

FCC RF EXPOSURE REPORT

FCC ID: 2BH7FBE670

Project No. : 2508C300
Equipment : BE12000 Tri-Band Wi-Fi 7 Router
Brand Name : tp-link
Test Model : Archer BE670
Model Name : Archer BE670, Archer BE12000
Hardware Version : 1.0
Software Version : 1.0
Applicant : TP-Link Systems Inc.
Address : 10 Mauchly, Irvine, CA 92618
Manufacturer : TP-Link Systems Inc.
Address : 10 Mauchly, Irvine, CA 92618
Date of Receipt : Aug. 21, 2025
Date of Test : Aug. 22, 2025 ~ Nov. 20, 2025
Issued Date : Dec. 15, 2025
Test Sample : Engineering Sample No.: DG920250821109
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091 & KDB 447498 D01 v06

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc. (Dongguan)

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-5-2508C300	R00	Original Report.	Dec. 15, 2025	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 WIFI 2.4G:

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	TP-Link Systems Inc.	Archer BE670	Dipole	IPEX	4.75
2	TP-Link Systems Inc.	Archer BE670	Dipole	IPEX	5.06

Note:

- 1) This EUT supports CDD, and all antennas are not equal, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=5.06.
- 2) Beamforming Gain = 3dB.
- 3) The antenna gain and beamforming gain are provided by the manufacturer.

For WIFI 5G:

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	TP-Link Systems Inc.	Archer BE670	Dipole	IPEX	6.22	UNII-1
					6.45	UNII-2A
					6.64	UNII-2C
					7.13	UNII-3
2	TP-Link Systems Inc.	Archer BE670	Dipole	IPEX	5.73	UNII-1
					6.10	UNII-2A
					5.85	UNII-2C
					5.34	UNII-3
3	TP-Link Systems Inc.	Archer BE670	Dipole	IPEX	5.27	UNII-1
					5.80	UNII-2A
					6.26	UNII-2C
					6.76	UNII-3
4	TP-Link Systems Inc.	Archer BE670	Dipole	IPEX	5.56	UNII-1
					5.28	UNII-2A
					6.69	UNII-2C
					6.40	UNII-3

Note:

- 1) This EUT supports CDD, and all antennas are not equal, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$),
the UNII-1 Directional gain=6.22, the UNII-2A Directional gain=6.45,
the UNII-2C Directional gain=6.69, the UNII-3 Directional gain=7.13.
- 2) Beamforming Gain = 6dB.
- 3) The antenna gain and beamforming gain are provided by the manufacturer.

For WIFI 6E:

Ant.	Brand	Model Name	Antenna Type	Connector	Frequency Range (MHz)	Gain (dBi)
1	NA	NA	Dipole	IPEX	5925-6425	7.58
					5925-6425	6.23
					6525-6875	6.71
					6875-7125	5.62
2	NA	NA	Dipole	IPEX	5925-6425	7.25
					5925-6425	7.79
					6525-6875	8.43
					6875-7125	6.62

Note:

- 1) This EUT supports CDD, and all antennas are not equal, Directional gain = GANT+Array Gain.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$),
the UNII-5 Directional gain=7.58, the UNII-6 Directional gain=7.79,
the UNII-7 Directional gain=8.43, the UNII-3 Directional gain=6.62.
- 2) Beamforming gain=3dB.
- 3) The antenna gain and beamforming gain are provided by the manufacturer.

3. CALCULATED RESULT

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
5.06	3.2063	26.25	421.6965	0.2034	1	Complies

For 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
7.13	5.1642	28.80	758.5776	0.5893	1	Complies

For 6GHz:

Max. e.i.r.p. (dBm)	Max. e.i.r.p. (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
29.97	993.1160	0.1494	1	Complies

For the max simultaneous transmission MPE:

Ratio			Total	Limit of Ratio	Test Result
2.4GHz	5GHz	6GHz			
0.2034	0.5893	0.1494	0.9421	1	Complies

Note:

(1) The calculated distance is 23 cm.

(2) Ratio=Power Density (S) (mW/cm²)/Limit of Power Density (S) (mW/cm²)

End of Test Report