

## **Intentional Radiator Test Report**

## **Application for Grant of Equipment Authorization**

FCC Part 15 Subpart C (15.247)

FCC ID: YJC-RDMERT0

Product Name:	Nighthawk RDM960 Personality Module
Model:	RDM

APPLICANT: AMI Investments LLC d.b.a Nighthawk 701 Canyon Drive Suite 105 Coppell TX, 75019

- TEST SITE(S): National Technical Systems Plano 1701 E Plano Pkwy #150 Plano, TX 75074
- REPORT DATE: Aug 6, 2014
- FINAL TEST DATES: July 16-17, 2014

TOTAL NUMBER OF PAGES: 20

Ρ

**Prepared By:** 

Edul

Yunus E. Faziloglu Wireless Manager

**Approved By:** 

Kimberly Zavala Quality Assurance Manager

**Reviewed By:** 

John Ngo General Manager

This report and the information contained herein represent the results of testing test articles identified and selected by the client performed to specifications and/or procedures selected by the client. National Technical Systems (NTS) makes no representations, expressed or implied, that such testing is adequate (or inadequate) to demonstrate efficiency, performance, reliability, or any other characteristic of the articles being tested, or similar products. This report should not be relied upon as an endorsement or certification by NTS of the equipment tested, nor does it represent any statement whatsoever as to its merchantability or fitness of the test article, or similar products, for a particular purpose. This report shall not be reproduced except in full.

# **REVISION HISTORY**

Rev#	Date	Comments	Modified By
0	Aug 6, 2014	First Release	Yunus Faziloglu

# TABLE OF CONTENTS

REVISION HISTORY	.2
TABLE OF CONTENTS	.3
SCOPE	
OBJECTIVE	
STATEMENT OF COMPLIANCE	.4
DEVIATIONS FROM THE STANDARDS	.5
MODIFICATIONS	.5
MEASUREMENT UNCERTAINTIES	
FEST RESULTS SUMMARY	
EQUIPMENT UNDER TEST (EUT) DETAILS	.7
EUT OPERATION	8
FEST SITE	.8
	.8
FEST SITE FEST EQUIPMENT FEST RESULTS SECTION	.8 .8 .9
TEST SITE TEST EQUIPMENT TEST RESULTS SECTION	.8 .8 .9
TEST SITE TEST EQUIPMENT TEST RESULTS SECTION AC LINE CONDUCTED EMISSIONS	.8 .8 .9 10
<b>FEST SITE FEST EQUIPMENT FEST RESULTS SECTION</b> AC LINE CONDUCTED EMISSIONS   20DB BANDWIDTH   1   CHANNEL SEPARATION	.8 .8 .9 10 12
<b>FEST SITE FEST EQUIPMENT FEST RESULTS SECTION</b> AC LINE CONDUCTED EMISSIONS   20DB BANDWIDTH   1   CHANNEL SEPARATION   1   NUMBER OF HOPPING CHANNELS	.8 .9 10 12 13
<b>FEST SITE FEST EQUIPMENT FEST RESULTS SECTION</b> AC LINE CONDUCTED EMISSIONS   20DB BANDWIDTH   1   CHANNEL SEPARATION   1   NUMBER OF HOPPING CHANNELS   1   DWELL TIME	.8 .8 .9 10 12 13 14
<b>FEST SITE FEST EQUIPMENT FEST RESULTS SECTION</b> AC LINE CONDUCTED EMISSIONS   20DB BANDWIDTH   1   CHANNEL SEPARATION   1   NUMBER OF HOPPING CHANNELS   1   DWELL TIME   1   PEAK CONDUCTED OUTPUT POWER	.8 .9 10 12 13 14 15 16
<b>FEST SITE FEST EQUIPMENT FEST RESULTS SECTION</b> AC LINE CONDUCTED EMISSIONS   20DB BANDWIDTH   1   CHANNEL SEPARATION   1   NUMBER OF HOPPING CHANNELS   1   DWELL TIME	.8 .9 10 12 13 14 15 16

### SCOPE

Tests have been performed on the *AMI Investments LLC* product *Nighthawk RDM960 Personality Module* Model *RDM* to demonstrate compliance with the following rules:

FCC Part 15 Subpart C (15.247)

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in National Technical Systems – Plano test procedures:

