

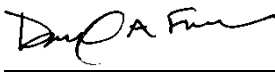


Engineering Solutions & Electromagnetic Compatibility Services

### FCC Part 15.247 Intentional Radiated Emissions Test Report

|                                                                                                                                                                                                                        |            |                                                                                                                                                             |                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Test Lab:</b><br><br>Rhein Tech Laboratories, Inc.      Tel: 703-689-0368<br>360 Herndon Parkway      Fax: 703-689-2056<br>Suite 1400      www.rheintech.com<br>Herndon, VA 20170<br>E-Mail: ATCBINFO@rheintech.com |            | <b>Applicant:</b><br><br>Honeywell International<br>2 Corporate Center Drive      Tel: 516-577-5863<br>Melville, NY 11747<br>Contact: Greg Barbato          |                   |
| <b>FCC ID:</b>                                                                                                                                                                                                         | CFS8DLWIFI | <b>Test Report Date</b>                                                                                                                                     | December 21, 2011 |
| <b>IC ID:</b>                                                                                                                                                                                                          | 573F-WIFI  |                                                                                                                                                             |                   |
| <b>Platform</b>                                                                                                                                                                                                        | N/A        | <b>RTL Work Order Number</b>                                                                                                                                | 2011199           |
| <b>Model #</b>                                                                                                                                                                                                         | WIFI       | <b>RTL Quote Number</b>                                                                                                                                     | QRTL11-295        |
| <b>American National Standard Institute</b>                                                                                                                                                                            |            | 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       |                   |
| <b>American National Standard Institute</b>                                                                                                                                                                            |            | ANSI C63.10-2009: American National Standard for Testing Unlicensed Wireless Devices                                                                        |                   |
| <b>FCC Classification</b>                                                                                                                                                                                              |            | DTS – Part 15 Digital Transmission System                                                                                                                   |                   |
| <b>FCC Rule Part(s)</b>                                                                                                                                                                                                |            | FCC Rules Part 15.247: Operation within the bands 920-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz Direct Sequence System (10-01-10) (Guidance per DA 00-705) |                   |

I, the undersigned, hereby declare that the equipment tested and referenced in this report conforms to the identified standard(s) as described in this test report. No modifications were made to the equipment during testing in order to achieve compliance with these standards. Furthermore, there was no deviation from, additions to, or exclusions from, the applicable parts of FCC Part 2, FCC Part 15 and, ANSI C63.4.

Signature: 

Date: December 21, 2011

Typed/Printed Name: Desmond A. Fraser

Position: President

*This report may not be reproduced, except in full, without the written approval of Rhein Tech Laboratories and Honeywell International. The test results relate only to the item(s) tested.*

*These tests are accredited and meet the requirements of ISO/IEC 17025 as verified by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1445.*

## Table of Contents

---

|       |                                                     |    |
|-------|-----------------------------------------------------|----|
| 1     | General Information .....                           | 4  |
| 1.1   | Scope .....                                         | 4  |
| 1.2   | Description of EUT .....                            | 4  |
| 1.3   | Test Facility .....                                 | 4  |
| 1.4   | Related Submittal(s)/Grant(s) .....                 | 4  |
| 1.5   | Modifications .....                                 | 4  |
| 2     | Test Information .....                              | 5  |
| 2.1   | Description of Test Modes .....                     | 5  |
| 2.2   | Exercising the EUT .....                            | 5  |
| 2.3   | Test Result Summary .....                           | 5  |
| 2.4   | Test System Details .....                           | 6  |
| 2.5   | Configuration of Tested System .....                | 6  |
| 3     | Radiated Emissions – FCC 15.209 .....               | 7  |
| 3.1   | Limits of Radiated Emissions Measurement .....      | 7  |
| 3.2   | Radiated Emissions Measurement Test Procedure ..... | 7  |
| 3.3   | Radiated Emissions Test Results .....               | 9  |
| 3.3.1 | Radiated Emissions Harmonics/Spurious .....         | 9  |
| 4     | Conclusion .....                                    | 15 |

