

RF Exposure Report

Report No.: SA160530C24

FCC ID: A8J-ENS620EXT

Test Model: ENS620EXT

Received Date: May 30, 2016

Test Date: Jun. 06 ~ Jul. 11, 2016

Issued Date: Jul. 20, 2016

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 |
|-------------|-------------------|---------------|
| SA160530C24 | Original release. | Jul. 20, 2016 |

1 Certificate of Conformity

Product: AC1300 Dual Concurrent Outdoor Access Point

Brand:  EnGenius®

Test Model: ENS620EXT

Sample Status: Engineering sample

Applicant: EnGenius Technologies

Test Date: Jun. 06 ~ Jul. 11, 2016

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:** Jul. 20, 2016

Pettie Chen / Senior Specialist

Approved by :  , **Date:** Jul. 20, 2016

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 21cm 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 | 25.94 | 8.18 | 21 | 0.466 | 1 |
| 5180-5240 | 16.53 | 8.18 | 21 | 0.053 | 1 |
| 5745-5825 | 26.02 | 8.18 | 21 | 0.475 | 1 |
| Beamforming mode | | | | | |
| 2412-2462 | 24.97 | 8.18 | 21 | 0.373 | 1 |
| 5180-5240 | 13.50 | 8.18 | 21 | 0.027 | 1 |
| 5745-5825 | 22.21 | 8.18 | 21 | 0.197 | 1 |

Note: Directional gain = $5.17\text{dBi} + 10\log(2) = 8.18\text{dBi}$

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 = 0.466 + 0.475 = 0.941

Therefore, the maximum calculation of this situation is 0.941, which is less than the "1" limit.

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