	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**ELECTROMAGNETIC COMPATIBILITY**

**EMC TEST REPORT**

**FCC 47 CFR PART 22 SUBPART H  
FCC 47 CFR PART 24 SUBPART E**

**ITRONIX CORPORATION**

**MODEL: IX-NW620**

**DUAL-BAND CDMA/EV-DO PCMCIA MODEM  
INSTALLED IN  
IX600 SERIES RUGGED LAPTOP PC  
UTILIZING AN  
INTERNAL MEANDERING LINE ANTENNA  
AND  
VEHICLE-MOUNT ANTENNA WITH CRADLE**

**FCC ID: KBCIX-NW620  
IC ID: 1943A-NW620**

Test Report Serial No.

010907KBC-T804-E24C


Test Report Revision No.

Revision 1.0 (Initial Release)

Test Lab and Location

**Celltech Compliance Testing & Engineering Lab  
(Celltech Labs Inc.)  
1955 Moss Court  
Kelowna, BC  
Canada  
V1Y 9L3**

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## DECLARATION OF COMPLIANCE

<b>Test Location</b>		<b>CELLTECH LABS INCORPORATED</b> Testing and Engineering Services 1955 Moss Court Kelowna, BC V1Y 9L3 Canada				<b>Company Information</b>		<b>ITRONIX CORPORATION</b> 12825 E. Mirabeau Parkway Spokane Valley, WA 99216 United States	
<b>Phone:</b>	250-448-7047	<b>Fax:</b>	250-448-7048						
<b>E-mail:</b>	info@celltechlabs.com	<b>Web site:</b>	www.celltechlabs.com						
<b>Lab Registration No.(s):</b>	FCC: 714830		IC:	IC 3874					
<b>Rule Part(s) Applied:</b>	FCC: §2; §22H; §24E		IC:	RSS-132 Issue 2, RSS-133 Issue 3					
<b>Device Classification(s):</b>	FCC: PCS Licensed Transmitter (PCB)		IC:	800 MHz Cellular Telephones Employing New Technologies 2 GHz Personal Communication Services					
<b>Device Identifier(s):</b>	FCC ID: KBCIX-NW620		IC ID:	1943A-NW620	<b>Model(s):</b>	IX-NW620			
<b>Device Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC								
<b>Transmit Frequency Range(s):</b>	824.70 - 848.31 MHz	Cellular CDMA/EV-DO	1851.25 - 1908.75 MHz	PCS CDMA/EV-DO					
<b>Receive Frequency Range(s):</b>	869.70 - 893.31 MHz	Cellular CDMA/EV-DO	1931.25 - 1988.75 MHz	PCS CDMA/EV-DO					
<b>Maximum RF Peak Conducted Output Power Levels Measured:</b>	PCS EV-DO (Rev. 0)	1851.25 MHz	28.44 dBm	1880.00 MHz	28.73 dBm	1908.75 MHz	26.77 dBm		
		Ch. 25	0.698 W	Ch. 600	0.746 W	Ch. 1175	0.475 W		
	Cellular EV-DO (Rev. 0)	824.70 MHz	28.86 dBm	836.52 MHz	29.27 dBm	848.31 MHz	28.87 dBm		
		Ch. 1013	0.769 W	Ch. 384	0.845 W	Ch. 777	0.771 W		
<b>Max. ERP/EIRP Levels Measured:</b>	26.90 dBm	0.489 W	848.31 MHz	SkyCross Internal Antenna		Cellular EV-DO			
	32.45 dBm	1.76 W	1851.25 MHz	SkyCross Internal Antenna		PCS EV-DO			
	21.75 dBm	0.150 W	824.70 MHz	MaxRad Vehicle-Mount Antenna		Cellular EV-DO			
	27.44 dBm	0.555 W	1851.25 MHz	MaxRad Vehicle-Mount Antenna		PCS EV-DO			
<b>Antenna Type(s) Tested:</b>	Internal Meandering Line		SkyCross, Inc.			P/N: 59-0479-004R			
	External Vehicle-Mount		MaxRad, Inc.			P/N: BMLPVDB800/1900			
<b>Internal Battery Type(s):</b>	Lithium-ion		10.8V	4.4Ah		Model Name: Ninja			
<b>Power Source(s) Tested:</b>	AC Power Adapter		Delta Electronics Inc.			Model: SADP-65KB D			
<b>Accessory Type(s) Tested:</b>	Vehicle Cradle		Model: IX600 Vehicle Dock			P/N: 50-0178-001R			

This wireless 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 Rule Parts 2, 22H, 24E; Industry Canada RSS-132 Issue 2, RSS 133 Issue 3; and ANSI TIA/EIA-603-C-2004.


I attest to the accuracy of the data. All measurements reported herein were performed by me or were 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.

**Test Report Approved By:**  
**Spencer Watson**  
 Senior EMC Technologist  
 Celltech Labs Inc.



<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	 <small>A GENERAL DYNAMICS COMPANY</small>
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

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### TEST SUMMARY

#### Referenced Standard(s): FCC CFR Title 47 Parts 2, 22 & 24

Appendix	Test Description	Procedure Reference	Limit Reference	Test Start Date	Test End Date	Result
A	Conducted RF Output Power	FCC 97-114, §2.1046	N/A	01Feb07	01Feb07	N/A
B	Effective Radiated Power Effective Isotropic Radiated Power	ANSI/TIA/EIA-603-C	§22.913 §24.232(c)	02Feb07	02Feb07	Pass
C	Radiated TX Spurious Emissions	ANSI/TIA/EIA-603-C	§22.917(a) §24.238(a)	07Feb07	12Feb07	Pass
D	Maximum Permissible Exposure	FCC CFR 47 § 2.1091 IEEE Std C95.1-2005	§1.1310 Table 1 (b)	n/a	n/a	Pass
E	Occupied Bandwidth	§2.1049	§2.202	13Feb07	13Feb07	Pass
F	Conducted TX Spurious Emissions	§22.917(b) §24.238(b)	§22.917(a) §24.238(a)	14Feb07	14Feb07	Pass
G	Frequency Stability Temperature Variation	ANSI/TIA/EIA-603-C, §2.1055 (a) (1)	§22.355 §24.235	14Feb07	14Feb07	Pass



#### Referenced Standard(s): IC RSS-132 Issue 2 & RSS-133 Issue 3

A	Conducted RF Output Power	RSS-Gen §4.6 RSS-133 §4.3	N/A	01Feb07	01Feb07	N/A
B	Effective Radiated Power Effective Isotropic Radiated Power	ANSI/TIA/EIA-603-C	SRSP-503 §5.1.3 SRSP-510 §5.1.2	02Feb07	02Feb07	Pass
C	Radiated TX Spurious Emissions	RSS-Gen §4.7	RSS-132 §4.5 RSS-133 §4.4	07Feb07	12Feb07	Pass
D	Maximum Permissible Exposure	RSS-102 Issue 2	Safety Code 6 2.2.1(a) Table 5	n/a	n/a	Pass
E	Occupied Bandwidth	RSS-Gen §4.4.1	RSS-132 §4.5.1 RSS-133 §6.5.1	13Feb07	13Feb07	Pass
F	Conducted TX Spurious Emissions	RSS-Gen §4.7	RSS-132 §4.5 RSS-133 §6.5	14Feb07	14Feb07	Pass
G	Frequency Stability Temperature Variation	RSS-Gen 4.5 RSS-133 §4.2	RSS-132 §4.3 RSS-133 §6.3	14Feb07	14Feb07	Pass
H	Conducted RX Spurious Emissions	RSS-Gen §4.8 RSS-133 §4.5	RSS-Gen §6(b) RSS-133 §6.7(b)	14Feb07	14Feb07	Pass


### REVISION LOG

Revision	Description	Implemented By	Implementation Date
1.0	Initial Release	Jonathan Hughes	February 19-21, 2007

### SIGNATORIES

Prepared By:		February 15, 2007
Name/Title:	Spencer Watson / Senior EMC Technologist	Date
Reviewed By:		February 21, 2007
Name/Title:	Jonathan Hughes / General Manager	Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	 <small>A GENERAL DYNAMICS COMPANY</small>
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## 1.0 SCOPE


This report outlines the measurements made and results collected during electromagnetic emissions testing of the IX-NW620 Dual-Band CDMA/EV-DO PCMCIA Modem installed in the Itronix IX600 Rugged Laptop PC. The PCMCIA Modem was connected to a SkyCross meandering line antenna mounted internally within the upper rear side of the laptop display lid. The DUT also has provision for an optional vehicle cradle utilizing a MaxRad vehicle-mount antenna. Measurement results were obtained for both antenna configurations and are presented in this report. The measurement results were applied against the applicable EMC requirements and limits outlined in the technical rules and regulations set forth in the Federal Communications Commission Code of Federal Regulations Title 47 Parts 2, 22 Subpart H, and 24 Subpart E; and Industry Canada Radio Standards Specification RSS-132 Issue 2, and RSS-133 Issue 3.

## 2.0 REFERENCES

### 2.1 Normative References

ANSI/ISO 17025:2005	General Requirements for competence of testing and calibration laboratories
IEEE/ANSI C63.4:2003	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
IEEE/ANSI C95.1:2005	American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields
ANSI/TIA/EIA-603-C:2004	Land Mobile FM or PM Communication Equipment Measurement and Performance Standards
CFR Title 47 Part 2:2006	Code of Federal Regulations Title 47: Telecommunication Part 2: Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
CFR Title 47 Part 22:2006	Code of Federal Regulations Title 47: Telecommunication Part 22: Public Mobile Services
CFR Title 47 Part 24:2006	Code of Federal Regulations Title 47: Telecommunication Part 24: Personal Communication Services
IC Spectrum Management & Telecommunications Policy	Radio Standards Specification RSS-102 Issue 2 - Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) RSS-132 Issue 2 - 800 MHz Cellular Telephones Employing New Technologies RSS-133 Issue 3 - 2 GHz Personal Communication Services RSS-212 Issue 1 (Provisional) - Test Facilities & Test Methods for Radio Equipment RSS-Gen Issue 1 - General Requirements and Information for the Certification of Radiocommunication Equipment SRSP-503 Issue 6 - Technical Requirements for Cellular Radiotelephone Systems Operating in the Bands 824 - 849 MHz and 869 - 894 MHz SRSP-510 Issue 3 - Technical Requirements for Personal Communications Services in the Bands 1850 - 1910 MHz and 1930 - 1990 MHz


<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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### 3.0 TERMS AND DEFINITIONS

AV	Average
CDMA	Code Division Multiple Access
CFR	Code of Federal Regulations
dB	decibel
dBm	dB referenced to 1 mW
dBuV	dB referenced to 1 uV
DUT	Device under Test
dBc	dB down from carrier
EBW	Emission Bandwidth
EDGE	Enhanced Data Rates for GSM Evolution
EIRP	Effective Isotropic Radiated Power
EMC	Electromagnetic Compatibility
ERP	Effective Radiated Power
EV-DO	Evolution - Data Optimized
FCC	Federal Communications Commission
FHSS	Frequency Hopping Spread Spectrum
GSM	Global Systems for Mobile Communication
GMRS	General Mobile Radio Service
GPRS	General Packet Radio Service
HP	Hewlett Packard
HPF	High Pass Filter
Hpol	Horizontal Polarization
HSDPA	High Speed Downlink Packet Access
HSUPA	High Speed Uplink Packet Access
Hz	Hertz
IC	Industry Canada
kHz	kilohertz
LNA	Low Noise Amplifier
m	meter
MHz	Megahertz
Mbps	megabits per second
na	not applicable
n/a	not available
PK	Peak
PPSD	Peak Power Spectral Density
QP	Quasi-peak
RBW	Resolution Bandwidth
R&S	Rohde & Schwarz
RSS	Radio Standard Specification
SA	Spectrum Analyzer
UMTS	Universal Mobile Telecommunications System
VBW	Video Bandwidth
Vpol	Vertical Polarization
WCDMA	Wide CDMA

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

#### 4.0 FACILITIES AND ACCREDITATIONS

The facilities used in collecting the test results outlined in this report are located at 1955 Moss Court, Kelowna, British Columbia, Canada, V1Y 9L3. The radiated and conducted emissions sites conform to the requirements set forth in ANSI C63.4 and are filed and listed with the FCC under Registration Number 714830 and Industry Canada under File Number IC 3874.

#### 5.0 GENERAL INFORMATION

##### 5.1 Applicant Information

<b>Company Name:</b>	Itronix Corporation
<b>Address:</b>	12825 E. Mirabeau Parkway
	Spokane Valley, WA 99216
	United States


##### 5.2 DUT Description


The DUT consisted of the IX-NW620 Dual-Band CDMA/EV-DO PCMCIA Modem installed in the Itronix IX600 Rugged Laptop PC connected to a SkyCross meandering line antenna installed within the upper rear side of the laptop display lid. The DUT also consisted of an optional vehicle cradle with a vehicle-mounted MaxRad dipole antenna and a 17-foot attached cable.

<b>Device Type:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem	<b>Model:</b>	IX-NW620	<b>Serial No.:</b>	5B0EDFA1		
<b>Host PC Type:</b>	Rugged Laptop PC	<b>Model:</b>	IX600	<b>Serial No.:</b>	ZZGEG5336ZZ5748		
<b>Modem Manufacturer:</b>	Novatel Wireless Inc.	<b>Host PC Manufacturer:</b>	Itronix Corporation				
<b>Device Identifier(s):</b>	<b>FCC ID:</b> KBCIX-NW620	<b>IC ID:</b>	1943A-NW620				
<b>Battery Type(s):</b>	Lithium-ion	10.8 Vdc	4.4 Ah	Model Name: Ninja			
<b>Power Source Tested:</b>	AC Power Adapter	Delta Electronics Inc.		Model: SADP-65KB D			
<b>Accessories Tested:</b>	Vehicle Cradle	Model: IX600 Vehicle Dock	P/N: 50-0178-001R	S/N: ZZTPE6096ZN4784			
<b>Antenna Type(s) &amp; Gain(s) Tested:</b>	SkyCross Internal Meandering Line		P/N: 59-0479-004R	Gain:	Cell:	3.8 dBi	
					PCS:	-0.3 dBi	
	MaxRad Vehicle-Mount Dipole		P/N: BMLPVDB800/1900	Gain:	Cell:	3 dBi	
					PCS:	3 dBi	

##### 5.3 Rule Part(s) & Classification(s)

<b>Rule Part(s) Applied:</b>	<b>FCC:</b>	47 CFR §2; §22(H), §24(E)
	<b>IC:</b>	RSS-132 Issue 2, RSS-133 Issue 3
<b>Device Classification(s):</b>	<b>FCC:</b>	PCS Licensed Transmitter (PCB)
	<b>IC:</b>	800 MHz Cellular Telephones employing New Technologies (RSS-132)
		2 GHz Personal Communication Services (RSS-133)

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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## 5.4 Mode(s) of Operation Tested

### 5.4.1 Dual-Band CDMA/EV-DO Modem

A radio communications analyzer (base station simulator) was used to set the CDMA/EV-DO modem card to the appropriate channel and power level for the specific measurement. Measurements were made with the modem set to the low, mid and high channel in each band or on a worst-case channel for the measurement, as determined by prescan evaluations. The following settings were used for each channel.

#### 5.4.1.1 Cellular CDMA/EV-DO

<b>Transmitter Frequency Range:</b>	824.70 - 848.31 MHz Ch. 1013 (824.70 MHz) (low), Ch. 384 (836.52 MHz) (mid) & Ch. 777 (848.31 MHz) (high) measured unless otherwise noted
<b>Software Power Gain Settings:</b>	Set by CDMA communications test set for "all ups"
<b>Modulation Type(s):</b>	EV-DO Rev. 0 (F-TAP)

#### 5.4.1.2 PCS CDMA/EV-DO

<b>Transmitter Frequency Range:</b>	1851.25 - 1908.75 MHz Ch. 25 (1851.25 MHz) (low), Ch 600 (1880.00 MHz) (mid) & Ch. 1175 (1908.75 MHz) (high) measured unless otherwise noted
<b>Software Power Gain Settings:</b>	Set by CDMA communications test set for "all ups"
<b>Modulation Type(s):</b>	EV-DO Rev. 0 (F-TAP)

## 5.5 Configuration Description

The DUT was configured, as described by the client as being representative of what would be delivered to a final customer. Prescan evaluations were made to determine the configuration that resulted in the highest emissions. EV-DO transmission in F-TAP mode was used for both cellular and PCS bands. More specific details may be included in each appendix.

### 5.5.1 Configuration Justification

The DUT was tested in a configuration described by the client as being typical of normal use. The system could be utilized as a standalone Laptop PC and installed in a vehicle cradle utilizing the vehicle-mount antenna. Both configurations were investigated and the results reported herein.

### 5.5.2 Transmitter Configuration(s)


<b>Optional Co-located Transmitter(s):</b>	Intel Pro 802.11abg WLAN Model: WM3B2915ABG	Limited Modular Approval FCC ID: KBCIX600-IWL
	Broadcom USB Bluetooth Model: BCM92035NMD	Limited Modular Approval FCC ID: KBCIX600-BT
	Intel Pro 802.11abg WLAN Model: WM3B2915ABG and Broadcom Bluetooth Model: BCM92035NMD	Limited Modular Approval FCC ID: KBCIX600-IWLBT
	Note: The WWAN and WLAN do not co-transmit (see applicant's attestation submitted with this application). The WWAN and Bluetooth can co-transmit. Spurious emissions were investigated and were in compliance.	

## 6.0 PASS/FAIL CRITERIA

Unless otherwise noted in the Appendices, the pass/fail criteria is the limit set forth in the reference standards. The DUT is considered to have passed the requirements if the data collected during the described measurement procedure is no greater than the specified limits as defined. The pass/fail statements made in this report only apply to the unit tested.


<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
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## APPENDICES

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### Appendix A - Conducted RF Output Power Measurement

#### A.1 REFERENCES

<b>Normative Reference Standard</b>	FCC CFR 47 §2.1046(b)
<b>Procedure Reference</b>	FCC 97-114

#### A.2 LIMITS

##### A.2.1 FCC CFR 47

FCC CFR 47 §2.1046 (b)	For single sideband, independent sideband, and single channel, controlled carrier radiotelephone transmitters the procedure specified in paragraph (a) of this section shall be employed and, in addition, the transmitter shall be modulated during the test as follows. In all tests, the input level of the modulating signal shall be such as to develop rated peak envelope power or carrier power, as appropriate, for the transmitter.
------------------------	---

\*ERP and EIRP limits are specified in Appendix B.