---

### Table Index

---

|             |                                                                    |    |
|-------------|--------------------------------------------------------------------|----|
| Table 2-1:  | Frequencies Tested .....                                           | 5  |
| Table 2-2:  | Test Result Summary – FCC Part 15, Subpart C (Section 15.247)..... | 5  |
| Table 2-3:  | Equipment Under Test .....                                         | 6  |
| Table 3-1:  | Radiated Emissions Test Equipment .....                            | 8  |
| Table 3-2:  | 2412 MHz; 802.11b; 11 mbps; Channel 1; Average Mode .....          | 9  |
| Table 3-3:  | 2437 MHz; 802.11b; 11 mbps; Channel 6; Average Mode .....          | 9  |
| Table 3-4:  | 2462 MHz; 802.11b; 11 mbps; Channel 11; Average Mode .....         | 9  |
| Table 3-5:  | 2412 MHz; 802.11g; 54 mbps; Channel 1; Average Mode .....          | 10 |
| Table 3-6:  | 2437 MHz; 802.11g; 54 mbps; Channel 6; Average Mode .....          | 10 |
| Table 3-7:  | 2462 MHz; 802.11g; 54 mbps; Channel 11; Average Mode .....         | 10 |
| Table 3-8:  | 2412 MHz; 802.11n; 65 mbps; Channel 1; Average Mode .....          | 11 |
| Table 3-9:  | 2437 MHz; 802.11n; 65 mbps; Channel 6; Average Mode .....          | 11 |
| Table 3-10: | 2462 MHz; 802.11n; 65 mbps; Channel 11; Average Mode .....         | 11 |
| Table 3-11: | 2412 MHz; 802.11b; 11 mbps; Channel 1; Peak Mode .....             | 12 |
| Table 3-12: | 2437 MHz; 802.11b; 11 mbps; Channel 6; Peak Mode .....             | 12 |
| Table 3-13: | 2462 MHz; 802.11b; 11 mbps; Channel 11; Peak Mode .....            | 12 |
| Table 3-14: | 2412 MHz; 802.11g; 54 mbps; Channel 1; Peak Mode .....             | 13 |
| Table 3-15: | 2437 MHz; 802.11g; 54 mbps; Channel 6; Peak Mode .....             | 13 |
| Table 3-16: | 2462 MHz; 802.11g; 54 mbps; Channel 11; Peak Mode .....            | 13 |
| Table 3-17: | 2412 MHz; 802.11n; 65 mbps; Channel 1; Peak Mode .....             | 14 |
| Table 3-18: | 2437 MHz; 802.11n; 65 mbps; Channel 6; Peak Mode .....             | 14 |
| Table 3-19: | 2462 MHz; 802.11n; 65 mbps; Channel 11; Peak Mode .....            | 14 |

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### Appendix Index

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|             |                        |    |
|-------------|------------------------|----|
| Appendix A: | Test Photographs ..... | 16 |
|-------------|------------------------|----|

---

### Photograph Index

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|               |                                     |    |
|---------------|-------------------------------------|----|
| Photograph 1: | Radiated Testing – Front View ..... | 16 |
| Photograph 2: | Radiated Testing – Back View .....  | 17 |

## 1 General Information

### 1.1 Scope

Applicable Standards:

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

This test report addresses the intentional radiated emissions requirements per FCC 15.247, which are the harmonic/spurious radiated emissions occurring in the restricted bands per FCC 15.205 (against the FCC 15.209 limits). Additionally, radiated field strength measurements are provided for the low and high channels for use with the conducted delta plots provided in a separate report filed with this application.

### 1.2 Description of EUT

|                        |                  |
|------------------------|------------------|
| Equipment Under Test   | Home Alarm       |
| Power Supply           | 9VDC AC Adapter  |
| Modulation Type        | DSSS             |
| Frequency Range        | 2412 – 2462 MHz  |
| Antenna Connector Type | PCB              |
| Antenna Types          | Ceramic, 0.5 dBi |

### 1.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170. This site has been fully described in a report and approved by the Federal Communications Commission to perform AC line conducted and radiated emissions testing (ANSI C63.4 2003).

### 1.4 Related Submittal(s)/Grant(s)

This report is to support an application for an original limited modular approval under FCC ID: CFS8DLWIFI, IC ID: 573F-WIFI.

### 1.5 Modifications

No modifications were required for compliance.

