

FCC RF EXPOSURE REPORT

FCC ID: TE7X60

Project No. : 1910C039
Equipment : AX3000 Whole Home Mesh Wi-Fi System
Brand Name : tp-link
Test Model : Deco X60
Series Model : N/A
Applicant : TP-Link Technologies Co., Ltd.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Manufacturer : TP-Link Technologies Co., Ltd.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Date of Receipt : Oct. 11, 2019
Date of Test : Oct. 14, 2019 ~ Nov. 12, 2019
Issued Date : Jan. 10, 2020
Report Version : R00
Test Sample : Engineering Sample No.: DG2019101158
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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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Dec. 19, 2019
R01	Updated the Max. Average Output Power of the 2.4G and the max simultaneous transmission MPE.	Jan. 10, 2020

1. 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

Antenna Specification:

For 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		3101502756	Internal	I-PEX	1.93
2		3101502757	Internal	I-PEX	1.94

Note: This EUT supports CDD, and antenna gains are not equal,
so Directional gain= $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi,
that is Directional gain= $10\log[(10^{1.93/20} + 10^{1.94/20})^2 / 2]$ dBi = 4.95.

For 5GHz UNII-1:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		3101502754	Internal	I-PEX	0.76
2		3101502755	Internal	I-PEX	0.80
3		3101502756	Internal	I-PEX	0.90
4		3101502757	Internal	I-PEX	0.97

Note: This EUT supports CDD, and antenna gains are not equal,
so Directional gain= $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi,
that is Directional gain= $10\log[(10^{0.76/20} + 10^{0.80/20} + 10^{0.90/20} + 10^{0.97/20})^2 / 4]$ dBi = 6.88..

2. TEST RESULTS

For 2.4GHz:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Average Output Power (dBm)	Max. Average Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.95	3.1261	28.00	630.9573	0.25126	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
6.88	4.8753	29.11	814.7043	0.50598	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			
0.25126	0.50598	0.75724	1	Complies

Note: The calculated distance is 25 cm.
Output power including tune up tolerance.

End of Test Report