R.F. Exposure Brief

FCC ID: ARA-BACE5X

Model no.: BreezeAir ACE

Applicant: Telrad Networks Ltd.

According to: FCC 47 CFR § 1.1309 - Application amendments

RF environment: General Public

Antenna types and gain: 23dBi Flat panel and 32dBi dish

Antenna duty cycle: 100%

Calculation of Maximum Permissible Exposure (MPE)

The Power density is given by:

$$(1) \quad S = \frac{P \times G}{4 \times \pi \times R^2}$$

Therefore:

$$(2) \quad R = \sqrt{\frac{P \times G}{4 \times \pi}}$$

Where:

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].

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

Therefore:

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

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

Antenna gain		Max TX Power		EIRP		Safe distance
dBi	Numeric	dBm	mW	dBm	mW	cm
30	1000	20.8	120.2264	50.8	1202264	97.81

Max TX power 21 is obtained at low frequency 5785MHz, at 20MHz channel BW.

General public will not be exposed to dangerous RF level when the fixed radio device will be used at distance above 97.8cm. When using the system for applications, all outdoor units must be installed with a separation distance of at least 1.50 meters from all persons during normal operation. Warning in the user manual will be provided.

The E.U.T. meets the limits of FCC 47 CFR § 1.1309.