## 2 Test Information

### 2.1 Description of Test Modes

In accordance with FCC 15.31(m), and because the EUT utilizes an operating band greater than 10 MHz, the following frequencies were tested:

**Table 2-1: Frequencies Tested**

| Channel | Frequency |
|---------|-----------|
| Low     | 2412      |
| Mid     | 2437      |
| High    | 2462      |

### 2.2 Exercising the EUT

The EUT was tested in all three orthogonal planes in order to determine worst-case emissions. The EUT was provided with software to continuously transmit during testing. The carrier was also checked to verify that information was being transmitted. There were no deviations from the test standard(s) and/or methods. The test results reported relate only to the item tested.

### 2.3 Test Result Summary

**Table 2-2: Test Result Summary – FCC Part 15, Subpart C (Section 15.247)**

| FCC Reference | C63.10 Procedure | Test               | Pass/Fail or N/A |
|---------------|------------------|--------------------|------------------|
| FCC 15.209    | 6.5, 6.6         | Radiated Emissions | Pass             |

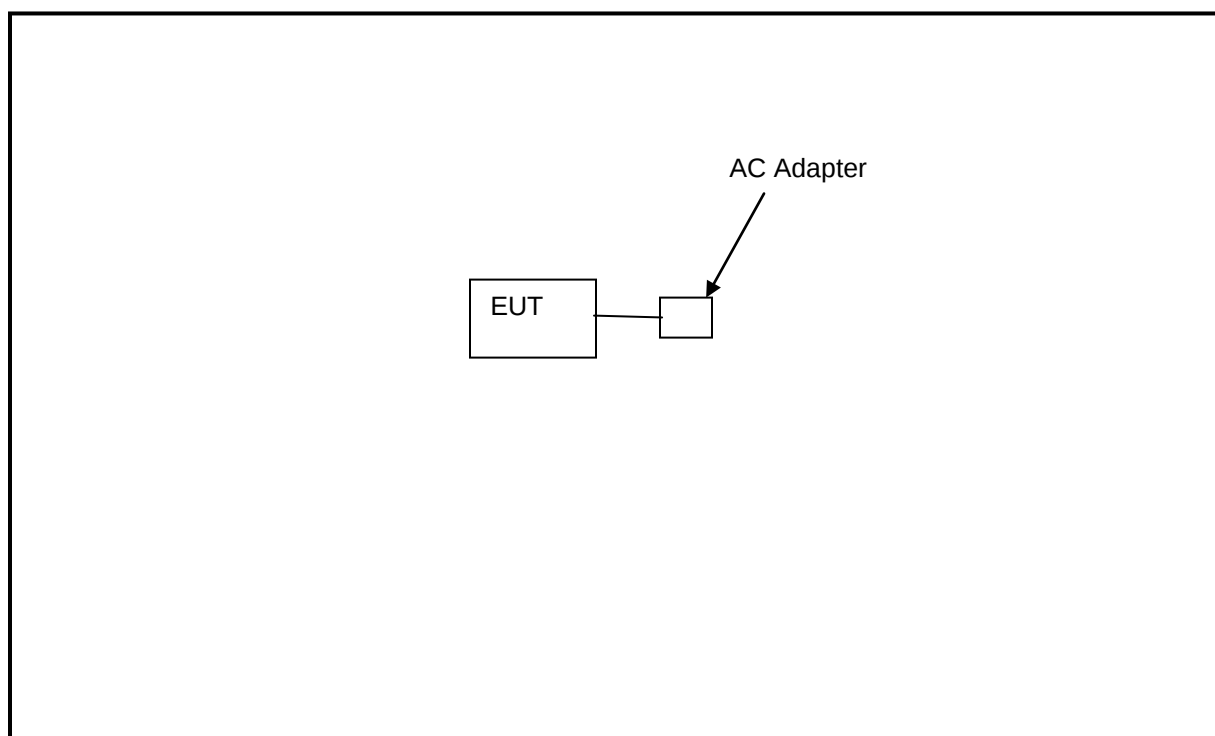
## 2.4 Test System Details

The test samples were received on December 15, 2011. The FCC identifiers for all applicable equipment, plus descriptions of all cables used in the tested system, are identified in the following tables.

