RF Exposure Report

Report No.:	SA180424C02
FCC ID:	KA2WL8620APEA1
Model:	DWL-8620APE
Received Date:	Apr. 24, 2018
Test Date:	May 16 ~ Jun. 25, 2018
Issued Date:	Jun. 29, 2018
Applicant:	D-Link Corporation
Address:	17595 Mt. Herrmann, Fountain Valley, California, United States, 92708
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
SA180424C02	Original release.	Jun. 29, 2018

1 Certificate of Conformity

Product: Unified AC Concurrent Dual-Band PoE Access Point

Brand: D-Link Corporation

Model: DWL-8620APE

Sample Status: Engineering sample

Applicant: D-Link Corporation

Test Date: May 16 ~ Jun. 25, 2018

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1-1992

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:** Jun. 29, 2018
Suntee Liu / Specialist

Approved by : _____ , **Date:** Jun. 29, 2018
Bruce Chen / Project Engineer

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^2)	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^2

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 37cm 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^2)	Limit (mW/cm^2)
CDD Mode					
2412-2462	29.54	9.02	37	0.417	1
5180-5240	28.15	10.02	37	0.381	1
5745-5825	29.65	10.02	37	0.539	1
Beamforming Mode					
2412-2462	28.00	3.78	37	0.088	1
5180-5240	26.38	5.77	37	0.095	1
5745-5825	27.88	5.77	37	0.135	1

Note:
1. The above Max Power is tune-up power which client declared.
2. Antenna gain:
CDD Mode:
2.4GHz Band: Directional gain = 3dBi + 10log(4) = 9.02dBi
5GHz Band: Directional gain = 4dBi +10log (4) = 10.02dBi
Beamforming Mode:
2.4GHz Band: Beamforming gain = 3.78dBi
5GHz Band: Beamforming gain = 5.77dBi

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 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4GHz + WLAN 5GHz Band 1 = 0.417 + 0.381 = 0.798
2. WLAN 2.4GHz + WLAN 5GHz Band 4 = 0.417 + 0.539 = 0.956

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

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