Excellence in Compliance Testing

# Certification Test Report

**FCC ID: R7PGRAMCNLX1**
**IC: 5294A-GRAMCNLX1**

**FCC Rule Part: 15.247**
**IC Radio Standards Specification: RSS-210**

**ACS Report Number: 08-0433 - 15C**

Manufacturer: Cellnet Technology, Inc.
Model: GasLX Residential American

Test Begin Date: November 12, 2008
Test End Date: November 13, 2008

Report Issue Date: January 9, 2009

FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612-0

This report is not be used to claim certification, approval, or endorsement by NVLAP, NIST or any government agency.

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**This report contains 17 pages**

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## 1.0 GENERAL

### 1.1 Purpose

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations and Industry Canada's Radio Standards Specification RSS-210.

### 1.2 Product Description

#### 1.2.1 General

An end-point is a one-way radio frequency device that uses Cellnet RF technology and protocol to transmit data over the Cellnet LAN. These end-points operate in the unlicensed ISM 902-928 frequency range using Direct Sequence Spread Spectrum (DSSS) modulation.

Manufacturer Information:
Cellnet Technology Inc.
30000 Mill Creek Ave., Suite 100
Alpharetta, GA 30022

Test Sample Serial Number(s):
ACS#1

Test Sample Condition:
Sample was provided in good working condition with no visible defects.

Detailed photographs of the EUT are filed separately with this filing.

#### 1.2.2 Intended Use

The GasLX Residential American is an end-point is a one-way radio frequency device that transmits data over the Cellnet LAN for utility data collection.

### 1.3 Test Methodology and Considerations

The GasLX Residential American was tested installed on a representative gas meter (American meter, Model number AC-250 serial number 08J913277) for radiated emissions measurements.

The GasLX Residential American was not supplied with a temporary RF antenna port therefore all measurements were taken radiated according to FCC KDB Publication No. 558074 - Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247), March 2005.

## 2.0 TEST FACILITIES

### 2.1 Location

The radiated and conducted emissions test sites are located at the following address:

Advanced Compliance Solutions
5015 B.U. Bowman Drive
Buford, GA 30518
Phone: (770) 831-8048
Fax: (770) 831-8598

### 2.2 Laboratory Accreditations/Recognitions/Certifications

The Semi-Anechoic Chamber Test Site, Open Area Test Site (OATS) and Conducted Emissions Site have been fully described, submitted to, and accepted by the FCC, Industry Canada and the Japanese Voluntary Control Council for Interference by information technology equipment. In addition, ACS is compliant to ISO/IEC 17025 as certified by the National Institute of Standards and Technology under their National Voluntary Laboratory Accreditation Program. The following certification numbers have been issued in recognition of these accreditations and certifications:

FCC Registration Number: 894540
Industry Canada Lab Code: IC 4175
VCCI Member Number: 1831

- VCCI OATS Registration Number R-1526
- VCCI Conducted Emissions Site Registration Number: C-1608

NVLAP Lab Code: 200612-0

## 2.3 Radiated Emissions Test Site Description

### 2.3.1 Semi-Anechoic Chamber Test Site

The Semi-Anechoic Chamber Test Site consists of a 20' x 30' x 18' shielded enclosure. The chamber is lined with Toyo Ferrite Grid Absorber, model number FFG-1000. The ferrite tile grid is 101 x 101 x 19mm thick and weighs approximately 550 grams. These tiles are mounted on steel panels and installed directly on the inner walls of the chamber.

The turntable is 150cm in diameter and is located 160cm from the back wall of the chamber. The chamber is grounded via 1 - 8' copper ground rod, installed at the center of the back wall, it is bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is all steel, flush mounted table installed in an all steel frame. The table is remotely operated from inside the control room located 25' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Behind the turntable is a 3' x 6' x 4' deep shielded pit used for support equipment if necessary. The pit is equipped with 1 - 4" PVC chases from the turntable to the pit that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit.

A diagram of the Semi-Anechoic Chamber Test Site is shown in Figure 2.3-1 below:

