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# RF EXPOSURE REPORT

**REPORT NO.:** SA140220D04

**MODEL NO.:** LAPAC1750

**FCC ID:** Q87-LAPAC1750

**RECEIVED:** Feb. 20, 2014

**TESTED:** Feb. 20 ~ Mar. 24, 2014

**ISSUED:** Apr. 14, 2014

**APPLICANT:** Linksys LLC

**ADDRESS:** 131 Theory Drive Irvine California 92617 United States

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

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan ( R.O.C. )

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## RELEASE CONTROL RECORD

| ISSUE NO.   | REASON FOR CHANGE | DATE ISSUED   |
|-------------|-------------------|---------------|
| SA140220D04 | Original release  | Apr. 14, 2014 |



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## 1. CERTIFICATION

**PRODUCT:** AC1750 Dual Band Access Point  
**MODEL NO.:** LAPAC1750  
**BRAND:** Linksys  
**APPLICANT:** Linksys LLC  
**TESTED:** Feb. 20 ~ Mar. 24, 2014  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
FCC OET Bulletin 65, Supplement C (01-01)  
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:** Apr. 14, 2014  
( Celia Chen / Senior Specialist )

**APPROVED BY :** Rex Lai , **DATE:** Apr. 14, 2014  
( Rex Lai / Assistant Manager )



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## 2. RF EXPOSURE LIMIT

### 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) |
|--|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| <b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b> |                               |                               |                                     |                        |
| 300-1500   | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000   | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

## 3. 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

## 4. 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**.



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## 5. 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          | 28.91           | 6.77               | 25            | 0.4709                              | 1.00                        |
| 5180 ~ 5240          | 15.96           | 6.77               | 25            | 0.0239                              | 1.00                        |
| 5745 ~ 5825          | 28.93           | 6.77               | 25            | 0.4731                              | 1.00                        |

**NOTE:** Directional gain = 2dBi + 10log(3) = 6.77dBi

### 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

1. WLAN (2.4G) + WLAN (5.0G BAND 1) =  $0.4709/1 + 0.0239/1 = 0.4948$

2. WLAN (2.4G) + WLAN (5.0G BAND 4) =  $0.4709/1 + 0.4731/1 = 0.9440$

**Therefore, the maximum calculation of this situation is 0.9440, which is less than the "1" limit.**

**--- END ---**