

## VERIFICATION



This is to certify that the product listed in follows was (were) tested in the Neutron EMC Laboratory to comply with the criteria limits Class A of conducted and radiated emissions of the Technical Standards FCC Part 15, Subpart B, established by the FCC, USA.

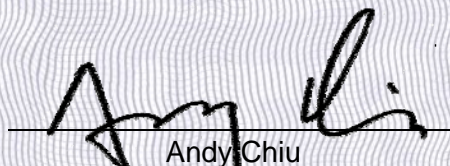
**Equipment** CPU MAINBOARD WITH ARM PROCESSOR  
**Model Name** ARM-C2-FULL

**Applicant** C.J.B. Computer Job Srl  
**Address** Via Ghislandi, 24 – 25125 BRESCIA - ITALY

**Standard(s)** FCC Part 15, Subpart B: 2013  
ANSI C63.4: 2009  
ICES-003 Issue 5: 2012  
CISPR 22: 2008  
CAN/CSA-CISPR 22-10

**Report(s)** NEI-FCCE-1-1404241

The test data, data evaluation, and equipment configuration contained in our test report(s) above was (were) obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.



Andy Chiu  
Authorized Signatory

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## VERIFICATION



This is to certify that the product listed in follows was (were) tested in the Neutron EMC Laboratory to comply with the criteria limits Class A of conducted and radiated emissions of the Technical Standards FCC Part 15, Subpart B, established by the FCC, USA.

**Equipment** MotherBoard  
**Model Name** ARM-C2-DEP

**Applicant** CJB Computer Job s.r.l.  
**Address** Via Ghislandi 24-25125 Brescia (BS) ITALY

**Standard(s)** FCC Part 15, Subpart B: 2012  
ANSI C63.4: 2009  
ICES-003 Issue 5: 2012  
CISPR 22: 2008  
CAN/CSA-CISPR 22-10

**Report(s)** NEI-FCCE-1-1403073

The test data, data evaluation, and equipment configuration contained in our test report(s) above was (were) obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.

  
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**Neutron Engineering Inc.**

## FCC Test Report

**Issued Date** : May. 05, 2014  
**Project No.** : 1404241  
**Equipment** : CPU MAINBOARD WITH ARM  
PROCESSOR  
**Model Name** : ARM-C2-FULL  
**Applicant** : C.J.B. Computer Job Srl  
**Address** : Via Ghislandi, 24 - 25125 BRESCIA -  
ITALY

**Tested by:** Neutron Engineering Inc. EMC Laboratory  
**Date of Receipt:** Apr. 18, 2014  
**Date of Test:** Apr. 18, 2014 ~ Apr. 30, 2014

**Testing Engineer:** Kevin Kao  
(Kevin Kao)

**Technical Manager:** Jeff Yang  
(Jeff Yang)

**Authorized Signatory:** Andy Chiu  
(Andy Chiu)

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### **Declaration**

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

**Neutron's** reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

**Neutron's** reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **Neutron-self**, extracts from the test report shall not be reproduced except in full with **Neutron's** authorized written approval.

**Neutron's** laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

### **Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.



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**REPORT ISSUED HISTORY**

Issue No.	Description	Issued Date
NEI-FCCE-1-1404241	Original Issue.	May. 05, 2014



## **1. VERIFICATION**

Equipment : CPU MAINBOARD WITH ARM PROCESSOR  
Brand Name : CJB ARM-C2  
Model Name : ARM-C2-FULL  
Applicant : C.J.B. Computer Job Srl  
Date of Test : Apr. 18, 2014 ~ Apr. 30, 2014  
Standard(s) : FCC Part 15, Subpart B: 2013 Class A  
ICES-003 Issue 5: 2012 Class A  
CAN/CSA CISPR 22-10 Class A  
CISPR 22: 2008 Class A  
ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCE-1-1404241) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).



## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Emission				
Standard(s)	Test Item	Limit	Judgment	Remark
FCC Part 15, Subpart B: 2013 ICES-003 Issue 5: 2012 CAN/CSA CISPR 22-10 CISPR 22: 2008	Conducted emission	Class A	PASS	
	Radiated emission Below 1 GHz	Class A	PASS	
	Radiated emission Above 1 GHz	Class A	PASS	NOTE (2)

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) If the EUT's max operating frequency does not exceed 108 MHz, the test will not be performed.





## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

### Conducted emission Test:

**C01:** (VCCI RN: C-2918; FCC RN: 95335; FCC DN: TW1010)

No.132-1, Ln. 329, Sec. 2, Balian Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

### Radiated emission Test (Below 1 GHz):

**OS02:** (VCCI RN: R-2669; FCC RN: 95335; FCC DN: TW1010)

No.132-1, Ln. 329, Sec. 2, Balian Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

### Radiated emission Test (Above 1 GHz):

**CB08:** (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1)

1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

## 2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty is not specified by FCC/ Industry Canada rules and for reference only.

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

### A. Conducted emission test:

Test Site	Measurement Frequency Range	U , (dB)	NOTE
C01	150 kHz ~ 30 MHz	1.94	

### B. Radiated emission test:

Test Site	Measurement Frequency Range	Ant. H / V	U , (dB)	NOTE
OS02	30 MHz ~ 200 MHz	V	2.48	
	30 MHz ~ 200 MHz	H	2.16	
	200 MHz ~ 1, 000 MHz	V	2.50	
	200 MHz ~ 1, 000 MHz	H	2.66	

Test Site	Item	Measurement Frequency Range	Uncertainty	NOTE
CB08	Radiated emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB
			200 - 1000MHz	3.11 dB
			1 - 18GHz	3.97 dB
			18 - 40GHz	4.01 dB
	Vertical Polarization		30 - 200MHz	3.22 dB
			200 - 1000MHz	3.24 dB
			1 - 18GHz	4.05 dB
			18 - 40GHz	4.04 dB

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above.

These are our  $U_{lab}$  values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called  $U_{CISPR}$ , as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our  $U_{lab}$  values are smaller than  $U_{CISPR}$ .



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	CPU MAINBOARD WITH ARM PROCESSOR
Brand Name	CJB ARM-C2
Model Name	ARM-C2-FULL
OEM Brand/Model Name	N/A
Model Difference	N/A
Product Description	More details of EUT technical specification please refer to the User's Manual.
Power Source	DC Voltage supplied from DC Source
Power Rating	I/P: DC 8-36V
Connecting I/O Port(s)	Please refer to the User's Manual
Products Covered	N/A
EUT Modification(s)	N/A

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.





### 3.2 DESCRIPTION OF TEST MODES

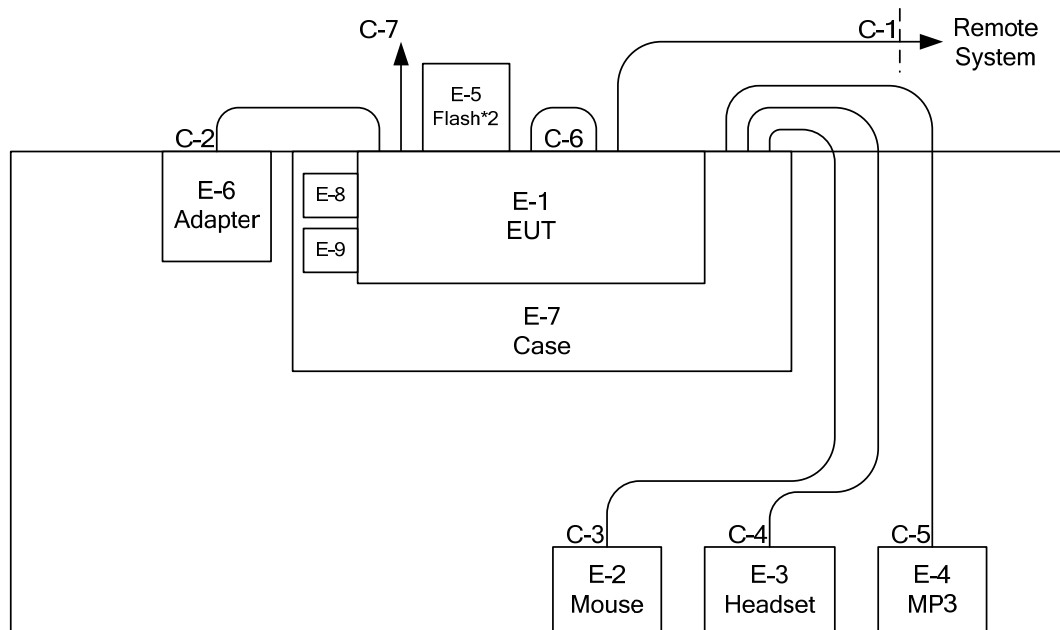
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	FULL SYSTEM

Conducted emission test	
Final Test Mode	Description
Mode 1	FULL SYSTEM

Radiated emission test	
Final Test Mode	Description
Mode 1	FULL SYSTEM

### 3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 RJ-45 Cable\*2  
C-2 Power Cable  
C-3 USB Cable  
C-4 Audio Cable\*2  
C-5 Audio Cable  
C-6 Data Cable  
C-7 Data Cable\*4

E-8 SD Card  
E-9 Micro SD Card





### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	CPU MAINBOARD WITH ARM PROCESSOR	CJB ARM-C2	ARM-C2-FULL	VER	N/A	EUT
E-2	USB Mouse	DELL	MS111-L	DOC	CN-09RRC7-44751-17J-OH1F	
E-3	Compact Earphone Mic	CJ	CJ-323	N/A	N/A	
E-4	USB Flash/MP3 Player	DELL	HV04T	DOC	95NY781	
E-5	Flash	SP	SP8G	N/A	N/A	
E-6	Adapter	LEAD YEAR	TG-6001-24V	DOC	0503024837 R03	
E-7	Case	N/A	N/A	N/A	N/A	
E-8	SD MEMORY CARD	Kingston	N/A	N/A	N/A	
E-9	Micro SD Card	SanDisk	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	10M	
C-2	YES	YES	1.5M	
C-3	YES	NO	1.7M	
C-4	NO	NO	1.8M	
C-5	NO	NO	1.5M	
C-6	NO	NO	0.1M	
C-7	NO	NO	1.5M	

Note:

(1) The support equipment was authorized by Declaration of Conformity (DOC).

**4. EMC EMISSION TEST****4.1 CONDUCTED EMISSION TEST****4.1.1 LIMITS (FREQUENCY RANGE 150 KHZ-30MHZ)**

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 - 5.0	73.00	60.00	56.00	46.00
5.0 - 30.0	73.00	60.00	60.00	50.00

**NOTE:**

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
Margin Level = Measurement Value – Limit Value

**4.1.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Apr. 21, 2015
2	Test Cable	TIMES	CFD300-NL	C01	Jun. 16, 2014
3	EMI Test Receiver	R&S	ESCI	100082	Mar. 20, 2015
4	Measurement Software	EZ	EZ_EMG (Version NB-03A)	N/A	N/A

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.





#### 4.1.3 TEST PROCEDURE

- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

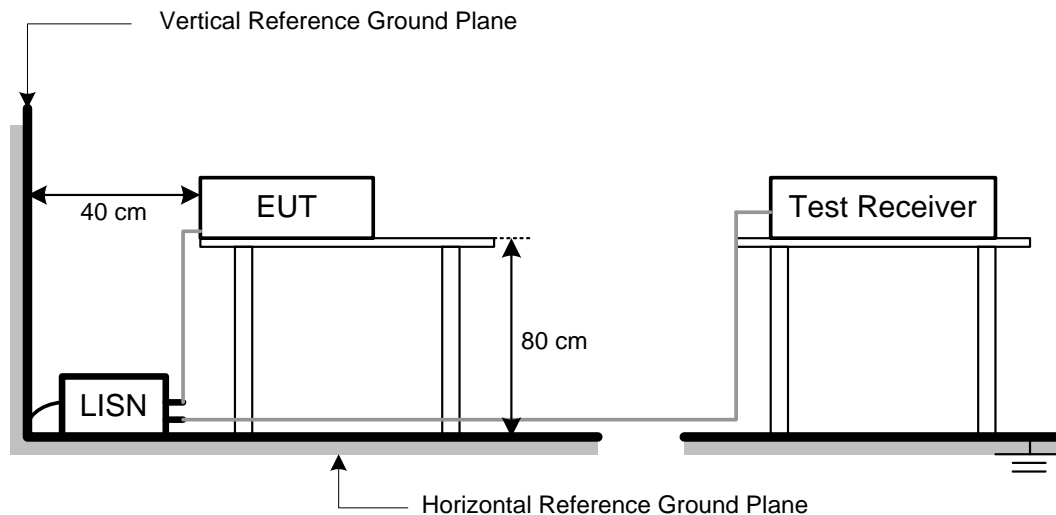
#### NOTE:

- Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
- All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn't perform.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP





#### **4.1.6 EUT OPERATING CONDITIONS**

The EUT used during radiated and/or conducted emission measurement was designed to exercise in a manner similar to a typical use. The sequence used is:

1. Read (write) from (to) mass storage device.
2. Send/Receive data to/from remote system.
3. Send/Receive audio to/from audio devices.
4. Repeated from 1 to 3 continuously.

