

RF EXPOSURE REPORT

REPORT NO.: SA140318C23

MODEL NO.: ENH1750EXT

FCC ID: A8J-ENH1750EXT

RECEIVED: Sep. 03, 2013

TESTED: Sep. 06, 2013 ~ Mar. 25, 2014

ISSUED: Apr. 16, 2014

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. CERTIFICATION.....	4
2. RF EXPOSURE	5
2.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)	5
2.2 MPE CALCULATION FORMULA.....	5
2.3 CLASSIFICATION	5
2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER	6



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140318C23	Original release	Apr. 16, 2014



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1. CERTIFICATION

PRODUCT: Wireless Access Point
MODEL NO.: ENH1750EXT
BRAND: EnGenius
APPLICANT: EnGenius Technologies
TESTED: Sep. 06, 2013 ~ Mar. 25, 2014
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (model: ENH1750EXT) 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.

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Ivy Lin / Specialist

APPROVED BY : Ken Liu , **DATE :** Apr. 16, 2014
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 41cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 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)
2412-2462	29.88	9.80	41	0.440	1
5745-5825	28.68	11.77	41	0.525	1

NOTE:

- 2.4GHz Band: Directional gain = 5dBi + 10log(3) = 9.80dBi
- 5GHz Band: Directional gain = 7dBi + 10log(3) = 11.77dBi

CONCLUSION:

Both of the WLAN 2.4G & WLAN 5.0G can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$$1. \text{ WLAN 2.4G} + \text{WLAN 5.0G} = 0.440 + 0.525 = 0.965 < 1$$

Therefore, the maximum calculation of this situation is 0.965, which is less than the "1" limit.

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