

RF Exposure Information.

As the TUNet 220MHz Wide Area Network does not differentiate between a TUNet 3205 (FCC ID: OZFR22002) and the 220MHz portion of the TUNet XR-3100, therefore the maximum duty factor associated with the TUNet 3205 is the same for the XR-3100, i.e. 6.3%. A typical duty factor for the part 90 portion of the XR-3100 however is equal to the TUNet 3205 at 0.3%.

The output power of the co located TC-1200 series transceiver (FCC ID:OZFT90002) is also added into the radiated output power for RF exposure calculations.

Table 1 Radiated Output Power with maximum 6.3% Duty Factor.

Output Power (Cable loss = 3.4dB/100ft @ 220 MHz)	Length of Cable (cm) ¹	P (W)
	23	4.982
	35	4.967
EIRP=P*DF*Gain+TC1200 (DF=6.3%, TC1200 series radiated power = 39mW)	Antenna Gain (dBi)	EIRP (W)
	Internal (2.1) ²	0.557
	5.2	1.088
	9.1	2.600
Limit (Uncontrolled)	$0.2 \frac{mW}{cm^2}$	

Table 2: Required Minimum Distance for Varying Antenna Gains.

Antenna Gain (dBi)	Required Minimum Distance To Achieve Margin (cm)	Margin Below Limit (μW)
Internal (2.1)	20	89
5.2	23	36
9.1	35	30

¹ The length of cable used in these calculations is based on the required minimum distance to achieve margin. In practice the cable lengths will be much longer, reducing the EIRP and hence exposure level.

² There is no cable loss associated with the internal antenna since the antenna is mounted inside the unit. Hence Output Power (P) remains at the rated level of 5.0W