

## RF Exposure Report

**Report No.:** SA140318C23C

**FCC ID:** A8J-ENH1750EXTA

**Test Model:** ENH1750EXT

**Received Date:** Jan. 14, 2016

**Test Date:** Jan. 30 ~ Feb. 19, 2016

**Issued Date:** Feb. 23, 2016

**Applicant:** EnGenius Technologies

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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
SA140318C23C	Original release.	Feb. 23, 2016

## 1 Certificate of Conformity

**Product:** Wireless Access Point

**Brand:** EnGenius

**Test Model:** ENH1750EXT

**Sample Status:** Engineering sample


**Applicant:** EnGenius Technologies

**Test Date:** Jan. 30 ~ Feb. 19, 2016

**Standard:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 (October 23, 2015)  
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:** Feb. 23, 2016  
Ivy Lin / Specialist

**Approved by :**  , **Date:** Feb. 23, 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 37cm 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	29.88	9.80	37	0.540	1
5180-5240	24.76	11.77	37	0.261	1
5745-5825	27.11	11.77	37	0.449	1

Note:

1. 2.4GHz Band: Directional gain = 5dBi + 10log(3) = 9.80dBi
2. 5GHz Band: Directional gain = 7dBi + 10log(3) = 11.77dBi

#### 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

$$WLAN\ 2.4GHz + WLAN\ 5GHz = 0.540 + 0.449 = 0.989$$

Therefore the maximum calculations of above situation is less than the "1" limit.

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