RF Exposure Report

Report No.:	SA181129C36
FCC ID:	A8J-EWS385AP
Test Model:	EWS385AP
Series Model:	EAP2250, ECW125
Received Date:	Nov. 29, 2018
Test Date:	Dec. 19 ~ Dec. 28, 2018
Issued Date:	Jan. 07, 2019
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.)
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
SA181129C36	Original release	Jan. 07, 2019

1 Certificate of Conformity

Product:	AC2200 Tri Band Indoor Ceiling Mount Access Point
Brand:	EnGenius
Test Model:	EWS385AP
Series Model:	EAP2250, ECW125
Sample Status:	Engineering sample
Applicant:	EnGenius Technologies
Test Date:	Dec. 19 ~ Dec. 28, 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:** Jan. 07, 2019

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Jan. 07, 2019

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

$Pd = (Pout*G) / (4*pi*r^2)$
where
Pd = power density in mW/cm^2
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 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					
2412-2462	23.44	7.63	20	0.255	1
5180-5240	22.50	8.95	20	0.278	1
5745-5825	23.30	9.00	20	0.338	1
Beamforming Mode					
2412-2462	19.67	7.63	20	0.107	1
5180-5240	19.49	8.95	20	0.139	1
5745-5825	20.29	9.00	20	0.169	1

Note:

2412-2462MHz: Directional gain = 4.62dBi + 10log(2) = 7.63dBi

5180-5240MHz: Directional gain = 5.94dBi + 10log(2) = 8.95dBi

5745-5825MHz: Directional gain = 5.99dBi + 10log(2) = 9.00dBi

Conclusion:

WLAN 2.4GHz (Radio 1) & WLAN 5GHz (Radio 2) & WLAN 5GHz (Radio 3) 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 2.4GHz (Radio 1) + WLAN 5GHz (Radio 3) + WLAN 5GHz (Radio 2) = 0.255 / 1 + 0.278 / 1 + 0.338 / 1 = 0.871

Therefore the maximum calculations of above situations are less than the “1” limit.

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