

## RF Exposure Report

**Report No.:** SA160606E02

**FCC ID:** W59XWOBAP1

**Test Model:** XWO-BAP1

**Received Date:** June 06, 2016

**Test Date:** June 29 to 30, 2016

**Issued Date:** July 26, 2016

**Applicant:** Luxul Wireless

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Hsin Chu Laboratory

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### Release Control Record

Issue No.	Description	Date Issued
SA160606E02	Original release.	July 26, 2016

## 1 Certificate of Conformity

**Product:** High Power AC1200 Dual-Band Outdoor Bridging AP

**Brand:** Luxul

**Test Model:** XWO-BAP1

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** Luxul Wireless


**Test Date:** June 29 to 30, 2016


**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 EMC characteristics under the conditions specified in this report.

**Prepared by :**  \_\_\_\_\_, **Date:** July 26, 2016  
Wendy Wu / Specialist

**Approved by :**  \_\_\_\_\_, **Date:** July 26, 2016  
May Chen / 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 40cm away from the body of the user.

So, this device is classified as **Mobile Device**.

### 2.4 Antenna Gain

2.4GHz				
Transmitter Circuit	Antenna Gain(dBi)	Frequency range (MHz ~ MHz)	Antenna Type	Connector Type
Chain (0)	6	2400~2483.5	Patch	NA
Chain (1)	6			
5GHz				
Transmitter Circuit	Antenna Gain(dBi)	Frequency range (MHz ~ MHz)	Antenna Type	Connector Type
Chain (0)	10	5150~5875	Patch	NA
Chain (1)	10			

## 2.5 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	747.622	9.01	40	0.29604	1
5180-5240	97.338	13.01	40	0.09682	1
5745-5825	395.908	13.01	40	0.39379	1

**NOTE:**

2.4GHz: Directional gain = 6dBi + 10log(2) = 9.01dBi

5GHz: Directional gain = 10dBi + 10log(2) = 13.01dBi

**Conclusion:**

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 2.4GHz + WLAN 5GHz =  $0.29604 / 1 + 0.39379 / 1 = 0.68983$

**Therefore the maximum calculations of above situations are less than the "1" limit.**

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