ANSI C63.4-2003 FHSS Test Procedures FCC Public Notice DA 00-705, Mar 2000

Nighthawk RDM960 Personality Module Model RDM was tested inside Itron C2SXD Form 2S Electric Meter to demonstrate compliance with the FCC rules. All intentional radiator parameters were tested in a radiated measurement test setup since an antenna port for direct measurements was not available. During testing Itron C2SXD Form 2S Electric Meter was placed 80cm above the ground plane on a non-conductive RF transparent support structure in upright position as shown in relevant test setup photos. Manufacturer specified this position as the only possible installation condition of the Nighthawk RDM960 Personality Module.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

## OBJECTIVE

The primary objective of the manufacturer is to demonstrate compliance with the regulations outlined in the previous section. This report is intended to support a grant of equipment authorization application of the Nighthawk RDM960 Personality Module as a "Limited Modular Approval" to be used inside Itron C2SXD Form 2S Electric Meter.

### STATEMENT OF COMPLIANCE

Nighthawk RDM960 Personality Module complied with the applicable requirement listed under the following FCC rules as a 900MHz frequency hopping spread spectrum transmitter:

FCC Part 15 Subpart C (15.247)

Testing was performed only on Nighthawk RDM960 Personality Module Model RDM when housed inside Itron C2SXD Form 2S Electric Meter as described above. Results only apply to that configuration. No other model variations or configurations were specified.

Maintenance of compliance is the responsibility of the manufacturer. Any modification to the product should be assessed to ensure compliance has been maintained.

Drew Caruth was present during all testing to represent the manufacturer.

### **DEVIATIONS FROM THE STANDARDS**

During testing there were no deviations from the regulatory rules and test procedures listed above.

## **MODIFICATIONS**

None

### **MEASUREMENT UNCERTAINTIES**

The measurement of uncertainty is not included with the data in this test report.

### TEST RESULTS SUMMARY

FCC Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.203	Antenna connector	Folded quarter-wave monopole printed circuit trace	Unique antenna connector or permanently attached antenna	Complies
15.207	AC Line conducted emissions	Lowest passing margin -19.271dB	As specified in 15.207(a)	Complies
15.215(c)	Frequency band of operation	910.0MHz - 919.8MHz	Within 902MHz – 928MHz	Complies
15.247(a)(1)	20dB Bandwidth	111 kHz	Channel spacing > 20dB	Complies
15.247(a)(1)	Channel Separation	200 kHz	bandwidth / 25kHz	Complies
15.247(a)(1)(i)	Number of Channels	50	50 or more	Complies
15.247(a)(1)(i)	Channel Dwell Time	68.7 milliseconds	< 0.4 seconds within a 20 second period	Complies
15.247(b)(2)	Conducted Output Power	0.008WEIRP = 0.025W	Conducted < 1.0W EIRP < 4.0W	Complies
15.247(d)	Antenna Port Spurious Emissions 30MHz – 9.28 GHz	Antenna port was not available	<-20dBc	N/A
15.247(d) 15.209	Radiated Spurious Emissions 30MHz – 9.28 GHz	50.9dBuV/m at 3m	15.209(a) in restricted bands, all others < -20dBc	Complies

Notes:

- Antenna gain is declared as maximum 5.0dBi by the manufacturer.
- Compliance to frequency hopping spread spectrum requirements of 15.247(a)(1), 15.247(g) and 15.247(h) are described by the manufacturer in the Operational Description exhibit.
- 15.247(i) RF exposure requirements are addressed in a separate exhibit.
- A separate test report has been issued to demonstrate compliance with FCC 15B unintentional emissions and receiver spurious emissions requirements.

## EQUIPMENT UNDER TEST (EUT) DETAILS

Nighthawk RDM960 Personality Module Model RDM provides wireless capabilities to the Itron C2SXD Form 2S Electric Meter. The RDM960 includes an onboard ERT radio that operates in the 910.0MHz – 919.8MHz frequency range as a frequency hopper for drive-by read. It transmits a standard consumption message (SCM) that can be read by a utility's existing meter reading equipment. It employs OOK modulation, uses 50 channels and transmits at a data rate of 16.384kbps. In addition, RDM960 includes two previously certified radios; a Novatel HS 3001 cell modem (FCC ID MIVCNN0301) and a Synapse SM200 RF engine (FCC ID U9O-SM200). The cell modem transmits metrology data over the cellular network and receives commands such as remote connect/disconnect. The RF engine is a 2.4 GHz band transceiver for mesh networking applications.

