

Test Report S/N:	102604KBC-T575-E24G				
Test Date(s):	August 30 - September 09, 2004				
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132			
Lab Registration(s):	FCC #714830	IC Lab File #3874			

	DECLARATION OF COMPLIANCE						
Test Lab		Applicant Information					
CELLTECH LABS INC.Testing and Engineering Services1955 Moss CourtKelowna, B.C.Canada V1Y 9L3Tel.:250-448-7047Fax:250-448-7046e-mail:info@celltechlabs.coweb site:www.celltechlabs.co		ITRONIX CORPORATION 801 South Stevens Street Spokane, WA 99204 United States					
FCC IDENTIFIER: IC IDENTIFIER: Model(s):	KBCIX260PNLA775BT 1943A-IX260Pe IX260PNLA775BT						
FCC Rule Part(s): IC Rule Part(s): Test Procedure(s):	FCC 47 CFR §24(E), §2	132 Issue 1 (Provisional) 2(H), §2					
FCC Device Classification:	IC RSS-133 Issue 2, IC ANSI TIA/EIA-603-B-20 PCS Licensed Transmi						
IC Device Classification:	2 GHz Personal Comm	unication Services (RSS-133) phones Employing New Technologies (RSS-132)					
Device Description:		h Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem Dipole Antenna, Vehicle-Mount Antenna, and Vehicle Cradle)					
Co-located Transmitter(s):	Cirronet BT2022 Blueto	.11b/g WLAN (with internal surface-mount antenna) ooth (with internal surface-mount antenna)					
Tx Frequency Range(s):	1850.2 - 1909.8 MHz (P 824.2 - 848.8 MHz (Cell	ular GSM)					
Rx Frequency Range(s):	1930.2 - 1990.8 MHz (P 869.2 - 894.8 MHz (Cell	ular GSM)					
Max. ERP/EIRP Measured:	2.54 Watts (34.05 dBm) 0.261 Watts (24.17 dBn	n) EIRP - PCS GSM (Itronix Swivel Dipole Antenna) ) ERP - Cellular GSM (Itronix Swivel Dipole Antenna) n) EIRP - PCS GSM (MaxRad Vehicle-Mount Antenna) n) ERP - Cellular GSM (MaxRad Vehicle-Mount Antenna)					
Max. Conducted Power Measured: Max. No. of Time Slots Tested:	28.9 dBm Peak (PCS G 4 (Class 12)	SM) / 32.0 dBm Peak (Cellular GSM)					
Source-Based Time-Av. Duty Cycle:	50 %						
Source-Based Time-Av. Cond. Pwr:		iSM) / 29.0 dBm Peak (Cellular GSM)					
Modulation(s) Tested:	GMSK						
Emission Designator(s):	238KGXW, 242KGXW,	240KG7W, 242KG7W					
Frequency Tolerance(s):	2.5 PPM	Curical Diracle (Dural Daniel COM)					
Antenna Type(s) Tested: Power Source(s) Tested:	MaxRad 3 dBi Gain Ve	l Swivel Dipole (Dual-Band GSM) hicle-Mount P/N: WMLPVDB800/1900 (Dual-Band GSM) tery, 6.0 Ah (Model: A2121-2)					
	12 V Vehicle Battery (fo						

This mobile device has demonstrated compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in FCC 47 CFR §24(E), §22(H), §2; Industry Canada RSS-133 Issue 2, RSS-132 Issue 1 (Provisional); and ANSI TIA/EIA-603-B-2002.

I attest to the accuracy of data. All measurements reported herein 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.

This test report shall not be reproduced partially, or in full, without the prior written approval of Celltech Labs Inc. The results and statements contained in this report pertain only to the device(s) evaluated.

Wussell W. Pupe

Russell Pipe Senior Compliance Technologist Celltech Labs Inc.

Duane M. Friesen EMC Manager Celltech Labs Inc.



© 2004 Celltech Labs Inc.



Test Report S/N:	102604KBC-T575-E24G				
Test Date(s):	August 30 - September 09, 2004				
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132			
Lab Registration(s):	FCC #714830	IC Lab File #3874			

TABLE OF CONTENTS							
Section	DESCF	RIPTION		Page #			
1.1 SCOPE							
2.1 GENERAL INFORMATION & DEVICE DESCRIPTION							
3.1 TEST EQUIPMENT LIST							
Appendix	MEASUREMENT PROCEDURES & DATA FCC Rule Part(s) IC Rule Part(s)						
Α	RF Output Power    §2.1046    RSS-133 §6.2 RSS-132 §4.4						
В	Effective Isotropic Radiated Power Output	§24.232(b)	RSS-133 §6.2	6-7			
С	Effective Radiated Power Output	§22.913	RSS-132 §4.4	8-9			
D	D    Field Strength of Spurious Radiation    §24.238 §22.917    RSS-133 §6.3 RSS-132 §4.5						
E Radiated Test Setup Photographs							



Test Report S/N:	102604KBC-T575-E24G				
Test Date(s):	August 30 - September 09, 2004				
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132			
Lab Registration(s):	FCC #714830	IC Lab File #3874			

#### FCC PART 24(E) & 22(H) EMC MEASUREMENT REPORT

#### 1.1 SCOPE

This report describes the measurements made and results collected during the Electromagnetic emissions testing of the Itronix Corporation Model: IX260PNLA775BT Rugged Laptop PC incorporating the internal Sierra Wireless AirCard 775 Dual-Band PCS/Cellular GSM GPRS/EDGE PCMCIA Modem with external swivel dipole antenna, vehicle-mount antenna, and vehicle cradle. Co-located within the DUT is a Senao NL-3054MP 802.11b/g Mini-PCI Card utilizing an internal surface-mount antenna located in the upper right side rear edge of the LCD display. The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Senao NL-3054MP 802.11b/g WLAN do not transmit simultaneously. Also co-located within the DUT is a Cirronet BT2022 Bluetooth Transmitter utilizing an internal surface-mount antenna located in the upper left side rear edge of the LCD display. The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Cirronet BT2022 Bluetooth Transmitter utilizing an internal surface-mount antenna located in the upper left side rear edge of the LCD display. The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Cirronet BT2022 Bluetooth Transmitter utilizing an internal surface-mount antenna located in the upper left side rear edge of the LCD display. The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Cirronet BT2022 Bluetooth Transmitter utilizing an internal surface-mount antenna located in the upper left side rear edge of the LCD display. The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Cirronet BT2022 Bluetooth Transmitter can transmit simultaneously. Please refer to the Co-Transmit Supplementary EMC test report for simultaneous transmit test results. The measurement results were applied against the EMC requirements and limits outlined in the technical rules and regulations set forth in the Federal Communication Commission Code of Federal Regulations Title 47 Parts 24(E), 22(H), 2; and Industry Canada Radio Standards Specification RSS-133 Issue 2, RSS-132 Issue 1 (Provisional).

