

## RF Exposure Report

**Report No.:** SA131112D04E

**FCC ID:** Q87-LAPN600

**Test Model:** LAPN600

**Received Date:** Jul. 20, 2016

**Test Date:** Jul. 20, 2016

**Issued Date:** Jul. 21, 2016

**Applicant:** Linksys LLC

**Address:** 121 Theory Drive Irvine California 92617 United States

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

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(R.O.C.)



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### Report Issue History Record

Issue No.	Description	Date Issued
SA131112D04	Original	Dec. 16, 2013
SA131112D04B	Upgraded the standard to section 15.407 under new rule for U-NII-1 and U-NII-3 band.	Apr. 7, 2016
SA131112D04E	Upgraded the standard to section 15.407 under new rule (16-24) for U-NII-3 band.	Jul. 21, 2016

### Release Control Record

Issue No.	Description	Date Issued
SA131112D04E	Original release.	Jul. 21, 2016

## 1 Certificate of Conformity

**Product:** Wireless-N600 Dual Band Access Point with PoE

**Brand:** Linksys

**Test Model:** LAPN600

**Sample Status:** Engineering sample

**Applicant:** Linksys LLC

**Test Date:** Jul. 20, 2016

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D03

KDB 447498 D01

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 :**

*Annie Chang*

**, Date:**

Jul. 21, 2016

Annie Chang / Senior Specialist

**Approved by :**

*Rex Lai*

**, Date:**

Jul. 21, 2016

Rex Lai / Assistant 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

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

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 25cm 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 (Original Approved)	28.82	4.81	25	0.2937	1
5180 ~ 5240 (Original Approved)	27.61	6.51	25	0.3288	1
5745 ~ 5825	29.52	6.91	25	0.5596	1

**NOTE:** 1. Directional gain =  $1.8\text{dBi} + 10\log(2) = 4.81\text{dBi}$   
 Directional gain =  $3.5\text{dBi} + 10\log(2) = 6.51\text{dBi}$   
 Directional gain =  $3.9\text{dBi} + 10\log(2) = 6.91\text{dBi}$   
 2. Driver Version: v1.0.14.001

#### CONCLUSION:

Both of the modules can transmit simultaneously, the formula of calculated the MPE is:

$\text{CPD1} / \text{LPD1} + \text{CPD2} / \text{LPD2} + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$\text{WLAN (2.4G)} + \text{WLAN (5.0G BAND 4)} = 0.2937/1 + 0.5596/1 = 0.8533$

**Therefore, the maximum calculation of this situation is 0.8533, which is less than the "1" limit.**

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