RF Maximum Permissible Exposure Measurement Report

of

E.U.T. : Wireless LAN USB Adapter

FCC ID. : QDWAB009WN200

MODEL : WN-200

for

APPLICANT : AirVast Technology Inc.

ADDRESS : 4F-1, NO. 1, LN. 21, HSIN HUA RD., KUEISHAN INDUSTRIAL PARTK, TOYUAN 330, TAIWAN, R.O.C.

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN

NO. 34, LIN 5, DING FU TSUN, LINKOU HSIANG,

TAIPEI HSIE, TAIWAN, R.O.C.

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Report Number : ET91R-07-072-01

TEST REPORT CERTIFICATION

Applicant	: AirVast Technology Inc. 4F-1, NO. 1, LN. 21, HSIN HUA RD., KUEISHAN INDUSTRIAL PARK, TAOYUAN 330, TAIWAN, R.O.C.
Manufacturer	: AirVast Technology Inc. 4F-1, NO. 1, LN. 21, HSIN HUA RD., KUEISHAN INDUSTRIAL PARK, TAOYUAN 330, TAIWAN, R.O.C.
Description of EUT	:
a) Type of EUT	: Wireless LAN USB Adapter
b) Trade Name	: AirVast
c) Model No.	: WN-200
d) Power Supply	: From Notebook PC
Regulation Applied	: IEEE C95.1-1991, FCC 47 CFR Part 1 and Part 2

I HEREBY CERTIFY THAT: The data shown in this report were made in accordance with the procedures given in IEEE C95.1, and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Note: 1. The result of the testing report relates only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of ETC.

Issued Date : Aug. 09, 2002

Test Engineer : S S Liou
(S. S. Liou)

Approve & Authorized Signer : Will Yauo
Will Yauo, Manager
EMC Detp. II of ELECTRONICS TESTING CENTER, TAIWAN

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : Wireless LAN USB Adapter
b) Trade Name : AirVast
c) Model No. : WN-200
d) Power Supply : From Notebook PC

1.2 Characteristics of Device

Wireless LAN is local area networking without wires, which uses radio frequencies to transmit and receive data between PC's or other network devices. Wireless LAN is able to configure independent networks and infrastructure networks. The former is suitable for small or temporary peer-to-peer configurations, and the later is offering fully distributed data connectivity via micro cells and roaming.

The Wireless LAN USB Adapter designed with a transmitting method of direct sequence spread spectrum is for local area network operation, which operates at 2.4 GHz ISM band and data rate up to 11 Mbps.

1.3 Test Methodology

The Maximum Permissible Exposure (MPE) was performed according to the procedures illustrated in IEEE C95.1-1991.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No.34, Lin 5, Ding Fu Tsun, Linkou Hsiang, Taipei Hsien, Taiwan, R.O.C.
This site has been fully described in a report submitted to the FCC, and accepted in a letter dated Feb. 10, 2000.

2 PROVISIONS APPLICABLE

2.1 Definition

MPE in Occupational / Controlled Environments:

Persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Also apply to a individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potatial for exposure.

MPE in General Population / Uncontrolled Environments:

General population / Uncontrilled exposure apply in situation in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment nay not be fully aware of the potatial for exposure or cannot execise control over their exposure.

2.2 Relative Requirement for Compliance

(1) MPE for Controlled Enviroments

According to section 1.1310 of FCC 47 CFR Part 1, MPE Limits for controlled enviroment are as following:

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
0.3-3.0	614	1.63	*100	6
3-30	1842/f	4.89/f	*900/f^2	6
30-300	61.4	0.163	1.0	6
300-1500	-----	-----	f/300	6
1500-100,000	-----	-----	5.0	6

(2) MPE for Uncontrolled Enviroments

According to section 1.1310 of FCC 47 CFR Part 1, MPE Limits for uncontrolled enviroment are as following:

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
0.3-3.0	614	1.63	*100	30
3-30	1842/f	4.89/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1500	-----	-----	f/1500	30
1500-100,000	-----	-----	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power desity

3. SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured for testing in a typical fashion, as a customer would normally use it. The MPE measurement was performed under the setting of maximum RF transmitting power and maximum transmission data rate of 11 Mbps. And measured on lowest, middle, and highest frequencies to demostrate the whole used band is complied with the requirement. Further, measurement was made on every possible azimuth arround the transmitting structure. Therefore, we can make sure that the MPE testing was performed under the wost case.

