

# RF Exposure Evaluation

## FCC ID: 2ABES-AIR

### 1. Client Information

**Applicant** : Pathway Innovations and Technologies, Inc.  
**Address** : 9833 Pacific Heights Blvd., Suite D, San Diego, CA 92121  
**Manufacturer** : ShenZhen KerunVisual Technology Co., LTD.  
**Address** : 6/F, Building2, Zone S2, 1213 Liuxian Blvd., Honghualing Industrial Park, Nanshan District, Shenzhen, China

### 2. General Description of EUT

<b>EUT Name</b>	:	AirStation	
<b>Models No.</b>	:	AirStation, KR119	
<b>Model Difference</b>	:	The different models are identical in schematic, structure and critical component, the only different is the appearance.	
<b>Product Description</b>	:	Operation Frequency: 802.11b/g: 2412MHz~2462MHz	
		Number of Channel:	802.11b/g:11 channels
		Out Power	802.11b: 17.39 dBm 802.11g: 17.65 dBm
		Antenna Gain:	2.5 dBi (Dipole Antenna)
		Modulation Type:	802.11b: CCK, QPSK, BPSK 802.11g: OFDM
		Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps
<b>Power Supply</b>	:	DC power from AC/DC Adapter.	
<b>Power Rating</b>	:	AC/DC Adapter: Input: AC 100~240V 50/60 Hz Output: DC 5V 2A	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	

**Note:**

- (1) More detail information about Equipment, please refer to User's manual, more information about the RF, please refer to test report.
- (2) Antenna information provided by the applicant.

Ant. No.	Brand	Model Name	Antenna Type	Gain (dBi)
1	N/A	AN2400-0101 RS	Dipole Ant.	2.5

## MPE Calculations for WIFI

### 1. Antenna Gain:

Dipole Antenna: 2 dBi.

### 2. EUT Operation Condition:

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

### 3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = (PG) / 4\pi R^2$$

Where

**S:** power density

**P:** power input to the antenna

**G:** power gain of the antenna in the direction of interest relative to an isotropic radiator.

**R:** distance to the center of radiation of the antenna

### 4. Test Result:

Worst Maximum MPE Result						
Mode	N <sub>TX</sub>	Frequency (MHz)	Power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
802.11b	1	2412	17.39	2.5	20	0.0194
802.11g	1	2412	17.65	2.5	20	0.0206

**Note:**  
 (1) N<sub>TX</sub> = Number of Transmit Antennas  
 (2) RF Output power specifies that Maximum Conducted Peak Output Power.

### 5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

#### Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm <sup>2</sup> )
300-1,500	F/1500
1,500-100,000	1.0

For 802.11b/g/n (2412~2462 MHz)

MPE limit S: 1 mW/ cm<sup>2</sup>

The MPE is calculated as 0.0206 mW / cm<sup>2</sup> < limit 1 mW / cm<sup>2</sup>. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

**Note**

For a more detailed features description, please refer to the RF Test Report.