Description	Part/Model Number	Revision	Serial Number	Location
Meter Box	N/A	N/A	N/A	Top-level assembly
Itron C2SXD Form 2S Electric Meter	G981143	N/A	69290356	Mounted in meter box
Nighthawk RDM960 Personality Module	RDM	3.01	0004	Installed in meter
ERT Radio	CC1101	N/A	N/A	On RDM960 PCB, top side
Novatel Cell Modem	HS 3001	N/A	N/A	On RDM960 PCB, top side
Synapse RF Engine	SM200	N/A	N/A	On RDM960 PCB, top side

Configuration supplied for testing was as follows:

Host (Itron C2SXD Form 2S Electric Meter) interface ports were as follows:

Dout	Connected To	Cable(s)			
Port	Connected 10	Description	Shielded or Unshielded	Length(m)	
Power	208VAC/60Hz Mains	AC Power	Unshielded	6ft	
Serial Interface	Support Laptop PC	Optical/USB	Unshielded	3ft	

List of support equipment used during testing was as follows:

Company	Model	Description	Serial Number	FCC ID
Lenovo	G550 2958	Laptop PC	CBU2833007	Contains FCC ID: QDS-BRCM1028

Support laptop PC was used only to put the RDM960 in specific test modes. It was disconnected during measurements.

### EUT OPERATION

During testing, ERT radio was transmitting at its highest power level at full data rate. Hopping function could be enabled or disabled and 3 different channels (low, middle and top) could be selected for continuous transmission as needed.

### TEST SITE

Final test measurements were taken at the test sites listed below.

Site	Registratio	n Numbers	Location
Site	FCC	Canada	Location
Chamber 1	A2LA Accredited Designation Number US1077	IC 4319A	1701 E Plano Pkwy #150 Plano, TX 75074.

ANSI C63.4 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement. The test site(s) contain separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4.

NTS	Description	Manufacturer	Model	Calibration	Calibration
Equipment				Duration	Due Date
#					
E1529P	PSA	Agilent	E4446A	12 Months	2/14/2015
E1554P	PreAmp	MITEQ	JS32-00104000-	12 Months	5/14/2015
	(1GHz-40GHz)		62-5P		
E1524P	Biconilog Antenna	ETS Lindgren	3142D	12 Months	3/19/2015
	(30MHz-1GHz)	_			
E1149P	Horn Antenna	EMCO	3115	12 Months	11/25/2014
	(1GHz-18GHz)				
E1068P	Horn Antenna	EMCO	3116	12 Months	5/15/2015
	(18GHz-40GHz)				
E1354P	LISN	Rohde&Schwarz	ESH3-Z5	12 Months	10/15/2014
E1525P	Transient Limiter	Hameg	HZ560	12 Months	12/10/2014

### TEST EQUIPMENT

Test Results Section

# AC Line Conducted Emissions

<b>Regulatory Rule /</b>	CFR Title 47 §15.207	CFR Title 47 §15.207					
Standard							
Standard / Method of	ANSI C63.4-2003						
Measurement		Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz					
Specifications	Frequency (MHz)	Quasi-Peak Limit (dBuV)	Average Limit (dBuV)				
•	0.15 - 0.5 66 to 56* 56 to 46*						
	0.5 - 5.0	56	46				
	5.0 - 30.0	60	50				
	* Decreases with the log	garithm of the frequency					
<b>Deviations From</b>	None						
Method of							
Measurement							
Tested By	Yunus Faziloglu						
Date	Jul-17-2014						
Test Result	Complies – Tabular da	ta shown below					

# EUT transmitting on low channel – Line

Frequency (MHz)	QP Reading (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AV Reading (dBuV)	AV Limit (dBuV)	AV Margin (dB)
0.153	29.365	65.913	-36.548	19.388	55.913	-36.526
0.357	21.028	60.083	-39.055	12.735	50.083	-37.348
0.542	19.784	56	-36.216	15.169	46	-30.831
0.986	20.797	56	-35.203	15.858	46	-30.142
1.146	21.234	56	-34.766	15.97	46	-30.03
1.263	21.307	56	-34.693	16.163	46	-29.837

