## **FCC TEST REPORT**

#### according to

# 47 CFR FCC Rules and Regulations Part 15 Subpart B, Class A Digital Device and Canada Standard ICES-003 Issue 5

Equipment : Embedded Controller

Model No. xxxxxAEC-6822-C3xxxxxx(Where x is 0-9, A-Z,

-or blank)

Filing Type : Verification

Applicant : AAEON Technology Inc.

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City,

Taipei, Taiwan, R.O.C.

The test result refers exclusively to the test presented test model / sample.

 Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

#### SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

TEL: 886-3-327-3456 FAX: 886-3-327-0973

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## History of this test report

Original Report Issue Date: Sep. 01, 2014

■ No additional attachment.

 $\hfill\Box$  Additional attachments were issued as following record:

Report No.	Issue Date	Description

Page No. : ii TEL: 886-3-327-3456 Issued Date : Sep. 01, 2014 FAX: 886-3-327-0973

Certificate No.: FV481303

## CERTIFICATE OF COMPLIANCE

according to

# 47 CFR FCC Rules and Regulations Part 15 Subpart B, Class A Digital Device and Canada Standard ICES-003 Issue 5

Equipment : Embedded Controller

Model No. : xxxxxAEC-6822-C3xxxxxx(Where x is 0-9, A-Z,

-or blank)

Applicant : AAEON Technology Inc.

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City,

Taipei, Taiwan, R.O.C.

#### I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4-2009 and the energy emitted by this equipment was *passed* CISPR PUB. 22 and FCC Part 15 Subpart B and Canada Standard ICES-003 Issue 5 in both radiated and conducted emission Class A limits.

The product sample received on **Aug. 13, 2014** and completely tested on **Aug. 18, 2014** at **SPORTON International Inc.** LAB.

Kero Kuo

Assistant Manager

#### SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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## 1. General Description of Equipment under Test

### 1.1. Applicant

#### **AAEON Technology Inc.**

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

#### 1.2. Manufacturer

Same as 1.1

#### 1.3. Basic Description of Equipment under Test

Equipment : Embedded Controller

Model No. : xxxxxAEC-6822-C3xxxxxx(Where x is 0-9, A-Z, -or blank)

Brand Name : AAEON
Power Supply Type : Switching

AC Power Cord : Non-Shielded, 1.8 m, 3 pin DC Power Cable : D-Shielded, 1.25 m, 2 pin

The maximum operating frequency is 1.6 GHz

#### 1.4. Feature of Equipment under Test

Model No.:FSP060-DBAE1

Input: 100-240Vac, 1.5A, 50-60Hz

Output: 12V === 5.0A MAX

Please refer to user manual.

**Adapter** 

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### 2. Test Configuration of Equipment under Test

#### 2.1. Test Manner

- a. During testing, the personal computer and equipment positions were varied according to ANSI C63.4-2009 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.
- The complete test system included remote workstation, LCD Monitor, USB Keyboard, USB Mouse, Printer, Modem(x4), iPod nano(x2) and EUT for EMI test. The remote workstation included Notebook(x2)
- c. The following test modes were for conducted emission test:

Mode 1. 1920\*1200 60Hz LAN : 1G Mode 2. 1600\*1200 60Hz LAN : 1G

- ⇒ For conducted final test, cause "Mode 2" generated the worst test result; it was reported as final data.
- a. The following test modes were for radiated emission below 1GHz test:

Mode 1. 1920\*1200 60Hz LAN : 1G Mode 2. 1600\*1200 60Hz LAN : 1G

- ⇒ For conducted final test, cause "**Mode 1**" generated the worst test result; it was reported as final data.
- d. The following test mode was referring to radiated worst case "**Mode 1**"(1GHz / 5TH of harmonic CPU fundamental) final test:

Mode 1. 1920\*1200 60Hz LAN: 1G

e. Frequency range investigated: Conducted 150 kHz to 30 MHz, Radiated 30 MHz to 8 GHz.

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## 2.2. Description of Test System

#### <Conducted and Radiated Below 1GHz >

No.	Description	Manufacturer	Model	FCC ID	Signal Cable Description
For I	Local				
1	LCD Monitor	DELL	U2410f	DoC	D-SUB Cable, D-Shielded, 1.8m
2	USB Keyboard	Microsoft	1366	DoC	USB Cable, AL-F-Shielded, 2m
3	USB Mouse	Microsoft	1113	DoC	USB Cable, AL-F-Shielded, 1.8m
4	Modem(x4)	ACEEX	DM1414	IFAXDM1414	RS232 Cable(x4), D-Shielded, 1.15m
5	Printer	EPSON	LQ300+	N/A	LPT Cable, D-Shielded, 1.8m
6	iPod nano(x2)	APPLE	A1199	DoC	USB Cable(x2), B-Shielded, 1.0m
For I	Remote				
-	Notebook(x2)	DELL	VOSTRO 3350	DoC	RJ45 Cable(x2), Non-Shielded,10m

