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|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

**FCC PART 15C EMC TEST REPORT**  
**FOR**  
**ITRONIX RUGGED LAPTOP PC MODEL: IX260PNL3AC860**  
**INCLUDING**  
**SENAO NL-3054MP 802.11B/G 2.4 GHz DSSS WLAN MINI-PCI CARD**  
**WITH**  
**RANGESTAR INTERNAL SURFACE-MOUNT ANTENNA**

**TRSN: 061506KBC-T758-E15W**  
**Issue 1.0**

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

**August 25, 2006**

|                             |                     |                    |
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## DECLARATION OF COMPLIANCE

|                                     |                                                                                                                                                                                                                                                                    |                                     |                                                                                                      |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Test Lab</b>                     | <b>CELLTECH LABS INC.</b><br>Testing and Engineering Services<br>1955 Moss Court<br>Kelowna, B.C.<br>Canada V1Y 9L3<br><br><b>Phone:</b> 250-448-7047<br><b>Fax:</b> 250-448-7048<br><b>e-mail:</b> info@celltechlabs.com<br><b>web site:</b> www.celltechlabs.com | <b>Applicant</b>                    | <b>ITRONIX CORPORATION</b><br>12825 E. Mirabeau Parkway<br>Spokane Valley, WA 99216<br>United States |
| <b>Lab Registration No.(s):</b>     | FCC: 714830                                                                                                                                                                                                                                                        | IC: IC 3874                         |                                                                                                      |
| <b>Rule Part(s):</b>                | FCC: §15.247; §2.1091; §1.1310                                                                                                                                                                                                                                     | IC: RSS-210 Issue 5                 |                                                                                                      |
| <b>Device Classification:</b>       | FCC: Digital Transmission System (DTS)                                                                                                                                                                                                                             | IC: Low Power Licence-Exempt Device |                                                                                                      |
| <b>Device Identification:</b>       | FCC ID: KBCIX260PNL3AC860                                                                                                                                                                                                                                          | IC: Not applicable                  |                                                                                                      |
| <b>DUT Description:</b>             |                                                                                                                                                                                                                                                                    |                                     |                                                                                                      |
| <b>Model:</b>                       | IX260PNL3AC860                                                                                                                                                                                                                                                     |                                     |                                                                                                      |
| <b>Device Description:</b>          | Rugged Laptop PC                                                                                                                                                                                                                                                   |                                     |                                                                                                      |
| <b>Internal Transmitter Tested:</b> | Senao NL-3054MP 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card                                                                                                                                                                                                          |                                     |                                                                                                      |
| <b>Transmit Frequency Range:</b>    | 2412 - 2462 MHz                                                                                                                                                                                                                                                    |                                     |                                                                                                      |
| <b>Max. RF Output Power:</b>        | 0.056 Watts - 17.46 dBm - Peak Conducted - 802.11b<br>0.100 Watts - 20.00 dBm - Peak Conducted - 802.11g                                                                                                                                                           |                                     |                                                                                                      |
| <b>Modulation Type(s):</b>          | DBPSK, DQPSK, CCK                                                                                                                                                                                                                                                  |                                     |                                                                                                      |
| <b>Antenna Type(s) Tested:</b>      | WLAN: RangeStar P/N: 100929 Internal Surface-Mount (upper right side of LCD Display)                                                                                                                                                                               |                                     |                                                                                                      |
| <b>Power Supply:</b>                | Stationary: 90 Watt AC Power Adapter / 11.1V Lithium-ion Battery, 6.0Ah (Model: A2121-2)                                                                                                                                                                           |                                     |                                                                                                      |

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 §15.247, Industry Canada RSS-210 Issue 5, and ANSI TIA/EIA-603-B-2002.

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.



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EMC Manager  
Celltech Labs Inc.



|                         |                                                                                                                |                |                   |               |                |                                                                                       |
|-------------------------|----------------------------------------------------------------------------------------------------------------|----------------|-------------------|---------------|----------------|---------------------------------------------------------------------------------------|
| <b>Applicant:</b>       | Itronix Corporation                                                                                            | <b>FCC ID:</b> | KBCIX260PNL3AC860 | <b>IC ID:</b> | not applicable |  |
|                         | Rugged Laptop PC with Senao NL-3054MP 802.11b/g WLAN Mini-PCI Card                                             |                |                   | <b>Model:</b> | IX260PNL3AC860 |                                                                                       |
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| TEST SUMMARY                                         |                               |                                            |                                                  |                 |               |        |
|------------------------------------------------------|-------------------------------|--------------------------------------------|--------------------------------------------------|-----------------|---------------|--------|
| Appendix                                             | Test Description              | Procedure Reference                        | Limit Reference                                  | Test Start Date | Test End Date | Result |
| <b>Referenced Standard: FCC CFR Title 47 Part 15</b> |                               |                                            |                                                  |                 |               |        |
| B                                                    | 6 dB Bandwidth                | FCC 97-114                                 | §15.247(2)                                       | na              | na            | Pass*  |
| C                                                    | Peak Conducted Power          | FCC 97-114                                 | §15.247 (b) (3)                                  | 27Oct04         | 27Oct04       | Pass   |
| D                                                    | Maximum Permissible Exposure  | FCC CFR 47 § 2.1091<br>IEEE Std C95.1-1999 | §1.1310 Table 1 (b)                              | 3Nov04          | 3Nov04        | Pass   |
| E                                                    | Radiated Spurious Emissions   | FCC 97-114                                 | §15.247(c)                                       | 25Oct04         | 4Nov04        | Pass   |
| F                                                    | Restricted Band Emissions     | FCC 97-114                                 | §15.205 (a), (b)<br>§15.209 (a)                  | 25Oct04         | 4Nov04        | Pass   |
| G                                                    | Peak Power Spectral Density   | FCC 97-114                                 | §15.247(d)                                       | na              | na            | Pass*  |
| H                                                    | Powerline Conducted Emissions | ANSI C63.4                                 | §15.207                                          | 5Nov04          | 5Nov04        | Pass   |
| <b>Referenced Standard: IC RSS-210 Issue 5</b>       |                               |                                            |                                                  |                 |               |        |
| B                                                    | 6 dB Bandwidth                | RSS-210 § 10                               | RSS-210 A1 §(l)(iv)                              | na              | na            | Pass*  |
| C                                                    | Peak Conducted Power          | RSS-210 § 10                               | RSS-210 A1 §(l)(iv)<br>RSS-210 §6.2.2 (o)(b)     | 27Oct04         | 27Oct04       | Pass   |
| D                                                    | Maximum Permissible Exposure  | RSS-102                                    | RSS-210 §14<br>Safety Code 6 2.2.1(a)<br>Table 5 | 3Nov04          | 3Nov04        | Pass   |
| E                                                    | Radiated Spurious Emissions   | RSS-212, ANSI C63.4                        | RSS-210 §6.2.2 (o)(e1)                           | 25Oct04         | 4Nov04        | Pass   |
| F                                                    | Restricted Band Emissions     | RSS-212, ANSI C63.4                        | RSS-210 §6.3                                     | 25Oct04         | 4Nov04        | Pass   |
| G                                                    | Peak Power Spectral Density   | RSS-210 § 10                               | RSS-210 §6.2.2 (o)(b)                            | na              | na            | Pass*  |
| H                                                    | Powerline Conducted Emissions | RSS-212, ANSI C63.4                        | RSS-210 §6.6                                     | 5Nov04          | 5Nov04        | Pass   |

\* Pass based on results outlined in reference module report.

#### REVISION LOG

| Issue | Description     | Implemented By | Implementation Date |
|-------|-----------------|----------------|---------------------|
| 1.0   | Initial Release | Jon Hughes     | 25Aug06             |

#### SIGNATORIES

|             |                                                                                     |               |
|-------------|-------------------------------------------------------------------------------------|---------------|
| Prepared By |  | Apr. 20, 2005 |
| Name/Title  | Duane M. Friesen, C.E.T. / EMC Manager                                              | Date          |
| Reviewed By |  | Apr. 20, 2005 |
| Name/Title  | Jon Hughes / General Manager                                                        | Date          |

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## 1.0 SCOPE

This report outlines the measurements made and results collected during the electromagnetic emissions testing of the Itronix Corporation Rugged Laptop PC with internal Senao NL-3054MP 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card and internal RangeStar surface-mount antenna. The results were applied against the EMC requirements and limits outlined in the technical rules and regulations set forth in the Federal Communication Commission Code of Federal Regulations Title 47 Part 15 Subpart C, and Industry Canada Radio Standards Specification RSS-210 Issue 5.

## 2.0 REFERENCES

### 2.1 Normative References

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANSI/ISO 17025:1999                                | 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 Std C95.1-1999                           | American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields                                                                                                                                                                                                                                                                                                              |
| CFR Title 47 Part 2:2003                           | Code of Federal Regulations<br>Title 47: Telecommunication<br>Part 2: Frequency Allocations and Radio Treaty Matters;<br>General Rules and Regulations                                                                                                                                                                                                                                                                         |
| CFR Title 47 Part 15:2003                          | Code of Federal Regulations<br>Title 47: Telecommunication<br>Part 15: Radio Frequency Devices                                                                                                                                                                                                                                                                                                                                 |
| IC Spectrum Management & Telecommunications Policy | Radio Standards Specification<br>RSS-212 Issue 1 (Provisional) - Test Facilities & Test Methods for Radio Equipment<br>RSS-210 Issue 5 - Low Power Licence-Exempt Radiocommunication Devices:<br>Amendment November 30, 2002<br>RSS-102 Issue 1 (Provisional) - Evaluation Procedure for Mobile and Portable Radio Transmitters with respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields |
| ADT Corp. Test Report                              | FCC Part 15.247 Test Report<br>Reference No: RF921215R02<br>Date: December 25, 2003                                                                                                                                                                                                                                                                                                                                            |

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### 3.0 TERMS AND DEFINITIONS

|      |                                  |
|------|----------------------------------|
| AVG  | Average                          |
| 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               |
| EMC  | Electromagnetic Compatibility    |
| FCC  | Federal Communication Commission |
| HP   | Hewlett Packard                  |
| HPF  | High Pass Filter                 |
| Hpol | Horizontal Polarization          |
| 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                |
| VBW  | Video Bandwidth                  |
| Vpol | Vertical Polarization            |
| WLAN | Wireless Local Area Network      |

|                             |                     |                    |
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#### 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 with the requirements set forth in ANSI C63.4 and are filed and are 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> | <b>Itronix Corporation</b> |
| <b>Address:</b>      | 12825 E. Mirabeau Parkway  |
|                      | Spokane Valley, WA 99216   |
|                      | United States              |

##### 5.2 DUT Description

The DUT consisted of the IX260+ Rugged Laptop PC with the internal Senao NL-3054MP 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card installed in the Mini-PCI slot and utilizing an internal surface-mount antenna installed in the upper right side rear edge of the LCD display. Photographs of the DUT placement and construction are shown in Appendix A.

|                       |                                                                   |                   |                |
|-----------------------|-------------------------------------------------------------------|-------------------|----------------|
| <b>Device:</b>        | Rugged Laptop PC                                                  |                   |                |
| <b>Model:</b>         | IX260PNL3AC860                                                    |                   |                |
| <b>Serial Number:</b> | ZZGEG4196ZZ6479                                                   |                   |                |
| <b>Identifier(s):</b> | <b>FCC ID:</b>                                                    | KBCIX260PNL3AC860 | <b>IC:</b> n/a |
| <b>Power Source:</b>  | Delta Electronics Model ADP-90AB Rev B 90 Watt AC-DC power supply |                   |                |

|                        |                                            |                                   |                                        |
|------------------------|--------------------------------------------|-----------------------------------|----------------------------------------|
| <b>Device:</b>         | 2.4GHz DSSS WLAN Mini-PCI Card (802.11b/g) |                                   |                                        |
| <b>Model:</b>          | Senao NL-3054MP PLUS ARIES (F) 1.00        |                                   |                                        |
| <b>Serial Number:</b>  | 048253621                                  |                                   |                                        |
| <b>Rule Part(s):</b>   | <b>FCC:</b>                                | §15.247; §2.1091; §1.1310         | <b>IC:</b> RSS-210 Issue 5             |
| <b>Classification:</b> | <b>FCC:</b>                                | Digital Transmission System (DTS) | <b>IC:</b> Low Power Licence-Exempt Tx |
| <b>Power Source:</b>   | Powered from the internal PC power supply  |                                   |                                        |

|                |                                                                            |  |  |
|----------------|----------------------------------------------------------------------------|--|--|
| <b>Device:</b> | Internal Surface-Mount Antenna (upper right side rear edge of LCD Display) |  |  |
| <b>Model:</b>  | RangeStar P/N: 100929                                                      |  |  |
| <b>Gain:</b>   | +4.5 dBi                                                                   |  |  |

|                             |                     |                    |
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### 5.3 Co-Located Equipment

|                |                                                |
|----------------|------------------------------------------------|
| <b>Device:</b> | GPS Receiver Module and antenna (receive only) |
| <b>Model:</b>  | Leadtek P/N GPS9547                            |

### 5.4 Cable Descriptions

| ROUTING       |              | Length | Model | Terminations |       | Shield Type | Shield Termination |       | Suppression |
|---------------|--------------|--------|-------|--------------|-------|-------------|--------------------|-------|-------------|
| From          | To           | m      |       | End 1        | End 2 |             | End 1              | End 2 |             |
| PC modem port | Unterminated | 1.0    | n/a   | RJ-11        | RJ-11 | None        | na                 | na    | None        |

### 5.5 Support Equipment

The following equipment was used in support of the DUT.

| SUPPORT EQUIPMENT LIST |           |                    |
|------------------------|-----------|--------------------|
| MANUFACTURER           | MODEL     | DESCRIPTION        |
| D-Link                 | DE-809TC/ | Ethernet hub       |
| YNG YUH                | YP-040    | Hub power supply   |
| MLi                    | 699       | Speakers           |
| Polk Audio             | n/a       | Speaker-microphone |
| DeLorme                | Tripmate  | GPS Receiver       |
| Intel                  | CS-430    | Camera             |
| Logitech               | M-S34     | Mouse              |

## 5.6 Clock Frequencies

### 5.6.1 DUT Clock Frequencies

|                |                                       |
|----------------|---------------------------------------|
| <b>Device:</b> | Rugged Laptop PC                      |
| <b>Clocks:</b> | 1.6 GHz processor                     |
| <b>Name:</b>   | 2.4GHz DSSS WLAN Mini-PCI Card        |
| <b>Clocks:</b> | n/a                                   |
| <b>Name:</b>   | Internal Surface-Mount Antenna (WLAN) |
| <b>Clocks:</b> | None                                  |

### 5.6.2 Co-Located Clock Frequencies

|                |             |
|----------------|-------------|
| <b>Device:</b> | Peripherals |
| <b>Clocks:</b> | n/a         |

## 5.7 Mode(s) of Operation Tested

Customer supplied software was used to place the WLAN card in the appropriate mode, channel, and power level for the specific measurement.

|                                               |                                                                                                                                                                                                   |                                                                                                                      |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency Range:</b>                    | 2412 - 2462 MHz<br>Ch. 1 (2412 MHz), Ch. 6 (2437 MHz) & Ch. 11 (2462 MHz) measured unless otherwise noted                                                                                         |                                                                                                                      |
| <b>Software Power Gain Settings:</b>          | 802.11b set to 0,1 for Channel 1; 0,5 for Channel 6; 0,7 for Channel 11<br>802.11g set to 0,8 for Channel 1; 0,10 for Channel 6; 0,12 for Channel 11<br>( x,y setting x = rfgain_l y = PN9 gain ) |                                                                                                                      |
| <b>RF Peak Conducted Output Power Tested:</b> | 802.11b 2412 MHz(1 Mbps) = 16.99 dBm<br>802.11b 2437 MHz(1 Mbps) = 17.46 dBm<br>802.11b 2462 MHz(1 Mbps) = 17.35 dBm                                                                              | 802.11g 2412 MHz(6 Mbps) = 20.00 dBm<br>802.11g 2437 MHz(6 Mbps) = 19.52 dBm<br>802.11g 2462 MHz(6 Mbps) = 19.49 dBm |
| <b>Modes / Data Rates Tested*:</b>            | 802.11b<br>(1, 5.5, 11 Mbps checked in prescan)<br>(1 Mbps determined to be worst-case and used unless otherwise noted)                                                                           |                                                                                                                      |
|                                               | 802.11g<br>(6, 36, 54 Mbps checked in prescan)<br>(6 Mbps determined to be worst-case and used unless otherwise noted)                                                                            |                                                                                                                      |
| <b>Modulation Type(s):</b>                    | OFDM with BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, CCK                                                                                                                                             |                                                                                                                      |
| <b>Battery Type(s):</b>                       | 11.1V Lithium-ion, 6.0Ah (Model: A2121-2)                                                                                                                                                         |                                                                                                                      |

\* Turbo mode available at module level but not enabled when installed in DUT

|                             |                     |                    |
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### 5.7.1 DUT Exercising Software Description

The DUT was configured and exercised using customer supplied test software that allowed an operator to set the parameters of the WLAN operation. The settings used are described in each appendix. Unless otherwise noted the power gain settings were set as described in section 5.6 with the worst-case data rate as described in the same section.