# EUT transmitting on low channel – Neutral

Frequency (MHz)	QP Reading (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AV Reading (dBuV)	AV Limit (dBuV)	AV Margin (dB)
26.556	33.363	60	-26.637	28.11	50	-21.89
27.157	35.03	60	-24.97	30.392	50	-19.608
27.302	33.792	60	-26.208	26.37	50	-23.63
27.501	35.099	60	-24.901	28.66	50	-21.34
27.606	34.541	60	-25.459	28.771	50	-21.229
28.009	31.432	60	-28.568	24.553	50	-25.447

# EUT transmitting on high channel - Line

Frequency (MHz)	QP Reading (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AV Reading (dBuV)	AV Limit (dBuV)	AV Margin (dB)
0.161	29.969	65.678	-35.709	17.767	55.678	-37.911
0.408	19.273	58.615	-39.343	12.062	48.615	-36.553
0.533	22.138	56	-33.862	17.434	46	-28.566
0.643	19.849	56	-36.151	14.808	46	-31.192

1.078	21.44	56	-34.56	16.083	46	-29.917
1.261	20.401	56	-35.599	15.259	46	-30.741

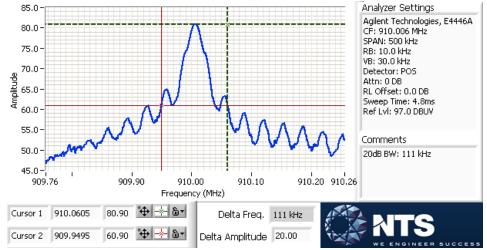
# EUT transmitting on high channel - Neutral

Frequency (MHz)	QP Reading (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AV Reading (dBuV)	AV Limit (dBuV)	AV Margin (dB)
26.327	31.69	60	-28.31	24.854	50	-25.146
26.475	33.14	60	-26.86	27.762	50	-22.238
26.979	35.586	60	-24.414	29.667	50	-20.333
27.124	35.434	60	-24.566	30.729	50	-19.271
27.422	34.305	60	-25.695	27.538	50	-22.462
27.564	34.853	60	-25.147	29.187	50	-20.813

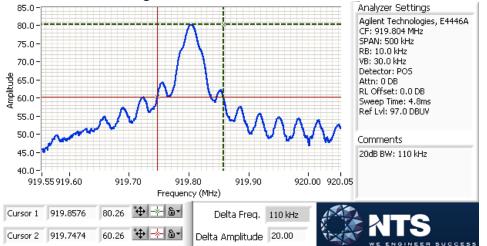
## 20dB Bandwidth

	OFD TH: 47 81	15.047(-)(1)(1)								
<b>Regulatory Rule /</b>	CFR Ittle 4/§	CFR Title 47 §15.247(a)(1)(i)								
Standard										
Standard / Method of	FHSS Test Proc	FHSS Test Procedures FCC Public Notice DA 00-705, Mar 2000								
Measurement										
Specifications	20dB bandwidt	h shall not exceed	500kHz							
<b>Deviations From</b>	None									
Method of										
Measurement										
Tested By	Yunus Fazilogh	l								
Date	Jul-16-2014									
Test Result	Channel	Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Verdict					
	Low	910.0	111	< 500kHz	Complies					
	High	919.8	110	< 500kHz	Complies					
	Corresponding	plots shown below	V							

## 20dB bandwidth of low channel - 111kHz

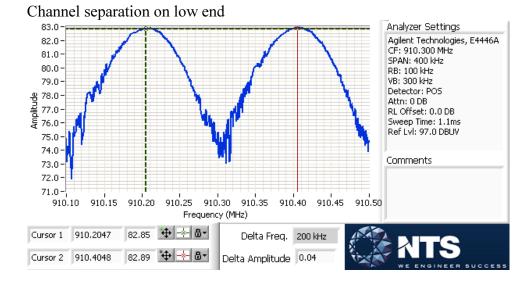


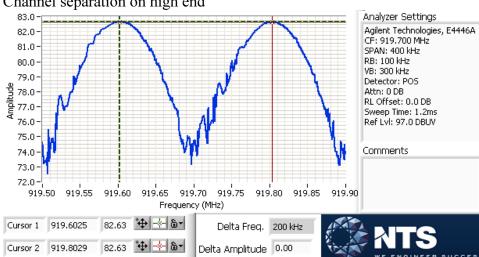
#### 20dB bandwidth of high channel - 110kHz



