

# Maximum Permissible Exposure Evaluation

## FCC ID: 2AKUR-NVR8008T-QWS

### 1. Client Information

<b>Applicant</b>	:	Hangzhou Jufeng Technology Co., Ltd.
<b>Address</b>	:	Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou China
<b>Manufacturer</b>	:	Hangzhou Jufeng Technology Co., Ltd.
<b>Address</b>	:	Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou China

### 2. General Description of EUT

<b>EUT Name</b>	:	NVR
<b>Models No.</b>	:	NVR8008T-QWS, NVR8004T-UWS, NVR8004T-UWS-V2, NVR8008T-PWS, NVR8004T-QWDS, JF-NVR8008T-QWS, JF-NVR8004T-UWS, JF-NVR8004T-UWS-V2, JF-NVR8008T-PWS, JF-NVR8004T-QWDS, NVR8008TR-QWS, NVR8008TR-QWDS, NVR8004TR-UWS, JF-NVR8008TR-QWS, JF-NVR8004TR-UWS
<b>Model Different:</b>	:	All PCB boards and circuit diagrams are the same, the only difference is that the different appearance have different models
<b>Brand Name</b>	:	----
<b>Product Description</b>	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
	Number of Channel:	11 channels
	RF Output Power:	802.11b: 14.407dBm 802.11g: 14.752dBm 802.11n (HT20): 13.333dBm 802.11n (HT40): 11.917dBm
	Antenna Gain:	5dBi dipole Antenna
<b>Power Rating</b>	:	Input: AC 100-240V 50/60Hz 1.5A Max
<b>Software Version</b>	:	NBD8008R-PWS-V2
<b>Hardware Version</b>	:	NBD80XXS-3536D V1.03
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual
<b>Remark</b>	:	the MPE report used the EUT(20210518-15_01-1#).



## MPE Calculations for WIFI

### 1. Antenna Gain:

Dipole Antenna:5dBi.

### 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	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
802.11b	1	2412	13.542	14±1	15	5	20	0.0199
		2437	13.944	14±1	15	5	20	0.0199
		2462	14.407	14±1	15	5	20	0.0199
802.11g	1	2412	13.736	14±1	15	5	20	0.0199
		2437	14.618	15±1	16	5	20	0.0250
		2462	14.752	15±1	16	5	20	0.0250
802.11n(HT20)	1	2412	12.688	13±1	14	5	20	0.0158
		2437	13.158	13±1	14	5	20	0.0158
		2462	13.333	13±1	14	5	20	0.0158
802.11n(HT40)	1	2422	11.716	12±1	13	5	20	0.0126
		2437	11.83	12±1	13	5	20	0.0126
		2452	11.917	12±1	13	5	20	0.0126
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 2.4WIFI:2412~2462 MHz

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

The MPE is calculated as  $0.0250 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{mW} / \text{cm}^2$ . 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.

**6. Conclusion:**

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----END OF REPORT-----