

# Maximum Permissible Exposure Evaluation

## FCC ID: 2AH3E-NVR02

### 1. Client Information

**Applicant** : OPCOM O.E.(DONG GUAN)INC.  
**Address** : Gu Cun Industry Estate, Dajing Countryside Committee, Houjie Town, Dongguan City, Guang Dong Province, China  
**Manufacturer** : Shenzhen Annidigital Technology Co., Ltd  
**Address** : 3rd Floor, Building D, Shangxue HiTech Industrial Park, Bantian, Longgang District, Shenzhen City, China

### 2. General Description of EUT

<b>EUT Name</b>	:	Wireless NVR
<b>Models No.</b>	:	NVR02
<b>Model Difference</b>	:	N/A
<b>Product Description</b>	Operation Frequency:	2408MHz~2468MHz
	Number of Channel:	31 Channels
	RF Output Power:	16.94 dBm
	Antenna Gain:	3 dBi Dipole Antenna
	Modulation Type:	GFSK
	Bit Rate of Transmitter:	4Mbps
<b>Power Supply</b>	:	DC power supplied by AC/DC Adapter.
<b>Power Rating</b>	:	AC/DC Adapter: Input:100~240V, 50/60Hz 0.6A Output:12V, 2000mA
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual
<b>Note:</b> More detail information about Equipment, please refer to User's manual, more information about the RF, please refer to test report.		

TB-RF-075-1.0

## MPE Calculations for WIFI

### 1. Antenna Gain:

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)
1	N/A	N/A	Dipole Ant.	3

### 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>	Power(max) (dBm) [P]	ANT Gain (dBi) [G]	Turn-up Power Tolerance (dB)	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
2408	1	16.51	3.0	±1	20	0.02237396
2440	1	16.60	3.0	±1	20	0.02284246
2468	1	16.94	3.0	±1	20	0.02470262

**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 : 2.4G: 2408MHz~2468MHz

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

The MPE is calculated as 0.02470262mW / 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.