

## **EXHIBIT 11 - MPE CALCULATION DATA**

**FCC ID: KBCIX260-PROG82BT**

**Applicant: ITRONIX, Corp.**

**Model: IX260 with the three co-located transmitters listed below**

**1.) Sony Ericsson GC82 with IX260 blade antenna**

Tx Freq: 848.80 MHz  
Source based time averaged Power @ antenna terminal input: 26.35  
Antenna gain: 1.82 dBi

Tx Freq: 1880.00 MHz

Source based time averaged Power @ antenna terminal input: 24.04  
Antenna Gain: 2.6 dBi

-supporting MPE calculations on page 3.

**2.) INTEL PRO WM3B2200BG, WLAN with Rangestar antenna PN: 100929**

Tx Freq: 2437 MHz  
Max Peak Power @ antenna terminal input: 17.41 dBm  
Antenna Gain: 4.5 dBi

-supporting MPE calculations on page 4.

**3.) MITSUMI Electric Co., Ltd, WML-C11NU,Bluetooth with Rangestar antenna PN: 100929**

Tx Freq: 2402 MHz  
Max Peak Power @ antenna terminal input: 14.46 dBm  
Antenna Gain 4.5 dBi

-supporting MPE calculations on page 4.

The GC82 WAN and the WLAN do not transmit at the same time. However, either the GC82 WAN or the WLAN can transmit at the same time as the Bluetooth, so multiple frequency exposure information is provided for these two combinations. Individual calculations are made for the GC82 with the MaxRad 3 dBi Gain - Vehicular Antenna Mount (P/N:WMLPVDB800/1900).

The MPE calculations are submitted for multiple frequency exposure criteria. The ratio of the field strength or power density to the applicable exposure limit at the exposure location was determined for each transmitter below and the sum of these ratios does not exceed the 1 mW/cm<sup>2</sup> limit for uncontrolled exposure / general population exposure limits detailed in CFR 47, Part 1.1310.

### 1.) Multiple Frequency Exposure Requirements with GC82& BT

| Ratio 1                           | Ratio 2   | Limit |
|-----------------------------------|-----------|-------|
| GC82/Cellular                     | Bluetooth |       |
| 0.156/.6                          | 0.016/1   | <1.0  |
| = 0.260                           | = 0.016   | <1.0  |
| Sum = 0.276 (mW/cm <sup>2</sup> ) |           | <1.0  |

| Ratio 1                           | Ratio 2   | Limit |
|-----------------------------------|-----------|-------|
| GC82/PCS                          | Bluetooth |       |
| 0.092/1                           | 0.016/1   | <1.0  |
| = 0.092                           | = 0.016   | <1.0  |
| Sum = 0.108 (mW/cm <sup>2</sup> ) |           | <1.0  |

### 2.) Multiple Frequency Exposure Requirements WLAN & BT

| Ratio 1                           | Ratio 2   | Limit |
|-----------------------------------|-----------|-------|
| WLAN                              | Bluetooth |       |
| 0.031/1                           | 0.016/1   | <1.0  |
| = 0.031                           | = 0.016   | <1.0  |
| Sum = 0.047 (mW/cm <sup>2</sup> ) |           | <1.0  |

MPE calculations for general population/uncontrolled limits are on the following two pages.

Prediction of MPE Limit OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2 \qquad R = \sqrt{PG/4\pi S}$$

- 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

**MPE General Population/Uncontrolled**

**GC82 Cellular**

Tx Frequency: 848.80 MHz  
 Max. Peak Power Antenna Input Terminal: 26.35 dBm  
 Antenna gain: 2.60 dBi

S= 0.57 (mW/cm<sup>2</sup>)  
 P= 431.5191 (mW)  
 G= 1.82 (numeric)  
 R = 10.51 (cm)

Field Density S (mw/cm<sup>2</sup>) at 20cm = 0.156 (mw/cm<sup>2</sup>)

**GC82 PCS**

Tx Frequency: 1880.00 MHz  
 Max. Peak Power Antenna Input Terminal: 24.04 dBm  
 Antenna gain: 2.60 dBi

S= 1.00 (mW/cm<sup>2</sup>)  
 P= 253.5129 (mW)  
 G= 1.82 (numeric)  
 R = 6.06 (cm)

Field Density S (mw/cm<sup>2</sup>) at 20cm = 0.092 (mw/cm<sup>2</sup>)

**MPE General Population/Uncontrolled**

**INTEL PRO WLAN**

Tx. Frequency: 2437.00 MHz  
Max. Peak Power Antenna Input Terminal: 17.41 dBm  
Antenna gain: 4.5 dBi

S= 1.00 mW/cm<sup>2</sup>  
P= 55.0808 (mW)  
G= 2.82 (numeric)  
R = 3.51 (cm)

Field Density S (mw/cm<sup>2</sup>) at 20cm = 0.030850298 (mw/cm<sup>2</sup>)

**MITSUMI BLUETOOTH**

Tx. Frequency: 2402.00 MHz  
Max. Peak Power Antenna Input Terminal: 14.16 dBm  
Antenna gain: 4.50 dBi

S= 1.00 (mW/cm<sup>2</sup>)  
P= 27.9254 (mW)  
G= 2.82 (numeric)  
R = 2.50 (cm)

Field Density S (mw/cm<sup>2</sup>) at 20cm = 0.01564815 (mw/cm<sup>2</sup>)

**MPE General Population/Uncontrolled****GC82 Cellular****With MaxRad 3 dBi Gain - Vehicular Mount Antenna (P/N: WMLPVDB800/1900)**

|   |        |     |
|---|--------|-----|
| Tx Frequency:   | 848.80 | MHz |
| Max. Peak Power Antenna Input Terminal:               | 26.35  | dBm |
| 3 dBi Antenna gain minus 1.89 dB cable loss, (17 ft.) | 1.11   | dBi |

|     |          |                       |
|-----|----------|-----------------------|
| S=  | 0.57     | (mW/cm <sup>2</sup> ) |
| P=  | 431.5191 | (mW)                  |
| G=  | 1.29     | (numeric)             |
| R = | 8.85     | (cm)                  |

Field Density S (mw/cm<sup>2</sup>) at 20cm = 0.111 (mw/cm<sup>2</sup>)

**GC82 PCS****With MaxRad 3 dBi Gain - Vehicular Mount Antenna (P/N:WMLPVDB800/1900)**

|   |         |     |
|---|---------|-----|
| Tx Frequency:   | 1880.00 | MHz |
| Max. Peak Power Antenna Input Terminal:               | 24.04   | dBm |
| 3 dBi Antenna gain minus 2.8 dB cable loss, ( 17 ft.) | 0.20    | dBi |

|     |          |                       |
|-----|----------|-----------------------|
| S=  | 1.00     | (mW/cm <sup>2</sup> ) |
| P=  | 253.5129 | (mW)                  |
| G=  | 1.05     | (numeric)             |
| R = | 4.60     | (cm)                  |

Field Density S (mw/cm<sup>2</sup>) at 20cm = 0.053 (mw/cm<sup>2</sup>)