



## **Appendix C. Original Report**

Please refer to Sporton report number FR170707B as below.



# Partial FCC RF Test Report

**APPLICANT** : DAP Technologies  
**EQUIPMENT** : Rugged Mobile Tablet Computer  
**BRAND NAME** : DAP  
**MODEL NAME** : 9000WBWZV1  
**MARKETING NAME** : M9010  
**FCC ID** : T5M9000WBWZV1  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : Digital Transmission System (DTS)

The product was integrated the WLAN Module (Brand Name: Summit Data Communications / Model Name: SDC-PE15N, FCC ID: TWG-SDCPE15N) during the test.

This is a partial report, and includes the Radiated Emissions test only. The product was received on Jul. 07, 2011 and completely tested on Sep. 19, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

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SPORTON INTERNATIONAL INC.

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FCC ID : T5M9000WBWZV1

Page Number : 1 of 65

Report Issued Date : Oct. 24, 2011

Report Version : Rev. 01



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### REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR170707B	Rev. 01	Initial issue of report	Oct. 24, 2011



### SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(b)	A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.2	15.247(d)	A8.5	Frequency Band Edges	$\leq 20\text{dBc}$	Pass	-
3.3	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 12.9 dB at 0.52 MHz
3.4	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.59 dB at 36.75 MHz
3.5	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-



# **1 General Description**

## **1.1 Applicant**

**DAP Technologies**

7450 South Priest DR Tempe, AZ, US

## **1.2 Manufacturer**

**Venture Corporation Limited**

Blk5006, Ang Mo Kio Avenue 5, #03-07 TECHplace II, Singapore 569870



### 1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Rugged Mobile Tablet Computer
Brand Name	DAP
Model Name	9000WBWZV1
Marketing Name	M9010
FCC ID	T5M9000WBWZV1
Tx/Rx Frequency Range	802.11b/g/n : 2400 MHz ~ 2483.5 MHz 802.11a/n : 5725 MHz ~ 5850 MHz
Channel Spacing	802.11b/g : 5 MHz 802.11a : 20 MHz
Maximum Output Power to Antenna	<b>&lt;2400 MHz ~ 2483.5 MHz&gt;</b> 802.11b : 17.49 dBm (0.0561 W) 802.11g : 18.12 dBm (0.0649 W) 802.11n (BW 20MHz) : 17.21 dBm (0.0526 W) 802.11n (BW 40MHz) : 17.00 dBm (0.0501 W) <b>&lt;5725 MHz ~ 5850 MHz&gt;</b> 802.11a : 20.18 dBm (0.1042 W) 802.11n (BW 20MHz) : 20.17 dBm (0.1040 W) 802.11n (BW 40MHz) : 19.14 dBm (0.0820 W)
Antenna Type	PIFA Antenna
HW Version	Merlion P3
SW Version	MER_00.00.10
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

**Remark:**

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



### 1.4 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL INC.		
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>FCC/IC Registration No.</b>
	CO05-HY	03CH05HY	722060/4086B-1

### 1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ♦ ANSI C63.4-2003
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 3

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

### 1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1	iPod Earphone	Apple	N/A	FCC DoC	Unshielded, 1.0 m	N/A
2	Bluetooth Earphone	Motorola	S705	IHDT6GH1	N/A	N/A
3	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4	(USB) Mouse	DELL	MOC5UO	FCC DoC	Shielded, 1.8 m	N/A
5	(USB) Mouse	Logitech	M90	FCC DoC	Shielded, 1.8 m	N/A



## 2 Test Configuration of Equipment Under Test

### 2.1 RF Power

Preliminary tests were performed in different data rate and recorded the RF power output in the following table:

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	17.30	-	-	-
CH 06	2437 MHz	17.49	17.31	17.24	17.34
CH 11	2462 MHz	17.36	-	-	-

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	17.75	-	-	-	-	-	-	-
CH 06	2437 MHz	18.12	17.73	17.89	17.51	17.83	17.77	17.73	17.77
CH 11	2462 MHz	18.03	-	-	-	-	-	-	-

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	16.55	-	-	-	-	-	-	-
CH 06	2437 MHz	17.21	16.98	17.01	16.99	17.01	16.89	16.99	17.11
CH 11	2462 MHz	16.62	-	-	-	-	-	-	-

