

FCC RF EXPOSURE REPORT

FCC ID: 2AX5JHR56G01

Project No. : 2006C205A
Equipment : 1300M Dual Band Gigabit Wireless Router
Brand Name : 
Test Model : RG-EW1200G PRO
Series Model : N/A
Applicant : Ruijie Networks Co., Ltd.
Address : Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China
Manufacturer : Ruijie Networks Co., Ltd.
Address : Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China
Date of Receipt : Jun. 29, 2020
Aug. 07, 2019
Date of Test : Jun. 30, 2020 ~ Aug. 07, 2020
Aug. 08, 2019 ~ Oct. 16, 2020
Issued Date : Dec. 17, 2020
Report Version : R01
Test Sample : Engineering Sample No.: DG2020063020
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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Certificate #5123.02

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Nov. 13, 2020
R01	Changed the applicant and manufacturer information.	Dec. 17, 2020

1. TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

2. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

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

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 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	RF link	RF21C05165A	Dipole	N/A	5.27
2	RF link	RF21C05164A	Dipole	N/A	4.97

Note:

This EUT supports CDD, and antenna gains are not equal, so Directional

gain=10log[(10^{G1/20}+10^{G2/20}+...10^{GN/20})²/N]dBi, that is Directional gain=10log[(10^{5.27/20}+10^{4.97/20})²/2]dBi =8.13.

So, the output power limit is 30-(8.13-6)=27.87, the power spectral density limit is 8-(8.13-6)=5.87

For 5GHz

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	RF link	RF21C05166A	Dipole	N/A	5.37
2	RF link	RF21C05194A	Dipole	N/A	5.37

Note:

This EUT supports CDD, and all antennas have the same gain, so, Directional gain = G_{ANT}+Array Gain.

For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=5.37.

For power spectral density measurements, N_{ANT}=2, N_{SS} = 1.

So the Directional gain=G_{ANT}+Array Gain=G_{ANT}+10log(N_{ANT}/ N_{SS})dBi=5.37+10log(2/1)dBi=8.38.

Then, the UNII-1 power spectral density limit is 17-(8.38-6)=14.62, the UNII-2A, UNII-2C power spectral density limit is 11-(8.38-6)=8.62, the UNII-3 power spectral density limit is 30-(8.38-6)=27.62

3. TEST RESULTS

For 2.4GHz:

Directional Gain (dBi)	Directional 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
8.13	6.5013	24.14	259.4179	0.21485	1	Complies

For 5GHz UNII-1:

Directional Gain (dBi)	Directional 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
8.38	6.8865	29.47	885.1156	0.77648	1	Complies

For 5GHz UNII-2A:

Directional Gain (dBi)	Directional 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
8.38	6.8865	23.99	250.6109	0.21985	1	Complies

For 5GHz UNII-2C:

Directional Gain (dBi)	Directional 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
8.38	6.8865	23.97	249.4595	0.21884	1	Complies

For 5GHz UNII-3:

Directional Gain (dBi)	Directional 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
8.38	6.8865	29.03	799.8343	0.70167	1	Complies

For the max simultaneous transmission MPE:

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			
0.21485	0.77648	0.99133	1	Complies

Note: The calculated distance is 25 cm.

End of Test Report