## **Channel Separation**

<b>Regulatory Rule /</b>	CFR Title 47 §	CFR Title 47 §15.247(a)(1)							
Standard									
Standard / Method of	FHSS Test Proc	HSS Test Procedures FCC Public Notice DA 00-705, Mar 2000							
Measurement									
Specifications	Minimum of 25	kHz or the 20dB l	oandwidth, whiche	ever is greater					
<b>Deviations From</b>	None								
Method of									
Measurement									
Tested By	Yunus Fazilogh	u							
Date	Jul-16-2014								
Test Result	Segment	20dB Bandwidth (kHz)	Limit (kHz)	Verdict					
	Low End 200 > 111 kHz Complies								
	Complies								
	Corresponding	plots shown below	/						

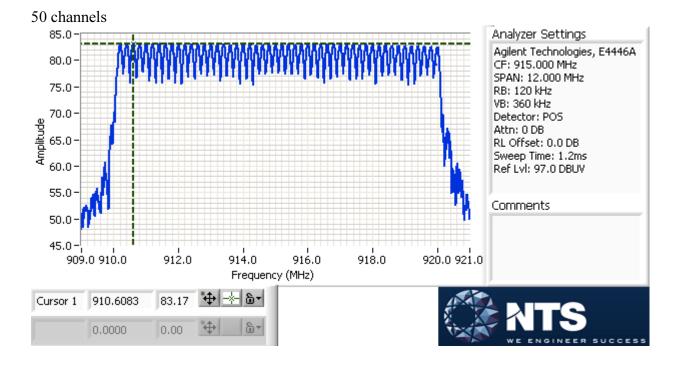




# Channel separation on high end

<b>Regulatory Rule /</b>	CFR Title 47 §15.247(a)(1)(i)									
Standard										
Standard / Method of	FHSS Test Procedures FCC Pub	FHSS Test Procedures FCC Public Notice DA 00-705, Mar 2000								
Measurement			o 705, 1111 20							
Specifications	At least 50 hopping frequencies	since the 20dB b	andwidth is le	ss than 250kHz						
Deviations From	None									
Method of										
Measurement										
Tested By	Yunus Faziloglu									
Date	Jul-16-2014									
Test Result	Number of hopping channels	Number of hopping channels Limit Verdict								
	50 At least 50 Complies									
	Corresponding plot shown below	N								

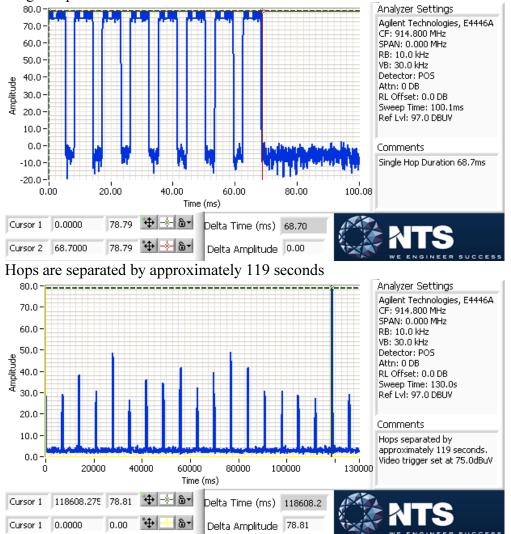
## Number of Hopping Channels



### **Dwell Time**

<b>Regulatory Rule /</b>	CFR Title 47 §15.247(a)(1)(i)	CFR Title 47 §15.247(a)(1)(i)						
Standard								
Standard / Method of	FHSS Test Procedures FCC Pul	olic Notice DA 0	0-705, Mar 2000					
Measurement								
Specifications	The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second time period since the 20dB bandwidth is less than 250kHz							
<b>Deviations From Method</b>	None							
of Measurement								
Tested By	Yunus Faziloglu							
Date	Jul-16-2014							
Test Result	Total dwell time within a 20LimitVerdictsecond period							
	68.7 milliseconds 0.4 seconds Complies							
	Corresponding plots and calcula	tion shown below	W					

Single hop duration is 68.7 milliseconds



Since it takes approximately 119 seconds for the hop to repeat, the total time of occupancy within a 20 second period is 68.7 milliseconds.