### 5.8 Configuration Description

The DUT was configured, as described by the client as being representative of what would be delivered to a final customer. This configuration included the WLAN and internal antenna as described in section 5.2 installed in a typical manner. More specific details may be included in each appendix.

#### 5.8.1 Configuration Justification

The DUT was tested in a configuration described by the client as being worst-case but typical of normal use.

Prescan measurements were made with the WLAN in each of the two available modes (b & g), lowest and highest bit rates and each of the lowest, highest and mid-band frequencies. From this preliminary data, it was determined that Mode b Rate 1 Mbps resulted in the highest spurious emissions. When a measurement of Mode g was required, its data rate was set for a worst-case setting of 6 Mbps. Unless otherwise specified in the applicable appendices, these settings were used for the measurements described in this report.

## 6.0 PASS/FAIL CRITERIA

Unless otherwise noted in the Appendices, the pass/fail criteria is the limit set forth in the reference standards. A DUT is considered to have passed the requirements, if the data collected during the described measurement procedure is less than or equal to the specified limits as defined. The pass/fail statements made in this report only apply to the unit tested.

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## APPENDICES

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## Appendix A - DUT Photographs

Photograph A-1 - Front of Open IX260+ Laptop PC



Photograph A-2 - Back of Open IX260+ Laptop PC



Photograph A-3 - Left Side of Open IX260+ Laptop PC



Photograph A-4 - Right Side of Open IX260+ Laptop PC



|                                                                    |                                                                                                                |         |                   |                |                |                                              |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------|-------------------|----------------|----------------|----------------------------------------------|
| Applicant:                                                         | Itronix Corporation                                                                                            | FCC ID: | KBCIX260PNL3AC860 | IC ID:         | not applicable | <b>ITRONIX</b><br>A GENERAL DYNAMICS COMPANY |
| Rugged Laptop PC with Senao NL-3054MP 802.11b/g WLAN Mini-PCI Card |                                                                                                                |         | Model:            | IX260PNL3AC860 |                |                                              |
| 2006 Celltech Labs Inc.                                            | This document is not to be reproduced in whole or in part without the written permission of Celltech Labs Inc. |         |                   |                |                | Page 12 of 48                                |

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## Appendix B - 6 dB Bandwidth Measurement

### B.1. REFERENCES

|                              |                        |
|------------------------------|------------------------|
| Normative Reference Standard | FCC CFR 47 §15.247 (2) |
| Procedure Reference          | FCC 97-114             |

### B.2. LIMITS

#### B.2.1. FCC CFR 47

FCC CFR 47 §15.247 (2) Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz

### B.3. TEST PROCEDURE

The test method used is outlined in the ADT Corp reference test report no. RF921215R02, section 4.3

### B.4. TEST RESULTS

The results used to show compliance to the applicable parts are outlined in the ADT Corp. reference test report no. RF921215R02, section 4.3.

As shown in section 4.3.7, the following are the outlined results for Mode b:

| Channel | Channel Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass/Fail |
|---------|-------------------------|----------------------|---------------------|-----------|
| 1       | 2412                    | 11.48                | 0.5                 | PASS      |
| 6       | 2437                    | 11.48                | 0.5                 | PASS      |
| 11      | 2462                    | 11.08                | 0.5                 | PASS      |

As shown in section 4.3.7, the following are the outlined results for Mode g:

| Channel | Channel Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass/Fail |
|---------|-------------------------|----------------------|---------------------|-----------|
| 1       | 2412                    | 16.52                | 0.5                 | PASS      |
| 6       | 2437                    | 16.56                | 0.5                 | PASS      |
| 11      | 2462                    | 16.40                | 0.5                 | PASS      |

### B.5. PASS/FAIL

In reference to the results outlined in B.4 and stated in the ADT Corp reference report, the DUT passes the requirements as stated in the reference standards as follows:

FCC 15.247 (2): The 6 dB bandwidth as measured meets the minimum 500 kHz bandwidth requirement.

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## Appendix C - Peak Conducted Power Measurement

### C.1. REFERENCES

|                              |                           |
|------------------------------|---------------------------|
| Normative Reference Standard | FCC CFR 47 §15.247(b) (3) |
| Procedure Reference          | FCC 97-114                |

### C.2. LIMITS

#### C.2.1. FCC CFR

§15.247(b): The maximum peak output power of the intentional radiator shall not exceed the following:

§15.247(b) (3) For system using digital modulation in the 902 – 928 MHz, 2400 – 2483.5 MHz, and 5725 – 5850 MHz bands: 1 Watt.

### C.3. ENVIRONMENTAL CONDITIONS

|                     |               |
|---------------------|---------------|
| Temperature         | 25.2 +/- 2 °C |
| Humidity            | 35 +/- 2 %    |
| Barometric Pressure | 96.34 kPa     |

### C.4. EQUIPMENT LIST

| ASSET NUMBER | MANUFACTURER | MODEL     | DESCRIPTION            | LAST CAL | CAL DUE |
|--------------|--------------|-----------|------------------------|----------|---------|
| 00015        | Agilent      | E4408B    | Spectrum Analyzer      | 29Dec03  | 29Dec04 |
| 00075        | Alpha Wire-J | 9223      | 2ft. RG223/U RF Cable  | 08Jul04* | 24Jun05 |
| 00076        | Pasternack   | PE7014-30 | 30dB 2 Watt Attenuator | 08Jul04* | 24Jun05 |

\*Cable and attenuator verified with power meter prior to use

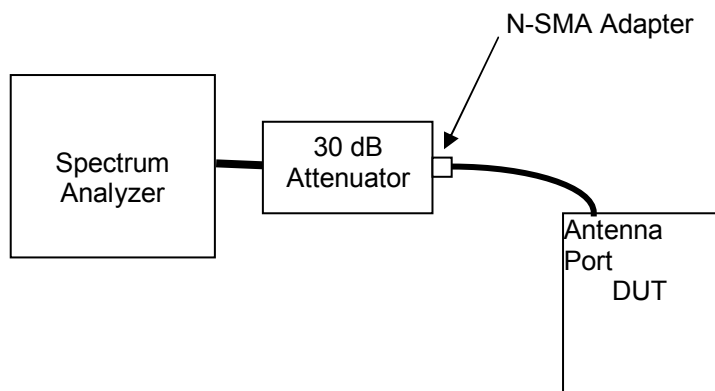
### C.5. MEASUREMENT EQUIPMENT SETUP

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in C.6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Measurement Equipment Settings    | <p>To evaluate the maximum peak power, the 26 dB bandwidth needs to be determined. This is performed with the spectrum analyzer using the following setting:</p> <p>RBW – 300 kHz<br/>VBW – 1MHz<br/>Span – 50 MHz<br/>Detector – Peak<br/>Average – Power<br/>Trace Average – 100</p> <p>Once the 26 dB bandwidth is determined, the channel power is measured within the band with the following spectrum analyzer settings:</p> <p>RBW – 1 MHz<br/>VBW – 3 MHz<br/>Detector – Peak<br/>Average – Power<br/>Integrate BW – equal to specific -26 dB EBW</p> |

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

## C.6. SETUP DRAWING

Figure C-1 - Setup Drawing



## C.7. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g.

## C.8. TEST RESULTS

| Channel | Frequency | 802.11b              |       |       |            | 802.11g              |       |       |            |
|---------|-----------|----------------------|-------|-------|------------|----------------------|-------|-------|------------|
|         |           | Peak Conducted Power |       | Limit | -26 dB EBW | Peak Conducted Power |       | Limit | -26 dB EBW |
|         | MHz       | dBm                  | Watts | Watts | MHz        | dBm                  | Watts | Watts | MHz        |
| Low     | 2412      | 16.99                | 0.050 | 1     | 19.2       | 20.00                | 0.100 | 1     | 29.59      |
| Mid     | 2437      | 17.46                | 0.056 | 1     | 19.2       | 19.52                | 0.090 | 1     | 29.70      |
| High    | 2462      | 17.35                | 0.054 | 1     | 19.2       | 19.49                | 0.089 | 1     | 30.56      |

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

### C.9. PASS/FAIL

In reference to the results outlined in C.8 the DUT passes the requirements as stated in the reference standards as follows:  
FCC 15.247 (b) (3): The peak power did not exceed 1 Watt.

### 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.



Russell Pipe  
Senior Compliance Technologist  
Celltech Labs Inc.

3Nov04

Date

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## Appendix D - Maximum Permissible Exposure Calculation

### D.1. REFERENCES

|                              |                                          |
|------------------------------|------------------------------------------|
| Normative Reference Standard | FCC CFR 47§1.1310<br>IEEE Std C95.1-1999 |
| Procedure Reference          | FCC CFR 47§2.1091                        |

### D.2. LIMITS

|                              |                        |
|------------------------------|------------------------|
| FCC CFR 47§1.1310 Table 1(b) | 1.0 mW/cm <sup>2</sup> |
|------------------------------|------------------------|

### D.3. ENVIRONMENTAL CONDITIONS

|                     |    |
|---------------------|----|
| Temperature         | na |
| Humidity            | na |
| Barometric Pressure | na |

### D.4. EQUIPMENT LIST

| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
|--------------|--------------|-------|-------------|----------|---------|
| na           |              |       |             |          |         |

### D.5. MEASUREMENT EQUIPMENT SETUP

|                                   |                                                                                                                  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------|
| MEASUREMENT EQUIPMENT CONNECTIONS | The results described herein were determined by the following calculation, so no measurement equipment was used. |
| MEASUREMENT EQUIPMENT SETTINGS    | na                                                                                                               |

### D.6. SETUP PHOTOS

|    |
|----|
| na |
|----|

### D.7. SETUP DRAWINGS

|    |
|----|
| na |
|----|

### D.8. DUT OPERATING DESCRIPTION

|    |
|----|
| na |
|----|

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## D.9. TEST RESULTS

### Calculation:

#### RangeStar Internal Antenna (802.11b mode):

Tx Frequency: 2437 (MHz)  
 RF Output Power at Antenna Input Terminal: 17.46 (dBm)  
 Antenna gain: 4.50 (dBi)

S = 1.00 (mW/cm<sup>2</sup>)  
 P = 55.7186 (mW)  
 G = 2.82 (numeric)

R = 3.54 (cm)

S at 20cm: 0.031207528 (mW/cm<sup>2</sup>)

#### RangeStar Internal Antenna (802.11g mode):

Tx Frequency: 2412 (MHz)  
 RF Output Power at Antenna Input Terminal: 20.00 (dBm)  
 Antenna gain: 4.50 (dBi)

S = 1.00 (mW/cm<sup>2</sup>)  
 P = 100.0000 (mW)  
 G = 2.82 (numeric)

R = 4.74 (cm)

S at 20cm: 0.0560092 (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 Applied to the Antenna  
 G = Numeric Antenna Gain  
 R = Distance from Antenna

### Results:

| Mode    | Power Density Limit | RF Conducted Output Power | Antenna Gain | MPE Distance | Power Density at 20 cm |
|---------|---------------------|---------------------------|--------------|--------------|------------------------|
|         | mW/cm <sup>2</sup>  | dBm                       | dBi          | cm           | mW/cm <sup>2</sup>     |
| 802.11b | 1.0                 | 17.46                     | 4.5          | 3.54         | 0.031                  |
| 802.11g | 1.0                 | 20.00                     | 4.5          | 4.74         | 0.056                  |

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

#### D.10. PASS/FAIL

In reference to the results outlined in D.9 the DUT passes the requirements as stated in the reference standards as follows:

1) The DUT must comply with the minimum spacing requirement of 20 cm to ensure an exposure of not more than 1 mW/cm<sup>2</sup>.

#### D.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.



\_\_\_\_\_  
Duane M. Friesen, C.E.T.  
EMC Manager  
Celltech Labs Inc.

\_\_\_\_\_  
03Nov04

Date

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## Appendix E - Radiated Spurious Emissions Measurement

### E.1. REFERENCES

|                              |                        |
|------------------------------|------------------------|
| Normative Reference Standard | FCC CFR 47 §15.247(c)  |
| Procedure Reference          | ANSI C63.4; FCC 97-114 |

### E.2. LIMITS

#### E.2.1. FCC CFR 47

§15.247 (c): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in 15.209 (a) is not required.

Note: Spurious emissions within the restricted bands are reported in Appendix F.

### E.3. ENVIRONMENTAL CONDITIONS

|                     |                   |
|---------------------|-------------------|
| Temperature         | 27.4 +/- 2 °C     |
| Humidity            | 33 +/- 2 %        |
| Barometric Pressure | 96.24 +/- 0.2 kPa |

### E.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                | 30Apr04  | 30Apr05 |
| 00035        | ETS          | 3115      | Double Ridged Guide Horn     | 24Mar04  | 24Mar05 |
| 00202        | ETS          | 3160-09   | Small Horn Antenna           | 27May04  | 27Jun05 |
| 00015        | Agilent      | E4408B    | Spectrum Analyzer            | 29Dec03  | 29Dec04 |
| 00049        | HP           | 8566B     | Spectrum Analyzer RF Section | 18May04  | 18May05 |
| 00049        | HP           | 85650A    | Quasi-peak Adapter           | 18May04  | 18May05 |
| 00047        | HP           | 85685A    | RF Preselector               | 18May04  | 18May05 |
| 00048        | Gore         | 65474     | Microwave Cable              | 20May04  | 20May05 |
| 00030        | HP           | 83017A    | LNA                          | 20May04  | 20May05 |

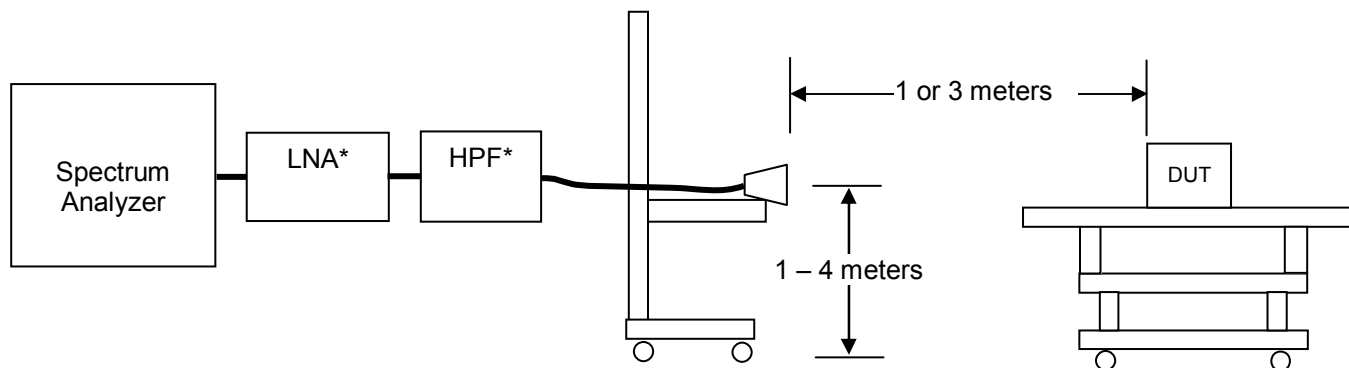
|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

## E.5. MEASUREMENT EQUIPMENT SETUP

|                                         |                                                                                                                                                                                                     |       |                  |          |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------|----------|
| MEASUREMENT<br>EQUIPMENT<br>CONNECTIONS | The measurement equipment was connected as shown in the E.6. A number of antennas were used to cover the applicable frequency range test. The ranges in which each antenna was used are as follows: |       |                  |          |
|                                         | Frequency Range                                                                                                                                                                                     |       | Antenna          |          |
|                                         | 30 MHz – 1 GHz                                                                                                                                                                                      |       | CBL-6111A Bilog  |          |
|                                         | 1 GHz – 18 GHz                                                                                                                                                                                      |       | ETS 3115 Horn    |          |
|                                         | 18 GHz – 26 GHz                                                                                                                                                                                     |       | ETS 3160-09 Horn |          |
| MEASUREMENT<br>EQUIPMENT<br>SETTINGS    | The spectrum analyzer was set to the following settings:                                                                                                                                            |       |                  |          |
|                                         | Frequency Range                                                                                                                                                                                     | RBW   | VBW              | Detector |
|                                         | MHz                                                                                                                                                                                                 | kHz   | kHz              |          |
|                                         | 30 – 1000                                                                                                                                                                                           | 100   | 300              | Peak*    |
|                                         | > 1000                                                                                                                                                                                              | 1000* | 1000             | Peak*    |
|                                         | *As a worst-case measurement, the average limit was applied to measurements made with a peak detector using a RBW of 1 MHz (vs the specified 100 kHz), when possible.                               |       |                  |          |