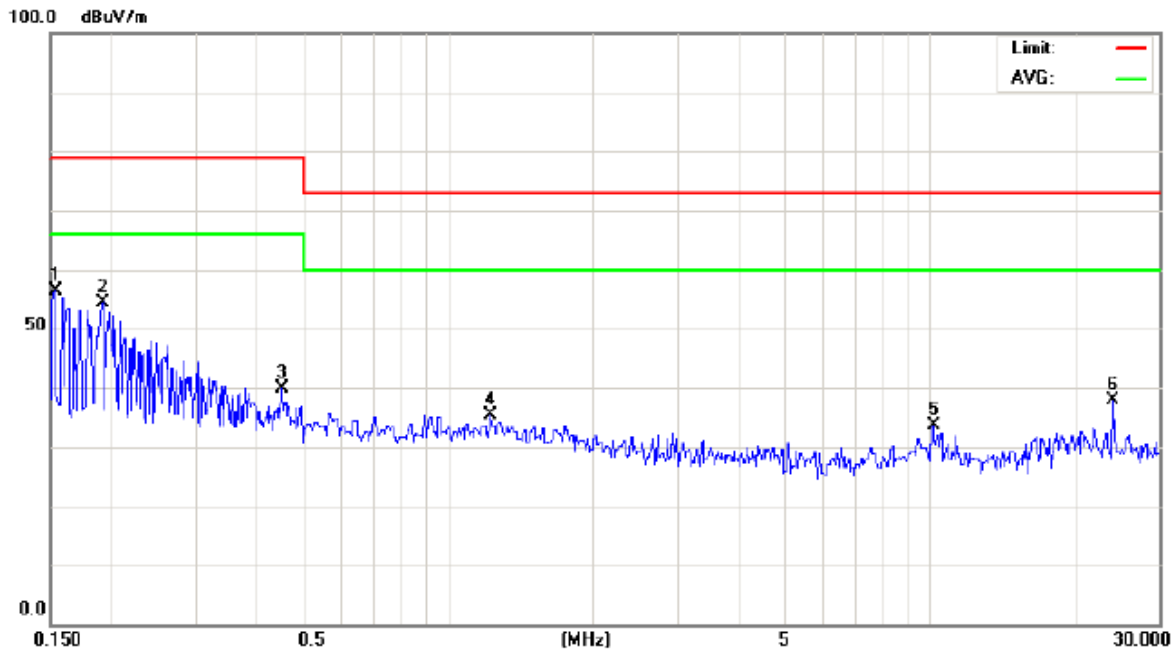
As the mouse is a strictly input device, no data is transmitted to (from) it during test. It is, however, continuously scanned for data input activity.



#### 4.1.7 TEST RESULTS

EUT	CPU MAINBOARD WITH ARM PROCESSOR	Model Name	ARM-C2-FULL
Temperature	24 °C	Relative Humidity	48%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

#### Phase: Line



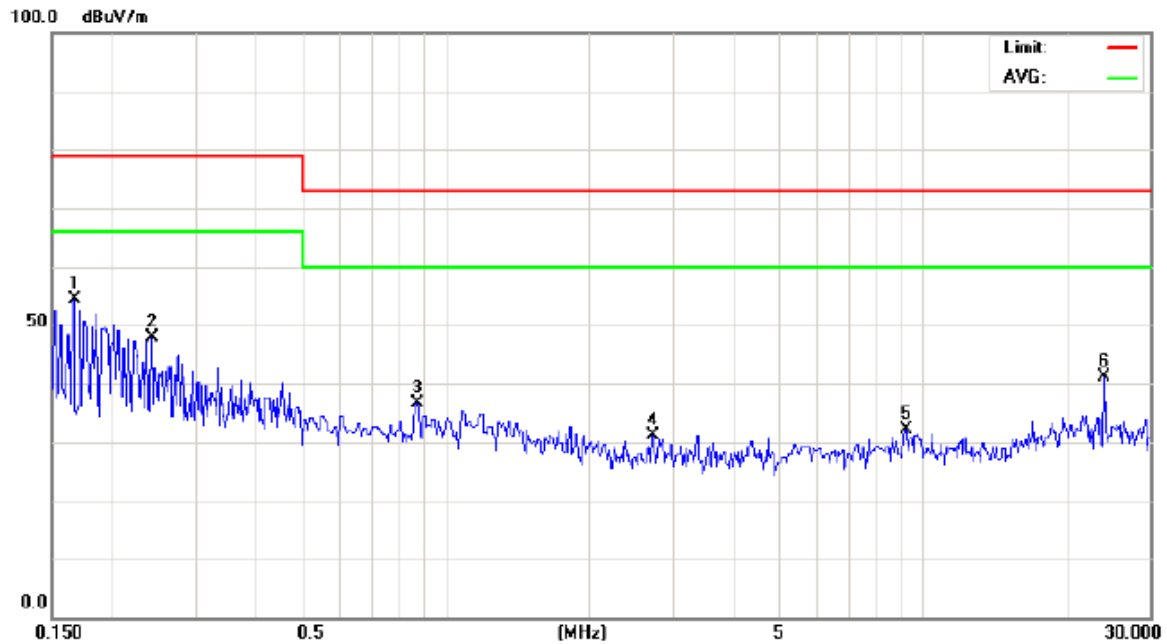
No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	0.1528	46.64	9.73	56.37	79.00	-22.63	peak	
2		0.1920	44.36	10.14	54.50	79.00	-24.50	peak	
3		0.4510	30.20	9.71	39.91	79.00	-39.09	peak	
4		1.2290	25.75	9.65	35.40	73.00	-37.60	peak	
5		10.1500	23.82	9.90	33.72	73.00	-39.28	peak	
6		24.0000	28.06	9.85	37.91	73.00	-35.09	peak	





EUT	CPU MAINBOARD WITH ARM PROCESSOR	Model Name	ARM-C2-FULL
Temperature	24 °C	Relative Humidity	48%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Phase: Neutral**



No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	0.1661	44.63	9.86	54.49	79.00	-24.51	peak	
2		0.2417	37.91	9.96	47.87	79.00	-31.13	peak	
3		0.8690	27.07	9.62	36.69	73.00	-36.31	peak	
4		2.7139	21.49	9.70	31.19	73.00	-41.81	peak	
5		9.2500	22.28	9.87	32.15	73.00	-40.85	peak	
6		24.0000	31.19	9.88	41.07	73.00	-31.93	peak	



## 4.2 RADIATED EMISSION TEST

### 4.2.1 LIMITS

#### Below 1 GHz

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30 - 230	40	30
230 - 1000	47	37

#### NOTE:

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B: 2013; ICES-003 Issue 5: 2012; CAN/CSA-CISPR 22-10;  
CISPR 22: 2008.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

#### Above 1 GHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class A (dBuV/m) (at 10m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	69.5	49.5
FREQUENCY (MHz)	Class B (dBuV/m) (at 3m)			
	PEAK	AVERAGE		
Above 1000	74	54		

#### NOTE:

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B: 2013; ICES-003 Issue 5: 2012.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).  
3m Emission level = 10m Emission level + 20log(10m/3m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

#### FREQUENCY RANGE OF RADIATED MEASUREMENT (FOR UNINTENTIONAL RADIATORS)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower



#### 4.2.2 MEASUREMENT INSTRUMENTS LIST

##### Below 1 GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9160	3173	Nov. 28, 2014
2	Pre-Amplifier	Anritsu	MH648A	M98457	Jun. 02, 2014
3	Test Cable	TIMES	LMR-400	10M-OS01	Jun. 02, 2014
4	Test Cable	TIMES	LMR-400	OS02	Jun. 02, 2014
5	EMI Test Receiver	R&S	ESCI	100082	Mar. 20, 2015
6	System Controller (OS02)	CT	SC100	N/A	N/A
7	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
8	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

##### Above 1 GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Pre_Amplifier	Agilent	8449B	3008A01714	Apr. 15, 2015
2	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 13, 2014
3	Microflex Cable	AISI	S104-SMAP-1	10M	May. 15, 2014
4	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	3M	May. 13, 2014
5	Spectrum Analyzer	R&S	FSP-40	100129	Jun. 20, 2014
6	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A
7	Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-546	Aug. 21, 2014

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.





#### **4.2.3 TEST PROCEDURE**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### **NOTE: (Below 1 GHz)**

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

#### **NOTE: (Above 1 GHz)**

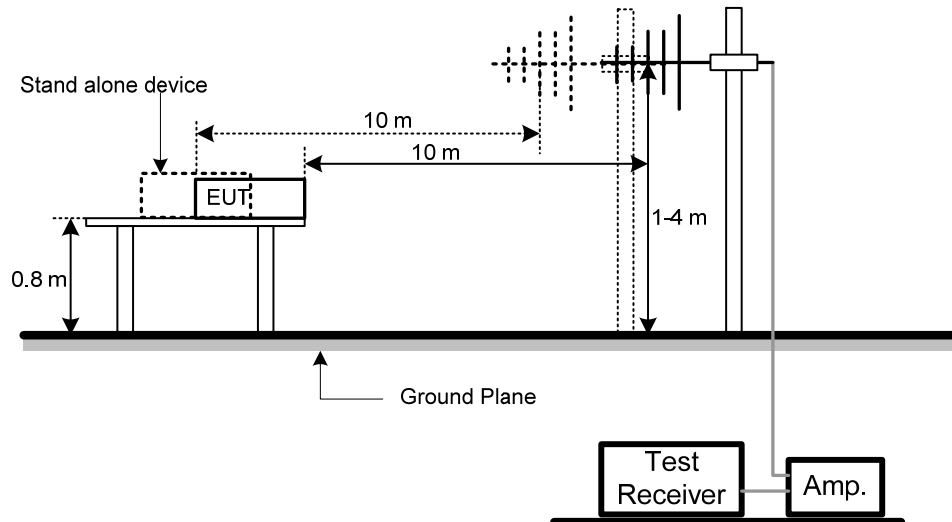
- a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz.  
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz.
- b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform.