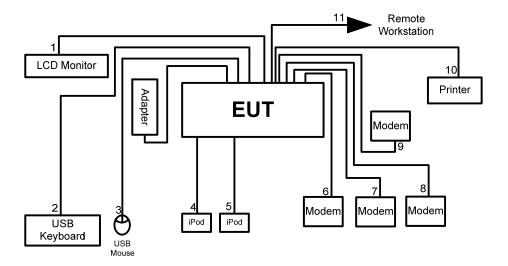
#### < Radiated Above 1GHz >

No.	Description	Manufacturer	Model	FCC ID	Signal Cable Description
For I	Local				
1	LCD Monitor	DELL	U2410f	DoC	D-SUB Cable, D-Shielded, 1.8m
2	USB Keyboard	DELL	SK-8175	DoC	USB Cable , AL-F-Shielded, 1.8m
3	USB Mouse	DELL	MOC5UO	DoC	USB Cable , AL-F-Shielded, 1.8m
4	Modem(x4)	ACEEX	DM1414	IFAXDM1414	RS232 Cable(x4), D-Shielded, 1.15m
5	Printer	HP	C2642A	B94C2642X	LPT Cable, D-Shielded, 1.2m
6	iPod nano(x2)	APPLE	A1366	DoC	USB Cable(x2), B-Shielded, 1.0m
For I	Remote				
-	Notebook(x2)	DELL	VOSTRO 3350	DoC	RJ45 Cable(x2), Non-Shielded,10m

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#### 2.3. Connection Diagram of Test System



- 1. The D-SUB cable is connected from the EUT to the support unit 1.
- 2. The USB cable is connected from the EUT to the support unit 2.
- 3. The USB cable is connected from the EUT to the support unit 3.
- 4-5. The USB cable is connected from the EUT to the support unit 6.
- 6-9. The RS232 cable is connected from the EUT to the support unit 4.
- 10. The LPT cable is connected from the EUT to the support unit 5.
- 11. The RJ45 cable is connected from EUT to remote workstation.

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#### 3. Test Software

An executive program, "WinEMC.exe" under Windows Embedded Standard, which generates a complete line of continuously repeating " H " pattern was used as the test software.

The program was executed as follows:

- a. Turn on the power of all equipment.
- b. Sends " H " messages to the LCD monitor via the EUT, and the LCD monitor displays " H " patterns on the screen.
- c. Sends "H" messages to the printer, then the printer prints them on the paper.
- d. Sends "H" messages to the iPod, and iPod reads and writes the message.
- e. The EUT reads the test program from the keyboard and mouse and runs it.
- f. Sends messages to modem.
- g. Repeat the steps from b to e.

At the same time, the following programs were executed:

- The Notebook (remote workstation) executed "Ping .exe" to link with the EUT to maintain the connection via RJ45 cable.

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#### 4. General Information of Test

#### 4.1. Test Facility

#### For conducted emission

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang,

Tao Yuan Hsien, Taiwan, R.O.C.

TEL: 886-3-327-3456 FAX: 886-3-327-0973

Test Site No. : CO04-HY

For radiated emission below 1GHz

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang,

Tao Yuan Hsien, Taiwan, R.O.C.

TEL: 886-3-327-3456 FAX: 886-3-327-0973

Test Site No. : 10CH01-HY

For radiated emission above 1GHz

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang,

Tao Yuan Hsien, Taiwan, R.O.C.

TEL: 886-3-327-3456 FAX: 886-3-327-0973

Test Site No. : 03CH04-HY

#### 4.2. Uncertainty of Test Site

Test Items	Test Site No.	Uncertainty	Remark
Conducted Emissions	CO04-HY	± 2.2 dB	Confidence levels of 95%
Radiated Emissions below 1GHz	10CH01-HY	± 2.5 dB	Confidence levels of 95%
Radiated Emissions above 1GHz	03CH04-HY	± 4.7 dB	Confidence levels of 95%

#### 4.3. Test Voltage

120V / 60Hz

#### 4.4. Standard for Methods of Measurement

ANSI C63.4-2009

#### 4.5. Test in Compliance with

CISPR PUB. 22 and FCC Part 15 and Canada Standard ICES-003 Issue 5

#### 4.6. Frequency Range Investigated

a. Conducted emission test: from 150 kHz to 30 MHz

b. Radiated emission test: from 30 MHz to 8 GHz

#### 4.7. Test Distance

a. The test distance of radiated emission from antenna to EUT is 10 M (from 30MHz ~ 1GHz)

b. The test distance of radiated emission from antenna to EUT is 3 M (from 1GHz ~ 8GHz)

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#### 5. Test of Conducted Powerline