3.2 Devices for Tested System

Device	Manufacture	Model	Cable Description
Wireless LAN USB Adapter *	AirVast Technology Inc.	WN-200	----

Remark "*" means device under test.

4 Maximum Permissible Exposure Measurement

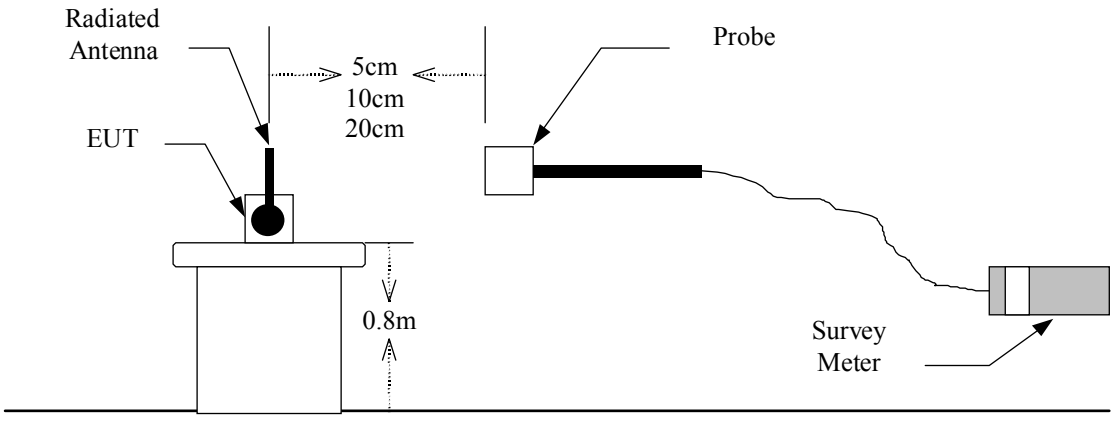
4.1 Applicable Standard

For this intentional radiator is used with any possible people, therefore the **Uncontrolled Enviroment Condition** is applied. And the MPE requirement is as descibed in section 2.2 of this test report.

4.2 Measurement Procedure

(1) Set up the device under test (DUT) as its normal using configuration. Please see figure 1.
(2) Calibrate the probe system so that the meter displays zero, and then power on the DUT.
(3) Scan the antenna of DUT with a proper spacer of 2.5 cm in vertical axis and keep vertical scanning around the antenna, and pick up the maximum data with Max. Hold function.
(4) Repeat step (3) by changing the spacer to 5cm, 10 cm, 15cm and then 20 cm till the field from DUT is too weak to be measured.
(5) Record the maximum value appeared.

Figure 1 : Measurement configuration



4.3 Measurement Instrument

The following instrument are used for radiated emissions measurement :

Equipment	Manufacturer	Model No.	Next Cal. Due
Survey Meter	Narda	8712	Jan. 30, 2003
Probe	Narda	8721D	Jan. 30, 2003

4.4 Power Desity Data

Operation Mode : Maximum Data Transmitting Rate
Transmitting Frequency : 2400 to 2483.5 MHz
Measured Output Peak Power : 13.67dBm@2412MHz; 14.83dBm@2442MHz; 12.00@2462MHz
Test Date : Jul. 23, 2002 Temperature : 25 ℃ Humidity : 70%

Measured Frequency MHz	Measured @ 2.5cm mW/cm^2	Measured @ 5cm mW/cm^2	Measured @ 10cm mW/cm^2	Measured @ 15cm mW/cm^2	Measured @ 20cm mW/cm^2	Probe Factor	Maximum Result @2.5cm mW/ cm^2	MPE Limt mW/cm^2
2412.00	0.3537	0.1050	0.0550	0.0375	0.0287	0.82	0.2900	1.0
2442.00	0.4100	0.1180	0.0681	0.0410	0.0350	0.82	0.3362	1.0
2462.00	0.3670	0.1030	0.0489	0.0362	0.0300	0.82	0.3009	1.0

Note :

1. Remark "---" means that the emission level is too low to be measured (the precise accuracy of the measurement system is 0.01 mW/ cm^2).
2. Value 0.82 is a corrected factor of measurement system.
3. Result = Value Measured X Corrected Factor.
4. The measurement was performed under the condition of fixed the emission frequency to get the most extreme MPE.

4.5 Measurement Setup Photos

Please see Setup Photos in Exhibit F.