**Table 2-3: Equipment Under Test**

| Part              | Manufacturer            | Model #         | Serial Number | FCC ID     | RTL Bar Code |
|-------------------|-------------------------|-----------------|---------------|------------|--------------|
| Home Alarm System | Honeywell International | WIFI            | 17862492      | CFS8DLWIFI | 20498        |
| AC Adapter        | Honeywell               | AMS62-0902770FU | N/A           | N/A        | 20498        |

## 2.5 Configuration of Tested System



### 3 Radiated Emissions – FCC 15.209

#### 3.1 Limits of Radiated Emissions Measurement

| Frequency (MHz) | Field Strength (uV/m) | Measurement Distance (m) |
|-----------------|-----------------------|--------------------------|
| 0.009-0.490     | 2400/f (kHz)          | 300                      |
| 0.490-1.705     | 2400/f (kHz)          | 30                       |
| 1.705-30.0      | 30                    | 30                       |
| 30-88           | 100                   | 3                        |
| 88-216          | 150                   | 3                        |
| 216-960         | 200                   | 3                        |
| Above 960       | 500                   | 3                        |

As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any circumstances of modulation.

#### 3.2 Radiated Emissions Measurement Test Procedure

Procedure: C63.10-2009 6.5, 6.6

Before final measurements of radiated emissions were made on the open-field three/ten meter range, the EUT was scanned indoors at one and three meter distances. This was done in order to determine its emissions spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. This process was repeated during final radiated emissions measurements on the open-field range, at each frequency, in order to ensure that maximum emission amplitudes were attained.

Final radiated emissions measurements were made on the three/ten-meter, open-field test site. The EUT was placed on a nonconductive turntable 0.8 meters above the ground plane. The spectrum was examined from 9 kHz to the 10<sup>th</sup> harmonic of the highest fundamental transmitter frequency (24.8 GHz).

At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the emission's maximum level. Measurements were taken using both horizontal and vertical antenna polarizations. For frequencies between 30 and 1000 MHz, the spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the CISPR quasi-peak detection mode. For emissions above 1,000 MHz, emissions are measured using the average detector function with a minimum resolution bandwidth of 1 MHz. No video filter less than 10 times the resolution bandwidth was used. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

**Table 3-1: Radiated Emissions Test Equipment**

| RTL Bar Code | Manufacturer                | Model             | Part Type                               | Serial Number | Calibration Due Date |
|--------------|-----------------------------|-------------------|-----------------------------------------|---------------|----------------------|
| 900930       | Hewlett Packard             | 85662A            | Spectrum Analyzer Display Section       | 3144A20839    | 9/13/12              |
| 900931       | Hewlett Packard             | 8566B             | Spectrum Analyzer (100 Hz - 22 GHz)     | 3138A07771    | 9/13/12              |
| 900932       | Hewlett Packard             | 8449B             | Amplifier (1 – 26.5 GHz)                | 3008A00505    | 7/14/12              |
| 900791       | Schaffner Chase             | CBL6112           | Bilog Periodic Antenna (25 MHz - 2 GHz) | 2099          | 1/31/13              |
| 901215       | Hewlett Packard             | 8596EM            | Spectrum Analyzer (9 kHz - 12.8GHz)     | 3826A00144    | 1/13/12              |
| 901516       | Insulated WireInternational | KPS-1503-2400-KPS | RF cable, 20'                           | NA            | 10/14/12             |
| 901517       | Insulated Wire Inc.         | KPS-1503-360-KPS  | RF cable 36"                            | 901262        | 10/14/12             |
| 900772       | EMCO                        | 3161-02           | Horn Antenna (2 - 4 GHz)                | 9804-1044     | 6/14/12              |
| 900321       | EMCO                        | 3161-03           | Horn Antennas (4 – 8.2 GHz)             | 9508-1020     | 6/14/12              |
| 900323       | EMCO                        | 3160-07           | Horn Antennas (8.2 – 12.4 GHz)          | 9605-1054     | 6/14/12              |
| 900356       | EMCO                        | 3160-08           | Horn Antennas (12.4 – 18 GHz)           | 9607-1044     | 6/14/12              |
| 901218       | EMCO                        | 3160-09           | Horn Antenna (18 - 26.5 GHz)            | 960281-003    | 6/19/12              |