Channel	Frequency	2.4GHz 802.11n (BW 40MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 03	2422 MHz	16.82	-	-	-	-	-	-	-
CH 06	2437 MHz	17.00	16.80	16.55	16.75	16.94	16.88	16.81	16.78
CH 09	2452 MHz	16.53	-	-	-	-	-	-	-



Channel	Frequency	5GHz 802.11a RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745 MHz	20.18	20.13	20.04	19.48	19.87	19.42	19.79	20.01
CH157	5785 MHz	19.96	-	-	-	-	-	-	-
CH165	5825 MHz	19.55	-	-	-	-	-	-	-

Channel	Frequency	5GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745 MHz	20.17	19.85	19.34	19.87	20.01	19.52	19.65	20.11
CH157	5785 MHz	19.04	-	-	-	-	-	-	-
CH165	5825 MHz	19.18	-	-	-	-	-	-	-

Channel	Frequency	5GHz 802.11n (BW 40MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH151	5755 MHz	19.14	18.99	18.85	18.92	19.11	19.07	19.09	19.00
CH159	5795 MHz	18.48	-	-	-	-	-	-	-

**Remark:**

1. The EUT is programmed to transmit signals continuously for all testing.
2. The data rates of WLAN 802.11a/b/g/n were set in 1Mbps for 802.11b, 6Mbps for 802.11g, MCS0 for 802.11n (BW 20MHz), MCS0 for 802.11n (BW 40MHz), 6Mbps for 802.11a, MCS0 for 802.11n (BW 20MHz), and MCS0 for 802.11n (BW 40MHz) for all the test cases due to the highest RF output power.
3. Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports.



## 2.2 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Pre-scanned tests, X, Y, Z in three orthogonal panels, were conducted to determine the final configuration from all possible combinations, laptop / tablet modes.

The following table is showing the total pre-scanned test modes, and the worst cases (E2 plane for 2.4GHz and H plane for 5GHz) are recorded in this report only.

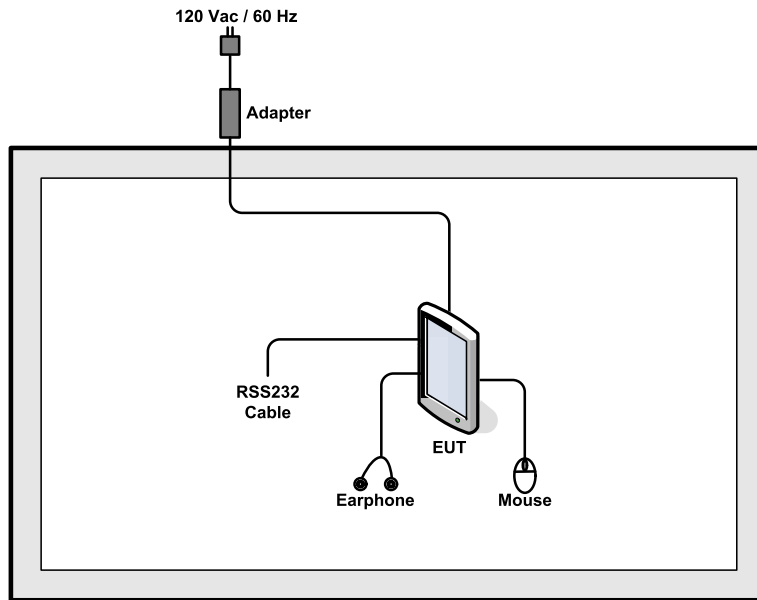
Test Cases		
Test Item	802.11b (Modulation : DSSS) 802.11g/n (Modulation : OFDM)	802.11a/n (Modulation : OFDM)
<b>Conducted TCs</b>	Mode 1: 802.11b_CH01_2412 MHz	Mode 13: 802.11a_CH149_5745 MHz
	Mode 2: 802.11b_CH06_2437 MHz	Mode 14: 802.11a_CH157_5785 MHz
	Mode 3: 802.11b_CH11_2462 MHz	Mode 15: 802.11a_CH165_5825 MHz
	Mode 4: 802.11g_CH01_2412 MHz	Mode 16: 802.11n_CH149_5745 MHz (BW 20M)
	Mode 5: 802.11g_CH06_2437 MHz	Mode 17: 802.11n_CH157_5785 MHz (BW 20M)
	Mode 6: 802.11g_CH11_2462 MHz	Mode 18: 802.11n_CH165_5825 MHz (BW 20M)
	Mode 7: 802.11n_CH01_2412 MHz (BW 20M)	Mode 19: 802.11n_CH151_5755 MHz (BW 40M)
	Mode 8: 802.11n_CH06_2437 MHz (BW 20M)	Mode 20: 802.11n_CH159_5795 MHz (BW 40M)
	Mode 9: 802.11n_CH11_2462 MHz (BW 20M)	
	Mode 10: 802.11n_CH03_2422 MHz (BW 40M)	
	Mode 11: 802.11n_CH06_2437 MHz (BW 40M)	
	Mode 12: 802.11n_CH09_2452 MHz (BW 40M)	