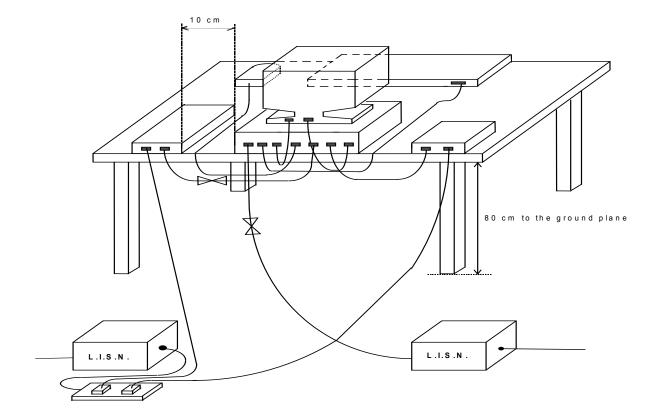
Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in ANSI C63.4, Clause 7 and Canada Standard ICES-003. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

#### 5.1. Test Procedures

- a. The EUT was warmed up for 15 minutes before testing started.
- b. The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
- c. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- d. All the support units are connect to the other LISN.
- e. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- f. The CISPR states that a 50 ohm , 50 microhenry LISN should be used.
- g. Both sides of AC line were checked for maximum conducted interference.
- h. The frequency range from 150 kHz to 30 MHz was searched.
- i. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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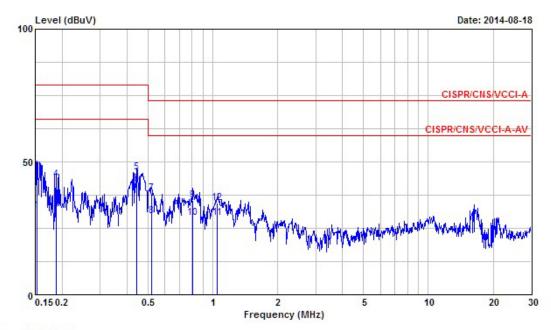
## 5.2. Typical Test Setup Layout of Conducted Powerline



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#### 5.3. Test Result of AC Powerline Conducted Emission

Test Mode	Mode 2	Test Site No.	CO04-HY					
Test Frequency	0.15 MHz ~ 30 MHz	Test Engineer	Zeus Chen					
Temperature	<b>25</b> ℃	Relative Humidity	45 %					
Note: Corrected Reading (dBμV) = LISN Factor + Cable Loss + Read Level = Level								
■The test was passed at the minimum margin that marked by the frame in the following data								



Site : CO04-HY

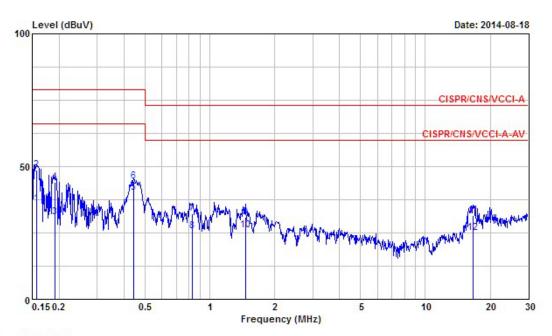
Condition : CISPR/CNS/VCCI-ANSLK (8127-477)-2014 LINE

EUT : Model : POWER: 120V/60Hz Memo : MODE 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1524030	31.69	-34.31	66.00	31.42	0.03	0.24	Average
2	0.1524030	46.22	-32.78	79.00	45.95	0.03	0.24	QP
3	0.1873850	31.83	-34.17	66.00	31.59	0.03	0.21	Average
4	0.1873850	43.38	-35.62	79.00	43.14	0.03	0.21	QP
5	0.4420810	45.98	-33.02	79.00	45.76	0.03	0.19	QP
6	0.4420810	41.61	-24.39	66.00	41.39	0.03	0.19	Average
7	0.5182420	38.28	-34.72	73.00	38.07	0.04	0.17	QP
8	0.5182420	29.73	-30.27	60.00	29.52	0.04	0.17	Average
9	0.8087580	35.64	-37.36	73.00	35.47	0.05	0.12	QP
10	0.8087580	28.80	-31.20	60.00	28.63	0.05	0.12	Average
11	1.050	28.86	-31.14	60.00	28.69	0.06	0.11	Average
12	1.050	34.69	-38.31	73.00	34.52	0.06	0.11	QP

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Site : CO04-HY

Condition : CISPR/CNS/VCCI-ANSLK (8127-477)-2014 NEUTRAL

EUT :

Model : POWER: 120V/60Hz Memo : MODE 2

	Freq	Freq Level		Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1573260	35.70	-30.30	66.00	35.45	0.02	0.23	Average
2	0.1573260	48.80	-30.20	79.00	48.55	0.02	0.23	QP
3	0.1903870	30.96	-35.04	66.00	30.73	0.02	0.21	Average
4	0.1903870	44.24	-34.76	79.00	44.01	0.02	0.21	QP
5	0.4420810	40.00	-26.00	66.00	39.78	0.03	0.19	Average
6	0.4420810	44.30	-34.70	79.00	44.08	0.03	0.19	QP
7	0.8304700	32.31	-40.69	73.00	32.14	0.05	0.12	QP
8	0.8304700	25.74	-34.26	60.00	25.57	0.05	0.12	Average
9	1.460	31.03	-41.97	73.00	30.76	0.06	0.21	QP
10	1.460	26.02	-33.98	60.00	25.75	0.06	0.21	Average
11	16.660	31.62	-41.38	73.00	31.07	0.28	0.27	QP
12	16.660	25.12	-34.88	60.00	24.57	0.28	0.27	Average