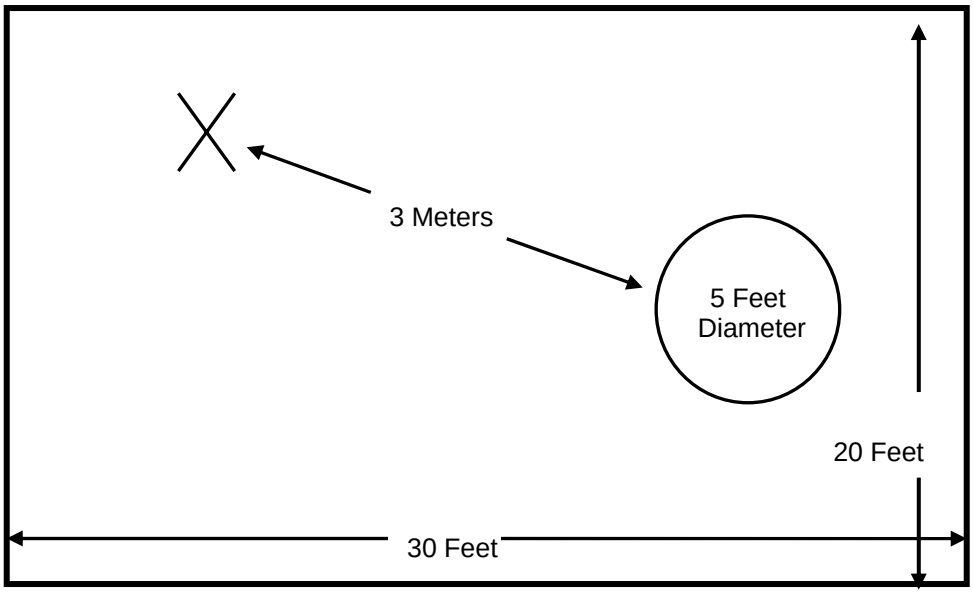


**Figure 2.3-1: Semi-Anechoic Chamber Test Site**

### 2.3.2 Open Area Tests Site (OATS)

The open area test site consists of a 40' x 66' concrete pad covered with a perforated electro-plated galvanized sheet metal. The perforations in the sheet metal are 1/8" holes that are staggered every 3/16". The individual sheets are placed to overlap each other by 1/4" and are riveted together to provide a continuous seam. Rivets are spaced every 3" in a 3 x 20 meter perimeter around the antenna mast and EUT area. Rivets in the remaining area are spaced as necessary to properly secure the ground plane and maintain the electrical continuity.

The entire ground plane extends 12' beyond the turntable edge and 16' beyond the antenna mast when set to a 10 meter measurement distance. The ground plane is grounded via 4 - 8' copper ground rods, each installed at a corner of the ground plane and bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is an all aluminum 10' flush mounted table installed in an all aluminum frame. The table is remotely operated from inside the control room located 40' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Adjacent to the turntable is a 7' x 7' square and 4' deep concrete pit used for support equipment if necessary. The pit is equipped with 5 - 4" PVC chases from the pit to the control room that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit. The pit is covered with 2 sheets of 1/4" diamond style re-enforced steel sheets. The sheets are painted to match the perforated steel ground plane; however the underside edges have been masked off to maintain the electrical continuity of the ground plane. All reflecting objects are located outside of the ellipse defined in ANSI C63.4.

A diagram of the Open Area Test Site is shown in Figure 2.3-2 below:

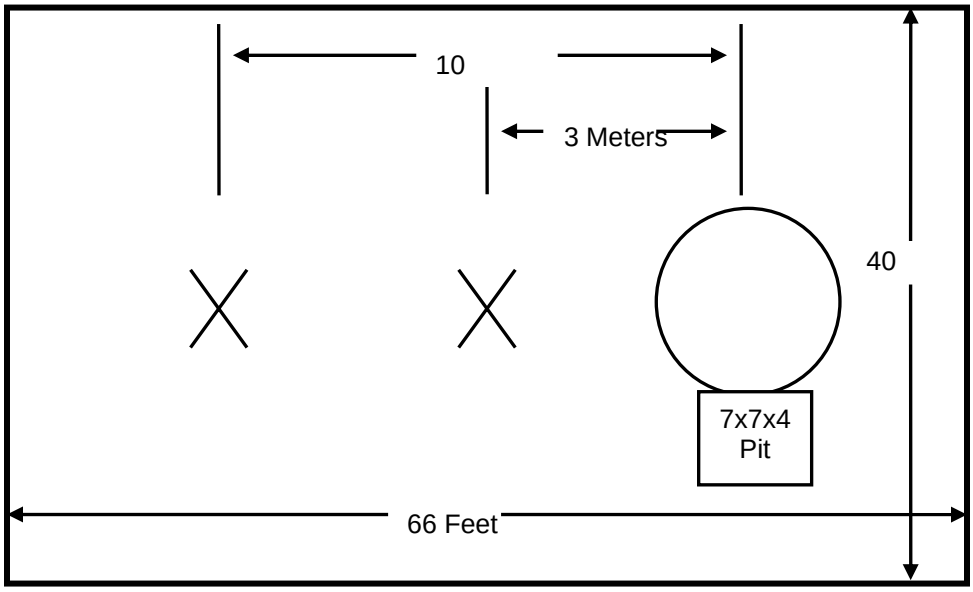


**Figure 2.3-2: Open Area Test Site**

### 2.4 Conducted Emissions Test Site Description

The AC mains conducted EMI site is located in the main EMC lab. It consists of an 8' x 8' solid aluminum horizontal group reference plane (GRP) bonded every 3" to an 8' X 8' vertical ground plane.

