2012
Deviation	**:**	N/A
Condition of Test Sample	**:**	Engineering Sample

We, **Central Research Technology Co**., hereby certify that one sample of the designated product was tested in our facility during the period mentioned above. The test records, data evaluation and Equipment Under Test (EUT) configurations shown in the present report are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

The test results show that the EUT as described in the present report is in compliance with the requirements set forth in the standards mentioned above and apply to the tested sample identified in the present report only. The test report shall not be reproduced, except in its entirety, without the written approval of Central Research Technology Co.

PREPARED BY : Rosa Hsieh (Rosa Hsieh/System Executive) , **DATE :** April 24, 2012

APPROVED BY : J. Y. Shih (Tsun-Yu Shih/General Manager) , **DATE :** Apr. 24, 2012

Contents

1. General Description

1.1 General Description of EUT

Equipment Under Test	:	EPIC Express Board		
Model No.	:	xxxxxEPIC-HD07-xxxxxx (Where x is 0-9，A-Z，-or blank) for marketing purpose		
Power in	:	120V/60Hz to the power adapter		
Power Adapter Specification	:	Trade Name	:	FSP
		Model No.	:	FSP60-DBAB1
		Input	:	100-240V, 1.5A,50~60Hz
		Output	:	12Vdc, 5A MAX
Highest Operating Frequency	:	1.65GHz from the test specification		
Manufacturer	:	AAEON Technology Inc.		
Function Description	:			

The EUT is an engineering sample of the EPIC Express Board. Please refer to the user's manual for the details.

The I/O ports of EUT are listed below:

No.	I/O Port Type	Quantity
1	D-Sub port	1
2	DVI port	1
3	PS2 port	1
4	USB port	8
5	RS232 port	6
6	LAN port	2
7	Audio input port	1
8	Audio output port	1
9	Mic. port	1

The devices (supplied by the manufacturer) used to assembly a host system are listed below:

Components	Specification
CPU	AMD G-T56N 1.65GHz
HDD	HITACHI Z5K320-250 250GB
Memory	DSL，DDR3-1066 4G
OSC	27MHz；25MHz；32.768KHz
Power Supply	AC Adapter Manufacturer：FSP AC Adapter Module Number：FSP060-DBAB1 AC Adapter Power Rating：I/P：100~240VAC, 1.5A, O/P：12Vdc/5A，60Watt

1.2 Test Mode

Normal operating as the customer’s requirement.

The EUT with D-Sub+DVI 1920 x 1200@60Hz resolution to monitor was selected by the manufacturer to be tested herein.

1.3 Applied standards

According to the specifications of the manufacturer and the requirements set in 47CFR Part 15, the applied standards to evaluate the compliance of the EUT are as following, and the measurement procedures specified in ANSI C63.4: 2003 are performed.

According to 47CFR Part 15 Section 15.33(b), the test frequency range of radiated emission measurements are listed below and the EUT herein shall be tested as:

Type of EUT	**Highest frequency generated or used in the device or on which the device operates or tunes (MHz)**	**Upper frequency of measurement range (MHz)**
☐	Below 1.705	30
☐	1.705 - 108	1000
☐	108 - 500	2000
☐	500 - 1000	5000
☑	Above 1000	5^{th} harmonic of the highest frequency or 40GHz, whichever is lower

All the test items are as following:

Applied Standards	**Test Items**	**Results**
FCC Part 15, Subpart B Class A ITE	☑ Conducted Emission Measurement	PASS
	☑ Radiated Emission Measurement	PASS

1.4 Test Setup for the EUT

The EUT is an unique unit connected with other necessary accessories and support units listed in the next section. It has been tested against each standard after the following setup steps:

a. Connect the EUT installed host system and all the support units to the appropriate power source.
b. Turn on the EUT and all the accessories and support units.
c. Install an EMC test software into the EUT and execute it under the Windows environment.
d. The EUT sends “H” patterns to the monitor, which fills the whole screen of it.
e. The EUT sends messages to the modems.
f. The EUT reads/writes messages from/to the USB Flash Disk(s).
g. The EUT send 1kHz audio signal to the earphones.
h. Another PC sends/ receives messages to/ from the EUT through a Hub by executing the command of “PING”.
i. Repeat and keep setup steps listed above before and during all tests.

EUT I/O ports / Peripherals	Exerciser Program (software)	Version of Program
EUT	BurnIn Test.exe	V 6.0
Monitor		
USB Flash Disk(s)		
Modem		
Earphone & Microphone		

1.5 The Support Units

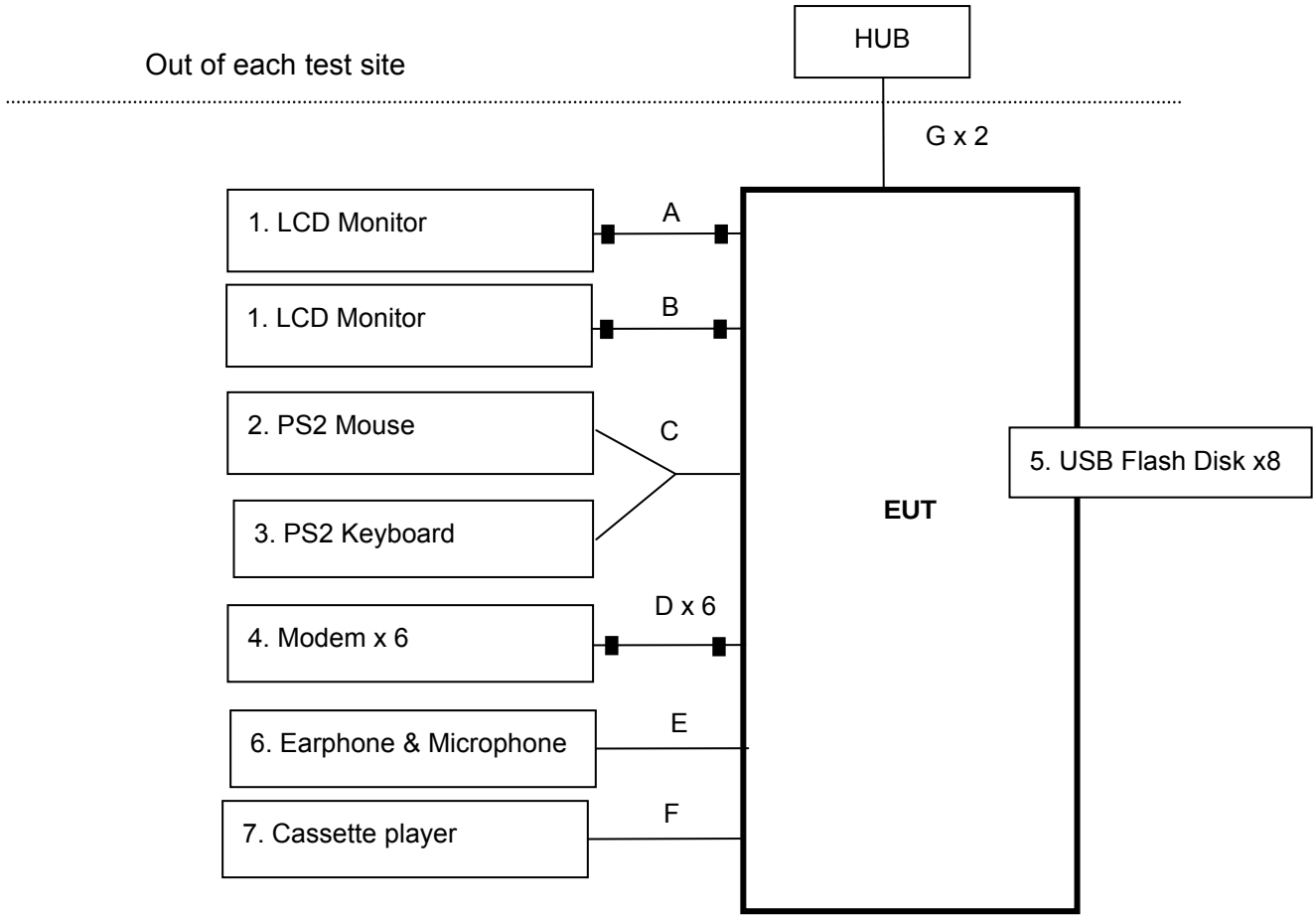
Conducted Emission Test

No.	Unit	Model No./ Serial No.	FCC ID	Trade Name	Power Cord	Supported by lab.
1	Monitor	2408WFP/ CN-0NN792-74261-849-154S	DoC	DELL	1.8m	✓
		U2410/ CN-082WXD-72872-12S-02EL	DoC	DELL	1.8m	✓
2	PS/2 Mouse	MO71KC/ 515044954	DoC	DELL	N/A	✓
3	PS/2 Keyboard	SK-8110/ MY-05N456-71619-53A-0541	DoC	DELL	N/A	✓
4	Modem	DM-1414/ 0311055094	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0505012779	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0509019802	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0509019801	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0509019805	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0609026973	IFAXDH1414	ACEEX	1.9m	✓
5	USB Flash Disk	U172/100-038	DoC	PQI	N/A	✓
		U172/100-042	DoC	PQI	N/A	✓
		U172/100-068	DoC	PQI	N/A	✓
		U172/100-071	DoC	PQI	N/A	✓
		U172/100-074	DoC	PQI	N/A	✓
		U172/100-079	DoC	PQI	N/A	✓
		U172/100-080	DoC	PQI	N/A	✓
		U172/100-098	DoC	PQI	N/A	✓
6	Earphone & Microphone	MIC-4/2008-007	N/A	SCE	N/A	✓
7	Cassette player	RQ-L11/ 4-717523-100921-4	N/A	Panasonic	N/A	✓