#### 4.2.4 DEVIATION FROM TEST STANDARD

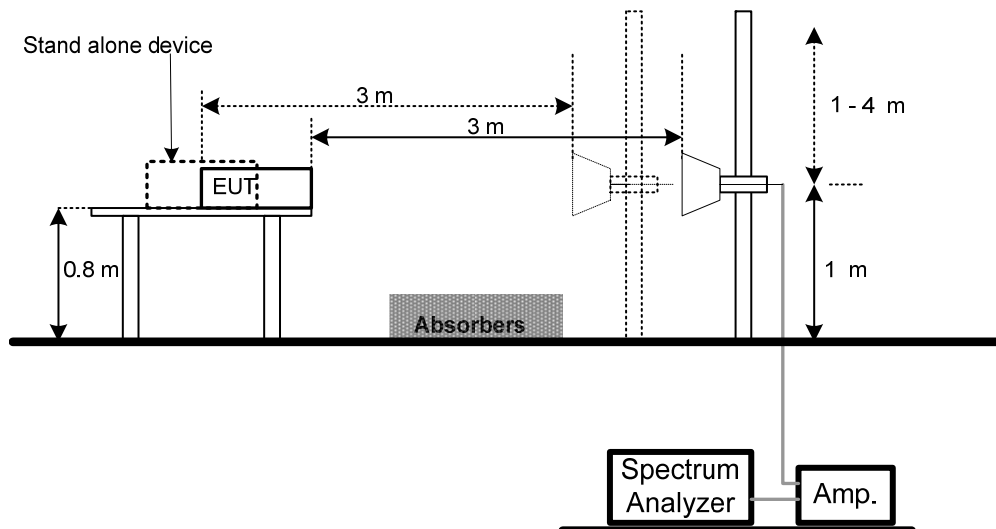
No deviation

#### 4.2.5 TEST SETUP

##### Below 1 GHz



##### Above 1 GHz



#### 4.2.6 EUT OPERATING CONDITIONS

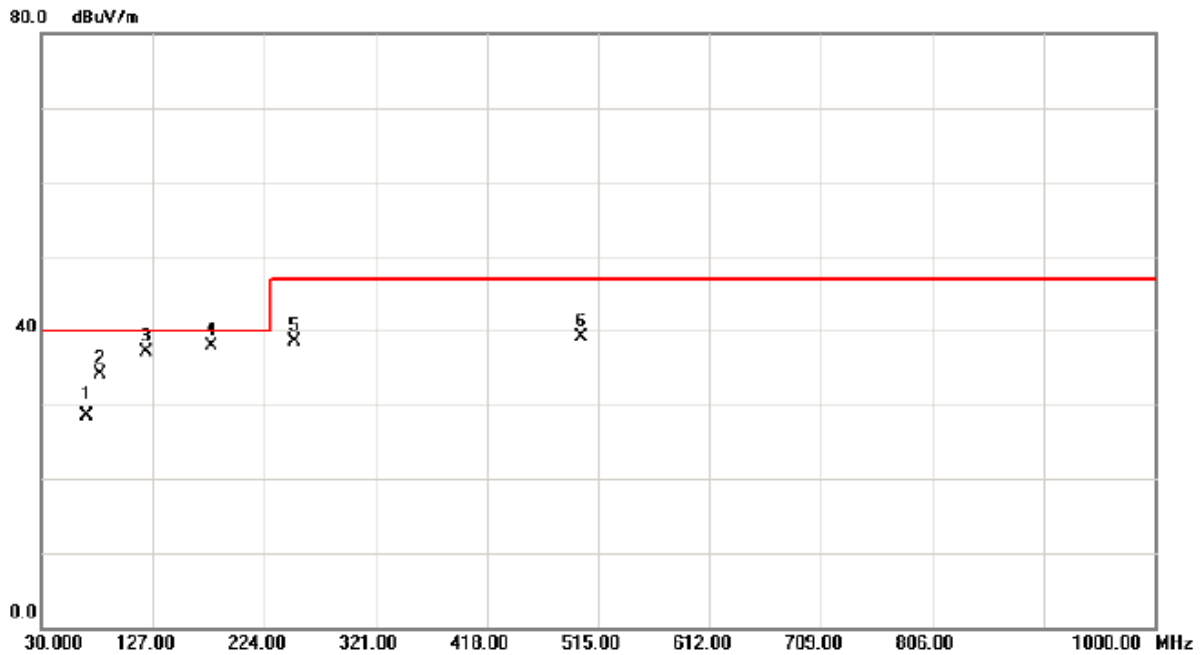
The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.



#### 4.2.7 TEST RESULTS-BELOW 1 GHZ

EUT	CPU MAINBOARD WITH ARM PROCESSOR	Model Name	ARM-C2-FULL
Temperature	21° C	Relative Humidity	54%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Vertical**



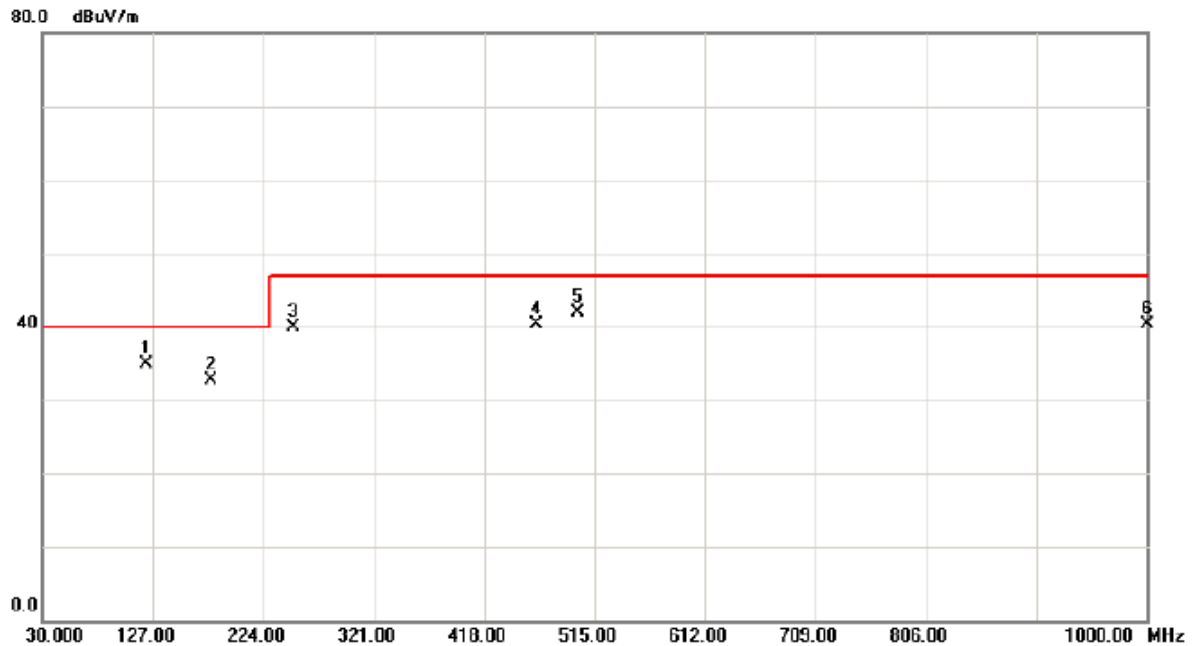
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		67.5080	33.75	-5.33	28.42	40.00	-11.58	QP	
2		81.0080	41.57	-7.43	34.14	40.00	-5.86	peak	
3		121.4900	41.37	-4.25	37.12	40.00	-2.88	peak	
4	*	178.6000	43.16	-5.26	37.90	40.00	-2.10	peak	
5		250.0100	43.98	-5.54	38.44	47.00	-8.56	peak	
6		500.0000	38.18	0.92	39.10	47.00	-7.90	peak	





EUT	CPU MAINBOARD WITH ARM PROCESSOR	Model Name	ARM-C2-FULL
Temperature	21° C	Relative Humidity	54%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Horizontal**



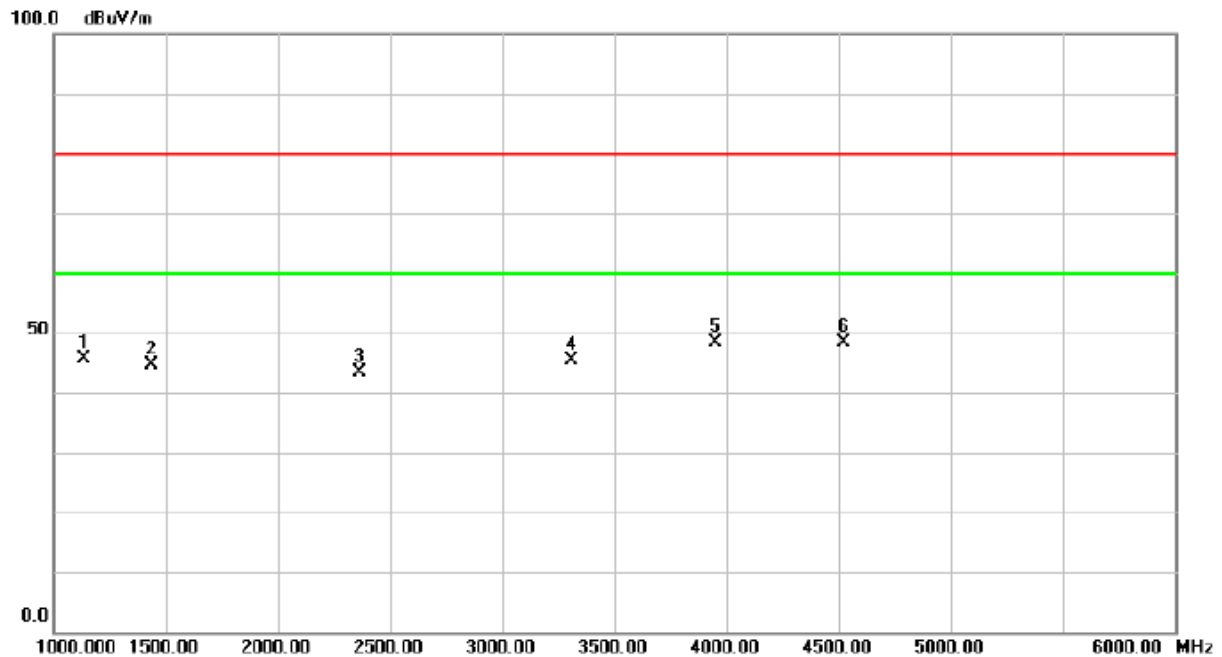
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		121.5160	39.15	-4.24	34.91	40.00	-5.09	peak	
2		178.5000	38.02	-5.24	32.78	40.00	-7.22	peak	
3		250.0000	45.53	-5.54	39.99	47.00	-7.01	peak	
4		464.2100	39.84	0.45	40.29	47.00	-6.71	peak	
5	*	500.0000	41.08	0.92	42.00	47.00	-5.00	peak	
6		1000.000	29.81	10.42	40.23	47.00	-6.77	peak	



#### 4.2.8 TEST RESULTS-ABOVE 1 GHZ

EUT	CPU MAINBOARD WITH ARM PROCESSOR	Model Name	ARM-C2-FULL
Temperature	25 °C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Vertical**

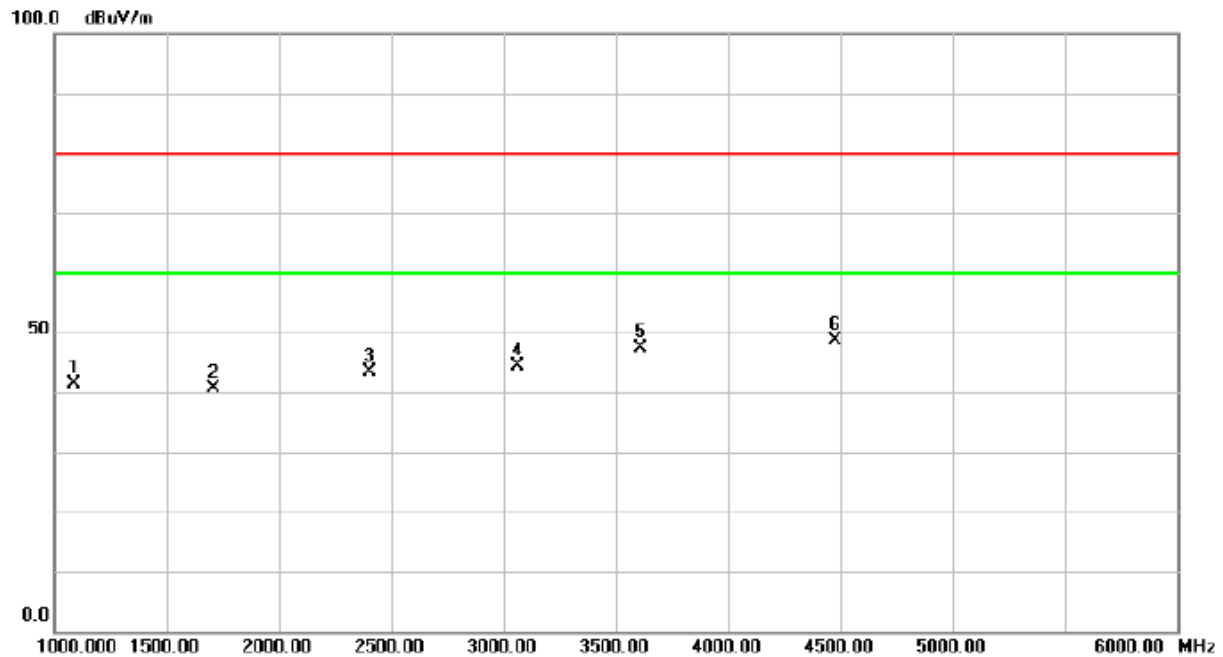


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1137.500	50.40	-4.82	45.58	80.00	-34.42	peak	
2		1437.500	47.79	-3.20	44.59	80.00	-35.41	peak	
3		2362.500	43.62	-0.16	43.46	80.00	-36.54	peak	
4		3312.500	43.33	2.00	45.33	80.00	-34.67	peak	
5		3950.000	43.18	5.08	48.26	80.00	-31.74	peak	
6	*	4525.000	42.49	5.84	48.33	80.00	-31.67	peak	