#### 2.1 GENERAL INFORMATION & DEVICE DESCRIPTION

IDENTIFIER(s)    FCC ID: KBCIX260PNLA775BT    IC ID: 1943A-IX260Pe      Model(s)    ZZGEG4112Z29810    IX260PNLA775BT      Serial No.(s)    ZZGEG4112Z29810    Production Unit    Rugged Laptop PC      Serial No.(s)    X04060400690004    Production Unit    AirCard 775 PCMCIA Modem      Device Description    Rugged Laptop PC with internal transmitter(s) and vehicle cradle    AirCard 775 PCMCIA Modem      Internal Transmitter(s)    Sena NL-3054MP 802.11b/g WLAN Mini-PCI Card    Cirronet BT2022 Bluetooth      Co-Transmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously    §2      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    Ses133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    2 GHz Personal Communication Services (RSS-133)    Excense of transmitter (PCB)      IC Classification    2 GHz Personal Communication Services (RSS-132)    PCS Licensed Transmitter (PCB)    Ecliption      Tx Frequency Range(s)    1820.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      869.2 - 394.8 MHz    GSM GPRS/EDGE    Cellular Band    Cellular Band      Max RF conducted    Operating Band(S) <th>APPLICANT</th> <th>ITRONIX CO</th> <th>RPORATION</th> <th></th> <th></th> <th colspan="4">801 South Stevens Street, Spokane, WA 99204</th> <th>9204</th>	APPLICANT	ITRONIX CO	RPORATION			801 South Stevens Street, Spokane, WA 99204				9204		
Serial No.(s)    ZZGEG4112Z29810    Production Unit    Rugged Laptop PC      Device Description    Rugged Laptop PC with internal transmitter(s) and vehicle cradle    AirCard 775 PCMCIA Modem      Internal Transmitter(s)    Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem    Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem      Co-Transmit Operation    GSM and Bluetooth co-located transmitters do not transmit simultaneously    GSM and Bluetooth co-located transmitters do not transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    RSS-133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    2 GHz Personal Communication Services (RSS-133)    Enclose (RSS-132)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    8692 - 894.8 MHz    GSM GPRS/EDGE    Cellular Band    Cellular Band      Antenna Type(s) Tested    Operating Band (SM    Description    Max. RF Conducted    0.936    W    29.71    dBm    EIRP    Cellular    2.7 *      Max. RF Conducted    QS & GPRS/EDGE    GSM GPRS/EDGE    Cellular    2.7 *    2.7 *    2	IDENTIFIER(S)	FCC ID: KBCIX260PNLA775BT					IC ID: 1943A-IX260Pe					
Serial NO.(s)    X04060400690004    Production Unit    AirCard 775 PC/MCIA Modem      Device Description    Rugged Laptop PC with internal transmitter(s) and vehicle cradle    Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PC/MCIA Modem      Internal Transmitter(s)    Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PC/MCIA Modem      Co-Transmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously      GC Transmit Operation    GSM and WLAN co-located transmitters can transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    RSS-133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    PCS Licensed Transmitter (PCB)    §2      IC Classification    2 GHz Personal Communication Services (RSS-132)    \$30.00      Tx Frequency Range(s)    880.42.2 848.8 MHz    GSM GPRS/EDGE    Cellular Band      Rx Frequency Range(s)    1930.2 - 1990.8 MHz    GSM GPRS/EDGE    PCS Band      Max. RF conducted    Operating Band(s)    Description    Max. RF Output Power Measured (ERP/ERP)    Length      Dual-Band GSM    3-dBi Gain    0.936    W    29.1    dBm    ERP    Cellular	Model(s)				IX26	0PNLA	775BT					
Note    Note    Production Unit    ArCard 7/5 PCMCIA Modem      Device Description    Rugged Laptop PC with internal transmitter(s) and vehicle cradle    Sterra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem      Internal Transmitter(s)    Sterra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem      Co-Transmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    RSS-133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    PCS Licensed Transmitter (PCB)    PCS Licensed Transmitter (PCB)      IC Classification    2 GHz Personal Communication Services (RSS-132)    Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    1850.2 - 1990.8 MHz    GSM GPRS/EDGE    Cellular Band    6869.2 - 894.8 MHz    GSM GPRS/EDGE    Cellular Band      Artenna Type(s) Tested    Operating Band(s)    Description    Max. RF Output Power Measured (EIRP/ERP)    Length      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power    2.7 dBm    2.7 dBm    2.7 dBm    2.7 dBm    2.7 dBm	Sorial No.(s)	ZZGEG4112ZZ	ZZGEG4112ZZ9810 Production Unit Rugged Laptop PC				PC					
Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem      Internal Transmitter(s)    Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem      Contransmitter Senator NL-3054MP 802.11b/g WLAN Mini-PCI Card      Contransmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously      GSM and WLAN co-located transmitters do not transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    RSS-133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    PCS Licensed Transmitter (PCB)      It Classification    PCS Licensed Transmitter (PCB)      It Classification    PCS Licensed Transmitter (PCB)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    Cellular Band      Advise Dipole    PCS Band      Advise Dipole    Cellular Band      Max. Freque	Sena No.(S)	X0406040069	0004		Pro	oductior	n Unit	A	irCard 77	5 PCMCIA	Modem	
Internal Transmitter(s)    Senao NL-3054MP 802.11b/g WLAN Mini-PCI Card      Cirronet BT2022 Bluetooth      Co-Transmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously      FCC Rule Part(s)    §22(H)    §2      IC Rule Part(s)    Status    RSS-132 Issue 1 (Provisional)      FCC Classification    PCS Licensed Transmitter do not transmitter (PCB)      IC Classification    PCS Licensed Transmitter (PCB)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Attenue game game game game game game game gam	Device Description		Rugged Laptop	PC wit	h inte	rnal tra	nsmitter(s) a	nd vehicl	e cradle			
Cirronet BT2022 Bluetooth      Co-Transmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously      GSM and WLAN co-located transmitters do not transmit simultaneously    GSM and WLAN co-located transmitters do not transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    RSS-133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    2 GHz Personal Communication Services (RSS-133)      IC Classification    2 GSM GPRS/EDGE    PCS Band      824.2 - 848.8 MHz    GSM GPRS/EDGE    Cellular Band      829.2 - 1990.8 MHz    GSM GPRS/EDGE    Cellular Band      869.2 - 894.8 MHz    GSM GPRS/EDGE    Cellular Band      BGSM GPRS/EDGE    Cellular Band    4.7 *      Built Band (s)    Description    Max. RF Output Power Measured (EIRP/ERP)    Length      Dual-Band    External    0.936    W 29.71    dBm    EIRP    PCS		Sierra	Wireless AirCa	ard 775	Dual-	Band G	SM GPRS/E	DGE PC	MCIA Mo	odem		
Co-Transmit Operation    GSM and Bluetooth co-located transmitters can transmit simultaneously      GSM and WLAN co-located transmitters do not transmit simultaneously    S2      FCC Rule Part(s)    §24(E)    §22(H)    §2      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)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Bab2.2 - 894.8 MHz    GSM GPRS/EDGE    PCS Band    Cellular Band      Dual-Band    External    0.936    W 29.71    dBm <eirp< th="">    PCS      Dual-Band    Swivel Dipole    2.54    W 34.05    dBm<erp< th="">    Cellular      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power    29.9 dBm Peak    2.7 "      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Avera</erp<></eirp<>	Internal Transmitter(s)		Senao N	L-30541	VP 80	)2.11b/	g WLAN Min	i-PCI Ca	ď			
Co-Transmit Operation    GSM and WLAN co-located transmitters do not transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      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)      IC Classification    800 MHz Cellular Telephones Employing New Technologies (RSS-132)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      824.2 - 848.8 MHz    GSM GPRS/EDGE    Cellular Band    869.2 - 894.8 MHz    GSM GPRS/EDGE    Cellular Band      Rx Frequency Range(s)    1930.2 - 1990.8 MHz    GSM GPRS/EDGE    Cellular Band    0.936 W    29.71    dBm    EIRP PCS    4.7 "      Max RF conducted    Operating Band(s)    Description    Max. RF Conducted    0.261 W    24.17    dBm    EIRP    2.7 "      Max, RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power    25.9 dBm Peak    2.7 "      Operating Mode(s) Tested    GSM GPRS/EDGE    10.512 W    27.09 dBm    ERP				Cirr	onet l	BT2022	Bluetooth					
GSM and WLAN co-located transmitters do not transmit simultaneously      FCC Rule Part(s)    §24(E)    §22(H)    §2      IC Rule Part(s)    RSS-133 Issue 2    RSS-132 Issue 1 (Provisional)      FCC Classification    2 GHz Personal Communication Services (RSS-133)    IC Classification    2 GHz Personal Communication Services (RSS-132)      IC Classification    2 GHz Personal Communication Services (RSS-132)    PCS Band      Tx Frequency Range(s)    1850.2 · 1909.8 MHz    GSM GPRS/EDGE    PCS Band      824.2 · 848.8 MHz    GSM GPRS/EDGE    PCS Band    869.2 · 894.8 MHz    GSM GPRS/EDGE    Cellular Band      Rx Frequency Range(s)    1930.2 · 1990.8 MHz    GSM GPRS/EDGE    PCS Band    Cellular Band      Max. RF conducted    0perating Band(s)    Description    Max. RF Output Power Measured (EIRP/ERP)    Length      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power    29.0 dBm Peak    2.7 "      Max. RF Conducted    GSM GPRS/EDGE    4.7 "    2.7 "    2.7 "    2.7 "      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power	Co-Transmit Operation											
IC Rule Part(s)  RSS-133 Issue 2  RSS-132 Issue 1 (Provisional)    FCC Classification  2 GHz Personal Communication Services (RSS-133)    IC Classification  2 GHz Personal Communication Services (RSS-132)    Tx Frequency Range(s)  1850.2 - 1909.8 MHz  GSM GPRS/EDGE  PCS Band    824.2 - 848.8 MHz  GSM GPRS/EDGE  Cellular Band  Cellular Band    Rx Frequency Range(s)  1930.2 - 1990.8 MHz  GSM GPRS/EDGE  Cellular Band    869.2 - 894.8 MHz  GSM GPRS/EDGE  Cellular Band  Cellular Band    0perating Band(s)  Description  Max. RF Output Power Measured (EIRP/ERP)  Length    Dual-Band  External  0.936  W 29.71  dBm  EIRP  PCS    0ual-Band GSM  3-dBi Gain  0.261  W 24.17  dBm  EIRP  PCS  2.7 "    Max. RF Conducted  28.9 dBm Peak  PCS GSM  Source-Based Time-Averaged Conducted Power  25.9 dBm Peak  2.7 "    Operating Mode(s) Tested  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged)  2.7 "    Max. RF Conducted  28.9 dBm Peak  PCS GSM  Source-Based Time-Averaged Conducted Power  2				located	tran	smitter	s do not tra	nsmit si	multaneo			
