



# RF EXPOSURE REPORT

**REPORT NO.:** SA131227C19E

**MODEL NO.:** DIR-862L, DIR-866L

**FCC ID:** KA2IR862LA1

**RECEIVED:** Dec. 10, 2013

**TESTED:** Jan. 10 ~ Aug. 08, 2014

**ISSUED:** Aug. 26, 2014

**APPLICANT:** D-Link Corporation

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

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## TABLE OF CONTENTS

RELEASE CONTROL RECORD .....	3
1. CERTIFICATION .....	4
2. RF EXPOSURE.....	5
2.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE).....	5
2.2 MPE CALCULATION FORMULA .....	5
2.3 CLASSIFICATION .....	5
2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER.....	6



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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA131227C19E	Original release.	Aug. 26, 2014

## 1. CERTIFICATION

**PRODUCT:** Wireless AC1600 Dual Band Gigabit Cloud Router, AC1750  
Wi-Fi Router

**MODEL:** DIR-862L, DIR-866L

**BRAND:** D-Link

**APPLICANT:** D-Link Corporation

**TESTED:** Jan. 10 ~ Aug. 08, 2014

**TEST SAMPLE:** ENGINEERING SAMPLE

**STANDARDS:** **FCC Part 2 (Section 2.1091)**  
**KDB 447498 D03**  
**IEEE C95.1**

The above equipment (model: DIR-862L) 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 :** Suntee Liu , **DATE :** Aug. 26, 2014  
Suntee Liu / Specialist

**APPROVED BY :** Ken Liu , **DATE :** Aug. 26, 2014  
Ken Liu / Senior 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)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

## 2.4 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	27.05	4.77	20	0.303	1
5180-5240	25.33	4.77	20	0.204	1
5745-5825	25.09	4.77	20	0.193	1

**Note:** Directional gain = 0dBi + 10log(3) = 4.77dBi

### CONCLUSION:

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 2.4GHz + WLAN 5GHz = 0.303 + 0.204 = 0.507

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

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