Radiated Emission Test

No.	Unit	Model No./ Serial No.	FCC ID	Trade Name	Power Cord	Supported by lab.
1	Monitor	U2410/ CN-0J257M-72872-070-02JL	DoC	DELL	1.8m	✓
		U2410/ CN-0J257M-72872-083-069L	DoC	DELL	1.8m	✓
2	PS/2 Mouse	MO71KC/ 515044954	DoC	DELL	N/A	✓
3	PS/2 Keyboard	SK-8110/ MY-05N456-71619-53A-0541	DoC	DELL	N/A	✓
4	Modem	DM-1414/ 0311055094	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0505012779	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0509019802	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0509019801	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0509019805	IFAXDH1414	ACEEX	1.9m	✓
		DM-1414/ 0609026973	IFAXDH1414	ACEEX	1.9m	✓
5	USB Flash Disk	U172/100-038	DoC	PQI	N/A	✓
		U172/100-042	DoC	PQI	N/A	✓
		U172/100-068	DoC	PQI	N/A	✓
		U172/100-071	DoC	PQI	N/A	✓
		U172/100-074	DoC	PQI	N/A	✓
		U172/100-079	DoC	PQI	N/A	✓
		U172/100-080	DoC	PQI	N/A	✓
		U172/100-098	DoC	PQI	N/A	✓
6	Earphone & Microphone	E220/20011029-3	N/A	ERGOTECH Technology	N/A	✓
7	Cassette player	RQ-L11/ 4-717523-100921-1	N/A	Panasonic	N/A	✓

1.6 Layout of the Setup



Connecting Cables :

No.	Cable	Length	Shielded	Core	Shielded Backshell	Supported by lab.	Note
A	VGA Cable	1.7m	✓	✓		✓	2Cores
B	DVI Cable	1.8m	✓	✓		✓	2Cores
C	EUT Connected Cable	0.15m	✓				
D	Modem Cable	1.8m	✓	✓		✓	2Cores
E	Earphone & Microphone Cable	1.8m	✓			✓	
F	Audio Cable	1.5m	✓			✓	
G	LAN Cable	>3m				✓	

1.7 Test Capability

Test Facility

The test facility used for evaluating the conformance of the EUT with each standard in the present report meets what required in CISPR16-1-4, CISPR16-2-3 and ANSI C63.4: 2003.

Test Room	Type of Test Room	Descriptions
TR1	10m semi-anechoic chamber (23m × 14m × 9m)	Complying with the NSA requirements in documents CISPR 22 and ANSI C63.4: 2003. for the radiated emission measurement.
TR11	3m semi-anechoic chamber (9m × 6m × 6m)	
TR5	Shielding Room (8m × 5m × 4m)	For the conducted emission measurement.

Test Laboratory Competence Information

Central Research Technology Co. has been accredited / filed / authorized by the agencies listed in the following table.

Certificate	Nation	Agency	Code	Mark
Accreditation Certificate	USA	NVLAP	200575-0	ISO/IEC 17025
	R.O.C. (Taiwan)	TAF	0905	ISO/IEC 17025
	R.O.C. (Taiwan)	BSMI	SL2-IN-E-0033, SL2-IS-E-0033, SL2-R1/R2-E-0033, SL2-A1-E-0033 SL2-L1-E-0033	ISO/IEC 17025
Site Filing Document	USA	FCC	474046,TW1053	Test facility list & NSA Data
	Canada	IC	4699A-1,-3	Test facility list & NSA Data
	Japan	VCCI	R-1527,C-1609,T-1441,G-10	Test facility list & NSA Data
Authorization Certificate	Germany	TUV	10021687	ISO/IEC 17025
	Norway	Nemko	ELA 212	ISO/IEC 17025

The copy of each certificate can be downloaded from our web site: www.crc-lab.com

2. Conducted Emission Measurement

Test Result : PASS

2.1 Limits for Emission Measurement

☑ Limits for conducted disturbances at the power mains

Frequency (MHz)	Class A Equipment		Class B Equipment	
	Quasi-peak (dBμV)	Average (dBμV)	Quasi-peak (dBμV)	Average (dBμV)
0.15 to 0.5	79	66	66 – 56	56 – 46
0.5 to 5	73	60	56	46
5 to 30	73	60	60	50

Note 1- The lower limit shall apply at the transition frequency.
Note 2- The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz for Class B equipment.

2.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
Test Receiver	R&S	ESCS 30/ 836858/021	Jan. 11, 2012	Jan. 11, 2013
LISN	R&S	ESH2-Z5/ 836613/001	June 2, 2011	June 2, 2012
2nd LISN	R&S	ENV4200/ 833209/010	March 26, 2012	March 26, 2013
50Ω terminator	N/A	N/A/ 001	Aug. 20, 2011	Aug. 20, 2012
RF Switch	N/A	RSU28/ 338965/002	Feb. 20, 2012	Aug. 20, 2012
RF Cable	N/A	N/A/ C0052 ~ 56	Feb. 20, 2012	Aug. 20, 2012
Test Software	Audix	e3/ Ver. 5.2004-2-19k	NCR	NCR
TR5 shielded room	ETS LINDGREN	TR5/ 15353-F	NCR	NCR

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR : No Calibration Required.

Measurement Uncertainty

The assessed measurement uncertainty with a suitable coverage factor K to ensure 95% confidence level for the normal distribution are shown as below, the values are less than U_{cispr} in table 1 of CISPR 16-4-2.

Equipment	Model Number	Uncertainty Value
LISN	ESH2-Z5	3.1dB
	ENV 4200	2.7dB

2.3 Test Procedures

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. If the EUT is tabletop equipment, it was placed on a non-conducted table with a height of 0.8 meters above the reference ground plane and 0.4 meters from the conducting wall of the shielded room. Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height of 12 millimeters above the reference ground plane.

c. Connect the EUT's power source to the appropriate power mains through the LISN.

d. All the other peripherals are connected to the 2nd LISN, if any.

e. The LISN was placed 0.8 meters from the EUT and at least 0.8 meters from other units and other metal planes.

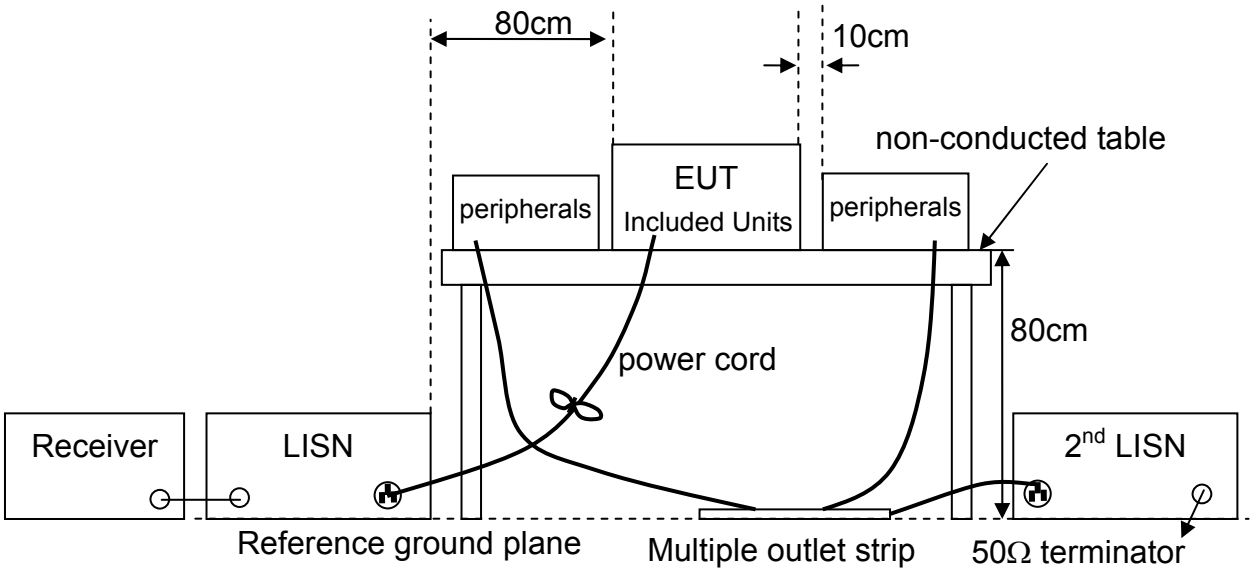
f. Measure the conducted emissions on each power line (Neutral Line and Line 1 – Hot side) of the EUT's power source by using the test receiver connected to the coupling RF output port of LISN.

g. Rapidly scan the signal from 150kHz to 30MHz by using the receiver through the Maximum-Peak detector to determine those frequencies associated with higher emission levels for each measured line.

h. Then measure the maximum level of conducted disturbance for each frequency found from step g. by using the receiver through the Quasi-Peak and Average detectors per CISPR 16-1.

i. Record the level for each frequency and compare with the required limit.