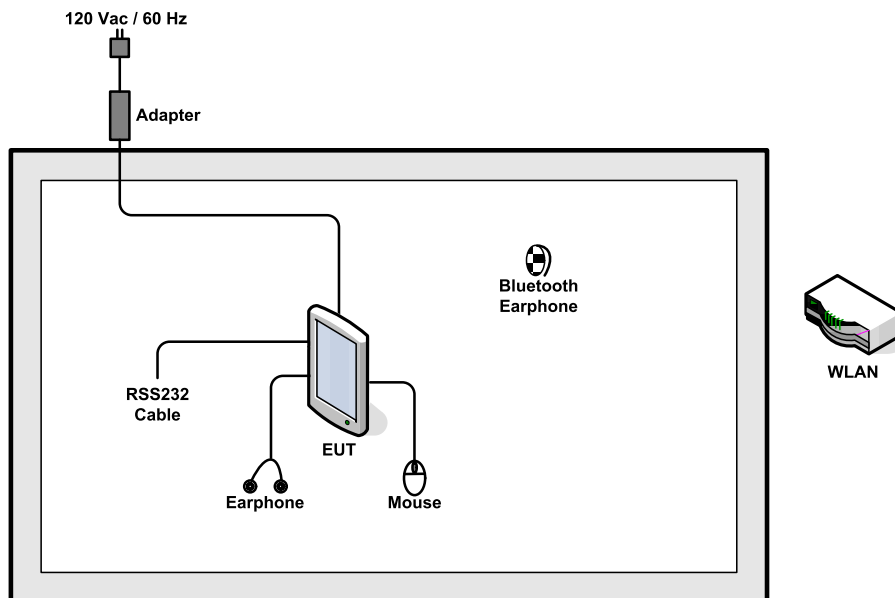
Test Cases		
Test Item	802.11b (Modulation : DSSS) 802.11g/n (Modulation : OFDM)	802.11a/n (Modulation : OFDM)
<b>Radiated TCs</b>	Mode 1: 802.11b_CH01_2412 MHz Mode 2: 802.11b_CH06_2437 MHz Mode 3: 802.11b_CH11_2462 MHz Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n_CH01_2412 MHz (BW 20M) Mode 8: 802.11n_CH06_2437 MHz (BW 20M) Mode 9: 802.11n_CH11_2462 MHz (BW 20M) Mode 10: 802.11n_CH03_2422 MHz (BW 40M) Mode 11: 802.11n_CH06_2437 MHz (BW 40M) Mode 12: 802.11n_CH09_2452 MHz (BW 40M)	Mode 13: 802.11a_CH149_5745 MHz Mode 14: 802.11a_CH157_5785 MHz Mode 15: 802.11a_CH165_5825 MHz Mode 16: 802.11n_CH149_5745 MHz (BW 20M) Mode 17: 802.11n_CH157_5785 MHz (BW 20M) Mode 18: 802.11n_CH165_5825 MHz (BW 20M) Mode 19: 802.11n_CH151_5755 MHz (BW 40M) Mode 20: 802.11n_CH159_5795 MHz (BW 40M)
<b>AC Conducted Emission</b>	Mode 1 : WLAN Link + Bluetooth Link + Zigbee On + TC + Adapter	
<b>Remark:</b> TC stands for Test Configuration, and consists of iPod earphone, RS232 Cable and Mouse.		

