

RF Exposure Report

Report No.: SA180424C18 R2

FCC ID: KA2AP1620B1

Model: DAP-1620

Series Model: DRA-1360

Received Date: Sep. 11, 2017

Test Date: Sep. 15, 2017 ~ May 18, 2018

Issued Date: Oct. 12, 2018

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
SA180424C18	Original release	May 24, 2018
SA180424C18 R1	Added one model and revised product name	Sep. 25, 2018
SA180424C18 R2	Added remark on page 6	Oct. 12, 2018

1 Certificate of Conformity

Product: AC1300 Wi-Fi Range Extender

Brand: D-Link Corporation

Model: DAP-1620

Series Model: DRA-1360

Sample Status: Engineering sample

Applicant: D-Link Corporation

Test Date: Sep. 15, 2017 ~ May 18, 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.

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Approved by : Bruce Chen , **Date:** Oct. 12, 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

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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**.

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)
2412-2462	24.48	4.01	20	0.141	1
CDD Mode					
5180-5240	24.93	5.01	20	0.196	1
5745-5825	25.38	5.01	20	0.218	1
Beamforming Mode					
5180-5240	21.92	5.01	20	0.098	1
5745-5825	22.37	5.01	20	0.109	1

Remark: The above Max power is tune-up power.

Note:

2.4GHz Band: Directional gain = 1dBi +10log(2) = 4.01dBi

5GHz Band: Directional gain = 2dBi +10log(2) = 5.01dBi

Conclusion:

The WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 +etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WALN 2.4GHz + WALN 5GHz = 0.141 + 0.218 = 0.359

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

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