#### A.3 ENVIRONMENTAL CONDITIONS

<b>Temperature</b>	25 +/- 5 °C
<b>Humidity</b>	40 +/- 10 %
<b>Barometric Pressure</b>	101 +/- 3 kPa

#### A.4 EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	HP	E4408B	Spectrum Analyzer	02Feb06	02Feb07
				05Feb07	05Feb08
00208	Anritsu	MT8820A	Radio Communications Test Set	06Jun06	06Jun07
00078	Pasternack	PE2214-20	Directional Coupler 1-18 GHz	n/a*	n/a*

\*Verified with power meter prior to use

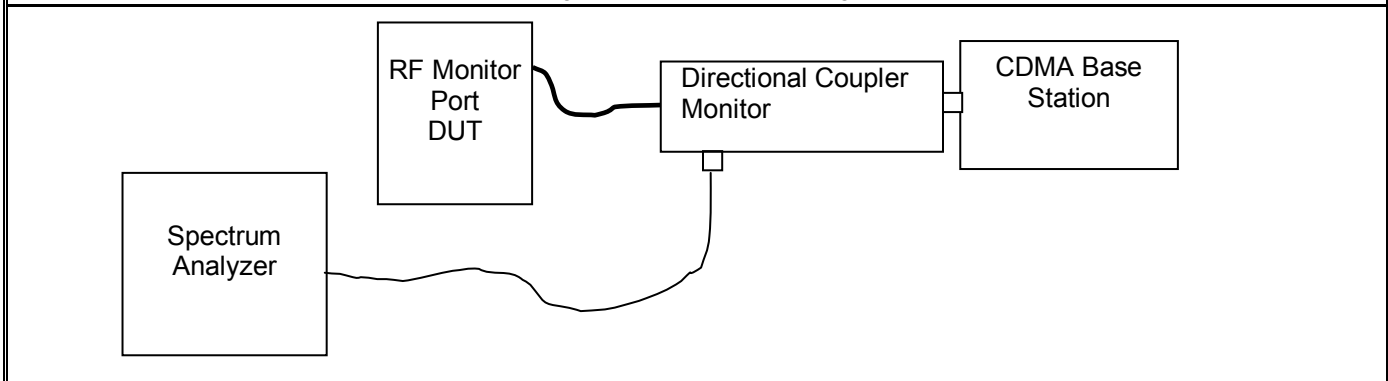
	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### A.5 MEASUREMENT EQUIPMENT SETUP

<b>Measurement Equipment Connections</b>	The equipment was connected as shown in the setup drawing in A.6.
<b>Measurement Equipment Settings</b>	For Channel Power: RBW = 1 MHz For Peak Power: RBW = 3 MHz Offset - set to include loss through cable and directional coupler.
<b>Measurement Procedure</b>	The channel was set on the base station and the resulting power measurement recorded and reported herein.

### A.6 SETUP DRAWING


Figure A.6-1 - Setup Drawing



### A.7 DUT OPERATING DESCRIPTION

Power measurements were made in the cellular and PCS bands, with the DUT set appropriately as described in section 5.3.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## A.8 TEST RESULTS

### A 8.1 1xEV-DO Rev. 0

#### Power Measurement Procedures

This procedure assumes the Anritsu MT8820A Radio Communication Analyzer contains the following applications installed and with valid license.

#### Application

1xEV-DO Terminal Test

#### Software Option

MX882003A: 1xEV-DO Measurement Software

#### FTAP

- Preset
- Operating Mode → Standard → 1xEV-DO
- Call processing Parameters → Application Protocol → FTAP
- Physical Channel Parameters → 0x04: 307.2 kbps (2 Slots)
- Call Processing Parameters → Sector ID → 00800580 00000000 00000000
- Call Processing Parameters → FTAP Packet Activity → 100%
- AT Power Control → All Up (0) (to get the maximum power)

#### RTAP

- Preset
- Operating Mode → Standard → 1xEV-DO
- Call processing Parameters → Application Protocol → RTAP
- Physical Channel Parameters → Data Channel Data Rate → 153.6 kbps
- Call Processing Parameters → Sector ID → 00800580 00000000 00000000
- Call Processing Parameters → FTAP Packet Activity → 100%
- AT Power Control → All Up (0) (to get the maximum power)

### Conducted Power Measurements

#### 1xEV-DO Rev. 0

Band	Freq. (MHz)	Channel	FTAP				RTAP					
			Rate (kbps)	Average		Peak		Rate (kbps)	Average		Peak	
				dBm	Watts	dBm	Watts		dBm	Watts	dBm	Watts
PCS	1851.25	25	307.2 (2 slot)	23.72	0.236	28.44	0.698	153.6	23.65	0.232	28.41	0.693
	1880.00	600		23.98	0.250	28.73	0.746		23.81	0.240	28.66	0.735
	1908.75	1175		21.23	0.133	26.77	0.475		21.21	0.132	26.70	0.468
Cell	824.70	1013	307.2 (2 slot)	24.65	0.292	28.86	0.769	153.6	24.64	0.291	28.82	0.762
	836.52	384		24.71	0.296	29.27	0.845		24.69	0.294	29.21	0.834
	848.31	777		24.58	0.287	28.87	0.771		24.55	0.285	28.79	0.757

Note: Peak Power was measured with the HP E4408B Spectrum Analyzer

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## A 8.2 1xRTT

### Power Measurement Procedures

This procedure assumes the Anritsu MT8820A Radio Communication Analyzer contains the following applications installed and with valid license.

#### Application

CDMA2000 Mobile Test

#### Software Option

MX882002A: CDMA2000 Measurement Software

#### 1xRTT

- Preset
- Operating Mode → Standard → CDMA2000 1X
- Call Processing Parameters → Protocol Revision (P\_REV) → 6: IS-2000
  - Radio Configuration → Fwd.RC3 + Rev.RC3
  - Service Option → SO55: Loopback
- Code Channel Parameters → F-FCH → 9600
  - F-SCH1 → 153600
  - R-SCH1 → 153600
- BS ID and Paging → System Identification (SID) → 999
  - Network ID (NID) → 65535
- AT Power Control → All Up (0) (to get the maximum power)


### Conducted Power Measurements

#### CDMA 1xRTT

Band	Freq. (MHz)	Channel	Rate (Kbps)	Radio Configuration (RC)	Service Option (SO)	Average		Peak	
						dBm	Watts	dBm	Watts
PCS	1851.25	25	9600	RC3	SO55 (FCH)	23.60	0.229	27.85	0.610
	1880.00	600				23.80	0.240	28.11	0.647
	1908.75	1175				21.12	0.129	26.30	0.423
Cell	824.70	1013	9600	RC3	SO55 (FCH)	24.50	0.282	28.51	0.710
	836.52	384				24.30	0.269	28.29	0.675
	848.31	777				24.38	0.274	28.42	0.695
PCS	1851.25	25	9600	RC3	SO32 (FCH+SCH)	23.62	0.230	27.81	0.604
	1880.00	600				23.77	0.238	27.93	0.621
	1908.75	1175				21.20	0.132	25.38	0.345
Cell	824.70	1013	9600	RC3	SO32 (FCH+SCH)	24.53	0.284	28.56	0.718
	836.52	384				24.30	0.269	28.31	0.678
	848.31	777				24.45	0.279	28.42	0.695
PCS	1851.25	25	9600	RC1	SO55	23.55	0.226	27.75	0.596
	1880.00	600				23.70	0.234	27.85	0.610
	1908.75	1175				21.15	0.130	25.39	0.346
Cell	824.70	1013	9600	RC1	SO55	24.52	0.283	28.54	0.714
	836.52	384				24.35	0.272	28.36	0.685
	848.31	777				24.41	0.276	28.43	0.697

Note: Peak Power was measured with the HP E4408B Spectrum Analyzer

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**A.9 PASS/FAIL**

There is no pass/fail criterion for this measurement.

**A.10 SIGN-OFF**

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.


*Spencer Watson*

Spencer Watson  
Senior EMC Technologist  
Celltech Labs Inc.

February 01, 2007

Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**Appendix B - Effective Radiated Power / Effective Isotropic Radiated Power Measurement**

**B.1 REFERENCES**

<b>Normative Reference Standard</b>	FCC CFR 47 §22.913 (a)(2), FCC CFR 47 §24.232 (c)
<b>Procedure Reference</b>	ANSI/TIA/EIA-603-C

**B.2 LIMITS**

**B.2.1 FCC CFR 47**

FCC CFR 47 §22.913 (a)(2)	(a)(2) <i>Maximum ERP. .... The ERP of mobile transmitters and auxiliary transmitters must not exceed 7 Watts.</i>
FCC CFR 47 §24.232 (c)	(c) <i>Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.</i>


**B.3 ENVIRONMENTAL CONDITIONS**

<b>Temperature</b>	25 +/- 5 °C
<b>Humidity</b>	40 +/- 10 %
<b>Barometric Pressure</b>	101 +/- 3 kPa

**B.4 EQUIPMENT LIST**

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00072	EMCO	2075	Mini-mast	n/a	n/a
00073	EMCO	2080	Turn Table	n/a	n/a
00071	EMCO	2090	Multi-Device Controller	n/a	n/a
00050	Chase	CBL-6111A	Bilog Antenna	04Apr06	04Apr07
00055	EMCO	3121C	Dipole Antenna	04Apr06	04Apr07
00034	ETS	3115	Double Ridged Guide Horn	11Aug05	11Aug07
00035	ETS	3115	Double Ridged Guide Horn	03Apr06	03Apr08
00161	Waveline	899	Standard Gain Horn Antenna	n/a	n/a
00051	HP	8566B	Spectrum Analyzer RF Section	04Apr06	04Apr07
00049	HP	85650A	Quasi-peak Adapter	04Apr06	04Apr07
00047	HP	85685A	RF Preselector	05Apr06	05Apr07
00048	Gore	65474	Microwave Cable	16Aug06	16Aug07
00006	R & S	SMR 20	Signal Generator (10MHz-40GHz)	06Apr06	06Apr07
00114	Amplifier Research	DC7154	Directional Coupler (0.8-4.2 GHz)	n/a	n/a
00078	Pasternack	PE2214-20	Directional Coupler (1-18 GHz)	n/a	n/a
00106	Amplifier Research	5S1G4	Power Amplifier (5W, 800MHz-4.2GHz)	n/a	n/a
00041	Amplifier Research	10W1000C	Power Amplifier (0.5 - 1 GHz)	n/a	n/a
00110	Gigatronics	8652A	Power Meter	12Apr06	12Apr07
00011	Gigatronics	80701A	Power Sensor	03Feb06	03Feb07
00208	Anritsu	MT8820A	Radio Communications Analyzer	06Jun06	06Jun07

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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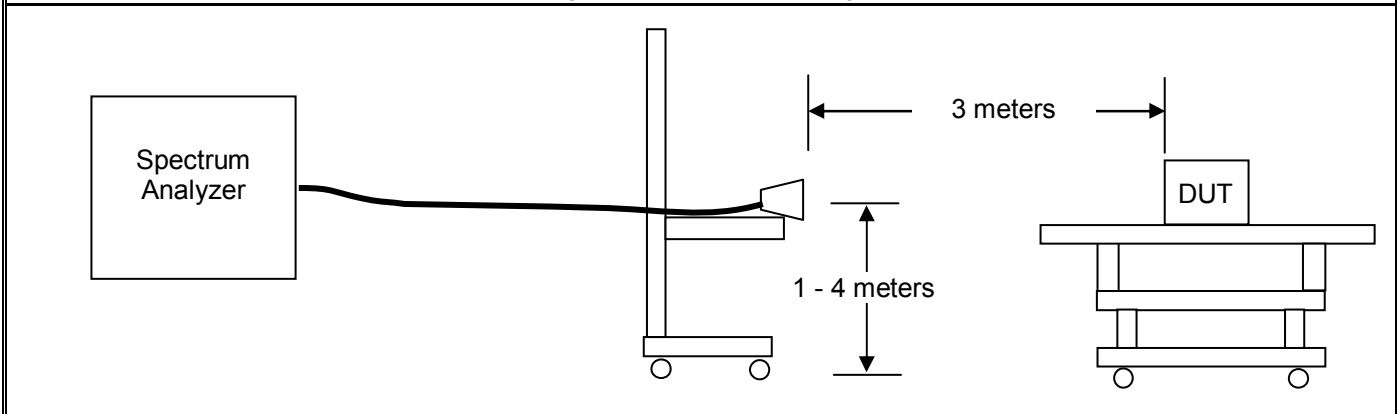
	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### B.5 MEASUREMENT EQUIPMENT SETUP

<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	For the field strength measurements, the measurement equipment was connected as shown in B.6. A number of antennas were used to cover the applicable frequency range tested. The ranges in which each antenna was used are as follows. For the final substitutions, the DUT was replaced with the appropriate antenna and fed from a CW signal source sufficient to replicate the received field strength of the emission being investigated.			
	Frequency Range	RX Antenna	TX Antenna	
	30 MHz - 1GHz	Bilog	Dipole	
	1 GHz - 20 GHz	ETS 3115 Horn	ETS 3115 Horn	
<b>MEASUREMENT EQUIPMENT SETTINGS</b>	For measuring the radiated field strength of the fundamental CDMA signal, the spectrum analyzer was set to the following settings:			
	Mode	RBW	VBW	Detector
		MHz	MHz	
	Cellular	3	3	Peak
PCS	3	3	Peak	

### B.6 SETUP DRAWING

Figure B.6-1 - Setup Drawing



### B.7 DUT OPERATING DESCRIPTION

Measurements were made for the low, mid and high channels for both the cellular and PCS bands at maximum power level as described in Appendix A. Each antenna configuration (Internal and Vehicle-Mount) was evaluated.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## B.8 SETUP PHOTOGRAPHS



Photograph B.8-1 - Bilog Receive Antenna with DUT Internal Antenna Configuration



Photograph B.8-2 - Horn Receive Antenna with DUT Internal Antenna Configuration

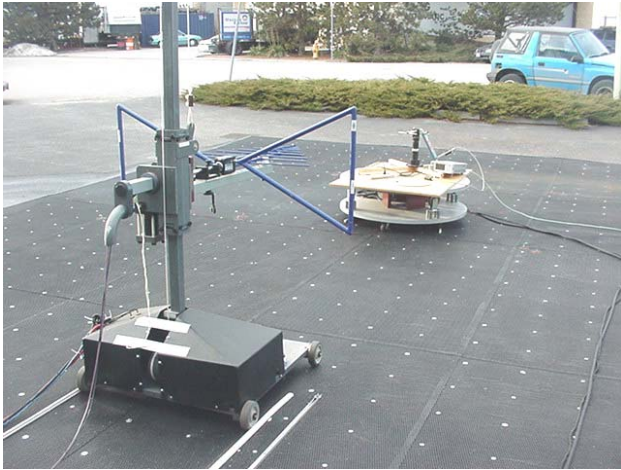


Photograph B.8-3 - Bilog Receive Antenna with DUT Vehicle-Mount Antenna Configuration



Photograph B.8-4 - Horn Receive Antenna with DUT Vehicle-Mount Antenna Configuration

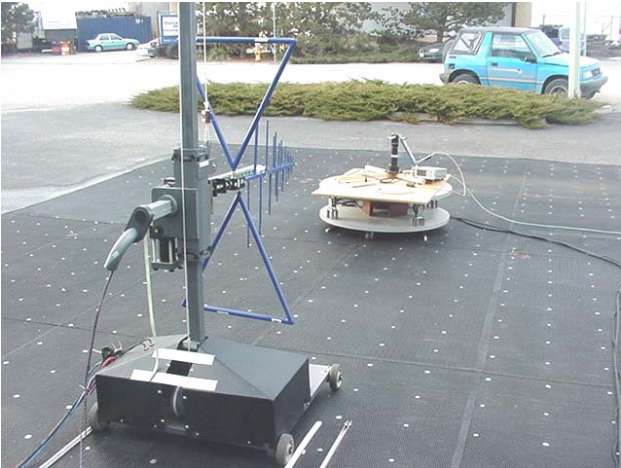
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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	



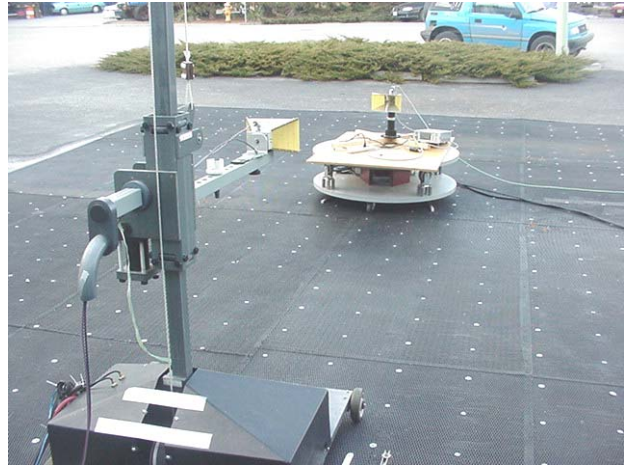
Photograph B.8-5 - Dipole Substitution Setup - Horizontal




Photograph B.8-6 - Horn Substitution Setup - Horizontal



Photograph B.8-7 - Dipole Substitution Setup - Vertical




Photograph B.8-8 - Horn Substitution Setup - Vertical

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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## B.9 TEST RESULTS

### B.9.1 Carrier Levels (Internal Antenna)


#### B.9.1.1 Cellular Carrier Levels

		<b>Project Number:</b>	804	<b>Standard:</b>	FCC22.913
		<b>Company:</b>	Itronix	<b>Test Start Date:</b>	2-Feb-07
		<b>Product:</b>	IX600 V620	<b>Test End Date:</b>	2-Feb-07

Configuration		Polarity	Distance m	Carrier Channel	Frequency MHz	Corrected Field Strength dBuV/m	Substituted SA Signal Level (uncorrected) dBuV	Power Applied to Antenna dBm	Antenna Gain dBi	ERP Limit		Margin dB	Pass/ Fail	Measured ERP Carrier Level	
Orientation	Accessory									dBm	Watts			dBm	milliWatts
<b>Portable EVDO Cellular Band Radiated Carrier Power Levels</b>															
Portable	None	H	3	1013	824.7000	124.36	99.40	22.86	-1.44	38.45	7.00	17.03	PASS	21.42	138.60
Portable	None	V	3	1013	824.7000	125.26	100.30	26.89	-1.44	38.45	7.00	13.00	PASS	25.45	350.56
Portable	None	H	3	384	836.5200	125.19	99.90	23.50	-1.35	38.45	7.00	16.30	PASS	22.15	164.14
Portable	None	V	3	384	836.5200	124.69	99.40	26.88	-1.35	38.45	7.00	12.92	PASS	25.53	357.45
Portable	None	H	3	777	848.3100	126.53	101.00	24.55	-1.25	38.45	7.00	15.15	PASS	23.30	213.62
Portable	None	V	3	777	848.3100	125.53	100.00	28.15	-1.25	38.45	7.00	11.55	PASS	26.90	489.38

#### B.9.1.2 PCS Carrier Levels

		<b>Project Number:</b>	804	<b>Standard:</b>	FCC24.232i
		<b>Company:</b>	Itronix	<b>Test Start Date:</b>	2-Feb-07
		<b>Product:</b>	IX600 V620	<b>Test End Date:</b>	2-Feb-07

Configuration		Polarity	Distance m	Carrier Channel	Frequency MHz	Corrected Field Strength dBuV/m	Substituted SA Signal Level (uncorrected) dBuV	Power Applied to Antenna dBm	Antenna Gain dBi	EIRP Limit		Margin dB	Pass/ Fail	Measured EIRP Carrier Level	
Orientation	Accessory									dBm	Watts			dBm	milliWatts
<b>Portable EVDO PCS Band Radiated Carrier Power Levels</b>															
Portable	None	H	3	25	1851.2500	126.73	96.30	23.63	8.82	33.01	2.00	0.56	PASS	32.45	1758.53
Portable	None	V	3	25	1851.2500	125.03	94.60	21.14	8.82	33.01	2.00	3.05	PASS	29.96	991.17
Portable	None	H	3	600	1880.0000	125.18	94.60	23.16	8.86	33.01	2.00	0.99	PASS	32.02	1590.74
Portable	None	V	3	600	1880.0000	123.38	92.80	20.27	8.86	33.01	2.00	3.88	PASS	29.13	817.71
Portable	None	H	3	1175	1908.7500	123.92	93.20	22.25	8.89	33.01	2.00	1.87	PASS	31.14	1300.32
Portable	None	V	3	1175	1908.7500	121.42	90.70	18.76	8.89	33.01	2.00	5.36	PASS	27.65	582.17

