RF Exposure Evaluation declaration

Product Name	Wireless 5 x 2 HD Matrix Transmitter
Model No.	GWHDMS52 - T, GWHDMS52W6 - T, VE819 - T, VE829 - T
FCC ID	QLEGWHDMS52

Applicant	ATEN Technology, Inc. dba IOGEAR
Address	19641 Da Vinci Foothill Ranch, CA 92610 United States

Date of Receipt	Mar. 07, 2013
Date of Declaration	Apr. 18, 2013
Report No.	133165R-RFUSP42V01

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm^2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product : Wireless 5 x 2 HD Matrix Transmitter
Test Item : RF Exposure Evaluation
Test Site : No.3 OATS

Operation Frequency	5190~5670MHz, 5755~5795MHz
Maximum Conducted output power	28.18dBm
Antenna gain	2.6dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
657.6578	0.238084

Power density in column 4 is much lower than the limit (1 mW/cm^2).