FCC Classification    PCS Licensed Transmitter (PCB)      IC Classification    2 GHz Personal Communication Services (RSS-133)      800 MHz Cellular Telephones Employing New Technologies (RSS-132)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      824.2 - 848.8 MHz    GSM GPRS/EDGE    Cellular Band    Cellular Band      869.2 - 1990.8 MHz    GSM GPRS/EDGE    PCS Band    Cellular Band      869.2 - 894.8 MHz    GSM GPRS/EDGE    Cellular Band    Cellular Band      869.2 - 894.8 MHz    GSM GPRS/EDGE    Cellular Band    Cellular Band    Cellular Band      0perating Band(s)    Description    Max. RF Output Power Measured (EIRP/ERP)    Length      0ual-Band    Swivel Dipole    2.54    W    34.05    dBm    EIRP    Cellular      0ual-Band GSM    3-dBi Gain    0.261    W    24.17    dBm    EIRP    2.7 "      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power    25.9 dBm Peak    2.7 "      Operating Mode(s) Tested    GSM GPRS/EDGE    4 Time Slots (Class 12)    50% Duty Cy		<b>.</b> .	,			§22(				ÿ		
IC Classification    2 GHz Personal Communication Services (RSS-133)      Tx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    PCS Band      Rx Frequency Range(s)    1850.2 - 1909.8 MHz    GSM GPRS/EDGE    Cellular Band      Rx Frequency Range(s)    1930.2 - 1990.8 MHz    GSM GPRS/EDGE    PCS Band      Max. RF conducted    0perating Band(s)    Description    Max. RF Output Power Measured (EIRP/ERP)    Length      Max. RF Conducted    0ual-Band GSM    3-dBi Gain    0.261    W    24.17    dBm    EIRP    PCS    2.7 "      Max. RF Conducted    28.9 dBm Peak    PCS GSM    Source-Based Time-Averaged Conducted Power    29.0 dBm Peak    2.5.9 dBm Peak    2.5.9 dBm Peak    20.0 dBm Peak    238KGXW, 242KGXW, 240KG7W, 242KG7W    25.9 PPM (Cellular GSM)    2.5 PPM (Cellular	IC Rule Part(s)	RS	S-133 Issue 2						ssue 1 (P	rovisional)		
BOD MHz Cellular Telephones Employing New Technologies (RSS-132)Tx Frequency Range(s)1850.2 - 1909.8 MHzGSM GPRS/EDGEPCS Band824.2 - 848.8 MHzGSM GPRS/EDGECellular BandRx Frequency Range(s)1930.2 - 1990.8 MHzGSM GPRS/EDGECellular Band869.2 - 894.8 MHzGSM GPRS/EDGECellular Band0perating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-BandExternal0.936W29.71dBmEIRPPCS0ual-Band GSM3-dBi Gain0.261W24.17dBmEIRPPCS2.7 "Max. RF Conducted Output Power Tested28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm Peak29.0 dBm Peak29.0 dBm Peak20.0 dBm Peak25.9 PM (PCS GSM)2.5 PPM (Cellular GSM)Modulation Type(s)Cast State	FCC Classification						<b>`</b>	,				
Tx Frequency Range(s)1850.2 - 1909.8 MHzGSM GPRS/EDGEPCS BandRx Frequency Range(s)824.2 - 848.8 MHzGSM GPRS/EDGECellular BandRx Frequency Range(s)1930.2 - 1990.8 MHzGSM GPRS/EDGEPCS Band869.2 - 894.8 MHzGSM GPRS/EDGECellular BandOperating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-BandExternal0.936W29.71dBmEIRPPCSGSM GPRS/EDGESwivel Dipole2.54W34.05dBmERPCellularDual-Band GSM3-dBi Gain0.261W24.17dBmEIRPPCS2.7 "Max. RF Conducted28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm Peak2.7 "Operating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)29.0 dBm PeakModulation Type(s)Emission Designator(s)2.5 PPM (PCS GSM)2.5 PPM (Cellular GSM)	IC Classification								,			
Ix Frequency Range(s)824.2 - 848.8 MHzGSM GPRS/EDGECellular BandRx Frequency Range(s)1930.2 - 1990.8 MHzGSM GPRS/EDGECellular BandRx Frequency Range(s)1930.2 - 1990.8 MHzGSM GPRS/EDGECellular Band869.2 - 894.8 MHzGSM GPRS/EDGECellular BandOperating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-Band GSM GPRS/EDGESwivel Dipole2.54W34.05dBmEIRPPCSMax. RF Conducted Output Power TestedGSM GPRS/EDGESwivel Dipole2.54W34.05dBmEIRPPCSMax. RF Conducted Output Power Tested28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm PeakOperating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged Conducted Power25.9 dBm PeakOL28.9 dBm PeakCellular GSMSource-Based Time-Averaged Conducted Power29.0 dBm PeakOperating Mode(s) TestedGSM GPRS/EDGE <th c<="" th=""><th></th><th></th><th></th><th></th><th></th><th></th><th>÷</th><th>nologies</th><th></th><th></th><th></th></th>	<th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>÷</th> <th>nologies</th> <th></th> <th></th> <th></th>							÷	nologies			
Rx Frequency Range(s)1930.2 - 1990.8 MHzGSM GPRS/EDGECellular Band869.2 - 894.8 MHzGSM GPRS/EDGEPCS Band869.2 - 894.8 MHzGSM GPRS/EDGECellular Band0perating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-BandExternal0.936W29.71dBmEIRPPCS0perating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-BandExternal0.936W29.71dBmEIRPPCS0perating Band (SM3-dBi Gain0.261W24.17dBmEIRPPCS0perating Band (SM3-dBi Gain0.261W27.09dBmERPCellular0perating Mode(s) Tested28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm Peak2.7 "0perating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged Conducted Power29.0 dBm Peak0perating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)Modulation Type(s)GMSK238KGXW, 242KGXW, 240KG7W, 242KG7W4.5 PPM (Cellular GSM)Frequency Tolerance(s)2.5 PPM (PCS GSM)2.5 PPM (Cellular GSM)	Tx Frequency Range(s)											
Rx Frequency Range(s)869.2 - 894.8 MHzGSM GPRS/EDGECellular BandOperating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-BandExternal0.936W29.71dBmEIRPPCS4.7 "Max. RF Output Power Measured (SM GPRS/EDGESwivel Dipole2.54W34.05dBmERPCellularDual-Band GSM3-dBi Gain0.261W24.17dBmEIRPPCS2.7 "Max. RF Conducted28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm Peak25.9 dBm PeakOperating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)29.0 dBm PeakModulation Type(s)GMSK238KGXW, 242KGXW, 240KG7W, 242KG7W2.5 PPM (Cellular GSM)2.5 PPM (Cellular GSM)												
Antenna Type(s) TestedOperating Band(s)DescriptionMax. RF Output Power Measured (EIRP/ERP)LengthDual-Band GSM GPRS/EDGEExternal Swivel Dipole0.936W29.71dBmEIRPPCS4.7 "Dual-Band GSM GPRS/EDGE3-dBi Gain Vehicle-Mount0.261W24.17dBmEIRPPCS2.7 "Max. RF Conducted Output Power Tested28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm Peak25.9 dBm Peak2.7 "Operating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)29.0 dBm Peak29.0 dBm PeakOperating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)29.0 dBm PeakModulation Type(s)GSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)Averaged)Frequency Tolerance(s)2.5 PPM (PCS GSM)2.5 PPM (Cellular GSM)2.5 PPM (Cellular GSM)	Rx Frequency Range(s)											
Antenna Type(s) TestedDual-Band GSM GPRS/EDGEExternal Swivel Dipole0.936W29.71dBmEIRPPCS4.7 "2.54W34.05dBmERPCellular4.7 "4.7 "4.7 "4.7 "Dual-Band GSM GPRS/EDGE3-dBi Gain Vehicle-Mount0.261W24.17dBmEIRPPCS2.7 "Max. RF Conducted Output Power Tested28.9 dBm PeakPCS GSMSource-Based Time-Averaged Conducted Power25.9 dBm Peak2.7 "Max. Operating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged Conducted Power29.0 dBm PeakOperating Mode(s) TestedGSM GPRS/EDGE4 Time Slots (Class 12)50% Duty Cycle (Source-Based Time-Averaged)Averaged)Modulation Type(s)GMSKCalled Class 12)Source-Based Time-Averaged Conducted Power29.0 dBm PeakEmission Designator(s)2.5 PPM (PCS GSM)2.5 PPM (Cellular GSM)												
Antenna Type(s) Tested  GSM GPRS/EDGE  Swivel Dipole  2.54  W  34.05  dBm  ERP  Cellular  4.7 *    Dual-Band GSM GPRS/EDGE  3-dBi Gain Vehicle-Mount  0.261  W  24.17  dBm  EIRP  PCS  2.7 *    Max. RF Conducted Output Power Tested  28.9 dBm Peak  PCS GSM  Source-Based Time-Averaged Conducted Power  25.9 dBm Peak  2.7 *    Operating Mode(s) Tested  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged Conducted Power  29.0 dBm Peak    Operating Mode(s) Tested  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged)  Averaged)    Modulation Type(s)  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged)    Frequency Tolerance(s)  2.5 PPM (PCS GSM)  2.5 PPM (Cellular GSM)						-					Length	
Anterind Type(s) rested  Concernment of the second seco								-			4.7 "	
GPRS/EDGE  Vehicle-Mount  0.512  W  27.09  dBm  ERP  Cellular    Max. RF Conducted Output Power Tested  28.9 dBm Peak  PCS GSM  Source-Based Time-Averaged Conducted Power  25.9 dBm Peak  26.9 dBm Peak    Operating Mode(s) Tested  32.0 dBm Peak  Cellular GSM  Source-Based Time-Averaged Conducted Power  29.0 dBm Peak    Operating Mode(s) Tested  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged)    Modulation Type(s)  GMSK    Emission Designator(s)  238KGXW, 242KGXW, 240KG7W, 242KG7W    Frequency Tolerance(s)  2.5 PPM (PCS GSM)  2.5 PPM (Cellular GSM)	Antenna Type(s) Tested			2.0								
Max. RF Conducted Output Power Tested  28.9 dBm Peak  PCS GSM  Source-Based Time-Averaged Conducted Power  25.9 dBm Peak    Operating Mode(s) Tested  32.0 dBm Peak  Cellular GSM  Source-Based Time-Averaged Conducted Power  29.0 dBm Peak    Operating Mode(s) Tested  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged)    Modulation Type(s)  GMSK    Emission Designator(s)  238KGXW, 242KGXW, 240KG7W, 242KG7W    Frequency Tolerance(s)  2.5 PPM (PCS GSM)  2.5 PPM (Cellular GSM)											2.7 "	
Output Power Tested  32.0 dBm Peak  Cellular GSM  Source-Based Time-Averaged Conducted Power  29.0 dBm Peak    Operating Mode(s) Tested  GSM GPRS/EDGE  4 Time Slots (Class 12)  50% Duty Cycle (Source-Based Time-Averaged)    Modulation Type(s)  GMSK    Emission Designator(s)  238KGXW, 242KGXW, 240KG7W, 242KG7W    Frequency Tolerance(s)  2.5 PPM (PCS GSM)  2.5 PPM (Cellular GSM)	Mars DE Oandustad			0.0							dDm Deels	
Operating Mode(s) Tested    GSM GPRS/EDGE    4 Time Slots (Class 12)    50% Duty Cycle (Source-Based Time-Averaged)      Modulation Type(s)    GMSK      Emission Designator(s)    238KGXW, 242KGXW, 240KG7W, 242KG7W      Frequency Tolerance(s)    2.5 PPM (PCS GSM)    2.5 PPM (Cellular GSM)												
Modulation Type(s)    GMSK      Emission Designator(s)    238KGXW, 242KGXW, 240KG7W, 242KG7W      Frequency Tolerance(s)    2.5 PPM (PCS GSM)    2.5 PPM (Cellular GSM)												
Emission Designator(s)238KGXW, 242KGXW, 240KG7W, 242KG7WFrequency Tolerance(s)2.5 PPM (PCS GSM)2.5 PPM (Cellular GSM)					(elageu)							
Frequency Tolerance(s)    2.5 PPM (PCS GSM)    2.5 PPM (Cellular GSM)												
			,		1	11V		2.51110	,	1	.2	
Power Source(s) Tested    Vehicle Battery    12 V    (For Vehicle Cradle)	Power Source(s) Tested		,						Model: A2121-2 (For Vehicle Cradle)			