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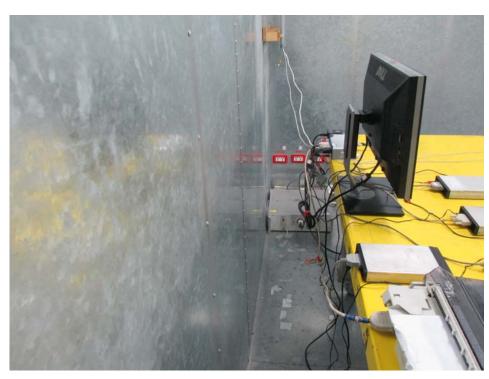
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## 5.4. Photographs of Conducted Power line Test Configuration

• The photographs show the configuration that generates the maximum emission.



FRONT VIEW



**REAR VIEW** 

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SIDE VIEW

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#### 6. Test of Radiated Emission

Radiated emissions below 1 GHz were measured with a bandwidth of 120 kHz for 30 MHz to 1,000 MHz and bandwidth of 1 MHz for above 1 GHz to 5th harmonic of highest frequency according to the methods defines in ANSI C63.4, Clause 8 and Canada Standard ICES-003. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

#### 6.1. Test Procedures

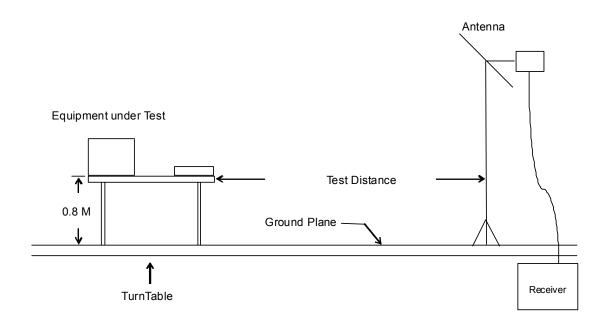
- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3m(above 1GHz)/10m(below 1GHz) from the interference-receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. The FCC Part 15.109 (g) permit parties seeking to authorize a digital device to choose to demonstrate that the device complies with either the Part 15 standards or the international standards found in Publication 22 of the International Special Committee on Radio Interference (CISPR).
- i. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- j. The main board was tested in accordance with section 15.32 of the FCC rules. Testing for radiated emissions was first performed with the main board installed in a typical enclosure but with the enclosure's cover removed so that the internal circuitry is exposed at the top and on at least two sides. And then the EUT was tested with enclosure's cover unless it pass the required limits at first condition.

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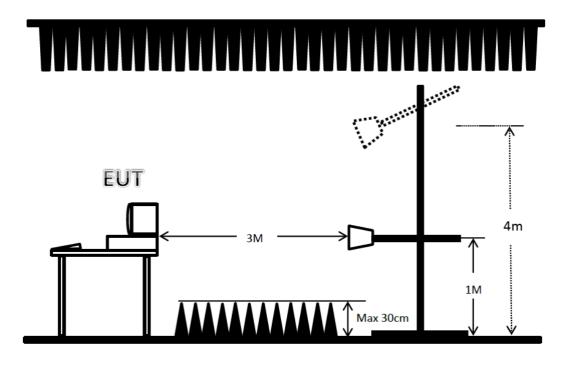
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## 6.2. Typical Test Setup Layout of Radiated Emission

#### < Below 1GHz >



#### < Above 1GHz >

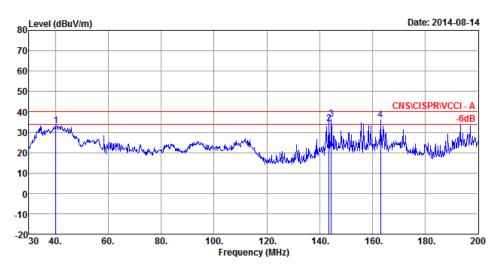


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#### Test Result of Radiated Emission (Below 1GHz) 6.3.