## 2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>





## **2.4 RF Utility**

The programmed RF utility "SRU", is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

### 3 Test Result

#### 3.1 Output Power Measurement

##### 3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

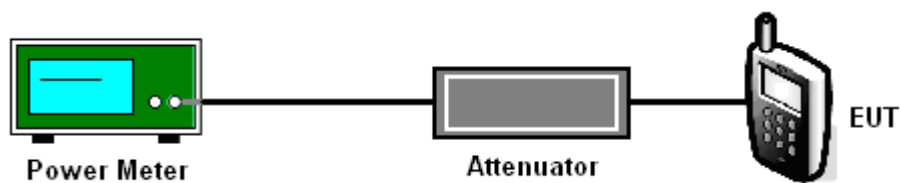
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the power meter by a low loss cable.
3. Measure the power by power meter.

##### 3.1.4 Test Setup





## 3.1.5 Test Result of Output Power

Test Mode :	Mode 1, 2, 3	Temperature :	23~25°C
Test Engineer :	Pinkston Tu	Relative Humidity :	51~54%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	17.30	30	Pass
06	2437	17.49	30	Pass
11	2462	17.36	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	23~25°C
Test Engineer :	Pinkston Tu	Relative Humidity :	51~54%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	17.75	30	Pass
06	2437	18.12	30	Pass
11	2462	18.03	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	23~25°C
Test Engineer :	Pinkston Tu	Relative Humidity :	51~54%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	16.55	30	Pass
06	2437	17.21	30	Pass
11	2462	16.62	30	Pass

Test Mode :	Mode 10, 11, 12	Temperature :	23~25°C
Test Engineer :	Pinkston Tu	Relative Humidity :	51~54%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422	16.82	30	Pass
06	2437	17.00	30	Pass
09	2452	16.53	30	Pass





<b>Test Mode :</b>	Mode 13, 14, 15	<b>Temperature :</b>	23~25°C
<b>Test Engineer :</b>	Pinkston Tu	<b>Relative Humidity :</b>	51~54%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	20.18	30	Pass
157	5785	19.96	30	Pass
165	5825	19.55	30	Pass

<b>Test Mode :</b>	Mode 16, 17, 18	<b>Temperature :</b>	23~25°C
<b>Test Engineer :</b>	Pinkston Tu	<b>Relative Humidity :</b>	51~54%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	20.17	30	Pass
157	5785	19.04	30	Pass
165	5825	19.18	30	Pass

<b>Test Mode :</b>	Mode 19, 20	<b>Temperature :</b>	23~25°C
<b>Test Engineer :</b>	Pinkston Tu	<b>Relative Humidity :</b>	51~54%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
151	5755	19.14	30	Pass
159	5795	18.48	30	Pass



## **3.2 Band Edges Measurement**

### **3.2.1 Limit of Band Edges**

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

### **3.2.2 Measuring Instruments**

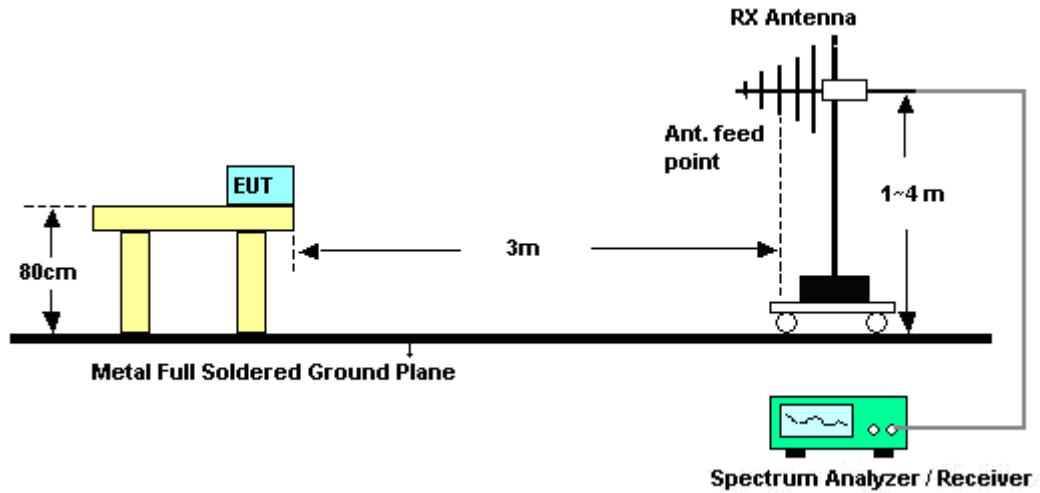
See list of measuring instruments of this test report.