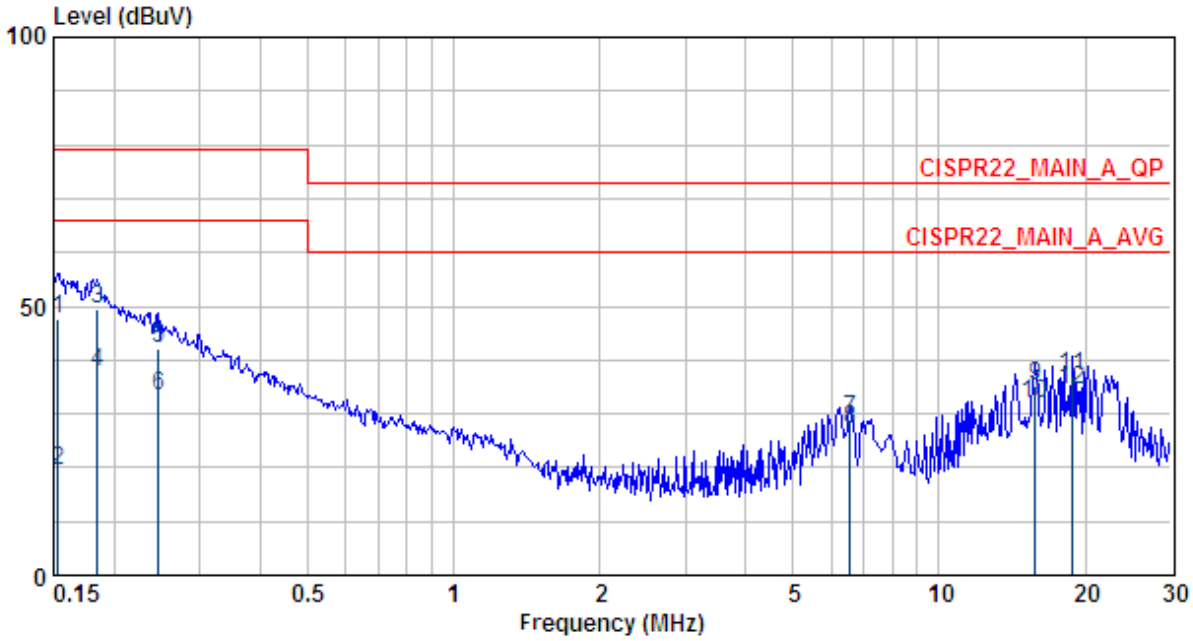
2.4 Test Configurations



2.5 Photographs of the Test Configurations

2.6 Test Results

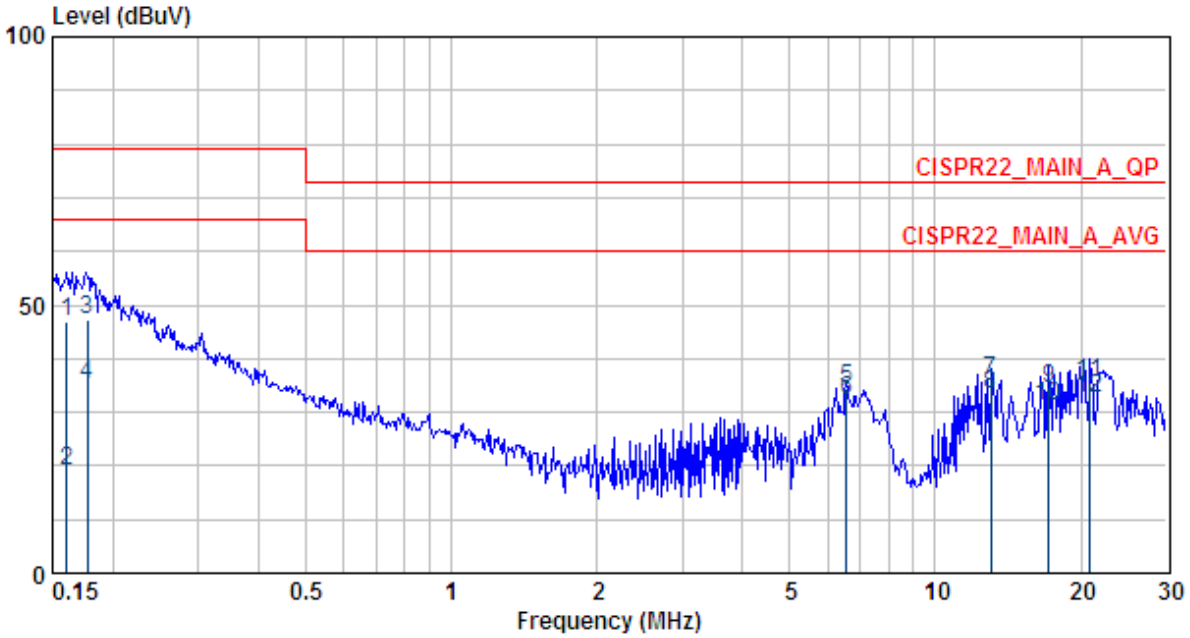
Test Mode	:	As description of section 1.2			
Test Voltage	:	120V/60Hz to the power adapter			
Tester	:	Kent	**Temperature**	:	26°C
Humidity	:	71%RH	**Frequency Range**	:	150kHz~30MHz
IF Bandwidth	:	9kHz	**Phase**	:	**Line**



	Freq	Level	Factor	Read Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.153	47.53	0.17	47.36	79.00	-31.47	LINE	QP
2	0.153	19.51	0.17	19.34	66.00	-46.49	LINE	AVERAGE
3	0.184	49.32	0.17	49.15	79.00	-29.68	LINE	QP
4	0.184	37.74	0.17	37.57	66.00	-28.26	LINE	AVERAGE
5	0.247	42.17	0.17	42.00	79.00	-36.83	LINE	QP
6	0.247	33.49	0.17	33.32	66.00	-32.51	LINE	AVERAGE
7	6.550	28.96	0.49	28.47	73.00	-44.04	LINE	QP
8	6.550	27.23	0.49	26.74	60.00	-32.77	LINE	AVERAGE
9	15.802	35.01	0.93	34.08	73.00	-37.99	LINE	QP
10	15.802	31.74	0.93	30.81	60.00	-28.26	LINE	AVERAGE
11	18.750	36.89	1.09	35.80	73.00	-36.11	LINE	QP
12	18.750	34.52	1.09	33.43	60.00	-25.48	LINE	AVERAGE

Note:
1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + insertion loss of LISN.
3. Q.P. is abbreviation of quasi-peak.

Test Mode	:	As description of section 1.2			
Test Voltage	:	120V/60Hz to the power adapter			
Tester	:	Kent	**Temperature**	:	27°C
Humidity	:	61%RH	**Frequency Range**	:	150kHz~30MHz
IF Bandwidth	:	9kHz	**Phase**	:	**Neutral**



	Freq	Level	Factor	Read Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.161	46.76	0.16	46.60	79.00	-32.24	NEUTRAL	QP
2	0.161	18.89	0.16	18.73	66.00	-47.11	NEUTRAL	AVERAGE
3	0.177	47.16	0.17	46.99	79.00	-31.84	NEUTRAL	QP
4	0.177	35.33	0.17	35.16	66.00	-30.67	NEUTRAL	AVERAGE
5	6.550	34.40	0.46	33.94	73.00	-38.60	NEUTRAL	QP
6	6.550	32.31	0.46	31.85	60.00	-27.69	NEUTRAL	AVERAGE
7	13.040	35.96	0.63	35.33	73.00	-37.04	NEUTRAL	QP
8	13.040	33.33	0.63	32.70	60.00	-26.67	NEUTRAL	AVERAGE
9	17.127	34.38	0.74	33.64	73.00	-38.62	NEUTRAL	QP
10	17.127	31.31	0.74	30.57	60.00	-28.69	NEUTRAL	AVERAGE
11	20.911	35.69	0.78	34.91	73.00	-37.31	NEUTRAL	QP
12	20.911	32.69	0.78	31.91	60.00	-27.31	NEUTRAL	AVERAGE

Note:
1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + insertion loss of LISN.
3. Q.P. is abbreviation of quasi-peak.