The site is of sufficient size to test table top and floor standing equipment in accordance with section 6.1.4 of ANSI C63.4.

A diagram of the room is shown below in figure 2.4-1:

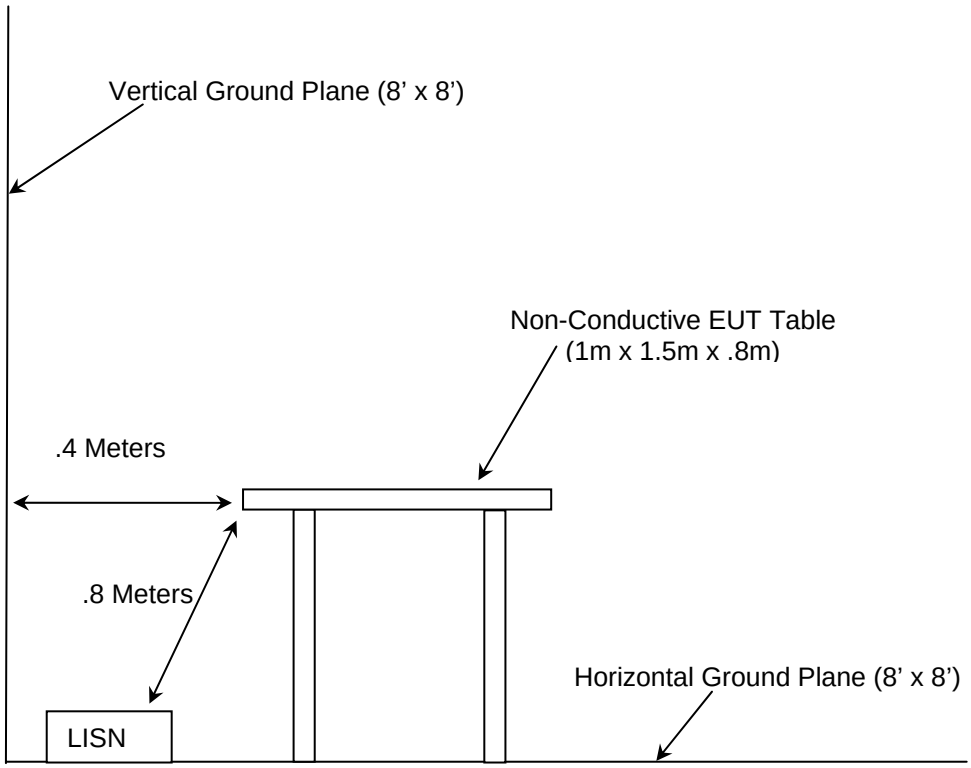


**Figure 2.4-1: AC Mains Conducted EMI Site**

## 3.0 APPLICABLE STANDARD REFERENCES

The following standards were used:

- ANSI C63.4-2003: Method of Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the 9KHz to 40GHz
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2008
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2008
- FCC KDB Publication No. 558074 - Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247), March 2005
- Industry Canada Radio Standards Specification: RSS-210 - Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Issue 7 June 2007
- Industry Canada Radio Standards Specification: RSS-GEN – General Requirements and Information for the Certification of Radiocommunication Equipment, Issue2, June 2007.

## 4.0 LIST OF TEST EQUIPMENT

All test equipment used for regulatory testing is calibrated yearly or according to manufacturer's specifications.

**Table 4-1: Test Equipment**

| Equipment Calibration Information | | | | | |
|---|---|---|---|---|---|
| **ACS#** | **Mfg.** | **Eq. type** | **Model** | **S/N** | **Cal. Due** |
| 1 | Rohde & Schwarz | Spectrum Analyzers | ESMI - Display | 833771/007 | 09-19-2009 |
| 2 | Rohde & Schwarz | Spectrum Analyzers | ESMI-Receiver | 839587/003 | 09-19-2009 |
| 22 | Agilent | Amplifiers | 8449B | 3008A00526 | 10-22-2009 |
| 25 | Chase | Antennas | CBL6111 | 1043 | 08-22-2009 |
| 30 | Spectrum Technologies | Antennas | DRH-0118 | 970102 | 05-07-2009 |
| 152 | EMCO | LISN | Feb-25 | 9111-1905 | 03-26-2009 |
| 167 | ACS | Cable Set | Chamber EMI Cable Set | 167 | 01-04-2009 |
| 168 | Hewlett Packard | Attenuators | 11947A | 44829 | 02-18-2009 |
| 283 | Rohde & Schwarz | Spectrum Analyzers | FSP40 | 1000033 | 09-19-2009 |
| 291 | Florida RF Cables | Cables | SMRE-200W-12.0-SMRE | None | 11-21-2008 |
| 292 | Florida RF Cables | Cables | SMR-290AW-480.0-SMR | None | 11-21-2008 |
| 321 | Hewlett Packard | Amplifiers | HPC 8447D | 1937A02809 | 10-08-2009 |
| 337 | Microwave Circuits | Filters | H1G513G1 | 282706 | 04-08-2009 |
| 338 | Hewlett Packard | Amplifiers | 8449B | 3008A01111 | 10-22-2009 |
| 339 | Aeroflex/Weinschel | Attenuators | AS-18 | 7142 | 07-08-2009 |
| 349 | Aeroflex | Attenuators | 47-30-43 | BU7390 | 12-10-2008 |
| 422 | Florida RF | Cables | SMS-200AW-72.0-SMR | 805 | 02-25-2009 |