Note: Portable orientation is in reference to the internal antenna configuration and is not pertaining to the RF exposure category.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## B.9.2 Carrier Levels (Vehicle-Mount Antenna)

### B.9.2.1 Cellular Carrier Levels



**Project Number:** 804      **Standard:** FCC22.913  
**Company:** Itronix      **Test Start Date:** 2-Feb-07  
**Product:** IX600 V620      **Test End Date:** 2-Feb-07

Configuration		Polarity	Distance m	Carrier Channel	Frequency MHz	Corrected Field Strength dBuV/m	Substituted SA Signal Level (uncorrected) dBuV	Power Applied to Antenna dBm	Antenna Gain dBi	ERP Limit		Margin dB	Pass/ Fail	Measured ERP Carrier Level	
Orientation	Accessory									dBm	Watts			dBm	milliWatts
<b>Mobile (Vehicle-Mount Antenna) EVDO Cellular Band Radiated Carrier Power Levels</b>															
Mobile	Vehicle Cradle	H	3	1013	824.7000	114.96	90.00	13.12	-1.44	38.45	7.00	26.77	PASS	11.68	14.71
Mobile	Vehicle Cradle	V	3	1013	824.7000	121.56	96.60	23.19	-1.44	38.45	7.00	16.70	PASS	21.75	149.54
Mobile	Vehicle Cradle	H	3	384	836.5200	113.39	88.10	11.30	-1.35	38.45	7.00	28.50	PASS	9.95	9.89
Mobile	Vehicle Cradle	V	3	384	836.5200	120.59	95.30	22.63	-1.35	38.45	7.00	17.17	PASS	21.28	134.34
Mobile	Vehicle Cradle	H	3	777	848.3100	112.43	86.90	9.80	-1.25	38.45	7.00	29.90	PASS	8.55	7.16
Mobile	Vehicle Cradle	V	3	777	848.3100	119.63	94.10	21.95	-1.25	38.45	7.00	17.75	PASS	20.70	117.39


### B.9.2.2 PCS Carrier Levels



**Project Number:** 804      **Standard:** FCC24.2321  
**Company:** Itronix      **Test Start Date:** 2-Feb-07  
**Product:** IX600 V620      **Test End Date:** 2-Feb-07

Configuration		Polarity	Distance m	Carrier Channel	Frequency MHz	Corrected Field Strength dBuV/m	Substituted SA Signal Level (uncorrected) dBuV	Power Applied to Antenna dBm	Antenna Gain dBi	EIRP Limit		Margin dB	Pass/ Fail	Measured EIRP Carrier Level	
Orientation	Accessory									dBm	Watts			dBm	milliWatts
<b>Mobile (Vehicle-Mount Antenna) EVDO PCS Band Radiated Carrier Power Levels</b>															
Mobile	Vehicle Cradle	H	3	25	1851.2500	119.03	88.60	15.92	8.82	33.01	2.00	8.27	PASS	24.74	297.95
Mobile	Vehicle Cradle	V	3	25	1851.2500	122.53	92.10	18.62	8.82	33.01	2.00	5.57	PASS	27.44	554.82
Mobile	Vehicle Cradle	H	3	600	1880.0000	117.08	86.50	15.02	8.86	33.01	2.00	9.13	PASS	23.88	244.12
Mobile	Vehicle Cradle	V	3	600	1880.0000	120.58	90.00	17.38	8.86	33.01	2.00	6.77	PASS	26.24	420.34
Mobile	Vehicle Cradle	H	3	1175	1908.7500	116.12	85.40	14.48	8.89	33.01	2.00	9.64	PASS	23.37	217.30
Mobile	Vehicle Cradle	V	3	1175	1908.7500	117.92	87.20	14.90	8.89	33.01	2.00	9.22	PASS	23.79	239.36

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**B.10 PASS/FAIL**

In reference to the results outlined in B.9, the DUT passes the requirements as stated in the referenced rule parts.

**B.11 SIGN-OFF**

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




Spencer Watson  
Senior EMC Technologist  
Celltech Labs Inc.

February 02, 2007

Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### Appendix C - Radiated Spurious Emissions Measurement

#### C.1 REFERENCES

<b>Normative Reference Standard</b>	FCC CFR 47 §22.917(a), FCC CFR 47 §24.238(a)
<b>Procedure Reference</b>	ANSI/TIA/EIA-603-C

#### C.2 LIMITS

##### C.2.1 FCC CFR 47

FCC CFR 47 §22.917 & §24.238	(a) <i>Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.</i>
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#### C.3 ENVIRONMENTAL CONDITIONS

<b>Temperature</b>	25 +/- 5 °C
<b>Humidity</b>	40 +/- 10 %
<b>Barometric Pressure</b>	101 +/- 3 kPa

#### C.4 EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00072	EMCO	2075	Mini-mast	n/a	n/a
00073	EMCO	2080	Turn Table	n/a	n/a
00071	EMCO	2090	Multi-Device Controller	n/a	n/a
00050	Chase	CBL-6111A	Bilog Antenna	04Apr06	04Apr07
00055	EMCO	3121C	Dipole Antenna	04Apr06	04Apr07
00034	ETS	3115	Double Ridged Guide Horn	11Aug05	11Aug07
00035	ETS	3115	Double Ridged Guide Horn	03Apr06	03Apr08
00161	Waveline	899	Standard Gain Horn Antenna	n/a	n/a
00051	HP	8566B	Spectrum Analyzer RF Section	04Apr06	04Apr07
00049	HP	85650A	Quasi-peak Adapter	04Apr06	04Apr07
00047	HP	85685A	RF Preselector	05Apr06	05Apr07
00048	Gore	65474	Microwave Cable	16Aug06	16Aug07
00115	Miteq	J54-00102600-35-5A	LNA	18Apr06	18Apr07
00006	R & S	SMR 20	Signal Generator (10MHz-40GHz)	06Apr06	06Apr07
00114	Amplifier Research	DC7154	Directional Coupler (0.8-4.2 GHz)	n/a	n/a
00078	Pasternack	PE2214-20	Directional Coupler (1-18 GHz)	n/a	n/a
00106	Amplifier Research	5S1G4	Power Amplifier (5W, 800MHz-4.2GHz)	n/a	n/a
00041	Amplifier Research	10W1000C	Power Amplifier (0.5 - 1 GHz)	n/a	n/a
00110	Gigatronics	8652A	Power Meter	12Apr06	12Apr07
00012	Gigatronics	80701A	Power Sensor	22Jan07	22Jan08
00208	Anritsu	MT8820A	Radio Communication Analyzer	06Jun06	06Jun07

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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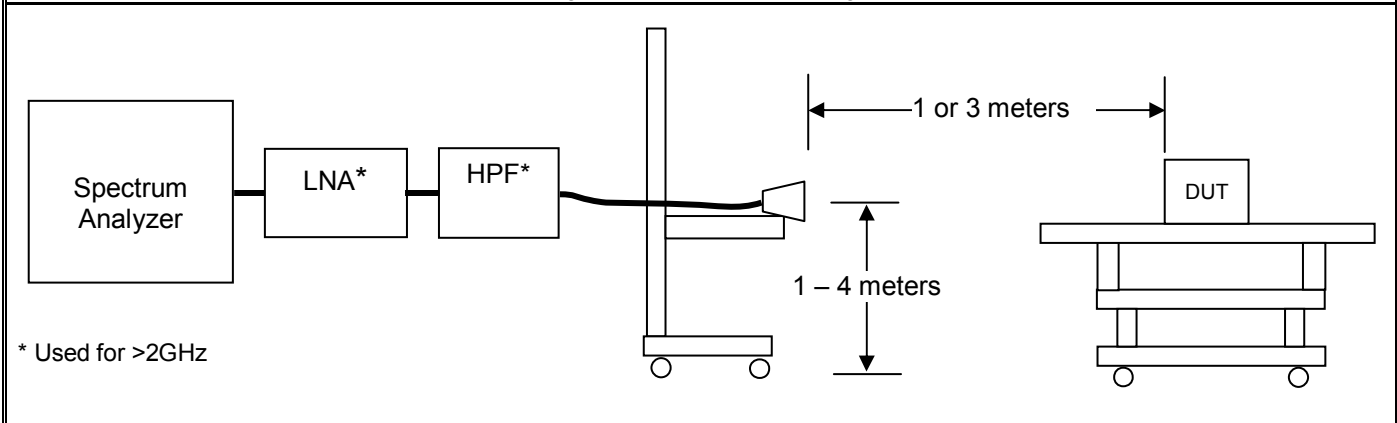
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.5 MEASUREMENT EQUIPMENT SETUP

<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	For the field strength measurements, the measurement equipment was connected as shown in C.6. A number of antennas were used to cover the applicable frequency range tested. The ranges in which each antenna was used are shown below. For the final substitutions, the DUT was replaced with the appropriate antenna and fed from a CW signal source sufficient to replicate the received field strength of the emission being investigated.			
	Frequency Range	RX Antenna	TX Antenna	
	30 MHz - 1GHz	Bilog	Dipole	
	1 GHz - 18 GHz	ETS 3115 Horn	ETS 3115 Horn	
	18 GHz - 20 GHz	Waveline 899 Horn	Waveline 899 Horn	
<b>MEASUREMENT EQUIPMENT SETTINGS</b>	For the spurious out-of-band emissions, the spectrum analyzer was set to the following settings:			
	Mode	RBW	VBW	Detector
		kHz	kHz	
	Cellular < 1 GHz	100	300	Peak*
	Cellular > 1 GHz	1000	1000	Peak*
	PCS	1000	1000	Peak*
*For measurements made below 1 GHz where the peak emission exceeded the average limit, a Quasi-peak measurement was made. For measurements above 1 GHz where the peak emission exceeded the average limit, an average measurement was made using video averaging.				

### C.6 SETUP DRAWING


Figure C.6-1 - Setup Drawing



### C.7 DUT OPERATING DESCRIPTION

Measurements were made for the low, mid and high channels transmitting in the cellular and PCS bands at maximum power level as described in Appendix A. Each antenna configuration (Internal and Vehicle-Mount) was evaluated.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## C.8 TEST RESULTS

The spurious measurements detailed in this section are referenced to the carrier levels set forth in Appendix B of this report:

### C.8.1 Spurious Emissions (Internal Antenna)

#### C.8.1.1 Cellular Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC22.917  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

Channel 1013												
Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	1013	1649.40	73.48	43.10	n/a	n/a	n/a	94.0*	20.5*	PASS*
H	3	none	1013	1649.40	66.98	36.60	n/a	n/a	n/a	94.0*	27.0*	PASS*
H	3	none	1013	2474.10	46.02	46.10	n/a	n/a	n/a	94.0*	48.0*	PASS*
H	3	none	1013	3298.80	43.76	40.63	n/a	n/a	n/a	94.0*	50.2*	PASS*
H	3	none	1013	4123.50	41.28	35.92	n/a	n/a	n/a	94.0*	52.7*	PASS*
H	3	none	1013	4948.20	43.89	37.09	n/a	n/a	n/a	94.0*	50.1*	PASS*
H	3	none	1013	5772.90	58.31	49.99	n/a	n/a	n/a	94.0*	35.7*	PASS*
H	3	none	1013	6597.60	44.61	35.44	n/a	n/a	n/a	94.0*	49.4*	PASS*
H	3	none	1013	7422.30	46.92	35.44	n/a	n/a	n/a	94.0*	47.1*	PASS*
H	3	none	1013	8247.00	48.88	35.88	n/a	n/a	n/a	94.0*	45.1*	PASS*
V	3	none	1013	1649.40	74.58	44.20	n/a	n/a	n/a	94.0*	19.4*	PASS*
V	3	none	1013	1649.40	68.38	38.00	n/a	n/a	n/a	94.0*	25.6*	PASS*
V	3	none	1013	2474.10	46.32	46.40	n/a	n/a	n/a	94.0*	47.7*	PASS*
V	3	none	1013	3298.80	41.73	38.60	n/a	n/a	n/a	94.0*	52.3*	PASS*
V	3	none	1013	4123.50	41.26	35.90	n/a	n/a	n/a	94.0*	52.7*	PASS*
V	3	none	1013	4948.20	43.10	36.30	n/a	n/a	n/a	94.0*	50.9*	PASS*
V	3	none	1013	5744.73	59.43	51.14	n/a	n/a	n/a	94.0*	34.6*	PASS*
V	3	none	1013	5772.90	59.02	50.70	n/a	n/a	n/a	94.0*	35.0*	PASS*
V	3	none	1013	6597.60	43.87	34.70	n/a	n/a	n/a	94.0*	50.1*	PASS*
V	3	none	1013	7422.30	47.88	36.40	n/a	n/a	n/a	94.0*	46.1*	PASS*
V	3	none	1013	8247.00	47.40	34.40	n/a	n/a	n/a	94.0*	46.6*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.1.2 Cellular Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC22.917  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 384**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	384	1673.04	72.00	41.50	n/a	n/a	n/a	94.0*	22.0*	PASS*
H	3	none	384	1673.04	65.20	34.70	n/a	n/a	n/a	94.0*	28.8*	PASS*
H	3	none	384	2509.56	47.78	47.75	n/a	n/a	n/a	94.0*	46.2*	PASS*
H	3	none	384	3346.08	40.51	37.25	n/a	n/a	n/a	94.0*	53.5*	PASS*
H	3	none	384	4182.60	49.96	44.58	n/a	n/a	n/a	94.0*	44.0*	PASS*
H	3	none	384	5019.12	42.86	35.86	n/a	n/a	n/a	94.0*	51.1*	PASS*
H	3	none	384	5855.64	43.55	35.16	n/a	n/a	n/a	94.0*	50.4*	PASS*
H	3	none	384	6692.16	44.20	34.80	n/a	n/a	n/a	94.0*	49.8*	PASS*
H	3	none	384	7528.68	46.29	34.52	n/a	n/a	n/a	94.0*	47.7*	PASS*
H	3	none	384	8365.20	47.35	34.10	n/a	n/a	n/a	94.0*	46.7*	PASS*
V	3	none	384	1673.04	72.90	42.40	n/a	n/a	n/a	94.0*	21.1*	PASS*
V	3	none	384	1673.04	66.20	35.70	n/a	n/a	n/a	94.0*	27.8*	PASS*
V	3	none	384	2509.56	49.63	49.60	n/a	n/a	n/a	94.0*	44.4*	PASS*
V	3	none	384	3346.08	40.16	36.90	n/a	n/a	n/a	94.0*	53.8*	PASS*
V	3	none	384	4182.60	46.48	41.10	n/a	n/a	n/a	94.0*	47.5*	PASS*
V	3	none	384	5019.12	44.20	37.20	n/a	n/a	n/a	94.0*	49.8*	PASS*
V	3	none	384	5855.64	43.49	35.10	n/a	n/a	n/a	94.0*	50.5*	PASS*
V	3	none	384	6692.16	44.80	35.40	n/a	n/a	n/a	94.0*	49.2*	PASS*
V	3	none	384	7528.68	47.27	35.50	n/a	n/a	n/a	94.0*	46.7*	PASS*
V	3	none	384	8365.20	47.65	34.40	n/a	n/a	n/a	94.0*	46.4*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.1.3 Cellular Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC22.917  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 777**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dB	dBm	dBm or dBuV/m*	dB	
H	3	none	777	1696.62	68.33	37.70	n/a	n/a	n/a	94.0*	25.7*	PASS*
H	3	none	777	1696.62	61.93	31.30	n/a	n/a	n/a	94.0*	32.1*	PASS*
H	3	none	777	2544.93	51.40	51.20	n/a	n/a	n/a	94.0*	42.6*	PASS*
H	3	none	777	3393.24	42.99	39.60	n/a	n/a	n/a	94.0*	51.0*	PASS*
H	3	none	777	4241.55	49.79	44.40	n/a	n/a	n/a	94.0*	44.2*	PASS*
H	3	none	777	5089.86	42.56	35.40	n/a	n/a	n/a	94.0*	51.4*	PASS*
H	3	none	777	5938.17	44.17	35.70	n/a	n/a	n/a	94.0*	49.8*	PASS*
H	3	none	777	6786.48	45.93	36.30	n/a	n/a	n/a	94.0*	48.1*	PASS*
H	3	none	777	7634.79	46.83	34.90	n/a	n/a	n/a	94.0*	47.2*	PASS*
H	3	none	777	8483.10	47.29	33.80	n/a	n/a	n/a	94.0*	46.7*	PASS*
V	3	none	777	1696.62	70.63	40.00	n/a	n/a	n/a	94.0*	23.4*	PASS*
V	3	none	777	1696.62	63.53	32.90	n/a	n/a	n/a	94.0*	30.5*	PASS*
V	3	none	777	2544.93	49.40	49.20	n/a	n/a	n/a	94.0*	44.6*	PASS*
V	3	none	777	3393.24	44.49	41.10	n/a	n/a	n/a	94.0*	49.5*	PASS*
V	3	none	777	4241.55	48.79	43.40	n/a	n/a	n/a	94.0*	45.2*	PASS*
V	3	none	777	5089.86	45.16	38.00	n/a	n/a	n/a	94.0*	48.8*	PASS*
V	3	none	777	5938.17	44.07	35.60	n/a	n/a	n/a	94.0*	49.9*	PASS*
V	3	none	777	6786.48	48.43	38.80	n/a	n/a	n/a	94.0*	45.6*	PASS*
V	3	none	777	7634.79	46.83	34.90	n/a	n/a	n/a	94.0*	47.2*	PASS*
V	3	none	777	8483.10	46.89	33.40	n/a	n/a	n/a	94.0*	47.1*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.1.4 PCS Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC24.238  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 25**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dB	dBm	dBm or dBuV/m*	dB	
H	3	none	25	3702.50	66.85	62.50	n/a	n/a	n/a	94.0*	27.2*	PASS*
H	3	none	25	3702.50	48.79	44.44	n/a	n/a	n/a	94.0*	45.2*	PASS*
H	3	none	25	5553.75	76.31	68.20	n/a	n/a	n/a	94.0*	17.7*	PASS*
H	3	none	25	5553.75	65.61	57.50	n/a	n/a	n/a	94.0*	28.4*	PASS*
H	3	none	25	7405.00	60.23	48.80	n/a	n/a	n/a	94.0*	33.8*	PASS*
H	3	none	25	7405.00	50.58	39.15	n/a	n/a	n/a	94.0*	43.4*	PASS*
H	3	none	25	9256.25	65.87	51.50	n/a	n/a	n/a	94.0*	28.1*	PASS*
H	3	none	25	9256.25	57.20	42.83	n/a	n/a	n/a	94.0*	36.8*	PASS*
H	1	none	25	11107.50	74.23	58.20	n/a	n/a	n/a	103.5*	29.3*	PASS*
H	1	none	25	12958.75	78.93	60.50	n/a	n/a	n/a	103.5*	24.6*	PASS*
H	1	none	25	14810.00	61.45	41.00	n/a	n/a	n/a	103.5*	42.1*	PASS*
H	1	none	25	16661.25	61.93	42.10	n/a	n/a	n/a	103.5*	41.6*	PASS*
H	1	none	25	18512.50	60.82	39.60	n/a	n/a	n/a	103.5*	42.7*	PASS*
V	3	none	25	3702.50	66.55	62.20	n/a	n/a	n/a	94.0*	27.5*	PASS*
V	3	none	25	3702.50	60.72	56.37	n/a	n/a	n/a	94.0*	33.3*	PASS*
V	3	none	25	5553.75	77.21	69.10	n/a	n/a	n/a	94.0*	16.8*	PASS*
V	3	none	25	5553.75	66.91	58.80	n/a	n/a	n/a	94.0*	27.1*	PASS*
V	3	none	25	7405.00	65.03	53.60	n/a	n/a	n/a	94.0*	29.0*	PASS*
V	3	none	25	7405.00	56.49	45.06	n/a	n/a	n/a	94.0*	37.5*	PASS*
V	3	none	25	9256.25	77.57	63.20	n/a	n/a	n/a	94.0*	16.4*	PASS*
V	3	none	25	9256.25	63.57	49.20	n/a	n/a	n/a	94.0*	30.4*	PASS*
V	1	none	25	11107.50	75.23	59.20	n/a	n/a	n/a	103.5*	28.3*	PASS*
V	1	none	25	12958.75	80.03	61.60	n/a	n/a	n/a	103.5*	23.5*	PASS*
V	1	none	25	14810.00	61.25	40.80	n/a	n/a	n/a	103.5*	42.3*	PASS*
V	1	none	25	16661.25	60.33	40.50	n/a	n/a	n/a	103.5*	43.2*	PASS*
V	1	none	25	18512.50	62.42	41.20	n/a	n/a	n/a	103.5*	41.1*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.1.5 PCS Spurious Emissions



