FCC 47 CFR PART 15 SUBPART B

TEST REPORT

For

Wall Mount 6 Slot Chassis

Model: AMC-262

Trade Name: AAEON

Issued to

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

Issued by



Compliance Certification Services Inc. Hsintien Lab.

No. 165, Chunghsen Road, Hsintien City Taipei Hsien, Taiwan TEL: (02) 2217-0894

FAX: (02) 2217-1029



Date of Issue: May 19, 2006

Note: This report shall not be reproduced except in full, without the written approval of Compliance Certification Services Inc. Itd. This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document.



TABLE OF CONTENTS

1	TEST RE	SULT CERTIFICATION	3
2	EUT DES	SCRIPTION	4
3	TEST MI	ETHODOLOGY	5
		SYSTEM OPERATION	
	3.2 DECIS	ION OF FINAL TEST MODE	5
4	SETUP O	F EQUIPMENT UNDER TEST	6
5	FACILIT	TIES AND ACCREDITATIONS	7
	5.1 FAC	ILITIES	7
	5.2 LAB	ORATORY ACCREDITATIONS AND LISTINGS	7
6	INSTRUM	MENT AND CALIBRATION	8
	6.1 MEA	SURING INSTRUMENT CALIBRATION	8
	6.2 TEST	T AND MEASUREMENT EQUIPMENT	8
7	LINE CO	NDUCTED & RADIATED EMISSION TEST	9
		IT	
		Γ PROCEDURE OF LINE CONDUCTED EMISSION1	
		Γ PROCEDURE OF RADIATED EMISSION1	
	7.4 TEST	Γ RESULTS	4
A	PPENDIX 1	I - PHOTOGRAPHS OF TEST SETUP1	16

1 TEST RESULT CERTIFICATION

Applicant: AAEON Technology Inc.

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

Date of Issue: May 19, 2006

Taipei, Taiwan, R.O.C.

Manufacturer: AAEON Technology Inc.

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

Taipei, Taiwan, R.O.C.

Equipment Under Test: Wall Mount 6 Slot Chassis

Trade Name: AAEON

Model: AMC-262

Detailed EUT Description: See Item 2 of this report

Date of Test: May 12, 2006

Applicable Standard	Class / Limit	Test Result			
FCC Part 15 Subpart B IC ICES-003	Class A	No non-compliance noted			
Deviation from Applicable Standard					
None					

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart B and the measurement procedures were according to ANSI C63.4. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

Approved by:

David Wang

Manager of Hsintien Laboratory

Compliance Certification Services Inc.

Reviewed by:

Vince Chiang

Assistant Manager of Hsintien Laboratory

Compliance Certification Services Inc.

Page 3 Rev. 00

2 EUT DESCRIPTION

Product	Wall Mount 6 Slot Chassis
Trade Name	AAEON
Model	AMC-262
Housing Type	Metal case
EUT Power Rating	100-240VAC
AC Power During Test	120VAC / 60Hz
Power Supply Manufacturer	Seventeam
Power Supply Model Number	ST-300BLV
AC Power Cord Type	Unshielded, 1.8m (Detachable)
OSC/Clock Frequencies	12MHz; 14.31818MHz; 25MHz; 32.768kHz

Date of Issue: May 19, 2006

I/O PORT OF EUT

I/O PORT TYPE	Q'TY	TESTED WITH
1). PIO Port	1	1
2). SIO Port	1	1
3). PS/2 Keyboard Port	1	1
4). VIDEO-OUT Port (VGA)	1	1
5). PS/2 one to two adaptor	1	1
6). LAN Port	2	2
7). USB Port	3	3

Note: Client consigns only one model sample (Model Number is AMC-262) to test.

Page 4 Rev. 00

3 TEST METHODOLOGY

3.1 EUT SYSTEM OPERATION

- 1. Windows XP boots system.
- 2. Run Emctest.exe to activate all peripherals and display "H" pattern on monitor screen.

Date of Issue: May 19, 2006

- 3. Run Winemc.exe then choose (C:/, E:/, G:/, H:/) to test EUT.
- 4. Press the start menu, select executive and type ping 192.168.0.2 –t (EUT), ping 192.168.0.1 –t (Server Notebook).
- 5. Press the start menu, select executive and type ping 192.168.1.2 –t (EUT), ping 192.168.1.1 –t (Server PC).

Note: Test program is self-repeating throughout the test.

3.2 DECISION OF FINAL TEST MODE

1. The following test mode(s) were scanned during the preliminary test:

Conduction:

1. NORMAL MODE

Radiation:

1	NORMAL MODE
1.	NORMAL MODE / 1-13.3GHz

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Conduction: Mode 1 **Radiation:** Mode 1

Then, the EUT configuration and cable configuration of the above highest emission mode was recorded for all final test items.