## 5.0 SUPPORT EQUIPMENT

**Table 5-1: Support Equipment**

| Item | Manufacturer | Equipment Type | Model Number | Serial Number |
|---|---|---|---|---|
| 1 | American Meter Company | Gas Meter | AC-250 | 08J913277 |

## 6.0 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

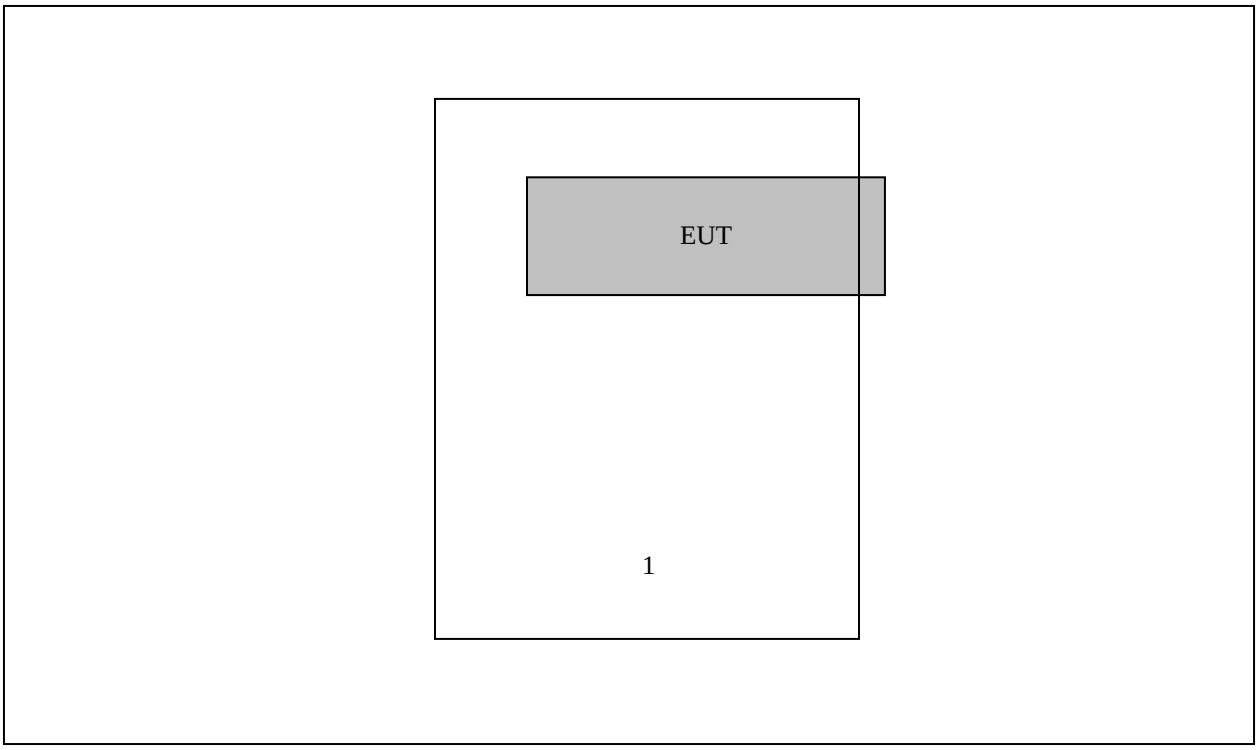


**Figure 6-1: EUT Test Setup**

*See Test Setup photographs for additional detail.

## 7.0 SUMMARY OF TESTS

Along with the tabular data shown below, plots were taken of all signals deemed important enough to document.

### 7.1 Antenna Requirement – FCC: Section 15.203

The EUT utilizes an integral loop antenna with a -3dBi gain which can not be removed or modified without damaging the device.

### 7.2 Power Line Conducted Emissions – FCC: Section 15.207 IC: RSS-Gen 7.2.2

The EUT is powered by an internal battery and is therefore not designed to be connected to the public utility (AC) power line. No Power line conducted emissions testing was performed.

### 7.3 Radiated Emissions – FCC: Section 15.109(Unintentional Radiation) IC: RSS-210 2.6

#### 7.3.1 Test Methodology

Radiated emissions tests were performed over the frequency range of 30MHz to 5GHz. Measurements of the radiated field strength were made at a distance of 3m from the boundary of the equipment under test (EUT) and the receiving antenna. The antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. Radiated measurements were made with the Spectrum Analyzer's resolution bandwidth set to 120 KHz for measurements above 30MHz. Average measurements are taken with the RBW and VBW set to 1MHz for measurements above 1000MHz.