Regulatory Rule /	CFR Title 47 §15.247(b)(2)
Standard	
Standard / Method of	FHSS Test Procedures FCC Public Notice DA 00-705, Mar 2000
Measurement	
Specifications	1.0W peak conducted and 4.0W EIRP since the EUT employs at least 50 hopping
	channels
<b>Deviations From Method</b>	None
of Measurement	
Tested By	Yunus Faziloglu
Date	Jul-16-2014
Test Result	Complies - Tabular data shown below

### Peak Conducted Output Power

Meas	Meas	Antenna	Frequency	Raw	Antenna	Cable	Corrected	EIRP	Declared	Peak
Detector	Distance	Polarity	(MHz)	Reading	Factor	Loss	Reading	(dBm)	Antenna	Conducted
				(dBuV)	(dB/m)	(dB)	(dBuV/m)		Gain of	Output
									EUT	Power (W)
									(dBi)	
Peak	3m	Н	910.0	79	24.2	1.86	105.06	9.83	5.0	0.003
Peak	3m	V	910.0	83.1	24.2	1.86	109.16	13.93	5.0	0.008
Peak	3m	Н	919.8	76.9	24.6	1.90	103.4	8.17	5.0	0.002
Peak	3m	V	919.8	82.4	24.6	1.90	108.9	13.67	5.0	0.007

Antenna is a "folded quarter-wave monopole printed circuit trace" with a declared gain of 5.0dBi

Measurement System Settings:

Span = 5MHz, RBW = 300kHz, VBW = 910kHz, Peak, Max-hold, Auto sweep

Calculations:

Corrected Reading (dBuV/m) = Raw Reading (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) EIRP(dBm) = Corrected Reading (dBuV/m) - 104.77 + 20log(3)

Peak Conducted Output Power (dBm) = EIRP (dBm) – Declared Antenna Gain (dBi)

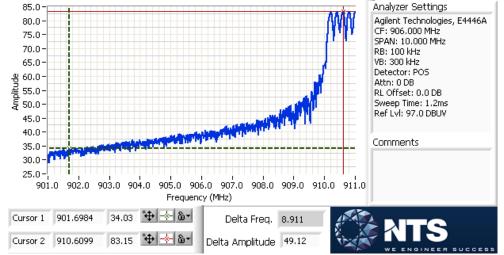
Peak Conducted Output Power (mW) =  $10^{(\text{Peak Conducted Output Power (dBm)}) / 10)$ 

Peak Conducted Output Power (W) = Peak Conducted Output Power (mW) / 1000

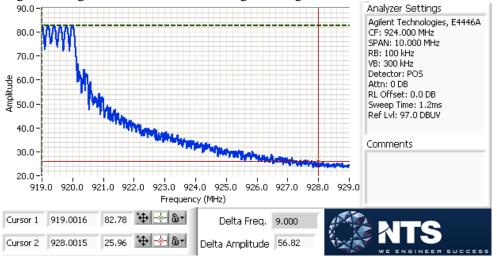
### Bandedge Compliance

<b>Regulatory Rule /</b>	CFR Title 47	CFR Title 47 §15.247(d)							
Standard									
Standard / Method of	FHSS Test P	rocedures FCC Pu	ablic Notice DA	00-705, Mar 200	00				
Measurement									
Specifications	20dB below t	he fundamental in	n any 100kHz ba	ndwidth					
<b>Deviations From Method</b>	None								
of Measurement									
Tested By	Yunus Fazilo	glu							
Date	Jul-16-2014								
Test Result	Channel Bandedge Delta at Limit Verdict Frequency (MHz) (dBc)								
	Low								
	High	928.0	-56.8	< -20dBc	Complies				
	Correspondin	g plots shown be	low						

#### Low bandedge when EUT is transmitting at its lowest channel



High bandedge when EUT is transmitting at its highest channel



<b>Regulatory Rule /</b>	CFR Title 47 §15.247(d) and §15.209(a)
Standard	
Standard / Method of	FHSS Test Procedures FCC Public Notice DA 00-705, Mar 2000
Measurement	
Specifications	20dB below the fundamental in any 100kHz bandwidth in non-restricted bands and 15.209(a) limits in all restricted bands as specified in 15.205(a)
<b>Deviations From Method</b>	None
of Measurement	
Tested By	Yunus Faziloglu
Date	Jul-17-2014
Test Result	Complies - Tabular data shown below

### Radiated Spurious Emissions

All spurious emissions in 30MHz-1GHz range were at noise floor level based on pre-scan results. The noise floor of the measurement system in this frequency range was below the generic 15.209(a) limits.

In 1GHz-10GHz range all spurious emissions other than the harmonics listed below were at noise floor level. The noise floor of the measurement system in this frequency range was below the generic 15.209(a) limits as well.