3. Radiated Emission Measurement

Test Result : PASS

3.1 Limits for Emission Measurement

☑ Limits for radiated disturbances below 1000MHz

Frequency (MHz)	Class A Equipment (10m distance)	Class B Equipment (3m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1000	49.5	54
Note 1- The lower limit shall apply at the transition frequency. Note 2- Additional provisions may be required for cases where interference occurs. Note 3- According to 15.109(g), as an alternative to the radiated emission limits shown above, digital devices may be shown to comply with the standards (CISPR), Pub. 22 shown as below.		
30 to 230	40	30
230 to 1000	47	37

☐ Limits for radiated disturbances in the frequency range 1000MHz ~ 2000MHz at a measuring distance of 10m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
1 to 2	69.5	49.5	63.5	43.5

☑ Limits for radiated disturbances above 1000MHz at a measuring distance of 3m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
1 to 40	80	60	74	54

3.2 Test Instruments

☑ For Measurement at the distance of 10m

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESCS 30/ 836858/020	Sept. 8, 2011	Sept. 8, 2012
Broadband Antenna	R&S	HL-562/ 360543/007	March 23, 2012	March 23, 2013
Broadband Antenna	R&S	HL-562/ 830547/010	April 26, 2011	April 26, 2012
Pre-Amplifier	Mini Circuit	ZKL-2/ 001	Jan. 17, 2012	July 17, 2012
Pre-Amplifier	Mini Circuit	ZKL-2/ 002	Jan. 17, 2012	July 17, 2012
Spectrum	R&S	FSP7/ 100108	June 10, 2011	June 10, 2012
Spectrum	R&S	FSP7/ 100384	Jan. 3, 2012	Jan. 3, 2013
RF Cable	JYEBAO	0214/ C0049	Jan. 17, 2012	July 17, 2012
RF Cable	JYEBAO	0214/ C0050	Jan. 17, 2012	July 17, 2012
Test Software	Audix	e3/ Ver. 4.3.714.e	NCR	NCR
TR1 Semi - anechoic Chamber	ETS. LINDGREN	TR1/ 17627-B	April 23, 2011	April 23, 2012

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR : No Calibration Required.
3. The calibration date of the semi-anechoic chamber listed above is the date of NSA measurement.

☑ For Measurement at the distance of 3m

Test Site and Equipment	Manufacturer	Model No./ Serial No.		Last Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESCI/ 100019		May 25, 2011	May 25, 2012
Bi-Log Antenna	EMCO	3142C/ 52088		May 19, 2011	May 19, 2012
Horn Antenna	EMCO	3117/ 00082847		March 1, 2012	March 1, 2013
Bore-sight Antenna Mast	Sunol	TLT2/ 051110-5		NCR	NCR
Pre-Amplifier	KMIC	☐	KMA010180A01/ 99056	Oct. 12, 2011	Oct. 12, 2012
	Mini Circuit	☐	ZKL-2/ 004	Feb. 6, 2012	Aug. 6, 2012
	MITEQ	☑	JS4-00101800-28-10P/1498979	Dec. 21, 2011	Dec. 21, 2012
	MITEQ		JS4-00101800-28-5A/742309	Dec. 14, 2011	Dec. 14, 2012
Spectrum Analyzer	Agilent	E4407B/ MY45106795		May 2, 2011	May 2, 2012
RF Cable	N/A	N/A/ C0080		Feb. 6, 2012	Aug. 6, 2012
RF Cable	N/A	N/A/ C0081		April 16, 2012	Oct. 16, 2012
Test Software	Audix	e3/ Ver. 4.3.714.e		NCR	NCR
TR11 Semi - anechoic Chamber	ETS. LINDGREN	TR11/ 906-A		April 22, 2012	April 22, 2013

Note:
1. The calibrations are traceable to NML/ROC.
2. NCR : No Calibration Required.
3. The calibration date of the semi-anechoic chamber listed above is the date of NSA measurement.

Measurement Uncertainty

The assessed measurement uncertainty with a suitable coverage factor K to ensure 95% confidence level for the normal distribution are shown as below, the values are less than U_{cispr} in table 1 of CISPR 16-4-2.

Test Site (Measuring distance)	**Polarization**	**Frequency Range**	
		30MHz ~200MHz	200MHz ~1000MHz
TR1(10m)	Horizontal	3.2dB	3.5dB
	Vertical	3.3dB	3.6dB
TR11(3m)	Horizontal	3.8 dB	4.1dB
	Vertical	3.3dB	3.7dB

Test Site (Measuring distance)	**Polarization**	**Frequency Range**	
		1GHz ~18GHz	18GHz~26GHz
TR11(3m)	Horizontal	3.5dB	4.4dB
	Vertical	3.6dB	4.5dB

3.3 Test Procedures

a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.

b. If the EUT is tabletop equipment, it was placed on a non-conducted table with a height of 0.8 meters above the reference ground plane in the semi-anechoic chamber. If the EUT is floor-standing equipment, it was placed on a non-conducted support with a height of 12 millimeters above the reference ground plane in the semi-anechoic chamber.

c. For the measurement of frequency below 1000MHz, the EUT was set 10m away from the interference receiving antenna for the limit of Class A equipment or CISPR 22. For Class B equipment and the measurement of frequency above 1000MHz, the EUT was set 3m away from the interference receiving antenna.

d. Rapidly sweep the signal in the test frequency range by using the spectrum through the Maximum-peak detector.

e. Rotate the EUT from 0° to 360° and position the receiving antenna at heights from 1 to 4 meters above the reference ground plane continuously to determine at least six frequencies associated with higher emission levels and record them.

f. For measurement of frequency above 1000MHz, the beamwidth of receiving horn antenna should keep covering EUT when the receiving horn antenna height varied.

g. Then measure each frequency found from step e. by using the spectrum with rotating the EUT and positioning the receiving antenna height to determine the maximum level.

h. Finely tune the antenna and turntable around the recorded position of each frequency found from step f.

i. For measurement of frequency below 1000MHz, set the receiver detector to be Quasi-Peak per CISPR 16-1 to find out the maximum level occurred.

j. For measurement of frequency above 1000MHz, set the spectrum detector to be Peak or Average to find out the maximum level occurred, if any.

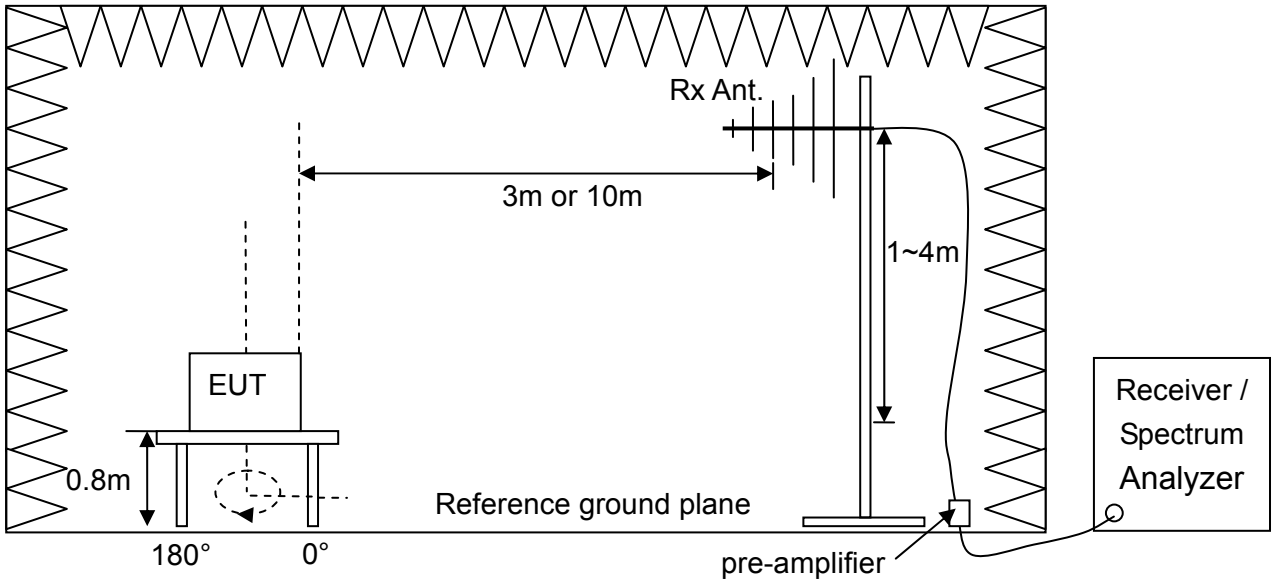
k. Record frequency, azimuth angle of the turntable, height, and polarization of the receiving antenna and compare the maximum level with the required limit.

l. Change the receiving antenna to another polarization to measure radiated emission by following step d. to k. again.

