FCC RF EXPOSURE REPORT

FCC ID: KA2IRX5460A1

Project No.	:	2002H005
Equipment	:	1) AX5400 Wi-Fi 6 Router 2) AX4800 Wi-Fi 6 Router
Brand Name	:	D-Link
Test Model	:	DIR-X5460
Series Model	:	DIR-X4860
Applicant	:	D-Link Corporation
Address	:	17595 Mt. Herrmann, Fountain Valley, California United States 92708
Manufacturer	:	D-Link Corporation
Address	:	17595 Mt. Herrmann, Fountain Valley, California United States 92708
Date of Receipt	:	Feb. 16, 2020
Date of Test	:	Feb. 16, 2020~Mar. 19, 2020
Issued Date	:	Apr. 02, 2020
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SH2020021330, SH2020021330-1
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.

Iscaa Min

Prepared by : Iscaa Min

Krain. Wu

Approved by : Krain Wu

Certificate # 5123.03

Add: No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210,China
TEL: +86-021-61765666
Web: www.newbtl.com

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Apr. 02, 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	IPEX	3	N/A
2	N/A	N/A	Dipole	IPEX	3	N/A

Note:

（1） Antenna Gain=3 dBi. For 2.4G, this EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain =GAnt.+10log(N)dBi, that is Directional gain=3+10log(2)dBi=6.01. So output power limit is 30-6.01+6=29.99, the power spectral density limit is 8-6.01+6=7.99.

（2） Ant. 1 for 1TX was found to be the worst case and recorded.

For 5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)	Note
1	N/A	N/A	Dipole	IPEX	3	N/A
2	N/A	N/A	Dipole	IPEX	3	N/A
3	N/A	N/A	Dipole	IPEX	3	N/A
4	N/A	N/A	Dipole	IPEX	3	N/A

Note:

(1) Antenna Gain=3 dBi. This EUT supports MIMO 4X4, any transmit signals are correlated with each other, so Directional gain = GAnt.+10log(N)dBi, that is Directional gain=3+10log(4)dBi=9.02; So,the UNII-1, UNII-3 output power limit is 30-9.02+6=26.98, the UNII-2A,UNII-2C output power limit is 24-9.02+6=20.98. The UNII-1 power spectral density limit is 17-9.02+6=13.98,UNII-2A,UNII-2C power spectral density limit is 11-9.02+6=7.98, the UNII-3 power spectral density limit is 30-9.02+6=26.98.

(2) Ant. 1 for 1TX was found to be the worst case and recorded.

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
3	1.9953	28	630.9573	0.25058	1	Complies

For 5GHz :

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. tune up Power (dBm)	Max. tune up Power Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3	1.9953	27.5	562.3413	0.22333	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			
0.25058	0.22333	0.47391	1	Complies

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

End of Test Report