

RF Exposure Report

Report No.: SA190412C01B

FCC ID: KA2BA2720PA1

Original FCC ID: KA2WL7620APA1

Test Model: DBA-2720P

Received Date: Nov. 11, 2019

Test Date: Dec. 03, 2019 ~ Jan. 07, 2020

Issued Date: Feb. 21, 2020

Applicant: D-Link Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SA190412C01B	Original release	Feb. 21, 2020

1 Certificate of Conformity

Product: Business Cloud Access Point
/ Nuclias Cloud-Managed AC2200 Wave 2 Access Point

Brand: D-Link Corporation

Model: DBA-2720P

Sample Status: Identical Prototype

Applicant: D-Link Corporation

Test Date: Dec. 03, 2019 ~ Jan. 07, 2020

Standards: FCC Part 2 (Section 2.1091)
IEEE C95.3 -2002

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

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:** Feb. 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 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 24cm 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	26.79	6.26	24	0.279	1
5180-5240	28.60	7.31	24	0.539	1
5260-5320	23.65	7.31	24	0.172	1
5500-5720	23.50	7.31	24	0.166	1
5745-5825	29.62	7.31	24	0.681	1

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

Note:

2.4GHz Band: Directional gain = $3.25\text{dBi} + 10\log(2) = 6.26\text{dBi}$

5GHz Band: Directional gain = $4.3\text{dBi} + 10\log(2) = 7.31\text{dBi}$

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:

$\text{CPD1} / \text{LPD1} + \text{CPD2} / \text{LPD2} + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4GHz + WLAN 5GHz Band 1 = $0.279 + 0.539 = 0.818$

2. WLAN 2.4GHz + WLAN 5GHz Band 3 = $0.279 + 0.166 = 0.445$

3. WLAN 2.4GHz + WLAN 5GHz Band 4 = $0.279 + 0.681 = 0.960$

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

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