EUT	CPU MAINBOARD WITH ARM PROCESSOR	Model Name	ARM-C2-FULL
Temperature	25 °C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Horizontal**



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1087.500	46.54	-5.08	41.46	80.00	-38.54	peak	
2		1712.500	42.89	-2.28	40.61	80.00	-39.39	peak	
3		2400.000	43.37	-0.03	43.34	80.00	-36.66	peak	
4		3062.500	43.53	0.89	44.42	80.00	-35.58	peak	
5		3612.500	43.88	3.39	47.27	80.00	-32.73	peak	
6	*	4475.000	42.76	5.77	48.53	80.00	-31.47	peak	



**5. EUT TEST PHOTO**

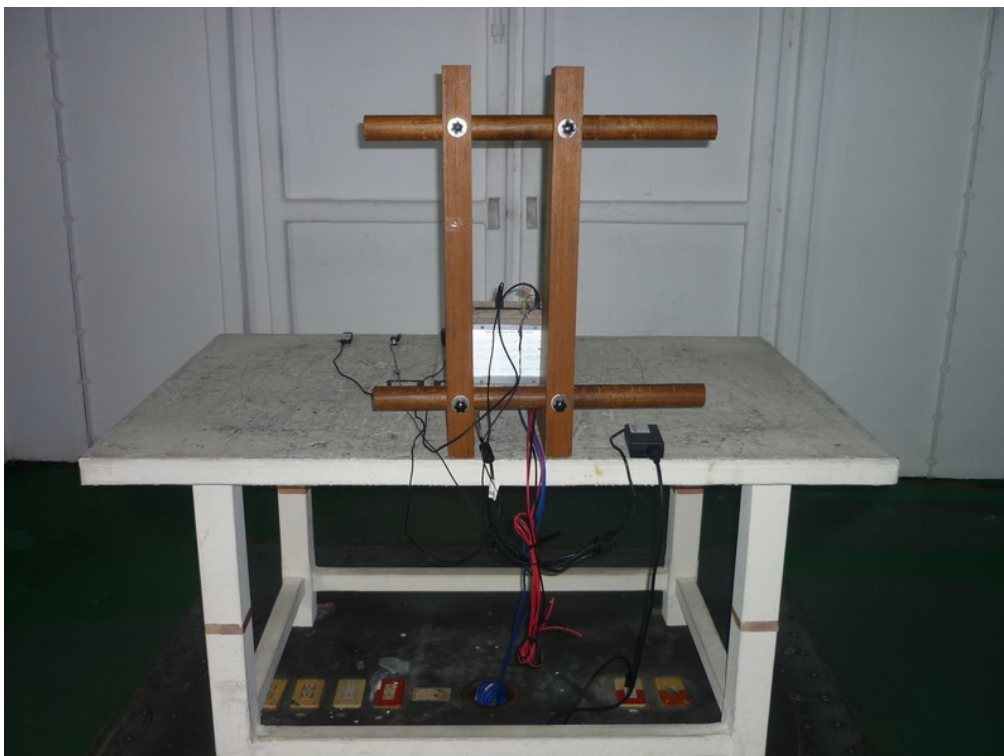
**Conducted emission test photos**

**FULL SYSTEM**



**Radiated emission below 1 GHz test photos**

**FULL SYSTEM**

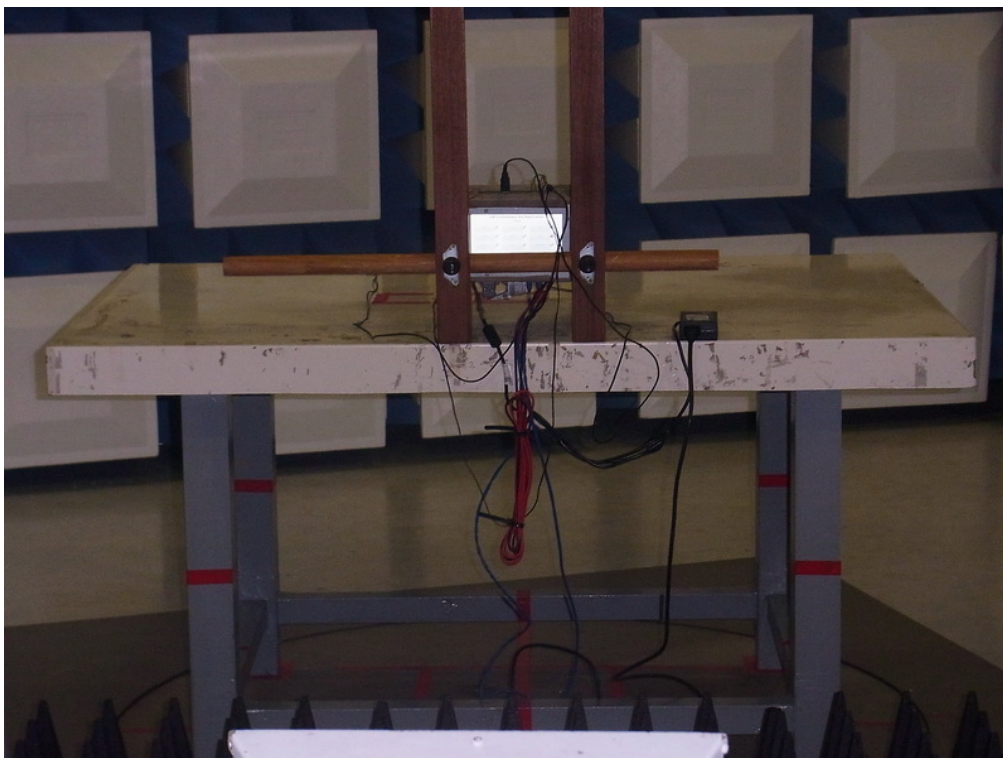
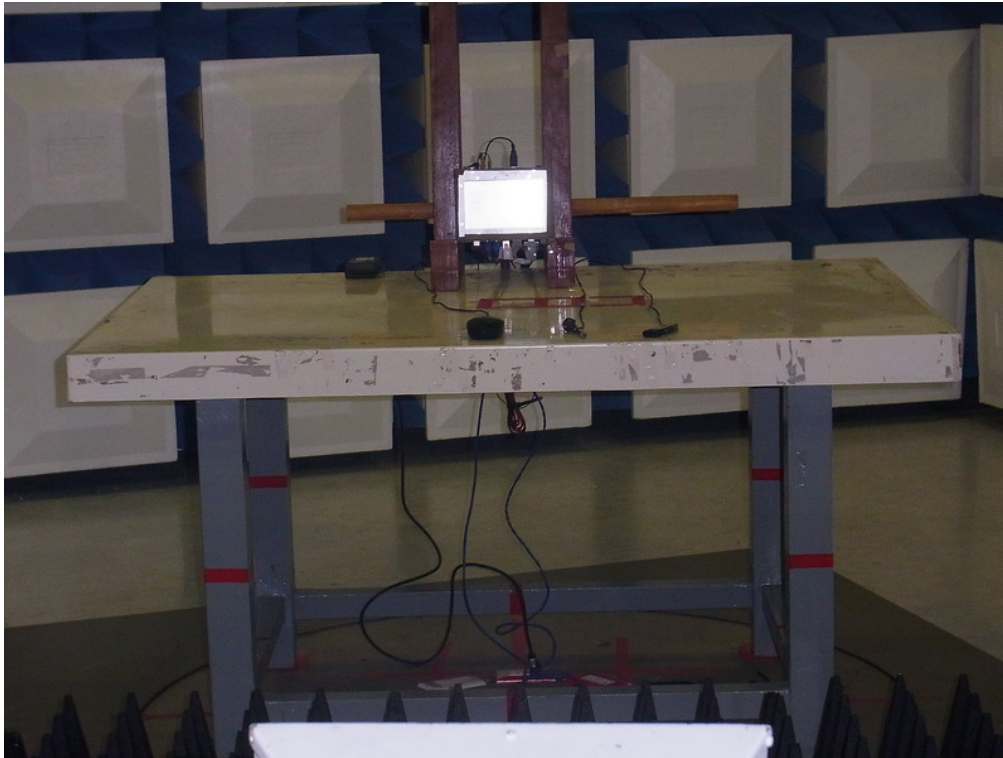