Page 5 Rev. 00

4 SETUP OF EQUIPMENT UNDER TEST

Setup Diagram

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

Date of Issue: May 19, 2006

Support Equipment

EUT Devices:

No	Equipment	Trade Name	Model #
1	CPU (2.66GHz)	Intel	Pentium4
2	MEMORY (256MB) / DDR 400 MHz	SYNNEX	S32MLD64V4F3
3	Power Supply	Seventeam	ST-300BLV
4	CPU Card	AAEON	FSB-860B

Peripherals Devices:

No	Equipment	Model	Serial No.	FCC ID/ BSMI ID	Trade Name	Data Cable	Power Cord
1	PS/2 Keyboard	6311-TW4C/6	N/A	BSMI ID: 4862A064	ACER	Shielded, 1.8m	N/A
2	PS/2 Keyboard	SK-8110	N/A	BSMI: T3A002 DoC	DELL	Shielded, 1.8m	N/A
3	PS/2 Mouse	M071KC	443029438	BSMI: R41108 DoC	DELL	Shielded, 1.8m	N/A
4	USB 2.0 HDD	ME-911	N/A	BSMI: D33031	PORTABLE	Shielded, 1.8m	N/A
5	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.8m	N/A
6	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.8m	N/A
7	Printer	C60	N/A	BSMI ID: 3902E006	EPSON	Shielded, 1.8m	Unshielded, 1.8m
8	Monitor	710V	GS17H9NXA05853A	BSMI: R33475 DoC	SAMSUNG	Shielded, 1.8m with two cores	Unshielded, 1.8m
9	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP - SOLUTION	Shielded, 1.1 m	Unshielded, 1.8m
10	Server PC	DCNE	CV8DH1S	BSMI: R33002	Dell	Unshielded, 20m	Unshielded, 1.8m
11	Server Notebook	PP05L	2464936188	DoC BSMI: R33002	DELL	Unshielded, 20m	Unshielded, 1.8m with a core

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

Page 6 Rev. 00

5 FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at CCS Taiwan Hsintien Lab at No. 165, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan.

The measurement facilities are constructed in conformance with the requirements of CISPR 16-1, ANSI C63.4 and other equivalent standards.

Date of Issue: May 19, 2006

5.2 LABORATORY ACCREDITATIONS AND LISTINGS

The test facilities used to perform Electromagnetic compatibility tests are registered or accredited by the organizations listed in the following table which includes the recognized scope specifically.

This accredited organization maintains A2LA accreditation to ISO/IEC 17025 for the specific test listed in A2LA Certificate # 0824-01. The test results included in this report, however, are not covered by this accreditation.

Country	Agency	Scope of Accreditation	Logo
USA	CFR 47, FCC Part 15/18; AS/NZS 3548; VCCI V3; CNS 13438; CNS 13439; CNS 13783; CNS 14115; CISPR 11/EN 55011; CISPR 14-1/EN 55014-1; CISPR 15/EN 55015; CISPR 22/EN 55022; EN 50081-1/EN 61000-6-3; EN 50082-1/EN 61000-6-4; IEC/EN 61000-4-2, IEC/EN 61000-4-5, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-3-3; CISPR 24/EN 55024; CISPR 14-2/EN 55014-2; EN 50081-2/EN 61000-6-1; EN 50082-2/EN 61000-6-2.		ACCREDITED No. 0824-01
USA	FCC	3/10 meter Open Area Test Sites to perform FCC Part 15/18 measurements	FC 250366
Japan	VCCI	3/10 meter Open Area Test Sites and Line Conducted Test Room to perform conducted/radiated measurements	VCCI R-1434/1630~4 C-1511/ 1882
Norway	NEMKO	EN 50081-1/2, EN 50082-1/2, IEC 61000-6-1/2/3/4, EN 50091-2, EN 50130-4, EN 55011, EN 55013, EN 55014-1/2, EN 55015, EN 55022, EN 55024, EN 61000-3-2/3, EN 61326-1, IEC 61000-4-2/3/4/5/6/8/11, Cispr 16-1/2/3/4	N ELA 103
Taiwan	CNLA	47 CFR FCC Part 15 Subpart B, EN 61000-3-2, EN 61000-3-3, CNS 13439, CNS 13783-1, CNS 13438, AS/NZS 3548, VCCI, CNS 13022-1/2/3, EN 55022, EN 55013, EN 55014-1, EN 61000-4-2/3/4/5/6/8/11, ENV 50204, ENV 50141, ENV 50142	TAF Trading Laboratory 1108
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439	SL2-IN-E-0005 SL2-A1-E-0005 SL2-R1-E-0005 SL2-R2-E-0005
Canada	Industry Canada	RSS212, Issue 1	Canada IC 5742

Note: No part of this report may be used to claim or imply product endorsement by CNLA, A2LA or other government agency.