Test mode	Mode 1	Test Site No.	10CH01-HY					
Test frequency	30 MHz ~ 1000 MHz	Test Engineer	Nigel Wang					
Temperature	20 ℃	Relative Humidity						
Note: 1. Emission level	$(dB\mu V/m) = 20 log Emission level (\mu V$	//m)						
2. Corrected Reading : Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level								
■The test was passed at the minimum margin that marked by the frame in the following data								



: 10CH01-HY

Condition: CNS\CISPR\VCCI - A 10m BICONICAL-1030804 VERTICAL

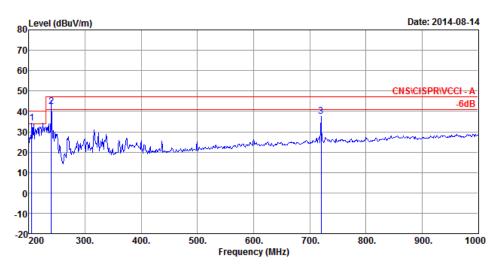
EUT

Model

Power : 120V/60Hz Memo : Mode 1

	Freq	Level		Limit Line						A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB/m	dB		cm	deg
1	40.20	33.16	-6.84	40.00	48.77	1.58	11.43	28.62	Peak		
2	143.56	34.39	-5.61	40.00	47.94	2.99	11.70	28.24	QP	100	165
3 MX	( 144.41	36.61	-3.39	40.00	50.15	2.99	11.71	28.24	Peak		
4	163.11	36.17	-3.83	40.00	48.82	3.18	12.33	28.16	Peak	100	165

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Site : 10CH01-HY

Condition: CNS\CISPR\VCCI - A 10m LOG-1030804 VERTICAL

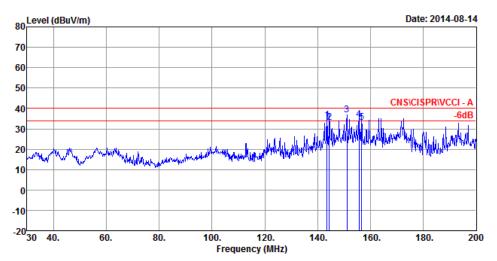
EUT : Model :

Power : 120V/60Hz Memo : Mode 1

			0ver	Limit	Read	Cable	Antenna	Preamp		A/Pos	T/Pos
	Freq	Level	Limit	Line	Level	Loss	Factor	Factor	Remark		
-	MHz	dBuV/m	dB	$\overline{\text{dBuV/m}}$	dBuV	dB	dB/m	dB			deg
1	204.80	34.28	-5.72	40.00	42.56	3.63	15.60	27.51	Peak		
2 MX	240.00	42.30	-4.70	47.00	53.01	4.00	12.70	27.41	QP	100	200
3	720.00	37.57	-9.43	47.00	38.04	7.08	20.56	28.11	Peak		

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Site : 10CH01-HY

Condition: CNS\CISPR\VCCI - A 10m BICONICAL-1030804 HORIZONTAL

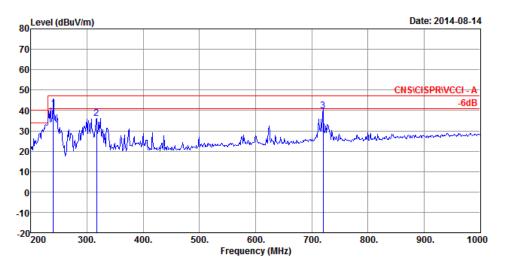
EUT : Model :

Power : 120V/60Hz Memo : Mode 1

			0ver	Limit	Read	Cable	Antenna	Preamp		A/Pos	T/Pos
	Freq	Level	Limit	Line	Level	Loss	Factor	Factor	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB/m	dB		cm	deg
1	143.56	34.26	-5.74	40.00	47.81	2.99	11.70	28.24	QP	400	165
2	144.41	33.01	-6.99	40.00	46.55	2.99	11.71	28.24	QP	400	135
3 MX	151.04	36.75	-3.25	40.00	49.81	3.14	12.01	28.21	Peak	400	200
4	155.63	34.57	-5.43	40.00	47.42	3.15	12.18	28.18	QP	400	169
5	156.65	33.10	-6.90	40.00	45.93	3.16	12.19	28.18	QP	400	178
									_		

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Site : 10CH01-HY

Condition: CNS\CISPR\VCCI - A 10m LOG-1030804 HORIZONTAL

EUT

Model

Power : 120V/60Hz Memo : Mode 1

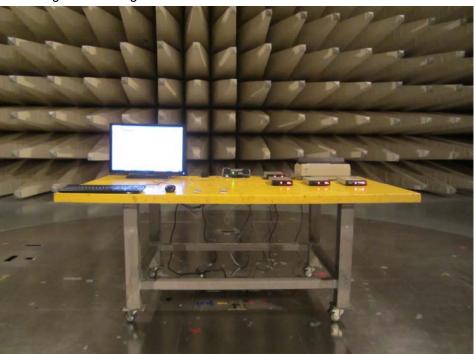
T/Pos	A/Pos						Limit			_	
		Remark	Factor	Factor	Loss	Level	Line	Limit	Level	Freq	
deg	Cm		dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	MHz	
230	400	QP	27.41	12.72	4.00	51.47	47.00	-6.22	40.78	240.00	1 MX
		Peak	27.39	13.86	4.64	45.12	47.00	-10.77	36.23	316.80	2
		Peak	28.11	20.56	7.08	40.38	47.00	-7.09	39.91	720.00	3