### 3.3 Radiated Emissions Test Results

#### 3.3.1 Radiated Emissions Harmonics/Spurious

**Table 3-2: 2412 MHz; 802.11b; 11 mbps; Channel 1; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2412.000        | 73.8                                                          | 25.1                          | 98.9                             | Fundamental    |             |
| 4824.000        | 15.6                                                          | 12.6                          | 28.2                             | 54.0           | -25.8       |
| 12060.000       | 16.1                                                          | 17.6                          | 33.7                             | 54.0           | -20.3       |
| 14472.000       | 19.3                                                          | 22.4                          | 41.7                             | 54.0           | -12.3       |
| 19296.000       | 17.2                                                          | 26.8                          | 44.0                             | 54.0           | -10.0       |

**Table 3-3: 2437 MHz; 802.11b; 11 mbps; Channel 6; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 4874.000        | 16.8                                                          | 12.6                          | 29.4                             | 54.0           | -24.6       |
| 7311.000        | 14.4                                                          | 12.9                          | 27.3                             | 54.0           | -26.7       |
| 12185.000       | 16.7                                                          | 17.5                          | 34.2                             | 54.0           | -19.8       |
| 19496.000       | 16.5                                                          | 26.5                          | 43.0                             | 54.0           | -11.0       |

**Table 3-4: 2462 MHz; 802.11b; 11 mbps; Channel 11; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2462.000        | 69.4                                                          | 25.2                          | 94.6                             | Fundamental    |             |
| 4924.000        | 14.3                                                          | 12.6                          | 26.9                             | 54.0           | -27.1       |
| 7386.000        | 15.3                                                          | 12.8                          | 28.1                             | 54.0           | -25.9       |
| 12310.000       | 19.5                                                          | 17.5                          | 37.0                             | 54.0           | -17.0       |
| 19696.000       | 17.3                                                          | 26.7                          | 44.0                             | 54.0           | -10.0       |
| 22158.000       | 17.3                                                          | 28.1                          | 45.4                             | 54.0           | -8.6        |
| 24620.000       | 17.8                                                          | 29.4                          | 47.2                             | 54.0           | -6.8        |

**Table 3-5: 2412 MHz; 802.11g; 54 mbps; Channel 1; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2412.000        | 65.5                                                          | 25.1                          | 90.6                             | Fundamental    |             |
| 4824.000        | 15.7                                                          | 12.6                          | 28.3                             | 54.0           | -25.7       |
| 12060.000       | 16.2                                                          | 17.6                          | 33.8                             | 54.0           | -20.2       |
| 14472.000       | 19.2                                                          | 22.4                          | 41.6                             | 54.0           | -12.4       |
| 19296.000       | 17.2                                                          | 26.8                          | 44.0                             | 54.0           | -10.0       |

**Table 3-6: 2437 MHz; 802.11g; 54 mbps; Channel 6; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 4874.000        | 16.8                                                          | 12.6                          | 29.4                             | 54.0           | -24.6       |
| 7311.000        | 14.3                                                          | 12.9                          | 27.2                             | 54.0           | -26.8       |
| 12185.000       | 16.7                                                          | 17.5                          | 34.2                             | 54.0           | -19.8       |
| 19496.000       | 16.5                                                          | 26.5                          | 43.0                             | 54.0           | -11.0       |

**Table 3-7: 2462 MHz; 802.11g; 54 mbps; Channel 11; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2462.000        | 61.4                                                          | 25.2                          | 86.6                             | Fundamental    |             |
| 4924.000        | 14.2                                                          | 12.6                          | 26.8                             | 54.0           | -27.2       |
| 7386.000        | 15.4                                                          | 12.8                          | 28.2                             | 54.0           | -25.8       |
| 12310.000       | 19.1                                                          | 17.5                          | 36.6                             | 54.0           | -17.4       |
| 19696.000       | 17.3                                                          | 26.7                          | 44.0                             | 54.0           | -10.0       |
| 22158.000       | 17.3                                                          | 28.1                          | 45.4                             | 54.0           | -8.6        |
| 24620.000       | 17.8                                                          | 29.4                          | 47.2                             | 54.0           | -6.8        |

