

RF Exposure Report

Report No.: SA170307C24

FCC ID: A8J-EAP1300

Test Model: EAP1300, EAP1300EXT

Received Date: Feb. 17, 2017

Test Date: Feb. 17 ~ Apr. 18, 2017

Issued Date: Apr. 20, 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
SA170307C24	Original release.	Apr. 20, 2017

1 Certificate of Conformity

Product: Dual Band Indoor Access Point

Brand: EnGenius

Test Model: EAP1300, EAP1300EXT

Sample Status: Engineering sample

Applicant: EnGenius Technologies

Test Date: Feb. 17 ~ Apr. 18, 2017

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

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. 20, 2017

Suntee Liu / Specialist

Approved by :



Date:

Apr. 20, 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

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

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 20cm 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					
WLAN 2412~2462	24.60	8.68	20	0.423	1
WLAN 5180~5240	24.36	8.01	20	0.343	1
WLAN 5745~5825	25.05	8.01	20	0.402	1
Beamforming Mode					
WLAN 2412~2462	21.03	8.68	20	0.186	1
WLAN 5180~5240	20.73	8.01	20	0.149	1
WLAN 5745~5825	22.04	8.01	20	0.201	1

Note:

2.4GHz: Max. directional gain = 5.67dBi + 10log(2) = 8.68dBi

5GHz: Max. directional gain = 5dBi + 10log(2) = 8.01dBi

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.423 + 0.402 = 0.825 < 1

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