CE EMF ASSESSMENT REPORT

according to

EN 62311 (2008-11)

Equipment	:	**Rugged Tablet Computer**
Model No.	:	**RTC-1000xx (xx is D1 or blank)**
Brand Name	:	**AAEON**
Filing Type	:	**New Application**
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
Received Date	:	Oct. 23, 2009
Final Test Date	:	Oct. 30, 2009

Statement

Test result included in this report is only for the 802.11b/g part of the product.

The assessment result in this report refers exclusively to the presented assessment model / sample.

Without written approval of SPORTON International Inc., the assessment report shall not be reproduced except in full. The assessment result shown in this report were made in accordance with the procedures and found in compliance with EN 62311 (2008-11). Sporton International as requested by the applicant to evaluate the human exposure to electromagnetic fields (EMF) essential requirements of the product sample received on Oct. 23, 2009 would like to declare that this sample has been evaluated and found to be in compliance with this standard(s)

2011. 1. 20

Wayne Hsu / Vice Manager

Table of Contents

1 GENERAL INFORMATION.....1
1.1 Basic Restrictions 1
1.2 Reference Levels 1
1.3 Compliance criteria 1
2 ASSESSMENT RESULT 2
2.1 Reference Levels Limits 2
2.2 Comply With the Reference Levels 2

History of This Assessment Report

Original Issue Date: Jan. 12, 2011
Report No.: EA0N1818AC

Attachment No.	Issue Date	Description

1 GENERAL INFORMATION

1.1 Basic Restrictions

Restrictions on exposure to time-varying electric, magnetic, and electromagnetic fields which are based directly on established health effects and biological considerations are termed “basic restrictions”. Depending upon the frequency of the field, the physical quantities used to specify these restrictions are specific absorption rate (SAR), and power density.

1.2 Reference Levels

Levels of field strength and currents that can be compared with corresponding measured or calculated values. The reference levels are derived from the basic restrictions using worst-case assumptions about exposure. If the reference levels are met, then the basic restrictions will be complied with, but if the reference levels are exceeded, it does not necessarily mean that the basic restrictions will not be met.

1.3 Compliance criteria

If the average power emitted by apparatus operating in the frequency range 10 MHz - 300 GHz is less than or equal to 20 mW and the transmitting peak power is less than 20 W then the apparatus is deemed to comply with the basic restrictions without testing. The evaluation of power is only valid if it is made with an uncertainty of less than 30 %.

2 ASSESSMENT RESULT

2.1 Reference Levels Limits

According to Council Recommendation 99/519/EC Annex III
Reference levels limits for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density Seq (W/m2)
0-1 Hz	-	3.2×10^4	4×10^4	-
1-8 Hz	10000	$3.2\times10^4/f^2$	$4\times10^4/f^2$	-
8-25 Hz	10000	4000/f	5000/f	-
0.025-0.8 kHz	250/f	4/f	5/f	-
0.8-3 kHz	250/f	5	6.25	-
3-150 kHz	87	5	6.25	-
0.15-1 MHz	87	0.73/f	0.92/f	-
1-10 MHz	$87/f^{1/2}$	0.73/f	0.92/f	-
10-400 MHz	28	0.073	0.095	2
400-2000 MHz	$1.375\ f^{1/2}$	$0.0037\ f^{1/2}$	$0.0046\ f^{1/2}$	f/200
2-300 GHz	61	0.16	0.2	**10**

2.2 Comply With the Reference Levels

The field calculation does not take into account the antenna size, which is assumed to be a point source. An ideal isotropic antenna is used as a reference to compare the performance of practical antennas: P watts is radiated, from a point, uniformly over the surface of sphere of radius r. The POINTING VECTOR gives the power density:
Assumed use distance from EUT to Human, 20 cm separation distance warning is required. In this section, the power density at 20 cm cm location is calculated to examine if it is lower than the limit.

E (V/m) = $\frac{\sqrt{30\times P\times G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = $\frac{30\times P\times G}{377\times d^2}$

IEEE 802.11 b/g

Test Mode	Test Freq (MHz)	λ (cm)	Minimum Far-Field Region (λ/4) cm	Min. User Distance (cm)	EIRP Power (dBm)	Power (mW)	Power Density (W/m2)
2.4G	2500	12	3.00	20.00	15.82	38.1944	**0.0760**

Note:
For more detailed e.i.r.p. power measurement description, please refer the **ER0N1818AC** radio test report. This EUT is deemed to comply with the reference levels are met, then the basic restrictions will be complied with human exposure limits.