#### 7.3.2 Test Results

Results of the test are given in Table 7.3.2-1 below:

**Table 7.3.2-1: Radiated Emissions Tabulated Data**

| Frequency (MHz) | Level (dBuV) | | Antenna Polarity | Correction Factors | Corrected Level (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | pk | Qpk/Avg | (H/V) | (dB) | pk | Qpk/Avg | pk | Qpk/Avg | pk | Qpk/Avg |
| **95.496** | --------- | 23.10 | V | -14.53 | --------- | 8.57 | -------- | 43.5 | --------- | 34.93 |
| **171.188** | --------- | 18.51 | V | -14.90 | --------- | 3.61 | -------- | 43.5 | --------- | 39.89 |
| **324.249** | --------- | 19.24 | V | -10.87 | --------- | 8.37 | -------- | 46.0 | --------- | 37.63 |
| **475.155** | --------- | 20.67 | H | -6.25 | --------- | 14.42 | -------- | 46.0 | --------- | 31.58 |
| **692.833** | --------- | 20.39 | H | -1.69 | --------- | 18.70 | -------- | 46.0 | --------- | 27.30 |
| **907.347** | --------- | 21.74 | H | 1.02 | --------- | 22.76 | -------- | 46.0 | --------- | 23.24 |
| **1613** | 26.74 | 19.47 | H | -9.45 | 17.29 | 10.02 | 74.0 | 54.0 | 56.71 | 43.98 |
| **4900** | 28.45 | 22.75 | H | 2.51 | 30.96 | 25.26 | 74.0 | 54.0 | 43.04 | 28.74 |

* Note: All emissions above 4900 MHz were attenuated below the permissible limit.

## 7.4 6dB / 99% Bandwidth – FCC: Section 15.247(a)(2) IC: RSS-210 A8.2(a)

### 7.4.1 Test Methodology

The 6dB bandwidth was measured in accordance with the FCC KDB Publication No. 558074 "Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)". The RBW of the spectrum analyzer was set to 100 kHz and VBW 300 kHz. Span was set large enough to capture the entire emissions and >> RBW.

The 99% occupied bandwidth was also measured in accordance to the measurement guidelines provided by Industry Canada (The Measurement of Occupied Bandwidth).

### 7.4.2 Test Results

Results are shown below in table 7.4.2-1 and figures 7.4.2-1 and 7.4.2-2.

**Table 7.4.2-1: 6dB / 99% Bandwidth**

| Frequency [MHz] | 6dB Bandwidth [MHz] | 99% Bandwidth [MHz] |
|---|---|---|
| 917.58 | 1.00 | 3.41 |

