

RF Exposure Report

Report No.: SA170308C17

FCC ID: A8J-ENS610EXT

Test Model: ENS610EXT

Received Date: Feb. 22, 2017

Test Date: Feb. 22 ~ Apr. 12, 2017

Issued Date: Apr. 17, 2017

Applicant: EnGenius Technologies

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

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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 RF Exposure	5
2.1 Limits for Maximum Permissible Exposure (MPE).....	5
2.2 MPE Calculation Formula	5
2.3 Classification	5
3 Calculation Result of Maximum Conducted Power	6

Release Control Record

Issue No.	Description	Date Issued
SA170308C17	Original release.	Apr. 17, 2017

1 Certificate of Conformity

Product: AC1300 Dual Concurrent Outdoor Access Point

Brand: 

Test Model: ENS610EXT

Sample Status: Engineering sample

Applicant: EnGenius Technologies

Test Date: Feb. 22 ~ Apr. 12, 2017

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D03 (January 17, 2014)
IEEE C95.1

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:** Apr. 17, 2017
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Approved by :  , **Date:** Apr. 17, 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)
CDD mode					
2412-2462	23.36	8.18	25	0.182	1
5180-5240	16.57	8.13	25	0.038	1
5745-5825	24.31	8.18	25	0.226	1
Beamforming mode					
2412-2462	20.35	8.18	25	0.091	1
5180-5240	13.56	8.13	25	0.019	1
5745-5825	21.30	8.18	25	0.113	1

Note:

2.4GHz Band: Directional gain = 5.17dBi + 10log(2) = 8.18dBi

5180-5240MHz: Directional gain = 5.12+10 log (2) = 8.13dBi

5745-5825MHz: Directional gain = 5.17+10 log (2) = 8.18dBi

CONCLUSION:

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

CPD1 / LPD1 + CPD2 / LPD2 +etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G = 0.182 + 0.226 = 0.408

Therefore, the maximum calculation of this situation is 0.408, which is less than the "1" limit.

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