FCC RF EXPOSURE REPORT

FCC ID: 2BH7FC64V2

Report No.	:	BTL-FCCP-3-2506C215
Equipment	:	AC1200 MU-MIMO Wi-Fi Router
Model Name	:	Archer C64
Test Model	:	Archer C64
Software Version	:	2.0
Hardware Version	:	2.0
Brand Name	:	tp-link
Applicant	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Manufacturer	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Radio Function	:	WLAN 2.4GHz, RLAN 5GHz (UNII-1, UNII-3)
FCC Rule Part(s)	:	FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091 FCC Title 47 Part 2.1091 & KDB 447498 D01 v06
Date of Receipt	:	2025/7/15
Date of Test	:	2025/7/15 ~ 2025/7/23
Issued Date	:	2025/8/20

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-3-2506C215	R00	Original Report.	2025/8/20	Valid

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

2. ANTENNA SPECIFICATION

For WLAN 2.4GHz:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	tp-link	Archer C64	Dipole	Weld	6.14
2	tp-link	Archer C64	Dipole	Weld	6.10

Note:
This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT}+Array Gain.
For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain= 6.14.
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=6.14+10log(2/1)dBi=9.15.

For RLAN 5GHz:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dB)
1	tp-link	Archer C64	Dipole	N/A	5.77
2	tp-link	Archer C64	Dipole	N/A	5.88

Note:
(1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT}+Array Gain.
For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain= 5.88.
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=5.88+10log(2/1)dBi=8.89.
Then, the UNII-1 power spectral density limit is 17-(8.89-6)=14.11,
the UNII-3 power spectral density limit is 30-(8.89-6)=27.11.
(2) Beamforming Gain: 3dB

The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3. CALCULATED RESULT

For WLAN 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
6.14	4.1115	24.1	257.0396	0.2104	1	Complies

For RLAN 5GHz:

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
5.88	3.8726	23.9	245.4709	0.18921	1	Complies

For the max simultaneous transmission MPE:

Ratio		Total	Limit of Ratio	Test Result
2.4GHz	5GHz			
0.2104	0.1892	0.3996	1	Complies

Note:
(1) The calculated distance is 20 cm.
(2) Ratio=Power Density (S) (mW/cm^2)/Limit of Power Density (S) (mW/cm^2)

End of Test Report