

Radio Frequency Radiation Exposure Evaluation for GigAccess Self Install GA OFDM 900 RSU

1. RF Hazard Distance Calculation

Limit for power density for general population /uncontrolled exposure is

$$0.604 \text{ mW/cm}^2 \text{ (for 902MHz)}$$

The Power density is given by:

$$P \text{ (mW/cm}^2\text{)} = P_T / 4\pi R^2$$

Therefore:

R = Distance to the center of radiation antenna [cm]

$$(3) \quad P_{dBm} = 10 \times \log P_{mW}$$

Therefore:
$$(4) \quad P_{mW} = 10^{\frac{P_{dBm}}{10}}$$

The hazard distances versus antenna gain are listed in [Table 1-1](#).

Note! GigAccess™ OFDM 900 was designed for fixed and mobile applications.

point-to-multi-point operation

Antenna	Gain	Tx Power		Safe Distance	Sector Type
[dBi]	[Numeric]	[dBm]	[mW]	[cm]	
6	3.98	30	1000	22.6	p2mp

Table 1-1: Hazard Distance versus Antenna Gain for Point to Multi Point

When using the system for point to multi point (p2mp) applications all outdoor units must be installed with a separation distance of at least **30 cm** from all persons during normal operation.