## E.6. SETUP DRAWING

Figure E-1 - Setup Drawing



\* Used for >1GHz

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

## E.7. SETUP PHOTOGRAPHS

Photograph E-1 - Vertical Polarization (1-18 GHz)



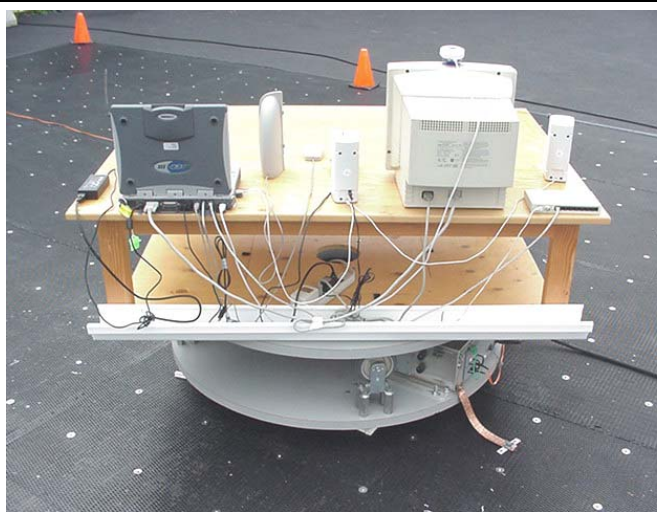
Photograph E-2 - Vertical Polarization (18-26 GHz)



Photograph E-3 - Front of Radiated Emission Configuration



Photograph E-4 - Back of Radiated Emission Configuration



## E.8. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g for the band-edge measurements and for Mode b for the remaining measurements. The configuration used for all other measurements was Mode b, 1 mbps with a gain setting of 0,1.

|                                                                           |                                                                                                                |                |                          |               |                       |                                                           |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------|--------------------------|---------------|-----------------------|-----------------------------------------------------------|
| <b>Applicant:</b>                                                         | <b>Itronix Corporation</b>                                                                                     | <b>FCC ID:</b> | <b>KBCIX260PNL3AC860</b> | <b>IC ID:</b> | <b>not applicable</b> | <b>ITRONIX</b> <sup>®</sup><br>A GENERAL DYNAMICS COMPANY |
| <b>Rugged Laptop PC with Senao NL-3054MP 802.11b/g WLAN Mini-PCI Card</b> |                                                                                                                |                |                          | <b>Model:</b> | <b>IX260PNL3AC860</b> |                                                           |
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|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## E.9. TEST RESULTS

### E.9.1. Mode b - Fundamental Field Strengths @ Specified Distance


**Project Number:** 100504KBC-T562-E15W  
**Company:** Itronix  
**Product:** IX260+ with Senao NL-3054MP Plus Aries2 WLAN

**Standard:** FCC15.247a  
**Test Start Date:** 25Oct04  
**Test End Date:** 03Nov04

| Mode b Carrier Field Strengths |          |                      |            |           |          |             |       |      |       |          |                |          |                |                           |                  |        |           |
|--------------------------------|----------|----------------------|------------|-----------|----------|-------------|-------|------|-------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| Channel                        | Polarity | Measurement Distance | Antenna    | Frequency | SA Level | Noise Floor | AF    | CL   | Other | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|                                |          |                      |            |           |          |             | dB/m  | dB   | dB    | dB/m     | dBuV/m         |          | m              | dB                        |                  |        |           |
| 1                              | H        | 3                    | Hom SN6276 | 2412.00   | 74.44    |             | 30.26 | 3.49 | 0.00  | 33.75    | 108.19         | PK       | 3              | 0.00                      | 116.20           | 8.01   | PASS      |
| 6                              | H        | 3                    | Hom SN6276 | 2437.00   | 74.58    |             | 30.30 | 3.51 | 0.00  | 33.81    | 108.39         | PK       | 3              | 0.00                      | 116.20           | 7.81   | PASS      |
| 11                             | H        | 3                    | Hom SN6276 | 2462.00   | 73.48    |             | 30.34 | 3.52 | 0.00  | 33.86    | 107.34         | PK       | 3              | 0.00                      | 116.20           | 8.86   | PASS      |
| 1                              | V        | 3                    | Hom SN6276 | 2412.00   | 67.66    |             | 30.26 | 3.49 | 0.00  | 33.75    | 101.41         | PK       | 3              | 0.00                      | 116.20           | 14.79  | PASS      |
| 6                              | V        | 3                    | Hom SN6276 | 2437.00   | 68.53    |             | 30.30 | 3.51 | 0.00  | 33.81    | 102.34         | PK       | 3              | 0.00                      | 116.20           | 13.86  | PASS      |
| 11                             | V        | 3                    | Hom SN6276 | 2462.00   | 67.05    |             | 30.34 | 3.52 | 0.00  | 33.86    | 100.91         | PK       | 3              | 0.00                      | 116.20           | 15.29  | PASS      |

### E.9.2. Mode g - Fundamental Field Strengths @ Specified Distance


**Project Number:** 100504KBC-T562-E15W  
**Company:** Itronix  
**Product:** IX260+ with Senao NL-3054MP Plus Aries2 WLAN

**Standard:** FCC15.247a  
**Test Start Date:** 25Oct04  
**Test End Date:** 03Nov04

| Mode g Carrier Field Strengths |          |                      |            |           |          |             |       |      |       |          |                |          |                |                           |                  |        |           |
|--------------------------------|----------|----------------------|------------|-----------|----------|-------------|-------|------|-------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| Channel                        | Polarity | Measurement Distance | Antenna    | Frequency | SA Level | Noise Floor | AF    | CL   | Other | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|                                |          |                      |            |           |          |             | dB/m  | dB   | dB    | dB/m     | dBuV/m         |          | m              | dB                        | dBuV/m           | dB     |           |
| 1                              | H        | 3                    | Hom SN6276 | 2412.00   | 73.32    |             | 30.26 | 3.49 | 0.00  | 33.75    | 107.07         | PK       | 3              | 0.00                      | 116.20           | 9.13   | PASS      |
| 6                              | H        | 3                    | Hom SN6276 | 2437.00   | 71.68    |             | 30.30 | 3.51 | 0.00  | 33.81    | 105.49         | PK       | 3              | 0.00                      | 116.20           | 10.71  | PASS      |
| 11                             | H        | 3                    | Hom SN6276 | 2462.00   | 70.70    |             | 30.34 | 3.52 | 0.00  | 33.86    | 104.56         | PK       | 3              | 0.00                      | 116.20           | 11.64  | PASS      |
| 1                              | V        | 3                    | Hom SN6276 | 2412.00   | 66.81    |             | 30.26 | 3.49 | 0.00  | 33.75    | 100.56         | PK       | 3              | 0.00                      | 116.20           | 15.64  | PASS      |
| 6                              | V        | 3                    | Hom SN6276 | 2437.00   | 66.31    |             | 30.30 | 3.51 | 0.00  | 33.81    | 100.12         | PK       | 3              | 0.00                      | 116.20           | 16.08  | PASS      |
| 11                             | V        | 3                    | Hom SN6276 | 2462.00   | 64.89    |             | 30.34 | 3.52 | 0.00  | 33.86    | 98.75          | PK       | 3              | 0.00                      | 116.20           | 17.45  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz :  
where d1 is the measurement distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

Calculated Limit (-20 dBc) = Field Strength -20

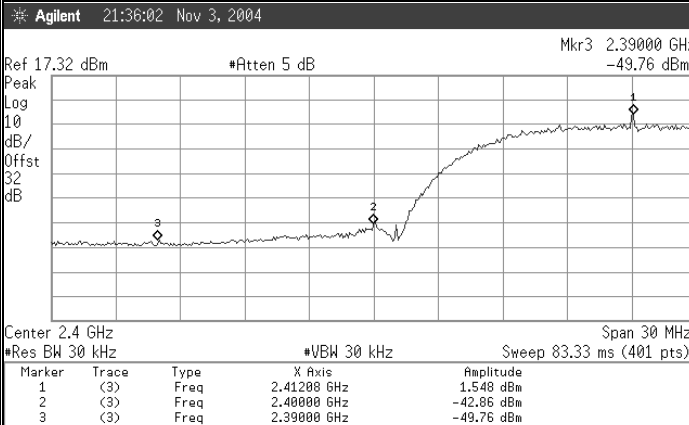
\*Calculated Limit used for spurious emission evaluation, levels measured with 100 kHz RBW

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

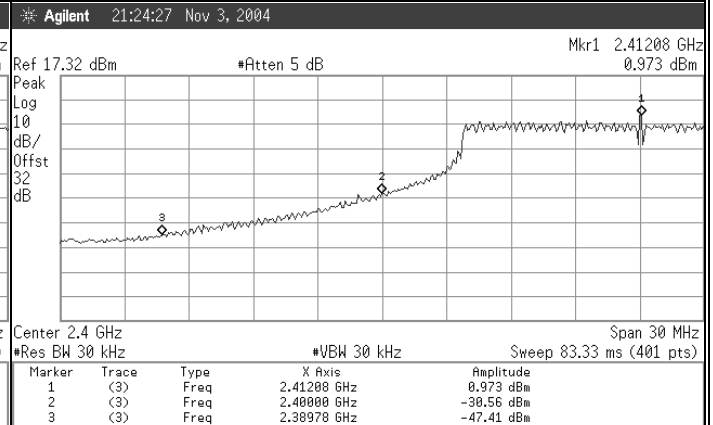
### E.9.3. Lower Band-edge Emission Field Strengths @ Specified Distance

Note: (Upper Band-edge (Restricted Band) is in Appendix F)

#### Channel 1 Mode b - Conducted Band-edge Plots



#### Channel 1 Mode g - Conducted Band-edge Plots



#### Channel 1 Mode b - Radiated Carrier Field Strengths

| Mode b  |          |                      |             |           |          |             |       |      |       |          |
|---------|----------|----------------------|-------------|-----------|----------|-------------|-------|------|-------|----------|
| Channel | Polarity | Measurement Distance | Antenna     | Frequency | SA Level | Noise Floor | AF    | CL   | Other | Total CF |
|         |          | m                    |             | MHz       | dBuV     |             | dB/m  | dB   | dB    | dBm      |
| 1       | H        | 3                    | Horn SN6276 | 2412.00   | 74.44    |             | 30.26 | 3.49 | 0.00  | 33.75    |
| 1       | H        | 3                    | Horn SN6276 | 2412.00   | 67.88    |             | 30.26 | 3.49 | 0.00  | 33.75    |
| 1       | V        | 3                    | Horn SN6276 | 2412.00   | 67.66    |             | 30.26 | 3.49 | 0.00  | 33.75    |
| 1       | V        | 3                    | Horn SN6276 | 2412.00   | 60.88    |             | 30.26 | 3.49 | 0.00  | 33.75    |

#### Channel 1 Mode g - Radiated Carrier Field Strengths

| Mode g  |          |                      |             |           |          |             |       |      |       |          |
|---------|----------|----------------------|-------------|-----------|----------|-------------|-------|------|-------|----------|
| Channel | Polarity | Measurement Distance | Antenna     | Frequency | SA Level | Noise Floor | AF    | CL   | Other | Total CF |
|         |          | m                    |             | MHz       | dBuV     |             | dB/m  | dB   | dB    | dBm      |
| 1       | H        | 3                    | Horn SN6276 | 2412.00   | 73.32    |             | 30.26 | 3.49 | 0.00  | 33.75    |
| 1       | H        | 3                    | Horn SN6276 | 2412.00   | 71.38    |             | 30.26 | 3.49 | 0.00  | 33.75    |
| 1       | V        | 3                    | Horn SN6276 | 2412.00   | 66.81    |             | 30.26 | 3.49 | 0.00  | 33.75    |
| 1       | V        | 3                    | Horn SN6276 | 2412.00   | 64.84    |             | 30.26 | 3.49 | 0.00  | 33.75    |

#### Channel 1 - Calculated Band-edge (Out-of-Band) Field Strengths

| Mode b  |          |           |                                 |              |          |                                     |                |                           |                 |        |
|---------|----------|-----------|---------------------------------|--------------|----------|-------------------------------------|----------------|---------------------------|-----------------|--------|
| Channel | Polarity | Frequency | Carrier Radiated Field Strength | Marker-Delta | Detector | Calculated Band-edge Field Strength | Limit Distance | Limit Distance Correction | Specified Limit | Margin |
|         |          | MHz       | dBuV/m                          | dBuV         |          | dBuV/m                              | m              | dB                        | dBuV/m          | dB     |
| 1       | H        | 2400.00   | 108.19                          | 44.41        | PK       | 83.78                               | 3.00           | 0.00                      | 88.19           | 24.41  |
| 1       | H        | 2400.00   | 101.53                          | 44.41        | AV       | 57.22                               | 3.00           | 0.00                      | 81.63           | 24.41  |
| 1       | V        | 2400.00   | 101.41                          | 44.41        | PK       | 57.00                               | 3.00           | 0.00                      | 88.19           | 31.19  |
| 1       | V        | 2400.00   | 94.63                           | 44.41        | AV       | 50.22                               | 3.00           | 0.00                      | 81.63           | 31.41  |

#### Channel 1 g - Calculated Band-edge (Out-of-Band) Field Strengths

| Mode g  |          |           |                                 |              |          |                                     |                |                           |                 |        |
|---------|----------|-----------|---------------------------------|--------------|----------|-------------------------------------|----------------|---------------------------|-----------------|--------|
| Channel | Polarity | Frequency | Carrier Radiated Field Strength | Marker-Delta | Detector | Calculated Band-edge Field Strength | Limit Distance | Limit Distance Correction | Specified Limit | Margin |
|         |          | MHz       | dBuV/m                          | dBuV         |          | dBuV/m                              | m              | dB                        | dBuV/m          | dB     |
| 1       | H        | 2400.00   | 107.07                          | 31.53        | PK       | 75.53                               | 3.00           | 0.00                      | 87.07           | 11.53  |
| 1       | H        | 2400.00   | 105.13                          | 31.53        | AV       | 73.59                               | 3.00           | 0.00                      | 85.13           | 11.53  |
| 1       | V        | 2400.00   | 100.56                          | 31.53        | PK       | 69.02                               | 3.00           | 0.00                      | 87.07           | 18.04  |
| 1       | V        | 2400.00   | 98.59                           | 31.53        | AV       | 67.05                               | 3.00           | 0.00                      | 85.13           | 18.07  |

Formulae:

Total CF (dB) = Antenna Factor (dB) + Cable Factor (dB) + Other Factor (Amplifier Gain, Filter Loss, etc) (dB)

Field Strength (dBuV/m) = SA Reading (dBuV) + Total CF (dB/m)

Limit Distance Correction (dB) = 40 \* log(d1/d2) for f < 30 MHz, 20\*log(d1/d2) for f > 30 MHz; where d1 is the measurement distance and d2 is the published limit

Limit (dBuV/m) = Published Limit (dBuV/m) + Limit Distance Correction (dB)

Margin (dB) = Limit (dBuV/m) - Field Strength (dBuV/m)

Note: Measurements and calculation reference the Marker-Delta Method Described in FCC Public Notice DA 00-705

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

#### E.9.4. Channel 1 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (not within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.247c  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |            |           |          |             |       |       |          |             |                |            |                |                           |                  |             |        |           |
|---------|----------|----------|------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector   | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          | m        |            | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | (PK/QP/AV) | m              | dB                        | dBuV/m           |             | dB     |           |
|         |          |          |            |           |          |             |       |       |          |             |                |            |                |                           |                  |             |        |           |
| CH1     | H        | 3        | Hom SN6276 | 4441.56   | 49.57    |             | 34.70 | 4.78  | -34.04   | 5.43        | 55.00          | PK         | 3.00           | 0.00                      | 88.39            | *           | 33.38  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 13155.80  | 46.30    |             | 41.72 | 9.46  | -34.15   | 17.03       | 63.33          | PK         | 3.00           | 9.54                      | 97.93            | *           | 34.60  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 1889.00   | 24.70    |             | 29.07 | 3.07  | 0.00     | 32.14       | 56.84          | PK         | 3.00           | 0.00                      | 82.34            | *           | 25.50  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2565.00   | 47.50    |             | 30.61 | 3.58  | -20.13   | 14.06       | 61.56          | PK         | 3.00           | 0.00                      | 82.34            | *           | 20.78  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 5272.81   | 53.55    |             | 36.14 | 5.24  | -34.38   | 7.00        | 60.55          | PK         | 3.00           | 0.00                      | 82.34            | *           | 21.79  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 8803.44   | 46.61    |             | 39.89 | 6.88  | -34.28   | 12.49       | 59.10          | PK         | 3.00           | 0.00                      | 82.34            | *           | 23.24  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 9531.88   | 45.80    |             | 40.30 | 7.28  | -34.26   | 13.32       | 59.12          | PK         | 3.00           | 0.00                      | 82.34            | *           | 23.22  | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 16428.50  | 44.30    |             | 41.71 | 10.15 | -33.10   | 18.77       | 63.07          | PK         | 3.00           | 9.54                      | 91.88            | *           | 28.81  | PASS      |

