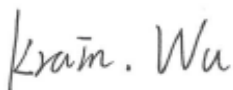


FCC RF EXPOSURE REPORT

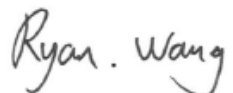
FCC ID: KA2DIR2150A1

Project No. : 2004H020
Equipment : 1) AC2100 Mesh Wi-Fi Gigabit Router
2) AC2100 Wi-Fi Gigabit Router
Brand Name : D-Link
Test Model : DIR-2150
Series Model : N/A
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 : April. 17, 2020
Date of Test : May. 01, 2020~June 15, 2020
Issued Date : Jul. 07, 2020
Report Version : R00
Test Sample : Engineering Sample No.: SH2020041790
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.



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Approved by : Ryan Wang



Certificate # 5123.03

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Jul. 07, 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	5	N/A
2	N/A	N/A	Dipole	N/A	5	N/A

Note:

(1) CDD:

All antennas have the same gain, Directional gain = GANT+Array Gain,

For power spectral density measurements, NANT = 4, NSS = 1. So Directional gain = GANT + Array

Gain = 10log (NANT/ NSS) dB = 5+10log(2/1)dBi=8.01. Then, the power density limit is 8-(8.01-6)=5.99.

For power measurements, Array Gain = 0 dB (NANT ≤ 4), so the Directional gain=5.

For 5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	5	N/A
2	N/A	N/A	Dipole	N/A	5	N/A
3	N/A	N/A	Dipole	N/A	5	N/A
4	N/A	N/A	Dipole	N/A	5	N/A

Note:

(2) Beamforming:

All antennas have the same gain, Directional gain = GANT + 10 log(NANT) dBi,

that is Directional gain=5 + 10log(4) dBi =11.02;

So output power limit is 30-11.02+6=24.98, the UNII-1 power density limit is 17-(11.02-6)=11.98. the

UNII-3 power density limit is 30-11.02+6=24.98.

(3) CDD:

All antennas have the same gain, Directional gain = GANT+Array Gain,

For power spectral density measurements, NANT = 4, NSS = 1. So Directional gain = GANT + Array

Gain = 10log (NANT/ NSS) dB = 5+10log(4/1)dBi=11.02. Then, the UNII-1 power density limit is

17-(11.02-6)=11.98. the UNII-3 power density limit is 30-11.02+6=24.98

For power measurements, Array Gain = 0 dB (NANT ≤ 4), so the Directional gain=5.

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
5	3.1623	28.00	630.9573	0.23160	1	Complies

For 5GHz :

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
11.02	12.6474	25.00	316.2278	0.46420	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			
0.23160	0.46420	0.69580	1	Complies

Note: The calculated distance is 26 cm.
Output power including tune up tolerance.

End of Test Report