

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

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

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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 : Polly Chien, **Date:** May 03, 2017
Polly Chien / Specialist

Approved by : Ken Liu, **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

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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 = $5.17 + 10 \log(2) = 8.18\text{dBi}$

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