**Table 3-8: 2412 MHz; 802.11n; 65 mbps; Channel 1; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2412.000        | 65.5                                                          | 25.1                          | 90.6                             | Fundamental    |             |
| 4824.000        | 15.9                                                          | 12.6                          | 28.5                             | 54.0           | -25.5       |
| 12060.000       | 16.1                                                          | 17.6                          | 33.7                             | 54.0           | -20.3       |
| 14472.000       | 19.2                                                          | 22.4                          | 41.6                             | 54.0           | -12.4       |
| 19296.000       | 17.2                                                          | 26.8                          | 44.0                             | 54.0           | -10.0       |

**Table 3-9: 2437 MHz; 802.11n; 65 mbps; Channel 6; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 4874.000        | 16.8                                                          | 12.6                          | 29.4                             | 54.0           | -24.6       |
| 7311.000        | 14.3                                                          | 12.9                          | 27.2                             | 54.0           | -26.8       |
| 12185.000       | 16.6                                                          | 17.5                          | 34.1                             | 54.0           | -19.9       |
| 19496.000       | 16.5                                                          | 26.5                          | 43.0                             | 54.0           | -11.0       |

**Table 3-10: 2462 MHz; 802.11n; 65 mbps; Channel 11; Average Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/ 10 Hz VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|---------------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2462.000        | 62.2                                                          | 25.2                          | 87.4                             | Fundamental    |             |
| 4924.000        | 14.4                                                          | 12.6                          | 27.0                             | 54.0           | -27.0       |
| 7386.000        | 15.2                                                          | 12.8                          | 28.0                             | 54.0           | -26.0       |
| 12310.000       | 19.0                                                          | 17.5                          | 36.5                             | 54.0           | -17.5       |
| 19696.000       | 17.3                                                          | 26.7                          | 44.0                             | 54.0           | -10.0       |
| 22158.000       | 17.3                                                          | 28.1                          | 45.4                             | 54.0           | -8.6        |
| 24620.000       | 17.8                                                          | 29.4                          | 47.2                             | 54.0           | -6.8        |

**Table 3-11: 2412 MHz; 802.11b; 11 mbps; Channel 1; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2412.000        | 82.5                                                   | 25.1                          | 107.6                            | Fundamental    |             |
| 4824.000        | 28.0                                                   | 12.6                          | 40.6                             | 74.0           | -33.4       |
| 12060.000       | 29.2                                                   | 17.6                          | 46.8                             | 74.0           | -27.2       |
| 14472.000       | 32.0                                                   | 22.4                          | 54.4                             | 74.0           | -19.6       |
| 19296.000       | 30.1                                                   | 26.8                          | 56.9                             | 74.0           | -17.1       |

**Table 3-12: 2437 MHz; 802.11b; 11 mbps; Channel 6; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 4874.000        | 29.3                                                   | 12.6                          | 41.9                             | 74.0           | -32.1       |
| 7311.000        | 26.7                                                   | 12.9                          | 39.6                             | 74.0           | -34.4       |
| 12185.000       | 29.6                                                   | 17.5                          | 47.1                             | 74.0           | -26.9       |
| 19496.000       | 29.6                                                   | 26.5                          | 56.1                             | 74.0           | -17.9       |

**Table 3-13: 2462 MHz; 802.11b; 11 mbps; Channel 11; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2462.000        | 78.2                                                   | 25.2                          | 103.4                            | Fundamental    |             |
| 4924.000        | 26.4                                                   | 12.6                          | 39.0                             | 74.0           | -35.0       |
| 7386.000        | 28.3                                                   | 12.8                          | 41.1                             | 74.0           | -32.9       |
| 12310.000       | 32.8                                                   | 17.5                          | 50.3                             | 74.0           | -23.7       |
| 19696.000       | 30.3                                                   | 26.7                          | 57.0                             | 74.0           | -17.0       |
| 22158.000       | 30.1                                                   | 28.1                          | 58.2                             | 74.0           | -15.8       |
| 24620.000       | 30.2                                                   | 29.4                          | 59.6                             | 74.0           | -14.4       |

**Table 3-14: 2412 MHz; 802.11g; 54 mbps; Channel 1; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2412.000        | 76.6                                                   | 25.1                          | 101.7                            | Fundamental    |             |
| 4824.000        | 29.7                                                   | 12.6                          | 42.3                             | 74.0           | -31.7       |
| 12060.000       | 30.1                                                   | 17.6                          | 47.7                             | 74.0           | -26.3       |
| 14472.000       | 32.0                                                   | 22.4                          | 54.4                             | 74.0           | -19.6       |
| 19296.000       | 30.2                                                   | 26.8                          | 57.0                             | 74.0           | -17.0       |

