

## RF Exposure Report

**Report No.:** SA150318C33E

**FCC ID:** 2AE3WEXTWAP100AC

**Test Model:** WAP 100AC

**Received Date:** Mar. 18, 2015

**Test Date:** Mar. 19 ~ Apr. 07, 2015

**Issued Date:** Apr. 14, 2015

**Applicant:** Extron Electronics

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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  
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### Release Control Record

Issue No.	Description	Date Issued
SA150318C33E	Original release.	Jun. 20, 2016

## 1 Certificate of Conformity

**Product:** 2.4GHz b/g/n, 5GHz ac/a/n Indoor AP

**Brand:** Extron

**Test Model:** WAP 100AC

**Sample Status:** Production sample

**Applicant:** Extron Electronics

**Test Date:** Mar. 19 ~ Apr. 07, 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:** Jun. 20, 2016

Pettie Chen / Senior Specialist

**Approved by :**  \_\_\_\_\_, **Date:** Jun. 20, 2016

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

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = 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 25cm 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	28.92	6.35	25	0.428	1
5180-5240	28.36	7.78	25	0.523	1
5745-5825	25.53	8.47	25	0.320	1

NOTE:

2.4GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.35 \text{ dBi}$

5.0GHz: For U-NII-1 Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 7.78 \text{ dBi}$

For U-NII-3 Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.47 \text{ dBi}$

#### Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.428 + 0.523 = 0.952

Therefore the maximum calculations of above situations are less than the "1" limit.

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