**Project Number:** 804      **Standard:** FCC24.238  
**Company:** Itronix      **Test Start Date:** 7-Feb-07  
**Product:** IX600 with V620      **Test End Date:** 12-Feb-07

**Channel 600**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	600	3760.00	62.94	58.40	n/a	n/a	n/a	94.0*	31.1*	PASS*
H	3	none	600	5640.00	74.09	65.90	n/a	n/a	n/a	94.0*	19.9*	PASS*
H	3	none	600	5640.00	61.89	53.70	n/a	n/a	n/a	94.0*	32.1*	PASS*
H	3	none	600	7520.00	60.96	49.20	n/a	n/a	n/a	94.0*	33.0*	PASS*
H	3	none	600	9400.00	60.24	45.80	n/a	n/a	n/a	94.0*	33.8*	PASS*
H	1	none	600	11280.00	75.31	59.00	n/a	n/a	n/a	103.5*	28.2*	PASS*
H	1	none	600	13160.00	80.49	61.40	n/a	n/a	n/a	103.5*	23.1*	PASS*
H	1	none	600	15040.00	59.14	39.60	n/a	n/a	n/a	103.5*	44.4*	PASS*
H	1	none	600	16920.00	64.00	42.70	n/a	n/a	n/a	103.5*	39.5*	PASS*
H	1	none	600	18800.00	61.75	40.60	n/a	n/a	n/a	103.5*	41.8*	PASS*
V	3	none	600	3760.00	64.34	59.80	n/a	n/a	n/a	94.0*	29.7*	PASS*
V	3	none	600	5640.00	76.09	67.90	n/a	n/a	n/a	94.0*	17.9*	PASS*
V	3	none	600	5640.00	64.79	56.60	n/a	n/a	n/a	94.0*	29.2*	PASS*
V	3	none	600	7520.00	65.96	54.20	n/a	n/a	n/a	94.0*	28.0*	PASS*
V	3	none	600	9400.00	74.64	60.20	n/a	n/a	n/a	94.0*	19.4*	PASS*
V	3	none	600	9400.00	61.94	47.50	n/a	n/a	n/a	94.0*	32.1*	PASS*
V	1	none	600	11280.00	74.41	58.10	n/a	n/a	n/a	103.5*	29.1*	PASS*
V	1	none	600	13160.00	80.09	61.00	n/a	n/a	n/a	103.5*	23.5*	PASS*
V	1	none	600	15040.00	59.14	39.60	n/a	n/a	n/a	103.5*	44.4*	PASS*
V	1	none	600	16920.00	62.50	41.20	n/a	n/a	n/a	103.5*	41.0*	PASS*
V	1	none	600	18800.00	61.95	40.80	n/a	n/a	n/a	103.5*	41.6*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.1.6 PCS Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620


**Standard:** FCC24.238  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 1175**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dB	dBm	dBm or dBuV/m*	dB	
H	3	none	1175	3817.50	67.52	62.80	n/a	n/a	n/a	94.0*	26.5*	PASS*
H	3	none	1175	5726.25	75.67	67.40	n/a	n/a	n/a	94.0*	18.3*	PASS*
H	3	none	1175	5726.25	65.17	56.90	n/a	n/a	n/a	94.0*	28.8*	PASS*
H	3	none	1175	7635.00	62.54	50.60	n/a	n/a	n/a	94.0*	31.5*	PASS*
H	3	none	1175	9543.75	68.34	53.80	n/a	n/a	n/a	94.0*	25.7*	PASS*
H	1	none	1175	11452.50	74.79	58.20	n/a	n/a	n/a	103.5*	28.7*	PASS*
H	1	none	1175	13361.25	79.68	59.90	n/a	n/a	n/a	103.5*	23.9*	PASS*
H	1	none	1175	15270.00	60.80	42.10	n/a	n/a	n/a	103.5*	42.7*	PASS*
H	1	none	1175	17178.75	69.21	46.50	n/a	n/a	n/a	103.5*	34.3*	PASS*
H	1	none	1175	19087.50	60.98	39.80	n/a	n/a	n/a	103.5*	42.6*	PASS*
V	3	none	1175	3817.50	63.22	58.50	n/a	n/a	n/a	94.0*	30.8*	PASS*
V	3	none	1175	5726.25	73.07	64.80	n/a	n/a	n/a	94.0*	20.9*	PASS*
V	3	none	1175	5726.25	61.87	53.60	n/a	n/a	n/a	94.0*	32.1*	PASS*
V	3	none	1175	7635.00	61.74	49.80	n/a	n/a	n/a	94.0*	32.3*	PASS*
V	3	none	1175	9543.75	67.94	53.40	n/a	n/a	n/a	94.0*	26.1*	PASS*
V	1	none	1175	11452.50	72.99	56.40	n/a	n/a	n/a	103.5*	30.5*	PASS*
V	1	none	1175	13361.25	79.68	59.90	n/a	n/a	n/a	103.5*	23.9*	PASS*
V	1	none	1175	15270.00	57.10	38.40	n/a	n/a	n/a	103.5*	46.4*	PASS*
V	1	none	1175	17178.75	62.01	39.30	n/a	n/a	n/a	103.5*	41.5*	PASS*
V	1	none	1175	19087.50	61.38	40.20	n/a	n/a	n/a	103.5*	42.2*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## C.8.2 Spurious Emissions (Vehicle-Mount Antenna)

### C.8.2.1 Cellular Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC22.917  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

Channel 1013												
Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	1013	1649.40	70.58	40.20	n/a	n/a	n/a	94.0*	23.4*	PASS*
H	3	none	1013	1649.40	63.98	33.60	n/a	n/a	n/a	94.0*	30.0*	PASS*
H	3	none	1013	2474.10	51.22	41.30	n/a	n/a	n/a	94.0*	42.8*	PASS*
H	3	none	1013	3298.80	53.63	40.50	n/a	n/a	n/a	94.0*	40.4*	PASS*
H	3	none	1013	4123.50	51.86	36.50	n/a	n/a	n/a	94.0*	42.1*	PASS*
H	3	none	1013	4948.20	54.60	37.80	n/a	n/a	n/a	94.0*	39.4*	PASS*
H	3	none	1013	5772.90	57.22	38.90	n/a	n/a	n/a	94.0*	36.8*	PASS*
H	3	none	1013	6597.60	55.17	36.00	n/a	n/a	n/a	94.0*	38.8*	PASS*
H	3	none	1013	7422.30	57.58	36.10	n/a	n/a	n/a	94.0*	36.4*	PASS*
H	3	none	1013	8247.00	59.80	36.80	n/a	n/a	n/a	94.0*	34.2*	PASS*
V	3	none	1013	1649.40	72.98	42.60	n/a	n/a	n/a	94.0*	21.0*	PASS*
V	3	none	1013	1649.40	67.28	36.90	n/a	n/a	n/a	94.0*	26.7*	PASS*
V	3	none	1013	2474.10	53.72	43.80	n/a	n/a	n/a	94.0*	40.3*	PASS*
V	3	none	1013	3298.80	50.53	37.40	n/a	n/a	n/a	94.0*	43.5*	PASS*
V	3	none	1013	4123.50	51.66	36.30	n/a	n/a	n/a	94.0*	42.3*	PASS*
V	3	none	1013	4948.20	53.40	36.60	n/a	n/a	n/a	94.0*	40.6*	PASS*
V	3	none	1013	5744.73	69.43	51.14	n/a	n/a	n/a	94.0*	24.6*	PASS*
V	3	none	1013	5772.90	58.02	39.70	n/a	n/a	n/a	94.0*	36.0*	PASS*
V	3	none	1013	6597.60	54.67	35.50	n/a	n/a	n/a	94.0*	39.3*	PASS*
V	3	none	1013	7422.30	58.68	37.20	n/a	n/a	n/a	94.0*	35.3*	PASS*
V	3	none	1013	8247.00	58.60	35.60	n/a	n/a	n/a	94.0*	35.4*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.2.2 Cellular Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620


**Standard:** FCC22.917  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 384**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dB	dBm	dBm or dBuV/m*	dB	
H	3	none	384	1673.04	70.80	40.30	n/a	n/a	n/a	94.0*	23.2*	PASS*
H	3	none	384	1673.04	63.60	33.10	n/a	n/a	n/a	94.0*	30.4*	PASS*
H	3	none	384	2509.56	52.63	42.60	n/a	n/a	n/a	94.0*	41.4*	PASS*
H	3	none	384	3346.08	48.66	35.40	n/a	n/a	n/a	94.0*	45.3*	PASS*
H	3	none	384	4182.60	56.78	41.40	n/a	n/a	n/a	94.0*	37.2*	PASS*
H	3	none	384	5019.12	52.60	35.60	n/a	n/a	n/a	94.0*	41.4*	PASS*
H	3	none	384	5855.64	54.09	35.70	n/a	n/a	n/a	94.0*	39.9*	PASS*
H	3	none	384	6692.16	54.40	35.00	n/a	n/a	n/a	94.0*	39.6*	PASS*
H	3	none	384	7528.68	56.67	34.90	n/a	n/a	n/a	94.0*	37.3*	PASS*
H	3	none	384	8365.20	57.95	34.70	n/a	n/a	n/a	94.0*	36.1*	PASS*
V	3	none	384	1673.04	71.50	41.00	n/a	n/a	n/a	94.0*	22.5*	PASS*
V	3	none	384	1673.04	64.70	34.20	n/a	n/a	n/a	94.0*	29.3*	PASS*
V	3	none	384	2509.56	55.93	45.90	n/a	n/a	n/a	94.0*	38.1*	PASS*
V	3	none	384	3346.08	48.26	35.00	n/a	n/a	n/a	94.0*	45.7*	PASS*
V	3	none	384	4182.60	55.08	39.70	n/a	n/a	n/a	94.0*	38.9*	PASS*
V	3	none	384	5019.12	54.00	37.00	n/a	n/a	n/a	94.0*	40.0*	PASS*
V	3	none	384	5855.64	54.29	35.90	n/a	n/a	n/a	94.0*	39.7*	PASS*
V	3	none	384	6692.16	55.40	36.00	n/a	n/a	n/a	94.0*	38.6*	PASS*
V	3	none	384	7528.68	58.17	36.40	n/a	n/a	n/a	94.0*	35.8*	PASS*
V	3	none	384	8365.20	58.65	35.40	n/a	n/a	n/a	94.0*	35.4*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.2.3 Cellular Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC22.917  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07


Channel 777

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dB	dBm	dBm or dBuV/m*	dB	
H	3	none	777	1696.62	67.43	36.80	n/a	n/a	n/a	94.0*	26.6*	PASS*
H	3	none	777	1696.62	61.93	31.30	n/a	n/a	n/a	94.0*	32.1*	PASS*
H	3	none	777	2544.93	57.60	47.40	n/a	n/a	n/a	94.0*	36.4*	PASS*
H	3	none	777	3393.24	51.99	38.60	n/a	n/a	n/a	94.0*	42.0*	PASS*
H	3	none	777	4241.55	57.29	41.90	n/a	n/a	n/a	94.0*	36.7*	PASS*
H	3	none	777	5089.86	52.96	35.80	n/a	n/a	n/a	94.0*	41.0*	PASS*
H	3	none	777	5938.17	54.57	36.10	n/a	n/a	n/a	94.0*	39.4*	PASS*
H	3	none	777	6786.48	56.53	36.90	n/a	n/a	n/a	94.0*	37.5*	PASS*
H	3	none	777	7634.79	57.83	35.90	n/a	n/a	n/a	94.0*	36.2*	PASS*
H	3	none	777	8483.10	58.19	34.70	n/a	n/a	n/a	94.0*	35.8*	PASS*
V	3	none	777	1696.62	69.53	38.90	n/a	n/a	n/a	94.0*	24.5*	PASS*
V	3	none	777	2544.93	56.60	46.40	n/a	n/a	n/a	94.0*	37.4*	PASS*
V	3	none	777	3393.24	53.39	40.00	n/a	n/a	n/a	94.0*	40.6*	PASS*
V	3	none	777	4241.55	57.39	42.00	n/a	n/a	n/a	94.0*	36.6*	PASS*
V	3	none	777	5089.86	55.96	38.80	n/a	n/a	n/a	94.0*	38.0*	PASS*
V	3	none	777	5938.17	54.87	36.40	n/a	n/a	n/a	94.0*	39.1*	PASS*
V	3	none	777	6786.48	57.43	37.80	n/a	n/a	n/a	94.0*	36.6*	PASS*
V	3	none	777	7634.79	57.53	35.60	n/a	n/a	n/a	94.0*	36.5*	PASS*
V	3	none	777	8483.10	58.59	35.10	n/a	n/a	n/a	94.0*	35.4*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.2.4 PCS Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC24.238  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

Channel 25												
Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	25	3702.50	62.85	58.50	n/a	n/a	n/a	94.0*	31.2*	PASS*
H	3	none	25	3702.50	44.55	40.20	n/a	n/a	n/a	94.0*	49.5*	PASS*
H	3	none	25	5553.75	70.21	62.10	n/a	n/a	n/a	94.0*	23.8*	PASS*
H	3	none	25	5553.75	60.11	52.00	n/a	n/a	n/a	94.0*	33.9*	PASS*
H	3	none	25	7405.00	56.83	45.40	n/a	n/a	n/a	94.0*	37.2*	PASS*
H	3	none	25	9256.25	62.07	47.70	n/a	n/a	n/a	94.0*	31.9*	PASS*
H	3	none	25	9256.25	53.07	38.70	n/a	n/a	n/a	94.0*	40.9*	PASS*
H	1	none	25	11107.50	70.43	54.40	n/a	n/a	n/a	103.5*	33.1*	PASS*
H	1	none	25	12958.75	74.23	55.80	n/a	n/a	n/a	103.5*	29.3*	PASS*
H	1	none	25	14810.00	61.35	40.90	n/a	n/a	n/a	103.5*	42.2*	PASS*
H	1	none	25	16661.25	61.13	41.30	n/a	n/a	n/a	103.5*	42.4*	PASS*
H	1	none	25	18512.50	60.92	39.70	n/a	n/a	n/a	103.5*	42.6*	PASS*
V	3	none	25	3702.50	64.55	60.20	n/a	n/a	n/a	94.0*	29.5*	PASS*
V	3	none	25	5553.75	72.41	64.30	n/a	n/a	n/a	94.0*	21.6*	PASS*
V	3	none	25	5553.75	61.91	53.80	n/a	n/a	n/a	94.0*	32.1*	PASS*
V	3	none	25	7405.00	62.83	51.40	n/a	n/a	n/a	94.0*	31.2*	PASS*
V	3	none	25	9256.25	73.27	58.90	n/a	n/a	n/a	94.0*	20.7*	PASS*
V	3	none	25	9256.25	59.37	45.00	n/a	n/a	n/a	94.0*	34.6*	PASS*
V	1	none	25	11107.50	73.13	57.10	n/a	n/a	n/a	103.5*	30.4*	PASS*
V	1	none	25	12958.75	77.33	58.90	n/a	n/a	n/a	103.5*	26.2*	PASS*
V	1	none	25	14810.00	61.75	41.30	n/a	n/a	n/a	103.5*	41.8*	PASS*
V	1	none	25	16661.25	60.63	40.80	n/a	n/a	n/a	103.5*	42.9*	PASS*
V	1	none	25	18512.50	61.52	40.30	n/a	n/a	n/a	103.5*	42.0*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.2.5 PCS Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620

**Standard:** FCC24.238  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 600**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	600	3760.00	61.14	56.60	n/a	n/a	n/a	94.0*	32.9*	PASS*
H	3	none	600	5640.00	68.59	60.40	n/a	n/a	n/a	94.0*	25.4*	PASS*
H	3	none	600	7520.00	58.66	46.90	n/a	n/a	n/a	94.0*	35.3*	PASS*
H	3	none	600	9400.00	58.64	44.20	n/a	n/a	n/a	94.0*	35.4*	PASS*
H	1	none	600	11280.00	72.21	55.90	n/a	n/a	n/a	103.5*	31.3*	PASS*
H	1	none	600	13160.00	77.49	58.40	n/a	n/a	n/a	103.5*	26.1*	PASS*
H	1	none	600	15040.00	59.64	40.10	n/a	n/a	n/a	103.5*	43.9*	PASS*
H	1	none	600	16920.00	63.00	41.70	n/a	n/a	n/a	103.5*	40.5*	PASS*
H	1	none	600	18800.00	60.75	39.60	n/a	n/a	n/a	103.5*	42.8*	PASS*
V	3	none	600	3760.00	62.24	57.70	n/a	n/a	n/a	94.0*	31.8*	PASS*
V	3	none	600	5640.00	72.99	64.80	n/a	n/a	n/a	94.0*	21.0*	PASS*
V	3	none	600	5640.00	61.39	53.20	n/a	n/a	n/a	94.0*	32.6*	PASS*
V	3	none	600	7520.00	64.26	52.50	n/a	n/a	n/a	94.0*	29.7*	PASS*
V	3	none	600	9400.00	72.84	58.40	n/a	n/a	n/a	94.0*	21.2*	PASS*
V	3	none	600	9400.00	60.04	45.60	n/a	n/a	n/a	94.0*	34.0*	PASS*
V	1	none	600	11280.00	72.71	56.40	n/a	n/a	n/a	103.5*	30.8*	PASS*
V	1	none	600	13160.00	77.19	58.10	n/a	n/a	n/a	103.5*	26.4*	PASS*
V	1	none	600	15040.00	60.04	40.50	n/a	n/a	n/a	103.5*	43.5*	PASS*
V	1	none	600	16920.00	62.90	41.60	n/a	n/a	n/a	103.5*	40.6*	PASS*
V	1	none	600	18800.00	62.35	41.20	n/a	n/a	n/a	103.5*	41.2*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.8.2.6 PCS Spurious Emissions