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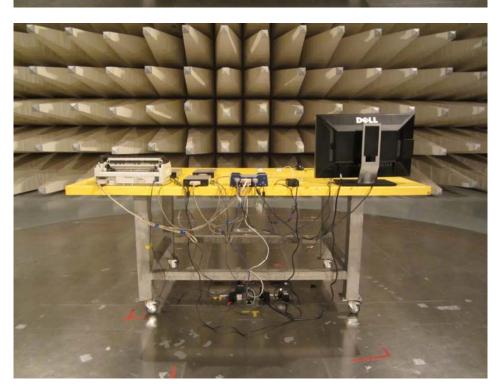
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 : Sep. 01, 2014

## 6.4. Photographs of Radiated Emission (Below 1GHz) Test Configuration

• The photographs show the configuration that generates the maximum emission.



FRONT VIEW



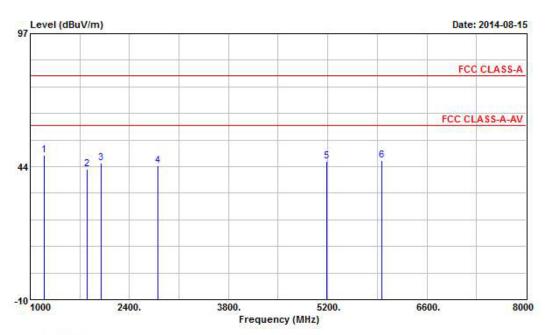
**REAR VIEW** 

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## 6.5. Test Result of Radiated Emission (Above 1GHz)

Test mode	Mode 1	Test Site No.	03CH04-HY					
Test frequency	From 1,000MHz to 8,000MHz	Test Engineer	Yen Liang Ou					
Temperature	26 ℃	Relative Humidity	50 %					
Note: 1. Emission level	Note: 1. Emission level (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m)							
2. Corrected Reading : Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level								
■The test was passed at the minimum margin that marked by the frame in the following data								



Site :03CH04-HY

Condition: FCC CLASS-A 3m HF-ANT-9120D VERTICAL

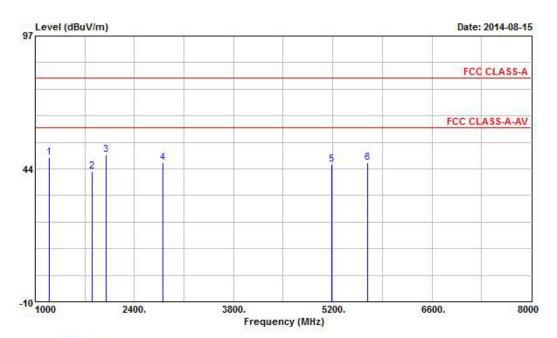
EUT :

POWER :120V/60Hz MEMO :MODE1

			Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	
	Freq	Level	Limit	Line	Level	Factor	Factor	Loss	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1198.000	48.22	-31.78	80.00	55.57	25.16	34.21	1.70			Peak
2	1798.000	42.42	-37.58	80.00	47.96	25.98	33.62	2.10	2000	1000	Peak
3	1998.000	44.98	-35.02	80.00	50.13	26.10	33.52	2.27			Peak
4	2804.000	43.97	-36.03	80.00	47.45	27.90	34.19	2.81			Peak
5	5181.000	45.52	-34.48	80.00	44.69	31.61	34.35	3.57			Peak
6	5961.000	45.95	-34.05	80.00	44.00	32.36	34.46	4.05			Peak

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Site :03CH04-HY

Condition: FCC CLASS-A 3m HF-ANT-9120D HORIZONTAL

EUT

MODEL

POWER :120V/60Hz MEMO :MODE1

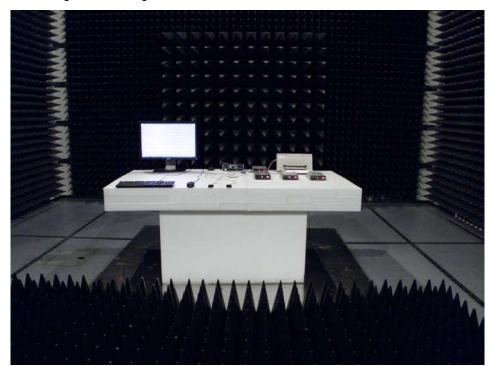
			Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	
	Freq	Level	Limit	Line	Level	Factor	Factor	Loss	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1198.000	47.95	-32.05	80.00	55.30	25.16	34.21	1.70			Peak
2	1804.000	42.55	-37.45	80.00	48.05	25.98	33.60	2.13	-	-	Peak
3	1998.000	49.29	-30.71	80.00	54.44	26.10	33.52	2.27	100	168	Peak
4	2798.000	45.88	-34.12	80.00	49.36	27.90	34.19	2.81			Peak
5	5181.000	45.43	-34.57	80.00	44.60	31.61	34.35	3.57			Peak
6	5697.000	45.95	-34.05	80.00	44.37	32.03	34.35	3.90			Peak

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## 6.6. Photographs of Radiated Emission (Above 1GHz) Test Configuration

• The photographs show the configuration that generates the maximum emission.



