

## 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<sup>2</sup> 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 <sup>2</sup> )			<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		

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

**Equation from page 18**

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

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

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

**Choose**

↓

Occupational/Controlled   

General Population/Uncontrolled   

Tx Frequency: 1850.20 (MHz)

Maximum Peak Power at Antenna Input Terminal: 28.12 (dBm)

Antenna gain (typical)+9dB for 8-element array: 0.10 (dBi)

ENTER

↓

S= 1.00 (mW/cm<sup>2</sup>)

P= 648.6344 (mW)

G= 1.02 (numeric)

**R = 7.27 (cm)**

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

0.131904426

**AIRCARD750#1**

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

**Equation from page 18**

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

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

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

**Choose**

↓

Occupational/Controlled

General Population/Uncontrolled

Tx Frequency: 1880.00 (MHz)

Maximum Peak Power at Antenna Input Terminal: 28.08 (dBm)

Antenna gain (typical)+9dB for 8-element array: 0.10 (dBi)

ENTER

↓

S= 1.00 (mW/cm<sup>2</sup>)

P= 642.6877 (mW)

G= 1.02 (numeric)

**R = 7.23 (cm)**

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

0.130695119

**AIRCARD750#2**

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

**Equation from page 18**

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

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

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

**Choose**

↓

Occupational/Controlled

General Population/Uncontrolled

Tx Frequency: 1909.00 (MHz)

Maximum Peak Power at Antenna Input Terminal: 28.00 (dBm)

Antenna gain (typical)+9dB for 8-element array: 0.10 (dBi)

ENTER

↓

S= 1.00 (mW/cm<sup>2</sup>)

P= 630.9573 (mW)

G= 1.02 (numeric)

**R = 7.17 (cm)**

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

0.128309664

**AIRCARD750#3**

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

**Equation from page 18**

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

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

**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

**Choose**

↓

Occupational/Controlled

General Population/Uncontrolled

**ENTER**

↓

Tx Frequency:	2450.00	(MHz)
Maximum Peak Power at Antenna Input Terminal:	21.20	(dBm)
Antenna gain (typical)+9dB for 8-element array:	4.50	(dBi)

**S=** 1.00 (mW/cm<sup>2</sup>)  
**P=** 131.8257 (mW)  
**G=** 2.82 (numeric)

**R = 5.44 (cm)**

**S (mw/cm<sup>2</sup>)  
at 20cm**  
  
 0.073834505

**MPI350**

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

**Equation from page 18**

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

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

**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

**Choose**

↓

Occupational/Controlled

General Population/Uncontrolled

Tx Frequency: 2450.00 (MHz)

Maximum Peak Power at Antenna Input Terminal: 14.46 (dBm)

Antenna gain (typical)+9dB for 8-element array: 4.50 (dBi)

ENTER

↓

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

**R = 2.50 (cm)**

**S (mw/cm<sup>2</sup>)  
at 20cm**  
 0.015640815

**BLUETOOTH**