**Project Number:** 804  
**Company:** Itronix  
**Product:** IX600 with V620


**Standard:** FCC24.238  
**Test Start Date:** 7-Feb-07  
**Test End Date:** 12-Feb-07

**Channel 1175**

Polarity	Distance m	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Maximized SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dB	dBm	dBm or dBuV/m*	dB	
H	3	none	1175	3817.50	65.42	60.70	n/a	n/a	n/a	94.0*	28.6*	PASS*
H	3	none	1175	5726.25	71.77	63.50	n/a	n/a	n/a	94.0*	22.2*	PASS*
H	3	none	1175	5726.25	61.07	52.80	n/a	n/a	n/a	94.0*	32.9*	PASS*
H	3	none	1175	7635.00	59.84	47.90	n/a	n/a	n/a	94.0*	34.2*	PASS*
H	3	none	1175	9543.75	66.24	51.70	n/a	n/a	n/a	94.0*	27.8*	PASS*
H	1	none	1175	11452.50	71.99	55.40	n/a	n/a	n/a	103.5*	31.5*	PASS*
H	1	none	1175	13361.25	76.98	57.20	n/a	n/a	n/a	103.5*	26.6*	PASS*
H	1	none	1175	15270.00	62.00	43.30	n/a	n/a	n/a	103.5*	41.5*	PASS*
H	1	none	1175	17178.75	68.31	45.60	n/a	n/a	n/a	103.5*	35.2*	PASS*
H	1	none	1175	19087.50	61.68	40.50	n/a	n/a	n/a	103.5*	41.9*	PASS*
V	3	none	1175	3817.50	60.62	55.90	n/a	n/a	n/a	94.0*	33.4*	PASS*
V	3	none	1175	5726.25	69.17	60.90	n/a	n/a	n/a	94.0*	24.8*	PASS*
V	3	none	1175	7635.00	59.44	47.50	n/a	n/a	n/a	94.0*	34.6*	PASS*
V	3	none	1175	9543.75	65.14	50.60	n/a	n/a	n/a	94.0*	28.9*	PASS*
V	1	none	1175	11452.50	69.39	52.80	n/a	n/a	n/a	103.5*	34.1*	PASS*
V	1	none	1175	13361.25	76.18	56.40	n/a	n/a	n/a	103.5*	27.4*	PASS*
V	1	none	1175	15270.00	58.60	39.90	n/a	n/a	n/a	103.5*	44.9*	PASS*
V	1	none	1175	17178.75	62.91	40.20	n/a	n/a	n/a	103.5*	40.6*	PASS*
V	1	none	1175	19087.50	61.88	40.70	n/a	n/a	n/a	103.5*	41.7*	PASS*

\*The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10<sup>th</sup> harmonic of the carrier with field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### C.9 PASS/FAIL

In reference to the results shown in C.8, the DUT passes the requirements as stated in the referenced rule parts as follows:

FCC 22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

FCC 24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

### C.10 SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




Spencer Watson  
Senior EMC Technologist  
Celltech Labs Inc.

February 12, 2007

Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**Appendix D - Maximum Permissible Exposure Calculations**

**D.1 REFERENCES**

<b>Normative Reference Standard</b>	FCC CFR 47§1.1310 IEEE Std C95.1:2005
<b>Procedure Reference</b>	FCC CFR 47§2.1091

**D.2 LIMITS**

FCC CFR 47§1.1310 Table 1(b)	Frequency	Power Density
	300 - 1500 MHz	f/1500 mW/cm <sup>2</sup>
	1500 - 100,000 MHz	1.0 mW/cm <sup>2</sup>

**D.3 ENVIRONMENTAL CONDITIONS**

<b>Temperature</b>	na
<b>Humidity</b>	na
<b>Barometric Pressure</b>	na

**D.4 MEASUREMENT EQUIPMENT SETUP**

<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	The results described herein were determined by calculations, so no measurement equipment was used. The power measurements used in these calculations were made as described in Appendix A of this report.
<b>MEASUREMENT EQUIPMENT SETTINGS</b>	n/a

**D.5 DUT OPERATING MODE(S)**

The maximum EV-DO RF conducted channel power in each band used for these calculations was measured on Channel 384 for Cellular and Channel 600 for PCS.



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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## D.6 TEST RESULTS

### D.6.1 Calculations:

#### SkyCross Internal Antenna (Max. Measured Average Conducted Power - Cellular)

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

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

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

- 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

Occupational/Controlled   
General Population/Uncontrolled

Ratio of Time on vs Total TX Time 1.00

Tx Frequency:	836.52	(MHz)
RF Output Power at Antenna Input Terminal:	24.71	(dBm)
Source-Based Time -Average Factor:	0.00	(dB)
Source-Based Time-Averaged RF Output Power at Antenna Input Terminal:	24.71	(dBm)
Antenna gain:	3.80	(dBi)

S= 0.56 (mW/cm<sup>2</sup>)  
P= 295.8012 (mW)  
G= 2.40 (numeric)

R = 10.06 (cm)

S at 20cm: 0.14101307 (mW/cm<sup>2</sup>)

#### Formulae:

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

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

where: S = Power Density Limit  
P = Power Output of the Device  
G = Numeric Antenna Gain  
R = Distance from Antenna

Source-Based Time-Average Factor = 10 \* log (Time On / (Time On + Time Off))

Power Output of the Device (W) = 10 \* log (RF Output Power (dBm) + Source-Based Time Average Factor (dB))

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	<b>ITRONIX</b> <small>A GENERAL DYNAMICS COMPANY</small>
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

D.6.2 Calculations:

**SkyCross Internal Antenna (Max. Measured Average Conducted Power - PCS)**

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

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

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

- 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

- Occupational/Controlled
- General Population/Uncontrolled

Ratio of Time on vs Total TX Time

Tx Frequency:	<input type="text" value="1880"/>	(MHz)
RF Output Power at Antenna Input Terminal:	<input type="text" value="23.98"/>	(dBm)
Source-Based Time -Average Factor:	<input type="text" value="0.00"/>	(dB)
Source-Based Time-Averaged RF Output Power at Antenna Input Terminal:	<input type="text" value="23.98"/>	(dBm)
Antenna gain:	<input type="text" value="-0.30"/>	(dBi)

S=  (mW/cm<sup>2</sup>)  
P=  (mW)  
G=  (numeric)

**R =  (cm)**

S at 20cm:  (mW/cm<sup>2</sup>)

**Formulae:**

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

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

where: S = Power Density Limit  
P = Power Output of the Device  
G = Numeric Antenna Gain  
R = Distance from Antenna

Source-Based Time-Average Factor = 10 \* log (Time On / (Time On + Time Off))  
Power Output of the Device (W) = 10 \* log (RF Output Power (dBm) + Source-Based Time Average Factor (dB))

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

D.6.3 Calculations:

**MaxRad Vehicle-Mount Antenna (Max. Measured Average Conducted Power - Cellular)**

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

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

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

- 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

- Occupational/Controlled
- General Population/Uncontrolled

Ratio of Time on vs Total TX Time

Tx Frequency:	<input type="text" value="836.52"/>	(MHz)
RF Output Power at Antenna Input Terminal:	<input type="text" value="24.71"/>	(dBm)
Source-Based Time -Average Factor:	<input type="text" value="0.00"/>	(dB)
Source-Based Time-Averaged RF Output Power at Antenna Input Terminal:	<input type="text" value="24.71"/>	(dBm)
Antenna gain:	<input type="text" value="3.00"/>	(dBi)

S=  (mW/cm<sup>2</sup>)  
P=  (mW)  
G=  (numeric)

**R =  (cm)**

S at 20cm:  (mW/cm<sup>2</sup>)

**Formulae:**

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

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

where: S = Power Density Limit  
P = Power Output of the Device  
G = Numeric Antenna Gain  
R = Distance from Antenna

Source-Based Time-Average Factor = 10 \* log (Time On / (Time On + Time Off))  
Power Output of the Device (W) = 10 \* log (RF Output Power (dBm) + Source-Based Time Average Factor (dB))

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

D.6.4 Calculations:

**MaxRad Vehicle-Mount Antenna (Max. Measured Average Conducted Power - PCS)**

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

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

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

- 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

- Occupational/Controlled
- General Population/Uncontrolled

Ratio of Time on vs Total TX Time

Tx Frequency:	<input type="text" value="1880"/>	(MHz)
RF Output Power at Antenna Input Terminal:	<input type="text" value="23.98"/>	(dBm)
Source-Based Time -Average Factor:	<input type="text" value="0.00"/>	(dB)
Source-Based Time-Averaged RF Output Power at Antenna Input Terminal:	<input type="text" value="23.98"/>	(dBm)
Antenna gain:	<input type="text" value="3.00"/>	(dBi)

S=  (mW/cm<sup>2</sup>)  
P=  (mW)  
G=  (numeric)

**R =  (cm)**

S at 20cm:  (mW/cm<sup>2</sup>)

**Formulae:**


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

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

where: S = Power Density Limit  
P = Power Output of the Device  
G = Numeric Antenna Gain  
R = Distance from Antenna

Source-Based Time-Average Factor = 10 \* log (Time On / (Time On + Time Off))  
Power Output of the Device (W) = 10 \* log (RF Output Power (dBm) + Source-Based Time Average Factor (dB))

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### Bluetooth Radio

Antenna Type	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm <sup>2</sup> )	General Population Exposure Limit from 1.1310 (mW/cm <sup>2</sup> )	Ratio of Power Density to the Exposure Limit
Etenna's AccuWave	EA2400	2402	0.85	3	0	0.0003	1	0.0003
Worst Case Ratio of Power Density to the Exposure Limit = 0.0003								

### Results:

Mode of Operation	RF Conducted Output Power	Antenna Gain	MPE Distance	Power Density at 20 cm	Power Density Limit
	dBm	dBi	cm	mW/cm <sup>2</sup>	mW/cm <sup>2</sup>
Cellular EV-DO	24.71	3.8	10.06	0.1410	0.56
PCS EV-DO	23.98	-0.3	4.31	0.0464	1.0
Bluetooth	-0.7	3.0	0.37	0.0003	1.0

### D.6.5 Co-Transmit MPE Calculations

Radio	Power Density at 20 cm	Ratio	Sum	Power Density Limit
	mW/cm <sup>2</sup>	(S / Limit)	mW/cm <sup>2</sup>	mW/cm <sup>2</sup>
Cellular EV-DO	0.1410	0.252	0.2523	1
Bluetooth	0.0003	0.0003		
PCS EV-DO	0.0464	0.0464	0.0467	1
Bluetooth	0.0003	0.0003		

### D.7 PASS/FAIL

In reference to the results outlined in D.6 the DUT passes the requirements as stated in the referenced rule part as follows:  
 1) The DUT must comply with the minimum spacing requirement of 20 cm to ensure an exposure of not more than f/1500 mW/cm<sup>2</sup> for frequencies between 300 and 1500 MHz and 1 mW/cm<sup>2</sup> for frequencies between 1500 and 100,000 MHz.

### D.8 SIGN-OFF


I attest to the accuracy of the data. All calculations/measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these calculations/measurements.



Spencer Watson  
 Senior EMC Technologist  
 Celltech Labs Inc.

February 14, 2007  
 Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### Appendix E - Occupied Bandwidth Measurement

E.1 REFERENCES	
<b>Normative Reference Standard</b>	FCC CFR 47 §2.202; FCC CFR 47 §2.1049
<b>Procedure Reference</b>	FCC CFR 47 §2.1049

E.2 LIMITS	
FCC CFR 47 §2.202	<i>Applicable Emission designator: 1M25F9W therefore: Theoretical Necessary BW=1.25 MHz</i>

E.3 ENVIRONMENTAL CONDITIONS	
<b>Temperature</b>	25 ± 5 °C
<b>Humidity</b>	35 ± 5 %RH
<b>Barometric Pressure</b>	uncontrolled

E.4 EQUIPMENT LIST					
ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	HP	E4408B	Spectrum Analyzer	05Feb07	05Feb08
00102	Pasternack	PE7015-3010	30dB attenuator	na	na*
00079	Pasternack	PE2208-6	Directional coupler	na	na*
00208	Anritsu	MT8820A	Radio Communication Analyzer	Jun06	Jun07

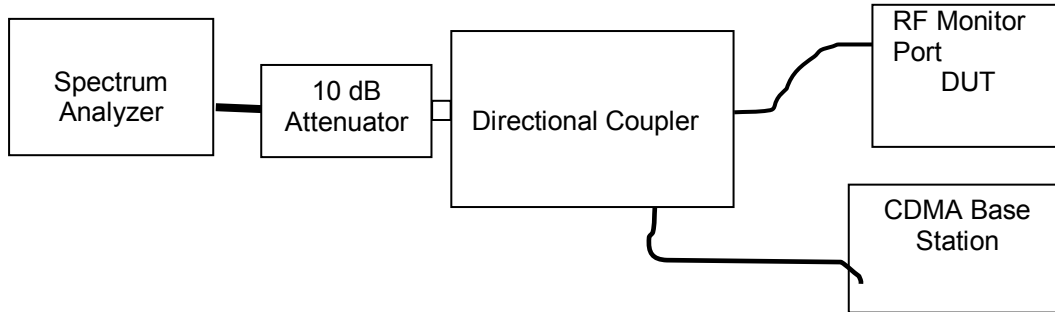
\* Verified with power meter prior to use

E.5 MEASUREMENT EQUIPMENT SETUP					
<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	The measurement equipment was connected as shown in E.6.				
<b>MEASUREMENT EQUIPMENT SETTINGS</b>	The spectrum analyzer was set to the following settings:				
	RBW	VBW	Detector	-	
	kHz	kHz			
30	30	Sample			

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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## E.6 SETUP DRAWING

Figure E.6-1 - Setup Drawing



## E.7 DUT OPERATING DESCRIPTION

Measurements were made with the DUT transmitting at maximum power in the cellular band, in a configuration as described in Section 5 of this report.



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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## E.8 TEST RESULTS

### E.8.1 Cellular Occupied Bandwidth

Channel 1013 (824.70 MHz)

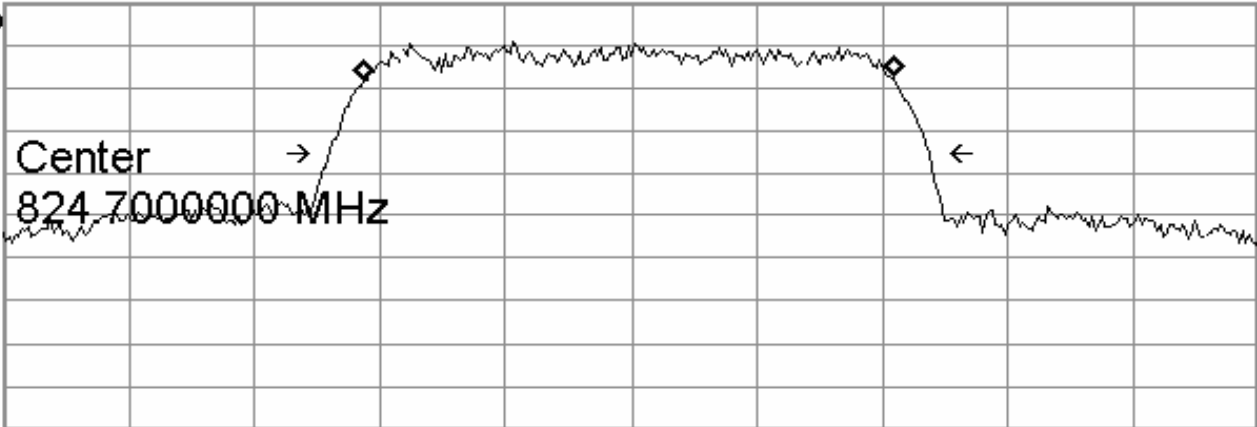
Agilent 17:28:09 Feb 13, 2007

R T

Ref 20.18 dBm

#Atten 25 dB Ext PG -13 dB

# Samp  
Log  
10  
dB/



Center 824.7 MHz

Span 3 MHz

#Res BW 30 kHz

#VBW 30 kHz

Sweep 6.791 ms (401 pts)

**Occupied Bandwidth**  
1.2690 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -5.233 kHz  
x dB Bandwidth 1.432 MHz\*

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 384 (836.52 MHz)

Agilent 17:29:30 Feb 13, 2007

R T

Ref 20.18 dBm

#Atten 25 dB Ext PG -13 dB

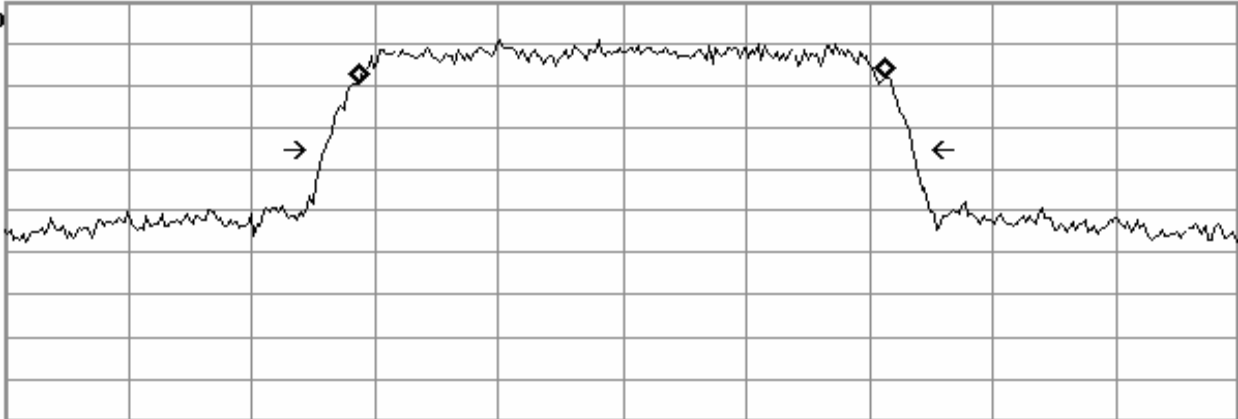
#Samp

Log

10

dB/

VAvg



Center 836.5 MHz

Span 3 MHz

#Res BW 30 kHz

#VBW 30 kHz

Sweep 6.791 ms (401 pts)

Occupied Bandwidth  
1.2711 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -3.423 kHz  
x dB Bandwidth 1.430 MHz\*



<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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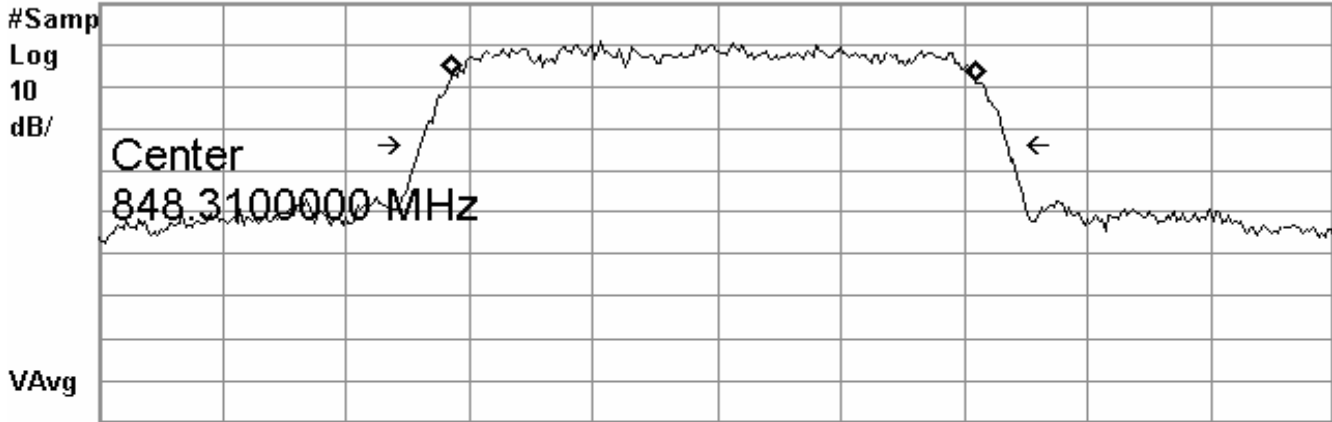
<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 777 (848.31 MHz)

