Report No.:	SA190514E01
FCC ID:	KA2AP2720A1
Test Model:	DAP-2720
Received Date:	Mar. 16, 2019
Test Date:	July 08, 2019
Issued Date:	Dec. 25, 2019
Applicant:	D-Link Corporation
Address:	No.289, Xinhu 3rd Rd., Neihu District, Tapei City 11494, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SA190514E01	Original release.	Dec. 25, 2019

1 Certificate of Conformity

Product:	Nuclias Connect AC2200 Wave2 Tri Band Access Point
Brand:	D-Link
Test Model:	DAP-2720
Sample Status:	ENGINEERING SAMPLE
Applicant:	D-Link Corporation
Test Date:	July 08, 2019
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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Dec. 25, 2019

Joyce Kuo / Specialist

Approved by : _____ , **Date:** Dec. 25, 2019

Clark Lin / Technical Manager

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 28cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Ant. No.	Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency range (GHz)	Antenna Type	Connector Type
2.4G-1	Chain 1	Donggun RF Electronic Technology Co.,Ltd	RF11C02064S	2.91	2.4~2.4835	PIFA	i-pex(MHF)
2.4G-2	Chain 0	Donggun RF Electronic Technology Co.,Ltd	RF11C02064S	2.75	2.4~2.4835	PIFA	i-pex(MHF)
5G-1	Chain 1	Donggun RF Electronic Technology Co.,Ltd	RF11C02064S	2.96	5.15~5.35	PIFA	i-pex(MHF)
5G-2	Chain 0	Donggun RF Electronic Technology Co.,Ltd	RF11C02064S	2.96	5.15~5.35	PIFA	i-pex(MHF)
5G-3	Chain 1	Donggun RF Electronic Technology Co.,Ltd	RF11C02064S	2.78	5.47~5.85	PIFA	i-pex(MHF)
5G-4	Chain 0	Donggun RF Electronic Technology Co.,Ltd	RF11C02064S	2.85	5.47~5.85	PIFA	i-pex(MHF)

2.5 Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN 2.4GHz	2462	552.262	5.84	28	0.21509	1
WLAN 5GHz (U-NII-1)	5200	861.054	5.97	28	0.34554	1
WLAN 5GHz (U-NII-3)	5795	791.834	5.83	28	0.30769	1

NOTE:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 2.4GHz: Directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.84dBi
   5GHz:
   U-NII-1: Directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.97dBi
   U-NII-3: Directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.83dBi

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz (low band) + WLAN 5GHz (high band) = 0.21509 / 1 + 0.34554 / 1 + 0.30769 / 1 = 0.86832

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

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