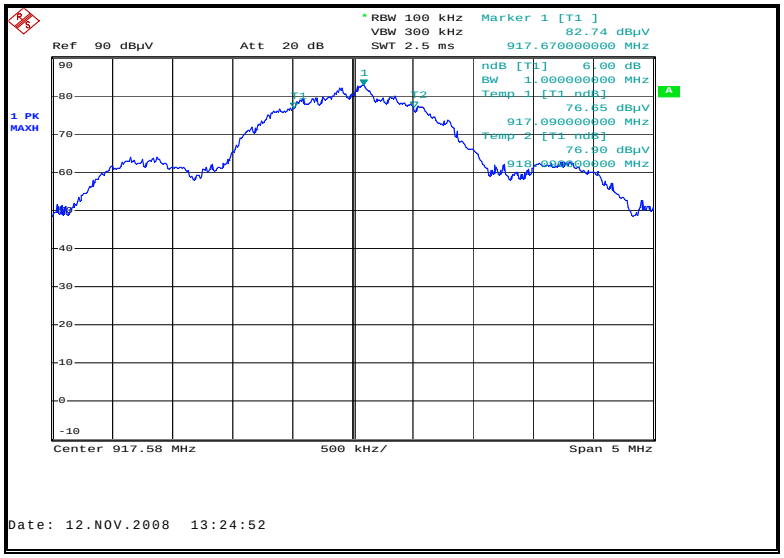


**Figure 7.4.2-1: 6dB Bandwidth Plot**

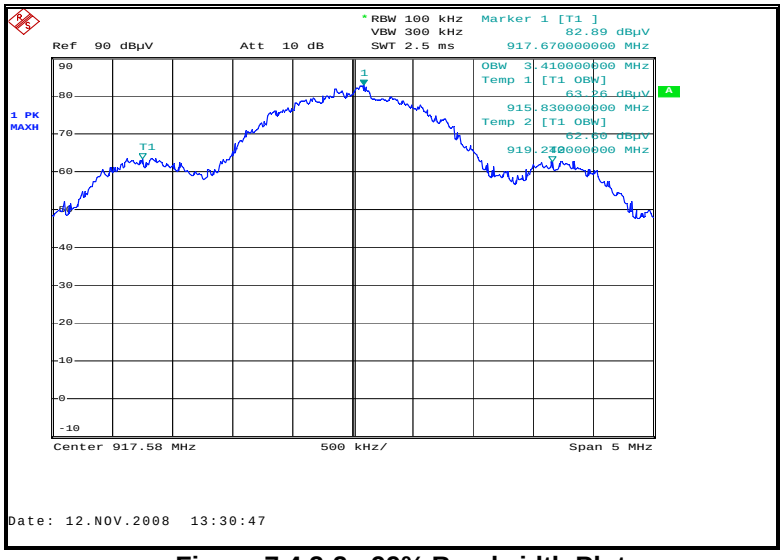


**Figure 7.4.2-2: 99% Bandwidth Plot**

## 7.5 Peak Output Power Requirement - FCC Section 15.247(b)(3) IC: RSS-210 A8.4(4)

### 7.5.1 Test Methodology

Antenna conducted measurements could not be performed on this device, therefore radiated tests were performed to show compliance with the peak output power limit according to the alternative test methods in the FCC KDB Publication No. 558074 "Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)".

The procedures set forth in ANSI C63.4 were followed with respect to maximizing the peak emission. The resolution bandwidth of the spectrum analyzer was set to 3 MHz which was greater the 6 dB bandwidth measured in section 7.4. The video bandwidth was set to 10 MHz and a peak detector using the Max Hold function was utilized.

The power was calculated using the following equation:

$$P = (E * d)^2 / 30 * G$$

Where: G = Numeric Gain of the transmitting antenna with reference to an isotropic radiator
d = The distance in meters from which the field strength was measured
E = The measured maximum fundamental field strength in V/m

Data was collected with the EUT operating at maximum power.

### 7.5.2 Test Results

Results are shown below in Tables 7.5.2-1 and 7.5.2.2 for the channel with the maximum fundamental field strength reading.

**Table 7.5.2-1: Fundamental Field Strength**

| Frequency (MHz) | Uncorrected Level (dBuV) | Antenna Polarity (H/V) | Correction Factors (dB) | Corrected Level (dBuV/m) |
|---|---|---|---|---|
| **917.58** | 87.07 | H | 28.53 | 115.60 |
| **917.58** | 86.82 | V | 28.65 | 115.47 |

**Table 7.5.2-2: Peak Output Power**

| Measurement Distance (m) | Antenna Gain (dBi) | Field Strength (V/m) | Antenna Gain (Num) | Power (mW) | Power (dBm) |
|---|---|---|---|---|---|
| 3 | -3 | 0.09 | 0.50 | 217.20 | 23.37 |

## 7.6 Band-Edge Compliance and Spurious Emissions - FCC Section 15.247(d) IC: RSS-210 2.6, A8.5

### 7.6.1 Band-Edge Compliance of RF Emissions

#### 7.6.1.1 Test Methodology

The EUT was investigated at the lowest and highest channel available to determine band-edge compliance.

#### 7.6.1.2 Test Results

In a 100 kHz bandwidth at the lower and upper band-edge, the radio frequency power that was produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. Band-edge compliance is displayed in Figure 7.6.1.2-1.

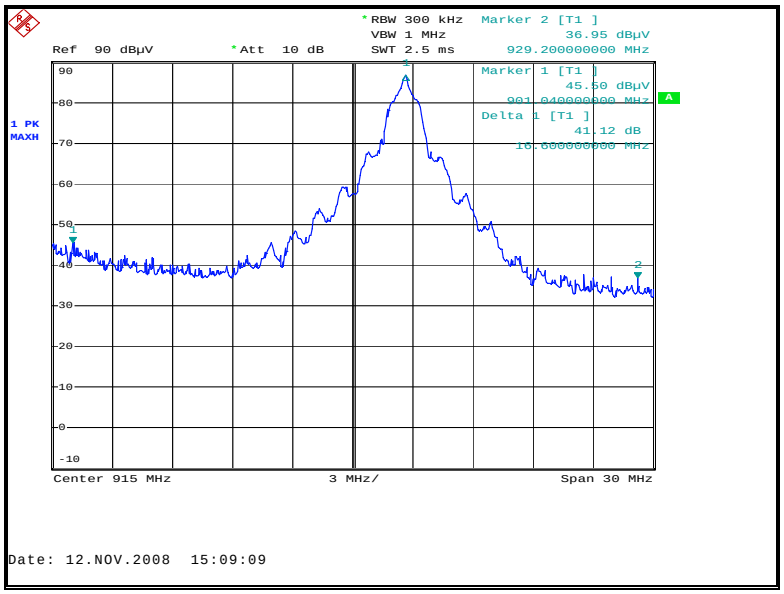


**Figure 7.6.1.2-1: Band-edge**

### 7.6.2 RF Conducted Spurious Emissions

#### 7.6.2.1 Test Methodology

Antenna conducted measurements could not be performed on this device, therefore radiated tests were performed to show compliance with the spurious RF conducted limit according to FCC KDB Publication No. 558074 “Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)”.