### **3.2.3 Test Procedures**

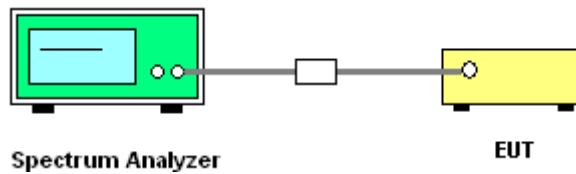
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) > RBW. Band edge emissions must be at least 20 dB below the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the output power of this device was measured by power meter, the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

### 3.2.4 Test Setup

#### <Radiated Band Edges>



#### <Conducted Band Edges>





3.2.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	23~26°C
Test Band :	802.11b	Relative Humidity :	53~56%
Test Channel :	01	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2369.28	53.79	-20.21	74	51.3	32	4.57	34.08	126	22	Peak
2369.28	43.69	-10.31	54	41.2	32	4.57	34.08	126	22	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.04	52.88	-21.12	74	50.36	32.02	4.58	34.08	100	329	Peak
2389.04	43.35	-10.65	54	40.83	32.02	4.58	34.08	100	329	Average

Test Mode :	Mode 3	Temperature :	23~26°C
Test Band :	802.11b	Relative Humidity :	53~56%
Test Channel :	11	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2498.29	52.24	-21.76	74	49.58	32.1	4.64	34.08	121	5	Peak
2498.29	44.94	-9.06	54	41.48	32.1	4.64	34.08	121	5	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2499.24	49.02	-24.98	74	46.36	32.1	4.64	34.08	100	339	Peak
2499.24	37.96	-16.04	54	35.3	32.1	4.64	34.08	100	339	Average



Test Mode :	Mode 4	Temperature :	23~26°C
Test Band :	802.11g	Relative Humidity :	53~56%
Test Channel :	01	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.99	50.64	-23.36	74	48.12	32.02	4.58	34.08	156	8	Peak
2389.99	36.66	-17.34	54	34.14	32.02	4.58	34.08	156	8	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.8	52.21	-21.79	74	49.69	32.02	4.58	34.08	108	241	Peak
2389.8	39.15	-14.85	54	36.63	32.02	4.58	34.08	108	241	Average

Test Mode :	Mode 6	Temperature :	23~26°C
Test Band :	802.11g	Relative Humidity :	53~56%
Test Channel :	11	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2498.1	49.51	-24.49	74	46.85	32.1	4.64	34.08	183	36	Peak
2498.1	36.46	-17.54	54	33.8	32.1	4.64	34.08	183	36	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	52.35	-21.65	74	49.7	32.09	4.64	34.08	103	239	Peak
2483.5	37.87	-16.13	54	35.22	32.09	4.64	34.08	103	239	Average



Test Mode :	Mode 7	Temperature :	23~26°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	53~56%
Test Channel :	01	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2387.14	52.2	-21.8	74	49.68	32.02	4.58	34.08	155	7	Peak
2387.14	38.64	-15.36	54	36.12	32.02	4.58	34.08	155	7	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.61	54.46	-19.54	74	51.94	32.02	4.58	34.08	109	238	Peak
2389.61	39.74	-14.26	54	37.22	32.02	4.58	34.08	109	238	Average

Test Mode :	Mode 9	Temperature :	23~26°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	53~56%
Test Channel :	11	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	50.92	-23.08	74	48.27	32.09	4.64	34.08	183	12	Peak
2483.5	36.88	-17.12	54	34.23	32.09	4.64	34.08	183	12	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2485.56	52.3	-21.7	74	49.65	32.09	4.64	34.08	102	235	Peak
2485.56	38.2	-15.8	54	35.55	32.09	4.64	34.08	102	235	Average



