

RF EXPOSURE SEPARATION DISTANCES

To protect from overexposure to RF energy, install Canopy radios so as to provide and maintain the minimum separation distances from all persons shown

Exposure separation distances

Module Type Separation Distance from Persons

Canopy Module (FSK or OFDM) At least 20 cm (approx 8 in)

The following section provides details and discussion of the associated calculations.

Details of Exposure Separation Distances Calculations and Power Compliance Margins

Limits and guidelines for RF exposure come from:

- US FCC limits for the general population. See the FCC web site at <http://www.fcc.gov>, and the policies, guidelines, and requirements in Part 1 of Title 47 of the Code of Federal Regulations, as well as the guidelines and suggestions for evaluating compliance in FCC OET Bulletin 65.

The applicable power density exposure limits from the documents referenced above are

- 10 W/m² for RF energy in the 5.4-5.7GHz frequency bands.

Peak power density in the far field of a radio frequency point source is calculated as follows:

$$S = (P \times G) / (4\pi d^2)$$

where

S = power density in W/m²

P = RMS transmit power capability of the radio, in W

G = total Tx gain as a factor, converted from dB

d = distance from point source, in meters

5.4 GHz OFDM	connectorized AP, 17 dBi	0.02 W (13 dBm)	50 (17 dB)	10 W/m ²	9 cm 20 cm	(8 in)	5
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The Recommended Separation Distance is chosen to give significant compliance margin in all cases. It is also chosen so that a given item (bare module) always has the same distance, regardless of frequency band, to simplify remembering and following exposure distances in the field.

These are conservative distances:

- They are along the beam direction (the direction of greatest energy).
Exposure to the sides and back of the module is significantly less.
- They meet sustained exposure limits for the general population (not just short-term occupational exposure limits), with considerable margin.