

# FCC RF EXPOSURE REPORT

## FCC ID: 2BH7FEAP670V3

**Project No.** : 2512C175  
**Equipment** : AX5400 Ceiling Mount Wi-Fi 6 Access Point  
**Brand Name** : tp-link  
**Test Model** : EAP670  
**Model Name** : EAP670, EAP673  
**Hardware Version** : 3.0  
**Software Version** : 3.0  
**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** : Dec. 15, 2025  
**Date of Test** : Dec. 15, 2025 ~ Jan. 27, 2026  
**Issued Date** : May 15, 2026  
**Test Sample** : Engineering Sample No.: DG920251216148 for LE, DG92025121587 for 2.4G and 5G.  
**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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**Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

**BTL's** reports apply only to the specific samples tested under conditions. It is manufacturer's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

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**BTL** is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

### REVISION HISTORY

| Report No.          | Version | Description      | Issued Date  | Note  |
|---------------------|---------|------------------|--------------|-------|
| BTL-FCCP-5-2512C175 | R00     | Original Report. | May 15, 2026 | 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 LE:

| Ant. | Brand   | Model Name | Antenna Type | Connector       | Gain (dBi) |
|------|---------|------------|--------------|-----------------|------------|
| 1    | tp-link | EAP670     | PIFA         | Microstrip line | 3.91       |

Note:

- 1) The antenna gain is provided by the manufacturer.

For 2.4GHz:

| Ant. | Brand   | Model Name | Antenna Type | Connector       | Gain (dBi) |
|------|---------|------------|--------------|-----------------|------------|
| 1    | tp-link | EAP670     | PIFA         | Microstrip line | 4.44       |
| 2    | tp-link | EAP670     | PIFA         | Microstrip line | 4.99       |

Note:

- 1) This EUT supports CDD, and all antenna gains are not equal, Directional gain =  $G_{ANT} + \text{Array Gain}$ .  
For power measurements, Array Gain=0dB ( $N_{ANT} \leq 4$ ), so the Directional gain=4.99.  
For power spectral density measurements, Directional gain= $10\log[(10^{G1/20} + 10^{G2/20} + \dots 10^{GN/20})^2/N]$ dBi,  
that is Directional gain(each angle)= $10\log[(10^{4.44/20} + 10^{1.39/20})^2/2]$ dBi =6.07
- 2) The antenna gain and beamforming gain are provided by the manufacturer.
- 3) Beamforming Gain: 3 dB.

For 5GHz:

| Ant. | Brand   | Model Name | Antenna Type | Connector       | Gain (dBi) | Note    |
|------|---------|------------|--------------|-----------------|------------|---------|
| 1    | tp-link | EAP670     | PIFA         | Microstrip line | 5.41       | UNII-1  |
|      |         |            |              |                 | 5.57       | UNII-2A |
|      |         |            |              |                 | 6.02       | UNII-2C |
|      |         |            |              |                 | 5.41       | UNII-3  |
| 2    | tp-link | EAP670     | PIFA         | Microstrip line | 5.21       | UNII-1  |
|      |         |            |              |                 | 5.08       | UNII-2A |
|      |         |            |              |                 | 4.45       | UNII-2C |
|      |         |            |              |                 | 4.26       | UNII-3  |
| 3    | tp-link | EAP670     | PIFA         | Microstrip line | 5.68       | UNII-1  |
|      |         |            |              |                 | 5.52       | UNII-2A |
|      |         |            |              |                 | 5.86       | UNII-2C |
|      |         |            |              |                 | 4.21       | UNII-3  |
| 4    | tp-link | EAP670     | PIFA         | Microstrip line | 5.77       | UNII-1  |
|      |         |            |              |                 | 5.63       | UNII-2A |
|      |         |            |              |                 | 5.88       | UNII-2C |
|      |         |            |              |                 | 5.72       | UNII-3  |

Note:

- 1) This EUT supports CDD, and all antenna gains are not equal, Directional gain =  $G_{ANT} + \text{Array Gain}$ .  
For power measurements, Array Gain=0dB ( $N_{ANT} \leq 4$ ).  
So, the UNII-1 Directional gain=5.77, the UNII-2A Directional gain=5.63, the UNII-2C Directional gain=6.02, the UNII-3 Directional gain=5.72.  
For power spectral density measurements, Directional gain= $10\log[(10^{G1/20} + 10^{G2/20} + \dots 10^{GN/20})^2/N]$ dBi.  
So, the UNII-1 Directional gain= $10\log[(10^{4.02/20} + 10^{4.02/20} + 10^{0.55/20} + 10^{5.64/20})^2/4]$ dBi =9.77.  
the UNII-2A Directional gain= $10\log[(10^{3.96/20} + 10^{3.84/20} + 10^{0.27/20} + 10^{5.63/20})^2/4]$ dBi =9.65.  
the UNII-2C Directional gain= $10\log[(10^{2.19/20} + 10^{1.57/20} + 10^{3.72/20} + 10^{5.88/20})^2/4]$ dBi =9.52.  
the UNII-3 Directional gain= $10\log[(10^{2.13/20} + 10^{2.01/20} + 10^{3.59/20} + 10^{5.72/20})^2/4]$ dBi =9.52.
- 2) The antenna gain and beamforming gain are provided by the manufacturer.
- 3) Beamforming Gain: 3 dB.

### 3. CALCULATED RESULT

For LE:

| Antenna Gain (dBi) | Antenna Gain (numeric) | Max. Peak Output Power (dBm) | Max. Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|------------------------------|-----------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 3.91               | 2.4604                 | 16.03                        | 40.0867                     | 0.0108                                  | 1                                                | Complies    |

For 2.4GHz:

| Antenna Gain (dBi) | Antenna Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 4.99               | 3.1550                 | 29.45                   | 881.0489               | 0.3034                                  | 1                                                | Complies    |

For 5GHz:

| Antenna Gain (dBi) | Antenna Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.72               | 3.7325                 | 29.65                   | 922.5714               | 0.3759                                  | 1                                                | Complies    |

**For the max simultaneous transmission MPE:**

| Ratio  |        |        | Total  | Limit of Ratio | Test Result |
|--------|--------|--------|--------|----------------|-------------|
| LE     | 2.4GHz | 5GHz   |        |                |             |
| 0.0108 | 0.3034 | 0.3759 | 0.6901 | 1              | Complies    |

Note:

- (1) The calculated distance is 27 cm.
- (2) Ratio=Power Density (S) (mW/cm<sup>2</sup>)/Limit of Power Density (S) (mW/cm<sup>2</sup>)
- (3) Output power including tune up tolerance (±0.5dB).

**End of Test Report**