RF EXPOSURE EVALUATION

Applicant	**: ATEN Technology, Inc., dba IOGEAR**
Applicant Address	: 19641 da Vinci Foothill Ranch California 92610, USA
Kind of Product	: Wireless HD Kit
Equipment model name	: GWAV8141K
Antenna type	: Dipole antenna Gain: 0.667dBi
Frequency Range	: 5150MHz ~ 5250MHz
Number of channels	: 2
Channel Spacing	: 40 MHz

** MPE Calculations **

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.   The MPE calculation for this exposure is shown below.

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

EIRP = P + G EIRP = 13.647 dBm	Where, P = Power input to the antenna (mW) G = Power gain of the antenna (dBi)

The numeric gain(G) of the antenna with a gain specified in dB is determined by:

G = Log^{-1} (dB antenna gain / 10)

G = Log^{-1} (0.667/ 10)

G = 1.17

Power density at the specific separation:

S = $PG/(4R^2\pi)$
 	
S = $(19.86 * 1.17 / (4 * 20^2 * \pi))$
 	
S = 0.0046 mW/cm^2
	Where,
	    S = Maximum power density (mW/cm^2)
	    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 Maximum permissible exposure (MPE) for the general population is 1 mW/cm^2 .
The power density at 20cm does not exceed the 1 mW/cm^2 limit.

Estimated safe separation:

R = $\sqrt{(PG / 4\pi)}$
 	
R = $\sqrt{(19.86 * 1.17/ 4\pi)}$
 	
R = 1.36 cm
	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)