**Radiated emission above 1 GHz test photos**

**FULL SYSTEM**

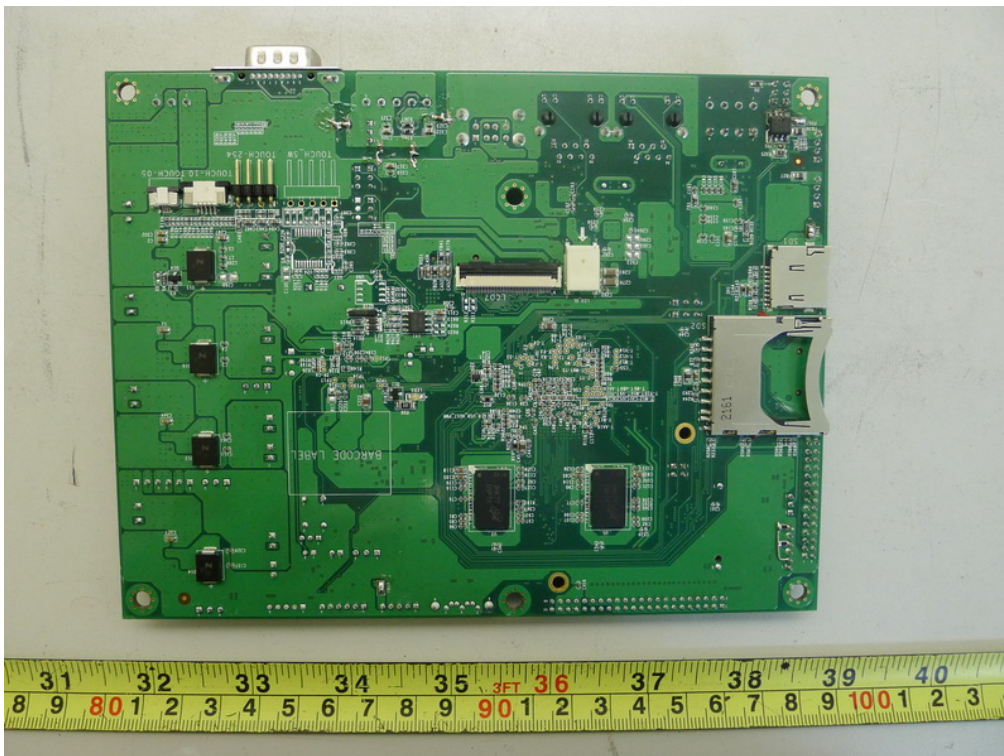




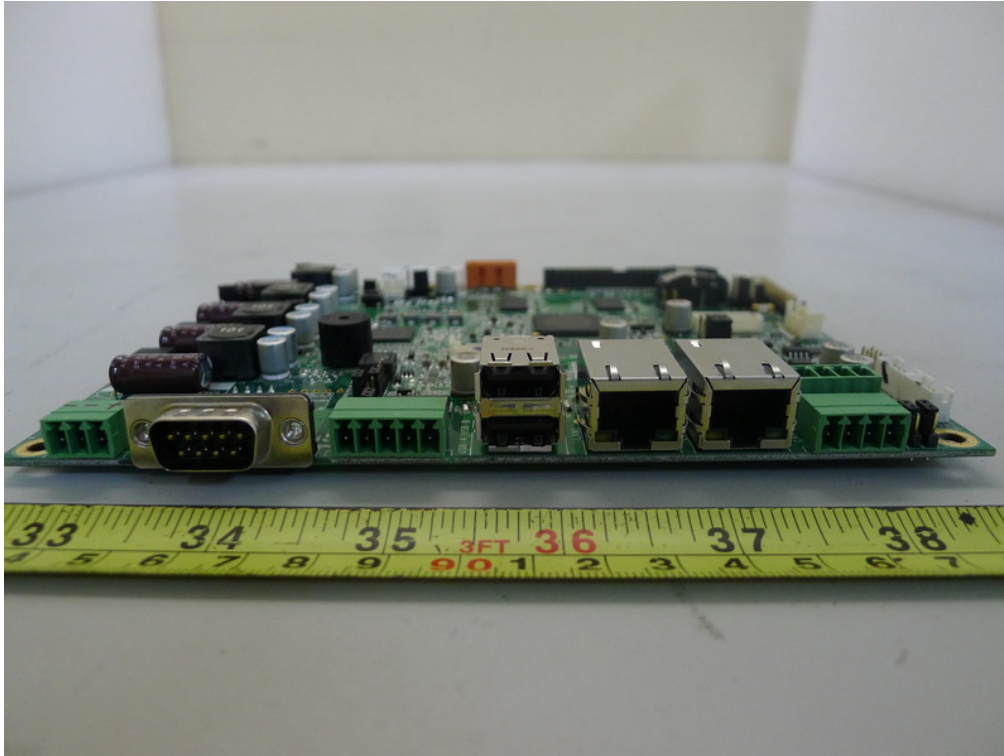
***Neutron Engineering Inc.***

## **ATTACHMENT**

## **PHOTOGRAPHS OF EUT**









**Neutron Engineering Inc.**

## FCC Test Report

**Issued Date** : Mar. 27, 2014

**Project No.** : 1403073

**Equipment** : MotherBoard

**Model Name** : ARM-C2-DEP

**Applicant** : CJB Computer Job s.r.l.

**Address** : Via Ghislandi 24-25125 Brescia (BS)  
ITALY

**Tested by:** Neutron Engineering Inc. EMC Laboratory

**Date of Receipt:** Mar. 12, 2014

**Date of Test:** Mar. 12, 2014 ~ Mar. 26, 2014

**Testing Engineer:**

*Kevin Kao*

(Kevin Kao)

**Technical Manager:**

*Jeff Yang*

(Jeff Yang)

**Authorized Signatory:**

*Andy Chiu*

(Andy Chiu)

**Neutron Engineering Inc.**

B1, No. 37, Lane 365, YangGuang St.,  
NeiHu District 114, Taipei, Taiwan.

TEL: +886-2-2657-3299

FAX: +886-2-2657-3331







### **Declaration**

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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**Neutron's** laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

### **Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.



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**REPORT ISSUED HISTORY**

Issue No.	Description	Issued Date
NEI-FCCE-1-1403073	Original Issue.	Mar. 27, 2014



## **1. VERIFICATION**

Equipment : MotherBoard  
Brand Name : N/A  
Model Name : ARM-C2-DEP  
Applicant : CJB Computer Job s.r.l.  
Date of Test : Mar. 12, 2014 ~ Mar. 26, 2014  
Standard(s) : FCC Part 15, Subpart B: 2012 Class A  
ICES-003 Issue 5: 2012 Class A  
CAN/CSA CISPR 22-10 Class A  
CISPR 22: 2008 Class A  
ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCE-1-1403073) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).



## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Emission				
Standard(s)	Test Item	Limit	Judgment	Remark
FCC Part 15, Subpart B: 2012 ICES-003 Issue 5: 2012 CAN/CSA CISPR 22-10 CISPR 22: 2008	Conducted emission	Class A	PASS	
	Radiated emission Below 1 GHz	Class A	PASS	
	Radiated emission Above 1 GHz	Class A	PASS	NOTE (2)

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) If the EUT's max operating frequency does not exceed 108 MHz, the test will not be performed.





## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

### Conducted emission Test:

**C03:** (VCCI RN: C-4461)

B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Taiwan.

### Radiated emission Test (Below 1 GHz):

**OS01:** (VCCI RN: R-2829; FCC RN: 95335; FCC DN: TW1010)

No.132-1, Ln. 329, Sec. 2, Balian Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

### Radiated emission Test (Above 1 GHz):

**CB08:** (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1)

1F., No. 61, Ln. 77, Sing-ai Rd., NeiHu Dist., Taipei City 114, Taiwan (R.O.C.)

## 2.2 MEASUREMENT UNCERTAINTY

**The measurement uncertainty is not specified by FCC/ Industry Canada rules and for reference only.**

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95%**.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

### A. Conducted emission test:

Test Site	Measurement Frequency Range	U , (dB)	NOTE
C03	150 kHz ~ 30 MHz	1.94	

### B. Radiated emission test:

Test Site	Measurement Frequency Range	Ant. H / V	U , (dB)	NOTE
OS01	30 MHz ~ 200 MHz	V	2.86	
	30 MHz ~ 200 MHz	H	2.56	
	200 MHz ~ 1, 000 MHz	V	2.88	
	200 MHz ~ 1, 000 MHz	H	2.98	

Test Site	Item	Measurement Frequency Range	Uncertainty	NOTE
CB08	Radiated emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB
		Horizontal Polarization	200 - 1000MHz	3.11 dB
		Horizontal Polarization	1 - 18GHz	3.97 dB
		Horizontal Polarization	18 - 40GHz	4.01 dB
	Radiated emission at 3m	Vertical Polarization	30 - 200MHz	3.22 dB
		Vertical Polarization	200 - 1000MHz	3.24 dB
		Vertical Polarization	1 - 18GHz	4.05 dB
		Vertical Polarization	18 - 40GHz	4.04 dB

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above.

These are our  $U_{lab}$  values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called  $U_{CISPR}$ , as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our  $U_{lab}$  values are smaller than  $U_{CISPR}$ .



### **3. GENERAL INFORMATION**

#### **3.1 GENERAL DESCRIPTION OF EUT**

Equipment	MotherBoard
Brand Name	N/A
Model Name	ARM-C2-DEP
OEM Brand/Model Name	N/A
Model Difference	N/A
Product Description	More details of EUT technical specification please refer to the User's Manual.
Power Source	DC Voltage supplied from DC Source
Power Rating	I/P: DC 24V
Connecting I/O Port(s)	Please refer to the User's Manual
Products Covered	N/A
EUT Modification(s)	N/A

**Note:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



### 3.2 DESCRIPTION OF TEST MODES

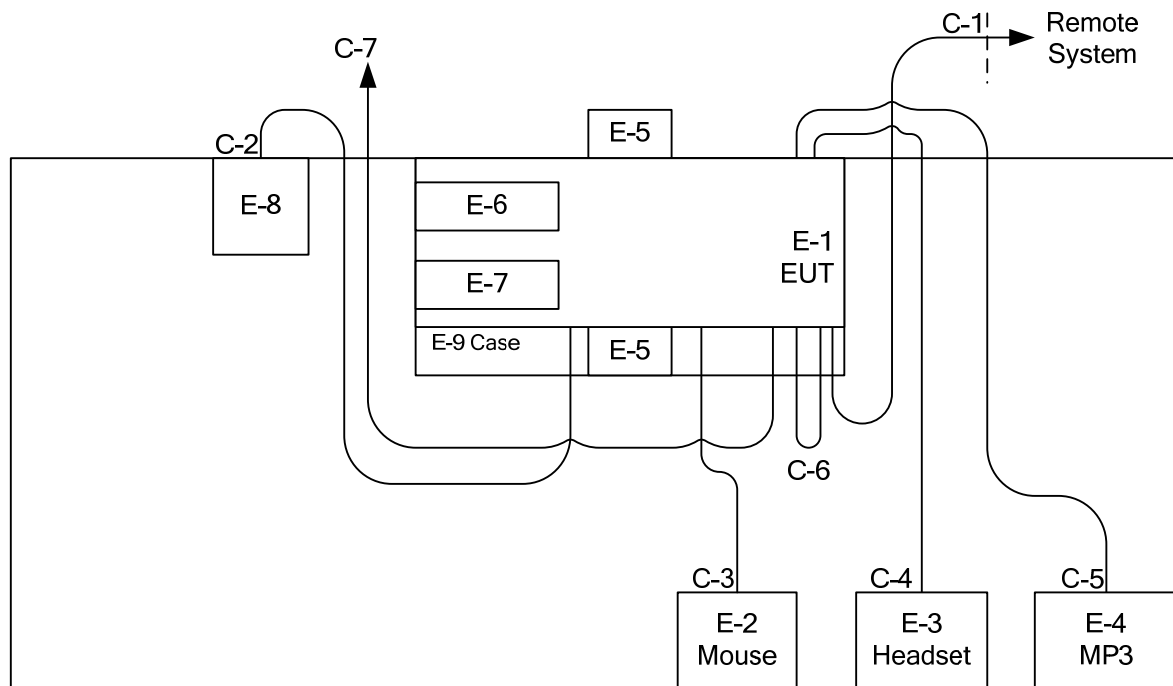
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	FULL SYSTEM

Conducted emission test	
Final Test Mode	Description
Mode 1	FULL SYSTEM

Radiated emission test	
Final Test Mode	Description
Mode 1	FULL SYSTEM

### 3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 RJ-45 Cable  
C-2 Power Cable  
C-3 USB Cable  
C-4 Audio Cable\*2  
C-5 Audio Cable  
C-6 RS232 Cable  
C-7 DATA Cable\*4

E-5 FLASH  
E-6 SD CARD  
E-7 MICRO SD  
E-8 Adapter



### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	MotherBoard	N/A	ARM-C2-DEP	VER	N/A	EUT
E-2	USB Mouse	DELL	MS111-L	DOC	CN-09RRC7-44751-17J-OH1F	
E-3	Compact Earphone Mic	CJ	CJ-323	N/A	N/A	
E-4	USB Flash/MP3 Player	DELL	HV04T	DOC	95NY781	
E-5	FLASH	SP	SP8G	N/A	N/A	
E-6	SD MEMORY CARD	Kingston	N/A	N/A	N/A	
E-7	Micro SD Card	SanDisk	N/A	N/A	N/A	
E-8	ADAPTER	LEAD YEAR ENT	TG-6001-24V	DOC	0503024837 R03	
E-9	CASE	N/A	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	10M	
C-2	YES	YES	1.8M	
C-3	YES	NO	1.8M	
C-4	NO	NO	1.7M	
C-5	NO	NO	1.6M	
C-6	YES	NO	0.05M	
C-7	NO	NO	1M	

Note:

(1) The support equipment was authorized by Declaration of Conformity (DOC).





## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION TEST

#### 4.1.1 LIMITS (FREQUENCY RANGE 150 KHZ-30MHZ)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 - 5.0	73.00	60.00	56.00	46.00
5.0 - 30.0	73.00	60.00	60.00	50.00

**NOTE:**

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
 Margin Level = Measurement Value – Limit Value

#### 4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101051	Jun. 16, 2014
2	Test Cable	TIMES	CFD300-NL	C03	Jun. 16, 2014
3	EMI Test Receiver	R&S	ESCI	100080	Apr. 01, 2014
4	Measurement Software	EZ	EZ_EMG (Version NB-03A)	N/A	N/A

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.



