

## RF Exposure Report

**Report No.:** SA170313C12

**FCC ID:** A8J-ENS500AC

**Test Model:** ENS500-AC, EnStation5-AC, ENS500EXT-AC

**Received Date:** Mar. 13, 2017

**Test Date:** Apr. 02 ~ Apr. 19, 2017

**Issued Date:** May 03, 2017

**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
SA170313C12	Original release.	May 03, 2017

## 1 Certificate of Conformity

**Product:** AC867 5GHz Outdoor CPE, AC867 5GHz Wave2 Ultra Long-Range Wireless Outdoor Customer Premises Equipment, AC867 5GHz Outdoor Access Point

**Brand:** EnGenius

**Test Model:** ENS500-AC, EnStation5-AC, ENS500EXT-AC

**Sample Status:** Engineering sample

**Applicant:** EnGenius Technologies

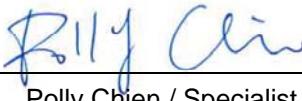
**Test Date:** Apr. 02 ~ Apr. 19, 2017

**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 EMC characteristics under the conditions specified in this report.

**Prepared by :** , **Date:** May 03, 2017

Polly Chien / Specialist

**Approved by :** , **Date:** May 03, 2017

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> )
<b>Test Mode A</b>					
<b>CDD mode</b>					
5180-5240	15.53	16.40	25	0.199	1
5745-5825	22.38	16.40	25	0.961	1
<b>Beamforming mode</b>					
5180-5240	12.52	16.40	25	0.099	1
5745-5825	19.37	16.40	25	0.481	1
<b>Test Mode B</b>					
<b>CDD mode</b>					
5180-5240	6.48	18.36	25	0.039	1
5745-5825	20.53	18.36	25	0.986	1
<b>Beamforming mode</b>					
5180-5240	3.47	18.36	25	0.019	1
5745-5825	17.52	18.36	25	0.493	1
<b>Test Mode C</b>					
<b>CDD mode</b>					
5180-5240	16.56	8.13	25	0.037	1
5745-5825	25.42	8.18	25	0.292	1
<b>Beamforming mode</b>					
5180-5240	13.54	8.13	25	0.019	1
5745-5825	22.41	8.18	25	0.146	1

Note:

**Test Mode A**

5180-5240MHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 16.40\text{dBi}$

5745-5825MHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 16.40\text{dBi}$

**Test Mode B**

5180-5240MHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 18.36\text{dBi}$

5745-5825MHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 18.36\text{dBi}$

**Test Mode C**

5180-5240MHz: Directional gain =  $5.12 + 10 \log (2) = 8.13\text{dBi}$

5745-5825MHz: Directional gain =  $5.17 + 10 \log (2) = 8.18\text{dBi}$

---END---