# FCC RF EXPOSURE REPORT

## FCC ID: TE7WA901NV6

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|---|---|---|
| **Project No.** | : | 2001C031 |
| **Equipment** | : | 450Mbps Wireless N Access Point |
| **Brand Name** | : | tp-link |
| **Test Model** | : | TL-WA901N |
| **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** | : | Jan. 06, 2020 |
| **Date of Test** | : | Jan. 06, 2020~Feb. 14, 2020 |
| **Issued Date** | : | Feb. 18, 2020 |
| **Report Version** | : | R00 |
| **Test Sample** | : | Engineering Sample No.: DG2020011610 |
| **Standard(s)** | : | FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091<br>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 | Feb. 18, 2020 |

## 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

Table for Filed Antenna

| Ant. | Brand | P/N | Antenna Type | Connector | Gain(dBi) |
|---|---|---|---|---|---|
| 1 | TP-LINK | 3101501026 | Dipole | Weld | 4.71 |
| 2 | TP-LINK | 3101501087 | Dipole | Weld | 4.71 |
| 3 | TP-LINK | 3101501276 | Dipole | Weld | 4.71 |

Note:
This EUT supports CDD, and all antennas have the same gain,
Directional gain = $G_{ANT}$+Array Gain.
For power spectral density measurements, Array Gain=10log($N_{ANT}/N_{SS}$) dB,
that is Directional gain = 4.71+10log(3/1)dBi=9.48. So, the power density limit is 8-(9.48-6)=4.52
For power measurements, Array Gain = 0 dB ($N_{ANT} \leq 4$), so the Directional gain=4.71

## 2. TEST RESULTS

| 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 |
|---|---|---|---|---|---|---|
| 4.71 | 2.9580 | 22.47 | 176.6038 | 0.10398 | 1 | Complies |

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

**End of Test Report**