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A	-IX260Pe
Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth							NIX <sup>.</sup>	
2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. 3 of 19							3 of 19	



Test Report S/N:	102604KBC-T575-E24G				
Test Date(s):	August 30 - September 09, 2004				
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132			
Lab Registration(s):	FCC #714830	IC Lab File #3874			

## FCC PART 24(E) & 22(H) EMC MEASUREMENT REPORT (Continued)

## 3.1 TEST EQUIPMENT LIST

Equipment Type	Model	Serial No.	Calibration Due Date
HP Signal Generator	8648D (9kHz-4.0GHz)	3847A00611	April 2005
Rohde & Schwarz Signal Generator	SMR 20 (10MHz-40GHz)	100104	April 2005
Gigatronics Power Meter	8651A	8650137	April 2005
Gigatronics Power Meter	8652A	1835267	April 2005
Gigatronics Power Sensor	80701A (0.05-18GHz)	1833535	April 2005
Gigatronics Power Sensor	80701A (0.05-18GHz)	1833542	April 2005
Gigatronics Power Sensor	80701A (0.05-18GHz)	1834350	April 2005
Amplifier Research Power Amp.	5S1G4 (5W, 800MHz-4.2GHz)	26235	N/A
Amplifier Research Power Amp.	10W1000C (0.5 – 1 GHz)	27887	N/A
Microwave System Amplifier	HP 83017A (0.5-26.5GHz)	3123A00587	N/A
Network Analyzer	HP 8753E (30kHz-3GHz)	US38433013	April 2005
Frequency Counter	HP 53181A (3GHz)	3736A05175	April 2005
DC Power Supply	HP E3611A	KR83015294	N/A
Multi-Device Controller	EMCO 2090	9912-1484	N/A
Mini Mast	EMCO 2075	0001-2277	N/A
Turntable	EMCO 2080-1.2/1.5	0002-1002	N/A
Double Ridged Horn Antenna	ETS 3115 (1-18GHz) TX Substitution Antenna (Horn SN6267)	6267	Oct 2004
Double Ridged Horn Antenna	ETS 3115 (1-18GHz)	6276	Oct 2004
Standard Gain Horn Antenna	ETS 3160-09 TX Substitution Antenna (3160-09)	9810-1123	N/A
Standard Gain Horn Antenna	ETS 3160-09	1263	N/A
Bilog Antenna	Schaffner CBL6111A	1607	Jan 2005
Roberts Dipole Antenna	3121C-DB4 TX Substitution Antenna (B_3121C)	0003-1494	Dec 2004
Roberts Dipole Antenna	3121C-DB4	0003-1498	Dec 2004
Spectrum Analyzer	HP 8594E	3543A02721	April 2005
Spectrum Analyzer	HP E4408B	US39240170	Dec 2004
Shielded Screen Room	Lindgren R.F. 18W-2/2-0	16297	N/A
Environmental Chamber	ESPEC ECT-2 (Temperature/Humidity)	0510154-B	Feb 2005
Directional Coupler	Amplifier Research DC7154 (0.8-4.2 GHz)	26197	N/A
Directional Coupler	Pasternack PE2214-20	00078	N/A
High Pass Filter	Microwave Circuits HIG318G1	0001DC0020	N/A
High Pass Filter	Microwave Circuits H02G18G1	0001DC0020	N/A
30 dB Attenuator	Pasternack PE7019-30	00065	N/A

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe
Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth							
2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. 4 of 19							



Test Report S/N:	102604KBC-T575-E24G				
Test Date(s):	August 30 - September 09, 2004				
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132			
Lab Registration(s):	FCC #714830	IC Lab File #3874			

### APPENDIX A - RF OUTPUT POWER MEASUREMENT - §2.1046

#### A.1. MEASUREMENT PROCEDURE

The peak conducted power levels for PCS and cellular bands were measured at the Sierra Wireless AirCard 775 PCMCIA Modem antenna connector port using a Gigatronics 8652A Universal Power Meter in burst average power mode. An offset was entered into the power meter to correct for the losses of the attenuator and cable installed between the transmitter output port and the power sensor input. The Sierra Wireless AC775 test software was used to set the DUT to transmit at a maximum rated power and data rate as defined by the manufacturer. All subsequent tests were performed using the same power measurement procedures.

#### A.2. MEASUREMENT DATA

RF CONDUCTED OUTPUT POWER MEASUREMENTS (measured at the AirCard 775 PCMCIA Modem Antenna Port)							
Frequency (MHz)Channel No.Peak Power (dBm)Frequency 							
824.2	128	31.9	1850.2	512	28.9		
836.6	190	31.9	1880.0	661	28.9		
848.8	251	32.0	1909.8	810	28.9		

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe
Rugged La	ptop PC with internal [	Jual-Band	GSM GPRS/EDGE Mo	dem, 802.1 <sup>-</sup>	1b/g WLAN, & Bluetooth		<b>ITRONIX</b>
2004 Celltech	Labs Inc. This docum	ent is not to l	be reproduced in whole o	r in part with	out the written permission of C	elltech Lab	s Inc. 5 of 19



Test Report S/N:		102604KBC-T575-E24G
Test Date(s):	August	30 - September 09, 2004
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132
Lab Registration(s):	FCC #714830	IC Lab File #3874

### APPENDIX B - EFFECTIVE ISOTROPIC RADIATED POWER OUTPUT - §24.232(b)

#### **B.1. MEASUREMENT PROCEDURE**

EIRP measurements were made on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-B-2002. The Sierra Wireless AirCard 775 test software installed in the IX260+ Laptop PC was used to set the DUT to transmit at a maximum rated power and data rate, as defined by the manufacturer. The DUT was placed on a turntable 3 meters from the receive antenna. For the swivel dipole antenna evaluation, the DUT was placed on a Styrofoam support at the center of the turntable, 1 meter above the ground plane. For the vehicle-mount antenna evaluation, the antenna was fixed on a 50 cm x 50 cm ground plane placed on a Styrofoam support, at a distance of 3 meters from the receive antenna, and connected to the transmitter via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The IX260+ Laptop PC was installed in the vehicle cradle placed on the turntable below the 50 cm x 50 cm ground plane. The maximum field intensity was determined by rotating the DUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters. Once the maximum emission was found, the spectrum analyzer was set to peak hold and the uncorrected emission value recorded for each of the low, mid and high channels tested. The DUT was then substituted with a horn antenna. A signal, simulating the DUT emission was generated, amplified, and fed through a directional coupler to the substitution antenna. The height and direction of the receive antenna as well as the direction of the substitution horn was adjusted for a maximum received signal. The power applied to the horn was then adjusted to give the same field strength reading as previously recorded for the DUT and the power at the forward coupler port recorded. The substitution antenna was then replaced with a calibrated power sensor, the forward coupler port power level confirmed and the power applied to the horn antenna recorded. The EIRP level was determined by correcting the applied feed point power with the addition of the horn gain.

(See next page for measurement data)

#### **B.2. MEASUREMENT SETUP**

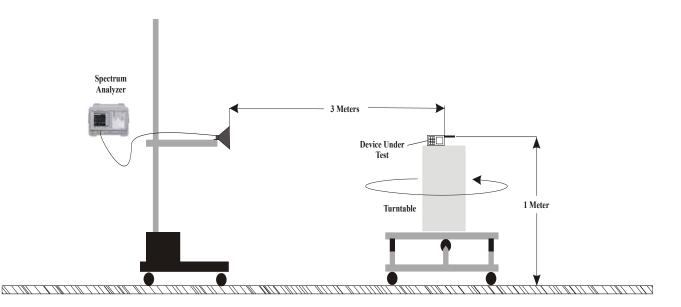


Figure 1. Radiated Power Measurement Test Setup Diagram

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe
Rugged La	ptop PC with internal D	Jual-Band	GSM GPRS/EDGE Mo	dem, 802.1 <sup>-</sup>	1b/g WLAN, & Bluetooth		ITRONIX
2004 Celltech	Labs Inc. This docume	ent is not to l	be reproduced in whole o	r in part with	out the written permission of C	elltech Lab	s Inc. 6 of 19



Test Report S/N:		102604KBC-T575-E24G
Test Date(s):	August	30 - September 09, 2004
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132
Lab Registration(s):	FCC #714830	IC Lab File #3874