Test Mode :	Mode 10	Temperature :	23~26°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	53~56%
Test Channel :	03	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386.95	57.67	-16.33	74	55.15	32.02	4.58	34.08	120	14	Peak
2386.95	39.78	-14.22	54	37.26	32.02	4.58	34.08	120	14	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386.57	58.26	-15.74	74	55.74	32.02	4.58	34.08	107	231	Peak
2386.57	40.55	-13.45	54	38.03	32.02	4.58	34.08	107	231	Average

Test Mode :	Mode 12	Temperature :	23~26°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	53~56%
Test Channel :	09	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.66	55.51	-18.49	74	52.86	32.09	4.64	34.08	150	19	Peak
2483.66	39.34	-14.66	54	36.69	32.09	4.64	34.08	150	19	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2484.23	57.47	-16.53	74	54.82	32.09	4.64	34.08	130	353	Peak
2484.23	39.41	-14.59	54	36.76	32.09	4.64	34.08	130	353	Average



Test Mode :	Mode 13	Temperature :	23~26°C
Test Band :	802.11a	Relative Humidity :	53~56%
Test Channel :	149	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	63.47	-11.63	75.1	54.83	34.66	7.17	33.19	100	22	Peak

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	60.86	-23.27	84.13	52.22	34.66	7.17	33.19	100	317	Peak

Test Mode :	Mode 15	Temperature :	23~26°C
Test Band :	802.11a	Relative Humidity :	53~56%
Test Channel :	165	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5850	55.94	-18.58	74.52	47	34.85	7.29	33.2	130	34	Peak

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5850	58.06	-25.42	83.48	49.12	34.85	7.29	33.2	100	320	Peak





Test Mode :	Mode 16	Temperature :	23~26°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	53~56%
Test Channel :	149	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	60.92	-16.74	77.66	52.28	34.66	7.17	33.19	121	25	Peak

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	73.45	-10.26	83.71	64.81	34.66	7.17	33.19	100	314	Peak

Test Mode :	Mode 18	Temperature :	23~26°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	53~56%
Test Channel :	165	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5850	61.23	-14.35	75.58	52.29	34.85	7.29	33.2	110	13	Peak

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5850	72.06	-12.06	84.12	63.12	34.85	7.29	33.2	100	323	Peak



Test Mode :	Mode 19	Temperature :	23~26°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	53~56%
Test Channel :	151	Test Engineer :	Wii Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	66.71	-7.45	74.16	58.07	34.66	7.17	33.19	100	19	Peak

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	74.92	-7.73	82.65	66.28	34.66	7.17	33.19	100	320	Peak



