

## RF Exposure Report

**Report No.:** SA140311C18B

**FCC ID:** A8J-ENH900EXTA

**Test Model:** ENH900EXT

**Received Date:** Jan. 13, 2016

**Test Date:** Jan. 20 ~ Feb. 19, 2016

**Issued Date:** Feb. 24, 2016

**Applicant:** EnGenius Technologies

**Address:** 1580 Scenic Avenue, Costa Mesa, CA92626

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

**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
SA140311C18B	Original release	Feb. 24, 2016



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## 1 Certificate of Conformity

**Product:** Wireless Access Point

**Brand:** EnGenius

**Test Model:** ENH900EXT

**Sample Status:** Engineering Sample

**Applicant:** EnGenius Technologies

**Test Date:** Jan. 20 ~ Feb. 19, 2016

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-2005

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 :**

Polly Chien / Specialist

**Date:**

Feb. 24, 2016

**Approved by :**

Ken Liu / Senior Manager

**Date:**

Feb. 24, 2016

## 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

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

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 38cm 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	29.12	9.77	38	0.427	1
5180-5240	17.93	11.77	38	0.051	1
5745-5825	27.86	11.77	38	0.506	1

Note:

2.4GHz: Directional gain = 5dBi +10log(3) = 9.77dBi

5.0GHz: Directional gain = 7dBi +10log(3) = 11.77dBi

### CONCLUSION:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$$WLAN\ 2.4G + WLAN\ 5.0G = 0.427 + 0.506 = 0.933$$

Therefore, the maximum calculation of this situation is 0.933, which is less than the "1" limit.

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