#### 4.1.3 TEST PROCEDURE

- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

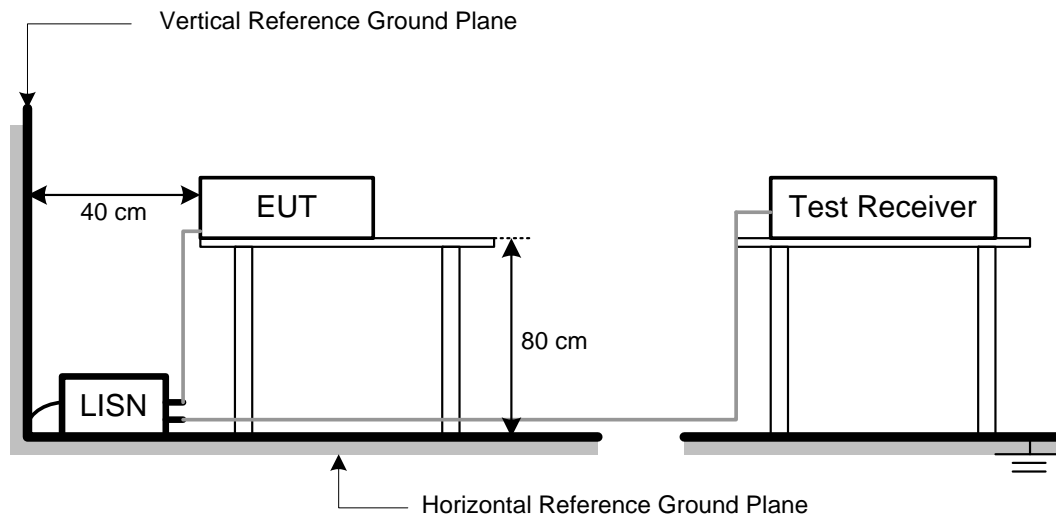
#### NOTE:

- Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
- All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn't perform.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP





#### **4.1.6 EUT OPERATING CONDITIONS**

The EUT exercise program used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use. The program contained on a PC hard disk and is auto-starting on power-up. Once loaded, the program sequentially exercises each system component in turn. The sequence used is:

1. Send/Receive data to/from remote system.
2. Send/Receive audio to/from audio devices.
3. Repeated from 1 to 2 continuously.

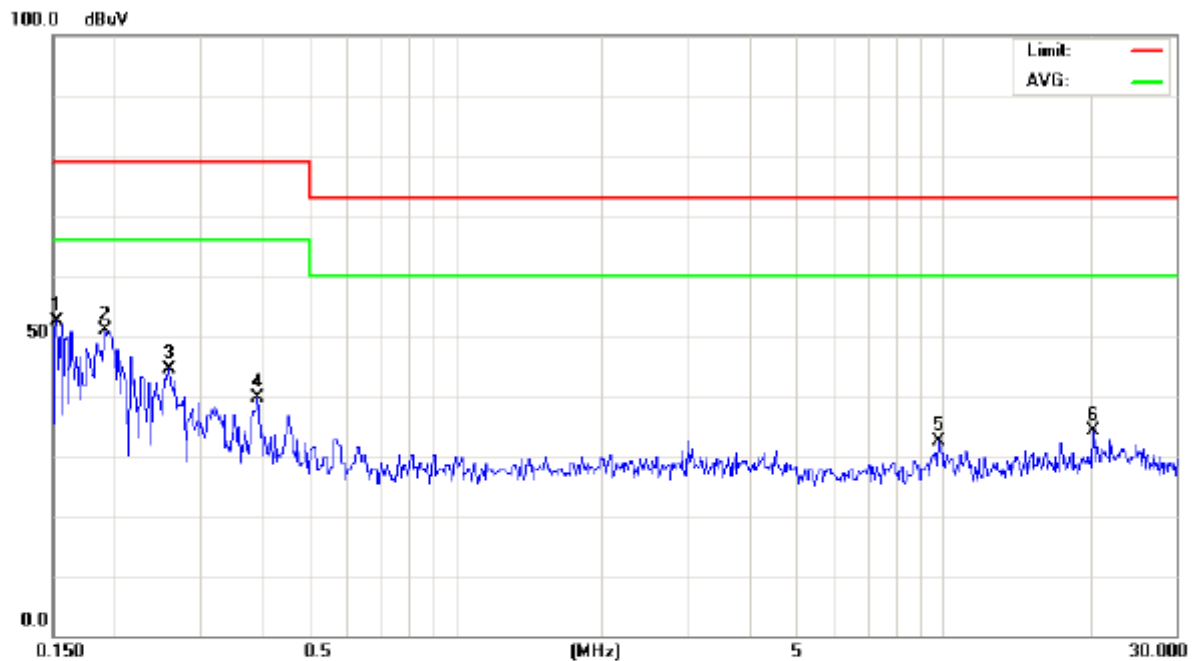
As the mouse is a strictly input device, no data is transmitted to (from) it during test. It is, however, continuously scanned for data input activity.



#### 4.1.7 TEST RESULTS

EUT	MotherBoard	Model Name	ARM-C2-DEP
Temperature	24 °C	Relative Humidity	48%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

#### Phase: Line

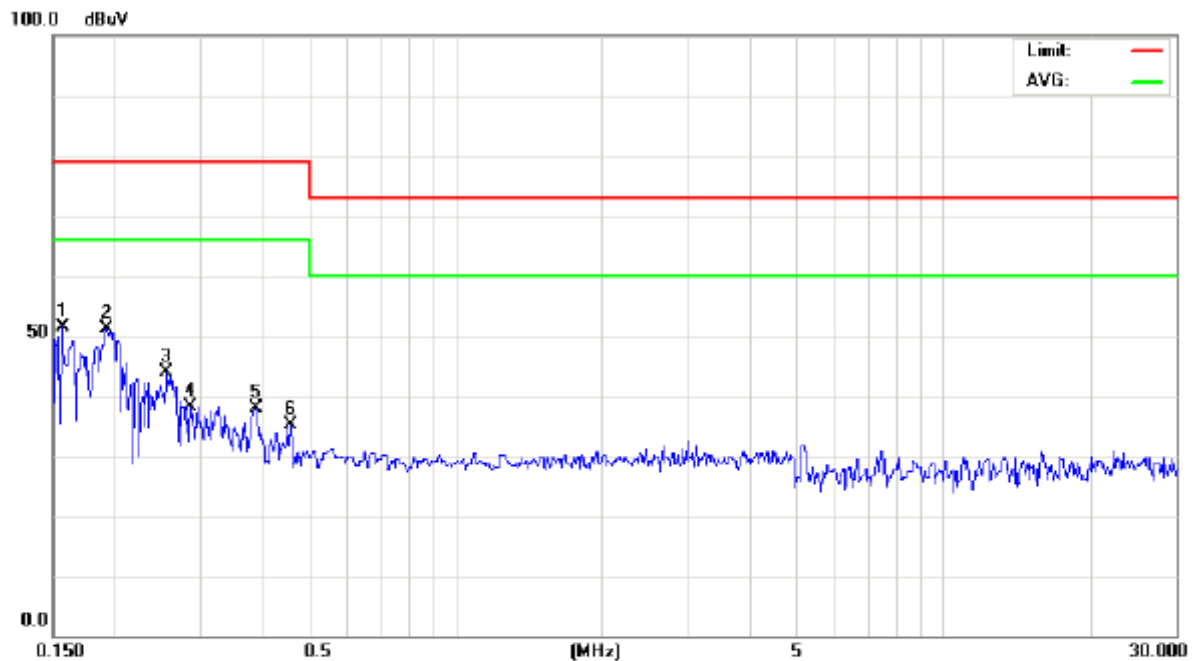


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1521	42.63	9.73	52.36	79.00	-26.64	peak	
2		0.1913	40.69	10.09	50.78	79.00	-28.22	peak	
3		0.2578	34.64	9.85	44.49	79.00	-34.51	peak	
4		0.3922	29.90	9.72	39.62	79.00	-39.38	peak	
5		9.8000	22.57	9.71	32.28	73.00	-40.72	peak	
6		20.2500	23.87	10.19	34.06	73.00	-38.94	peak	



EUT	MotherBoard	Model Name	ARM-C2-DEP
Temperature	24 °C	Relative Humidity	48%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Phase: Neutral**



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1563	41.62	9.75	51.37	79.00	-27.63	peak	
2		0.1920	40.95	10.08	51.03	79.00	-27.97	peak	
3		0.2556	34.10	9.85	43.95	79.00	-35.05	peak	
4		0.2858	28.47	9.69	38.16	79.00	-40.84	peak	
5		0.3873	28.10	9.72	37.82	79.00	-41.18	peak	
6		0.4573	25.26	9.75	35.01	79.00	-43.99	peak	



## 4.2 RADIATED EMISSION TEST

### 4.2.1 LIMITS

#### Below 1 GHz

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30 - 230	40	30
230 - 1000	47	37

#### NOTE:

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B: 2012; ICES-003 Issue 5: 2012; CAN/CSA-CISPR 22-10;  
CISPR 22: 2008.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

#### Above 1 GHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class A (dBuV/m) (at 10m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	69.5	49.5
FREQUENCY (MHz)	Class B (dBuV/m) (at 3m)			
	PEAK	AVERAGE		
Above 1000	74	54		

#### NOTE:

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B: 2012; ICES-003 Issue 5: 2012.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).  
3m Emission level = 10m Emission level + 20log(10m/3m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

#### FREQUENCY RANGE OF RADIATED MEASUREMENT (FOR UNINTENTIONAL RADIATORS)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower





#### 4.2.2 MEASUREMENT INSTRUMENTS LIST

##### Below 1 GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9160	3176	Jun. 13, 2014
2	Pre-Amplifier	Anritsu	MH648A	M09961	Jun. 02, 2014
3	Test Cable	TIMES	LMR-400	30M	Jun. 02, 2014
4	Test Cable	TIMES	LMR-400	OS01-1	Jun. 02, 2014
5	EMI Measuring Receiver	SHCAFFNER	SCR 3501	408	Jan. 7, 2015
6	Spectrum Analyzer	ADVANTEST	R3162	140100131	Sep. 24, 2014
7	Positioning Controller (OS01)	CT	SC100	N/A	N/A
8	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
9	Measurement Software	EZ	EZ EMC (Version NB-02A)	N/A	N/A

##### Above 1 GHz:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Horn Antenna (1G)	Schwarzbeck	BBHA 9120 D	9120D-325	Jun. 15, 2014
2	Pre_Amplifier	Agilent	8449B	3008A01714	Apr. 16, 2014
3	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 13, 2014
4	Microflex Cable	AISI	S104-SMAP-1	10M	May. 15, 2014
5	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	3M	May. 13, 2014
6	Spectrum Analyzer	R&S	FSP-40	100129	Jun. 20, 2014
7	Measurement Software	EZ	EZ EMC (Version NB-03A)	N/A	N/A

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.



#### **4.2.3 TEST PROCEDURE**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### **NOTE: (Below 1 GHz)**

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

#### **NOTE: (Above 1 GHz)**

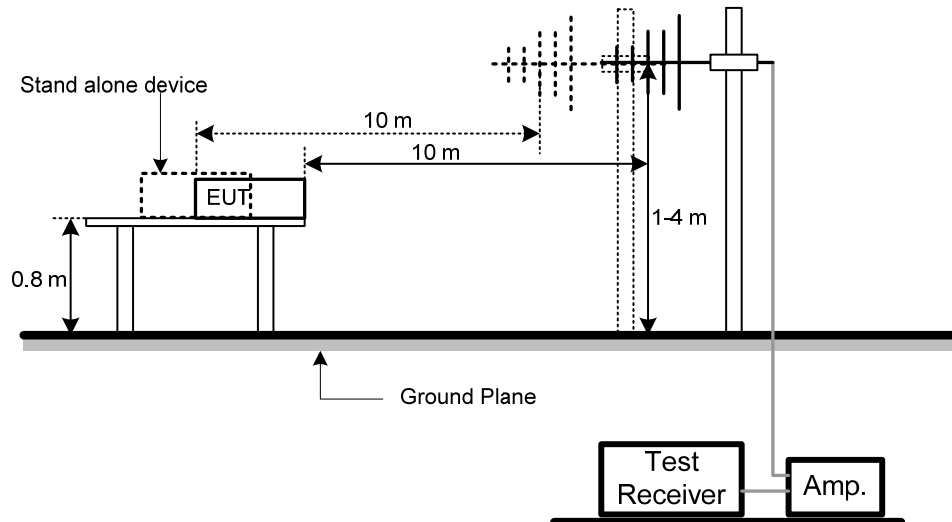
- a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz.  
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz.
- b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform.

