



# RF EXPOSURE REPORT

**REPORT NO.:** SA110322C11

**MODEL NO.:** MBR95

**FCC ID:** UXX-MBR95

**ACCORDING:** FCC Guidelines for Human Exposure  
IEEE C95.1

**APPLICANT:** Cradlepoint, Inc.

**ADDRESS:** 805 West Franklin Street. Boise, ID 83702

**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.)  
Ltd., Taoyuan Branch

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**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Apr. 13, 2011



## 1. CERTIFICATION

**PRODUCT:** Mobile Broadband Router  
**MODEL NO.:** MBR95  
**BRAND:** cradlepoint  
**APPLICANT:** Cradlepoint, Inc.  
**TESTED:** Mar. 30 ~ Apr. 11, 2011  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** **FCC Guidelines for Human Exposure**  
**IEEE C95.1**

The above equipment (Model: MBR95) 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.

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Polly Chien / Specialist

APPROVED BY : *Gary Chang* , DATE: Apr. 13, 2011  
Gary Chang / Assistant Manager

## 2. RF EXPOSURE

### 2.1 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)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 2.2 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

### 2.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

## 2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

### For FCC ID: UXX-MBR95

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )	CPD/LPD
2412-2462	20.9	-2	20	0.015	1.00	0.015

### For FCC ID: TARCMU-300 (USB Dongle) 850 Band

MODE	ERP(dBm)	EIRP(dBm)	SOURCE TIME AVERAGE POWER (dBm)	MPE	LIMIT	CPD/LPD
CDMA 850	25.32	27.47	27.47	0.11	0.55	<b>0.20</b>

### 1900 Band / 2507.5~2684.5MHz

MODE	EIRP(dBm)	SOURCE TIME AVERAGE POWER (dBm)	MPE	LIMIT	CPD/LPD
CDMA 1900	27.8	27.8	0.12	1	0.12
WIMAX 2507.5~2684.5MHz	25.02	25.02	0.06	1	0.06

### CONCLUSION:

The Product has 1 USB ports to connect 3G device for support 3G function. Transmit simultaneously is evaluated for this product + 1 usb dongle.

The formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

There are many combinations of transmitting simultaneously, only the worst combination will be calculated and mentioned as below:

Maximum CPD/LPD of FCC ID: UXX-MBR95 is 0.015

Maximum CPD/LPD of FCC ID: TARCMU-300 is 0.2

Therefore, maximum MPE is

$$0.015 + 0.2 = 0.215$$

**Therefore, the maximum calculation of this situation is 0.215, which is less than the "1" limit.**