RF EXPOSURE REPORT

REPORT NO.: SA120220E40

MODEL NO.: MBR1200B

FCC ID: UXX-MBR1200B

RECEIVED: Feb. 20, 2012

TESTED: Mar. 13, 2012

ISSUED: Mar. 23, 2012

APPLICANT: Cradlepoint, Inc

ADDRESS: 805 W. Franklin Street, Boise, ID 83702

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA120220E40	Original release	Mar. 23, 2012

1. CERTIFICATION

PRODUCT:	CradlePoint MBR1200B Failsafe N Router for Mobile Broadband
BRAND NAME:	cradlepoint
MODEL NO.:	MBR1200B
TEST SAMPLE:	ENGINEERING SAMPLE
APPLICANT:	Cradlepoint, Inc
TESTED DATE:	Mar. 13, 2012
STANDARDS:	FCC Part 2 (Section 2.1091)
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

The above equipment (Model: MBR1200B) 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 : _____ , **DATE:** *Mar. 23, 2012*
(Elsie Hsu, Specialist)

APPROVED BY : _____ , **DATE:** *Mar. 23, 2012*
(May Chen, Deputy 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^2)	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

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm2

Pout = 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

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**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Antenna Type	Connecter Type
Chain (0)	3	PIFA	NA
Chain (1)	2	PIFA	NA

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm^2)	LIMIT (mW/cm^2)
2422-2452	299.5	3	20	0.119	1.00

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm^2)	LIMIT (mW/cm^2)
2422-2452	299.5	3	45	0.023	1.00

DEVICE	MAX EIRP (W)	MAX EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/ cm^2)	LIMIT (mW/cm^2)
3G / WiMAX / LTE Device	11.48	40.6	45	0.451	0.549

This product can operate with a plug-in 3G, WiMAX or LTE device which has maximum of 7W ERP(11.48W EIRP) output power.

CONCLUSION:

Both of the WLAN and plug-in device (3G, WiMAX or LTE) can transmit simultaneously, the formula of calculated the MPE is:

$CPD_1 / LPD_1 + CPD_2 / LPD_2 + ……etc. < 1$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is 0.023 / 1 + 0.451 / 0.549= 0.844, which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.

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