

## RF Exposure Report

**Report No.:** SA151109C01

**FCC ID:** SLY-WX1O33

**Test Model:** WX-1-O

**Received Date:** Nov. 09, 2015

**Test Date:** Nov. 16 ~ Dec. 07, 2015

**Issued Date:** Dec. 09, 2015

**Applicant:** Pakedge Device and Software Inc.

**Address:** 3847 Breakwater Ave., Hayward, California, United States, 94545

**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

**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   |
|-------------|-------------------|---------------|
| SA151109C01 | Original release. | Dec. 09, 2015 |



# 1 Certificate of Conformity

**Product:** 802.11ac Dual Band Access Point  
**Brand:** PAKEDGE  
**Test Model:** WX-1-O  
**Sample Status:** Engineering sample  
**Applicant:** Pakedge Device and Software Inc.  
**Test Date:** Nov. 16 ~ Dec. 07, 2015  
**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 (October 23, 2015)  
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 :** Polly Chen , **Date:** Dec. 09, 2015  
Polly Chen / Specialist

**Approved by :** Ken Liu , **Date:** Dec. 09, 2015  
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) |
|---|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| 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<sup>2</sup>

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 22cm 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 <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412-2462            | 27.46           | 8.532              | 22            | 0.653                               | 1                           |
| 5180-5240            | 15.00           | 10.418             | 22            | 0.057                               | 1                           |
| 5745-5825            | 22.01           | 10.970             | 22            | 0.327                               | 1                           |

Note:

2.4GHz: Directional gain =  $3.762\text{dBi} + 10\log(3) = 8.532$

5GHz:

5180 ~ 5240MHz: Directional gain =  $5.648\text{dBi} + 10\log(3) = 10.418\text{dBi}$

5745 ~ 5825MHz: Directional gain =  $6.200\text{dBi} + 10\log(3) = 10.970\text{dBi}$

#### CONCLUSION:

Both of the WLAN 2.4G & WLAN 5G 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

$WLAN\ 2.4G + WLAN\ 5.0G = 0.653 + 0.327 = 0.980$

Therefore, the maximum calculation of this situation is 0.980, which is less than the "1" limit.

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