RF Exposure Report

Report No.:	SA160201E01
FCC ID:	W59XAP1410
Test Model:	XAP-1410
Received Date:	Feb. 01, 2016
Test Date:	Feb. 03, 2016
Issued Date:	Feb. 24, 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.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, 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.

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA160201E01	Original release.	Feb. 24, 2016

1 Certificate of Conformity

Product:	High Power AC1200 Dual-Band Wireless AP
Brand:	Luxul
Test Model:	XAP-1410
Sample Status:	ENGINEERING SAMPLE
Applicant:	Luxul Wireless
Test Date:	Feb. 03, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-2005

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:** Feb. 24, 2016

Claire Kuan / Specialist

Approved by : _____ , **Date:** Feb. 24, 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^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 24cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

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

2.4GHz								
Transmitter Circuit	Brand	Model No.	Ant. Gain (dBi) Including cable loss	Frequency range (GHz to GHz)	Antenna Type	Connecter Type	Cable Loss(dB)	Cable Length
Chain (0)	HL	290-20261	4	2.4~2.4835	PIFA	IPEX	NA	43mm
Chain (1)	HL	290-20262	4	2.4~2.4835	PIFA	IPEX	NA	83mm
5GHz								
Transmitter Circuit	Brand	Model No.	Ant. Gain (dBi) Including cable loss	Frequency range (GHz to GHz)	Antenna Type	Connecter Type	Cable Loss(dB)	Cable Length
Chain (0)	HL	290-20263	4.5	5.15~5.85	PIFA	IPEX	NA	142mm
Chain (1)	HL	290-20264	4.5	5.15~5.85	PIFA	IPEX	NA	207mm

3 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	860.191	7.01	24	0.59698	1
5180-5240	396.725	7.51	24	0.30893	1
5745-5825	361.162	7.51	24	0.28123	1

NOTE:
2.4GHz: Directional gain = 4dBi + 10log(2) = 7.01dBi
5GHz: Directional gain = 4.5dBi + 10log(2) = 7.51dBi

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.59698 / 1 + 0.30893 / 1 = 0.90591

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

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