Applicant: ITRONIX, Corp. FCC ID: KBCIX260MPIA750BT

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

FCC ID: KBCIX260MPIA750BT Applicant: ITRONIX, Corp.

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

#### 1.) AIRCARD750

-supporting calculations on pages 2-4

Tx Freq: 1850.20 Tx Freq: 1880.00 Tx Freq: 1909.00

Max Peak Power @ antenna terminal input: 28.12 Max Peak Power @ antenna terminal input: 28.08 Max Peak Power @ antenna terminal input: 28.00

Antenna Gain: 0.1dBi

#### 2.) **MPI350**

-supporting calculations on page 5

Tx Freq: 2450 MHz

Max Peak Power @ antenna terminal input: 21.2 dBm

Antenna Gain: 4.5 dBi

#### 3.) Bluetooth

-supporting calculations on page 6

Tx Freq: 2450 MHz

Max Peak Power @ antenna terminal input: 14.46 dBm

Antenna Gain 4.5 dBi

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^2 limit for uncontrolled exposure / general population exposure limits detailed in CFR 47, Part 1.1310.

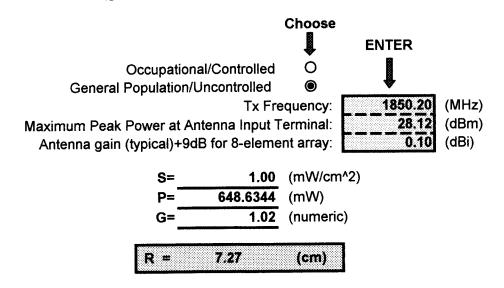
## Multiple Frequency Exposure Requirements

Ratio 1	Ratio 2	Ratio 3	Limit
AIRCARD750	MPI350	Bluetooth	<1.0
0.132/1	0.074/1.0	0.016/1	<1.0
= .132	= .074	= .016	<1.0
$Sum = .222  (mW/cm^2)$			<1.0

AIRCARD750			
Tx Freq: 1850.20	Tx Freq: 1880.00	Tx Freq: 1909.00	
Ratio 1	Ratio 2	Ratio 3	
0.132/5	0.131/5	0.128/5	
= .00264	= .00262	= .0256	
Max = .00264 used for multiple frequency exposure above			

### Equation from page 18

$$S = PG$$
 $A = PG$ 
 $A$ 



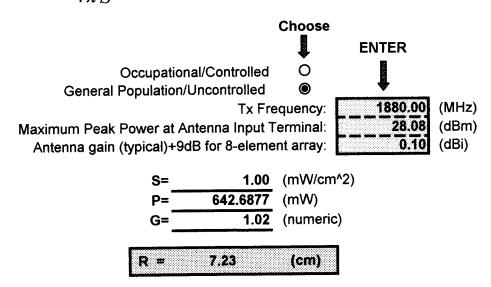
S (mw/cm<sup>2</sup>) at 20cm

0.131904426

AIRCARD750#1

## Equation from page 18

$$S = PG$$
 $A = PG$ 
 $A$ 



S (mw/cm<sup>2</sup>) at 20cm

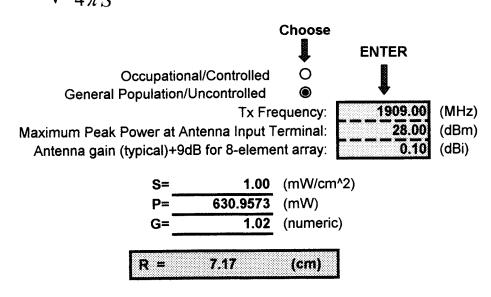
0.130695119

AIRCARD750#2

## Equation from page 18

$$S = PG$$

$$= \frac{PG}{4\pi R^2}$$
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



S (mw/cm<sup>2</sup>) at 20cm

0.128309664

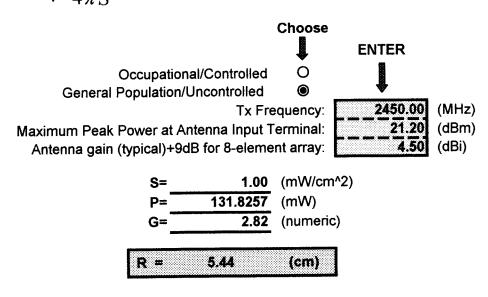
AIRCARD750#3

### Equation from page 18

$$S = PG$$

$$-4\pi R^2$$

$$R = \sqrt{\frac{PG}{4\pi S}}$$
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



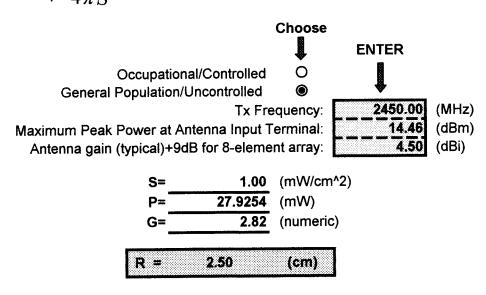
S (mw/cm<sup>2</sup>) at 20cm

0.073834505

**MPI350** 

## Equation from page 18

$$S = \frac{PG}{4\pi R^2}$$
 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



S (mw/cm^2) at 20cm

0.015640815

#### **BLUETOOTH**