SPORTON International Inc.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

Certificate No.: CB10303021

Maximum Permissible Exposure

Applicant's company	**AirTight Networks, Inc.**
Applicant Address	339 N. Bernardo Avenue, Suite #200, Mountain View, California, USA
FCC ID	**TOR-C75**
Manufacturer's company	**DONG GUAN G-COM COMPUTER CO., LTD**
Manufacturer Address	1st Row, Yin Shan Road, Yin Hwu Industrial Area, Qingxi Town, DongGuan City, GuangDong, China

Product Name	AirTight Access Point
Brand Name	AirTight
Model Name	C-75, C-75-E
Ref. Standard(s)	47 CFR FCC Part 2 Subpart J, section 2.1091
EUT Freq. Range	2400 ~ 2483.5MHz / 5150 ~ 5250MHz / 5725 ~ 5850MHz
Received Date	Jan. 10, 2014

Sam Chen
SPORTON INTERNATIONAL INC.

Table of Contents

1. TABLE FOR MULTIPLE LIST 1
2. MAXIMUM PERMISSIBLE EXPOSURE 2
2.1. Applicable Standard 2
2.2. MPE Calculation Method 2
2.3. Calculated Result and Limit 3

History of This Assessment Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA411023	Rev. 01	Initial issue of report	Mar. 13, 2014

1. TABLE FOR MULTIPLE LIST

The EUT has two model names which are identical to each other in all aspects except for the following table:

Brand Name	Model Name	Antenna	Description
AirTight	C-75	Internal Ant.	EUT 1
	C-75-E	External Ant.	EUT 2

2. MAXIMUM PERMISSIBLE EXPOSURE

2.1. Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|², |H|² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|², |H|² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2. MPE Calculation Method

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

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Calculated Result and Limit

EUT 1 (Model No. C-75)

For 5GHz UNII Band:

Antenna Type : PCB Antenna

Max Conducted Power for IEEE 802.11a: 16.48dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
6.50	4.4668	16.4800	44.4631	0.039532	1	Complies

For 5GHz ISM Band:

Antenna Type : PCB Antenna

Max Conducted Power for IEEE 802.11ac MCS0, Nss1 VHT20: 26.85dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
6.60	4.5709	26.8526	484.4638	0.440770	1	Complies

For 2.4GHz Band:

Antenna Type : PCB Antenna

Max Conducted Power for IEEE 802.11n MCS0 HT20: 24.98dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
6.00	3.9811	24.9846	315.1112	0.249697	1	Complies

CONCULSION:

Both of the WLAN 2.4GHz Band and WLAN 5GHz Band can transmit simultaneously, the formula of calculatedthe MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ...etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is 0.249697 / 1 + 0.440770 / 1 = 0.690467, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

EUT 2 (Model No. C-75-E)

For 5GHz UNII Band:

Antenna Type : Dipole Antenna

Max Conducted Power for IEEE 802.11a: 16.82dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
5.00	3.1623	16.8200	48.0839	0.030266	1	Complies

For 5GHz ISM Band:

Antenna Type : Dipole Antenna

Max Conducted Power for IEEE 802.11ac MCS0, Nss1 VHT40: 25.50dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
5.00	3.1623	25.5045	355.1776	0.223561	1	Complies

For 2.4GHz Band:

Antenna Type : Dipole Antenna

Max Conducted Power for IEEE 802.11n MCS0 HT20: 24.30dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Average Output Power (dBm)	Average Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
5.00	3.1623	24.2974	268.9929	0.169313	1	Complies

CONCULSION:

Both of the WLAN 2.4GHz Band and WLAN 5GHz Band can transmit simultaneously, the formula of calculatedthe MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ...etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is 0.169313 / 1 + 0.223561 / 1 = 0.392874, which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.