RF Exposure Report

Report No.:	SA170801C10B
FCC ID:	KA2WL7620APA1
Model:	DWL-7620AP
Received Date:	Aug. 01, 2017
Test Date:	Aug. 07 ~ Aug. 30, 2017
Issued Date:	Aug. 10, 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.)

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Release Control Record

Issue No.	Description	Date Issued
SA170801C10B	Original release	Aug. 10, 2018

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 : Pettie Chen , **Date:** Aug. 10, 2018

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Aug. 10, 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				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	…	…	f/1500	30
1500-100,000	…	…	1.0	30

f = Frequency in MHz; *Plane-wave equivalent power density

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 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^2)	Limit (mW/cm^2)
CDD Mode					
2412-2462	27.20	6.26	25	0.282	1
5180-5240	28.86	7.31	25	0.527	1
5260-5320	23.99	7.31	25	0.172	1
5500-5720	23.89	7.31	25	0.168	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
5260-5320	20.98	7.31	25	0.086	1
5500-5720	20.88	7.31	25	0.084	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, 2 or 2.4GHz & 5GHz Band 3 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 = 0.282 + 0.527 = 0.809
2. WLAN 2.4GHz + WLAN 5GHz Band 3 = 0.282 + 0.168 = 0.450
3. 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.

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