



RF EXPOSURE REPORT

REPORT NO.: SA110120C10

MODEL NO.: CBR400

FCC ID: UXX-CTR550

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

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang,
Taipei Hsien 244, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Feb. 18, 2011

1. 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

2. MPE CALCULATION FORMULA

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

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**.

4. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For FCC ID: UXX-CTR550

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)	CPD/LPD
2412-2462	24.7	1	20	0.074	1.00	0.074



For FCC ID: N7NAC880E (Express card)
850 Band

MODE	ERP(dBm)	EIRP(dBm)	SOURCE TIME AVERAGE POWER (dBm)	MPE	LIMIT	CPD/LPD
GPRS	28.8	30.95	27.95	0.12	0.55	0.22
EGPRS	26.8	28.95	25.95	0.08	0.55	0.15
WCDMA	25.9	28.05	25.05	0.06	0.55	0.11
HSDPA	26.0	28.15	25.15	0.07	0.55	0.13

1900 Band

MODE	EIRP(dBm)	SOURCE TIME AVERAGE POWER (dBm)	MPE	LIMIT	CPD/LPD
GPRS	29.3	26.3	0.08	1	0.08
EGPRS	27.0	24.0	0.05	1	0.05
WCDMA	27.1	24.1	0.05	1	0.05
HSDPA	27.6	24.6	0.06	1	0.06

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	0.20

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 and 1 express slot to connect 3G device to support 3G function. Transmit simultaneously is evaluated for this product + 1 usb dongle + 1 express card.

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: UXXCTR550 is 0.074

Maximum CPD/LPD of FCC ID: N7NAC880E is 0.22

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

Therefore, maximum MPE is

$$0.074 + 0.22 + 0.2 = 0.494$$

Therefore, the maximum calculation of this situation is 0.494, which is less than the “1” limit.