### Measurement System Settings:

30MHz – 1GHz: Peak, RBW = 100kHz, VBW = 300kHz 1GHz – 10GHz: Peak, RBW = 1MHz, VBW = 3MHz (VBW=10Hz for Average)

#### EUT transmitting on its lowest channel at 910.0MHz

Polarity /	Freq	Raw	Antenna	Cable	Preamp	Filter	Corrected	Limit	Margin
Detector	(MHz)	(dBuV)	Factor	Loss	Gain	Loss	(dBuV/m)	(dBuV/m)	(dB)
			(dB/m)	(dB)	(dB)	(dB)	at 3m	at 3m	
V-Peak	1820	76	26.9	4.1	-48.8	1.6	59.8	74	-14.2
V-Av	1820	53.6	26.9	4.1	-48.8	1.6	37.4	54	-16.6
H-Peak	1820	72.1	26.9	4.1	-48.8	1.6	55.9	74	-18.1
H-Av	1820	51.6	26.9	4.1	-48.8	1.6	35.4	54	-18.6
V-Peak	2730	54.8	28.8	4.9	-48	1.6	42.1	54	-11.9
H-Peak	2730	53.2	28.8	4.9	-48	1.6	40.5	54	-13.5
V-Peak	3640	52.4	31.6	5.7	-47	1.6	44.3	54	-9.7
H-Peak	3640	50.9	31.6	5.7	-47	1.6	42.8	54	-11.2
V-Peak	4550	49.9	32.3	6.5	-46.6	1.6	43.7	54	-10.3
H-Peak	4550	48.1	32.3	6.5	-46.6	1.6	41.9	54	-12.1
V-Peak	5460	49.3	34	6.9	-46	1.6	45.8	54	-8.2
H-Peak	5460	51	34	6.9	-46	1.6	47.5	54	-6.5
V-Peak	6370	48	34.5	7.3	-45.7	1.6	45.7	54	-8.3
H-Peak	6370	48.5	34.5	7.3	-45.7	1.6	46.2	54	-7.8

Corrected Reading (dBuV/m) = Raw Reading (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) + Preamp Gain (dB) + Filter Loss (dB)

Margin (dB) = Corrected Reading (dBuV/m) – Limit (dBuV/m)

Negative margin indicates a passing result

Polarity / Detector	Freq (MHz)	Raw (dBuV)	Antenna Factor	Cable Loss	Preamp Gain	Filter Loss	Corrected (dBuV/m)	Limit (dBuV/m)	Margin (dB)
		× ,	(dB/m)	(dB)	(dB)	(dB)	at 3m	at 3m	
V-Peak	1839.6	70.2	27	4.1	-48.8	1.6	54.1	74	-19.9
V-Av	1839.6	50.8	27	4.1	-48.8	1.6	34.7	54	-19.3
H-Peak	1839.6	66.7	27	4.1	-48.8	1.6	50.6	74	-23.4
H-Av	1839.6	46.2	27	4.1	-48.8	1.6	30.1	54	-23.9
V-Peak	2759.4	52.6	28.8	4.9	-48	1.6	39.9	54	-14.1
H-Peak	2759.4	50.6	28.8	4.9	-48	1.6	37.9	54	-16.1
V-Peak	3679.2	50.1	31.7	5.7	-47	1.6	42.1	54	-11.9
H-Peak	3679.2	50.3	31.7	5.7	-47	1.6	42.3	54	-11.7
V-Peak	4599	50.8	32.4	6.5	-46.5	1.6	44.8	54	-9.2
H-Peak	4599	52.2	32.4	6.5	-46.5	1.6	46.2	54	-7.8
V-Peak	5518.8	52.4	34	6.9	-46.1	1.6	48.8	54	-5.2
H-Peak	5518.8	54.1	34	6.9	-46.1	1.6	50.5	54	-3.5
V-Peak	6438.6	53.1	34.4	7.3	-45.5	1.6	50.9	54	-3.1
H-Peak	6438.6	52	34.4	7.3	-45.5	1.6	49.8	54	-4.2

## EUT transmitting on its highest channel at 919.8MHz

Corrected Reading (dBuV/m) = Raw Reading (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) + Preamp Gain (dB) + Filter Loss (dB)

Margin (dB) = Corrected Reading (dBuV/m) – Limit (dBuV/m)

Negative margin indicates a passing result

# End of Report

This page is intentionally left blank And marks the last page of this report