



## ESD TEST REPORT

**For**

**IPC**

**Model: EMB-830**

**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. 163-1, Chungsen Road, Hsintien City  
Taipei Hsien, Taiwan  
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## TEST RESULT CERTIFICATION

**Applicant:** **AAEON Technology Inc.**  
5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City,  
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:** IPC

**Trade Name:** AAEON

**Model:** EMB-830

**Detailed EUT Description:** See Item 2 of this report

**Date of Test:** October 2, 2006

Applicable Standard	Class/Limit/Criterion	Test Result
EN 55024:1998+A1: 2001+A2: 2003, including		
IEC 61000-4-2: 1995 + A1: 1998 + A2: 2000	Criterion B	No non-compliance noted
<b>Deviation from Applicable Standard</b>		
None		

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the EMC Directive 89/336/EMC and the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

*Approved by:*

*Reviewed by:*

David Wang  
Manager of Hsintien Laboratory  
Compliance Certification Services Inc.

Vince Chiang  
Assistant Manager of Hsintien Laboratory  
Compliance Certification Services Inc.



## FACILITIES AND ACCREDITATIONS

### FACILITIES



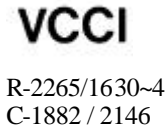


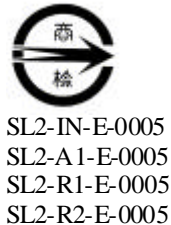

All measurement facilities used to collect the measurement data are located at CCS Taiwan Hsintien Lab at No. 163-1, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan.

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

### 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	A2LA	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 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-11, IEC/EN 61000-3-2, 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.	
USA	FCC	3/10 meter Open Area Test Sites to perform FCC Part 15/18 measurements	
Japan	VCCI	3/10 meter Open Area Test Sites and Line Conducted Test Room to perform conducted/radiated measurements	
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, Cisprr 16-1/2/3/4	
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	
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439	
Canada	Industry Canada	RSS212, Issue 1	

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



## TEST EQUIPMENT LIST

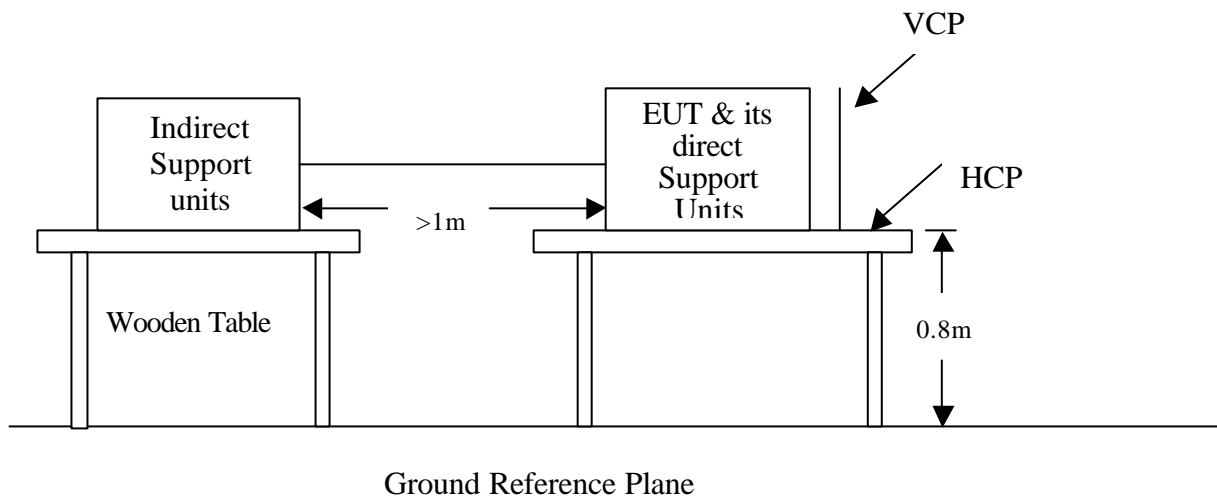
<b>ESD Test Site (EN 61000-4-2)</b>			
<b>Manufacturer/Type</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Due</b>
Schaffner / ESD Simulator	NSG 438	129	04/24/2007
Sato / Aneroid Barometer	7610-20	89090	09/03/2007
TOP / Thermo-Hygro meter	HA-202	9303-1	02/22/2007

## ELECTROSTATIC DISCHARGE (ESD) IMMUNITY TEST

<b>Port</b>	: Enclosure
<b>Basic Standard</b>	: IEC/EN 61000-4-2
<b>Test Level</b>	: $\pm 8$ kV (Air Discharge) $\pm 4$ kV (Contact Discharge) $\pm 4$ kV (Indirect Discharge)
<b>Performance Criterion</b>	: B (Standard Required)
<b>Tested by</b>	: Benson Yang
<b>Temperature</b>	: 20°C
<b>Humidity</b>	: 55%
<b>Pressure</b>	: 1010mbar

### Block Diagram of Test Setup:

(The 470 k ohm resistors are installed per standard requirement.)



**Test Procedure:**

1. The EUT was located 0.1 m minimum from all sides of the HCP.
2. The indirect support units were located 1 m minimum away from the EUT, but direct support unit was/were located at same location as EUT on the HCP and keep at a distance of 10 cm with EUT.
3. As per the requirement of EN 55024; applying direct contact discharge at the sides other than front of EUT at minimum 50 discharges (25 positive and 25 negative) if applicable, can't be applied direct contact discharge side of EUT then the indirect discharge shall be applied. One of the test points shall be subjected to at least 50 indirect discharge (contact) to the front edge of horizontal coupling plane.
4. Other parts of EUT where it is not possible to perform contact discharge then selecting appropriate points of EUT for air discharge, a minimum of 10 single air discharges shall be applied.
5. The application of ESD to the contact of open connectors is not required.
6. The EUT direct connection units also need to be applied ESD at the port of EUT cable connected.
7. Putting a mark on EUT to show tested points. The following test condition was followed during the tests.

**Note:** As per IEC/EN 61000-4-2, two 470k bleed resistors cable is connected between the EUT and HCP during the test applicable for power ungrounded or battery operating unit only.

The electrostatic discharges were applied as follows:

Amount of discharge	Voltage	Coupling	Result (Pass/Fail)
Mini 10 /Point	± 8 kV	Air Discharge	Pass
Mini 25 /Point	± 4 kV	Contact Discharge	Pass
Mini 25 /Point	± 4 kV	Indirect Discharge HCP (Front)	Pass
Mini 25 /Point	± 4 kV	Indirect Discharge VCP (Right)	Pass
Mini 25 /Point	± 4 kV	Indirect Discharge VCP (Left)	Pass
Mini 25 /Point	± 4 kV	Indirect Discharge VCP (Back)	Pass



**Performance & Result:**

- Criterion A:** The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
  
- Criterion B:** The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
  
- Criterion C:** Temporary loss of function is allowed, provided the functions self recoverable or can be restored by the operation of controls.

<input checked="" type="checkbox"/> <b>PASS</b> <input type="checkbox"/> <b>FAIL</b>
<b>Observation:</b> No function degraded during the tests.



## ELECTROSTATIC DISCHARGE TEST

