

Environmental evaluation and exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310

The transceiver CRM 3.65GHz is classified as fixed (pole mounted) and limited for use in Airspan outdoor CPE V70 and MRTE series products.

The WiFi module FCC ID:PPD-AR5BHB112 may be installed together with the CRM 3.65GHz module. The transceiver CRM 3.65GHz and WiFi module were evaluated for Maximum Permissible Exposure compliance for end-use multi-radio.

The simultaneous transmission of 2 above mentioned transmitters is evaluated.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm² for 1500 -100000 MHz frequency range.

The power density $P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$, where

P_T is the transmitted power, which is equal to the peak transmitter output power plus maximum antenna gain.

26.8 dBm is the CRM maximum conducted output power of the both RF chains (Table 7.1.3 of the AIRRAD_FCC.23805 test report),

5.6 dBi – antenna gain.

Table of estimated safe distance calculation

| Tx | Frequency, MHz | Peak Tx power | | Antenna gain, dBi | Duty cycle | Power density, mW/cm ² | Limit, mW/cm ² | % of Std |
|------|----------------|---------------|--------|-------------------|------------|-----------------------------------|---------------------------|----------|
| | | dBm | mW | | | | | |
| Tx1 | 3650-3700 | 26.8 | 478.6 | 5.6 | 1.0 | 0.346 | 1.0 | 0.346 |
| Tx2* | 2412-2462 | 22.48 | 176.0 | 8.37 | 1.0 | 0.24 | 1.0 | 0.24 |
| Tx3* | 5470-5725 | 20.90 | 123.05 | 9.53 | 1.0 | 0.22 | 1.0 | 0.22 |

*- data from RF Exposure Evaluation ReportNo.FA000823, FCC ID:PPD-AR5BHB112. The device operates either in 2412-2462 MHz band or 5180-5825 MHz bands but not both in the same time. Maximum total power used for calculation.

- 1) Total % of standard: Tx1 + Tx2 = 0.346 + 0.24 = 0.586
- 2) Total % of standard: Tx1 + Tx3 = 0.346 + 0.22 = 0.566

Distance (estimated) = 20 x $\sqrt{0.586}$ = 15.3 cm.

Recommended MPE distance is 20 cm when all antennas are within 20 cm of each other.

Below is given % MPE contour map and Table prepared in accordance with FCC recommendations worksheet

<http://transition.fcc.gov/oet/ea/presentations/files/oct05/MPE-mobile.xls>

% MPE Contour

Note: The 0% contour surrounding the antennas identifies a 20 cm perimeter surrounding all active antennas

