



TESTING CERT #3478.01



TEST REPORT

| | |
|---------------------------|--|
| EUT Description | WLAN and BT, 2x2 PCIe M.2 2230 adapter card |
| Brand Name | Intel® Dual Band Wireless-AC 8265 |
| Model Name | 8265NGW |
| Serial Number | TA#: H93538-003 WF MAC: 34:13:E8:52:D6:27 BT MAC: 34:13:E8:52:D6:2B (see section 4) |
| FCC/IC ID | FCC ID: PD98265NG / PD98265NGU IC ID: 1000M-8265NG |
| Antenna type | SkyCross WIMAX/WLAN Reference Antenna |
| Hardware/Software Version | HW: WsP2230 cfg12.1MS Op SW: 99.0.19.1 |
| Date of Sample Receipt | 2016-04-01 |
| Date of Test | 2016-05-03 |
| Features | 802.11 a/b/g/n/ac Wireless LAN + BDR/EDR 2.1 + BLE 4.2 (see section 5) |

| | |
|----------------------|---|
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| | |
|---------------------|--|
| Reference Standards | FCC CFR Title 47 Part 15E RSS 247 issue 1 |
|---------------------|--|

| | |
|--------------------|----------------|
| Test Report number | 160321-01.TR04 |
| Revision Control | Rev. 00 |

The test results relate only to the samples tested.

The test report shall not be reproduced in full, without written approval of the laboratory.

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1. Standards, reference documents and applicable test methods

1. FCC 47 CFR part 15 - Subpart E – Unlicensed National Information Infrastructure Devices.
2. FCC OET KDB 905462 D02 UNII DFS Compliance Procedures New Rules v01r02 – Compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection.
3. RSS-247 Issue 1 — Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSS) and Licence-Exempt Local Area Network (LE-LAN) Devices
4. ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

2. General conditions, competences and guarantees

- ✓ Intel Mobile Communications Wireless RF Lab (Intel WRF Lab) is a testing laboratory accredited by the American Association for Laboratory Accreditation (A2LA).
- ✓ Intel Mobile Communications Wireless RF Lab (Intel WRF Lab) is an Accredited Test Firm listed by the FCC, with Designation Number FR0011.
- ✓ Intel Mobile Communications Wireless RF Lab (Intel WRF Lab) is a Registered Test Site listed by IC, with IC Assigned Code 1000Y.
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
- ✓ Intel WRF Lab is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.
- ✓ Intel WRF Lab has developed calibration and proficiency programs for its measurement equipment to ensure correlated and reliable results to its customers.
- ✓ This report is only referred to the item that has undergone the test.
- ✓ This report does not imply an approval of the product by the Certification Bodies or competent Authorities.
- ✓ Complete or partial reproduction of the report cannot be made without written permission of Intel WRF Lab.

3. Environmental Conditions

- ✓ At the site where the measurements were performed the following limits were not exceeded during the tests:

| | |
|-------------|------------|
| Temperature | 22°C ± 2°C |
| Humidity | 38% ± 5% |

4. Test samples

| Sample | Control # | Description | Model | Serial # | Date of reception |
|--------|---------------|-----------------|------------------------------|--|-------------------|
| #01 | 160321-01.S07 | Wi-Fi/BT Module | 8265NGW, Cfg: WS12.1MS | TA: H93538-003, WFM: 3413E852D627, BDM: 3413E852D62B | 2016-04-01 |
| | 160321-01.S11 | Extender board | PCB00495 | ASS00495-001 4950414-028 | 2016-04-14 |
| | 15051101.S11 | AC/DC Adapter | SPU60-102 | 087411640 1350 | 2016-01-07 |
| | 160107-01.S16 | Desktop | DELL OptiPlex 960 | 07990499 1249 | 2015-05-12 |

5. EUT features

These are the detailed bands and modes supported by the Equipment Under Test:

| | |
|------------------------|--|
| 802.11b/g/n | 2.4GHz (2400.0 – 2483.5 MHz) |
| 802.11a/n/ac | 5.2GHz (5150.0 – 5250.0 MHz) 5.3GHz (5250.0 – 5350.0 MHz) 5.6GHz (5470.0 – 5725.0 MHz) 5.8GHz (5725.0 – 5850.0 MHz) |
| BDR/EDR 2.1 BLE 4.2 | 2.4GHz (2400.0 – 2483.5 MHz) |

6. Remarks and comments

1. The operating mode of the sample is only client without radar detection.
2. The maximum antenna gain is 5dBi.

7. Test Verdicts summary

| FCC part | RSS part | Test name | Verdict |
|----------------|------------------|-----------------------------------|---------|
| 15.407 (h) (2) | RSS-247 part 6.3 | Non Occupancy Period | NA |
| | | DFS Detection Threshold | NA |
| | | Channel Availability Check Time | NA |
| | | Uniform Spreading | NA |
| | | U-NII Detection Bandwidth | NA |
| | | DFS Detection Threshold | NA |
| | | Channel Closing Transmission Time | P |
| | | Channel Move Time | P |
| | | U-NII Detection Bandwidth | NA |

P: Pass
 F: Fail
 NM: Not Measured
 NA: Not Applicable

8. Document Revision History

| Revision # | Date | Modified by | Details |
|------------|------------|-------------|-------------|
| Rev. 00 | 2016-05-13 | A. Del Real | First Issue |