FRONT VIEW



**REAR VIEW** 

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## 7. List of Measuring Equipment Used < Conducted Emission >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Mar. 26, 2014	Conduction (CO04-HY)
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	JAN. 21, 2014	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz ~ 30MHz	Apr. 21, 2014	Conduction (CO04-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	7.61183201e+012	9kHz ~ 30MHz	Oct. 30, 2013	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)
50 ohm terminal	N/A	N/A	CON-01-04	N/A	Feb. 25, 2014	Conduction (CO04-HY)

Calibration Interval of instruments listed above is one year.

#### < Radiated Emission below 1GHz >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
10m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-10M	10CH01-HY	30MHz ~ 1GHz 10m/3m	Jun. 09, 2014	Radiation (10CH01-HY)
Spectrum Analyzer	R&S	FSP7	838858/013	9kHz ~ 7GHz	Feb. 18, 2014	Radiation (10CH01-HY)
Receiver	R&S	ESCI	101382	9kHz ~ 3GHz	Sep. 05, 2013	Radiation (10CH01-HY)
Amplifier	Agilent	8447D	2944A10825	100kHz ~ 1.3GHz z	Apr. 14, 2014	Radiation (10CH01-HY)
Amplifier	Agilent	8447D	2944A10826	100kHz ~ 1.3GHz	Apr. 08, 2014	Radiation (10CH01-HY)
Biconical Antenna	Schwarz beck	VHBB 9124	286	30MHz ~ 200MHz	Aug. 04, 2014	Radiation (10CH01-HY)
Log Antenna	Schwarz beck	VUSLP 9111	206	200MHz ~ 1GHz	Aug. 04, 2014	Radiation (10CH01-HY)
Turn Table	HD	DT 60 RPS	1513/004/00	0 ~ 360 degree	N/A	Radiation (10CH01-HY)
Antenna Mast	HD	MA240	240/556/00	1 ~ 4 m	N/A	Radiation (10CH01-HY)
Antenna Mast	HD	MA240	240/559/00	1 ~ 4 m	N/A	Radiation (10CH01-HY)
RF Cable-R10m	BELDEN	RG8/U	CB023-INSIDE	30MHz ~ 1GHz	Nov. 14, 2013	Radiation (10CH01-HY)
RF Cable-R10m	Suhner Switzerland + Rosenberger	RG223/U + UAA220A-0	CB022-DOOR	30MHz ~ 1GHz	Nov. 14, 2013	Radiation (10CH01-HY)

Calibration Interval of instruments listed above is one year.

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#### < Radiated Emission above 1GHz >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP40	100593	9 kHz ~ 40 GHz	Oct. 03, 2013	Radiation (03CH04-HY)
Amplifier	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Aug. 20, 2013	Radiation (03CH04-HY)
Horn Antenna	SCHWARZBECK	BBHA9120	BBHA9120D1130	1 GHz ~ 18 GHz	Sep.10, 2013	Radiation (03CH04-HY)
Turn Table	Chaintek	3000	MF7802056	0 ~ 360 degree	NCR	Radiation (03CH04-HY)
Antenna Mast	MF	MF-7802	MF780208163	1 m ~ 4 m	NCR	Radiation (03CH04-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	CB063-HF	1 GHz ~ 40 GHz	Nov.20 , 2013	Radiation (03CH04-HY)

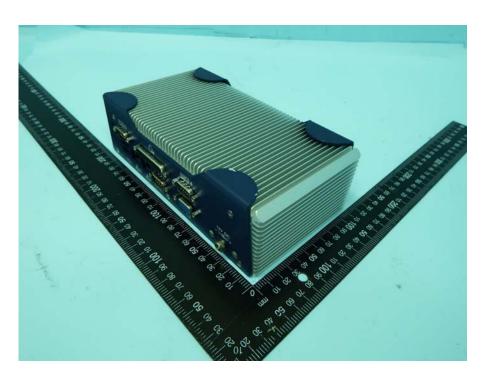
Calibration Interval of instruments listed above is one year.

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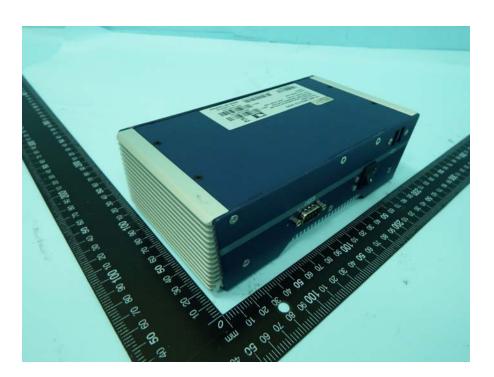
NCR: No calibration request.