#### E.9.5. Channel 1 Harmonic Emission Field Strengths @ Specified Distance (not within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.247c  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |            |           |          |             |       |       |          |             |                |            |                |                           |                  |             |        |           |
|---------|----------|----------|------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector   | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          | m        |            | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | (PK/QP/AV) | m              | dB                        | dBuV/m           |             | dB     |           |
| CH1     | H        | 3        | Hom SN6276 | 7236.00   | 44.50    |             | 38.22 | 6.28  | -34.32   | 10.19       | 54.69          | PK         | 3.00           | 0.00                      | 88.39            | *           | 33.70  | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 9648.00   | 50.06    |             | 40.30 | 7.37  | -34.25   | 13.41       | 63.47          | PK         | 3.00           | 0.00                      | 88.39            | *           | 24.91  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 16884.00  | 36.50    | x           | 42.74 | 10.36 | -36.68   | 16.42       | 52.92          | PK         | 3.00           | 9.54                      | 97.93            | *           | 45.01  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 7236.00   | 45.72    |             | 38.22 | 6.28  | -34.32   | 10.19       | 55.91          | PK         | 3.00           | 0.00                      | 82.34            | *           | 26.43  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 9648.00   | 49.38    |             | 40.30 | 7.37  | -34.25   | 13.41       | 62.79          | PK         | 3.00           | 0.00                      | 82.34            | *           | 19.54  | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 16884.00  | 36.90    | x           | 42.74 | 10.36 | -36.68   | 16.42       | 53.32          | PK         | 3.00           | 9.54                      | 91.88            | *           | 38.56  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

No emissions levels were measured above those reported

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### E.9.6. Channel 6 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (not within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.247c  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |            |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector   | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          | m        |             | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | (PK/QP/AV) | m              | dB                        | #REF!            |             | dB     |           |
|         |          |          |             |           |          |             |       |       |          |             |                |            |                |                           |                  |             |        |           |
| CH6     | H        | 3        | Horn SN6276 | 1892.00   | 22.10    |             | 29.08 | 3.07  | 0.00     | 32.15       | 54.25          | PK         | 3.00           | 0.00                      | 88.39            | *           | 34.13  | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1887.00   | 31.10    |             | 29.06 | 3.07  | 0.00     | 32.13       | 63.23          | PK         | 3.00           | 0.00                      | 82.34            | *           | 19.11  | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 17641.50  | 39.90    |             | 44.82 | 10.48 | -36.59   | 18.72       | 58.62          | PK         | 3.00           | 9.54                      | 91.88            | *           | 33.26  | PASS      |

### E.9.7. Channel 6 Harmonic Emission Field Strengths @ Specified Distance (not within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.247c  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
| CH6     | H        | 3        | Horn SN6276 | 9748.00   | 47.32    | x           | 40.30 | 7.39  | -34.25   | 13.44       | 60.76          | PK       | 3.00           | 0.00                      | 88.39            | *           | 27.63  | PASS      |
| CH6     | H        | 1        | Horn SN6276 | 17059.00  | 38.50    | x           | 43.17 | 10.40 | -36.66   | 16.91       | 55.41          | PK       | 3.00           | 9.54                      | 97.93            | *           | 42.52  | PASS      |
| CH6     | H        | 1        | 3160-09     | 21933.00  | 47.81    | x           | 40.30 | 11.99 | -37.96   | 14.33       | 62.14          | PK       | 3.00           | 9.54                      | 97.93            | *           | 35.79  | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 9748.00   | 49.37    | x           | 40.30 | 7.39  | -34.25   | 13.44       | 62.81          | PK       | 3.00           | 0.00                      | 82.34            | *           | 19.53  | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 17059.00  | 36.70    | x           | 43.17 | 10.40 | -36.66   | 16.91       | 53.61          | PK       | 3.00           | 9.54                      | 91.88            | *           | 38.27  | PASS      |
| CH6     | V        | 1        | 3160-09     | 21933.00  | 48.67    |             | 40.30 | 11.99 | -37.96   | 14.33       | 63.00          | PK       | 3.00           | 9.54                      | 91.88            | *           | 28.88  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits were applied to the peak emission

No emissions levels were measured above those reported

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### E.9.8. Channel 11 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (not within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.247c  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
| CH11    | H        | 3        | Horn SN6276 | 4441.56   | 49.57    |             | 34.70 | 4.78  | -34.04   | 5.43        | 55.00          | PK       | 3.00           | 0.00                      | 88.39            | *           | 33.38  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 9647.81   | 50.06    |             | 40.30 | 7.37  | -34.25   | 13.41       | 63.47          | PK       | 3.00           | 0.00                      | 88.39            | *           | 24.91  | PASS      |
| CH11    | H        | 1        | Horn SN6276 | 16498.40  | 44.50    |             | 41.90 | 10.28 | -33.05   | 19.12       | 63.62          | PK       | 3.00           | 9.54                      | 97.93            | *           | 34.31  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 9647.81   | 49.38    |             | 40.30 | 7.37  | -34.25   | 13.41       | 62.79          | PK       | 3.00           | 0.00                      | 82.34            | *           | 19.54  | PASS      |
| CH11    | V        | 1        | Horn SN6276 | 16422.00  | 45.30    |             | 41.70 | 10.14 | -33.10   | 18.73       | 64.03          | PK       | 3.00           | 9.54                      | 91.88            | *           | 27.85  | PASS      |

### E.9.9. Channel 11 Harmonic Emission Field Strengths @ Specified Distance (not within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.247c  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          | m        |             | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | PK/QP/AV | m              | dB                        | dBuV/m           |             | dB     |           |
|         |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
| CH11    | H        | 3        | Horn SN6276 | 9848.00   | 44.51    | x           | 40.30 | 7.41  | -34.25   | 13.46       | 57.97          | PK       | 3.00           | 0.00                      | 88.39            | *           | 30.41  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 9848.00   | 44.43    | x           | 40.30 | 7.41  | -34.25   | 13.46       | 57.89          | PK       | 3.00           | 0.00                      | 82.34            | *           | 24.44  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

No emissions levels were measured above those reported

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

#### E.10. PASS/FAIL

In reference to the results outlined in E.9, the DUT passes the requirements as stated in the reference standards as follows:  
FCC 15.247 (c): All emissions within any 100 kHz bandwidth outside the operating frequency band are greater than 20 dB below the maximum 100 kHz bandwidth signal within the operating band.

#### E.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.



Russell Pipe  
Senior Compliance Technologist  
Celltech Labs Inc.

04Nov04

Date

## Appendix F - Restricted Band Emissions Measurement

### F.1. REFERENCES

|                                     |                                                    |
|-------------------------------------|----------------------------------------------------|
| <b>Normative Reference Standard</b> | FCC CFR 47 §15.205 (a) (b), FCC CFR 47 §15.209 (a) |
| <b>Procedure Reference</b>          | FCC 97-114                                         |

### F.2. LIMITS

| FCC CFR 47 §15.205      | (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                      |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------|-----|----------------------|-------------------|--------------|-----------|----------|--------------------|-------------------|---------------|-----------|---------------------|-------------------|---------------|-----------|-------------------|------------|-----------|-----------|-----------------------|------------|-------------|---------|-----------------------|---------|---------------|---------|-------------------|-----------|-----------|-----------|-----------------------|------------|---------------|------------|-----------------------|---------|-----------|------------|-------------------|--------------|-----------|------------|-------------------|---------------------|-------------|-----------|-----------------------|-------------|-----------|-------------|-----------------------|-----------------|-----------|-----------|--------------------|--------------|-----------|-----------|-------------------------|---------|-------------|------------|-------------------------|-----------|-----------|------------------|-------------------|--|--|--|--|--|--|
|                         | <table><tr><th>MHz</th><th>MHz</th><th>MHz</th><th>GHz</th></tr><tr><td>0.090–0.110 .....</td><td>16.42–16.423</td><td>399.9–410</td><td>4.5–5.15</td></tr><tr><td>1.0495–0.505 .....</td><td>16.69475–16.69525</td><td>608–614</td><td>5.35–5.46</td></tr><tr><td>2.1735–2.1905 .....</td><td>16.80425–16.80475</td><td>960–1240</td><td>7.25–7.75</td></tr><tr><td>4.125–4.128 .....</td><td>25.5–25.67</td><td>1300–1427</td><td>8.025–8.5</td></tr><tr><td>4.17725–4.17775 .....</td><td>37.5–38.25</td><td>1435–1626.5</td><td>9.0–9.2</td></tr><tr><td>4.20725–4.20775 .....</td><td>73–74.6</td><td>1645.5–1646.5</td><td>9.3–9.5</td></tr><tr><td>6.215–6.218 .....</td><td>74.8–75.2</td><td>1660–1710</td><td>10.6–12.7</td></tr><tr><td>6.26775–6.26825 .....</td><td>108–121.94</td><td>1718.8–1722.2</td><td>13.25–13.4</td></tr><tr><td>6.31175–6.31225 .....</td><td>123–138</td><td>2200–2300</td><td>14.47–14.5</td></tr><tr><td>8.291–8.294 .....</td><td>149.9–150.05</td><td>2310–2390</td><td>15.35–16.2</td></tr><tr><td>8.362–8.366 .....</td><td>156.52475–156.52525</td><td>2483.5–2500</td><td>17.7–21.4</td></tr><tr><td>8.37625–8.38675 .....</td><td>156.7–156.9</td><td>2655–2900</td><td>22.01–23.12</td></tr><tr><td>8.41425–8.41475 .....</td><td>162.0125–167.17</td><td>3260–3267</td><td>23.6–24.0</td></tr><tr><td>12.29–12.293 .....</td><td>167.72–173.2</td><td>3332–3339</td><td>31.2–31.8</td></tr><tr><td>12.51975–12.52025 .....</td><td>240–285</td><td>3345.8–3358</td><td>36.43–36.5</td></tr><tr><td>12.57675–12.57725 .....</td><td>322–335.4</td><td>3600–4400</td><td>(<sup>2</sup>)</td></tr><tr><td>13.36–13.41 .....</td><td></td><td></td><td></td></tr></table> | MHz           | MHz                  | MHz | GHz                  | 0.090–0.110 ..... | 16.42–16.423 | 399.9–410 | 4.5–5.15 | 1.0495–0.505 ..... | 16.69475–16.69525 | 608–614       | 5.35–5.46 | 2.1735–2.1905 ..... | 16.80425–16.80475 | 960–1240      | 7.25–7.75 | 4.125–4.128 ..... | 25.5–25.67 | 1300–1427 | 8.025–8.5 | 4.17725–4.17775 ..... | 37.5–38.25 | 1435–1626.5 | 9.0–9.2 | 4.20725–4.20775 ..... | 73–74.6 | 1645.5–1646.5 | 9.3–9.5 | 6.215–6.218 ..... | 74.8–75.2 | 1660–1710 | 10.6–12.7 | 6.26775–6.26825 ..... | 108–121.94 | 1718.8–1722.2 | 13.25–13.4 | 6.31175–6.31225 ..... | 123–138 | 2200–2300 | 14.47–14.5 | 8.291–8.294 ..... | 149.9–150.05 | 2310–2390 | 15.35–16.2 | 8.362–8.366 ..... | 156.52475–156.52525 | 2483.5–2500 | 17.7–21.4 | 8.37625–8.38675 ..... | 156.7–156.9 | 2655–2900 | 22.01–23.12 | 8.41425–8.41475 ..... | 162.0125–167.17 | 3260–3267 | 23.6–24.0 | 12.29–12.293 ..... | 167.72–173.2 | 3332–3339 | 31.2–31.8 | 12.51975–12.52025 ..... | 240–285 | 3345.8–3358 | 36.43–36.5 | 12.57675–12.57725 ..... | 322–335.4 | 3600–4400 | ( <sup>2</sup> ) | 13.36–13.41 ..... |  |  |  |  |  |  |
| MHz                     | MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MHz           | GHz                  |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 0.090–0.110 .....       | 16.42–16.423                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 399.9–410     | 4.5–5.15             |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 1.0495–0.505 .....      | 16.69475–16.69525                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 608–614       | 5.35–5.46            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 2.1735–2.1905 .....     | 16.80425–16.80475                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 960–1240      | 7.25–7.75            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 4.125–4.128 .....       | 25.5–25.67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1300–1427     | 8.025–8.5            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 4.17725–4.17775 .....   | 37.5–38.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1435–1626.5   | 9.0–9.2              |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 4.20725–4.20775 .....   | 73–74.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1645.5–1646.5 | 9.3–9.5              |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 6.215–6.218 .....       | 74.8–75.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1660–1710     | 10.6–12.7            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 6.26775–6.26825 .....   | 108–121.94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1718.8–1722.2 | 13.25–13.4           |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 6.31175–6.31225 .....   | 123–138                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2200–2300     | 14.47–14.5           |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 8.291–8.294 .....       | 149.9–150.05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2310–2390     | 15.35–16.2           |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 8.362–8.366 .....       | 156.52475–156.52525                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2483.5–2500   | 17.7–21.4            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 8.37625–8.38675 .....   | 156.7–156.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2655–2900     | 22.01–23.12          |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 8.41425–8.41475 .....   | 162.0125–167.17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3260–3267     | 23.6–24.0            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 12.29–12.293 .....      | 167.72–173.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3332–3339     | 31.2–31.8            |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 12.51975–12.52025 ..... | 240–285                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3345.8–3358   | 36.43–36.5           |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 12.57675–12.57725 ..... | 322–335.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3600–4400     | ( <sup>2</sup> )     |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 13.36–13.41 .....       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                      |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
|                         | <sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490–0.510 MHz.<br><sup>2</sup> Above 38.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                      |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
|                         | (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions of 15.35 apply to these measurements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                      |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| FCC CFR 47 §15.209      | (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                      |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
|                         | <table><tr><th>Frequency</th><th colspan="2">Field Strength</th><th>Measurement Distance</th></tr><tr><th>MHz</th><th>uV/m</th><th>dBuV/m</th><th>Meters</th></tr><tr><td>.009 – 0.490</td><td>2400/F(kHz)</td><td>48.52 – 13.80</td><td>300</td></tr><tr><td>0.490 – 1.705</td><td>24000/F(kHz)</td><td>33.80 – 22.97</td><td>30</td></tr><tr><td>1.705 – 30.0</td><td>30</td><td>29.54</td><td>30</td></tr><tr><td>30 – 88</td><td>100</td><td>40.00</td><td>3</td></tr><tr><td>88 – 216</td><td>150</td><td>43.52</td><td>3</td></tr><tr><td>216 - 960</td><td>200</td><td>46.02</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>53.98</td><td>3</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Frequency     | Field Strength       |     | Measurement Distance | MHz               | uV/m         | dBuV/m    | Meters   | .009 – 0.490       | 2400/F(kHz)       | 48.52 – 13.80 | 300       | 0.490 – 1.705       | 24000/F(kHz)      | 33.80 – 22.97 | 30        | 1.705 – 30.0      | 30         | 29.54     | 30        | 30 – 88               | 100        | 40.00       | 3       | 88 – 216              | 150     | 43.52         | 3       | 216 - 960         | 200       | 46.02     | 3         | Above 960             | 500        | 53.98         | 3          |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| Frequency               | Field Strength                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               | Measurement Distance |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| MHz                     | uV/m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | dBuV/m        | Meters               |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| .009 – 0.490            | 2400/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 48.52 – 13.80 | 300                  |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 0.490 – 1.705           | 24000/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 33.80 – 22.97 | 30                   |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 1.705 – 30.0            | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 29.54         | 30                   |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 30 – 88                 | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 40.00         | 3                    |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 88 – 216                | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 43.52         | 3                    |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| 216 - 960               | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 46.02         | 3                    |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
| Above 960               | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 53.98         | 3                    |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |
|                         | (b) In the emission table above, the tighter limit applies at the band edges.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                      |     |                      |                   |              |           |          |                    |                   |               |           |                     |                   |               |           |                   |            |           |           |                       |            |             |         |                       |         |               |         |                   |           |           |           |                       |            |               |            |                       |         |           |            |                   |              |           |            |                   |                     |             |           |                       |             |           |             |                       |                 |           |           |                    |              |           |           |                         |         |             |            |                         |           |           |                  |                   |  |  |  |  |  |  |

