

## RF Exposure Report

**Report No.:** SA191203C34

**FCC ID:** KA2AP1755A1

**Original FCC ID:** KA2AP1955A1

**Test Model:** DAP-1750

**Series Model:** DAP-1755

**Received Date:** Dec. 04, 2019

**Test Date:** Jan. 04 ~ Jan. 20, 2020

**Issued Date:** Jan. 21, 2020

**Applicant:** D-Link Corporation

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

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

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA191203C34	Original release	Jan. 21, 2020

## 1 Certificate of Conformity

**Product:** AC1750 High Performance Mesh Wi-Fi Range Extender,  
AC1750 Gigabit Dualband 3\*3 11AC MU-MIMO Wi-Fi Range Extender

**Brand:** D-Link

**Test Model:** DAP-1750

**Series Model:** DAP-1755

**Sample Status:** Engineering sample

**Applicant:** D-Link Corporation

**Test Date:** Jan. 04 ~ Jan. 20, 2020

**Standards:** FCC Part 2 (Section 2.1091)

**References Test** KDB 447498 D01 General RF Exposure Guidance v06

**Guidance:** IEEE C95.3 -2002

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:** Jan. 21, 2020  
Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Jan. 21, 2020  
Bruce Chen / Senior 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 <sup>2</sup> )	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 <sup>2</sup> )*	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/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 27cm 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	28.50	7.42	27	0.427	1
5180-5240	22.42	9.07	27	0.154	1
5745-5825	27.63	9.07	27	0.511	1
Beamforming Mode					
2412-2462	26.21	7.42	27	0.252	1
5180-5240	22.42	9.07	27	0.154	1
5745-5825	26.63	9.07	27	0.406	1

\*Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Note:

1. Directional gain:

2.4GHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^{2/3}] = 7.42\text{dBi}$

5.0GHz Band: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^{2/3}] = 9.07\text{dBi}$

2. The above Max Power is Tune-up Power which client declared.

#### 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 =  $0.427 / 1 + 0.154 / 1 = 0.580$

2. WLAN 2.4GHz + WLAN 5GHz Band 4 =  $0.427 / 1 + 0.511 / 1 = 0.937$

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

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