

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

| | | | |
|--|---|--|----------------------|
| EUT Name | : | Wireless NVR | |
| Models No. | : | NVR02 | |
| Model Difference | : | N/A | |
| Product Description | : | 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 |
| Power Supply | : | DC power supplied by AC/DC Adapter. | |
| Power Rating | : | AC/DC Adapter: Input:100~240V, 50/60Hz 0.6A Output:12V, 2000mA | |
| Connecting I/O Port(S) | : | Please refer to the User's Manual | |
| Note:More detail information about Equipment, please refer to User's manual, more information about the RF, please refer to test report. | | | |

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 _{TX} | Power(max) (dBm) [P] | ANT Gain (dBi) [G] | Turn-up Power Tolerance (dB) | Distance (cm) [R] | Power Density (mW/ cm ²) [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_{TX}= 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 ²) |
|--------------------------|---|
| 300-1,500 | F/1500 |
| 1,500-100,000 | 1.0 |

For : 2.4G: 2408MHz~2468MHz

MPE limit S: 1 mW/ cm²

The MPE is calculated as 0.02470262mW / cm² < limit 1 mW / cm².

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.