### 7.6.3 Radiated Spurious Emissions - FCC Section 15.205 IC: RSS-210 2.6

#### 7.6.3.1 Test Methodology

Radiated emissions tests were made over the frequency range of 30MHz to 10GHz, 10 times the highest fundamental frequency.

The EUT was rotated through 360° and the receive antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. For frequencies below 1000MHz, quasi-peak measurements were made using a resolution bandwidth (RBW) of 120 kHz and a video bandwidth (VBW) of 300 kHz. For frequencies above 1000MHz, peak measurements were made using an RBW of 1 MHz and a VBW of 3 MHz and the average emission was calculated by correcting for the duty cycle of the EUT.

As specified in section 7.6.2, for those frequencies that fall outside the restricted bands, the FCC KDB Publication No. 558074 “Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)” for conducted spurious emissions was followed using a RBW of 100 kHz and VBW of 300 kHz.

#### 7.6.3.2 Duty Cycle Correction

For average radiated measurements in restricted bands, the measured level was reduced by a factor 18.79dB to account for the duty cycle of the EUT. The EUT transmits for approximately 11.5mS within a 100ms period. The duty cycle correction factor is determined using the formula: 20log (11.5/100) = 18.79dB.

A detailed analysis of the duty cycle timing is provided in the Theory of Operation accompanying this filing.

### 7.6.3.3 Test Results

Radiated spurious emissions found in the band of 30MHz to 10GHz are reported in Table 7.6.3.3-1.

**Table 7.6.3.3-1: Radiated Spurious Emissions**

| Frequency (MHz) | Level (dBuV) | | Antenna Polarity | Correction Factors | Corrected Level (dBuV/m) | | Limit (dBuV/m) | | Margin (dB) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | pk | Qpk/Avg | (H/V) | (dB) | pk | Qpk/Avg | pk | Qpk/Avg | pk | Qpk/Avg |
| ***Fundamental Frequency*** | | | | | | | | | | |
| **917.58** | 82.62 | 82.62 | H | 28.53 | 111.15 | 111.15 | -------- | -------- | --------- | --------- |
| **917.58** | 82.10 | 82.10 | V | 28.65 | 110.75 | 110.75 | -------- | -------- | --------- | --------- |
| ***Spurious Emissions*** | | | | | | | | | | |
| **895.24** | 60.73 | --------- | H | 27.95 | 88.68 | --------- | 91.1 | --------- | 2.47 | --------- |
| **895.24** | 60.85 | --------- | V | 27.80 | 88.65 | --------- | 91.1 | --------- | 2.49 | --------- |
| **939.8** | 54.35 | --------- | H | 29.39 | 83.74 | --------- | 91.1 | --------- | 7.41 | --------- |
| **939.8** | 52.39 | --------- | V | 29.89 | 82.28 | --------- | 91.1 | --------- | 8.87 | --------- |
| **961.64** | 20.06 | 20.06 | H | 30.12 | --------- | 50.18 | -------- | 54.0 | --------- | 3.82 |
| **961.64** | 19.95 | 19.95 | V | 30.58 | --------- | 50.53 | -------- | 54.0 | --------- | 3.47 |
| **1835.16** | 73.02 | 73.02 | H | -2.43 | 70.59 | --------- | 91.1 | --------- | 20.56 | --------- |
| **1835.16** | 65.24 | 65.24 | V | -2.47 | 62.77 | --------- | 91.1 | --------- | 28.37 | --------- |
| **2752.74** | 59.46 | 59.46 | H | 0.81 | 60.27 | 41.48 | 74.0 | 54.0 | 13.73 | 12.52 |
| **2752.74** | 59.17 | 59.17 | V | 0.61 | 59.78 | 40.99 | 74.0 | 54.0 | 14.22 | 13.01 |
| **3670.32** | 55.68 | 55.68 | H | 3.89 | 59.57 | 40.78 | 74.0 | 54.0 | 14.43 | 13.22 |
| **3670.32** | 54.44 | 54.44 | V | 3.92 | 58.36 | 39.58 | 74.0 | 54.0 | 15.64 | 14.42 |
| **4587.9** | 52.82 | 52.82 | H | 6.31 | 59.13 | 40.34 | 74.0 | 54.0 | 14.87 | 13.66 |
| **4587.9** | 50.81 | 50.81 | V | 6.41 | 57.22 | 38.43 | 74.0 | 54.0 | 16.78 | 15.57 |
| **5505.48** | 50.05 | --------- | H | 8.54 | 58.59 | --------- | 91.1 | --------- | 32.56 | --------- |
| **5505.48** | 51.29 | --------- | V | 8.54 | 59.83 | --------- | 91.1 | --------- | 31.32 | --------- |
| **6423.06** | 50.25 | --------- | H | 10.28 | 60.53 | --------- | 91.1 | --------- | 30.62 | --------- |
| **6423.06** | 49.23 | --------- | V | 10.31 | 59.54 | --------- | 91.1 | --------- | 31.61 | --------- |

