RF Exposure Report

Report No.:	SABDUI-WTW-P20110876
FCC ID:	KA2R15A1
Test Model:	R15
Received Date:	Feb. 20, 2021
Date of Evaluation:	May 25, 2021
Issued Date:	Jun. 01, 2021
Applicant:	D-Link Corporation
Address:	14420 Myford Road Suite 100 Irvine California United States 92606
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
SABDUI-WTW-P20110876	Original Release	Jun. 01, 2021

1 Certificate of Conformity

Product:	AX1500 Wi-Fi 6 AI Router, AX1500 SMART ROUTER
Brand:	D-Link
Test Model:	R15
Sample Status:	Engineering Sample
Applicant:	D-Link Corporation
Date of Evaluation:	May 25, 2021
Standards:	FCC Part 2 (Section 2.1091)
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.

Prepared by : Lena Wang , **Date:** Jun. 01, 2021

Lena Wang / Specialist

Approved by : , **Date:** Jun. 01, 2021

Dylan Chiou / 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 21cm 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 Average Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN					
CDD Mode					
2412-2462	27.92	7.81	21	0.675	1
5180-5240	23.83	8.31	21	0.295	1
5745-5825	24.03	8.31	21	0.309	1
Beamforming Mode					
2412-2462	22.00	7.81	21	0.173	1
5180-5240	20.71	8.31	21	0.144	1
5745-5825	21.02	8.31	21	0.155	1

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

Note:

1. Directional gain:
   2.4GHz: Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 7.81$ dBi
   5GHz: Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 8.31$ dBi
2. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

The simultaneous operation mode was determined by client.

WLAN 2.4G+ 5GHz =0.675/1+0.309/1=0.984

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

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