

## RF Exposure Report

**Report No.:** SA150714C42

**FCC ID:** PD5-WAP150

**Test Model:** WAP150

**Received Date:** Jul. 15, 2015

**Test Date:** Jul. 15 ~ Aug. 12, 2015

**Issued Date:** Aug. 19, 2015

**Applicant:** Delta Networks, Inc.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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### Release Control Record

Issue No.	Description	Date Issued
SA150714C42	Original release.	Aug. 19, 2015



**1 Certificate of Conformity**

**Product:** Wireless-AC/N Dual Radio Access Point with PoE  
**Brand:** Cisco  
**Test Model:** WAP150  
**Sample Status:** Engineering sample  
**Applicant:** Delta Networks, Inc.  
**Test Date:** Jul. 15 ~ Aug. 12, 2015  
**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D03  
IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Aug. 19, 2015  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Aug. 19, 2015  
Ken Liu / Senior Manager

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

R = distance between observation point and center of the radiator in cm

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

### 3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	26.37	6.38	20	0.375	1
5180-5240	13.49	6.47	20	0.020	1
5260-5320	18.92	6.70	20	0.073	1
5500-5700	20.04	6.72	20	0.094	1
5745-5825	19.10	6.72	20	0.076	1

Note:

2412-2462MHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.38\text{dBi}$

5180-5240MHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.47\text{dBi}$

5260-5320MHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.70\text{dBi}$

5500-5700MHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi}$

5745-5825MHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi}$

#### Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G =  $0.375 + 0.094 = 0.469$

Therefore, the maximum calculation of this situation is 0.469, which is less than the "1" limit.

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