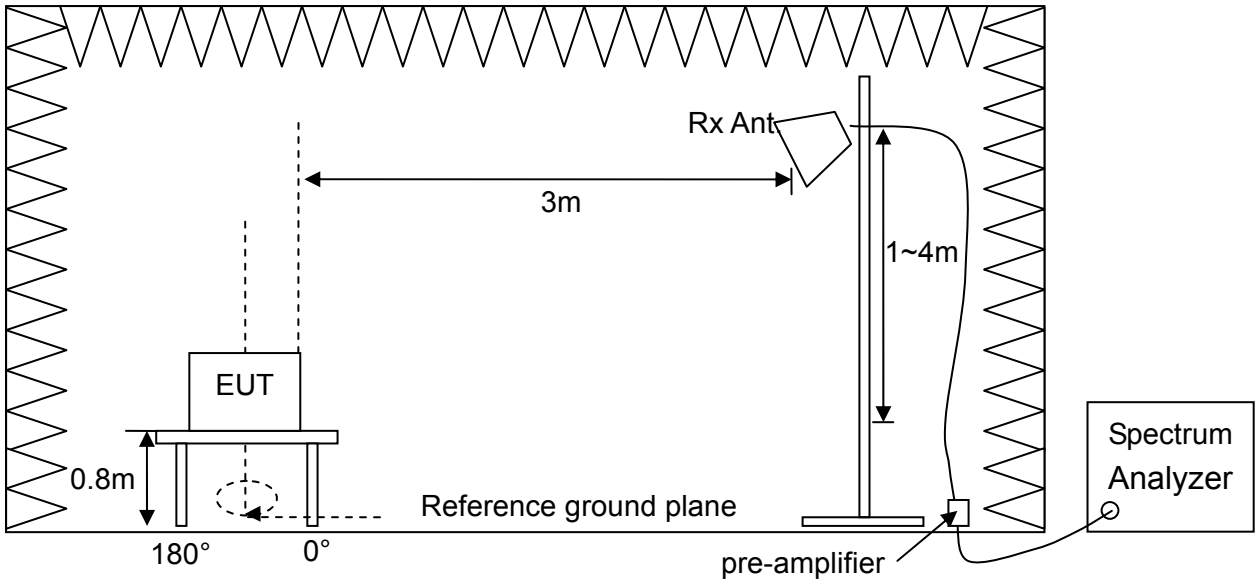
m. If the peak emission level measured from step e. is 4dB lower than the limit specified, then the emission values presented will be the peak value only. Otherwise, accurate Q.P. value will be measured and presented.

3.4 Test Configurations

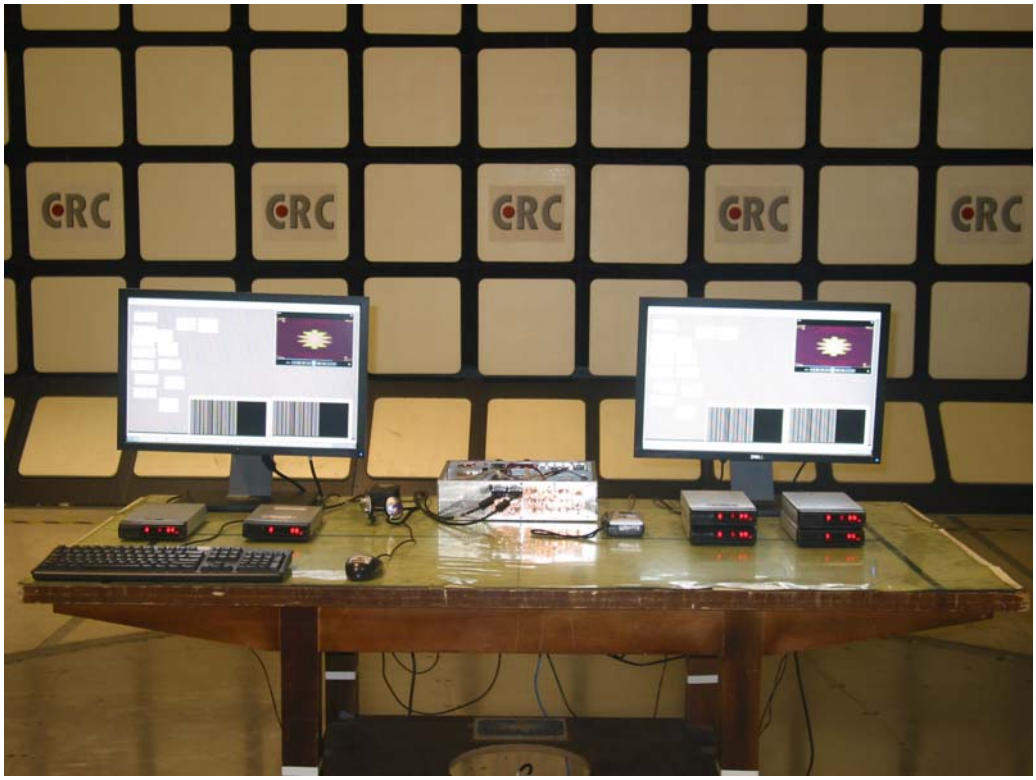
Radiated Emission Measurement below 2000MHz

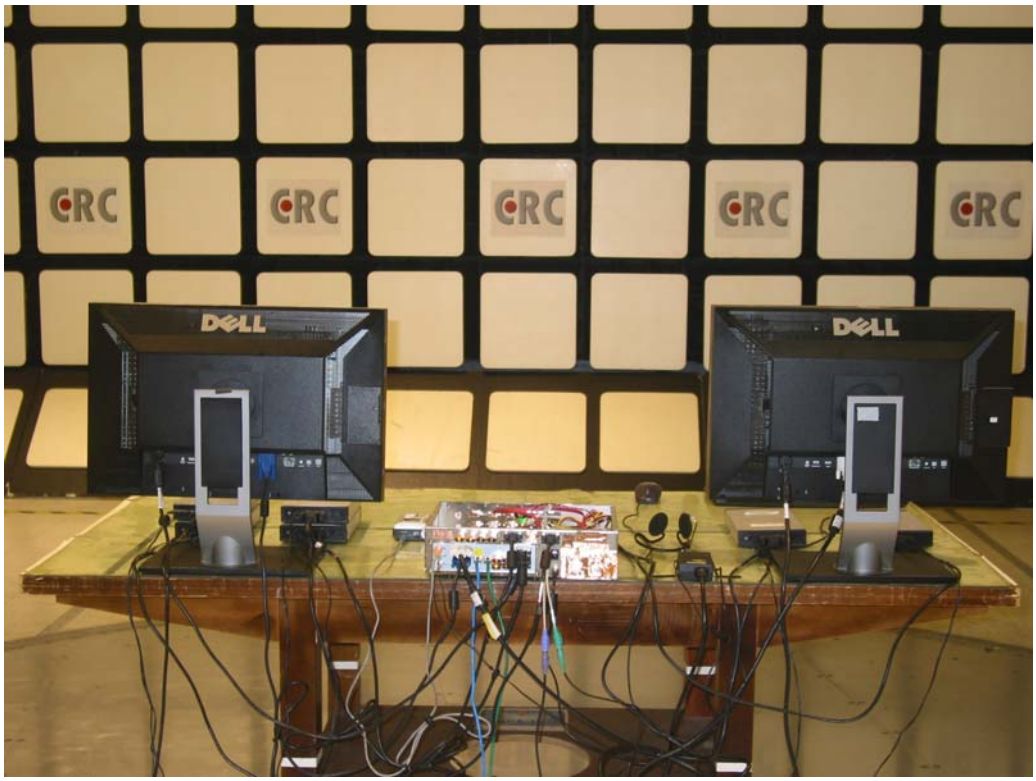


Radiated Emission Measurement above 1000MHz (if any)



