

## RF Exposure Report

**Report No.:** SA140220D04D

**FCC ID:** Q87-LAPAC1750

**Test Model:** LAPAC1750

**Received Date:** May 4, 2016

**Test Date:** May 4 ~ 11, 2016

**Issued Date:** May 19, 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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### Report Issue History Record

| Issue No.    | Description  | Date Issued   |
|--------------|--|---------------|
| SA140220D04  | Original   | Apr. 14, 2014 |
| SA140220D04C | Upgraded the standard to section 15.407 under new rule for U-NII-1 and U-NII-3 band.         | Apr. 7, 2016  |
| SA140220D04D | Upgraded the standard to section 15.407 under new rule (16-24) for U-NII-1 and U-NII-3 band. | May 19, 2016  |

### Release Control Record

| Issue No.    | Description       | Date Issued  |
|--------------|-------------------|--------------|
| SA140220D04D | Original release. | May 19, 2016 |

## 1 Certificate of Conformity

**Product:** AC1750 Dual Band Access Point

**Brand:** Linksys

**Test Model:** LAPAC1750

**Sample Status:** Engineering sample

**Applicant:** Linksys LLC

**Test Date:** May 4 ~ 11, 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 :** Celia Chen , **Date:** May 19, 2016  
( Celia Chen / Supervisor )

**Approved by :** Rex Lai , **Date:** May 19, 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

$$Pd = (Pout * G) / (4 * pi * r^2)$$

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 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<br>(Original Approved) | 28.91           | 6.77               | 25            | 0.4709                              | 1                           |
| 5180 ~ 5240                        | 27.63           | 6.77               | 25            | 0.3507                              | 1                           |
| 5745 ~ 5825                        | 29.03           | 6.77               | 25            | 0.4841                              | 1                           |

**NOTE:** 1. Directional gain = 2dBi + 10log(3) = 6.77dBi  
 2. Driver Version: v1.1.00.005

#### CONCLUSION:

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

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

CPD = Calculation power density

LPD = Limit of power density

$$WLAN (2.4G) + WLAN (5.0G) = 0.4709/1 + 0.4841/1 = 0.9550$$

**Therefore, the maximum calculation of this situation is 0.9550, which is less than the "1" limit.**

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