Page 7 Rev. 00

6 INSTRUMENT AND CALIBRATION

6.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

Date of Issue: May 19, 2006

6.2 TEST AND MEASUREMENT EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and. other equivalent standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective manual.

Equipment Used for Emission Measurement

Open Area Test Site # I							
EQUIPMENT	MFR	MODEL	SERIAL NUMBER	CAL. DUE			
SITE NSA	CCS	I Site	N/A	10/14/2006			
MEASURE RECEIVER	SCHAFFNER	SCR3501	338	06/27/2006			
SPECTRUM ANALYZER	ADVANTEST	R3132	120900008	No Calibration Required			
ANTENNA	SCHAFFNER	CBL 6112B	2809	09/23/2006			
AMPLIFIER	SCHAFFNER	CPA9231A	3626	10/08/2006			
CABLE	BELDEN	9913	N-TYPE #I2	02/17/2007			
ATTENUATOR	MCL	UNAT-6	AT06-3	10/08/2006			
THERMO- HYGRO METER	TFA	N/A	NO.2	11/02/2006			
	Abo	ove 1GHz Used					
EMC ANALYZER (100Hz-22GHz)	HP	8566B	2937A06102	06/30/2006			
ANTENNA (1-18GHz)	EMCO	3115	00022256	01/12/2007			
AMPLIFIER (1-18GHz)	HP	8449B	3008A01266	02/06/2007			
CABLE (1-18GHz)	JYEBAO	LL142	SMA#RS1	02/06/2007			
CABLE (1-18GHz)	HUBER +SUHNER	SUCOFLEX 104	SMA#RS3	02/06/2007			
CABLE (1-18GHz)	JYEBAO	LL142	SMA#C1	02/06/2007			

Note: The measurement uncertainty is less than +/- 3.36dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.

Page 8 Rev. 00

Conducted Emission Test Site # A						
EQUIPMENT	MFR	MODEL	SERIAL NUMBER	CAL. DUE		
TEST RECEIVER	R&S	ESHS20	840455/006	02/06/2007		
LISN (EUT)	SCHWARZBECK	NSLK 8127	8127382	01/02/2007		
LISN	SOLAR	8012-50-R-24-BNC	8305114	01/02/2007		
BNC CABLE	JYE BAO	RG-223/U	BNC A2	10/08/2006		
THERMO- HYGRO METER	ТОР	HA-202	9303-1	02/22/2007		

Date of Issue: May 19, 2006

Note: The measurement uncertainty is less than +/- 2.83dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.

7 LINE CONDUCTED & RADIATED EMISSION TEST

7.1 LIMIT

Maximum permissible level of Line Conducted Emission

FREQUENCY	Class A	Class B (dBuV)		Class A (dBuV)		(dBuV)
(MHz)	Quasi-peak	Average	Quasi-peak	Average		
0.15 - 0.5	79	66	66 - 56	56 - 46		
0.50 - 5.0	73	60	56	46		
5.0 - 30.0	73	60	60	50		

Note: The lower limit shall apply at the transition frequency.

Maximum permissible level of Radiated Emission measured at 10 meter

FREQUENCY	Class A (dBuV/m)	Class B (dBuV/m) Quasi-peak		
(MHz)	Quasi-peak			
30 – 230	40	30		
230 - 1000	47	37		

Note: The lower limit shall apply at the transition frequency.

Maximum permissible level of Radiated Emission measured at 3 meter

FREQUENCY	Class A (dBuV/m)	Class B (dBuV/m)		
(MHz)	Average	Peak	Average	Peak	
Above 1000	59.3	79.3	53.9	73.9	

Note: The lower limit shall apply at the transition frequency.

7.2 TEST PROCEDURE OF LINE CONDUCTED EMISSION

Procedure of Preliminary Test

• The EUT was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

Date of Issue: May 19, 2006

- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test system with EUT received AC power, 120V/60Hz, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane.
- All support equipment received power from a second LISN.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a EMI Test Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to the Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Receiver.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.2 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.2 producing the highest emission level.
- The EUT configuration and cable configuration of the above highest emission level were recorded for reference of the final test.

Page 10 Rev. 00

Procedure of Final Test

• EUT and support equipment were set up on the test bench as per step 10 of the preliminary test.

Date of Issue: May 19, 2006

- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the AV. limit in Q.P. mode, then the emission signal was re-checked using an AV. detector.
- The test data of the worst-case condition(s) was recorded.