## APPENDIX A. Photographs of EUT





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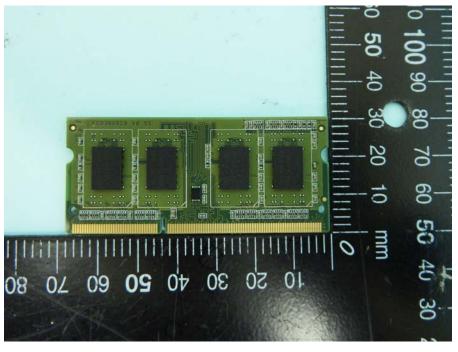
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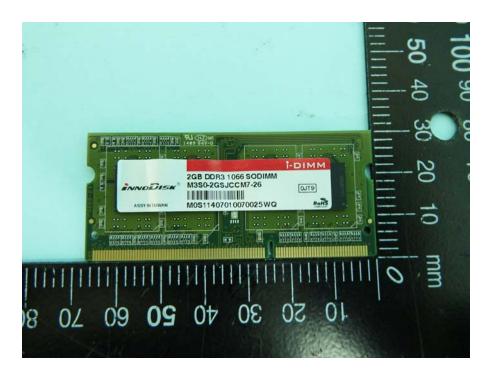


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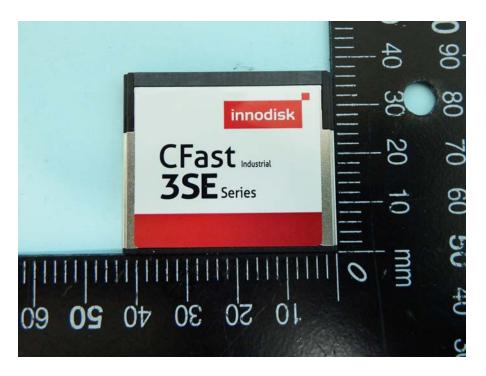
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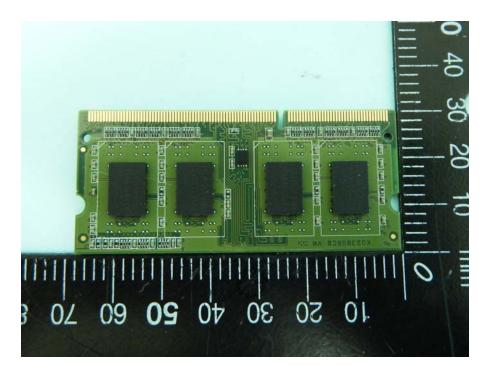
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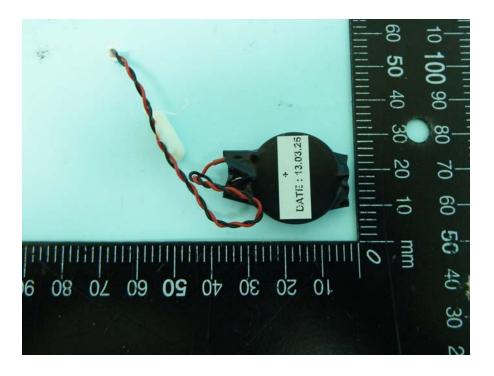


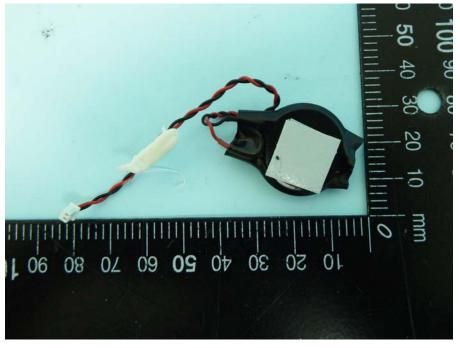
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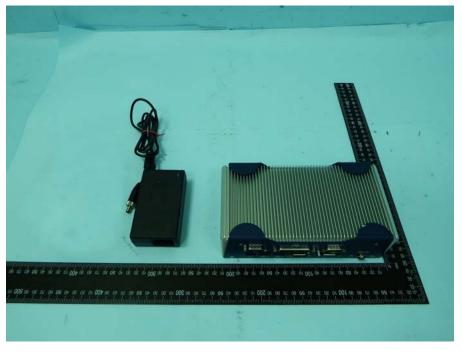
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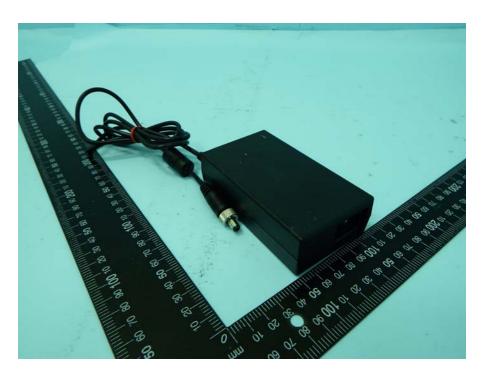


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