



FCC RF EXPOSURE REPORT

FCC ID: Q78-ZXHNF670E

| Project No. | : 1708C103 |
|-------------|--|
| Equipment | : GPON ONT |
| Model | : ZXHN F670E |
| Applicant | : ZTE Corporation |
| Address | : ZTE Plaza, Hi-Tech Park, Nanshan District, |
| | Shenzhen, Guangdong, P.R.China |
| | |

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

BTL INC.

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, China. TEL: +86-769-8318-3000 FAX: +86-769-8319-6000



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

2.4G WiFi

External Antenna

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-------|------------|--------------|-----------|------------|
| 1 | N/A | N/A | Dipole | N/A | 5 |
| 2 | N/A | N/A | Dipole | N/A | 5 |

Note:

The EUT incorporates a MIMO function. Physically, the EUT providestwo completedtransmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then,**Direction gain = G**_{ANT},that is Directional gain=5.

Internal Antenna

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-------|------------|--------------|-----------|------------|
| 1 | N/A | N/A | PCB | N/A | 3 |
| 2 | N/A | N/A | PCB | N/A | 3 |

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G**_{ANT}, that is Directional gain=3.

5G WiFi

External Antenna

| Ant. | Manufacturer | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|--------------|------------|-----------------|-----------|---------------|
| 1 | N/A | N/A | Dipole | N/A | 5 |
| 2 | N/A | N/A | Dipole | N/A | 5 |
| 3 | N/A | N/A | Dipole | N/A | 5 |

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and receivers (3T3R), all transmit signals are completely uncorrelated, then, **Direction gain = G**ANT, that is Directional gain=5.





Internal Antenna

| Ant. | Manufacturer | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|--------------|------------|-----------------|-----------|---------------|
| 1 | N/A | N/A | PCB | N/A | 3 |
| 2 | N/A | N/A | PCB | N/A | 3 |
| 3 | N/A | N/A | PCB | N/A | 3 |

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and receivers (3T3R), all transmit signals are completely uncorrelated, then, **Direction gain = G**_{ANT}, that is Directional gain=3.





TEST RESULTS

| EUT : | GPON ONT | Model Name : | ZXHN F670E |
|----------------|--------------|--------------------|------------|
| Temperature : | 25 ℃ | Relative Humidity: | 55 % |
| Test Voltage : | AC 120V/60Hz | | |

2.4G WIFI

| / | Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|---|--------------------------|---------------------------|----------------------------|---------------------------|----------------------------------|--|----------------|
| | 5 | 3.1623 | 18.8 | 75.8578 | 0.04775 | 1 | Complies |

5G Band UNII-1

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm ²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|--------------------------|---------------------------|----------------------------|---------------------------|---|--|----------------|
| 5 | 1.9953 | 26.04 | 401.7908 | 0.25290 | 1 | Complies |

5G Band UNII-3

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|--------------------------|---------------------------|----------------------------|---------------------------|----------------------------------|--|----------------|
| 5 | 1.9953 | 29.01 | 796.1594 | 0.50113 | 1 | Complies |

For 2.4G+5G simultaneous transmission MPE:

0.04775/1 + 0.50113/1 = 0.54888 < 1

Note: the calculated distance is 20 cm.