3.5 Photographs of the Test Configurations

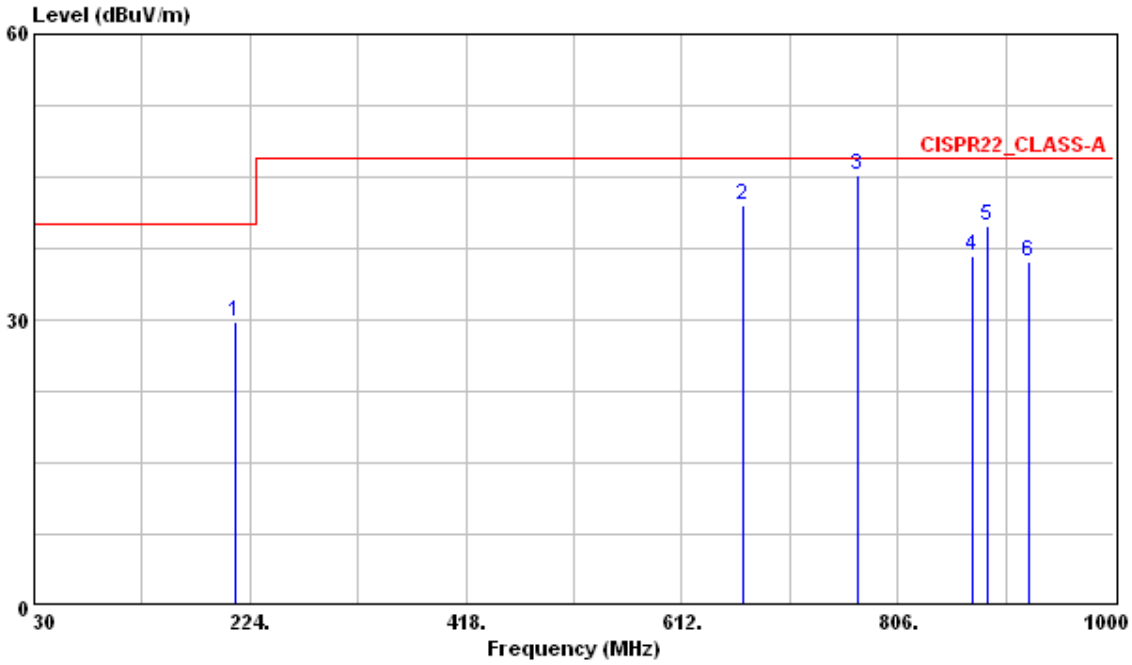




3.6 Test Results

Radiated Emission Measurement below 1000MHz

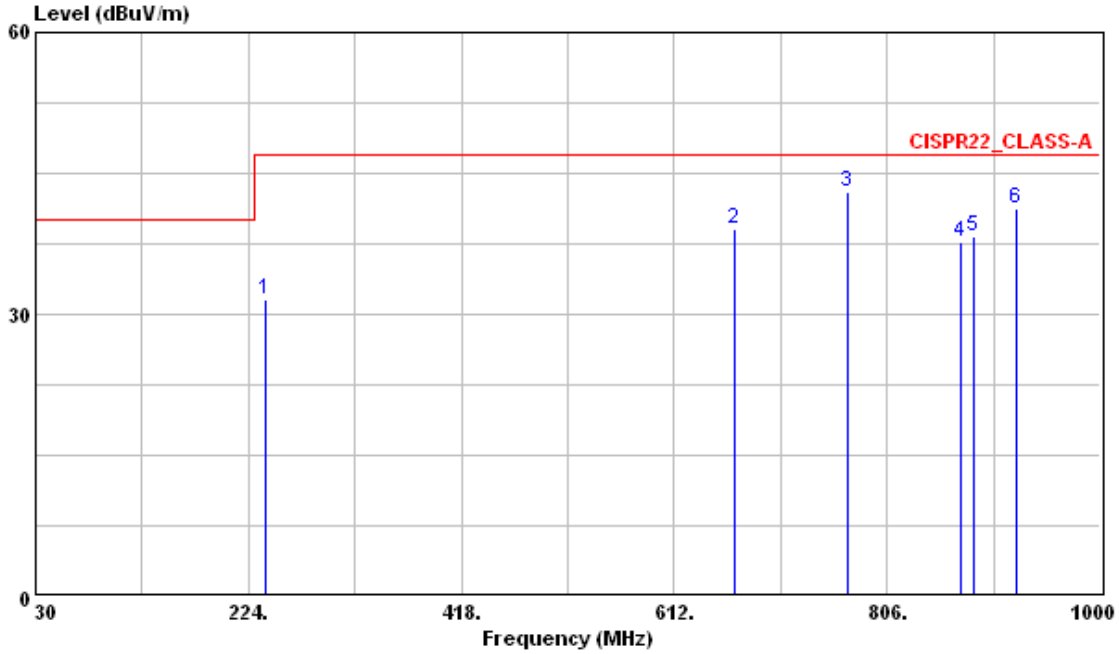
Test Mode	:	As description of section 1.2			
Test Voltage	:	120V/60Hz to the power adapter			
Tester	:	Meng	**Temperature**	:	27°C
Humidity	:	58%RH	**Frequency Range**	:	30MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Horizontal**



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	209.992	29.83	49.96	-20.13	40.00	-10.17	328	352	HORIZONTAL	QP
2	666.320	41.98	49.88	-7.90	47.00	-5.02	---	---	HORIZONTAL	Peak
3	769.994	45.14	51.62	-6.48	47.00	-1.86	365	200	HORIZONTAL	QP
4	872.652	36.71	41.38	-4.67	47.00	-10.29	238	249	HORIZONTAL	QP
5	886.510	39.77	44.13	-4.36	47.00	-7.23	---	---	HORIZONTAL	Peak
6	923.370	36.15	40.08	-3.93	47.00	-10.85	---	---	HORIZONTAL	Peak

Note:
1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + antenna factor – gain of pre-amplifier.
3. Q.P is abbreviation of quasi-peak.

Test Mode	:	As description of section 1.2			
Test Voltage	:	120V/60Hz to the power adapter			
Tester	:	Meng	**Temperature**	:	27°C
Humidity	:	58%RH	**Frequency Range**	:	30MHz~1GHz
IF Bandwidth	:	120kHz	**Polarization**	:	**Vertical**

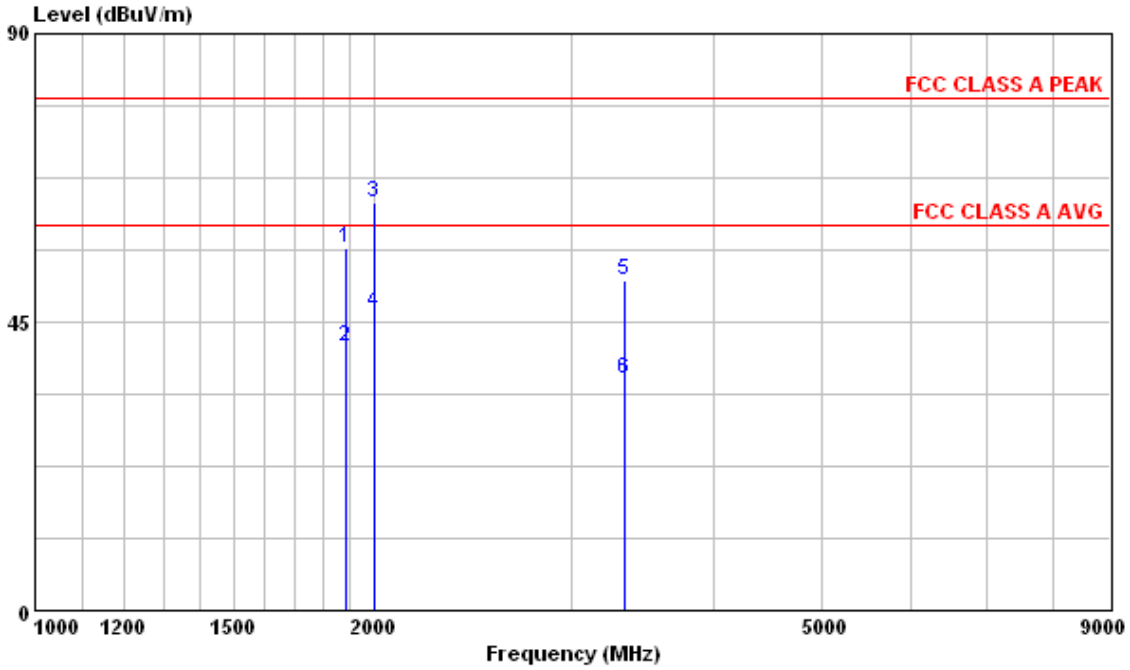


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	239.986	31.68	50.17	-18.49	47.00	-15.32	100	359	VERTICAL	QP
2	666.680	39.02	46.00	-6.98	47.00	-7.98	396	144	VERTICAL	QP
3	769.994	42.99	48.53	-5.54	47.00	-4.01	310	144	VERTICAL	QP
4	872.660	37.67	41.12	-3.45	47.00	-9.33	280	192	VERTICAL	QP
5	885.490	38.32	41.48	-3.16	47.00	-8.68	208	21	VERTICAL	QP
6	923.370	41.32	43.94	-2.62	47.00	-5.68	---	---	VERTICAL	Peak

Note:
1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + antenna factor – gain of pre-amplifier.
3. Q.P is abbreviation of quasi-peak.