Annex A. Test & System Description

A.1 Test Conditions

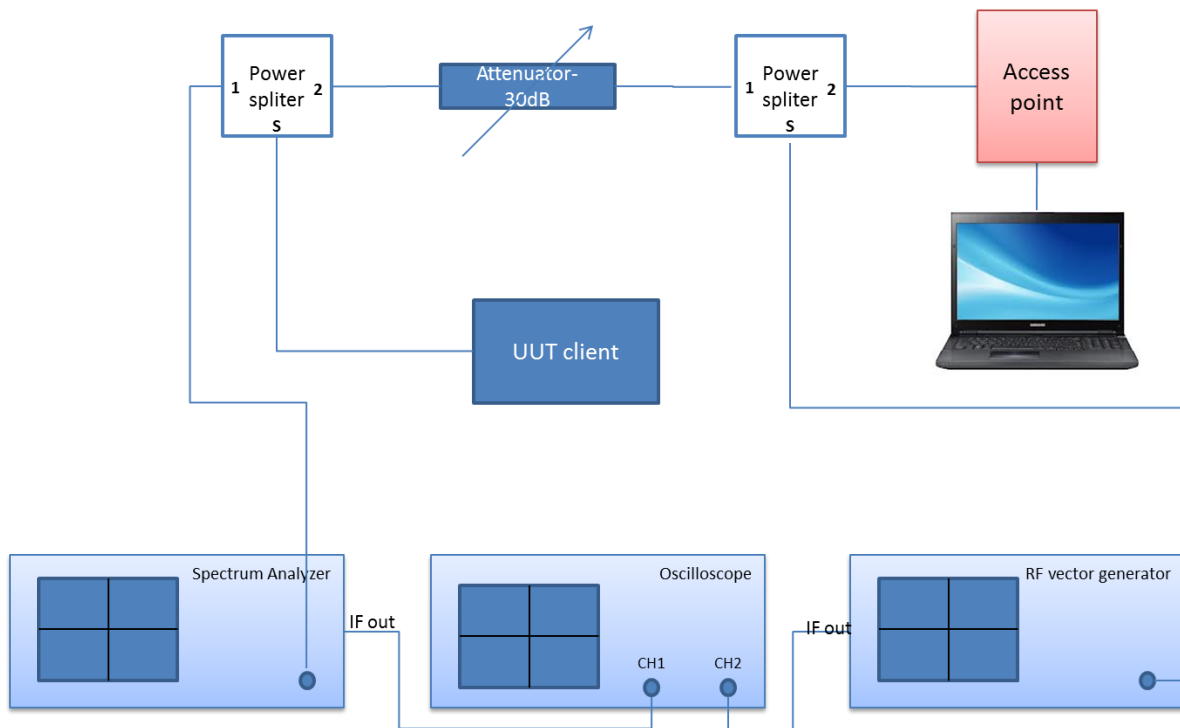
The EUT power supply was provided by the Extender test board, $V_{nominal} = 3.3 V_{DC}$. The Intel ProSet Wifi software was used to set the EUT in normal operation mode.

A.2 Measurement system

Measurements were performed using the following setups, made in accordance to the general provisions of FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v01r02.

The EUT was installed in a test fixture and this test fixture is connected to a laptop computer and AC/DC power adapter. A second laptop computer was used to configure the access point on the DFS channels; a channel was selected randomly by the access point. To enable channel loading, this second laptop computer is also used as a server host, a video was streamed on the EUT.

Conducted Setup



A.3 Test Equipment List

Conducted Setup

| ID# | Device | Type/Model | Serial Number | Manufacturer | Cal. Date | Cal. Due Date |
|------|-------------------------|----------------|---------------|-----------------|------------|---------------|
| 0033 | Spectrum analyzer | FSV40 | 101072 | Rohde & Schwarz | 2016-01-20 | 2018-01-20 |
| 0017 | Vector Signal Generator | SMJ100A | 100458 | Rohde & Schwarz | 2015-10-21 | 2017-10-21 |
| 0312 | Digital Oscilloscope | RTE1052 | 101135 | Rohde & Schwarz | 2015-05-25 | 2017-03-25 |
| 0261 | Access point* | Aironet IOS | FTX134390GV | Cisco | NA | NA |
| - | Laptop DELL | Lattitude 5440 | - | DELL | NA | NA |

*: FCC ID: LDK102061

A.4 Measurement Uncertainty Evaluation

The system uncertainty evaluation is shown in the below table:

| Measurement type | Uncertainty |
|------------------|-------------|
| Timing domain | ± 1 ms |

Annex B. Test Results

B.1 Test results for Dynamic Frequency Selection (DFS)

Test procedure

The conducted setup shown on §A.2 *Measurement system* was used to measure the Channel Closing Transmission Time and Channel Move Time.

The *Client Device* (UUT) is set up to associate with the *Master Device*. The channel loading test file is streamed from the *Master Device* to the *Client Device*. Radar test waveforms generated with the vector signal generator are injected into the *Master* on the operating channel above the DFS detection threshold. Observations are done on the transmissions of the UUT at the end of the radar burst on the Operating Channel for a duration greater than 10 seconds. We measured the transmissions from the UUT during the observation time, after radar detection occurs the Channel Move Time and Channel Closing Transmission Time are recorded.

Results tables

Tested Channel: 52, Frequency: 5260 MHz

| Test item | Results | Limit |
|-----------------------------------|-----------|---|
| Channel Closing Transmission Time | < 5.97 ms | 200 ms + an aggregate of 60ms over remaining 10 seconds period. |
| Channel Move Time | 5.97 ms | 10 seconds |

Results screenshot