

## RF Exposure Report

**Report No.:** SA170801C10

**FCC ID:** KA2WL7620APA1

**Model:** DWL-7620AP

**Received Date:** Aug. 01, 2017

**Test Date:** Aug. 07 ~ Aug. 30, 2017

**Issued Date:** Sep. 12, 2017

**Applicant:** D-Link Corporation

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

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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**Release Control Record**

| Issue No.   | Description      | Date Issued   |
|-------------|------------------|---------------|
| SA170801C10 | Original release | Sep. 12, 2017 |

## 1 Certificate of Conformity

**Product:** Unified AC Tri-band PoE Access Point

**Brand:** D-Link Corporation

**Model:** DWL-7620AP

**Sample Status:** Identical Prototype

**Applicant:** D-Link Corporation

**Test Date:** Aug. 07 ~ Aug. 30, 2017

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D03 (January 17, 2014)  
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 RF characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Sep. 12, 2017  
Petlie Chen / Senior Specialist

**Approved by :**  , **Date:** Sep. 12, 2017  
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

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

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> ) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| CDD Mode             |                 |                    |               |                                     |                             |
| 2412-2462            | 27.20           | 6.26               | 25            | 0.282                               | 1                           |
| 5180-5240            | 28.86           | 7.31               | 25            | 0.527                               | 1                           |
| 5745-5825            | 29.81           | 7.31               | 25            | 0.656                               | 1                           |
| Beamforming Mode     |                 |                    |               |                                     |                             |
| 2412-2462            | 23.88           | 6.26               | 25            | 0.131                               | 1                           |
| 5180-5240            | 24.58           | 7.31               | 25            | 0.197                               | 1                           |
| 5745-5825            | 26.35           | 7.31               | 25            | 0.296                               | 1                           |

Note:

2.4GHz Band: Directional gain = 3.25dBi + 10log(2) = 6.26dBi

5GHz Band: Directional gain = 4.3dBi + 10log (2) = 7.31dBi

#### Conclusion:

2.4GHz & 5GHz Band 1 or 2.4GHz & 5GHz Band 4 can transmit at same time.

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 2.4GHz + WLAN 5GHz Band 1 = 0.282 + 0.527 = 0.809

2. WLAN 2.4GHz + WLAN 5GHz Band 4 = 0.282 + 0.656 = 0.938

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

---END---