**Table 3-15: 2437 MHz; 802.11g; 54 mbps; Channel 6; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 4874.000        | 30.2                                                   | 12.6                          | 42.8                             | 74.0           | -31.2       |
| 7311.000        | 27.2                                                   | 12.9                          | 40.1                             | 74.0           | -33.9       |
| 12185.000       | 29.7                                                   | 17.5                          | 47.2                             | 74.0           | -26.8       |
| 19496.000       | 30.0                                                   | 26.5                          | 56.5                             | 74.0           | -17.5       |

**Table 3-16: 2462 MHz; 802.11g; 54 mbps; Channel 11; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2462.000        | 72.5                                                   | 25.2                          | 97.7                             | Fundamental    |             |
| 4924.000        | 27.6                                                   | 12.6                          | 40.2                             | 74.0           | -33.8       |
| 7386.000        | 27.6                                                   | 12.8                          | 40.4                             | 74.0           | -33.6       |
| 12310.000       | 29.6                                                   | 17.5                          | 47.1                             | 74.0           | -26.9       |
| 19696.000       | 30.3                                                   | 26.7                          | 57.0                             | 74.0           | -17.0       |
| 22158.000       | 30.3                                                   | 28.1                          | 58.4                             | 74.0           | -15.6       |
| 24620.000       | 30.7                                                   | 29.4                          | 60.1                             | 74.0           | -13.9       |

**Table 3-17: 2412 MHz; 802.11n; 65 mbps; Channel 1; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2412.000        | 77.4                                                   | 25.1                          | 102.5                            | Fundamental    |             |
| 4824.000        | 29.7                                                   | 12.6                          | 42.3                             | 74.0           | -31.7       |
| 12060.000       | 29.1                                                   | 17.6                          | 46.7                             | 74.0           | -27.3       |
| 14472.000       | 31.7                                                   | 22.4                          | 54.1                             | 74.0           | -19.9       |
| 19296.000       | 29.8                                                   | 26.8                          | 56.6                             | 74.0           | -17.4       |

**Table 3-18: 2437 MHz; 802.11n; 65 mbps; Channel 6; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 4874.000        | 28.3                                                   | 12.6                          | 40.9                             | 74.0           | -33.1       |
| 7311.000        | 27.6                                                   | 12.9                          | 40.5                             | 74.0           | -33.5       |
| 12185.000       | 30.1                                                   | 17.5                          | 47.6                             | 74.0           | -26.4       |
| 19496.000       | 29.2                                                   | 26.5                          | 55.7                             | 74.0           | -18.3       |

**Table 3-19: 2462 MHz; 802.11n; 65 mbps; Channel 11; Peak Mode**

| Frequency (MHz) | Spectrum Analyzer Average Level (1 MHz RBW/VBW) (dBuV) | Site Correction Factor (dB/m) | Corrected Average Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|--------------------------------------------------------|-------------------------------|----------------------------------|----------------|-------------|
| 2462.000        | 73.3                                                   | 25.2                          | 98.5                             | Fundamental    |             |
| 4924.000        | 27.6                                                   | 12.6                          | 40.2                             | 74.0           | -33.8       |
| 7386.000        | 28.3                                                   | 12.8                          | 41.1                             | 74.0           | -32.9       |
| 12310.000       | 32.1                                                   | 17.5                          | 49.6                             | 74.0           | -24.4       |
| 19696.000       | 30.5                                                   | 26.7                          | 57.2                             | 74.0           | -16.8       |
| 22158.000       | 29.6                                                   | 28.1                          | 57.7                             | 74.0           | -16.3       |
| 24620.000       | 30.8                                                   | 29.4                          | 60.2                             | 74.0           | -13.8       |

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Client: Honeywell International  
Model #: WIFI  
Standards: FCC 15.247  
FCC/IC ID: CFS8DLWIFI/573F-WIFI  
Report #: 2011199

**Test Personnel:**

|                    |                                                                                   |                        |
|--------------------|-----------------------------------------------------------------------------------|------------------------|
| Daniel W. Baltzell |  | December 15 - 18, 2011 |
| EMC Test Engineer  | Signature                                                                         | Dates of Tests         |

