ATTACHMENT

** MPE Calculations **

(a) FCC limit at 881.6MHz

The MPE calculation for this exposure is shown below.

Limits for Occupational/Controlled Exposure

The peak radiated output power (EIRP) is calculated as follows:

Maximum permissible exposure is Freq. (MHz)/300 = MPE mW/cm^2

881.6 MHz/300 = 2.94 mW/cm^2

The following calculations determine at what distance from the antenna the power density is

=2.94 mW/cm^2

Max Tx output power = 39.69dBm

numeric Gain = 10dBi

MPE Calulation

Estimated safe separation:

R = $\sqrt{(PG / 4\pi 2.94)}$
 	
 R = $\sqrt{(9311.08*10 / 4\pi 2.94)}$
 	
 R = 50.21Cm
	Where,
	    P = Power input to the antenna (mW)
	    G = Numeric power gain of the antenna
	    R = Distance to the center of the radiation of the antenna
	       (20cm = limit for MPE)

The minimum safe distance for Occupational/Controlled exposure is 50.21cm for the antenna when
 installed.

This is the worst case for the downlink. The maximum antenna gain stated is for the downlink.

This product is installed by trained professionals in outdoor applications only

ATTACHMENT

(a) FCC limit at 1960MHz

The MPE calculation for this exposure is shown below.

Limits for Occupational/Controlled Exposure

The peak radiated output power (EIRP) is calculated as follows:

Maximum permissible exposure is 5 mW/cm^2

The following calculations determine at what distance from the antenna the power density is

=5 mW/cm^2

Max Tx output power = 39.33 dBm

numeric Gain = 10.5 dBi

MPE Calulation

Estimated safe separation:

$R = \sqrt{(PG / 4\pi 5.0)}$
 	
 $R = \sqrt{(8570.38 * 10.5 / 4\pi 5.0)}$
 	
 R = 37.85Cm
	Where,
	     P = Power input to the antenna (mW)
	     G = Numeric power gain of the antenna
	     R = Distance to the center of the radiation of the antenna
	       (20cm = limit for MPE)

The minimum safe distance for Occupational/Controlled exposure is 37.85cm for the antenna when installed.

This is the worst case for the downlink. The maximum antenna gain stated is for the downlink.

This product is installed by trained professionals in outdoor applications only