DECLARATION OF COMPLIANCE
MPE EVALUATION REPORT

Test Lab

CELLTECH LABS INC.
1955 Moss Court
Kelowna, B.C.
Canada V1Y 9L3
Phone: 250-448-7047
Fax: 250-448-7046
e-mail: info@celltechlabs.com
web site: www.celltechlabs.com

Applicant Information

ITRONIX CORPORATION
801 South Stevens Street
Spokane, WA 99210
United States

FCC Rule Part(s):	**47 CFR §24(E), §22(H); §15.247; §2.1091; §1.1310**
IC Rule Part(s):	**RSS-133 Issue 2, RSS-132 Issue 1 (Provisional), RSS-210 Issue 5, RSS-102 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 Type:	**Rugged Laptop PC with Sony Ericsson GC82 GSM GPRS/EDGE Modem External Swivel Dipole Antenna (Dual-Band GSM), Vehicle-Mount Antenna (Dual-Band GSM), and Cradle**
FCC IDENTIFIER:	**KBCIX260PLUSGC82**
Model(s):	**IX260PLUSGC82**
Tx Frequency Range(s):	**1850.2 - 1909.8 MHz (PCS GSM) 824.2 - 848.8 MHz (Cellular GSM)**
Max. RF Conducted Power Measured:	**30.13 dBm Peak (PCS GSM) 32.27 dBm Peak (Cellular GSM)**
Mode(s) / Time Slot(s) Tested:	**GSM EDGE / 2-out-of-8 Time Slots (Max. Data Rate: 61.85 kbps per slot)**
Source-Based Time-Av. Duty Cycle:	**25 %**
Max. Source-Based Time-Av. Cond. Pwr:	**24.11 dBm Peak (PCS GSM) 26.25 dBm Peak (Cellular GSM)**
Antenna Type(s) Evaluated:	**Itronix IX260+ External Swivel Dipole MaxRad 3 dBi Vehicle-Mount P/N: WMLPVDB800/1900**

This mobile transmitting device was determined to be compliant with localized Maximum Permissible Exposure (MPE) for 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 C95.1-1992, and ANSI / IEEE C95.3-1992.

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.

Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.

1.1 MPE Calculation Data

1. Itronix IX260+ Swivel Dipole Antenna

a. PCS GSM Band

Tx Frequency:	1880.0	(MHz)
Source-Based Time-Averaged Power at Antenna Input Terminal:	24.11	(dBm)
Antenna gain:	2.60	(dBi)

S=	1.00	(mW/cm^2)
P=	257.6321	(mW)
G=	1.82	(numeric)

R = 6.11 (cm)

Field Density @ 20 cm = 0.093 (mW/cm^2)

b. Cellular GSM Band

Tx Frequency:	848.8	(MHz)
Source-Based Time-Averaged Power at Antenna Input Terminal:	26.25	(dBm)
Antenna gain:	2.60	(dBi)

S=	0.57	(mW/cm^2)
P=	421.6965	(mW)
G=	1.82	(numeric)

R = 10.39 (cm)

Field Density @ 20 cm = 0.152 (mW/cm^2)

Itronix IX260+ Swivel Dipole Antenna

MPE Calculation Data (Cont.)

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

PCS GSM Band

Tx Frequency:	1880.0	(MHz)
Source-Based Time-Averaged Power at Antenna Input Terminal:	24.11	(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=	257.6321	(mW)
G=	1.05	(numeric)

R = 4.63 (cm)

Field Density @ 20 cm = 0.054 (mW/cm^2)

Cellular GSM Band

Tx Frequency:	848.8	(MHz)
Source Based Time Averaged Power at Antenna Input Terminal:	26.25	(dBm)
3 dBi Antenna Gain minus 1.89 dB cable loss for 17 ft cable:	1.11	(dBi)

S=	0.57	(mW/cm^2)
P=	421.6965	(mW)
G=	1.29	(numeric)

R = 8.75 (cm)

Field Density @ 20 cm = 0.108 (mW/cm^2)

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

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 GSM band (1850-1910 MHz) is 1.0 mW/cm^2; and the limit for the frequency range in the cellular GSM band (824-849 MHz) is 0.6 mW/cm^2 (F/1500). The data in this report demonstrates that the Itronix Corporation Model: IX260PLUSGC82 Rugged Laptop PC FCC ID: KBCIX260PLUSGC82 with Sony Ericsson GC82 Dual-Band GSM GPRS/EDGE Radio Modem, utilizing an external swivel dipole antenna and mobile 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.**