

## RF Exposure Report

**Report No.:** SA150825C34

**FCC ID:** KA2WL8710APA1

**Test Model:** DWL-8710AP

**Received Date:** Aug. 25, 2015

**Test Date:** Sep. 25 ~ Oct. 29, 2015

**Issued Date:** Nov. 05, 2015

**Applicant:** D-Link Corporation

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

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### Release Control Record

Issue No.	Description	Date Issued
SA150825C34	Original release	Nov. 05, 2015



# 1 Certificate of Conformity

**Product:** 802.11n/ac Unified Wireless Outdoor Access Point

**Brand:** D-Link

**Test Model:** DWL-8710AP

**Sample Status:** Engineering sample

**Applicant:** D-Link Corporation

**Test Date:** Sep. 25 ~ Oct. 29, 2015

**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 :**                     *Sunt Lee*                     , **Date:**                     Nov. 05, 2015                      
Sunt Lee / Specialist

**Approved by :**                     *Ken Liu*                     , **Date:**                     Nov. 05, 2015                      
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)
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 24cm 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	28.73	7.93	24	0.640	1
5180-5240	20.77	9.93	24	0.162	1
5745-5825	23.77	9.93	24	0.324	1

Note:

2412-2462MHz Directional gain =  $4.92\text{dBi} + 10\log(2) = 7.93\text{dBi}$

5180-5240MHz Directional gain =  $6.92\text{dBi} + 10\log(2) = 9.93\text{dBi}$

5745-5825MHz Directional gain =  $6.92\text{dBi} + 10\log(2) = 9.93\text{dBi}$

#### Conclusion:

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

$\text{WLAN } 2.4\text{GHz} + \text{WLAN } 5\text{GHz} = 0.640 + 0.324 = 0.964$

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

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