

RF Exposure Report

Report No.: SA180730C06

FCC ID: A8J-ENSTA5-ACV2

Test Model: ENS500-ACv2, ENS500EXT-ACv2, EnStation5-ACv2

Series Model: EAS100-14, EAS100EXT, EAS100-19

Received Date: Jul. 30, 2018

Test Date: Aug. 24 ~ Sep. 07, 2018

Issued Date: Sep. 17, 2018

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.)

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



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Release Control Record

Issue No.	Description	Date Issued
SA180730C06	Original release	Sep. 17, 2018

1 Certificate of Conformity

Product: Outdoor Long Range Wireless Access Point

Brand: EnGenius, emplus

Test Model: ENS500-ACv2, ENS500EXT-ACv2, EnStation5-ACv2

Series Model: EAS100-14, EAS100EXT, EAS100-19

Sample Status: Engineering sample

Applicant: EnGenius Technologies

Test Date: Aug. 24 ~ Sep. 07, 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:** Sep. 17, 2018
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Sep. 17, 2018
Bruce Chen / Project Engineer

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)
Patch Ant. for model: ENS500-ACv2 and EAS100-14 (CDD Mode)					
5180-5240	15.23	16.43	25	0.187	1
5745-5825	22.34	16.43	25	0.959	1
Patch Ant. for model: ENS500-ACv2 and EAS100-14 (Beamforming Mode)					
5180-5240	12.22	16.43	25	0.093	1
5745-5825	19.29	16.43	25	0.475	1
Dipole Ant. for model: ENS500EXT-ACv2 and EAS100EXT (CDD Mode)					
5180-5240	16.62	8.18	25	0.038	1
5745-5825	27.16	8.18	25	0.435	1
Dipole Ant. for model: ENS500EXT-ACv2 and EAS100EXT (Beamforming Mode)					
5180-5240	13.54	8.18	25	0.019	1
5745-5825	24.15	8.18	25	0.218	1
Patch Ant. for model: EnStation5-ACv2 and EAS100-19 (CDD Mode)					
5180-5240	5.35	18.51	25	0.031	1
5745-5825	20.40	18.51	25	0.991	1
Patch Ant. for model: EnStation5-ACv2 and EAS100-19 (Beamforming Mode)					
5180-5240	2.34	18.51	25	0.015	1
5745-5825	17.39	18.51	25	0.495	1

Note:

1. Patch Ant. for model: ENS500-ACv2 and EAS100-14 Directional gain = $13.42\text{dBi} + 10\log(2) = 16.43\text{dBi}$
2. Dipole Ant. for model: ENS500EXT-ACv2 and EAS100EXT Directional gain = $5.17\text{dBi} + 10\log(2) = 8.18\text{dBi}$
3. Patch Ant. for model: EnStation5-ACv2 and EAS100-19 Directional gain = $15.50\text{dBi} + 10\log(2) = 18.51\text{dBi}$

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