Agilent 17:30:30 Feb 13, 2007

R T

Ref 20.18 dBm #Atten 25 dB Ext PG -13 dB



Center 848.3 MHz Span 3 MHz  
 #Res BW 30 kHz #VBW 30 kHz Sweep 6.791 ms (401 pts)

Occupied Bandwidth  
 1.2698 MHz

Occ BW % Pwr 99.00 %  
 x dB -26.00 dB

Transmit Freq Error -5.571 kHz  
 x dB Bandwidth 1.433 MHz\*

Summary		
Channel	Frequency	OBW
	MHz	MHz
1013	824.70	1.2690
384	836.52	1.2711
777	848.31	1.2698



<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

E.8.2 PCS Occupied Bandwidth

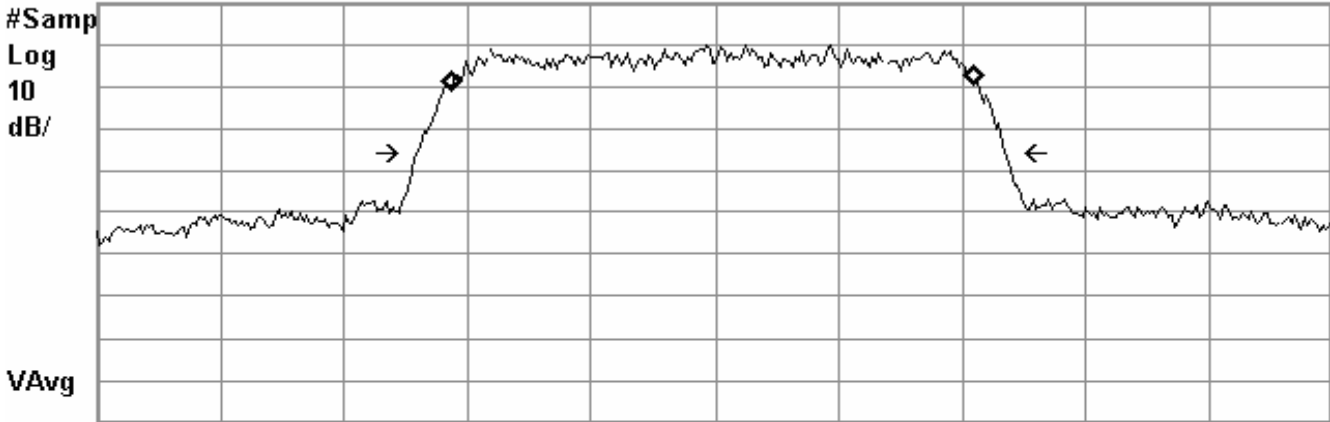
Channel 25 (1851.25 MHz)

Agilent 17:26:47 Feb 13, 2007

R T

Ref 20.18 dBm

#Atten 25 dB Ext PG -13 dB



Center 1.851 GHz

Span 3 MHz

#Res BW 30 kHz

#VBW 30 kHz

Sweep 6.791 ms (401 pts)

**Occupied Bandwidth**  
1.2709 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -3.411 kHz  
x dB Bandwidth 1.426 MHz\*



<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

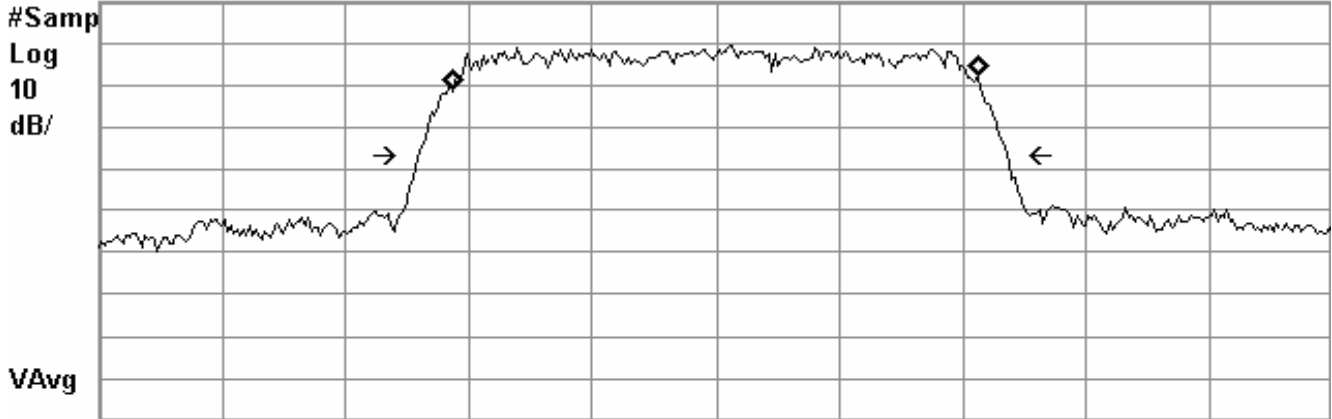
Channel 600 (1880 MHz)

Agilent 17:23:34 Feb 13, 2007

R T

Ref 20.18 dBm

#Atten 25 dB Ext PG -13 dB



Center 1.88 GHz

Span 3 MHz

#Res BW 30 kHz

#VBW 30 kHz

Sweep 6.791 ms (401 pts)

Occupied Bandwidth  
1.2729 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -3.774 kHz  
x dB Bandwidth 1.433 MHz\*



<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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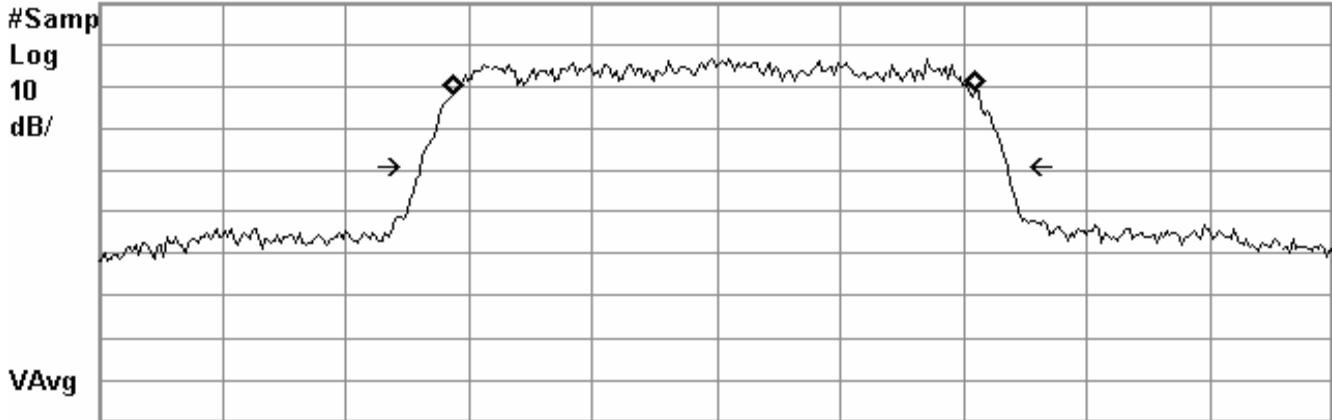
<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 1175 (1908.75 MHz)

Agilent 17:25:13 Feb 13, 2007

R T

Ref 20.18 dBm #Atten 25 dB Ext PG -13 dB



Center 1.909 GHz Span 3 MHz  
 #Res BW 30 kHz #VBW 30 kHz Sweep 6.791 ms (401 pts)


Occupied Bandwidth  
 1.2721 MHz

Occ BW % Pwr 99.00 %  
 x dB -26.00 dB

Transmit Freq Error -3.265 kHz  
 x dB Bandwidth 1.425 MHz\*

Summary

Channel	Frequency	OBW
	MHz	MHz
25	1851.25	1.2709
600	1880.00	1.2729
1175	1908.75	1.2721

	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**E.9 PASS/FAIL**

In reference to the theoretical necessary bandwidth of 1.25 MHz associated with the published Emission Designator 1M25F9W, the maximum occupied bandwidth measured exceeds this by 1.8%.

**E.10 SIGN-OFF**

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




Spencer Watson  
Senior EMC Technologist  
Celltech Labs Inc.

February 13, 2007

Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**Appendix F - Conducted TX Spurious Emissions Measurement**

<b>F.1 REFERENCES</b>	
<b>Normative Reference Standard</b>	FCC CFR 47 §22.917(a); FCC CFR 47 §24.238(a)
<b>Procedure Reference</b>	FCC CFR 47 §22.917(b); FCC CFR 47 §24.238(b)


<b>F.2 LIMITS</b>	
FCC CFR 47 §22.917 §24.238	<i>(a) Out of Band Emissions. The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by: at least 43 + 10 log P dB</i>

<b>F.3 ENVIRONMENTAL CONDITIONS</b>	
<b>Temperature</b>	25 ± 5 °C
<b>Humidity</b>	35 ± 5 %RH
<b>Barometric Pressure</b>	uncontrolled

<b>F.4 EQUIPMENT LIST</b>					
ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	HP	E4408B	Spectrum Analyzer	05Feb07	05Feb08
00102	Pasternack	PE7015-3010	30dB attenuator	na	na*
00079	Pasternack	PE2208-6	Directional coupler	na	na*
00208	Anritsu	MT8820A	Radio Communication Analyzer	Jun06	Jun07

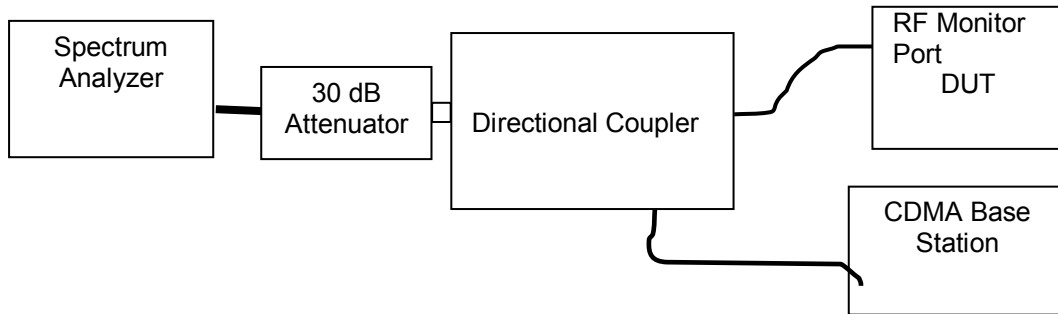
\* Verified with power meter prior to use

<b>F.5 MEASUREMENT EQUIPMENT SETUP</b>					
<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	The measurement equipment was connected as shown in F.6.				
<b>MEASUREMENT EQUIPMENT SETTINGS</b>	The spectrum analyzer was set to the following settings:				
	Frequency Range	Measurement		Specified BW	Detector
		RBW	VBW		
	MHz	kHz	kHz	kHz	
	At Block edges	30	30	1% EBW	Sample
Within 1 MHz of the Block Edges	30	30	1% EBW	Sample	
Beyond 1 MHz from Block Edges	100	100	100	Peak	

	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## F.6 SETUP DRAWING

Figure F.6-1 - Setup Drawing



## F.7 DUT OPERATING DESCRIPTION

Measurements were made with the DUT transmitting at maximum power in the cellular band, in a configuration as described in Section 5 of this report. The Block Edge measurements were made with the DUT transmitting on the channel closest to the edge under investigation (CH1013 & CH777). The remaining spurious measurements were made on each of the three channels, Low (CH1013), Mid (CH384) and High (CH777).

Measurements were made with the DUT transmitting at maximum power in the PCS band, in a configuration as described in Section 5 of this report. The Block Edge measurements were made with the DUT transmitting on the channel closest to the edge under investigation (CH25 & CH1175). The remaining spurious measurements were made on each of the three channels, Low (CH25), Mid (CH600) and High (CH1175).

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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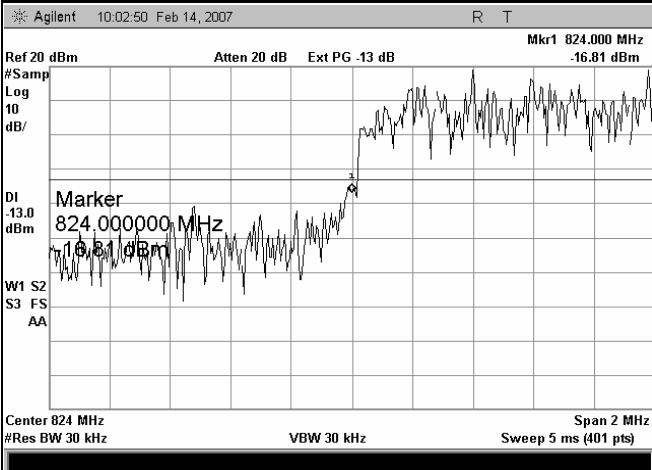


<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

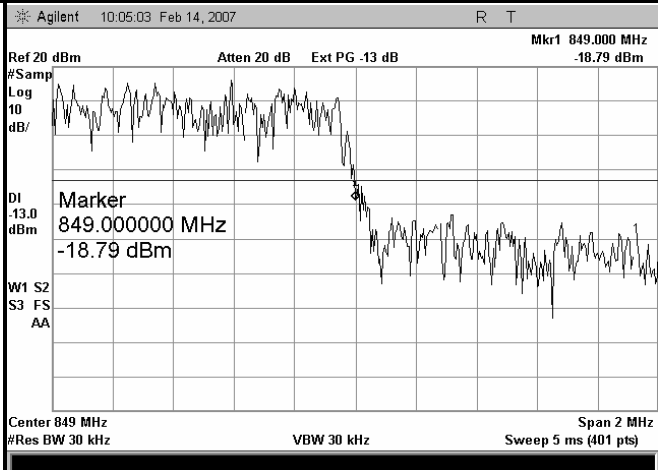
## F.8 TEST RESULTS

### F.8.1 Cellular Spurious Emissions within 1MHz of Block Edge

#### Lower Block Edge - 824 MHz (Channel 1013)



#### Upper Block Edge - 849 MHz (Channel 777)

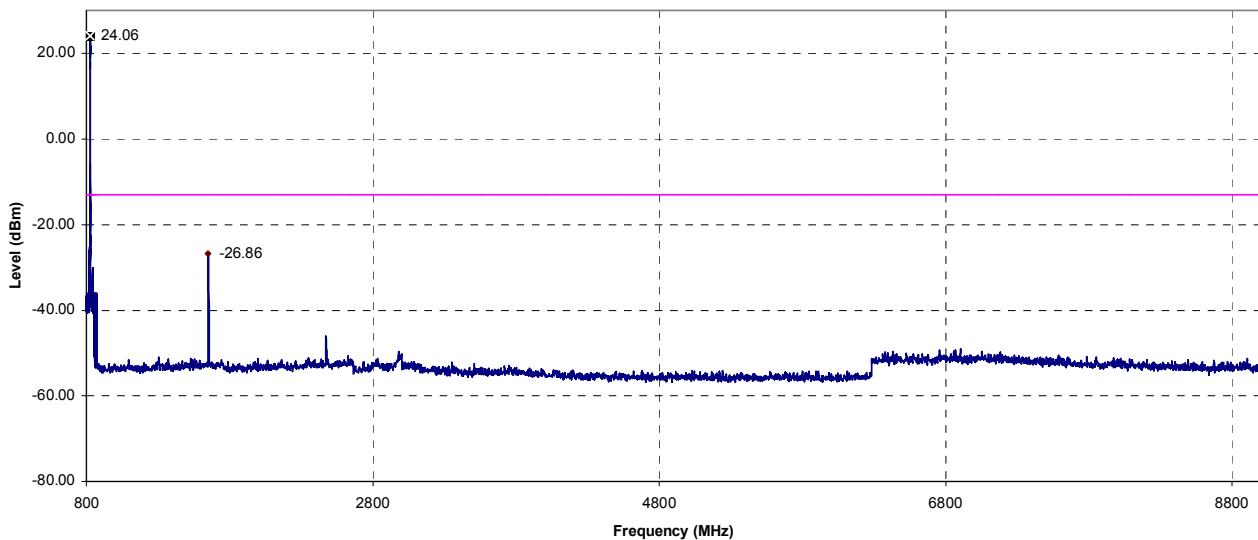


### F.8.2 Cellular Conducted Transmitter Spurious Emissions

#### Channel 1013

Transmitting Conducted Spurs - 100 kHz RBW & VBW in the range 800-1000 MHz - 1 MHz RBW & VBW in the range 1-9 GHz Frequency = 824.7 MHz  
Carrier Peak Power = 24.06 dBm

Maximum Out-of-Band Emission = -26.86dBm @ 1649.15 MHz



— Signal    x Carrier Peak    - Maximum Out-of-band Emission    — Limit = -13dBm

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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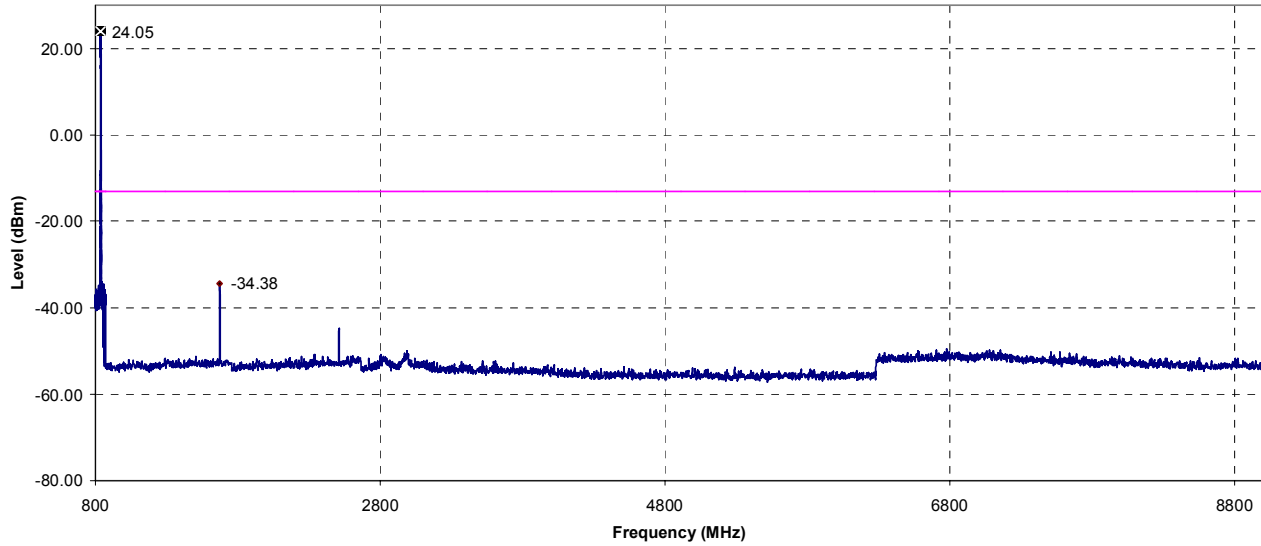


