

FCC RF EXPOSURE REPORT

FCC ID: TE7KH310

Project No. : 1905C145
Equipment : Kasa Spot Camera Hub
Model Name : KH310
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

According : FCC Guidelines for Human Exposure IEEE
C95.1 & FCC Part 2.1091

B T L I N C .

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Certificate #5123.02

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Aug. 06, 2019
R01	Updated the data for 915MHz.	Aug. 23, 2019

1. GENERAL SUMMARY

Equipment : Kasa Spot Camera Hub
 Brand Name : tp-link
 Test Model : KH310
 Series Model : N/A
 Applicant : TP-Link Technologies Co., Ltd.
 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 Test : May. 30, 2019 ~ Jun. 21, 2019
 Test Sample : Engineering Sample No.: DG19053032
 Standards : 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.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-3-1905C145) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

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

Antenna Specification:


For 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		3101502555	PCB	I-PEX	3.20
2		3101502556	PCB	I-PEX	3.54

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 = $10\log[(10^{3.20/20} + 10^{3.54/20})^2 / 2]$ dBi = 6.38. So, the average output power limit is $30 - (6.38 - 6) = 29.62$, the power spectral density limit is $8 - (6.38 - 6) = 7.62$.

For 904MHz ~ 924MHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		N/A	Internal	I-PEX	2.12

3. 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
6.38	4.3451	26.06	403.6454	0.34910	1	Complies

For 904MHz ~ 924MHz:

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
2.12	1.6293	14.50	28.1838	0.00914	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	904MHz ~ 924MHz			
0.34910	0.00914	0.35824	1	Complies

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

End of Test Report