# EFFECTIVE ISOTROPIC RADIATED POWER OUTPUT - §24.232(b) (Continued)

## **B.3. MEASUREMENT DATA**

Substitution Antenna Type	Product:	Frequency	IX260+ with AC	775 Swivel Dipole A Substituted	ntenna Carri	ier Power Leve	ls		Test End D	ate:	9-Sep-04	
Antenna Type	Channel	Frequency			ntenna Carri	ier Power Leve	ls					
Antenna Type	Channel	Frequency	Corrected	Substituted								
			Field Strength	SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Carrier E	IRP Level	EIRP	Limit	Margin	Pass/Fa
		MH7	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
Horn SN6267	512	1850.20	130.75	98.80	22.00	6.55	28.55	0.717	33.01	2.00	4.46	PASS
Horn SN6267	661	1880.00	130.99	98.90	22.62	6.58	29.20	0.832	33.01	2.00	3.81	PASS
Horn SN6267	810	1909.80	131.05	98.80	23.10	6.61	29.71	0.936	33.01	2.00	3.30	PASS
Horn SN6267	512	1850.20	125.35	93.40	17.83	6.55	24.38	0.274	33.01	2.00	8.63	PASS
Horn SN6267	661	1880.00	125.19	93.10	17.32	6.58	23.90	0.245	33.01	2.00	9.11	PASS
Horn SN6267	810	1909.80	124.95	92.70	16.87	6.61	23.48	0.223	33.01	2.00	9.53	PASS
e:	a v au da atitu di s											
TARLERINA USED I	or substitutio	זו										
nulae:	Deuver en ri	adta Antonna (d	Deel : Antonno (	ain (dDi)								
. ,			orrij + Antenna G	am (abi)								
	Horn SN6267 Horn SN6267 Horn SN6267 Horn SN6267 Horn SN6267 Horn SN6267 E antenna used f natenna used f nulae: P Level (dBm) =	Horn SN6267    661      Horn SN6267    810      Horn SN6267    512      Horn SN6267    661      Horn SN6267    810      Antenna used for substitution      nulae:      P Level (dBm) = Power appli	Horn SN6267    661    1880.00      Horn SN6267    810    1909.80      Horn SN6267    512    1850.20      Horn SN6267    661    1880.00      Horn SN6267    661    1880.00      Horn SN6267    810    1909.80      Antenna used for substitution    Internation	Horn SN6267    661    1880.00    130.99      Horn SN6267    810    1909.80    131.05      Horn SN6267    512    1850.20    125.35      Horn SN6267    661    1880.00    125.19      Horn SN6267    810    1909.80    124.95      Antenna used for substitution	Horn SN6267    661    1880.00    130.99    98.90      Horn SN6267    810    1909.80    131.05    98.80      Horn SN6267    512    1850.20    125.35    93.40      Horn SN6267    661    1880.00    125.19    93.10      Horn SN6267    810    1909.80    124.95    92.70      Horn SN6267    810    1909.80    124.95    92.70      Antenna used for substitution	Horn SN6267    661    1880.00    130.99    98.90    22.62      Horn SN6267    810    1909.80    131.05    98.80    23.10      Horn SN6267    512    1850.20    125.35    93.40    17.83      Horn SN6267    661    1880.00    125.19    93.10    17.32      Horn SN6267    810    1909.80    124.95    92.70    16.87      Antenna used for substitution	Horn SN6267    661    1880.00    130.99    98.90    22.62    6.58      Horn SN6267    810    1909.80    131.05    98.80    23.10    6.61      Horn SN6267    512    1850.20    125.35    93.40    17.83    6.55      Horn SN6267    661    1880.00    125.19    93.10    17.32    6.58      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61      Mattenna used for substitution	Horn SN6267    661    1880.00    130.99    98.90    22.62    6.58    29.20      Horn SN6267    810    1909.80    131.05    98.80    23.10    6.61    29.71      Horn SN6267    512    1850.20    125.35    93.40    17.83    6.55    24.38      Horn SN6267    661    1880.00    125.19    93.10    17.32    6.58    23.90      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48      Antenna used for substitution	Horn SN6267    661    1880.00    130.99    98.90    22.62    6.58    29.20    0.832      Horn SN6267    810    1909.80    131.05    98.80    23.10    6.61    29.71    0.936      Horn SN6267    512    1850.20    125.35    93.40    17.83    6.55    24.38    0.274      Horn SN6267    661    1880.00    125.19    93.10    17.32    6.58    23.90    0.245      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48    0.223      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48    0.223      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48    0.223      Antenna used for substitution    Image:    Image:	Horn SN6267    661    1880.00    130.99    98.90    22.62    6.58    29.20    0.832    33.01      Horn SN6267    810    1909.80    131.05    98.80    23.10    6.61    29.71    0.936    33.01      Horn SN6267    512    1850.20    125.35    93.40    17.83    6.55    24.38    0.274    33.01      Horn SN6267    661    1880.00    125.19    93.10    17.83    6.55    24.38    0.274    33.01      Horn SN6267    661    1880.00    125.19    93.10    17.32    6.58    23.90    0.245    33.01      Horn SN6267    810    1909.80    124.95    92.70    16.87    6.61    23.48    0.223    33.01      Antenna used for substitution    Internation of the substit the substition	Horn SN6267  661  1880.00  130.99  98.90  22.62  6.58  29.20  0.832  33.01  2.00    Horn SN6267  810  1909.80  131.05  98.80  23.10  6.61  29.71  0.936  33.01  2.00    Horn SN6267  512  1850.20  125.35  93.40  17.83  6.55  24.38  0.274  33.01  2.00    Horn SN6267  661  1880.00  125.19  93.10  17.83  6.55  24.38  0.274  33.01  2.00    Horn SN6267  661  1880.00  125.19  93.10  17.32  6.58  23.90  0.245  33.01  2.00    Horn SN6267  810  1909.80  124.95  92.70  16.87  6.61  23.48  0.223  33.01  2.00    Antenna used for substitution  Image:  Image:	Horn SN6267  661  1880.00  130.99  98.90  22.62  6.58  29.20  0.832  33.01  2.00  3.81    Horn SN6267  810  1909.80  131.05  98.80  23.10  6.61  29.71  0.936  33.01  2.00  3.30    Horn SN6267  512  1850.20  125.35  93.40  17.83  6.55  24.38  0.274  33.01  2.00  8.63    Horn SN6267  661  1860.00  125.19  93.40  17.83  6.55  24.38  0.274  33.01  2.00  8.63    Horn SN6267  661  1860.00  125.19  93.10  17.32  6.58  23.90  0.245  33.01  2.00  9.53    Horn SN6267  810  1909.80  124.95  92.70  16.87  6.61  23.48  0.223  33.01  2.00  9.53    Antenna used for substitution

1	Celltech		Project Nu Company:		072804-540aKi Itronix	BC					Standard: Test Start I	Date:	FCC24.2	
	Testrigan		Product:		IX260+ with AC	775					Test End D	ate:	9-Sep-04	
						Mobile Ante	nna Carrier F	ower Levels						
Polarity	Distance	Substitution E Frequ		Substitution Antenna Type	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Carrier EIRP Level		EIRP Limit		Margin	Pass/Fa	
	m			MH7	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
Н	3	Horn SN6267	512	1850.20	119.05	87.10	10.17	6.55	16.72	0.047	33.01	2.00	16.29	PASS
н	3	Horn SN6267	661	1880.00	116.09	84.00	7.74	6.58	14.32	0.027	33.01	2.00	18.69	PASS
н	3	Horn SN6267	810	1909.80	116.95	84.70	8.95	6.61	15.56	0.036	33.01	2.00	17.45	PASS
V	3	Horn SN6267	512	1850.20	125.05	93.10	17.62	6.55	24.17	0.261	33.01	2.00	8.84	PASS
V	3	Horn SN6267	661	1880.00	123.59	91.50	15.59	6.58	22.17	0.165	33.01	2.00	10.84	PASS
V	3	Horn SN6267	810	1909.80	124.45	92.20	16.34	6.61	22.95	0.197	33.01	2.00	10.06	PASS
	Note: Horn	Antenna used fo	or substitutio	n										
	Form													
		Level (dBm) = f in (dB) = Limit (r			Bm) + Antenna G	aın (dBi)								
	warg	in (ub) = Limit (i	uonn) - Leve	r (upin)										+ +

Applicant:  Itronix Corporation  Model:  IX260PNLA775BT  FCC ID:  KBCIX260PNLA775BT  IC ID:  1943A-I    Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modern, 802.11b/g WLAN, & Bluetooth  Image: Constraint of the second							-IX260Pe	
Rugged La	ptop PC with internal E	Jual-Band	GSM GPRS/EDGE Mo	dem, 802.1 <sup>-</sup>	1b/g WLAN, & Bluetooth		ITRO	NIX <sup>.</sup>
2004 Celltech	Labs Inc. This docume	ent is not to l	pe reproduced in whole o	r in part with	out the written permission of C	elltech Labs	s Inc.	7 of 19



Test Report S/N:		102604KBC-T575-E24G
Test Date(s):	August	30 - September 09, 2004
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132
Lab Registration(s):	FCC #714830	IC Lab File #3874

### **APPENDIX C - EFFECTIVE RADIATED POWER OUTPUT - §22.913**

#### C.1. MEASUREMENT PROCEDURE

ERP measurements were made on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-B-2002. The Sierra Wireless AirCard 775 test software installed in the IX260+ Laptop PC was used to set the DUT to transmit at a maximum rated power and data rate, as defined by the manufacturer. The DUT was placed on a turntable 3 meters from the receive antenna. For the swivel dipole antenna evaluation, the DUT was placed on a Styrofoam support at the center of the turntable, 1 meter above the ground plane. For the vehicle-mount antenna evaluation, the antenna was fixed on a 50 cm x 50 cm ground plane placed on a Styrofoam support, at a distance of 3 meters from the receive antenna, and connected to the transmitter via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The IX260+ Laptop PC was installed in the vehicle cradle placed on the turntable below the 50 cm x 50 cm ground plane. The maximum field intensity was determined by rotating the DUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters. Once the maximum emission was found, the spectrum analyzer was set to peak hold and the uncorrected emission value recorded for each of the low, mid and high channels tested. The DUT was then substituted with a dipole antenna. A signal, simulating the DUT emission was generated, amplified, and fed through a directional coupler to the substitution antenna. The height and direction of the receive antenna as well as the direction of the substitution dipole was adjusted for a maximum received signal. The power applied to the dipole was then adjusted to give the same field strength reading as previously recorded for the DUT and the power at the forward coupler port recorded. The substitution antenna was then replaced with a calibrated power sensor, the forward coupler port power level confirmed and the power applied to the dipole antenna recorded. The ERP level was determined by correcting the applied feed point power with the addition of the dipole gain.