<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 384

Transmitting Conducted Spurs - 100 kHz RBW & VBW in the range 800-1000 MHz - 1 MHz RBW & VBW in the range 1-9 GHz  
 Frequency = 836.52 MHz  
 Carrier Peak Power = 24.05 dBm

Maximum Out-of-Band Emission = -34.38dBm @ 1674.06 MHz



— Signal    ✕ Carrier Peak    ◆ Maximum Out-of-band Emission    — Limit = -13dBm

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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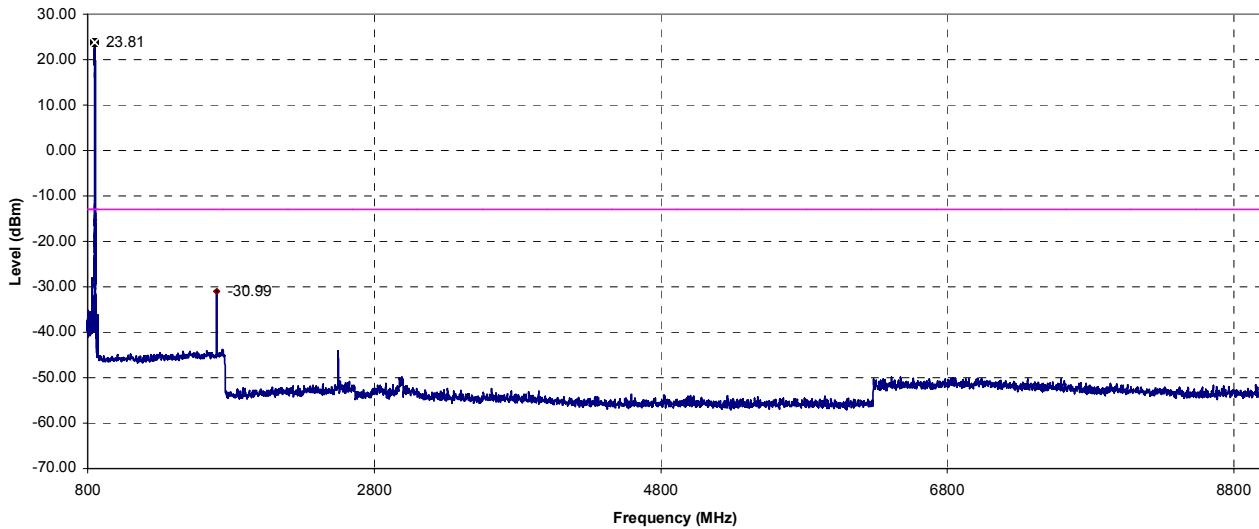


<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 777

Transmitting Conducted Spurs - 100 kHz RBW & VBW in the range 800-1000 MHz - 1 MHz RBW & VBW in the range 1-9 GHz  
 Frequency = 848.31 MHz  
 Carrier Peak Power = 23.81 dBm

Maximum Out-of-Band Emission = -30.99dBm @ 1698.96 MHz



— Signal    ✕ Carrier Peak    ◆ Maximum Out-of-band Emission    — Limit = -13 dBm

\* Losses are factored into the measured value with an offset in the analyzer.

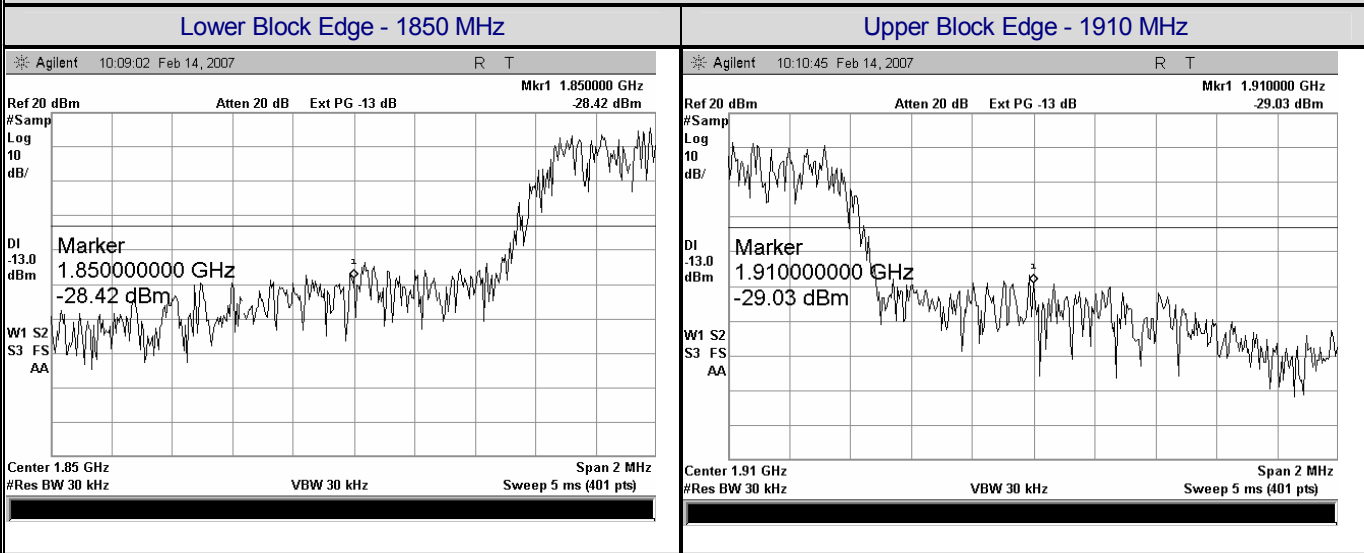
<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### F.8.3 PCS Spurious Emissions within 1MHz of Block Edge

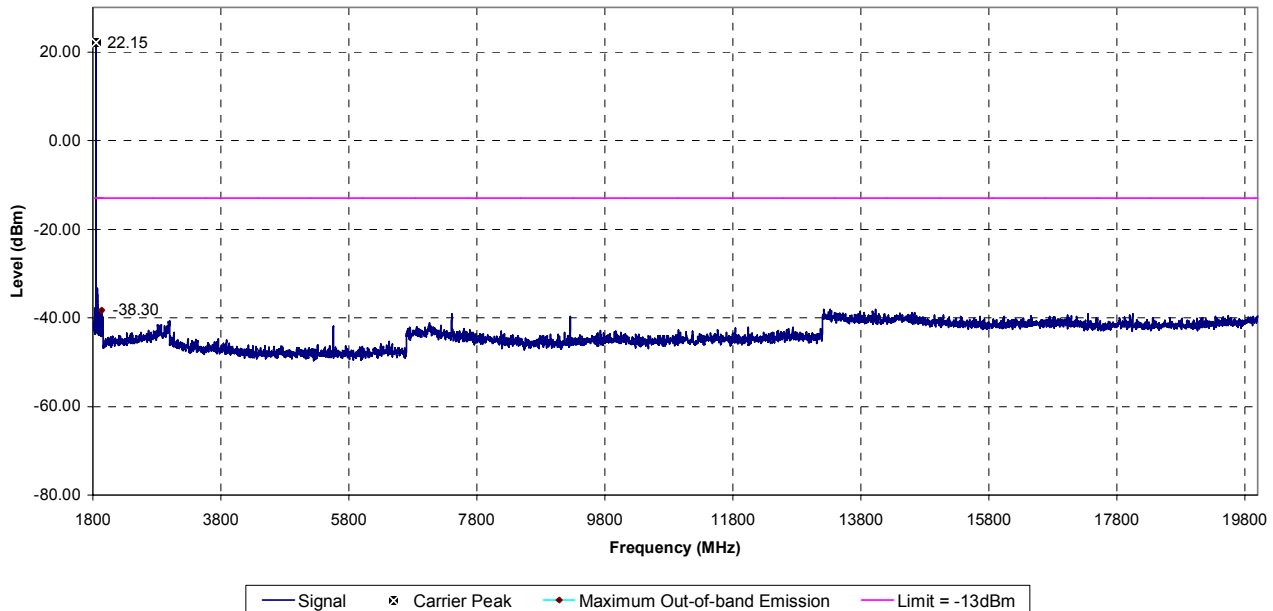


### F.8.4 PCS Transmitter Conducted Spurious Emissions removed by more than 1MHz from Block Edge

#### Channel 25

Transmitting Conducted Spurs - 100 kHz RBW & VBW in the range 1.830 - 20 GHz Frequency = 1851.25 MHz  
Carrier Peak Power = 22.15 dBm

Maximum Out-of-Band Emission = -38.30dBm @ 1936.33 MHz



<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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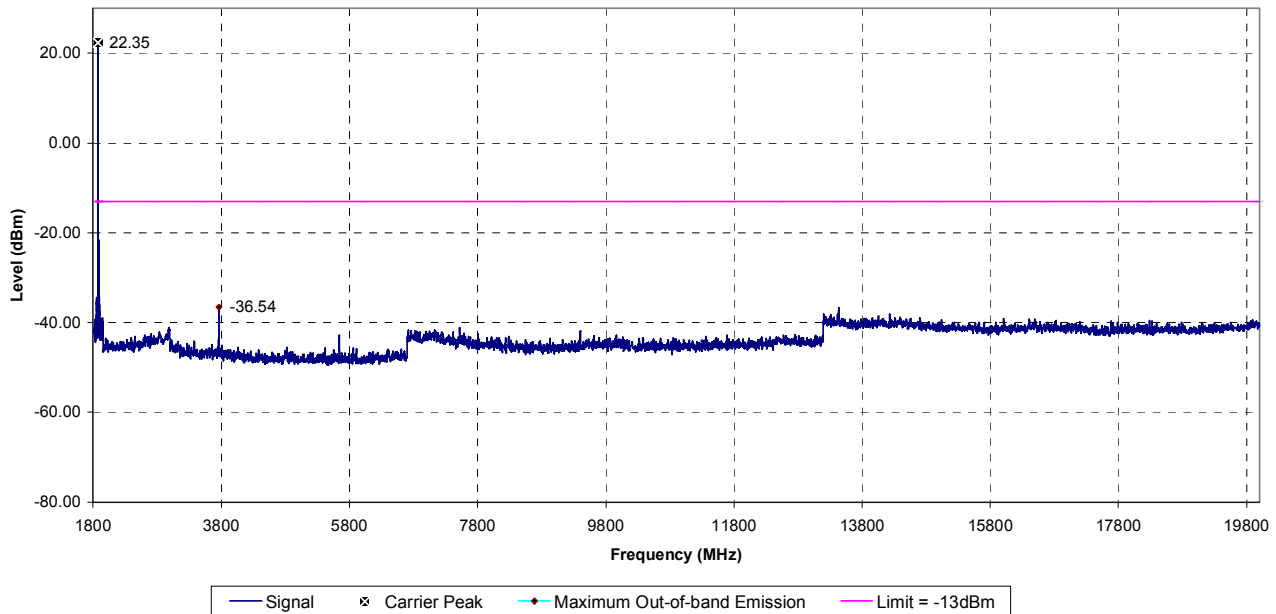


<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 600

Transmitting Conducted Spurs - 100 kHz RBW & VBW in the range 1.830 - 20 GHz Frequency = 1880 MHz  
Carrier Peak Power = 22.35 dBm

Maximum Out-of-Band Emission = -36.54dBm @ 3763.20 MHz



<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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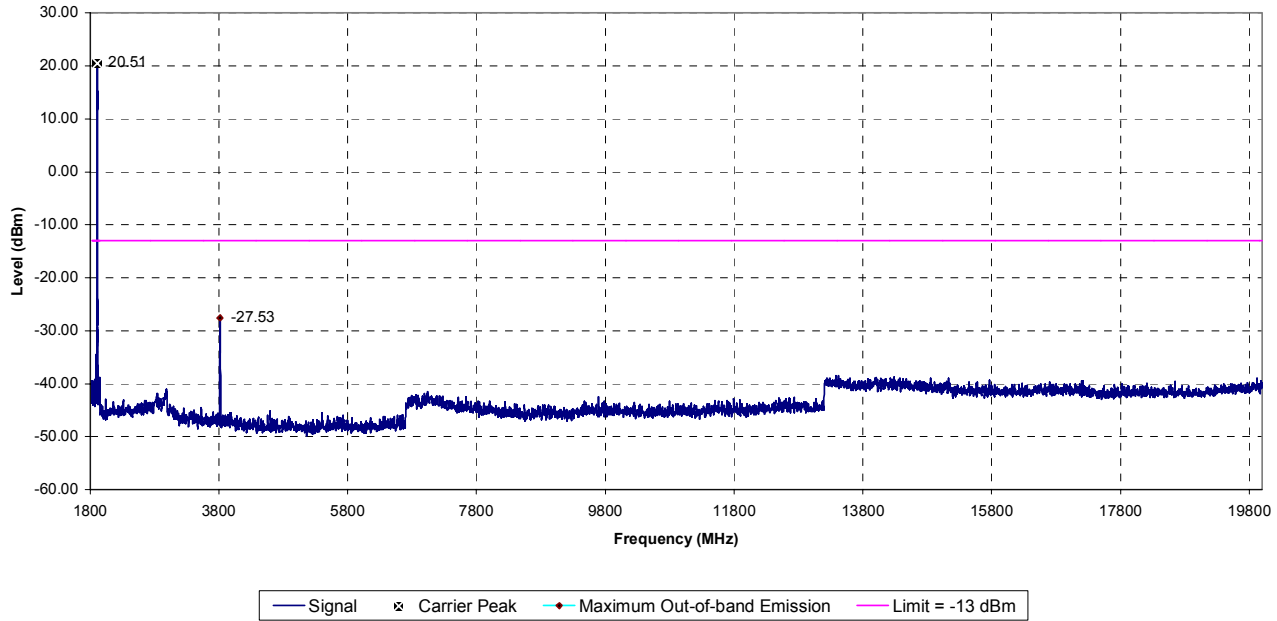


<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Channel 1175


Transmitting Conducted Spurs - 100 kHz RBW & VBW in the range 1.830 - 20 GHz Frequency = 1908.75 MHz  
Carrier Peak Power = 20.51 dBm

Maximum Out-of-Band Emission = -27.53dBm @ 3816.53 MHz



\* Losses are factored into the measured value with an offset in the analyzer.

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### F.9 PASS/FAIL

In reference to the results outlined in F.8, the DUT passes the requirements as stated in the referenced rule parts.

FCC CFR 4 §22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

FCC CFR 4 §24.238 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

### F.10 SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




Spencer Watson  
Senior EMC Technologist  
Celltech Labs Inc.

February 14, 2007

Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**Appendix G - Frequency Stability / Temperature Variation Measurement**

<b>G.1 REFERENCES</b>	
<b>Normative Reference Standard</b>	FCC CFR 47 §22.355; FCC CFR 47 §24.235
<b>Procedure Reference</b>	ANSI/TIA/EIA-603-C, FCC CFR 47 §2.1055 (a) (1)


<b>G.2 LIMITS</b>	
FCC CFR 47 §22.355	<i>Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Service must be maintained within the tolerances given on Table C-1 of this section. Table C-1 - Frequency Tolerance for Transmitters in the Public Mobile Services: .....821 MHz to 896 MHz ... Mobile ≤ 3 watts .....2.5 ppm</i>
FCC CFR 47 §24.235	<i>The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. *the fundamental frequency of the channel closest to a block edge is separated from the edge by 1.25 MHz.</i>

<b>G.3 ENVIRONMENTAL CONDITIONS</b>	
<b>Temperature</b>	NA
<b>Humidity</b>	40 +/- 10 %
<b>Barometric Pressure</b>	101 +/- 2 kPa

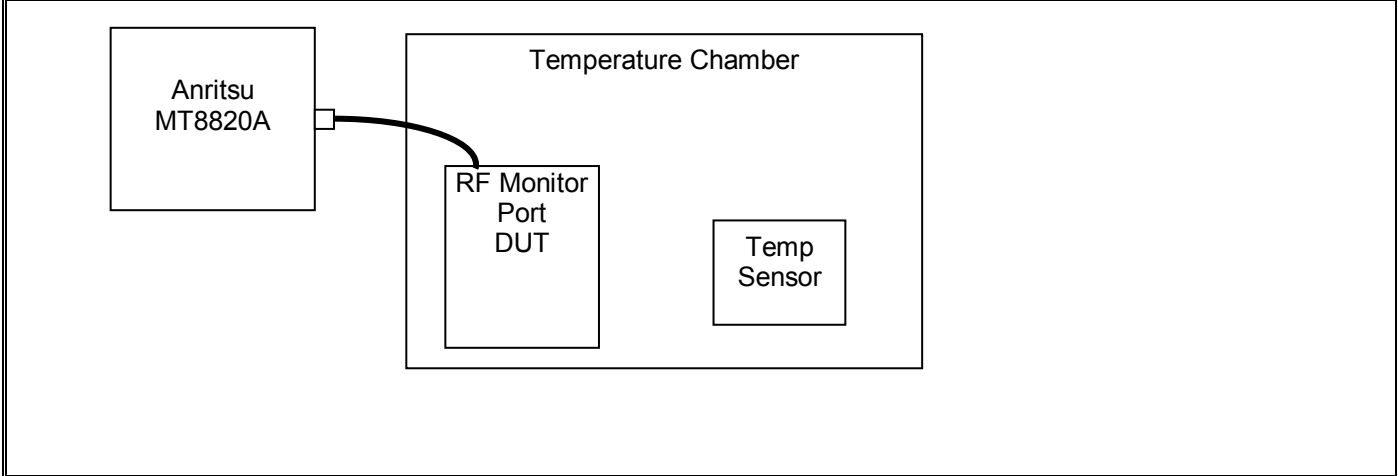
<b>G.4 EQUIPMENT LIST</b>						
Receiving Equipment						
ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
1	00081	Espec	ECT-2	Environmental Chamber	N/a	N/a*
2	00208	Anritsu	MT8820A	Radio Communication Analyzer	06Jun06	06Jun07
3	00207	VWR	61161-378	Temperature Sensor	07Mar06	06Mar08

\*Temperature verified during measurements with the VWR Temperature Sensor.

<b>G.5 MEASUREMENT EQUIPMENT SETUP</b>	
<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	The measurement equipment was connected as shown in G.6.

	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
	<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### G.6 SETUP DRAWING



### G.7 DUT OPERATING MODE(S)

Measurements were made with the DUT transmitting at the cellular mid channel (CH384) and PCS mid channel (CH600).