### 3.3 AC Conducted Emission Measurement

#### 3.3.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

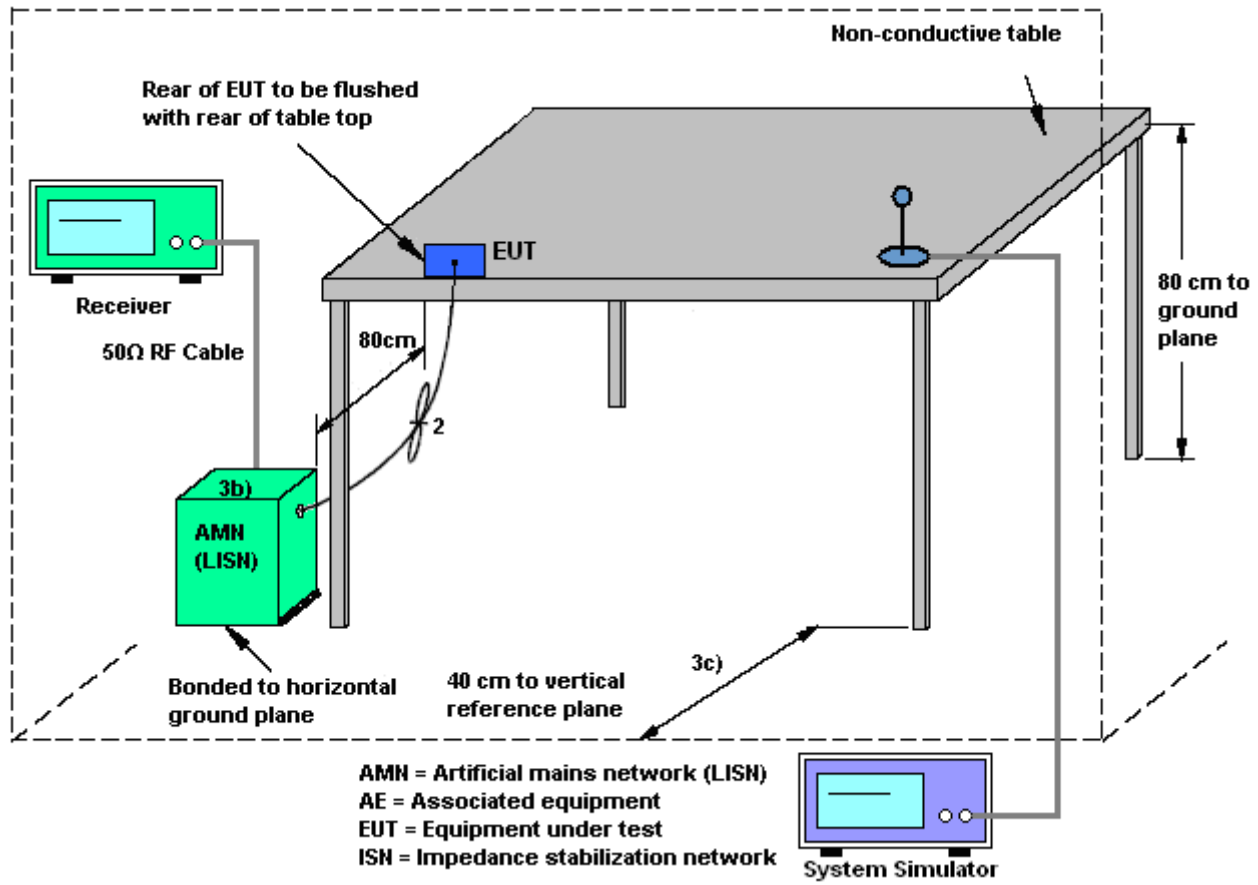
#### 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.3.3 Test Procedures

4. The testing follows the guidelines in ANSI C63.4-2003.
5. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
6. Connect EUT to the power mains through a line impedance stabilization network (LISN).
7. All the support units are connecting to the other LISN.
8. The LISN provides 50 ohm coupling impedance for the measuring instrument.
9. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
10. Both sides of AC line were checked for maximum conducted interference.
11. The frequency range from 150 kHz to 30 MHz was searched.
12. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