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

### F.3. ENVIRONMENTAL CONDITIONS

|                            |                   |
|----------------------------|-------------------|
| <b>Temperature</b>         | 27.4 +/- 2 °C     |
| <b>Humidity</b>            | 33 +/- 2 %        |
| <b>Barometric Pressure</b> | 96.24 +/- 0.2 kPa |

### F.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     |
| 00200        | Empire       | LG-105    | Large Loop Antenna           | 30Apr04  | 30Apr05 |
| 00201        | Empire       | LC-105    | Small Loop Antenna           | 30Apr04  | 30Apr05 |
| 00050        | Chase        | CBL-6111A | Bilog Antenna                | 30Apr04  | 30Apr05 |
| 00035        | ETS          | 3115      | Double Ridged Guide Horn     | 24Mar04  | 24Mar05 |
| 00202        | ETS          | 3160-09   | Small Horn Antenna           | 27May04  | 27Jun05 |
| 00015        | Agilent      | E4408B    | Spectrum Analyzer            | 29Dec03  | 29Dec04 |
| 00049        | HP           | 8566B     | Spectrum Analyzer RF Section | 18May04  | 18May05 |
| 00049        | HP           | 85650A    | Quasi-peak Adapter           | 18May04  | 18May05 |
| 00047        | HP           | 85685A    | RF Preselector               | 18May04  | 18May05 |
| 00048        | Gore         | 65474     | Microwave Cable              | 20May04  | 20May05 |
| 00030        | HP           | 83017A    | LNA                          | 20May04  | 20May05 |

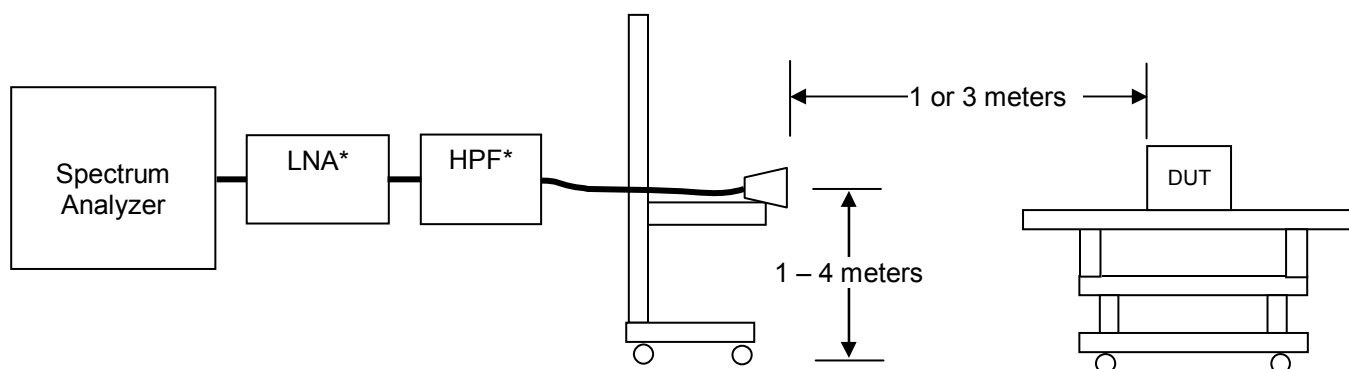
|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## F.5. MEASUREMENT EQUIPMENT SETUP

|                                         |                                                                                                                                                                                                     |       |                  |          |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------|----------|
| MEASUREMENT<br>EQUIPMENT<br>CONNECTIONS | The measurement equipment was connected as shown in the F.6. A number of antennas were used to cover the applicable frequency range test. The ranges in which each antenna was used are as follows: |       |                  |          |
|                                         | Frequency Range                                                                                                                                                                                     |       | Antenna          |          |
|                                         | 9 kHz – 150 kHz                                                                                                                                                                                     |       | LP-105 Loop      |          |
|                                         | 150 kHz – 30 MHz                                                                                                                                                                                    |       | LG-105 Loop      |          |
|                                         | 30 MHz – 1 GHz                                                                                                                                                                                      |       | CBL-6111A Bilog  |          |
|                                         | 1 GHz – 18 GHz                                                                                                                                                                                      |       | ETS 3115 Horn    |          |
|                                         | 18 GHz– 26GHz                                                                                                                                                                                       |       | ETS 3160-09 Horn |          |
| MEASUREMENT<br>EQUIPMENT<br>SETTINGS    | The spectrum analyzer was set to the following settings:                                                                                                                                            |       |                  |          |
|                                         | Frequency Range                                                                                                                                                                                     | RBW   | VBW              | Detector |
|                                         | MHz                                                                                                                                                                                                 | kHz   | kHz              |          |
|                                         | 0.009 - 0.150                                                                                                                                                                                       | 0.200 | 10               | Peak*    |
|                                         | 0.150 - 30                                                                                                                                                                                          | 9     | 30               | Peak*    |
|                                         | 30 – 1000                                                                                                                                                                                           | 100   | 300              | Peak*    |
|                                         | > 1000                                                                                                                                                                                              | 1000* | 1000             | Peak*    |
|                                         | *As a worst-case measurement, the average/quasi-peak limits were applied to measurements made with a peak detector.                                                                                 |       |                  |          |

## F.6. SETUP DRAWING

Figure F-1 - Setup Drawing



\* Used for >1GHz

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

## F.7. SETUP PHOTOGRAPHS

Photograph F-1 - Horizontal Polarization (30MHz - 1 GHz)



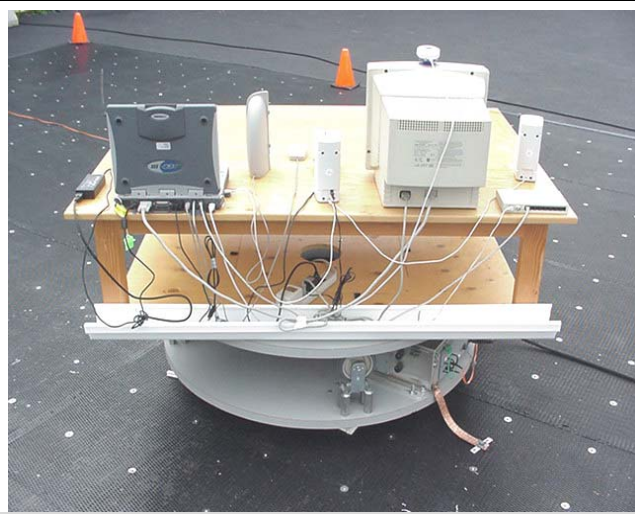
Photograph F-2 - Vertical Polarization (1-18 GHz)



Photograph F-3 - Front of Radiated Emission Configuration



Photograph F-4 - Back of Radiated Emission Configuration



## F.8. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g for the band-edge measurements and for Mode b for the remaining measurements.

|                                                                           |                                                                                                                |                |                   |                |                |                                              |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------|-------------------|----------------|----------------|----------------------------------------------|
| <b>Applicant:</b>                                                         | Itronix Corporation                                                                                            | <b>FCC ID:</b> | KBCIX260PNL3AC860 | <b>IC ID:</b>  | not applicable | <b>ITRONIX</b><br>A GENERAL DYNAMICS COMPANY |
| <b>Rugged Laptop PC with Senao NL-3054MP 802.11b/g WLAN Mini-PCI Card</b> |                                                                                                                |                | <b>Model:</b>     | IX260PNL3AC860 |                |                                              |
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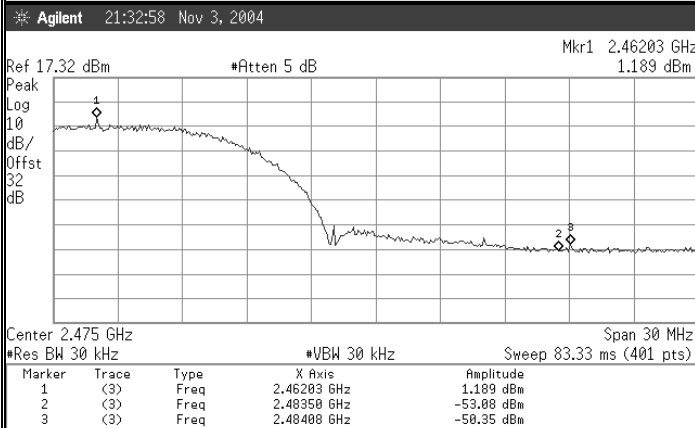
|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## F.9. TEST RESULTS

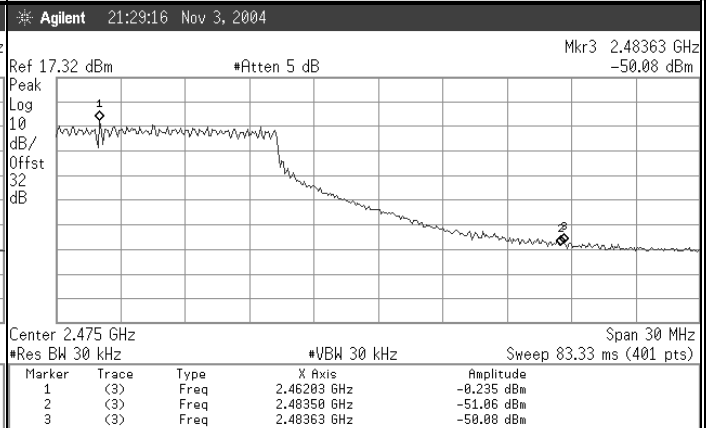
### F.9.1. Upper Band-edge Emission Field Strengths @ Specified Distance

Note: (Lower Band-edge (Out-of-Band) is in Appendix E)

#### Channel 11 Mode b - Conducted Band-edge Plots



#### Channel 11 Mode g - Conducted Band-edge Plots



#### Channel 11 Mode b - Radiated Carrier Field Strengths

| Mode b  |          |                      |             |           |          |             |       |      |       |             |
|---------|----------|----------------------|-------------|-----------|----------|-------------|-------|------|-------|-------------|
| Channel | Polarity | Measurement Distance | Antenna     | Frequency | SA Level | Noise Floor | AF    | CL   | Other | Detector    |
|         |          | m                    |             | MHz       | dBuV     |             | dB/m  | dB   | dB    | (PK/QP/AVG) |
| 11      | H        | 3                    | Horn SN6276 | 2462.00   | 80.01    |             | 30.34 | 3.52 | 0.00  | PK          |
| 11      | H        | 3                    | Horn SN6276 | 2462.00   | 71.00    |             | 30.34 | 3.52 | 0.00  | AV          |
| 11      | V        | 3                    | Horn SN6276 | 2462.00   | 74.17    |             | 30.34 | 3.52 | 0.00  | PK          |
| 11      | V        | 3                    | Horn SN6276 | 2462.00   | 65.24    |             | 30.34 | 3.52 | 0.00  | AV          |

#### Channel 11 Mode g - Radiated Carrier Field Strengths

| Mode g  |          |                      |             |           |          |             |       |      |       |             |
|---------|----------|----------------------|-------------|-----------|----------|-------------|-------|------|-------|-------------|
| Channel | Polarity | Measurement Distance | Antenna     | Frequency | SA Level | Noise Floor | AF    | CL   | Other | Detector    |
|         |          | m                    |             | MHz       | dBuV     |             | dB/m  | dB   | dB    | (PK/QP/AVG) |
| 11      | H        | 3                    | Horn SN6276 | 2462.00   | 77.70    |             | 30.34 | 3.52 | 0.00  | PK          |
| 11      | H        | 3                    | Horn SN6276 | 2462.00   | 69.10    |             | 30.34 | 3.52 | 0.00  | AV          |
| 11      | V        | 3                    | Horn SN6276 | 2462.00   | 73.86    |             | 30.34 | 3.52 | 0.00  | PK          |
| 11      | V        | 3                    | Horn SN6276 | 2462.00   | 64.80    |             | 30.34 | 3.52 | 0.00  | AV          |

#### Channel 11 b - Calculated Band-edge (Restricted) Field Strengths

| Mode b  |          |          |           |                                 |              |          |                                     |                |                           |                 |
|---------|----------|----------|-----------|---------------------------------|--------------|----------|-------------------------------------|----------------|---------------------------|-----------------|
| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Marker-Delta | Detector | Calculated Band-edge Field Strength | Limit Distance | Limit Distance Correction | Specified Limit |
|         |          | m        | MHz       | dBuV/m                          | dBuV         |          | dBuV/m                              | m              | dB                        | dBuV/m          |
| 11      | H        | 3        | 2463.50   | 113.87                          | 51.54        | PK       | 62.33                               | 3.00           | 0.00                      | 73.98           |
| 11      | H        | 3        | 2463.50   | 104.86                          | 51.54        | AV       | 53.32                               | 3.00           | 0.00                      | 53.98           |
| 11      | V        | 3        | 2463.50   | 108.03                          | 51.54        | PK       | 56.49                               | 3.00           | 0.00                      | 73.98           |
| 11      | V        | 3        | 2463.50   | 99.10                           | 51.54        | AV       | 47.56                               | 3.00           | 0.00                      | 53.98           |

#### Channel 11 g - Calculated Band-edge (Restricted) Field Strengths

| Mode g  |          |          |           |                                 |              |          |                                     |                |                           |                 |
|---------|----------|----------|-----------|---------------------------------|--------------|----------|-------------------------------------|----------------|---------------------------|-----------------|
| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Marker-Delta | Detector | Calculated Band-edge Field Strength | Limit Distance | Limit Distance Correction | Specified Limit |
|         |          | m        | MHz       | dBuV/m                          | dBuV         |          | dBuV/m                              | m              | dB                        | dBuV/m          |
| 11      | H        | 3        | 2463.50   | 111.56                          | 49.85        | PK       | 61.71                               | 3.00           | 0.00                      | 73.98           |
| 11      | H        | 3        | 2463.50   | 102.96                          | 49.85        | AV       | 53.11                               | 3.00           | 0.00                      | 53.98           |
| 11      | V        | 3        | 2463.50   | 107.72                          | 49.85        | PK       | 57.87                               | 3.00           | 0.00                      | 73.98           |
| 11      | V        | 3        | 2463.50   | 98.66                           | 49.85        | AV       | 48.81                               | 3.00           | 0.00                      | 53.98           |

Formulae:

Total CF (dB) = Antenna Factor (dB) + Cable Factor (dB) + Other Factor (Amplifier Gain, Filter Loss, etc) (dB)

Field Strength (dBuV/m) = SA Reading (dBuV) + Total CF (dB/m)

Limit Distance Correction (dB) = 40 \* log(d1/d2) for f < 30 MHz; 20\*log(d1/d2) for f > 30 MHz; where d1 is the measurement distance and d2 is the published limit

Limit (dBuV/m) = Published Limit (dBuV/m) + Limit Distance Correction (dB)

Margin (dB) = Limit (dBuV/m) - Field Strength (dBuV/m)

Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### F.9.2. Channel 1 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.209  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |            |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          |          |            |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|         |          | m        |            | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | PK/QP/AV | m              | dB                        | dBuV/m           |             | dB     |           |
| CH1     | H        | 3        | Hom SN6276 | 2688.00   | 51.40    |             | 31.00 | 3.65  | -19.98   | 14.67       | 66.07          | PK       | 3.00           | 0.00                      | 73.98            |             | 7.91   | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 2688.00   | 28.80    |             | 31.00 | 3.65  | -19.98   | 14.67       | 43.47          | AV       | 3.00           | 0.00                      | 53.98            |             | 10.51  | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 2768.00   | 51.40    |             | 31.26 | 3.71  | -19.94   | 15.03       | 66.43          | PK       | 3.00           | 0.00                      | 73.98            |             | 7.55   | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 2768.00   | 27.40    |             | 31.26 | 3.71  | -19.94   | 15.03       | 42.43          | AV       | 3.00           | 0.00                      | 53.98            |             | 11.55  | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 7541.25   | 56.96    |             | 38.73 | 6.43  | -34.31   | 10.85       | 67.81          | PK       | 3.00           | 0.00                      | 73.98            |             | 6.17   | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 7541.25   | 38.80    |             | 38.73 | 6.43  | -34.31   | 10.85       | 49.65          | AV       | 3.00           | 0.00                      | 53.98            |             | 4.33   | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 9035.31   | 38.70    |             | 40.21 | 7.02  | -34.27   | 12.96       | 51.66          | PK       | 3.00           | 0.00                      | 73.98            |             | 22.32  | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 9035.00   | 34.10    |             | 40.21 | 7.02  | -34.27   | 12.96       | 47.06          | AV       | 3.00           | 0.00                      | 53.98            |             | 6.92   | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 13159.79  | 50.30    |             | 41.73 | 9.45  | -34.15   | 17.03       | 67.33          | PK       | 3.00           | 9.54                      | 83.52            |             | 16.19  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 13155.80  | 37.80    |             | 41.72 | 9.46  | -34.15   | 17.03       | 54.83          | AV       | 3.00           | 9.54                      | 63.52            |             | 8.69   | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 16138.89  | 52.90    |             | 40.96 | 10.01 | -33.30   | 17.67       | 70.57          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.96  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 16138.89  | 39.70    |             | 40.96 | 10.01 | -33.30   | 17.67       | 57.37          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.16   | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 17991.00  | 52.50    |             | 45.87 | 10.45 | -36.54   | 19.78       | 72.28          | PK       | 3.00           | 9.54                      | 83.52            |             | 11.25  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 17991.00  | 39.90    |             | 45.87 | 10.45 | -36.54   | 19.78       | 59.68          | AV       | 3.00           | 9.54                      | 63.52            |             | 3.85   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 1089.00   | 39.30    |             | 26.62 | 2.31  | 0.00     | 28.93       | 68.23          | PK       | 3.00           | 0.00                      | 73.98            |             | 5.74   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 1089.00   | 24.20    |             | 26.62 | 2.31  | 0.00     | 28.93       | 53.13          | AV       | 3.00           | 0.00                      | 53.98            |             | 0.84   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2486.00   | 51.60    |             | 30.38 | 3.51  | -20.25   | 13.64       | 65.24          | PK       | 3.00           | 0.00                      | 73.98            |             | 8.74   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2486.00   | 37.30    |             | 30.38 | 3.51  | -20.25   | 13.64       | 50.94          | AV       | 3.00           | 0.00                      | 53.98            |             | 3.04   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2734.00   | 51.10    |             | 31.15 | 3.68  | -19.96   | 14.87       | 65.97          | PK       | 3.00           | 0.00                      | 73.98            |             | 8.01   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2734.00   | 27.20    |             | 31.15 | 3.68  | -19.96   | 14.87       | 42.07          | AV       | 3.00           | 0.00                      | 53.98            |             | 11.91  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2844.00   | 50.40    |             | 31.50 | 3.77  | -19.90   | 15.37       | 65.77          | PK       | 3.00           | 0.00                      | 73.98            |             | 8.21   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 2844.00   | 27.40    |             | 31.50 | 3.77  | -19.90   | 15.37       | 42.77          | AV       | 3.00           | 0.00                      | 53.98            |             | 11.21  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 7541.25   | 48.00    |             | 38.73 | 6.43  | -34.31   | 10.85       | 58.85          | PK       | 3.00           | 0.00                      | 73.98            |             | 15.13  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 7541.25   | 37.30    |             | 38.73 | 6.43  | -34.31   | 10.85       | 48.15          | AV       | 3.00           | 0.00                      | 53.98            |             | 5.83   | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 9363.44   | 46.20    |             | 40.27 | 7.23  | -34.26   | 13.24       | 59.44          | PK       | 3.00           | 0.00                      | 73.98            |             | 14.54  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 9363.44   | 33.30    |             | 40.27 | 7.23  | -34.26   | 13.24       | 46.54          | AV       | 3.00           | 0.00                      | 53.98            |             | 7.44   | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 16428.00  | 53.20    |             | 41.71 | 10.15 | -33.10   | 18.76       | 71.96          | PK       | 3.00           | 9.54                      | 83.52            |             | 11.56  | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 16429.93  | 39.40    |             | 41.72 | 10.16 | -33.10   | 18.78       | 58.18          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.35   | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 17974.50  | 53.60    |             | 45.82 | 10.38 | -36.55   | 19.66       | 73.26          | PK       | 3.00           | 9.54                      | 83.52            |             | 10.26  | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 17974.50  | 39.90    |             | 45.82 | 10.38 | -36.55   | 19.66       | 59.56          | AV       | 3.00           | 9.54                      | 63.52            |             | 3.96   | PASS      |
| CH1     | V        | 1        | 3160-09    | 19770.00  | 55.00    | x           | 40.30 | 11.39 | -36.32   | 15.36       | 70.36          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.16  | PASS      |
| CH1     | V        | 1        | 3160-09    | 19770.00  | 42.40    | x           | 40.30 | 11.39 | -36.32   | 15.36       | 57.76          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.76   | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### F.9.3. Channel 1 Harmonic Emission Field Strengths @ Specified Distance (within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC 15.209  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |            |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          |          |            |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
| CH1     | H        | 3        | Hom SN6276 | 4824.00   | 42.40    |             | 35.35 | 4.98  | -34.08   | 6.24        | 48.64          | PK       | 3.00           | 0.00                      | 73.98            |             | 25.34  | PASS      |
| CH1     | H        | 3        | Hom SN6276 | 4824.00   | 28.90    |             | 35.35 | 4.98  | -34.08   | 6.24        | 35.14          | AV       | 3.00           | 0.00                      | 53.98            |             | 18.84  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 12060.00  | 36.10    | x           | 40.58 | 8.54  | -34.18   | 14.94       | 51.04          | PK       | 3.00           | 9.54                      | 63.52            | *           | 12.49  | PASS      |
| CH1     | H        | 1        | Hom SN6276 | 14472.00  | 42.50    | x           | 42.57 | 9.28  | -34.12   | 17.74       | 60.24          | PK       | 3.00           | 9.54                      | 63.52            | *           | 3.28   | PASS      |
| CH1     | H        | 1        | 3160-09    | 19926.00  | 55.80    | x           | 40.30 | 11.75 | -36.30   | 15.75       | 71.55          | PK       | 3.00           | 9.54                      | 83.52            |             | 11.97  | PASS      |
| CH1     | H        | 1        | 3160-09    | 19926.00  | 42.50    | x           | 40.30 | 11.75 | -36.30   | 15.75       | 58.25          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.27   | PASS      |
| CH1     | H        | 1        | 3160-09    | 21708.00  | 48.56    | x           | 40.30 | 11.91 | -38.05   | 14.15       | 62.71          | PK       | 3.00           | 9.54                      | 83.52            |             | 20.81  | PASS      |
| CH1     | H        | 1        | 3160-09    | 21708.00  | 35.21    | x           | 40.30 | 11.91 | -38.05   | 14.15       | 49.36          | AV       | 3.00           | 9.54                      | 63.52            |             | 14.16  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 4824.00   | 44.40    |             | 35.35 | 4.98  | -34.08   | 6.24        | 50.64          | PK       | 3.00           | 0.00                      | 73.98            |             | 23.34  | PASS      |
| CH1     | V        | 3        | Hom SN6276 | 4824.00   | 31.90    |             | 35.35 | 4.98  | -34.08   | 6.24        | 38.14          | AV       | 3.00           | 0.00                      | 53.98            |             | 15.84  | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 12060.00  | 36.10    | x           | 40.58 | 8.54  | -34.18   | 14.94       | 51.04          | PK       | 3.00           | 9.54                      | 63.52            | *           | 12.49  | PASS      |
| CH1     | V        | 1        | Hom SN6276 | 14472.00  | 42.30    | x           | 42.57 | 9.28  | -34.12   | 17.74       | 60.04          | PK       | 3.00           | 9.54                      | 63.52            | *           | 3.48   | PASS      |
| CH1     | V        | 1        | 3160-09    | 19926.00  | 42.90    | x           | 40.30 | 11.75 | -36.30   | 15.75       | 58.65          | PK       | 3.00           | 9.54                      | 63.52            | *           | 4.87   | PASS      |
| CH1     | V        | 1        | 3160-09    | 21708.00  | 48.67    | x           | 40.30 | 11.91 | -38.05   | 14.15       | 62.82          | PK       | 3.00           | 9.54                      | 83.52            |             | 20.70  | PASS      |
| CH1     | V        | 1        | 3160-09    | 21708.00  | 34.47    | x           | 40.30 | 11.91 | -38.05   | 14.15       | 48.62          | AV       | 3.00           | 9.54                      | 63.52            |             | 14.90  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits were applied to the peak emission

The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

#### F.9.4. Channel 6 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.209  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
| CH6     | H        | 3        | Horn SN6276 | 4284.06   | 42.40    |             | 34.70 | 4.68  | -34.03   | 5.36        | 47.76          | PK       | 3.00           | 0.00                      | 73.98            |             | 26.22  | PASS      |
| CH6     | H        | 3        | Horn SN6276 | 4284.06   | 29.60    |             | 34.70 | 4.68  | -34.03   | 5.36        | 34.96          | AV       | 3.00           | 0.00                      | 53.98            |             | 19.02  | PASS      |
| CH6     | H        | 3        | Horn SN6276 | 4319.06   | 43.50    |             | 34.70 | 4.70  | -34.03   | 5.37        | 48.87          | PK       | 3.00           | 0.00                      | 73.98            |             | 25.11  | PASS      |
| CH6     | H        | 3        | Horn SN6276 | 4319.06   | 30.40    |             | 34.70 | 4.70  | -34.03   | 5.37        | 35.77          | AV       | 3.00           | 0.00                      | 53.98            |             | 18.21  | PASS      |
| CH6     | H        | 1        | Horn SN6276 | 16430.10  | 52.10    |             | 41.72 | 10.16 | -33.10   | 18.78       | 70.88          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.64  | PASS      |
| CH6     | H        | 1        | Horn SN6276 | 16430.10  | 39.40    |             | 41.72 | 10.16 | -33.10   | 18.78       | 58.18          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.34   | PASS      |
| CH6     | H        | 1        | Horn SN6276 | 17925.00  | 52.60    |             | 45.68 | 10.28 | -36.55   | 19.40       | 72.00          | PK       | 3.00           | 9.54                      | 83.52            |             | 11.52  | PASS      |
| CH6     | H        | 1        | Horn SN6276 | 17925.00  | 39.90    |             | 45.68 | 10.28 | -36.55   | 19.40       | 59.30          | AV       | 3.00           | 9.54                      | 63.52            |             | 4.22   | PASS      |
| CH6     | H        | 1        | 3160-09     | 19920.00  | 55.40    |             | 40.30 | 11.74 | -36.30   | 15.74       | 71.14          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.38  | PASS      |
| CH6     | H        | 1        | 3160-09     | 19920.00  | 42.50    |             | 40.30 | 11.74 | -36.30   | 15.74       | 58.24          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.28   | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1081.00   | 36.40    |             | 26.61 | 2.30  | 0.00     | 28.91       | 65.31          | PK       | 3.00           | 0.00                      | 73.98            |             | 8.67   | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1081.00   | 24.20    |             | 26.61 | 2.30  | 0.00     | 28.91       | 53.11          | AV       | 3.00           | 0.00                      | 53.98            |             | 0.87   | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1109.00   | 34.50    |             | 26.65 | 2.33  | 0.00     | 28.98       | 63.48          | PK       | 3.00           | 0.00                      | 73.98            |             | 10.50  | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1109.00   | 23.10    |             | 26.65 | 2.33  | 0.00     | 28.98       | 52.08          | AV       | 3.00           | 0.00                      | 53.98            |             | 1.90   | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1887.00   | 35.30    |             | 29.06 | 3.07  | 0.00     | 32.13       | 67.43          | PK       | 3.00           | 0.00                      | 73.98            |             | 6.55   | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 1887.00   | 25.20    |             | 29.06 | 3.07  | 0.00     | 32.13       | 57.33          | AV       | 3.00           | 0.00                      | 73.98            | *           | 16.65  | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 4316.88   | 44.40    |             | 34.70 | 4.70  | -34.03   | 5.37        | 49.77          | PK       | 3.00           | 0.00                      | 73.98            |             | 24.21  | PASS      |
| CH6     | V        | 3        | Horn SN6276 | 4316.88   | 31.10    |             | 34.70 | 4.70  | -34.03   | 5.37        | 36.47          | AV       | 3.00           | 0.00                      | 53.98            |             | 17.51  | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 14777.50  | 51.80    |             | 42.54 | 9.29  | -34.11   | 17.73       | 69.53          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.99  | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 14777.50  | 39.00    |             | 42.54 | 9.29  | -34.11   | 17.73       | 56.73          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.79   | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 16462.60  | 52.50    |             | 41.80 | 10.23 | -33.08   | 18.96       | 71.46          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.07  | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 16462.60  | 39.10    |             | 41.80 | 10.23 | -33.08   | 18.96       | 58.06          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.47   | PASS      |
| CH6     | V        | 1        | Horn SN6276 | 17641.50  | 39.90    |             | 44.82 | 10.48 | -36.59   | 18.72       | 58.62          | PK       | 3.00           | 9.54                      | 63.52            | *           | 4.91   | PASS      |
| CH6     | V        | 1        | 3160-09     | 19986.00  | 55.20    |             | 40.30 | 11.77 | -36.30   | 15.77       | 70.97          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.55  | PASS      |
| CH6     | V        | 1        | 3160-09     | 19986.00  | 42.40    |             | 40.30 | 11.77 | -36.30   | 15.77       | 58.17          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.35   | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### F.9.5. Channel 6 Harmonic Emission Field Strengths @ Specified Distance (within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.209  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |            |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          |          |            |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|         |          |          | m          |           | MHz      | dBuV        |       | dB/m  | dB       | dB          | dB/m           | dBuV/m   | {PK/QP/AV}     | m                         | dB               | #REF!       |        | dB        |
| CH6     | H        | 3        | Hom SN6276 | 4874.00   | 43.40    |             | 35.45 | 5.03  | -34.09   | 6.39        | 49.79          | PK       | 3.00           | 0.00                      | 73.98            |             | 24.19  | PASS      |
| CH6     | H        | 3        | Hom SN6276 | 4874.00   | 30.20    |             | 35.45 | 5.03  | -34.09   | 6.39        | 36.59          | AV       | 3.00           | 0.00                      | 53.98            |             | 17.39  | PASS      |
| CH6     | H        | 3        | Hom SN6276 | 7311.00   | 47.32    | x           | 38.36 | 6.31  | -34.32   | 10.35       | 57.67          | PK       | 3.00           | 0.00                      | 73.98            |             | 16.31  | PASS      |
| CH6     | H        | 3        | Hom SN6276 | 7311.00   | 32.20    | x           | 38.36 | 6.31  | -34.32   | 10.35       | 42.55          | AV       | 3.00           | 0.00                      | 53.98            |             | 11.43  | PASS      |
| CH6     | H        | 1        | Hom SN6276 | 14622.00  | 51.90    | x           | 42.58 | 9.35  | -34.11   | 17.82       | 69.72          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.80  | PASS      |
| CH6     | H        | 1        | Hom SN6276 | 14622.00  | 38.90    | x           | 42.58 | 9.35  | -34.11   | 17.82       | 56.72          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.80   | PASS      |
| CH6     | H        | 1        | 3160-09    | 19496.00  | 54.90    | x           | 40.30 | 11.28 | -36.36   | 15.22       | 70.12          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.40  | PASS      |
| CH6     | H        | 1        | 3160-09    | 19496.00  | 42.20    | x           | 40.30 | 11.28 | -36.36   | 15.22       | 57.42          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.10   | PASS      |
| CH6     | H        | 1        | 3160-09    | 24370.00  | 51.62    | x           | 40.40 | 12.90 | -36.92   | 16.38       | 68.00          | PK       | 3.00           | 9.54                      | 83.52            |             | 15.52  | PASS      |
| CH6     | H        | 1        | 3160-09    | 24370.00  | 41.40    | x           | 40.40 | 12.90 | -36.92   | 16.38       | 57.78          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.74   | PASS      |
| CH6     | V        | 3        | Hom SN6276 | 4874.69   | 43.20    |             | 35.45 | 5.03  | -34.09   | 6.39        | 49.59          | PK       | 3.00           | 0.00                      | 73.98            |             | 24.39  | PASS      |
| CH6     | V        | 3        | Hom SN6276 | 4874.69   | 30.40    |             | 35.45 | 5.03  | -34.09   | 6.39        | 36.79          | AV       | 3.00           | 0.00                      | 53.98            |             | 17.19  | PASS      |
| CH6     | V        | 3        | Hom SN6276 | 7311.00   | 44.09    | x           | 38.36 | 6.31  | -34.32   | 10.35       | 54.44          | PK       | 3.00           | 0.00                      | 73.98            |             | 19.54  | PASS      |
| CH6     | V        | 3        | Hom SN6276 | 7311.00   | 32.20    | x           | 38.36 | 6.31  | -34.32   | 10.35       | 42.55          | AV       | 3.00           | 0.00                      | 53.98            |             | 11.43  | PASS      |
| CH6     | V        | 1        | Hom SN6276 | 14622.00  | 51.70    | x           | 42.58 | 9.35  | -34.11   | 17.82       | 69.52          | PK       | 3.00           | 9.54                      | 83.52            |             | 14.00  | PASS      |
| CH6     | V        | 1        | Hom SN6276 | 14622.00  | 38.80    | x           | 42.58 | 9.35  | -34.11   | 17.82       | 56.62          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.90   | PASS      |
| CH6     | V        | 1        | 3160-09    | 19496.00  | 54.80    | x           | 40.30 | 11.28 | -36.36   | 15.22       | 70.02          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.50  | PASS      |
| CH6     | V        | 1        | 3160-09    | 19496.00  | 42.20    | x           | 40.30 | 11.28 | -36.36   | 15.22       | 57.42          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.10   | PASS      |
| CH6     | V        | 1        | 3160-09    | 24370.00  | 51.54    | x           | 40.40 | 12.90 | -36.92   | 16.38       | 67.92          | PK       | 3.00           | 9.54                      | 83.52            |             | 15.60  | PASS      |
| CH6     | V        | 1        | 3160-09    | 24370.00  | 37.09    | x           | 40.40 | 12.90 | -36.92   | 16.38       | 53.47          | AV       | 3.00           | 9.54                      | 63.52            |             | 10.05  | PASS      |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

