RF Exposure Report

Report No.:	SA150828E07
FCC ID:	W59XAP1510
Test Model:	XAP-1510
Series Model:	XWS-2510
Received Date:	Aug. 28, 2015
Test Date:	Sep. 09 to 12, 2015
Issued Date:	Sep. 23, 2015
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:	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (3):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA150828E07	Original release.	Sep. 23, 2015

1 Certificate of Conformity

Product:	High Power AC1900 Dual-Band Wireless AP
Brand:	LUXUL
Test Model:	XAP-1510
Series Model:	XWS-2510
Sample Status:	ENGINEERING SAMPLE
Applicant:	Luxul Wireless
Test Date:	Sep. 09 to 12, 2015
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D03 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 : _____ , **Date:** Sep. 23, 2015

Lori Chung / Specialist

Approved by : _____ , **Date:** Sep. 23, 2015

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^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 30cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Brand	Model	Antenna Gain (dBi)	Frequency range (GHz to GHz)	Antenna Type	Connecter Type
Chain (0)	NA	29020222	2.7	2.4-2.4835	PIFA	i-pex(MHF)
			5.2	5.15-5.85		
Chain (1)	NA	29020223	2.7	2.4-2.4835	PIFA	i-pex(MHF)
			5.2	5.15-5.85		
Chain (2)	NA	29020224	2.7	2.4-2.4835	PIFA	i-pex(MHF)
			5.2	5.15-5.85		

4 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	790.746	7.47	30	0.39047	1
5180-5240	471.757	9.97	30	0.41425	1
5745-5825	611.716	9.97	30	0.53715	1

NOTE:
2.4GHz: Directional gain = 2.7dBi + 10log(3) = 7.47dBi
5GHz: Directional gain = 5.2dBi + 10log(3) = 9.97dBi

Conclusion:

Both of the 2.4GHz/5GHz 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

Therefore, the worst-case situation is 0.39047 / 1 + 0.53715 / 1= 0.928, which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.

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