

RF Exposure Evaluation
FCCID: QRF-GNVPZ1NT3
Wireless Mesh Router
Tranzeo Wireless Technologies Inc.

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RF Exposure Evaluation

FCC 1.1310 states the criteria listed in the table below shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in Section 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of Section 2.1093 of this chapter. Further information on evaluating compliance with these limits can be found in the FCC's OST/OET Bulletin Number 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation".

| Frequency Range (MHZ) | Electric Field Strength (V/m) | Magnetic Field Strength (A/M) | Power Density (mW/cm ²) | Average Time |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------|
| (A) Limits for Occupational/Control Exposures | | | | |
| 300-1500 | -- | -- | F/300 | 6 |
| 1500-100,000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/Uncontrolled Exposures | | | | |
| 300-1500 | -- | -- | F/1500 | 6 |
| 1500-100,000 | -- | -- | 1 | 30 |

EUT Operating Condition

The maximum antenna gain is 17 dBi at 2.4 GHz and 32 dBi at 5.8 GHz.

RF exposure evaluation distance calculation

2.4GHz radio with 17 dBi antenna

| Freq (MHz) | Output Power to Antenna (dBm) | Antenna Gain (dBi) | r (cm) |
|------------|-------------------------------|--------------------|--------|
| 2412 | 28.25 | 7.5 | 51.6 |
| 2437 | 28.05 | 7.5 | 50.4 |
| 2462 | 27.46 | 7.5 | 47.1 |

5.8GHz radio with 32 dBi antenna

| Freq (MHz) | Output Power to Antenna (dBm) | Antenna Gain (dBi) | r (cm) |
|------------|-------------------------------|--------------------|--------|
| 5745 | 22.56 | 10.5 | 150.7 |
| 5785 | 21.61 | 10.5 | 135.2 |
| 5825 | 21.47 | 10.5 | 132.9 |

As shown above, the minimum distance where the MPE limit is reached is 150.7 cm for the EUT.