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## G.8 TEST RESULTS

### Frequency Stability over Temperature - Cell Band

**Carrier Frequency (MHz): 836.52**  
**Channel: 384**  
**Mode: Cellular EV-DO**  
**Deviation Limit (PPM): 2.5**


Temperature (°C)	Measured Frequency	Carrier Frequency Deviation		Specification	
		(Hz)	(PPM)	Lower Limit (PPM)	Upper Limit (PPM)
+20 (Ref)	836.519991	0.00	0.000	2.500	-2.500
-30	836.519986	5.00	0.006	2.500	-2.500
-20	836.520029	-38.00	-0.045	2.500	-2.500
-10	836.520005	-14.00	-0.017	2.500	-2.500
0	836.519991	0.00	0.000	2.500	-2.500
+10	836.519993	-2.00	-0.002	2.500	-2.500
+20	836.520013	-22.00	-0.026	2.500	-2.500
+30	836.519997	-6.00	-0.007	2.500	-2.500
+40	836.519963	28.00	0.033	2.500	-2.500
+50	836.520016	-25.00	-0.030	2.500	-2.500

### Frequency Stability over Temperature - PCS Band

**Carrier Frequency (MHz): 1880**  
**Channel: 600**  
**Mode: PCS EV-DO**  
**Deviation Limit (PPM): 2.5**

Temperature (°C)	Measured Frequency	Carrier Frequency Deviation		Specification	
		(Hz)	(PPM)	Lower Limit (PPM)	Upper Limit (PPM)
+20 (Ref)	1880.000016	0.00	0.000	2.500	-2.500
-30	1879.999976	40.00	0.021	2.500	-2.500
-20	1879.999999	17.00	0.009	2.500	-2.500
-10	1880.000017	-1.00	-0.001	2.500	-2.500
0	1880.000018	-2.00	-0.001	2.500	-2.500
+10	1880.000001	15.00	0.008	2.500	-2.500
+20	1880.000016	0.00	0.000	2.500	-2.500
+30	1879.99997	46.00	0.024	2.500	-2.500
+40	1879.999969	47.00	0.025	2.500	-2.500
+50	1879.999948	68.00	0.036	2.500	-2.500

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**G.9 PASS/FAIL**

In reference to the results outlined in G.8, the DUT passes the requirements as stated in the referenced rule parts.

**G.10 SIGN-OFF**

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




\_\_\_\_\_  
 Spencer Watson  
 Senior EMC Technologist  
 Celltech Labs Inc.

\_\_\_\_\_  
 February 14, 2007  
 Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**Appendix H - Conducted RX Spurious Emissions Measurement**

<b>H.1 REFERENCES</b>	
<b>Normative Reference Standard</b>	IC RSS-132 §4.6, IC RSS-Gen §6 (b); IC RSS-133 §6.7 (b)
<b>Procedure Reference</b>	IC RSS-Gen §4.8; IC RSS-133 §4.5


<b>H.2 LIMITS</b>	
IC RSS-132 §4.6	<i>Receiver spurious emissions shall comply with the limits specified in RSS-Gen</i>
IC RSS-Gen §6 (b) IC RSS-133 §6.7 (b)	<i>(b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4 kHz spurious frequency in the band 30 – 1000 MHz or 5 nanowatts above 1 GHz.</i>

<b>H.3 ENVIRONMENTAL CONDITIONS</b>	
<b>Temperature</b>	25 ± 5 °C
<b>Humidity</b>	35 ± 5 %RH
<b>Barometric Pressure</b>	uncontrolled

<b>H.4 EQUIPMENT LIST</b>					
ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	05Feb07	05Feb08
00188	Narda	M3933/16-06	2 x 2dB attenuator	na	na*
00078	Pasternack	PE2208-6	Directional coupler	na	na*
00208	Anritsu	MT8820A	Radio Communication Analyzer	Jun06	Jun07

\*Verified prior to use

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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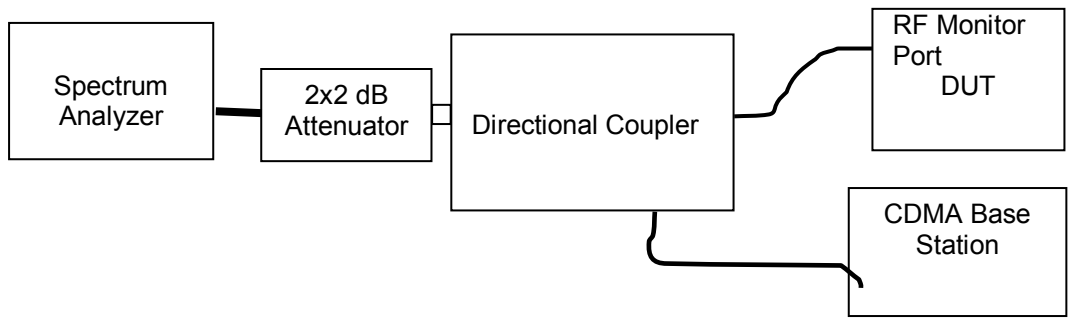
	<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### H.5 MEASUREMENT EQUIPMENT SETUP

<b>MEASUREMENT EQUIPMENT CONNECTIONS</b>	The measurement equipment was connected as shown in H.6.			
<b>MEASUREMENT EQUIPMENT SETTINGS</b>	Spectrum analyzer settings:			
	Frequency Range	RBW	VBW	Detector
	MHz	kHz	kHz	
	30 MHz – 1000 MHz	10*	10	Peak
1 GHz – 20 GHz	100	100	Peak	

### H.6 SETUP DRAWING

Figure H.6-1 - Setup Drawing



### H.7 DUT OPERATING MODE(S)

Measurements were made with the DUT in receive mode for the cellular band mid channel (CH384) and for the PCS band mid channel (CH600).

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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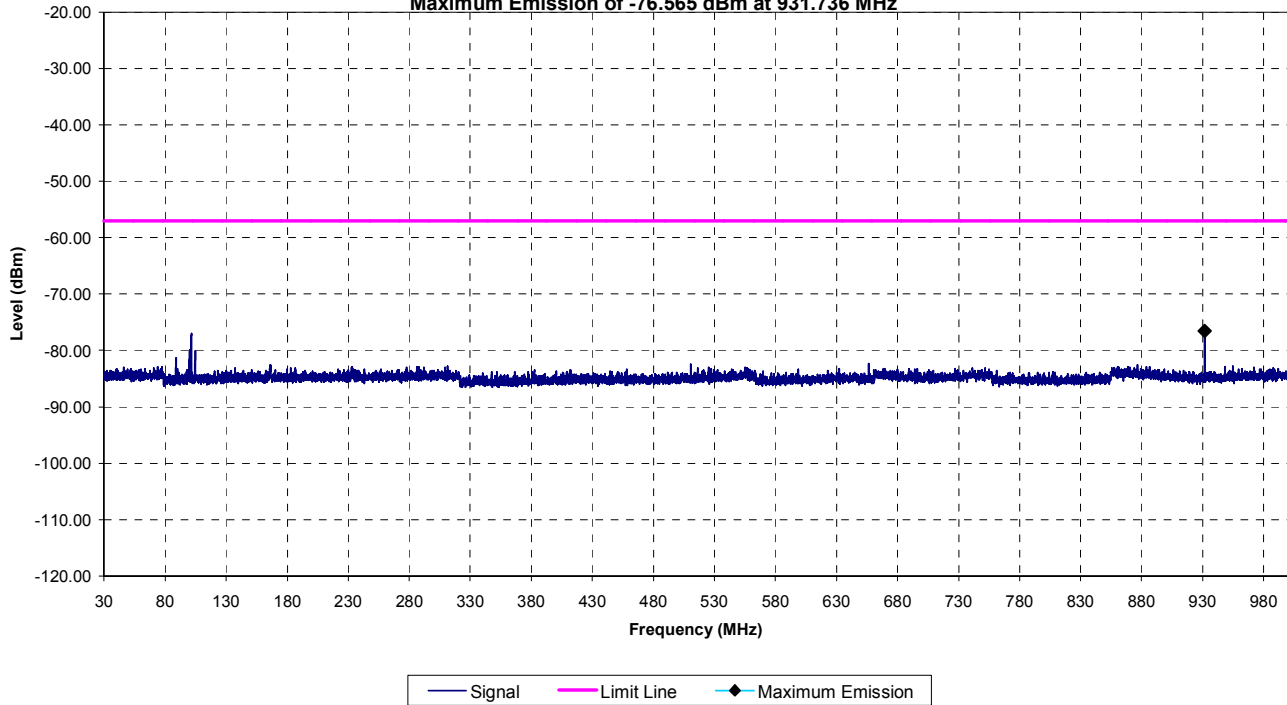


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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

## H.8 TEST RESULTS

### H.8.1 Cellular Receiver Spurious Emissions

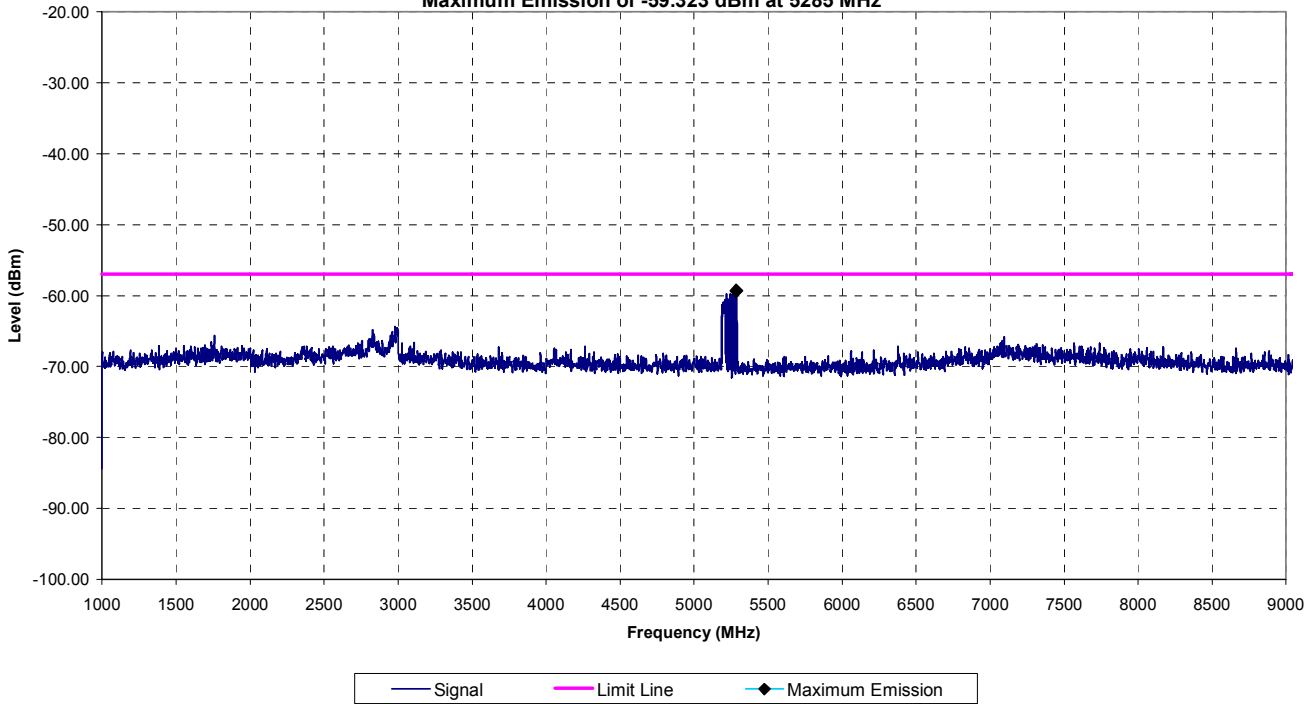
Receiving Conducted Spurs with 10 kHz RBW & VBW Frequency = 881.52 MHz  
 Maximum Emission of -76.565 dBm at 931.736 MHz





<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Receiving Conducted Spurs with 100 kHz RBW & VBW Frequency = 881.52 MHz  
Maximum Emission of -59.323 dBm at 5285 MHz



Calculations:

$$\text{Limit (dBm)} = 10 * \log(\text{Limit (mW)})$$

$$\text{Margin (dB)} = \text{Limit (dBm)} - \text{Peak Emission (dBm)}$$

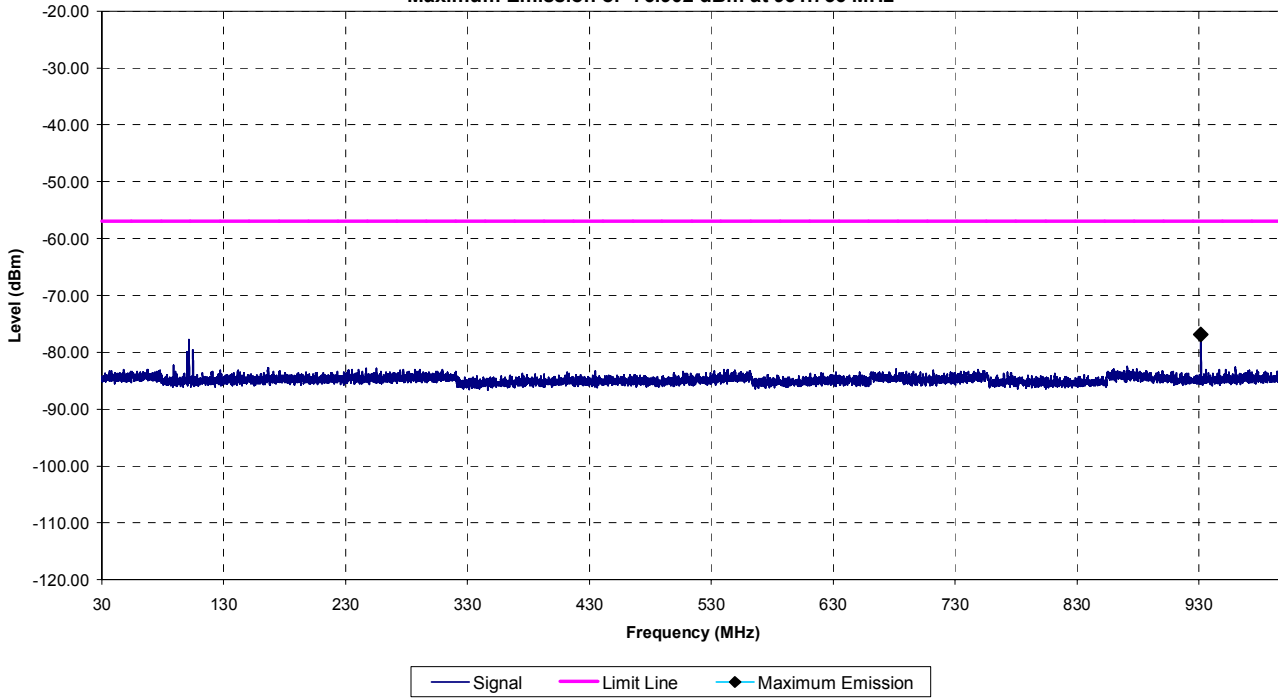
<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
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<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### H.8.2 PCS Receiver Spurious Emissions

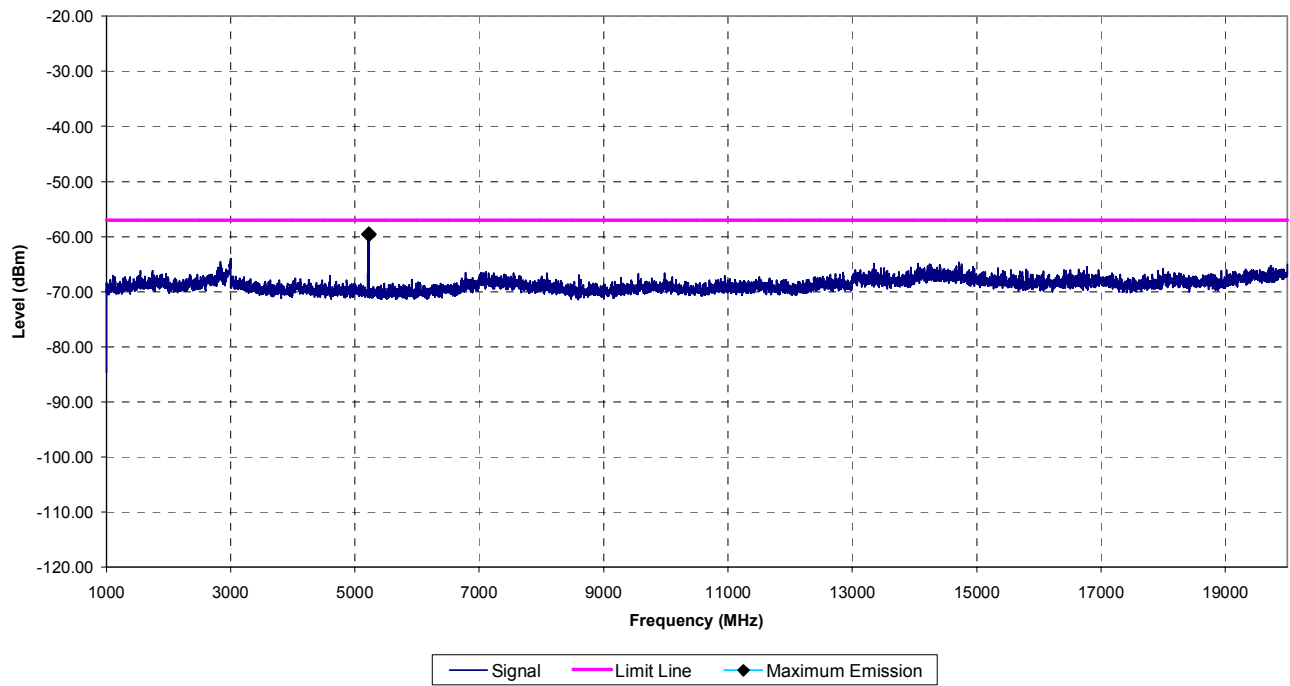
Receiving Conducted Spurs with 10 kHz RBW & VBW Frequency = 1960 MHz  
 Maximum Emission of -76.902 dBm at 931.736 MHz






<b>Test Report Serial No.:</b>	010907KBC-T804-E24C	<b>Report Issue Date:</b>	February 21, 2007
<b>Date(s) of Evaluation:</b>	February 01-14, 2007	<b>Report Revision No.:</b>	Revision 1.0
<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

Receiving Conducted Spurs with 100 kHz RBW & VBW Frequency = 1960 MHz  
 Maximum Emission of -59.596 dBm at 5222.5 MHz



Calculations:

$Limit (dBm) = 10 * \log (Limit (mW))$   
 $Margin (dB) = Limit (dBm) - Peak Emission (dBm)$

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	<b>Test Standard(s) Applied:</b>	FCC 47 CFR §2, §22H, §24E	Industry Canada RSS-132, RSS-133	
	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

### H.9 PASS/FAIL

In reference to the results outlined in H.8, the DUT passes the requirements as stated in the referenced standards.

IC RSS-Gen §6 (b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4kHz spurious frequency in the band 30 – 1000 MHz or 5 nanowatts above 1 GHz.

IC RSS-133 §6.7 (b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4kHz spurious frequency in the band 30 - 1000 MHz or 5 nanowatts above 1 GHz.

### H.10 SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




\_\_\_\_\_  
 Spencer Watson  
 Senior EMC Technologist  
 Celltech Labs Inc.

\_\_\_\_\_  
 February 14, 2007

Date

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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	<b>Test Lab Registration(s):</b>	FCC Lab Registration #714830	Industry Canada Lab File #3874	

**END OF DOCUMENT**

<b>Company Name:</b>	Itronix Corporation	<b>FCC ID:</b>	KBCIX-NW620	<b>IC ID:</b>	1943A-NW620	
<b>DUT Description:</b>	Dual-Band CDMA/EV-DO PCMCIA Modem installed in Itronix IX600 Rugged Laptop PC					
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