#### 4.2.4 DEVIATION FROM TEST STANDARD

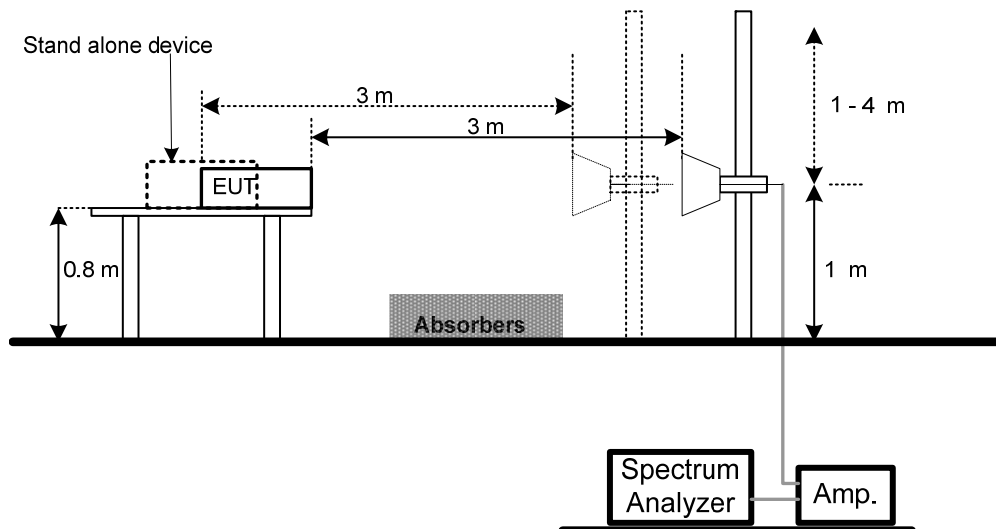
No deviation

#### 4.2.5 TEST SETUP

##### Below 1 GHz



##### Above 1 GHz



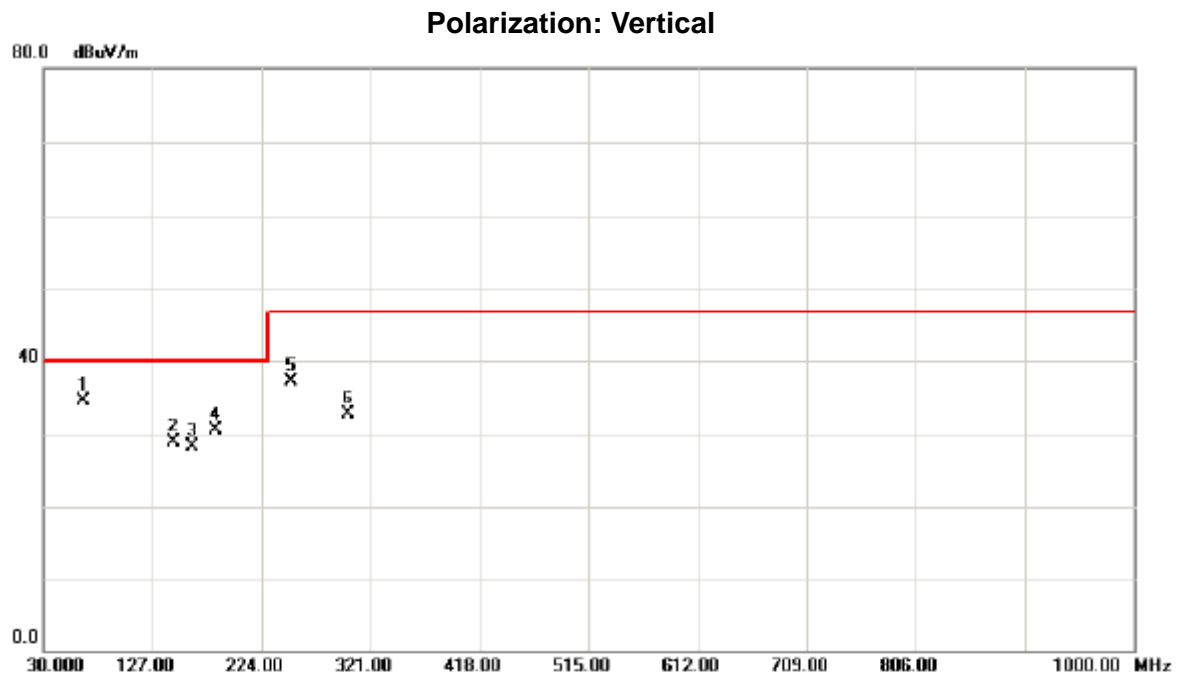
#### 4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.



#### 4.2.7 TEST RESULTS-BELOW 1 GHZ

EUT	MotherBoard	Model Name	ARM-C2-DEP
Temperature	15 °C	Relative Humidity	54%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

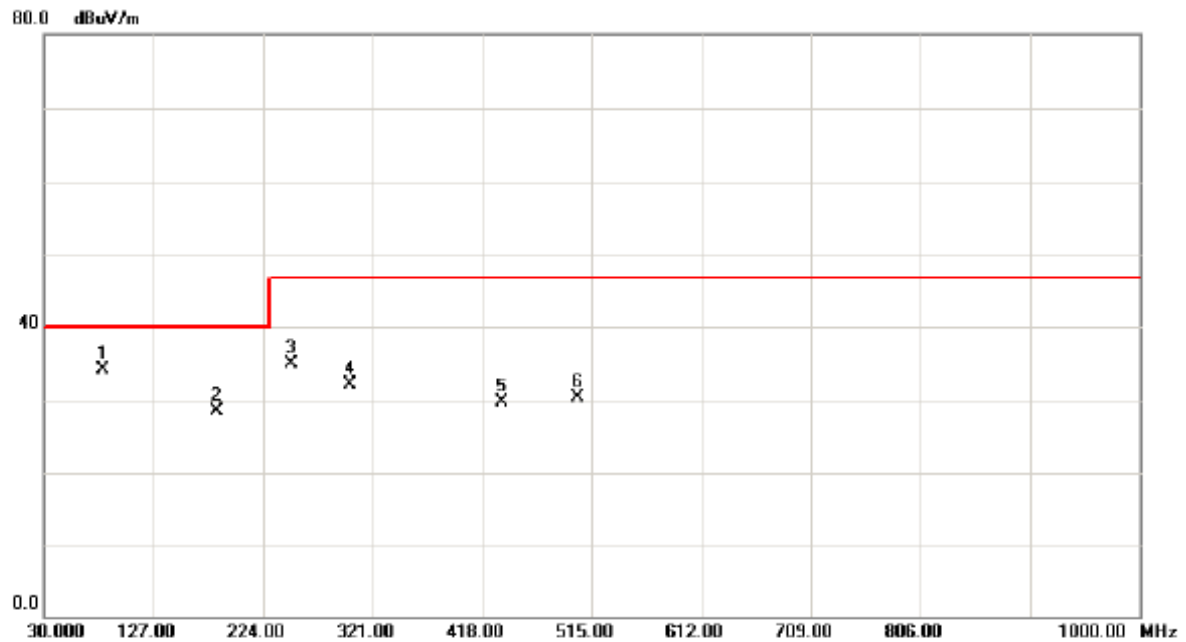


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	66.1920	41.98	-7.38	34.60	40.00	-5.40	peak	
2		145.1300	34.37	-5.37	29.00	40.00	-11.00	peak	
3		162.1040	33.20	-4.91	28.29	40.00	-11.71	peak	
4		183.7600	36.40	-5.87	30.53	40.00	-9.47	peak	
5		249.9200	43.19	-6.08	37.11	47.00	-9.89	peak	
6		301.2800	36.79	-4.04	32.75	47.00	-14.25	peak	



EUT	MotherBoard	Model Name	ARM-C2-DEP
Temperature	15 °C	Relative Humidity	54%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Horizontal**



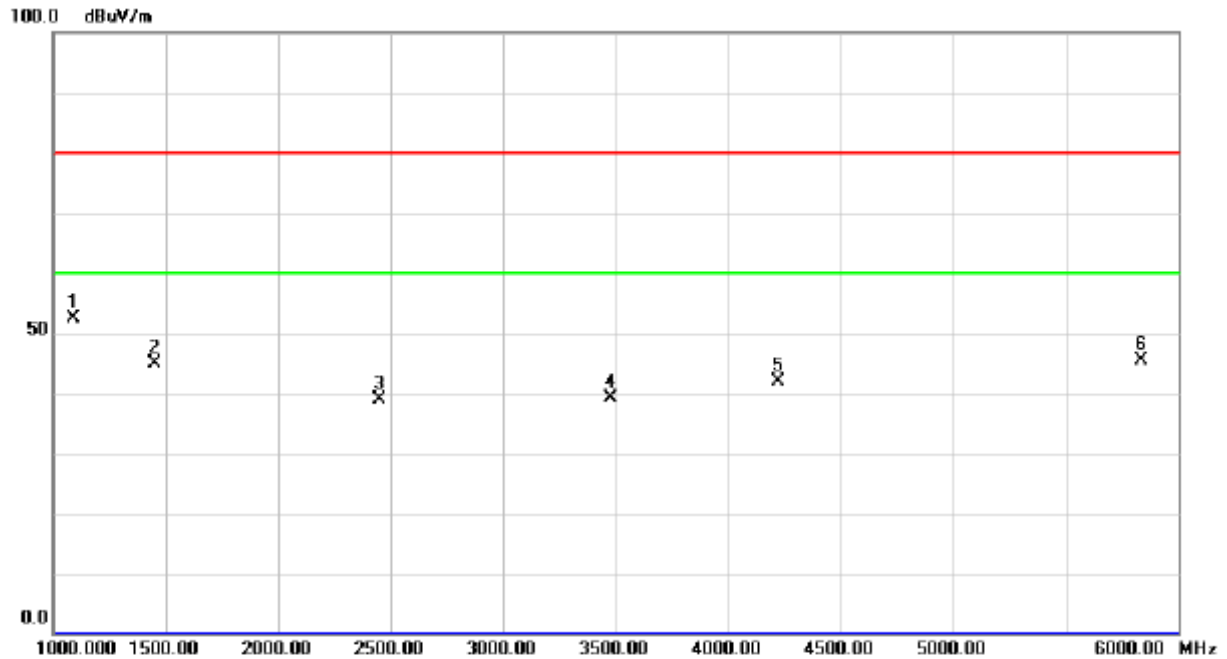
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	82.2600	44.10	-10.01	34.09	40.00	-5.91	peak	
2		183.9000	34.33	-5.89	28.44	40.00	-11.56	peak	
3		249.7800	41.00	-6.08	34.92	47.00	-12.08	peak	
4		301.4000	36.18	-4.04	32.14	47.00	-14.86	peak	
5		435.5000	30.79	-1.08	29.71	47.00	-17.29	peak	
6		502.4200	29.98	0.41	30.39	47.00	-16.61	peak	



#### 4.2.8 TEST RESULTS-ABOVE 1 GHZ

EUT	MotherBoard	Model Name	ARM-C2-DEP
Temperature	25 °C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Vertical**



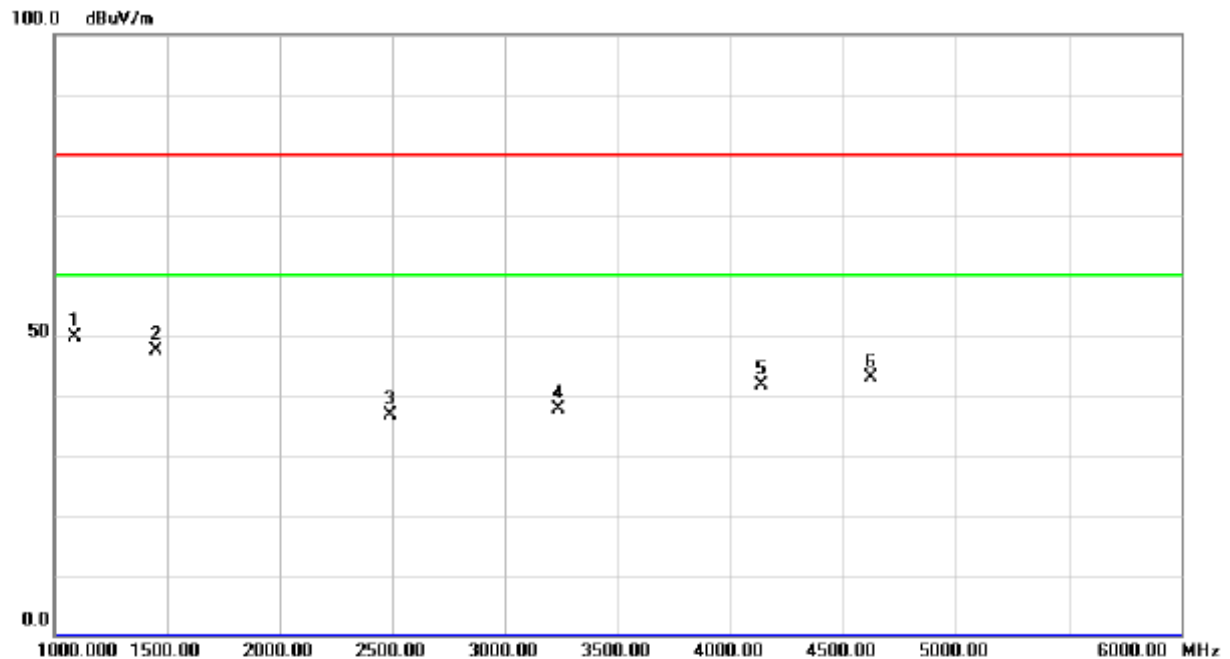
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	1087.500	57.50	-5.08	52.42	80.00	-27.58	peak	
2		1450.000	48.07	-3.13	44.94	80.00	-35.06	peak	
3		2450.000	38.77	0.15	38.92	80.00	-41.08	peak	
4		3475.000	36.35	2.72	39.07	80.00	-40.93	peak	
5		4225.000	36.27	5.54	41.81	80.00	-38.19	peak	
6		5837.500	37.24	8.06	45.30	80.00	-34.70	peak	





