RF EXPOSURE REPORT

REPORT NO.: SA130314C08
MODEL NO.: ESR900, ESR1200, ESR1750
FCC ID: A8JESR900
RECEIVED: Mar. 14, 2013
TESTED: Mar. 22 ~ Apr. 12, 2013
ISSUED: Apr. 24, 2013

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, 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 Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

This report should not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

TABLE OF CONTENTS

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130314C08	Original release	Apr. 24, 2013

1. CERTIFICATION

PRODUCT:	Wireless Device
MODEL NO.:	ESR900, ESR1200, ESR1750
BRAND:	EnGenius
APPLICANT:	EnGenius Technologies
TESTED:	Mar. 22 ~ Apr. 12, 2013
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: ESR900) 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 : Celine Chou **, DATE :** Apr. 24, 2013

Celine Chou / Specialist

APPROVED BY : Ken Liu **, DATE :** Apr. 24, 2013

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/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 33cm 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)	Conducted power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412~2462	29.45	7.22	33	0.339	1
5180~5240	16.06	10.28	33	0.031	1
5745~5825	29.21	10.28	33	0.650	1

Note:
2.4GHz: Directional gain = 2.45dBi + 10log(3) = 7.22dBi
5.0GHz: Directional gain = 5.51dBi + 10log(3) = 10.28dBi

CONCULSION:

Both of the WLAN 2.4G & 5.0G 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

2.4G + 5G combo Module: WLAN 2.4G + WLAN 5.0G = 0.339 + 0.650 = 0.989

Therefore, the maximum calculation of this situation is 0.939, which is less than the “1” limit.