RF Exposure Report

Report No.:	SA190726C11
FCC ID:	KA2BA2520PA1
Model:	DBA-2520P
Received Date:	Jun. 28, 2019
Test Date:	Jul. 11 ~ Aug. 01, 2019
Issued Date:	Aug. 06, 2019
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 Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
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
SA190726C11	Original release	Aug. 06, 2019

1 Certificate of Conformity

Product: Nuclias Cloud-Managed AC1900 Wave 2 Access Point

Brand: D-Link Corporation

Model: DBA-2520P

Sample Status: Engineering sample

Applicant: D-Link Corporation

Test Date: Jul. 11 ~ Aug. 01, 2019

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06
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 : _____ , **Date:** Aug. 06, 2019
Polly Chien / Specialist

Approved by : _____ , **Date:** Aug. 06, 2019
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				
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 30cm 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	27.69	7.77	30	0.311	1
5180-5240	27.68	8.77	30	0.390	1
5745-5825	29.98	8.77	30	0.663	1
Beamforming Mode					
2412-2462	22.86	7.77	30	0.102	1
5180-5240	22.91	8.77	30	0.130	1
5745-5825	25.21	8.77	30	0.221	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 = 3dBi + 10log(3) = 7.77dBi
5GHz Band: Directional gain = 4dBi +10log (3) = 8.77dBi
2. The above Max Power is Turn-up Power which client declaried.

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 = 0.311 / 1 + 0.390 / 1 = 0.701
2. WLAN 2.4GHz + WLAN 5GHz Band 4 = 0.311 / 1 + 0.663 / 1 = 0.974

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

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