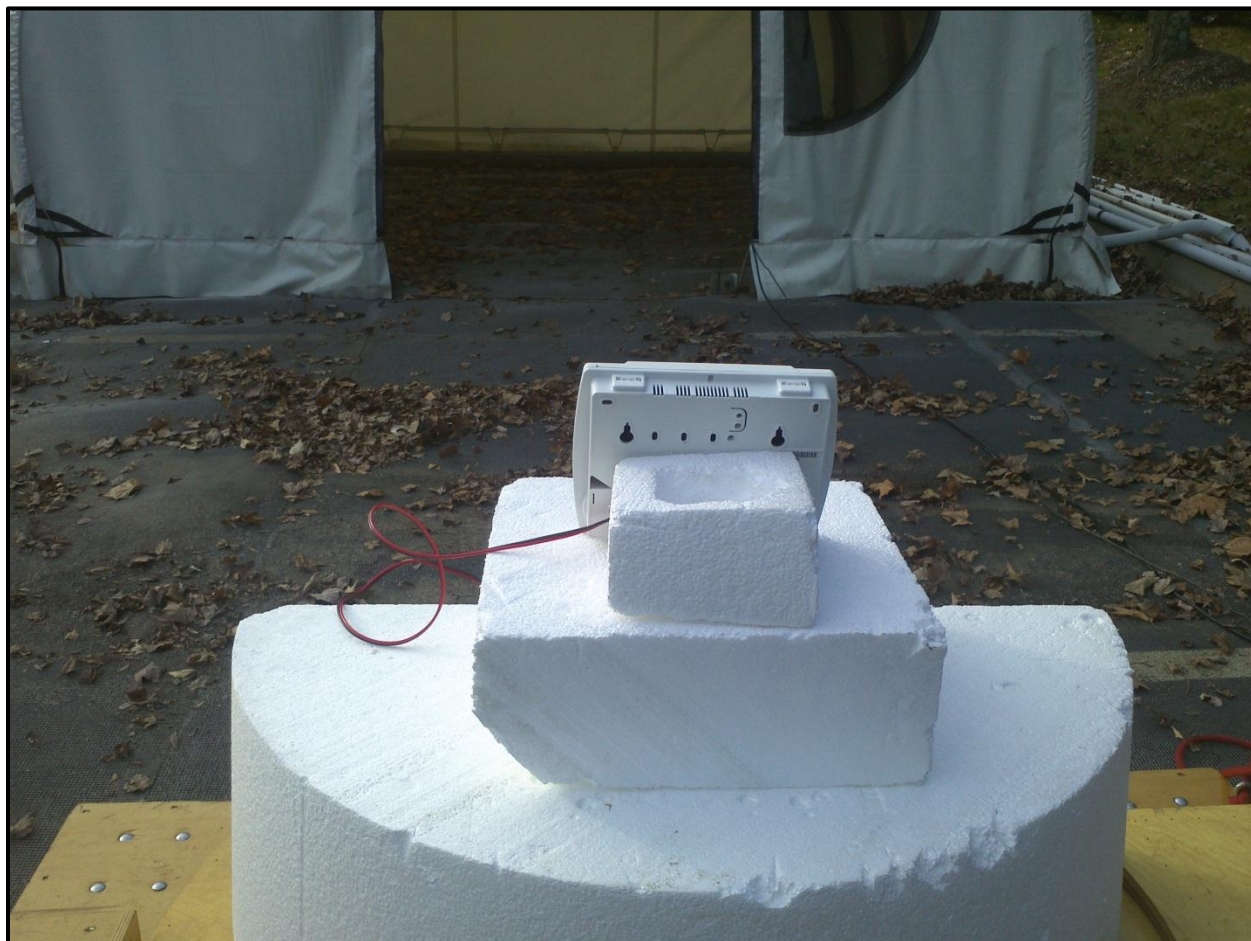
**4 Conclusion**

The data in this measurement report shows that the Honeywell International FCC ID: CFS8DLWIFI, IC ID: 573F-WIFI.complies with the applicable radiated requirements of Parts 2 and 15 of the FCC rules and regulations.

## Appendix A: Test Photographs



Photograph 1: Radiated Testing – Front View



**Photograph 2: Radiated Testing – Back View**