(See next page for measurement data)

#### **C.2. MEASUREMENT SETUP**

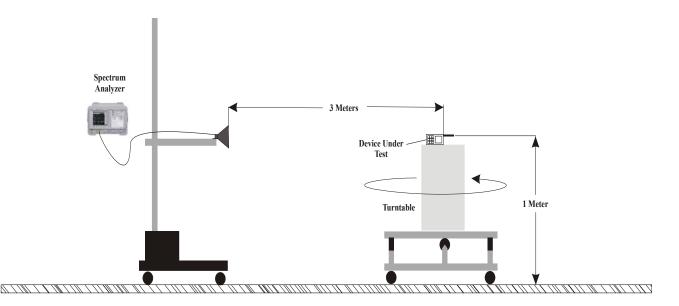


Figure 2. Radiated Power Measurement Test Setup Diagram

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe
Rugged La	ptop PC with internal E	Dual-Band	GSM GPRS/EDGE Mo	dem, 802.1 <sup>-</sup>	1b/g WLAN, & Bluetooth		ITRONIX
2004 Celltech	Labs Inc. This docume	ent is not to l	be reproduced in whole o	r in part with	out the written permission of C	elltech Lab	s Inc. 8 of 19



Test Report S/N:		102604KBC-T575-E24G
Test Date(s):	August	30 - September 09, 2004
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132
Lab Registration(s):	FCC #714830	IC Lab File #3874

# EFFECTIVE RADIATED POWER OUTPUT - §22.913 (Continued)

## C.3. MEASUREMENT DATA

(	Cel		Project Nu Company:		072804-540aK Itronix	BC					Standard: Test Start [		FCC22.9 8-Sep-04	
	Testing and	Engineering Senilces Lab	Product:		IX260+ with AC	775					Test End D	ate:	9-Sep-04	ļ
						Swivel Dipole A	Antenna Carr	ier Power Leve	els		_			
Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Carrier E	RP Level	ERP	Limit	Margin	Pass/Fa
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
н	3	B_3121C	128	824.20	126.05	100.90	34.90	1.29	34.05	2.54	38.45	7.00	4.40	PASS
н	3	B_3121C	190	836.60	126.28	100.80	34.72	1.44	34.02	2.52	38.45	7.00	4.43	PASS
Н	3	B_3121C	251	848.80	126.29	100.70	34.50	1.59	33.94	2.48	38.45	7.00	4.51	PASS
V	3	B_3121C	128	824.20	123.85	98.70	32.95	1.29	32.10	1.62	38.45	7.00	6.35	PASS
V	3	B_3121C	190	836.60	124.38	98.90	32.57	1.44	31.87	1.54	38.45	7.00	6.58	PASS
V	3	B_3121C	251	848.80	123.99	98.40	32.62	1.59	32.07	1.61	38.45	7.00	6.38	PASS
	Note: Dipole	e Antenna use	d for substit	ution										
				,	lBm) + Antenna (	∋ain (dBi) - 2.14								

	Ω.		Project Nu	imber:	072804-540aK	BC					Standard:		FCC22.9	13
1	Cel	ltech	Company:		ltronix						Test Start [	Date:	8-Sep-04	
	Testing and	Engineering Services Lab	Product:		IX260+ with AC	775					Test End D	ate:	9-Sep-04	F
						Mobile Ante	nna Carrier F	Power Levels						
Polarity	Distance	Substitution Antenna Type			Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Carrier ERP Level		ERP Limit		Margin	Pass/Fa
	m		-	MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
Н	3	B_3121C	128	824.20	114.25	89.10	19.02	1.29	18.17	0.066	38.45	7.00	20.28	PASS
н	3	B_3121C	190	836.60	114.98	89.50	19.54	1.44	18.84	0.077	38.45	7.00	19.61	PASS
н	3	B_3121C	251	848.80	113.99	88.40	18.99	1.59	18.44	0.070	38.45	7.00	20.01	PASS
V	3	B_3121C	128	824.20	119.05	93.90	27.49	1.29	26.64	0.461	38.45	7.00	11.81	PASS
V	3	B_3121C	190	836.60	120.28	94.80	27.79	1.44	27.09	0.512	38.45	7.00	11.36	PASS
V	3	B_3121C	251	848.80	119.49	93.90	26.87	1.59	26.32	0.428	38.45	7.00	12.13	PASS
	Note: Dipol	e Antenna used	for substitu	tion										
	Form		Power applie	ed to Antenna (d	3m) + Antenna G	ain (dBi) - 2 14								
		n (dB) = Limit (												

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe			
Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth										
2004 Celltech	2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. 9 of 19									



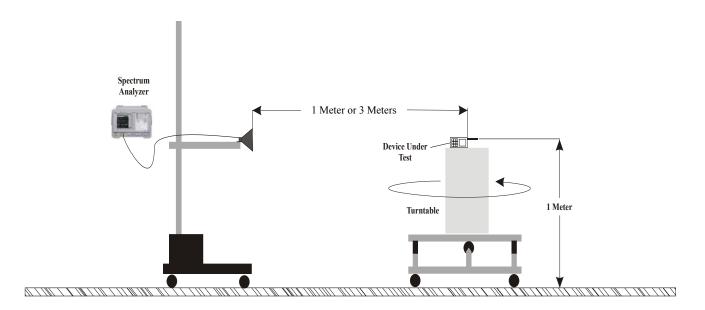
Test Report S/N:	102604KBC-T575-E240					
Test Date(s):	August 30 - September 09, 200					
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132				
Lab Registration(s):	FCC #714830	IC Lab File #3874				

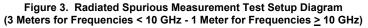
#### APPENDIX D - FIELD STRENGTH OF SPURIOUS RADIATION - §24.238, 22.917

#### **D.1. MEASUREMENT PROCEDURE**

EIRP measurements were made on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-B-2002. The Sierra Wireless AirCard 775 test software installed in the IX260+ Laptop PC was used to set the DUT to transmit at a maximum rated power and data rate, as defined by the manufacturer. The DUT was placed on a turntable 3 meters from the receive antenna. For the swivel dipole antenna evaluation, the DUT was placed on a Styrofoam support at the center of the turntable, 1 meter above the ground plane. For the vehicle-mount antenna evaluation, the antenna was fixed on a 50 cm x 50 cm ground plane placed on a Styrofoam support, at a distance of 3 meters from the receive antenna, and connected to the transmitter via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The IX260+ Laptop PC was installed in the vehicle cradle placed on the turntable below the 50 cm x 50 cm ground plane. A frequency band from just above the highest transmitted frequency to just above the 10<sup>th</sup> harmonic of the highest transmitted frequency was divided into smaller bands corresponding to measurement equipment setups and capabilities. The measurement equipment including carrier blocking filters, was optimized for maximum sensitivity for each band while ensuring no saturation occurred in any gain stages that may be present. It was also necessary to measure the bands above 10 GHz at a distance of 1 meter versus the 3-meter measurement distance used for the lower bands. The applicable bands were chosen from: 800 MHz to 1 GHz, 1 GHz to 5 GHz, 5 GHz to 10 GHz, 10 GHz to 18 GHz and 18 GHz to 20 GHz. The maximum field intensity in each of these bands were determined by rotating the DUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters while maintaining the spectrum analyzer trace in max hold. The stored trace was then evaluated to determine any significant emissions that should be evaluated by substitution. The frequency and uncorrected field strength level for each significant emission was recorded. To describe the noise floor, the maximum level associated with a number of frequencies within the band were also recorded. The DUT was then substituted with a transmit antenna. A signal simulating the DUT emission was generated for each of the signals recorded; it was amplified and fed through a directional coupler to the substitution antenna. The height and direction of the receive antenna as well as the direction of the substitution horn was adjusted for a maximum received signal. The power applied to the transmit antenna was then adjusted to give the same field strength reading as previously recorded for the DUT and the power at the forward coupler port recorded. The substitution antenna was then replaced with a calibrated power sensor, the forward coupler port power level confirmed and the power applied to the horn antenna recorded. The radiated power level was determined by correcting the applied feed point power with the addition of the antenna gain.

#### **D.2. MEASUREMENT SETUP**





Applicant:    Itronix Corporation    Model:    IX260PNLA775BT    FCC ID:    KBCIX260PNLA775BT    IC ID:    1943A-IX260											
Rugged La	Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth										
2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. 10 c											



Test Report S/N:	102604KBC-T575-E240					
Test Date(s):	August 30 - September 09, 20					
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132				
Lab Registration(s):	FCC #714830	IC Lab File #3874				

