

## RF Exposure Report

**Report No.:** SA181107C49

**FCC ID:** A8J-ENSTACV2

**Test Model:** EnStationACv2

**Received Date:** Nov. 07, 2018

**Test Date:** Nov. 15 ~ Nov. 27, 2018

**Issued Date:** Dec. 07, 2018

**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.)

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

| Issue No.   | Description      | Date Issued   |
|-------------|------------------|---------------|
| SA181107C49 | Original release | Dec. 07, 2018 |

## 1 Certificate of Conformity

**Product:** Outdoor Long Range Wireless Access Point

**Brand:** EnGenius

**Test Model:** EnStationACv2

**Sample Status:** Engineering sample

**Applicant:** EnGenius Technologies

**Test Date:** Nov. 15 ~ Nov. 27, 2018

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.1-1992

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 RF characteristics under the conditions specified in this report.

**Prepared by :** Celine Chou , **Date:** Dec. 07, 2018  
Celine Chou / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Dec. 07, 2018  
Bruce Chen / Project Engineer

## 2 RF Exposure

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

| Frequency Range<br>(MHz)                              | Electric Field<br>Strength (V/m) | Magnetic Field<br>Strength (A/m) | Power Density<br>(mW/cm <sup>2</sup> ) | Average Time<br>(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> ) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| CDD Mode             |                 |                    |               |                                     |                             |
| 2412-2462            | 15.53           | 3.81               | 20            | 0.017                               | 1                           |
| 5180-5240            | 7.77            | 15.50              | 20            | 0.042                               | 1                           |
| 5745-5825            | 20.49           | 15.50              | 20            | 0.790                               | 1                           |
| Beamforming Mode     |                 |                    |               |                                     |                             |
| 5180-5240            | 4.76            | 15.50              | 20            | 0.021                               | 1                           |
| 5745-5825            | 17.48           | 15.50              | 20            | 0.395                               | 1                           |

Note: 5GHz: Directional gain = 15.5dBi + 10log(2) = 18.51dBi

#### Conclusion:

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

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

CPD = Calculation power density

LPD = Limit of power density

$$2.4G + 5G = 0.017 + 0.790 = 0.807$$

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

---END---