Report No.:	SA190213E02
FCC ID:	KA2AP2682A1
Test Model:	DAP-2682
Received Date:	Feb. 13, 2019
Test Date:	Apr. 23, 2019
Issued Date:	July 26, 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 R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SA190213E02	Original release.	July 26, 2019

1   Certificate of Conformity

Product: Nuclias Connect AC2300 Wave2 Access Point

Brand: D-Link

Test Model: DAP-2682

Sample Status: ENGINEERING SAMPLE

Applicant: D-Link Corporation

Test Date: Apr. 23, 2019
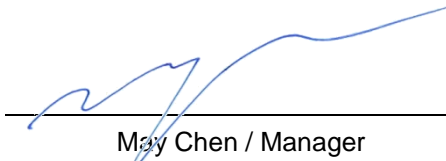
Standards: FCC Part 2 (Section 2.1091)

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:** _____July 26, 2019_____

Claire Kuan / Specialist

Approved by : _____ , **Date:** _____July 26, 2019_____

May Chen / 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 41cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Ant. No.	Model	Antenna Gain (dBi)	Frequency range (GHz)	Antenna Type	Connector Type
1	290-20382	3.86	2.4~2.4835	PIFA	i-pex(MHF)
		4.62	5.15~5.25		
		4.68	5.25~5.35		
		4.88	5.47~5.725		
		4.88	5.725~5.85		
2	290-20383	3.96	2.4~2.4835	PIFA	i-pex(MHF)
		4.51	5.15~5.25		
		4.59	5.25~5.35		
		4.74	5.47~5.725		
		4.93	5.725~5.85		
3	290-20384	3.73	2.4~2.4835	PIFA	i-pex(MHF)
		4.25	5.15~5.25		
		4.77	5.25~5.35		
		4.66	5.47~5.725		
		4.88	5.725~5.85		
4	290-20385	3.7	2.4~2.4835	PIFA	i-pex(MHF)
		4.93	5.15~5.25		
		4.65	5.25~5.35		
		4.74	5.47~5.725		
		4.74	5.725~5.85		

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	2437	867.929	9.83	41	0.39510	1
WLAN 5GHz (U-NII-1)	5230	505.494	10.60	41	0.27475	1
WLAN 5GHz (U-NII-3)	5755	680.795	10.88	41	0.39467	1

Note:

1. 2.4GHz: The directional gain = $10 \log[(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 4]$ = 9.83dBi.

2. 5GHz (U-NII-1): The Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 4]$ = 10.60dBi.

3. 5GHz (U-NII-3): The Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 4]$ = 10.88dBi

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 (U-NII-3) = 0.39510 / 1 + 0.39467 / 1 = 0.78977

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

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