## FIELD STRENGTH OF SPURIOUS RADIATION - §24.238 (Continued)

## D.3. MEASUREMENT DATA - PCS Band

_ /		h l	Project Nu	mber:	072804-540aKI	BC			Standard:		FCC24.238	3
L	<b>Le</b>	tech	Company:		Itronix				Test Start Da	ate:	30-Aug-04	
	Testing and	Engineering Services Lab	Product:		IX260+ with AC	775			Test End Da	te:	8-Sep-04	
					Swivel Dip	oole Antenna S	purious Emis	sions				
Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Emission EIRP Level	EIRP Limit	Margin	Pass/Fa
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
Н	3	Horn SN6267	512	1072.00	69.45	40.50	-35.76	4.06	-31.70	-13.00	18.70	PASS
Н	3	Horn SN6267	512	3702.00	56.61	54.50	-41.77	8.06	-33.71	-13.00	20.71	PASS
Н	3	Horn SN6267	512	7402.00	53.07	43.70	-51.88	8.98	-42.90	-13.00	29.90	PASS
Н	3	Horn SN6267	512	9252.00	54.12	42.10	-51.19	9.05	-42.14	-13.00	29.14	PASS
Н	1	Horn SN6267	512	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
Н	1	3160-09	512	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	512	1950.00	66.13	33.70	-42.68	6.65	-36.03	-13.00	23.03	PASS
V	3	Horn SN6267	512	2420.00	61.07	64.10 57.20	-32.13	7.62	-24.50	-13.00	11.50	PASS
V V	3	Horn SN6267 Horn SN6267	512 512	3702.00 7402.00	59.41 54.27	57.30 44.90	-38.73 -50.36	8.06 8.98	-30.67 -41.38	-13.00 -13.00	17.67 28.38	PASS PASS
V	3	Horn SN6267	512	9252.00	55.72	44.90	-50.36	9.05	-41.38	- 13.00	28.38	PASS
v	1	Horn SN6267	512	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
v	1	3160-09	512	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
Н	3	Horn SN6267	661	1999.00	66.38	33.70	-42.89	6.70	-36.19	-13.00	23.19	PASS
H H	3	Horn SN6267	661	3762.00	59.47 59.47	57.20 57.20	-38.79 -38.20	8.05 8.05	-30.74 -30.15	-13.00 -13.00	17.74 17.15	PASS PASS
H H	3	Horn SN6267 Horn SN6267	661 661	3762.00 7522.00	59.47	57.20 43.10	-38.20	8.05	-30.15 -38.29	- 13.00	25.29	PASS
n H	3	Horn SN6267	661	9400.00	53.77	43.10	-47.21	9.20	-36.29	-13.00	23.29	PASS
н	1	Horn SN6267	661	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
н	1	3160-09	661	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
v	3	Horn SN6267	661	1851.00	64.90	32.90	-44.18	6.55	-37.63	-13.00	24.63	PASS
v	3	Horn SN6267	661	2462.00	64.83	67.70	-28.05	7.72	-20.33	-13.00	7.33	PASS
v	3	Horn SN6267	661	3762.00	58.37	56.10	-39.64	8.05	-31.59	-13.00	18.59	PASS
V	3	Horn SN6267	661	7522.00	52.76	43.10	-52.08	8.92	-43.16	-13.00	30.16	PASS
V	3	Horn SN6267	661	9402.00	52.57	40.50	-48.69	9.20	-39.48	-13.00	26.48	PASS
V	1	Horn SN6267	661	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	661	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
н	3	Horn SN6267	810	1991.00	66.74	34.10	-43.06	6.69	-36.37	-13.00	23.37	PASS
н	3	Horn SN6267	810	3820.00	73.36	70.90	-24.23	8.04	-16.19	-13.00	3.19	PASS
н	3	Horn SN6267	810	5730.00	67.34	60.90	-31.01	8.88	-22.13	-13.00	9.13	PASS
н	3	Horn SN6267	810	7638.00	52.49	42.70	-51.24	9.01	-42.23	-13.00	29.23	PASS
Н	3	Horn SN6267	810	9550.00	54.01	41.90	-45.99	9.36	-36.63	-13.00	23.63	PASS
Н	1	Horn SN6267	810	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
Н	1	3160-09	810	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	810	1129.00	69.93	40.80	-37.28	4.35	-32.94	-13.00	19.94	PASS
V	3	Horn SN6267	810	3820.00	65.66	63.20	-32.39	8.04	-24.36	-13.00	11.36	PASS
V	3	Horn SN6267	810	5730.00	54.34	47.90	-45.63	8.88	-36.75	-13.00	23.75	PASS
V		Horn SN6267	810	7638.00	53.69	43.90	-51.44	9.01	-42.43	-13.00	29.43	PASS
V	3	Horn SN6267	810	9550.00	53.61	41.50	-48.99	9.36	-39.63	-13.00	26.63	PASS
V V	1	Horn SN6267	810	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	810	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
	Note:	Antonno usod f	or cubatituti o	2								
		Antenna used f olicable freque			d up to the carrier	tenth harmonic a	nd any signifi	ant emissions	or noise floor	level reported	l for each ran	de.
		,	,,,,				, see, organite					
	Form	ulae:										
			Fundamental	Power Level, in	watts) below the l	Fundamental pea	ak power give	s - 13 dBm				
	EIRP	Level (dBm) =	Power appli	ed to Antenna (d	Bm) + Antenna G							
			dBm) - Leve	L ( all Dava )								

Applicant: Itronix Corporation Model: IX260PNLA775BT FCC ID: KBCIX260PNLA775BT IC ID: 1943A-IX2											
Rugged La	Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth										
2004 Celltech	2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. 11 of 19										



Test Report S/N:	102604KBC-T575-E240					
Test Date(s):	August 30 - September 09, 20					
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132				
Lab Registration(s):	FCC #714830	IC Lab File #3874				

## FIELD STRENGTH OF SPURIOUS RADIATION - §24.238 (Continued)

## D.3. MEASUREMENT DATA - PCS Band (Cont.)

1		<b>Jack</b>	Project Nu		072804-540aK	30			Standard:		FCC24.23	5
l	<b>Vell</b>	iecn	Company:		Itronix				Test Start D		30-Aug-04	
	Testing and E	Ingineering Services Lab	Product:		IX260+ with AC	775			Test End Da	te:	8-Sep-04	
					Mohilo	Antenna Spuri	ous Emissia	no.				
_					MODIE	Antenna Spun						
Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Emission EIRP Level	EIRP Limit	Margin	Pass/Fa
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
H	3	Horn SN6267	512	1140.00	64.47	35.30	-41.69	4.40	-37.29	-13.00	24.29	PASS
H	3	Horn SN6267	512	7402.00	53.47	44.10	-49.87	8.98	-40.89	-13.00	27.89	PASS
H	3	Horn SN6267	512	8000.00	54.51	44.50	-50.85	9.30	-41.55	-13.00	28.55	PASS
H	3	Horn SN6267	512	9252.00	53.12	41.10	-48.70	9.05	-39.64	-13.00	26.64	PASS
H H	1	Horn SN6267 3160-09	512 512	17992.00	67.54	45.70 45.90	-41.33 -38.54	7.94	-33.39 -22.59	-13.00 -13.00	20.39 9.59	PASS PASS
n V	3	Horn SN6267	512	19662.00	64.03	43.90 34.90	-30.34	4.35	-22.59	-13.00	25.84	PASS
v	3	Horn SN6267	512	2454.00	59.91	62.80	-43.18 -32.69	4.35	-38.84	-13.00	25.84	PASS
v	3	Horn SN6267	512	7402.00	56.87	47.50	-32.09	8.98	-24.99 -35.01	-13.00	22.01	PASS
v	3	Horn SN6267	512	9252.00	55.32	47.30	-43.99	9.05	-39.09	-13.00	22.01	PASS
v	1	Horn SN6267	512	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
v	1	3160-09	512	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
H	3	Horn SN6267	661	1998.00	66.37	33.70	-42.89	6.70	-36.19	-13.00	23.19	PASS
H	3	Horn SN6267	661	7520.00	52.56	42.90	-50.87	8.92	-41.95	-13.00	28.95	PASS
H	3	Horn SN6267	661	9402.00	52.17	40.10	-42.42	9.20	-33.22	-13.00	20.22	PASS
H	3	Horn SN6267	661	9706.00	54.74	42.70	-45.95	9.55	-36.40	-13.00	23.40	PASS
H	1	Horn SN6267	661	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H V	1	3160-09 Horn SN6267	661 661	19882.00	61.52 63.83	45.90 34.70	-38.54 -43.27	15.95 4.35	-22.59 -38.93	-13.00 -13.00	9.59	PASS PASS
v	3			1129.00		45.50					25.93	
v	3	Horn SN6267 Horn SN6267	661 661	7444.00 7522.00	55.05 53.76	45.50	-49.04 -50.26	8.94 8.92	-40.09 -41.34	-13.00 -13.00	27.09 28.34	PASS PASS
v	3	Horn SN6267	661	9402.00	53.57	44.10	-44.96	9.20	-41.34	-13.00	20.54	PASS
v	1	Horn SN6267	661	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
v	1	3160-09	661	19706.00	60.68	45 30	-39.36	15.88	-23.48	-13.00	10.48	PASS
	0		040	1000.00	00.05	0.1.70	45.00	0.50	20.07	10.00	70.07	5400
H	3	Horn SN6267	810	1888.00	63.85	31.70	-45.66	6.59	-39.07	-13.00	26.07	PASS
H H	3	Horn SN6267	810 810	2458.00 3820.00	54.42 52.46	57.30 50.00	-40.11 -45.74	7.71	-32.40 -37.71	-13.00 -13.00	19.40 24.71	PASS PASS
H	3	Horn SN6267 Horn SN6267	810	7638.00	53.29	43.50	-43.74	9.04	-41.67	-13.00	24.71	PASS
H	3	Horn SN6267	810	9550.00	53.61	43.50	-46.77	9.36	-41.07	-13.00	28.07	PASS
Н	1	Horn SN6267	810	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	810	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	810	1107.00	72.77	43.70	-34.60	4.24	-30.37	-13.00	17.37	PASS
v	3	Horn SN6267	810	3820.00	64.16	61.70	-33.83	8.04	-25.79	-13.00	12.79	PASS
V	3	Horn SN6267	810	3822.00	65.66	63.20	-32.28	8.04	-24.24	-13.00	11.24	PASS
V	3	Horn SN6267	810	9550.00	53.81	41.70	-49.93	9.36	-40.57	-13.00	27.57	PASS
V	1	Horn SN6267	810	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	810	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
_												
	Note:											
		Antenna used f	or substitutio	n								
	All ap	plicable freque	ncy ranges v	vere investigated	up to the carrier	tenth harmonic a	nd any signifi	cant emissions	or noise floor	level reported	for each rar	ge.
	Form	ulae:										
					watts) below the		ak power give	s -13 dBm				
		. ,			Bm) + Antenna G	aın (dB)						
	warg	n (dB) = Limit (	u¤m) - Leve	r (dBm)								

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe			
Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth										
2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. 12 of 19										



Test Report S/N:	102604KBC-T575-E240					
Test Date(s):	August 30 - September 09, 20					
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132				
Lab Registration(s):	FCC #714830	IC Lab File #3874				

