

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

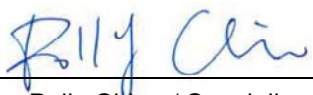
Sample Status: Engineering sample


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 ²) | 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/cm²

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 ²) | Limit (mW/cm ²) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| Test Mode A | | | | | |
| CDD mode | | | | | |
| 5180-5240 | 15.53 | 16.40 | 25 | 0.199 | 1 |
| 5745-5825 | 22.38 | 16.40 | 25 | 0.961 | 1 |
| Beamforming mode | | | | | |
| 5180-5240 | 12.52 | 16.40 | 25 | 0.099 | 1 |
| 5745-5825 | 19.37 | 16.40 | 25 | 0.481 | 1 |
| Test Mode B | | | | | |
| CDD mode | | | | | |
| 5180-5240 | 6.48 | 18.36 | 25 | 0.039 | 1 |
| 5745-5825 | 20.53 | 18.36 | 25 | 0.986 | 1 |
| Beamforming mode | | | | | |
| 5180-5240 | 3.47 | 18.36 | 25 | 0.019 | 1 |
| 5745-5825 | 17.52 | 18.36 | 25 | 0.493 | 1 |
| Test Mode C | | | | | |
| CDD mode | | | | | |
| 5180-5240 | 16.56 | 8.13 | 25 | 0.037 | 1 |
| 5745-5825 | 25.42 | 8.18 | 25 | 0.292 | 1 |
| Beamforming mode | | | | | |
| 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---