### 7.6.3.4 Sample Calculation:

$R_C = R_U + CF_T$

Where:

$CF_T$ = Total Correction Factor (AF+CA+AG)-DC (Average Measurements Only)
$R_U$ = Uncorrected Reading
$R_C$ = Corrected Level
AF = Antenna Factor
CA = Cable Attenuation
AG = Amplifier Gain
DC = Duty Cycle Correction Factor

**Example Calculation: Peak**

Corrected Level: 59.46 + 0.81 = 60.27dBuV/m
Margin: 74dBuV/m – 60.27dBuV/m = 13.73dB

**Example Calculation: Average**

Corrected Level: 59.46 + 0.81 - 18.79 = 41.48dBuV
Margin: 54dBuV – 41.48dBuV = 12.52dB

## 7.7 Peak Power Spectral Density- FCC Section 15.247(e) IC: RSS-210 A8.2(b))

### 7.7.1 Test Methodology

The peak power spectral density was measured in accordance with the alternative test methods in the FCC KDB Publication No. 558074 "Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)". The emission peaks within the pass band were located and zoomed in on. The spectrum analyzer RBW was set to 3 kHz and VBW 10 kHz. Span was adjusted to 500 kHz and the sweep time was calculated to be 168s (Span/3 kHz). A peak detector using the Max Hold function was utilized.

The power was calculated using the following equation:

$$P = (E * d)^2 / 30 * G$$

Where: G = Numeric Gain of the transmitting antenna with reference to an isotropic radiator
d = The distance in meters from which the field strength was measured
E = The measured maximum fundamental field strength in V/m

Results are shown below in Table 7.7.2-1 to Table 7.7.2-2 and Figure 7.7.2-1.

### 7.7.2 Test Results

**Table 7.7.2-1: Fundamental Field Strength in 3 kHz bandwidth**

| Frequency (MHz) | Uncorrected Level (dBuV) | Antenna Polarity (H/V) | Correction Factors (dB) | Corrected Level (dBuV/m) |
|---|---|---|---|---|
| **917.58** | 70.65 | H | 28.53 | 99.18 |
| **917.58** | 69.92 | V | 28.65 | 98.57 |

**Table 7.7.2-2: Peak Power Spectral Density**

| Measurement Distance (m) | Antenna Gain (dBi) | Field Strength (V/m) | Antenna Gain (Num) | Power Density (mW) | Power Density (dBm) |
|---|---|---|---|---|---|
| 3 | -3 | 0.09 | 0.50 | 4.95 | 6.95 |

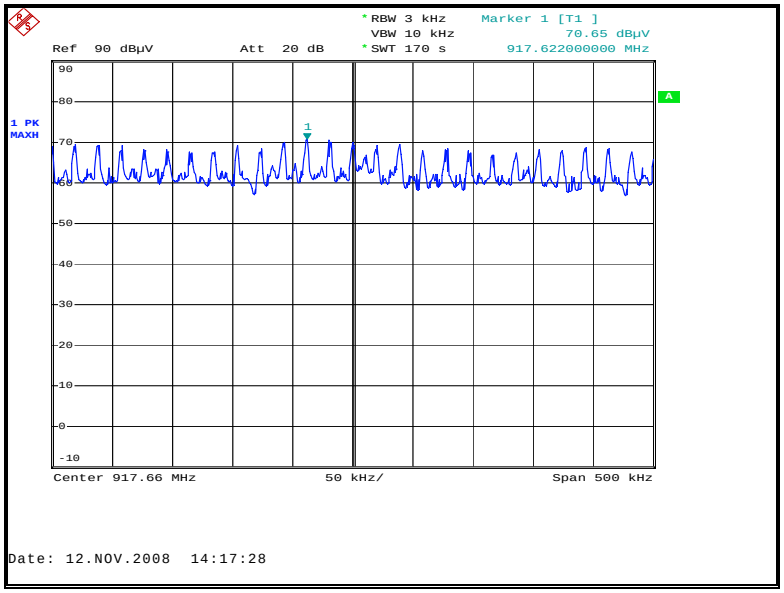


**Figure 7.7.2-1: Peak Power Spectral Density**

**8.0 CONCLUSION**

In the opinion of ACS, Inc. the GasLX Residential American, manufactured by Cellnet Technology, Inc.meets the requirements of FCC Part 15 subpart C and Industry Canada's Radio Standards Specification RSS-210.

# END REPORT