Data Sample:

Freq. MHz	Read Level dBuV	Factor dB	Level dBuV	Limit dBuV	Over Limit dB	Reading Type (P/Q/A)	Line (L1/L2)
x.xx	42.95	0.55	43.50	73	-29.50	Q	L1

Freq. = Emission frequency in MHz

Read Level = Uncorrected Analyzer/Receiver reading Factor = Insertion loss of LISN + Cable Loss

Level = Read Level + Factor
Limit = Limit stated in standard
Over Limit = Reading in reference to limit

P = Peak Reading

Q = Quasi-peak Reading A = Average Reading

L1 = Hot side L2 = Neutral side

Calculation Formula

Over Limit (dB) = Level (dBuV) – Limit (dBuV)

Page 11 Rev. 00

7.3 TEST PROCEDURE OF RADIATED EMISSION

Procedure of Preliminary Test

• The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

Date of Issue: May 19, 2006

- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC power source, 120V/60Hz, from the outlet socket under the turntable. All support equipment received power from another socket under the turntable.
- The antenna was placed at 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 13300MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.2 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.2 producing the highest emission level.
- The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Page 12 Rev. 00

Procedure of Final Test

• EUT and support equipment were set up on the turntable as per step 8 of the preliminary test.

Date of Issue: May 19, 2006

- The Analyzer / Receiver scanned from 30MHz to 13300MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recorded at least the six highest emissions. Emission frequency, amplitude, antenna
 position, polarization and turntable position were recorded into a computer in which
 correction factors were used to calculate the emission level and compare reading to the
 applicable limit and only Q.P. reading is presented.
- The test data of the worst case condition(s) was recorded.

Data Sample:

Fre MI		Read Level dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Over Limit dB	Reading Type (P/Q/A)	Pol. (H/V)
х.х	ΚX	14.0	12.2	26.2	40	-13.8	Q	Н

Freq. = Emission frequency in MHz

Read Level = Uncorrected Analyzer/Receiver reading

Factor = Antenna Factor + Cable Loss + Attenuator (3/6/10dB) – Amplifier Gain

Level = Read Level + Factor
Limit = Limit stated in standard
Over Limit = Reading in reference to limit

P = Peak Reading

Q = Quasi-peak Reading A = Average Reading

H = Antenna Polarization: Horizontal V = Antenna Polarization: Vertical

Calculation Formula

Over Limit (dB) = Level (dBuV/m) – Limit (dBuV/m)

Page 13 Rev. 00

7.4 TEST RESULTS

Line Conducted Emission

Model: AMC-262 **Test Mode:** Mode 1

Temperature: 26°C **Humidity:** 75% RH

Test Results: Passed **Tested by:** Jason Lee

(The chart below shows the highest readings taken from the final data.)

Six Highest Conducted Emission Readings								
Frequency Range Investigated				150 kHz to 30 MHz				
Freq (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Reading Type (P/Q/A)	Line (L1/L2)	
4.848	32.69	0.38	33.07	73.00	-39.93	P	L1	
13.057	38.42	0.74	39.16	73.00	-33.84	P	L1	
4.848	31.37	0.38	31.75	73.00	-41.25	P	L2	
13.768	31.07	0.76	31.84	73.00	-41.16	P	L2	
16.140	45.94	0.84	46.79	73.00	-26.21	P	L2	
25.055	30.93	1.21	32.14	73.00	-40.86	P	L2	

NOTE: The emission level was or more than 2dB below the Average limit, so no re-check anymore.

Page 14 Rev. 00

Date of Issue: May 19, 2006

Radiated Emission

Model: AMC-262 Test Mode: Mode 1

Date of Issue: May 19, 2006

Temperature: 29°C **Humidity:** 58% RH

Test Results: Passed Tested by: Jason Lee

(The chart below shows the highest readings taken from the final data.)

Six Highest Radiated Emission Readings								
Frequency Range Investigated			30 MHz to 1000 MHz at 10m					
Freq (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Reading Type (P/Q/A)	Pol. (H/V)	
57.730	45.60	-14.74	30.86	40.00	-9.14	Q	V	
129.870	40.10	-9.22	30.88	40.00	-9.12	Q	\mathbf{V}	
32.430	37.10	-6.59	30.51	40.00	-9.49	Q	Н	
57.470	44.50	-14.69	29.81	40.00	-10.19	Q	Н	
129.190	40.20	-9.19	31.01	40.00	-8.99	Q	H	
480.070	38.90	-1.60	37.30	47.00	-9.70	Q	H	

 $\textbf{NOTE:} \ 30 \text{MHz to } 1000 \text{MHz test is Applicable CISPR } 22 \ / \ EN \ 55022 \ standard.$

Page 15 Rev. 00

APPENDIX I - PHOTOGRAPHS OF TEST SETUP LINE CONDUCTED EMISSION TEST





Page 16 Rev. 00

RADIATED EMISSION TEST





Page 17 Rev. 00