

# RF EXPOSURE REPORT

**REPORT NO.:** SA130819E05 R1

**MODEL NO.:** RV130W

**FCC ID:** N89-RV130W

**RECEIVED:** Apr. 23, 2013

**TESTED:** Aug. 30, 2013

**ISSUED:** Sep. 27, 2013

**APPLICANT:** CyberTAN Technology, Inc.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130819E05	Original release	Sep. 26, 2013
SA130819E05 R1	Add standalone 20cm usage conditions	Sep. 27, 2013

## 1. CERTIFICATION

**PRODUCT:** Wireless Multifunction VPN Router  
**BRAND NAME:** Cisco  
**MODEL NO.:** RV130W  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**APPLICANT:** CyberTAN Technology, Inc.  
**TESTED DATE:** Aug. 30, 2013  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
FCC OET Bulletin 65, Supplement C (01-01)  
IEEE C95.1

The above equipment (Model: RV130W) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY :** Midoli Peng, **DATE:** Sep. 27, 2013  
( Midoli Peng, Specialist )

**APPROVED BY :** May Chen, **DATE:** Sep. 27, 2013  
( May Chen, Manager )

## 2. RF EXPOSURE LIMIT

### 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)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 3. MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

### 4. CLASSIFICATION

This product could be applied with one 3.5G USB wireless device, and the safe distance is 33 cm for collocated radio.

## 5. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

### For WLAN:

FREQUENCY- (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	531.666	1.7	20	0.15645	1.00

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	531.666	1.7	33	0.05746	1.00

### For 3.5G USB wireless device:

DEVICE	MAX EIRP (mW)	MAX EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
3.5G USB wireless device	7000	38.45	33	0.51152	0.55

This product can operate with a plug-in 3G device which has maximum of 7W ERP(7000mW EIRP) output power.

## CONCLUSION:

Both of the WLAN and plug-in device (3.5G USB wireless device) can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

**CPD = Calculation power density**

**LPD = Limit of power density**

Therefore, the worst-case situation is  $0.05746 / 1 + 0.51152 / 0.55 = 0.987$ , which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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