Radiated Emission Measurement above 1000MHz

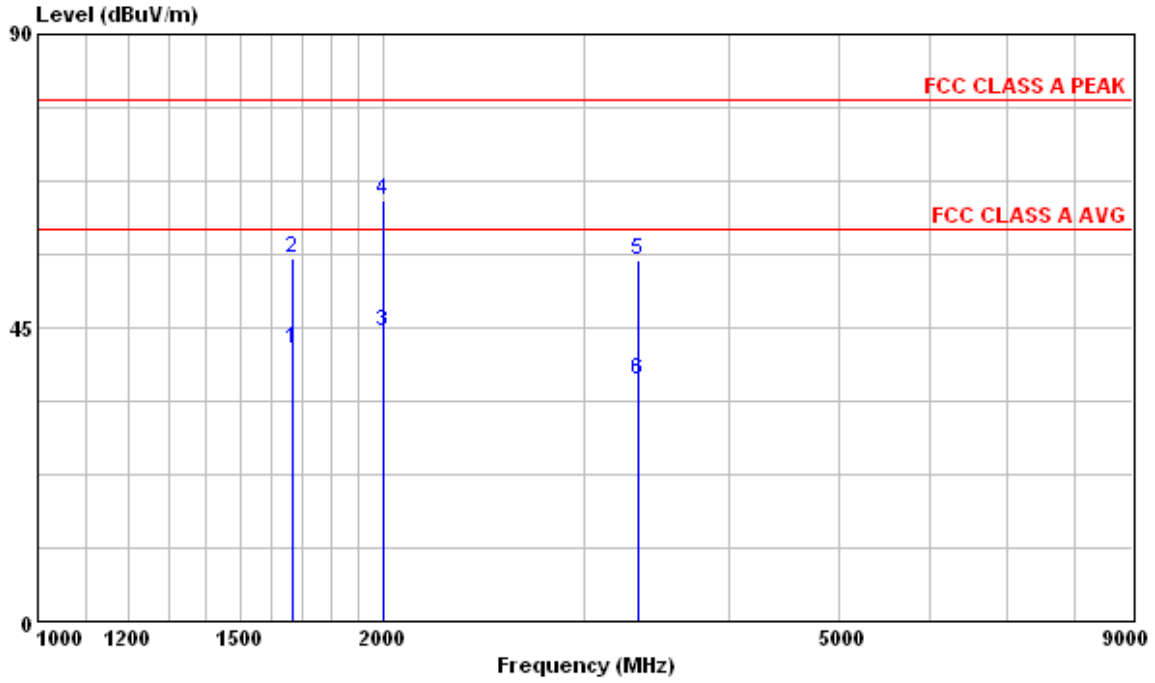
Test Mode	:	As description of section 1.2			
Test Voltage	:	120V/60Hz to the power adapter			
Tester	:	Meng	**Temperature**	:	27°C
Humidity	:	58%RH	**Frequency Range**	:	1GHz ~9GHz
IF Bandwidth	:	1MHz	**Polarization**	:	**Horizontal**



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	1888.540	56.57	97.62	-41.05	80.00	-23.43	252	271	HORIZONTAL	Peak
2	1889.790	41.28	82.32	-41.04	60.00	-18.72	256	278	HORIZONTAL	Average
3	1999.820	63.79	104.01	-40.22	80.00	-16.21	199	326	HORIZONTAL	Peak
4 @	2000.500	46.44	86.66	-40.22	60.00	-13.56	190	333	HORIZONTAL	Average
5	3332.620	51.53	89.71	-38.18	80.00	-28.47	233	99	HORIZONTAL	Peak
6	3333.990	36.13	74.31	-38.18	60.00	-23.87	230	104	HORIZONTAL	Average

Note:
1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + antenna factor – gain of pre-amplifier.

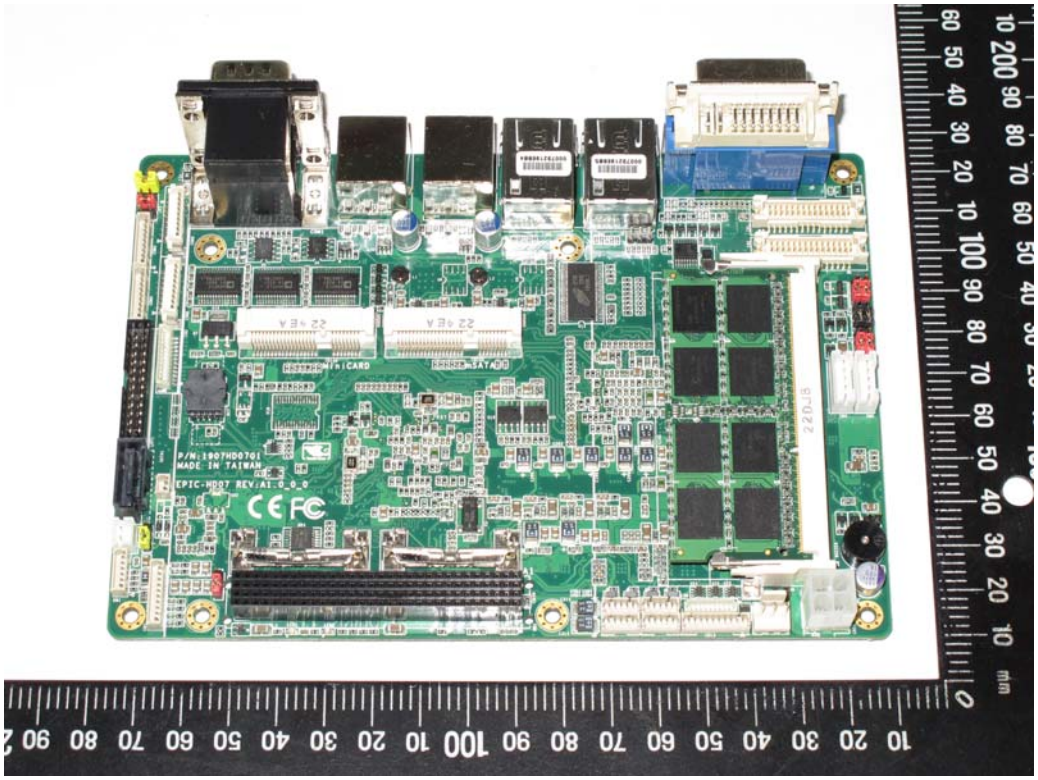
Test Mode	:	As description of section 1.2			
Test Voltage	:	120V/60Hz to the power adapter			
Tester	:	Meng	**Temperature**	:	27°C
Humidity	:	58%RH	**Frequency Range**	:	1GHz ~9GHz
IF Bandwidth	:	1MHz	**Polarization**	:	**Vertical**

