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# RF EXPOSURE REPORT

**REPORT NO.:** SA131230C34  
**MODEL NO.:** ESR350, EIR1500  
**FCC ID:** A8J-ESR350  
**RECEIVED:** Dec. 30, 2013  
**TESTED:** Jan. 16 ~ Jan. 17, 2014  
**ISSUED:** Feb. 10, 2014

**APPLICANT:** EnGenius Technologies

**ADDRESS:** 1580 Scenic Avenue, Costa Mesa, CA92626

**ISSUED BY:** Bureau Veritas Consumer Products Services  
(H.K.) Ltd., Taoyuan Branch

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA131230C34	Original release	Feb. 10, 2014



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## 1. CERTIFICATION

**PRODUCT:** Wireless N300 Router  
**MODEL NO.:** ESR350, EIR1500  
**BRAND:** EnGenius  
**APPLICANT:** EnGenius Technologies  
**TESTED:** Jan. 16 ~ Jan. 17, 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: ESR350) 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** : Feb. 10, 2014  
Celine Chou / Specialist

**APPROVED BY** : Ken Liu , **DATE** : Feb. 10, 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 <sup>2</sup> )	AVERAGE TIME (minutes)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
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/cm<sup>2</sup>

$P_{out}$  = 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**.

## 2.4 Calculation result of maximum conducted power

MODULATION MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
802.11b	20.50	2	20	0.035	1
802.11g	26.39	2	20	0.137	1
802.11n (20MHz)	27.54	2	20	0.179	1
802.11n (40MHz)	27.56	2	20	0.180	1

**NOTE:**

- 802.11n transmit signals are completely uncorrelated.
- 802.11b, g:** Gain = 2dBi.  
**802.11n:** Directional gain = 2dBi+10 log (2/2) = 2dBi.