|                                                                    |                                                                                                                |         |                   |        |                |                                                                                                                     |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------|-------------------|--------|----------------|---------------------------------------------------------------------------------------------------------------------|
| Applicant:                                                         | Itronix Corporation                                                                                            | FCC ID: | KBCIX260PNL3AC860 | IC ID: | not applicable | <br>A GENERAL DYNAMICS COMPANY |
| Rugged Laptop PC with Senao NL-3054MP 802.11b/g WLAN Mini-PCI Card |                                                                                                                |         |                   | Model: | IX260PNL3AC860 |                                                                                                                     |
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|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### F.9.6. Channel 11 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.209  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          | m        |             | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | PK/QP/AV | m              | dB                        | dBuV/m           |             | dB     |           |
| CH11    | H        | 3        | Horn SN6276 | 4826.53   | 40.50    |             | 35.35 | 4.98  | -34.08   | 6.25        | 46.75          | PK       | 3.00           | 0.00                      | 73.98            |             | 27.23  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 4826.53   | 27.80    |             | 35.35 | 4.98  | -34.08   | 6.25        | 34.05          | AV       | 3.00           | 0.00                      | 53.98            |             | 19.93  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 9350.13   | 41.50    |             | 40.27 | 7.23  | -34.26   | 13.24       | 54.74          | PK       | 3.00           | 0.00                      | 73.98            |             | 19.24  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 9350.13   | 28.50    |             | 40.27 | 7.23  | -34.26   | 13.24       | 41.74          | AV       | 3.00           | 0.00                      | 53.98            |             | 12.24  | PASS      |
| CH11    | H        | 1        | 3160-09     | 19907.86  | 55.20    | x           | 40.30 | 11.73 | -36.31   | 15.72       | 70.92          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.60  | PASS      |
| CH11    | H        | 1        | 3160-09     | 19907.86  | 42.40    | x           | 40.30 | 11.73 | -36.31   | 15.72       | 58.12          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.40   | PASS      |
| CH11    | H        | 1        | 3160-09     | 24616.31  | 50.61    | x           | 40.40 | 13.00 | -36.82   | 16.58       | 67.19          | PK       | 3.00           | 9.54                      | 83.52            |             | 16.33  | PASS      |
| CH11    | H        | 1        | 3160-09     | 24616.31  | 36.75    | x           | 40.40 | 13.00 | -36.82   | 16.58       | 53.33          | AV       | 3.00           | 9.54                      | 63.52            |             | 10.19  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 4826.81   | 42.50    |             | 35.35 | 4.98  | -34.08   | 6.25        | 48.75          | PK       | 3.00           | 0.00                      | 73.98            |             | 25.23  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 4826.81   | 29.80    |             | 35.35 | 4.98  | -34.08   | 6.25        | 36.05          | AV       | 3.00           | 0.00                      | 53.98            |             | 17.93  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 7540.54   | 47.80    |             | 38.73 | 6.43  | -34.31   | 10.85       | 58.65          | PK       | 3.00           | 0.00                      | 73.98            |             | 15.33  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 7540.54   | 41.20    |             | 38.73 | 6.43  | -34.31   | 10.85       | 52.05          | AV       | 3.00           | 0.00                      | 53.98            |             | 1.93   | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 9365.09   | 40.50    |             | 40.27 | 7.23  | -34.26   | 13.24       | 53.74          | PK       | 3.00           | 0.00                      | 73.98            |             | 20.24  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 9365.09   | 27.50    |             | 40.27 | 7.23  | -34.26   | 13.24       | 40.74          | AV       | 3.00           | 0.00                      | 53.98            |             | 13.24  | PASS      |
| CH11    | V        | 1        | 3160-09     | 19920.45  | 55.20    | x           | 40.30 | 11.75 | -36.30   | 15.74       | 70.94          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.58  | PASS      |
| CH11    | V        | 1        | 3160-09     | 19920.00  | 42.40    | x           | 40.30 | 11.74 | -36.30   | 15.74       | 58.14          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.38   | PASS      |
| CH11    | V        | 1        | 3160-09     | 24621.69  | 50.88    | x           | 40.40 | 13.00 | -36.82   | 16.58       | 67.46          | PK       | 3.00           | 9.54                      | 83.52            |             | 16.06  | PASS      |
| CH11    | V        | 1        | 3160-09     | 24621.69  | 36.73    | x           | 40.40 | 13.00 | -36.82   | 16.58       | 53.31          | AV       | 3.00           | 9.54                      | 63.52            |             | 10.21  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

### F.9.7. Channel 11 Harmonic Emission Field Strengths @ Specified Distance (within restricted bands)



Company: 100504KBC-T562-E15W  
Product: Itronix  
IX260+ with Senao NL-3054MP Plus Aries2 WLAN

Standard: FCC15.209  
Test Start Date: 25Oct04  
Test End Date: 03Nov04

| Mode b  |          |          |             |           |          |             |       |       |          |             |                |          |                |                           |                  |             |        |           |
|---------|----------|----------|-------------|-----------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|-------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna  | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Lower Limit | Margin | Pass/Fail |
|         |          | m        |             | MHz       | dBuV     |             | dB/m  | dB    | dB       | dB/m        | dBuV/m         | PK/QP/AV | m              | dB                        | dBuV/m           |             | dB     |           |
| CH11    | H        | 3        | Horn SN6276 | 4924.00   | 41.20    |             | 35.55 | 5.05  | -34.09   | 6.51        | 47.71          | PK       | 3.00           | 0.00                      | 73.98            |             | 26.27  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 4924.00   | 28.80    |             | 35.55 | 5.05  | -34.09   | 6.51        | 35.31          | AV       | 3.00           | 0.00                      | 53.98            |             | 18.67  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 7386.00   | 44.50    |             | 38.49 | 6.34  | -34.32   | 10.51       | 55.01          | PK       | 3.00           | 0.00                      | 73.98            |             | 18.97  | PASS      |
| CH11    | H        | 3        | Horn SN6276 | 7386.00   | 31.70    |             | 38.49 | 6.34  | -34.32   | 10.51       | 42.21          | AV       | 3.00           | 0.00                      | 53.98            |             | 11.77  | PASS      |
| CH11    | H        | 1        | Horn SN6276 | 12310.00  | 36.30    | x           | 40.93 | 8.69  | -34.18   | 15.45       | 51.75          | PK       | 3.00           | 9.54                      | 63.52            | *           | 11.78  | PASS      |
| CH11    | H        | 1        | Horn SN6276 | 14772.00  | 51.90    | x           | 42.55 | 9.29  | -34.11   | 17.73       | 69.63          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.89  | PASS      |
| CH11    | H        | 1        | Horn SN6276 | 14772.00  | 39.00    | x           | 42.55 | 9.29  | -34.11   | 17.73       | 56.73          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.79   | PASS      |
| CH11    | H        | 1        | 3160-09     | 19696.00  | 54.90    | x           | 40.30 | 11.42 | -36.33   | 15.39       | 70.29          | PK       | 3.00           | 9.54                      | 83.52            |             | 13.24  | PASS      |
| CH11    | H        | 1        | 3160-09     | 19696.00  | 42.30    | x           | 40.30 | 11.42 | -36.33   | 15.39       | 57.69          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.84   | PASS      |
| CH11    | H        | 1        | 3160-09     | 22158.00  | 49.49    | x           | 40.33 | 12.08 | -37.86   | 14.54       | 64.03          | PK       | 3.00           | 9.54                      | 83.52            |             | 19.49  | PASS      |
| CH11    | H        | 1        | 3160-09     | 22158.00  | 35.19    | x           | 40.33 | 12.08 | -37.86   | 14.54       | 49.73          | AV       | 3.00           | 9.54                      | 63.52            |             | 13.79  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 4924.00   | 46.60    |             | 35.55 | 5.05  | -34.09   | 6.51        | 53.11          | PK       | 3.00           | 0.00                      | 73.98            |             | 20.87  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 4924.00   | 40.10    |             | 35.55 | 5.05  | -34.09   | 6.51        | 46.61          | AV       | 3.00           | 0.00                      | 53.98            |             | 7.37   | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 7386.00   | 43.60    |             | 38.49 | 6.34  | -34.32   | 10.51       | 54.11          | PK       | 3.00           | 0.00                      | 73.98            |             | 19.87  | PASS      |
| CH11    | V        | 3        | Horn SN6276 | 7386.00   | 31.10    |             | 38.49 | 6.34  | -34.32   | 10.51       | 41.61          | AV       | 3.00           | 0.00                      | 53.98            |             | 12.37  | PASS      |
| CH11    | V        | 1        | Horn SN6276 | 12310.00  | 36.90    |             | 40.93 | 8.69  | -34.18   | 15.45       | 52.35          | PK       | 3.00           | 9.54                      | 63.52            | *           | 11.18  | PASS      |
| CH11    | V        | 1        | Horn SN6276 | 14772.00  | 51.30    | x           | 42.55 | 9.29  | -34.11   | 17.73       | 69.03          | PK       | 3.00           | 9.54                      | 83.52            |             | 14.49  | PASS      |
| CH11    | V        | 1        | Horn SN6276 | 14772.00  | 39.06    | x           | 42.55 | 9.29  | -34.11   | 17.73       | 56.79          | AV       | 3.00           | 9.54                      | 63.52            |             | 6.73   | PASS      |
| CH11    | V        | 1        | 3160-09     | 19696.00  | 55.50    | x           | 40.30 | 11.42 | -36.33   | 15.39       | 70.89          | PK       | 3.00           | 9.54                      | 83.52            |             | 12.64  | PASS      |
| CH11    | V        | 1        | 3160-09     | 19696.00  | 42.30    | x           | 40.30 | 11.42 | -36.33   | 15.39       | 57.69          | AV       | 3.00           | 9.54                      | 63.52            |             | 5.84   | PASS      |
| CH11    | V        | 1        | 3160-09     | 22158.00  | 49.48    | x           | 40.33 | 12.08 | -37.86   | 14.54       | 64.02          | PK       | 3.00           | 9.54                      | 83.52            |             | 19.50  | PASS      |
| CH11    | V        | 1        | 3160-09     | 22158.00  | 35.46    | x           | 40.33 | 12.08 | -37.86   | 14.54       | 50.00          | AV       | 3.00           | 9.54                      | 63.52            |             | 13.52  | PASS      |

#### Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction =  $40 \cdot \log(d1/d2)$  for  $F < 30$  MHz,  $20 \cdot \log(d1/d2)$  for  $F > 30$  MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

\*Where applicable the QP or Average Limits where applied to the peak emission

The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
| <b>Test Report S/N:</b>     | 061506KBC-T758-E15W |                    |
| <b>Test Date(s):</b>        | 25Oct04 - 05Nov04   |                    |
| <b>Test Type(s):</b>        | FCC §15.247         | IC RSS-210 Issue 5 |
| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

#### F.10. PASS/FAIL

In reference to the results outlined in F.9, the DUT passes the requirements as stated in the reference standards as follows: FCC 15.205 (a) (b) and 15.209 (a): No emissions were measured within the restricted bands as outlined in 15.205 that exceeded the limits stated in 15.209.

#### F.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.



Russell Pipe  
Senior Compliance Technologist  
Celltech Labs Inc.

04Nov04  
Date

|                      |                     |                    |
|----------------------|---------------------|--------------------|
| Test Report S/N:     | 061506KBC-T758-E15W |                    |
| Test Date(s):        | 25Oct04 - 05Nov04   |                    |
| Test Type(s):        | FCC §15.247         | IC RSS-210 Issue 5 |
| Lab Registration(s): | FCC #714830         | IC Lab File #3874  |

## Appendix G - Peak Power Spectral Density Measurement

### G.1. REFERENCES

|                              |                       |
|------------------------------|-----------------------|
| Normative Reference Standard | FCC CFR 47 §15.247(d) |
| Procedure Reference          | FCC 97-114            |

### G.2. LIMITS

#### G.2.1. FCC CFR

§15.247(d): For digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission.

### G.3. TEST PROCEDURE

The test method used is outlined in the ADT Corp. reference test report no. RF921215R02, section 4.5

### G.4. TEST RESULTS

The results used to show compliance to the applicable parts are outlined in the ADT Corp reference test report no. RF921215R02, section 4.5.

| Channel | 802.11b         |            |                | 802.11g         |            |                |
|---------|-----------------|------------|----------------|-----------------|------------|----------------|
|         | Frequency (GHz) | PPSD (dBm) | Data Rate Mb/s | Frequency (GHz) | PPSD (dBm) | Data Rate Mb/s |
| Low     | 2.412           | -1.13      | 11             | 2.412           | -10.79     | 6              |
| Mid     | 2.437           | 5.44       | 11             | 2.437           | -7.58      | 6              |
| High    | 2.462           | 4.44       | 11             | 2.462           | -11.99     | 6              |

### G.5. PASS/FAIL

In reference to the results outlined in G.4 and stated in the ADT Corp reference report, the DUT passes the requirements as stated in the reference standards as follows:

FCC 15.247 (d): The peak power spectral density did not exceed +8 dBm in any 3 kHz band.

## Appendix H - Conducted Powerline Emissions Measurement

### H.1. REFERENCES

|                                     |                            |
|-------------------------------------|----------------------------|
| <b>Normative Reference Standard</b> | CFR 47 FCC Part 15 §15.207 |
| <b>Procedure Reference</b>          | ANSI C63.4                 |

### H.2. LIMITS

§15.207: Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each powerline and ground at the power terminal.

| Frequency of Emission (MHz) | Conducted Limit (dBuV) |           |
|-----------------------------|------------------------|-----------|
|                             | Quasi-Peak             | Average   |
| 0.15 – 0.5                  | 66 to 56*              | 56 to 46* |
| 0.50 – 5.0                  | 56                     | 46        |
| 5.0 – 30.0                  | 60                     | 50        |

\*Decreases logarithmically with frequency.

