RF Exposure Report

Report No.:	SA190410E09A
FCC ID:	KA2IR2640A1
Original FCC ID:	KA2IR882A1
Test Model:	DIR-2640
Received Date:	Sep. 26, 2019
Test Date:	Oct. 03, 2019
Issued Date:	Oct. 24, 2019
Applicant:	D-Link Corporation
Address:	17595 Mt. Herrmann Street Fountain Valley, CA92708 USA
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
SA190410E09A	Original release.	Oct. 24, 2019

1 Certificate of Conformity

Product:	AC2600 High Power Wi-Fi Router
Brand:	D-Link
Test Model:	DIR-2640
Sample Status:	ENGINEERING SAMPLE
Applicant:	D-Link Corporation
Test Date:	Oct. 03, 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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Oct. 24, 2019

Claire Kuan / Specialist

Approved by : _____ , **Date:** Oct. 24, 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 38 cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

The directional gain table:

Frequency (MHz)	Max Gain (dBi)
2412-2462	10.06
5180-5825	10.90
Note: More detailed information, please refer to operating description.	

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	729.608	10.06	38	0.40767	1
WLAN U-NII-1	5200	304.911	10.90	38	0.20673	1
WLAN U-NII-3	5825	615.398	10.90	38	0.41723	1

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

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 = 0.40767 / 1 + 0.41723 / 1 = 0.82490

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

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