Radio Frequency Radiation Exposure Evaluation for GigAccess Self Install GA OFDM 700 RSU

RF Hazard Distance Calculation

Limit for power density for general population /uncontrolled exposure is

0.466 mW/cm² (for 698MHz)

The Power density is given by:

S (mW/cm²)= PG /4п R²

Where:

S = Power Density = 0.466 [mW/cm^2]

P = Power input to the antenna [mW].

G = Antenna Gain in the direction of interest [In numeric format].

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

Therefore:

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

Therefore:

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

The hazard distances versus antenna gain are listed in the following table.

Point-to-multi-point operation

Antenna Gain		Tx Power		Safe Distance	Sector Type
[dBi]	[Numeric]	[dBm]	[mW]	[cm]	
6	3.98	25	317	**14.66**	p2mp

Table 1: Hazard Distance versus Antenna Gain

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When using the system for point to multi point (p2mp) applications all outdoor units must be installed with a separation distance of at least **20 cm** from all persons during normal operation.
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