### H.3. ENVIRONMENTAL CONDITIONS

|                            |               |
|----------------------------|---------------|
| <b>Temperature</b>         | +26 ± 5 °C    |
| <b>Humidity</b>            | 31 % ± 10% RH |
| <b>Barometric Pressure</b> | 101.4 kpa     |

### H.4. EQUIPMENT LIST

| ASSET NUMBER | MANUFACTURER | MODEL  | DESCRIPTION                          | LAST CAL | CAL DUE |
|--------------|--------------|--------|--------------------------------------|----------|---------|
| 00063        | HP           | 85662A | Spectrum Analyzer Display            | na       | na      |
| 00051        | HP           | 8566B  | Spectrum Analyzer RF Section         | 18May04  | 18May05 |
| 00049        | HP           | 85650A | Quasi-Peak Adapter                   | 18May04  | 18May05 |
| 00047        | HP           | 85685A | Preselector                          | 18May04  | 18May05 |
| 00083        | EMCO         | 3825/2 | Line Impedance Stabilization Network | 29Apr04  | 29Apr05 |
| 00084        | EMCO         | 3825/2 | Line Impedance Stabilization Network | 29Apr04  | 29Apr05 |

### H.5. MEASUREMENT EQUIPMENT SETUP

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MEASUREMENT EQUIPMENT CONNECTIONS</b> | The conducted emissions were measured on each of the two AC powerline leads connected to the DUT's power supply brick. A two line LISN was used to make this measurement. A drawing of the equipment setup is shown in H.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>MEASUREMENT EQUIPMENT SETTINGS</b>    | <p>Each of the monitor ports from the 2-line LISN was connected in turn to the spectrum analyzer. The port not connected to the analyzer was terminated in a 50-ohm load. A prescan of the peak emission levels was made of the 150 kHz – 30 MHz range split into 4 equal frequency bands. The following were the spectrum analyzer settings:</p> <p>Start Frequency and Stop Frequency set by software for each of the four bands<br/> RBW: 100 kHz<br/> VBW: 300 kHz<br/> Sweep: 500 mS</p> <p>The resulting data from each band was corrected and collected by software and presented in the graphical representations shown in H.9 for the two leads. The frequency points with the highest 10 levels on each lead were used by software to optimize a set of 20 readings for each type of detector (peak, quasi-peak and average). This data was corrected by the software is presented in the tables shown in section H.9.</p> |

|                             |                     |                    |
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| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

## H.6. SETUP PHOTOS

Photograph H-1 - AC Powerline Conducted Emission Configuration



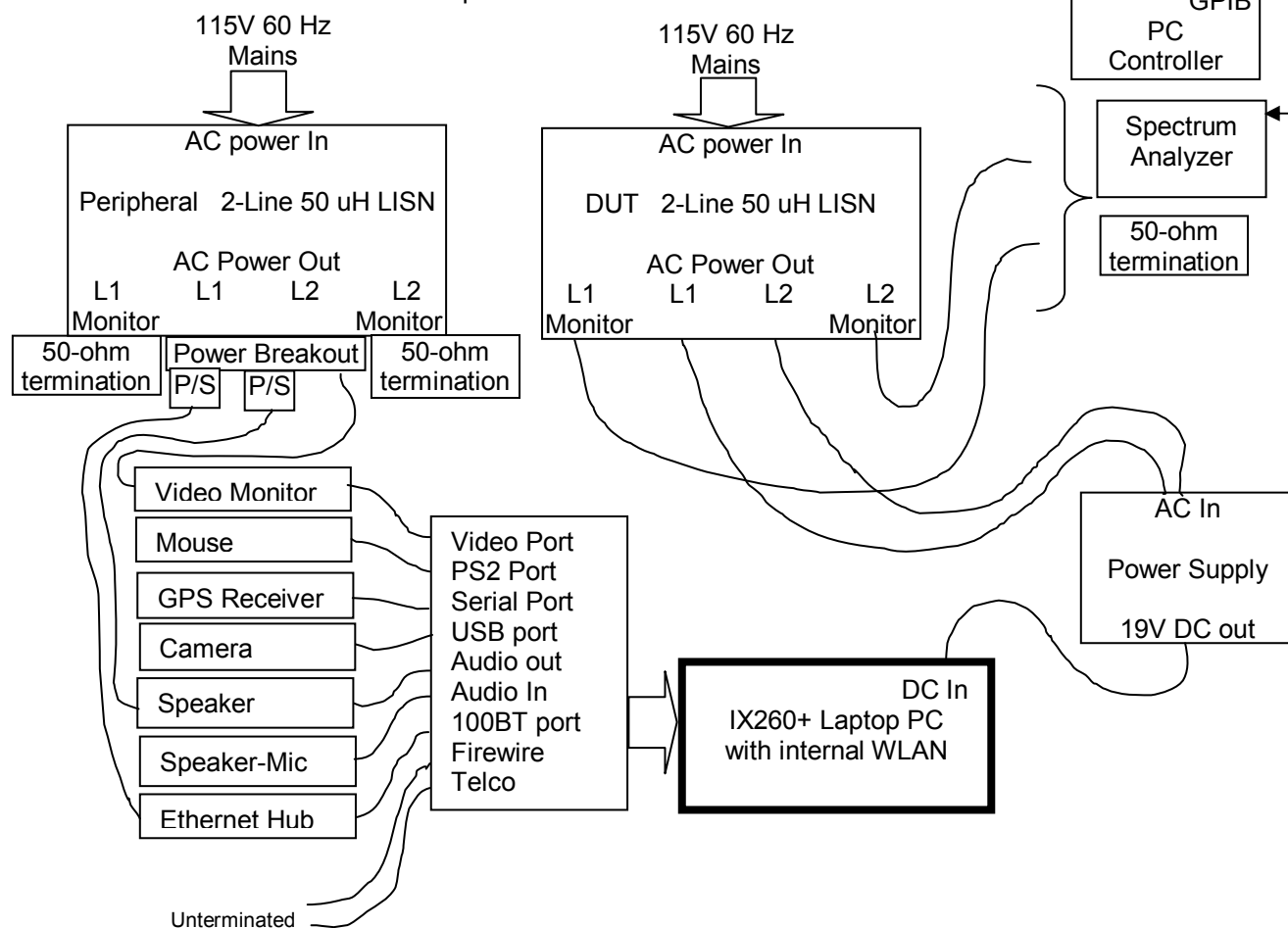
Photograph H-2 - AC Powerline Conducted Emission Cable Placement



## H.7. SETUP DRAWING

Figure H-1 - Setup Drawing

### Conducted Emission Measurement Setup



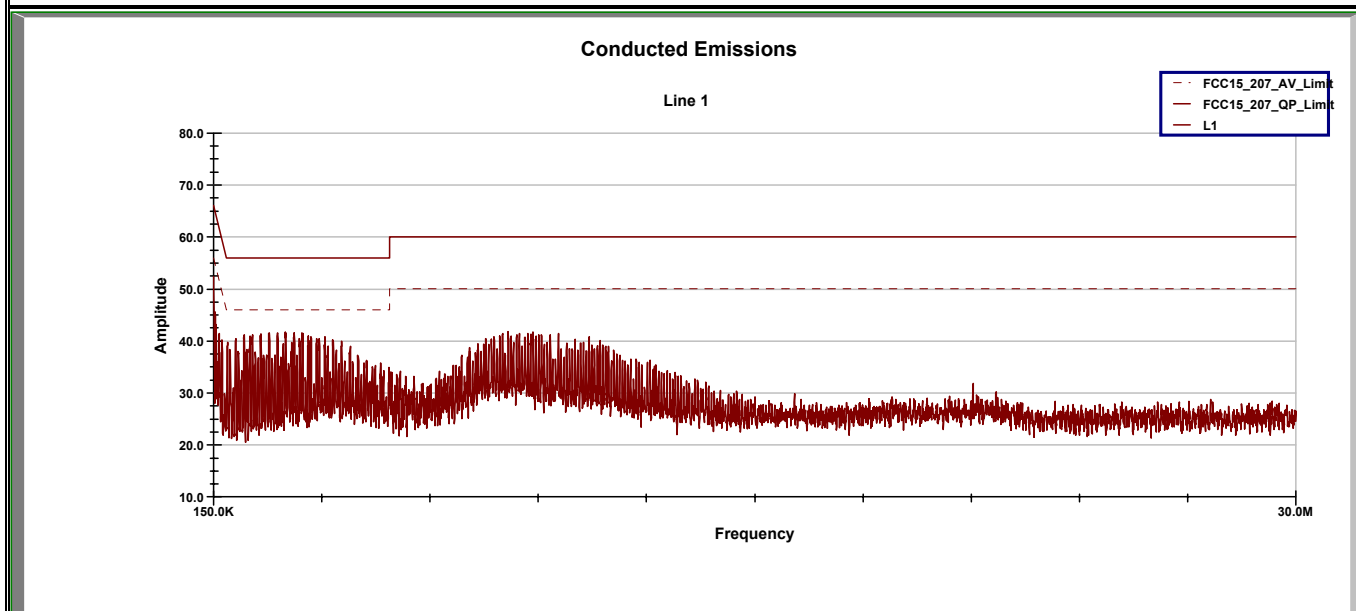
## H.8. DUT OPERATING DESCRIPTION

|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| <b>WLAN:</b>        | The WLAN was set to transmit at full power on Channel 1, Mode b 1 Mb/s.                        |
| <b>PC:</b>          | Other than operating the WLAN software and running MS windows, no PC exercising was performed. |
| <b>Peripherals:</b> | All peripherals were active, but no specific traffic was initiated.                            |

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## H.9. TEST RESULTS

### H.9.1. Line 1 Conducted Emissions



Project Number: 100504KBC-T562-E15W  
Company: Itronix  
Product: IX260+ with Senao NL-3054MP WLAN

Standard: FCC 15.207  
Test Start Date: 5-Nov-04  
Test End Date: 5-Nov-04

Line 1 Conducted Emissions

| Frequency<br>MHz | Uncorrected Reading |                    |                 | Correction<br>Factor<br>dB | Corrected Emission Level |                    |                 | Quasi-Peak<br>Limit<br>dBuV | Quasi-Peak<br>Margin<br>dB | Average<br>Limit<br>dBuV | Average<br>Margin<br>dB | Pass/Fail |
|------------------|---------------------|--------------------|-----------------|----------------------------|--------------------------|--------------------|-----------------|-----------------------------|----------------------------|--------------------------|-------------------------|-----------|
|                  | Peak<br>dBuV        | Quasi-Peak<br>dBuV | Average<br>dBuV |                            | Peak<br>dBuV             | Quasi-Peak<br>dBuV | Average<br>dBuV |                             |                            |                          |                         |           |
| 0.186            | 46.50               | 42.69              | 25.92           | 1.57                       | 48.07                    | 44.26              | 27.49           | 64.23                       | 19.97                      | 54.23                    | 26.74                   | Pass      |
| 0.992            | 39.70               | 38.89              | 38.44           | 0.32                       | 40.03                    | 39.22              | 38.77           | 56.00                       | 16.79                      | 46.00                    | 7.24                    | Pass      |
| 1.895            | 43.00               | 31.49              | 29.85           | 0.29                       | 43.29                    | 31.78              | 30.13           | 56.00                       | 24.22                      | 46.00                    | 15.87                   | Pass      |
| 2.126            | 43.10               | 41.67              | 41.32           | 0.29                       | 43.39                    | 41.96              | 41.61           | 56.00                       | 14.04                      | 46.00                    | 4.39                    | Pass      |
| 8.290            | 42.80               | 41.50              | 38.55           | 0.32                       | 43.12                    | 41.82              | 38.87           | 60.00                       | 18.18                      | 50.00                    | 11.13                   | Pass      |
| 8.975            | 42.40               | 40.92              | 36.32           | 0.33                       | 42.73                    | 41.25              | 36.65           | 60.00                       | 18.75                      | 50.00                    | 13.35                   | Pass      |
| 9.654            | 41.40               | 39.08              | 33.94           | 0.33                       | 41.73                    | 39.41              | 34.27           | 60.00                       | 20.59                      | 50.00                    | 15.73                   | Pass      |
| 16.301           | 30.00               | 23.10              | 15.72           | 0.37                       | 30.37                    | 23.47              | 16.09           | 60.00                       | 36.53                      | 50.00                    | 33.91                   | Pass      |

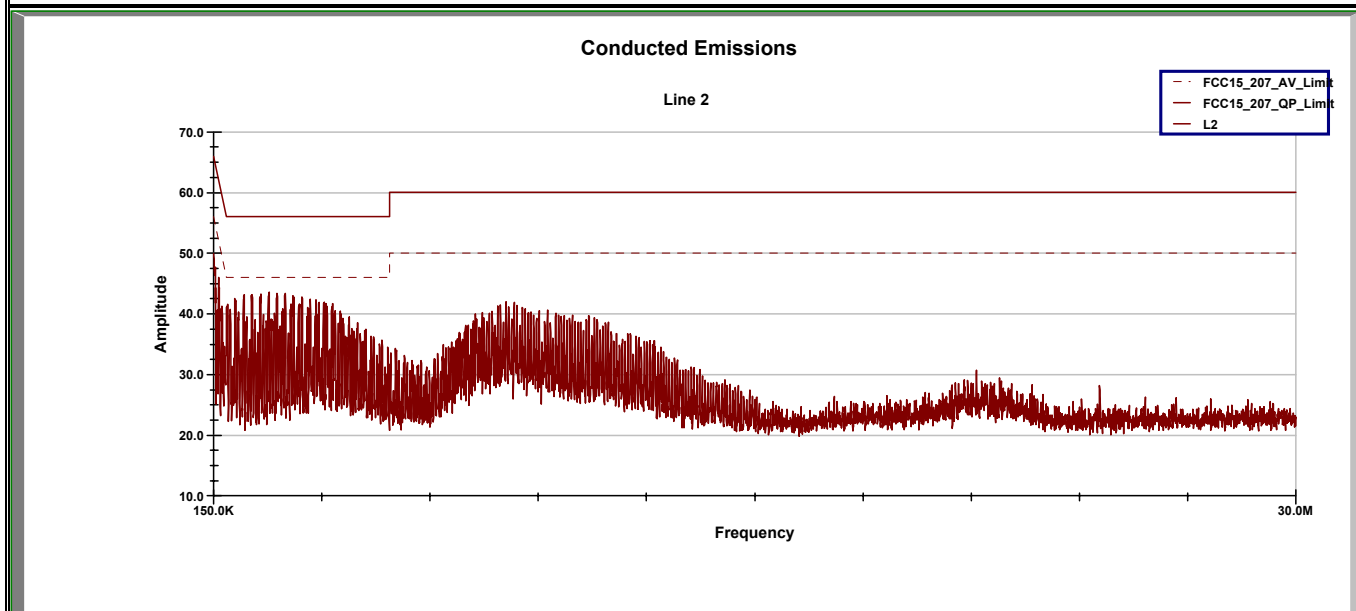
### Calculations

CF = Correction Factor

Emission Level = Measured Level + correction factor

Margin = Limit – Emission Level

## H.9.2. Line 2 Conducted Emissions



Project Number: 100504KBC-T562-E15W  
Company: Itronix  
Product: IX260+ with Senao NL-3054MP WLAN

Standard: FCC 15.207  
Test Start Date: 5-Nov-04  
Test End Date: 5-Nov-04

Line 2 Conducted Emissions

| Frequency<br>MHz | Uncorrected Reading |                    |                 | Correction<br>Factor<br>dB | Corrected Emission Level |                    |                 | Quasi-Peak<br>Limit<br>dBuV | Quasi-Peak<br>Margin<br>dB | Average<br>Limit<br>dBuV | Average<br>Margin<br>dB | Pass/Fail |
|------------------|---------------------|--------------------|-----------------|----------------------------|--------------------------|--------------------|-----------------|-----------------------------|----------------------------|--------------------------|-------------------------|-----------|
|                  | Peak<br>dBuV        | Quasi-Peak<br>dBuV | Average<br>dBuV |                            | Peak<br>dBuV             | Quasi-Peak<br>dBuV | Average<br>dBuV |                             |                            |                          |                         |           |
| 0.193            | 48.10               | 44.67              | 28.79           | 1.51                       | 49.61                    | 46.18              | 30.30           | 63.91                       | 17.72                      | 53.91                    | 23.61                   | Pass      |
| 0.284            | 42.00               | 38.75              | 19.10           | 0.89                       | 42.89                    | 39.64              | 20.00           | 60.71                       | 21.06                      | 50.71                    | 30.71                   | Pass      |
| 1.670            | 43.20               | 42.67              | 42.72           | 0.30                       | 43.50                    | 42.97              | 43.02           | 56.00                       | 13.03                      | 46.00                    | 2.98                    | Pass      |
| 1.900            | 43.40               | 42.75              | 42.79           | 0.29                       | 43.69                    | 43.04              | 43.09           | 56.00                       | 12.96                      | 46.00                    | 2.91                    | Pass      |
| 8.209            | 41.90               | 40.79              | 37.84           | 0.33                       | 42.23                    | 41.12              | 38.17           | 60.00                       | 18.88                      | 50.00                    | 11.83                   | Pass      |
| 8.437            | 41.90               | 40.93              | 38.24           | 0.33                       | 42.23                    | 41.26              | 38.57           | 60.00                       | 18.74                      | 50.00                    | 11.43                   | Pass      |
| 10.488           | 39.90               | 38.66              | 35.90           | 0.33                       | 40.23                    | 38.99              | 36.24           | 60.00                       | 21.01                      | 50.00                    | 13.77                   | Pass      |
| 21.024           | 31.50               | 27.26              | 22.42           | 0.99                       | 32.49                    | 28.25              | 23.41           | 60.00                       | 31.75                      | 50.00                    | 26.59                   | Pass      |

## Calculations

CF = Correction Factor

Emission Level = Measured Level + correction factor

Margin = Limit - Emission Level

|                             |                     |                    |
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| <b>Lab Registration(s):</b> | FCC #714830         | IC Lab File #3874  |

#### H.10. PASS/FAIL

In reference to the results outlined in H.9 the DUT passes the requirements as stated in the reference standards as follows:  
The RF voltage measured in reference to ground on each of the power line conductors does not exceed the limits as outline in FCC 15.207.

#### H.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.



Russell Pipe  
Senior Compliance Technologist  
Celltech Labs Inc.

05Nov04

Date

|                             |                     |                    |
|-----------------------------|---------------------|--------------------|
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**END OF DOCUMENT**