EUT	MotherBoard	Model Name	ARM-C2-DEP
Temperature	25 °C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM		

**Polarization: Horizontal**



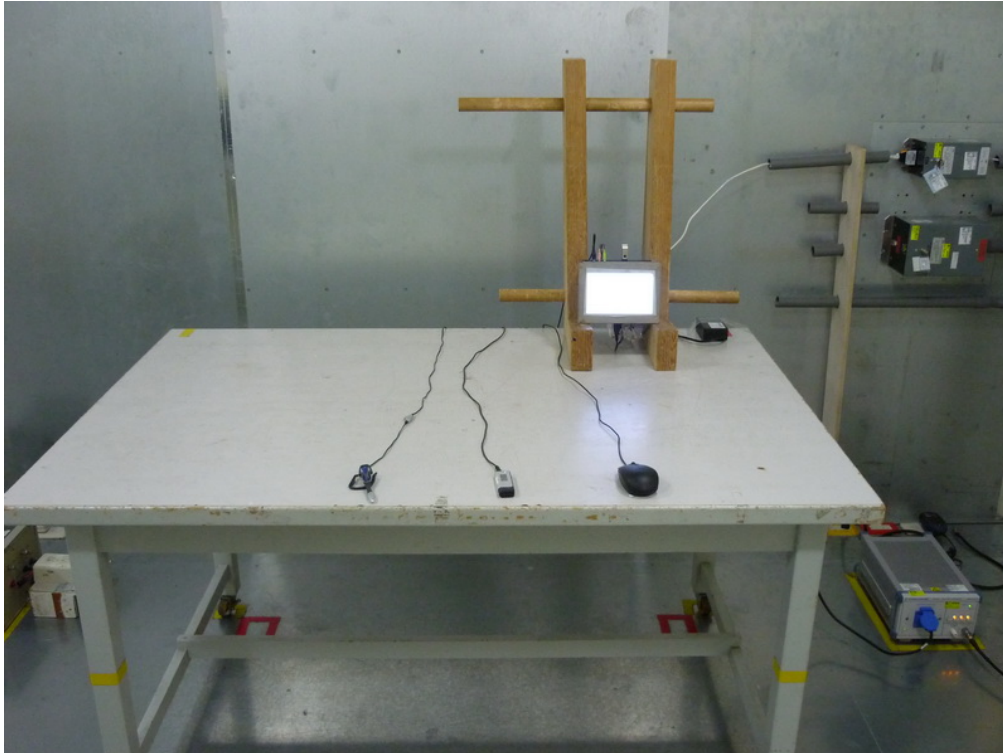
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	1087.500	54.69	-5.08	49.61	80.00	-30.39	peak	
2		1450.000	50.43	-3.13	47.30	80.00	-32.70	peak	
3		2487.500	36.29	0.30	36.59	80.00	-43.41	peak	
4		3237.500	35.92	1.68	37.60	80.00	-42.40	peak	
5		4137.500	36.15	5.46	41.61	80.00	-38.39	peak	
6		4625.000	37.01	5.97	42.98	80.00	-37.02	peak	



**5. EUT TEST PHOTO**

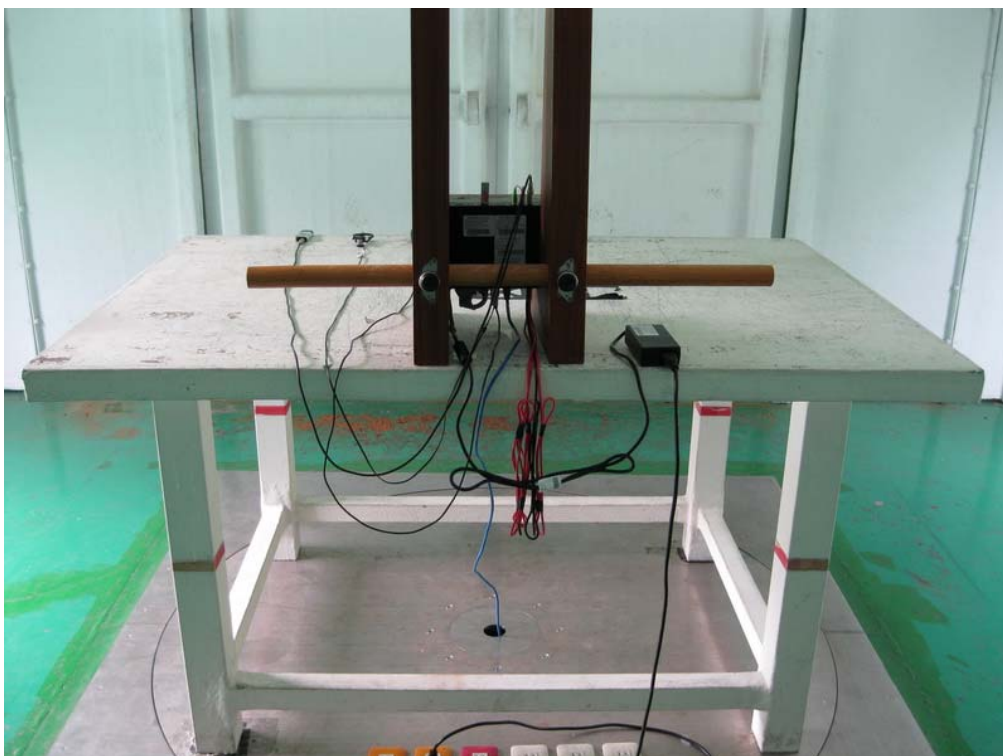
**Conducted emission test photos**

**FULL SYSTEM**



**Radiated emission Below 1 GHz test photos**

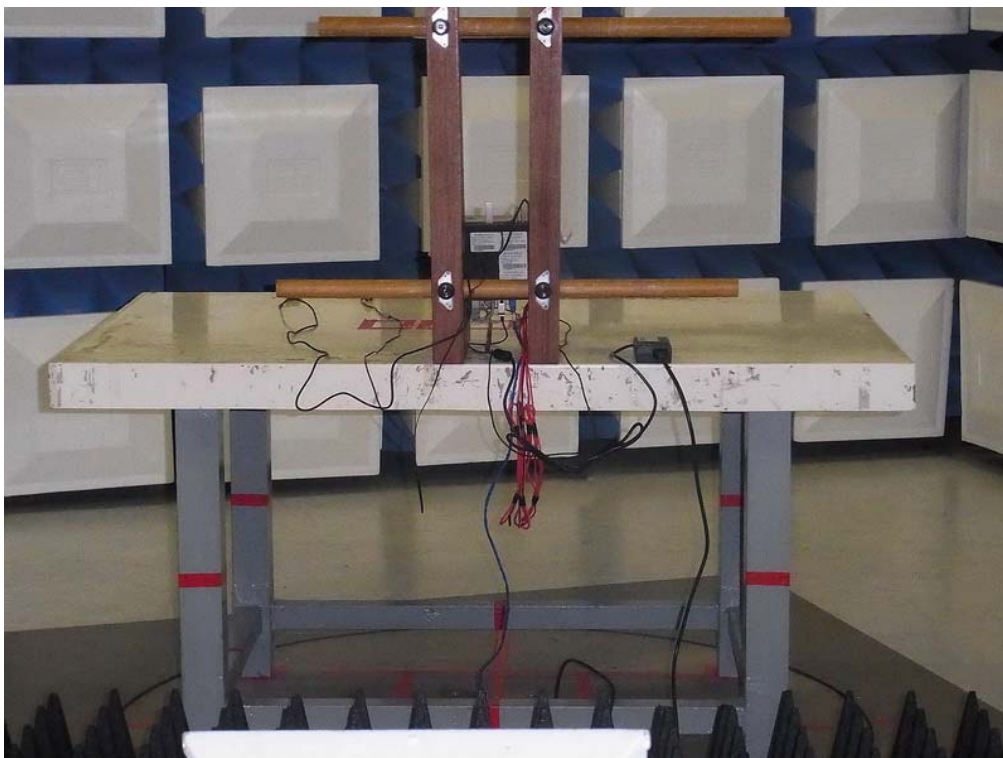
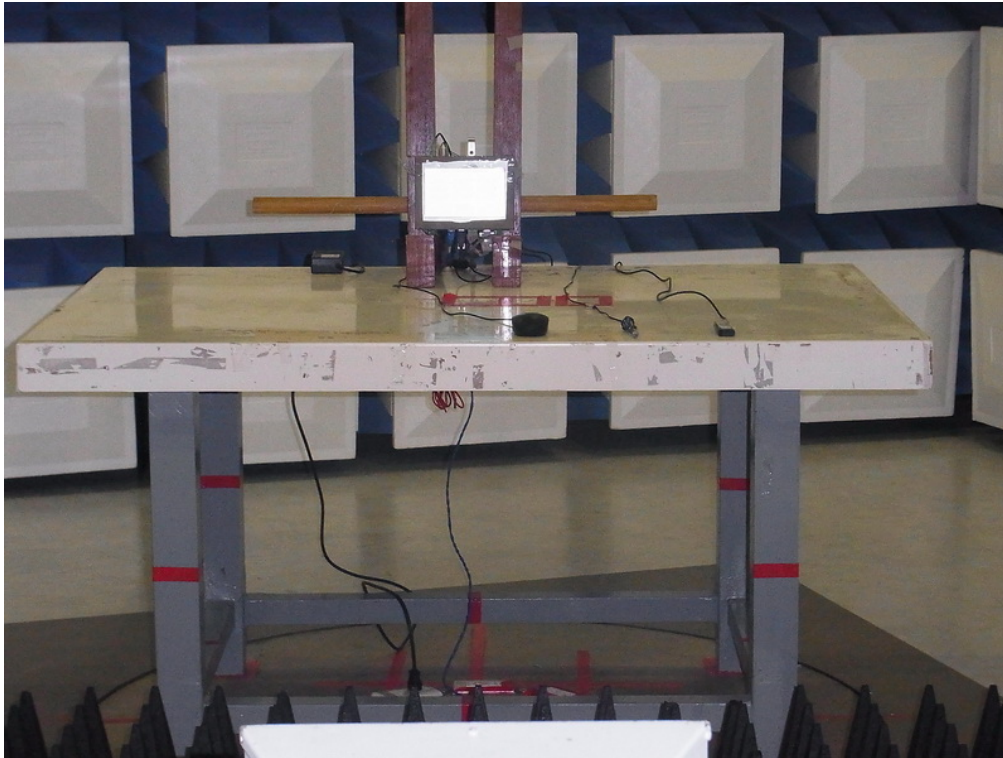
**FULL SYSTEM**





**Radiated emission above 1 GHz test photos**

**FULL SYSTEM**





***Neutron Engineering Inc.***

## **ATTACHMENT**

## **PHOTOGRAPHS OF EUT**