# FIELD STRENGTH OF SPURIOUS RADIATION - §22.917 (Continued)

## D.3. MEASUREMENT DATA - Cellular Band

- 7		toch	Company	-	Itronix				Test Start D	ate:	30-Aug-04	
L	YCI Testro and	Encineering Services Lab	Product:	•	IX260+ with AC	775			Test End Da		8-Sep-04	
			FIUUUCI.		IX200+ WILLIAC	115			rest Ena De		0-36h-04	
					Swivel Di	oole Antenna S	purious Emis	sions				
Polarity	Distance	Substitution Antenna Type	Channe	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Powor Applied to Antenna	Antenna Gain	Emission ERP Level	ERP Limit	Margin	Pass/Fa
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
Н	3	B_3121C	128	847.20	58.48	32.90	-37.83	1.57	-36.26	-13.00	23.26	PASS
Н	3	Horn SN6267	128	1777.00	63.94	32.30	-45.54	6.48	-39.06	-13.00	26.06	PASS
Н	3	Horn SN6267	128	4946.00	51.19	46.10	-50.37	8.61	-41.76	-13.00	28.76	PASS
V	3	B_3121C	128	813.20	60.90	36.00	-31.00	1.11	-29.89	-13.00	16.89	PASS
V	3	Horn SN6267	128	1030.00	63.31	34.50	-43.91	3.85	-40.06	-13.00	27.06	PASS
V	3	Horn SN6267	128	2428.00	56.60	59.60	-35.45	7.64	-27.81	-13.00	14.81	PASS
Н	3	B_3121C	190	815.20	56.24	31.30	-39.96	1.14	-38.82	-13.00	25.82	PASS
н	3	Horn SN6267	190	1674.00	68.24	37.10	-40.56	6.37	-34.19	-13.00	21.19	PASS
Н	3	Horn SN6267	190	2418.00	52.66	55.70	-41.40	7.62	-33.78	-13.00	20.78	PASS
н	3	Horn SN6267	190	7528.00	53.16	43.50	-50.71	8.92	-41.79	-13.00	28.79	PASS
Н	3	Horn SN6267	190	8366.00	52.44	41.90	-52.32	9.30	-43.02	-13.00	30.02	PASS
V	3	B_3121C	190	811.00	53.65	28.80	-38.47	1.08	-37.40	-13.00	24.40	PASS
V	3	Horn SN6267	190	1954.00	66.55	34.10	-42.32	6.65	-35.67	-13.00	22.67	PASS
V	3	Horn SN6267	190	2422.00	58.68	61.70	-34.96	7.63	-27.33	-13.00	14.33	PASS
V	3	Horn SN6267	190	5020.00	54.46	49.20	-47.52	8.60	-38.92	-13.00	25.92	PASS
V	3	Horn SN6267	190	8368.00	52.85	42.30	-52.65	9.30	-43.35	-13.00	30.35	PASS
Н	3	B 3121C	251	810.20	50.13	25.30	-45.10	1.06	-44.03	-13.00	31.03	PASS
н	3	Horn SN6267	251	1565.00	59.97	29.30	-49.22	6.27	-42.96	-13.00	29.96	PASS
н	3	Horn SN6267	251	2418.00	51.86	54.90	-43.80	7.62	-36.18	-13.00	23.18	PASS
н	3	Horn SN6267	251	7640.00	53.08	43.30	-52.45	9.01	-43.44	-13.00	30.44	PASS
Н	3	Horn SN6267	251	8490.00	51.59	40.90	-53.00	9.30	-43.70	-13.00	30.70	PASS
V	3	B_3121C	251	842.40	53.48	27.90	-40.24	1.51	-38.73	-13.00	25.73	PASS
V	3	Horn SN6267	251	1698.00	71.65	40.40	-37.33	6.40	-30.94	-13.00	17.94	PASS
V	3	Horn SN6267	251	2428.00	55.80	58.80	-38.35	7.64	-30.71	-13.00	17.71	PASS
V	3	Horn SN6267	251	5094.00	54.23	48.80	-50.02	8.60	-41.42	-13.00	28.42	PASS
V	3	Horn SN6267	251	7638.00	53.89	44.10	-51.90	9.01	-42.89	-13.00	29.89	PASS
	Note: Dipol	o Antonna usor	for substitu	ition 1000 MHz a	nd below, Horn A	ntenna used for s	ubstitution ab	ove 1000 MHz				
					d up to the carrier					level reported	⊥ I for each rar	uge.
	F											
	Form	ulae:										
					watts) below the		ak power give	s -13 dBm				
		Level (dBm) = F in (dB) = Limit (			3m) + Antenna G	aın (dBi) - 2.14						

Applicant:    Itronix Corporation    Model:    IX260PNLA775BT    FCC ID:    KBCIX260PNLA775BT    IC ID:    1943A-IX										
Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth										
2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc.										



Test Report S/N:	102604KBC-T575-E24G					
Test Date(s):	August 30 - September 09, 20					
Test Type(s):	FCC §24E, §22H	IC RSS-133, RSS-132				
Lab Registration(s):	FCC #714830	IC Lab File #3874				

## FIELD STRENGTH OF SPURIOUS RADIATION - §22.917 (Continued)

## D.3. MEASUREMENT DATA - Cellular Band (Cont.)

1	6	toch	Project NL		072804-540aK	50			Standard:	-4	FCC22.91	
C	Vel	<i>Jeinecn</i>	Company:		Itronix				Test Start Date:		30-Aug-04	
	Testing and	Engreeing Servoes Lab	Product:		IX260+ with AC	775			Test End Da	te:	8-Sep-04	
Mobile Antenna Spurious Emissions												
Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Emission ERP Level	ERP Limit	Margin	Pass/Fa
	m		-	MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
Н	3	B_3121C	128	841.60	61.27	35.70	-35.57	1.50	-34.07	-13.00	21.07	PASS
Н	3	Horn SN6267	128	1993.00	65.75	33.10	-55.15	6.69	-48.46	-13.00	35.46	PASS
Н	3	Horn SN6267	128	7418.00	54.54	45.10	-47.88	8.97	-38.91	-13.00	25.91	PASS
Н	3	Horn SN6267	128	7928.00	55.30	45.30	-50.77	9.24	-41.53	-13.00	28.53	PASS
V	3	B_3121C	128	925.80	47.30	20.50	-48.18	1.99	-46.19	-13.00	33.19	PASS
V	3	Horn SN6267	128	1073.00	66.25	37.30	-39.96	4.07	-35.90	-13.00	22.90	PASS
V	3	Horn SN6267	128	7416.00	54.13	44.70	-49.66	8.97	-40.69	-13.00	27.69	PASS
V	3	Horn SN6267	128	7510.00	54.55	44.90	-48.53	8.91	-39.62	-13.00	26.62	PASS
н	3	B_3121C	190	827.00	51.13	25.90	-44.12	1.32	-42.80	-13.00	29.80	PASS
н	3	Horn SN6267	190	1122.00	62.01	32.90	-44.16	4.31	-39.85	-13.00	26.85	PASS
н	3	Horn SN6267	190	2390.00	56.94	60.10	-37.09	7.56	-29.53	-13.00	16.53	PASS
Н	3	Horn SN6267	190	7528.00	53.16	43.50	-50.72	8.92	-41.79	-13.00	28.79	PASS
V	3	B_3121C	190	825.80	49.10	23.90	-43.00	1.31	-41.69	-13.00	28.69	PASS
V	3	Horn SN6267	190	1949.00	63.92	31.50	-44.45	6.65	-37.80	-13.00	24.80	PASS
V	3	Horn SN6267	190	2454.00	58.71	61.60	-34.45	7.70	-26.75	-13.00	13.75	PASS
V	3	Horn SN6267	190	7530.00	52.76	43.10	-51.88	8.92	-42.96	-13.00	29.96	PASS
н	3	B_3121C	251	827.40	50.14	24.90	-45.18	1.33	-43.85	-13.00	30.85	PASS
Н	3	Horn SN6267	251	1988.00	66.92	34.30	-42.48	6.69	-35.80	-13.00	22.80	PASS
Н	3	Horn SN6267	251	2418.00	52.26	55.30	-42.40	7.62	-34.78	-13.00	21.78	PASS
н	3	Horn SN6267	251	7638.00	53.09	43.30	-51.07	9.01	-42.05	-13.00	29.05	PASS
Н	3	Horn SN6267	251	8490.00	51.39	40.70	-52.71	9.30	-43.41	-13.00	30.41	PASS
V	3	B_3121C	251	924.40	58.75	32.00	-37.04	2.01	-35.03	-13.00	22.03	PASS
V	3	Horn SN6267	251	1886.00	74.14	42.00	-55.09	6.59	-48.50	-13.00	35.50	PASS
V	3	Horn SN6267	251	7638.00	52.69	42.90	-52.33	9.01	-43.32	-13.00	30.32	PASS
V	3	Horn SN6267	251	7940.00	55.53	45.50	-51.03	9.25	-41.78	-13.00	28.78	PASS
	Noto:											
					nd below, Horn A							
	All ap	plicable freque	ncy ranges v	vere investigated	l up to the carrier	tenth harmonic a	nd any signific	cant emissions	or noise floor	ievel reported	tor each ran	ge.
	Form	ulae:										
			undamenta	Power Level, in	watts) below the	Fundamental pea	ak power aive	s -13 dBm				-
					3m) + Antenna G		,					
	Marg	in (dB) = Limit (	dBm) - Leve	l (dBm)								

Applicant:	Itronix Corporation	Model:	IX260PNLA775BT	FCC ID:	KBCIX260PNLA775BT	IC ID:	1943A-IX260Pe	
Rugged Laptop PC with internal Dual-Band GSM GPRS/EDGE Modem, 802.11b/g WLAN, & Bluetooth								
2004 Celltech Labs Inc. This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc.						s Inc. 14 of 19		