

## RF Exposure Report

**Report No.:** SA160629E03

**FCC ID:** W59XWR3100

**Test Model:** XWR-3100

**Received Date:** June 29, 2016

**Test Date:** July 07 to 14, 2016

**Issued Date:** Aug. 09, 2016

**Applicant:** Luxul Wireless

**Address:** 14203 Minuteman Dr Suite 201 Draper UT 84020 USA

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

**Lab Address:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

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### Release Control Record

Issue No.	Description	Date Issued
SA160629E03	Original release.	Aug. 09, 2016

## 1 Certificate of Conformity

**Product:** Dual-Band AC3100 Gigabit Router

**Brand:** Luxul

**Test Model:** XWR-3100

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** Luxul Wireless

**Test Date:** July 07 to 14, 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 :**

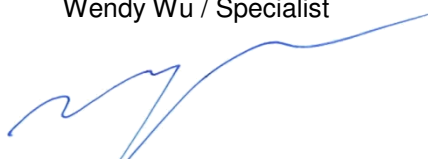


**Date:**

Aug. 09, 2016

Wendy Wu / Specialist

**Approved by :**



**Date:**

Aug. 09, 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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

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 38cm away from the body of the user.

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

### 2.4 Antenna Gain

Antenna No	Brand	Model	Antenna Net Gain (dBi)	Frequency range (MHz ~ MHz)	Antenna Type	Connector Type	Cable Length	Cable Loss
1	NA	290-20268	3.88	2.4~2.4835	Dipole	R-SMA	200mm	0.53
			3.62	5.15~5.25				0.83
			2.9	5.25~5.35				0.83
			2.34	5.47~5.850				0.83
2	NA	290-20268	3.88	2.4~2.4835	Dipole	R-SMA	200mm	0.53
			3.62	5.15~5.25				0.83
			2.9	5.25~5.35				0.83
			2.34	5.47~5.850				0.83
3	NA	290-20268	3.88	2.4~2.4835	Dipole	R-SMA	200mm	0.53
			3.62	5.15~5.25				0.83
			2.9	5.25~5.35				0.83
			2.34	5.47~5.850				0.83
4	NA	290-20268	3.88	2.4~2.4835	Dipole	R-SMA	200mm	0.53
			3.62	5.15~5.25				0.83
			2.9	5.25~5.35				0.83
			2.34	5.47~5.850				0.83

## 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	920.645	9.9	38	0.49581	1
5180-5240	851.538	9.64	38	0.43194	1
5745-5825	984.837	8.36	38	0.37204	1

NOTE:

2.4GHz: Directional gain = 3.88dBi + 10log(4) = 9.9dBi

5GHz: UNII-1: Directional gain = 3.62dBi + 10log(4) = 9.64dBi

UNII-3: Directional gain = 2.34dBi + 10log(4) = 8.36dBi

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