

FCC RF EXPOSURE REPORT

FCC ID: KA2IRX1560A1

Project No. : 1910H003C
Equipment : AX1500 Wi-Fi 6 Router
Brand Name : D-Link
Test Model : DIR-X1560
Series Model : N/A
Applicant : D-Link Corporation
Address : 17595 Mt. Herrmann Fountain Valley, CA92708 USA
Manufacturer : D-Link Corporation
Address : 17595 Mt. Herrmann Fountain Valley, CA92708 USA
Date of Receipt : Sep. 07, 2020
Date of Test : Sep. 07, 2020~Oct. 16, 2020
Issued Date : Nov.18,2020
Report Version : R01
Test Sample : Engineering Sample No.: SH201910112
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091, OET Bulletin 65 Supplement C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Maker Qi

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Nov.17,2020
R01	Revise the report to address the comments.	Nov.18,2020

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

For 2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)	Note
1	N/A	N/A	Dipole	N/A	2	N/A
2	N/A	N/A	Dipole	N/A	2	N/A

Note:

- (1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT} , that is Directional gain for UNII-1=2; for UNII-3=2.

For 5G :

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	2	N/A
2	N/A	N/A	Dipole	N/A	2	N/A

Note:

- (2) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT} , that is Directional gain for UNII-2A=2; for UNII-2C=2.
- (3) The EUT incorporates beamforming Function, so Directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi, that is Directional gain for UNII-2A=2+10 log(2)dBi =5.01 dBi; for UNII-2C=2+10 log(2)dBi =5.01 dBi.

For 2.4G:

Operating Mode	TX	Ant. 1	Ant. 2	Ant. 1 + Ant. 2
Mode				
IEEE 802.11b		✓	✓	✗
IEEE 802.11g		✓	✓	✗
IEEE 802.11n (HT20)		✓	✓	✓
IEEE 802.11n (HT40)		✓	✓	✓

For 5G:

Operating Mode	TX Mode	Ant. 1	Ant. 2	Ant. 1 + Ant. 2
IEEE 802.11a		✓	✓	✗
IEEE 802.11n (HT20)		✓	✓	✓
IEEE 802.11n (HT40)		✓	✓	✓
IEEE 802.11ac (VHT20)		✓	✓	✓
IEEE 802.11ac (VHT40)		✓	✓	✓
IEEE 802.11ac (VHT80)		✓	✓	✓
IEEE 802.11ax (HE20)		✓	✓	✓
IEEE 802.11ax (HE40)		✓	✓	✓
IEEE 802.11ax (HE80)		✓	✓	✓

2. TEST RESULTS

For 2.4GHz:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. tune up Power (dBm)	Max. tune up Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	30.00	1000	0.31546	1	Complies

For 5GHz UNII-2A & UNII-2C:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5.01	3.1696	23.94	247.7422	0.1562	1	Complies

For 5GHz UNII-1:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. tune up Power (dBm)	Max. tune up Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	27.00	501.1872	0.31546	1	Complies

For 5GHz UNII-3:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. tune up Power (dBm)	Max. tune up Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.00	794.3282	0.49998	1	Complies

For the max simultaneous transmission MPE:

2.4G+5G

Power Density (S) (mW/cm ²)	Power Density (S) (mW/cm ²)	Total	Limit of Power Density (S) (mW/cm ²)	Test Result
2.4GHz	5GHz			
0.31546	0.49998	0.81544	1	Complies

Note: The calculated distance is 20 cm.
Output power including tune up tolerance

End of Test Report