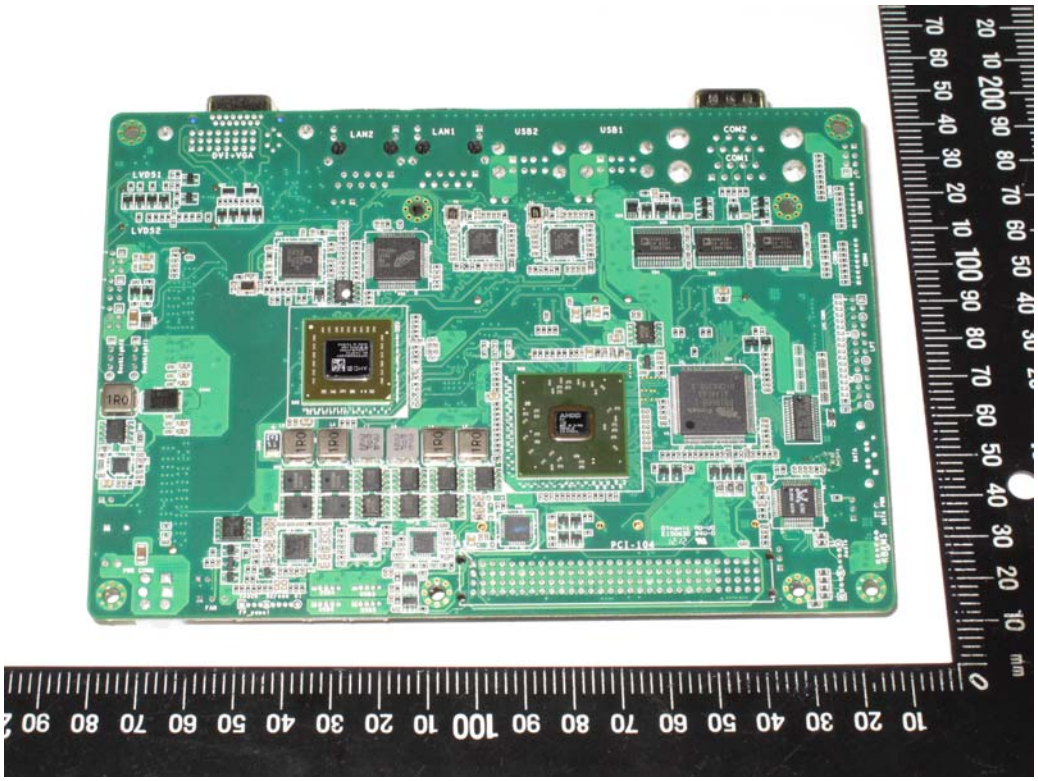


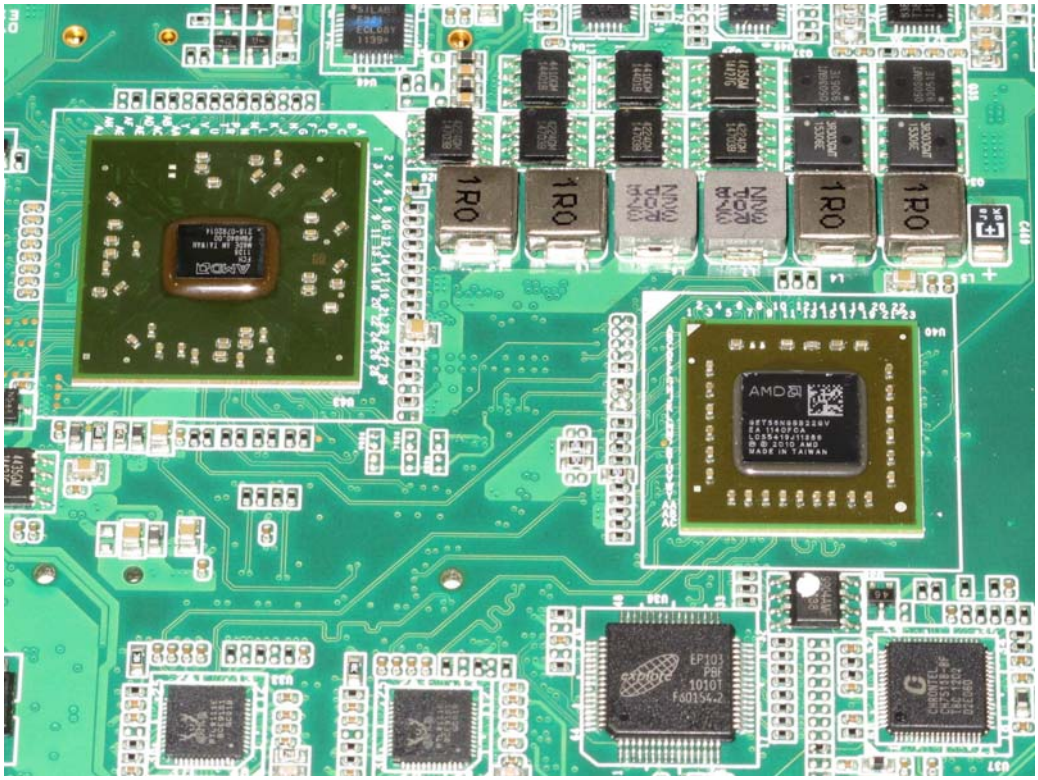
	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	1665.190	41.87	84.76	-42.89	60.00	-18.13	160	45	VERTICAL	Average
2	1666.770	55.57	98.45	-42.88	80.00	-24.43	164	39	VERTICAL	Peak
3	1998.580	44.46	84.69	-40.23	60.00	-15.54	150	146	VERTICAL	Average
4	1999.560	64.50	104.72	-40.22	80.00	-15.50	159	138	VERTICAL	Peak
5	3333.300	55.39	93.57	-38.18	80.00	-24.61	160	153	VERTICAL	Peak
6	3334.890	36.92	75.10	-38.18	60.00	-23.08	165	158	VERTICAL	Average

Note:
1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + antenna factor – gain of pre-amplifier.

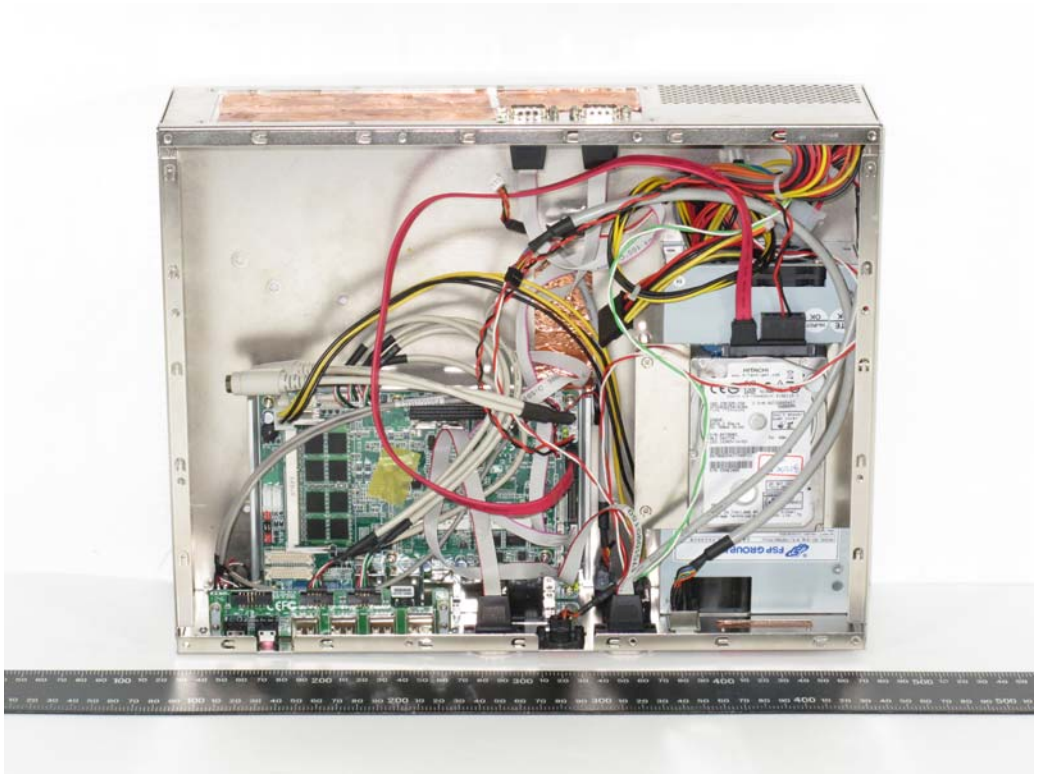
Attachment 1
Photographs of EUT

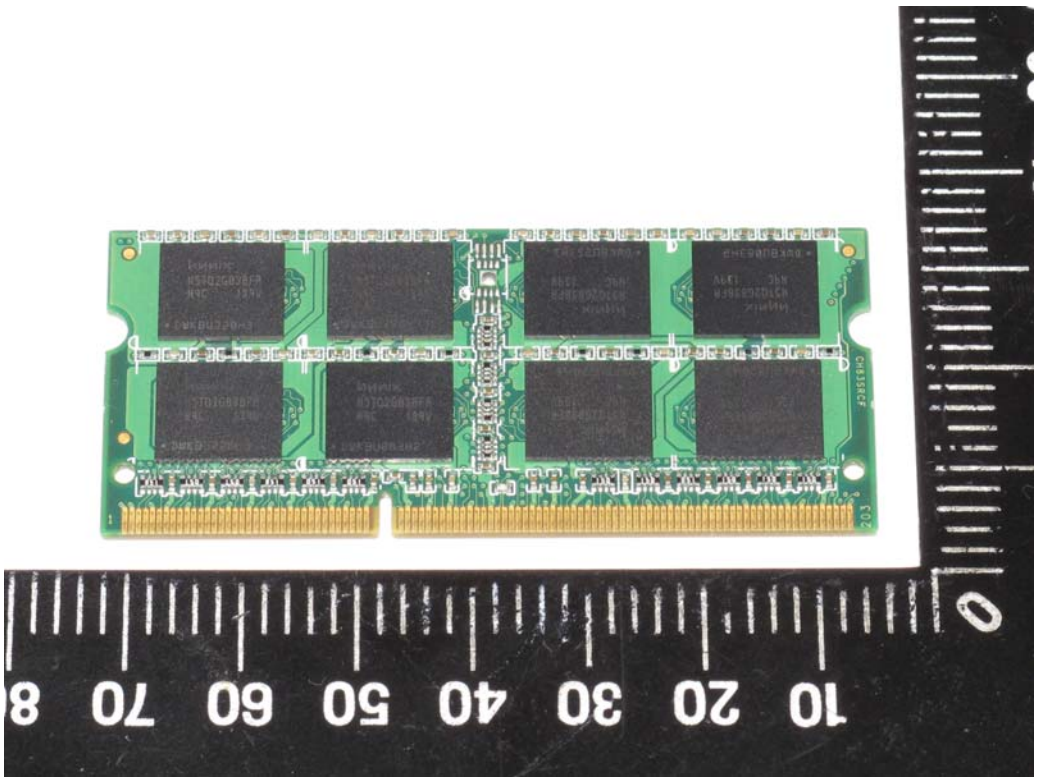





1RO
1RO
1RO
1RO
AMD
EP101
PBF
1010T

Support Units





Attachment 2
Modifications of EUT

Statement of the EUT Modifications

According to the rules of ANSI C63.4-2003 clause 10.1.13, the following equipment (EUT):

Product	**:**	EPIC Express Board
Model No.	**:**	xxxxxEPIC-HD07-xxxxxx (Where x is 0-9，A-Z，-or blank) for marketing purpose
Manufacturer	**:**	AAEON Technology Inc.
Address	**:**	5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien Dist, New Taipei City, Taiwan, R.O.C.

☐ should be **without** any modifications made

☐ should be **with** some modifications made

to bring the EUT into compliance with the appropriate specifications (47CFR Part 15, Subpart B). If any, the details of the modifications including the complete descriptions, reasons and so on are described in next page of this report.

We , **AAEON Technology Inc.** hereby ensure that the product specified above will have all of the modifications incorporated in the product when manufactured and placed on the market.

The following importer or manufacturer is responsible for this statement:

Company Name : _____

Company Address : _____

Telephone : _____ E-mail : _____

Legal Signature of the responsible personal:

_____ _____

Title / Name (full name) Date

The details of the modifications:

Item	Solution Component	Specifications	Manufacturer	Quantity	Reasons
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

If needed, some modification items are shown in the photographs in the following.