DECLARATION OF COMPLIANCE
MPE EVALUATION REPORT

Test Lab

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Applicant Information

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FCC IDENTIFIER:	**KBCIX260PROA555BT**
IC IDENTIFIER:	**1943A-IX260Pb**
Model(s):	**IX260PROA555BT**

FCC Rule Part(s):	**47 CFR §24(E), §22(H); §2.1091; §1.1310**
IC Rule Part(s):	**RSS-133 Issue 2, RSS-132 Issue 1 (Provisional)**
FCC Classification:	**PCS Licensed Transmitter (PCB)**
IC Classification:	**2 GHz Personal Communication Services (RSS-133)** **800 MHz Cellular Telephones Employing New Technologies (RSS-132)**
Device Description:	**Rugged Laptop PC with Sierra Wireless AirCard 555/550 CDMA Modem, External Swivel Dipole Antenna, Vehicle-Mount Antenna, & Vehicle Cradle (co-located with Intel Pro 2200BG WLAN and Cirronet BT2022 Bluetooth)**
Tx Frequency Range(s):	**1851.25 - 1908.75 MHz (PCS CDMA)** **824.70 - 848.31 MHz (Cellular CDMA)**
Max. RF Output Power Measured:	**23.0 dBm Conducted (PCS CDMA)** **23.0 dBm Conducted (Cellular CDMA)**
Antenna Type(s) Evaluated:	**Itronix IX260+ External Swivel Dipole (Dual-Band CDMA)** **MaxRad 3 dBi Vehicle-Mount P/N: WMLPVDB800/1900 (Dual-Band CDMA)**

This mobile transmitting device was compliant with localized Maximum Permissible Exposure (MPE) for the Uncontrolled Exposure / General Population limits specified in FCC 47 CFR §1.1310 and Industry Canada RSS-102 Issue 1 (Provisional), in accordance with the requirements of FCC OET Bulletin 65, Edition 97-01, Health Canada's Safety Code 6, ANSI / IEEE C95.1-1999, and ANSI / IEEE C95.3-2002.

I attest to the accuracy of data. All measurements and/or calculations were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

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1.1 MPE Calculation Data

1. Itronix IX260+ Swivel Dipole Antenna

a. PCS CDMA Band

Tx Frequency:	1880.00	(MHz)
RF Output Power at Antenna Input Terminal:	23.0	(dBm)
Antenna gain:	2.60	(dBi)

S=	1.00	(mW/cm^2)
P=	199.5262	(mW)
G=	1.82	(numeric)

R = 5.38 (cm)

S (mw/cm^2) at 20cm

0.072153826

b. Cellular CDMA Band

Tx Frequency:	835.89	(MHz)
RF Output Power at Antenna Input Terminal:	23.0	(dBm)
Antenna gain:	2.60	(dBi)

S=	0.56	(mW/cm^2)
P=	199.5262	(mW)
G=	1.82	(numeric)

R = 7.20 (cm)

S (mw/cm^2) at 20cm

0.072153826

Itronix IX260+ Swivel Dipole Antenna

MPE Calculation Data (Cont.)

2. MaxRad 3 dBi Gain Vehicle-Mount Antenna (P/N: WMLPVDB800/1900)

PCS CDMA Band

Tx Frequency:	1880.00	(MHz)
RF Output Power at Antenna Input Terminal:	23.0	(dBm)
3 dBi Antenna Gain minus 2.80 dB cable loss for 17 ft cable:	0.20	(dBi)

S=	1.00	(mW/cm^2)
P=	199.5262	(mW)
G=	1.05	(numeric)

R = 4.08 (cm)

S (mw/cm^2) at 20cm

0.041520193

MaxRad 3 dBi Gain Vehicle-Mount Antenna P/N: WMLPVDB800/1900

Cellular CDMA Band

Tx Frequency:	835.89	(MHz)
RF Output Power at Antenna Input Terminal:	23.0	(dBm)
3 dBi Antenna Gain minus 1.88 dB cable loss for 17 ft cable:	1.10	(dBi)

S=	0.56	(mW/cm^2)
P=	199.5262	(mW)
G=	1.29	(numeric)

R = 6.06 (cm)

S (mw/cm^2) at 20cm

0.051080997

2.1 Calculation to determine MPE

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

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

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

3.1 MPE Limits

According to FCC 47 CFR 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

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)
(A)Limits For Occupational / Control Exposures				
30-300	61.4	0.163	1.0	6
300-1500	…	…	F/300	6
1500-100,000	…	…	5	6
(B)Limits For General Population / Uncontrolled Exposure				
30-300	27.5	0.073	0.2	30
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

4.1 Summary

The Maximum Permissible Exposure (MPE) limit (General Population / Uncontrolled Exposure environment) for the frequency range in the PCS CDMA band (1850-1910 MHz) is 1.0 mW/cm^2; and the limit for the frequency range in the cellular CDMA band (824-849 MHz) is 0.6 mW/cm^2 (F/1500). The data in this report demonstrates that the Itronix Corporation Rugged Laptop PC Model: IX260PROA555BT with internal Sierra Wireless AirCard 555/550 Dual-Band CDMA Modem, utilizing an external swivel dipole antenna and vehicle-mount antenna complies with the Maximum Permissible Exposure (MPE) requirements specified in FCC §2.1091, §1.1310, OET Bulletin 65 (Edition 97-01), and Health Canada's Safety Code 6 for the General Population / Uncontrolled Exposure environment.

Notes:

1. **The 17 ft antenna cable is supplied with and connected to the vehicle antenna at time of purchase.**
2. **Please refer to the Co-Transmit Supplementary EMC report for MPE evaluation data with Bluetooth transmitter.**
3. **The internal co-located 802.11b/g WLAN and Bluetooth transmitters do not utilize the vehicle-mount antenna.**