

# RF Exposure Evaluation Declaration

Product Name : SPORTS CAM  
Model No. : SR10  
FCC ID. : 2AA22SR10

Applicant : SanJet Technology Corp.

Address : 4F, No.2, Li-Hsin 6th Rd., Hsinchu Science Park, Hsinchu, Taiwan, R.O.C

Date of Receipt : 2013/08/20  
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Report No. : 138403R-RF-US-Exp  
Report Version : V1.0



The declaration results relate only to the samples calculated.

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## 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 <sup>2</sup> )	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:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

$P_d$  = power density in  $\text{mW/cm}^2$

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1  $\text{mW/cm}^2$ . 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°C and 78% RH.

### 1.3. Test Result of RF Exposure Evaluation

Product	SPORTS CAM
Test Mode	Transmit
Test Condition	RF Exposure Evaluation

#### Antenna Gain

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0dBi or 1 in linear scale.

#### Output Power into Antenna & RF Exposure Evaluation Distance:

IEEE 802.11b			
WLAN Function			
Channel	Channel Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
1	2412	2.2284	0.00044
6	2437	2.8054	0.00056
11	2462	3.8459	0.00077

IEEE 802.11g			
WLAN Function			
Channel	Channel Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
1	2412	0.6855	0.00014
6	2437	0.8511	0.00017
11	2462	1.1298	0.00022

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm<sup>2</sup>.

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Product	SPORTS CAM
Test Mode	Transmit
Test Condition	RF Exposure Evaluation

**Antenna Gain**

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0dBi or 1 in linear scale.

**Output Power into Antenna & RF Exposure Evaluation Distance:**

IEEE 802.11n (20MHz) ANT 0			
WLAN Function			
Channel	Channel Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
1	2412	0.6295	0.00013
6	2437	0.7925	0.00016
11	2462	1.0568	0.00021

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm<sup>2</sup>.