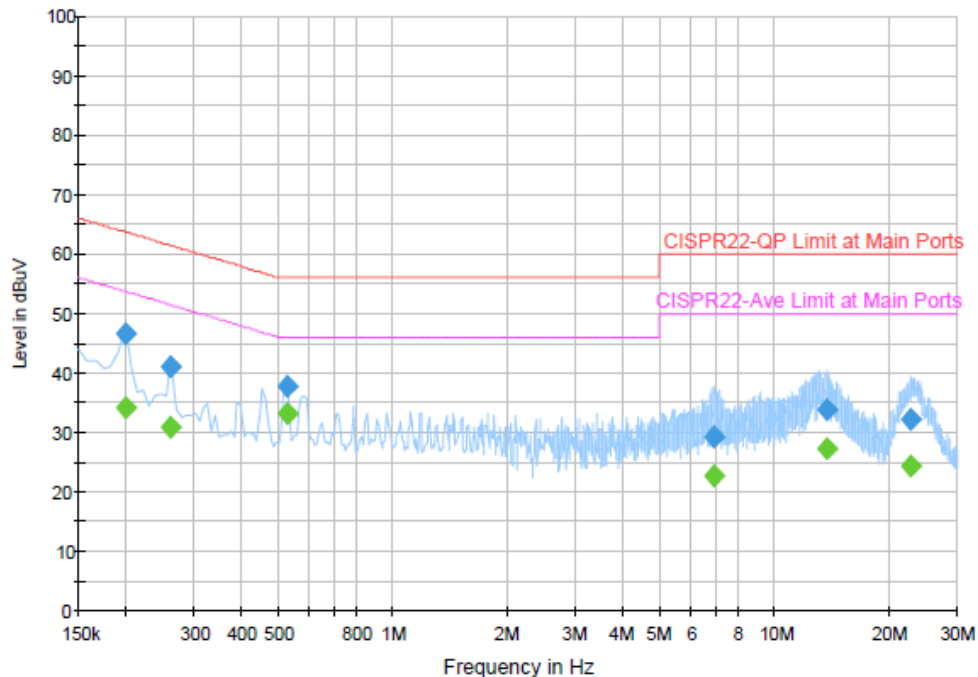
### 3.3.4 Test Setup





### 3.3.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link + Bluetooth Link + Zigbee On + TC + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



#### Final Result 1

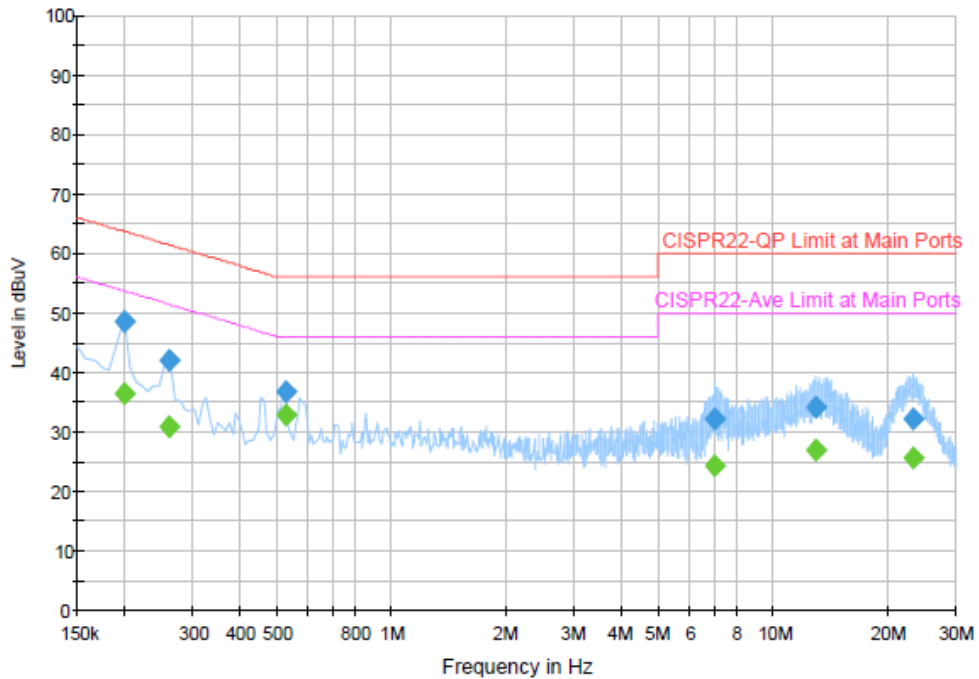
Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.198000	46.6	Off	L1	19.4	17.1	63.7
0.262000	41.0	Off	L1	19.4	20.4	61.4
0.526000	37.6	Off	L1	19.4	18.4	56.0
6.934000	29.1	Off	L1	19.5	30.9	60.0
13.694000	33.9	Off	L1	19.6	26.1	60.0
22.550000	32.0	Off	L1	19.8	28.0	60.0

#### Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.198000	34.2	Off	L1	19.4	19.5	53.7
0.262000	30.7	Off	L1	19.4	20.7	51.4
0.526000	33.1	Off	L1	19.4	12.9	46.0
6.934000	22.6	Off	L1	19.5	27.4	50.0
13.694000	27.2	Off	L1	19.6	22.8	50.0
22.550000	24.3	Off	L1	19.8	25.7	50.0



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link + Bluetooth Link + Zigbee On + TC + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.198000	48.4	Off	N	19.4	15.3	63.7
0.262000	42.1	Off	N	19.4	19.3	61.4
0.526000	36.8	Off	N	19.4	19.2	56.0
7.014000	32.1	Off	N	19.6	27.9	60.0
12.918000	34.0	Off	N	19.7	26.0	60.0
23.262000	32.1	Off	N	19.8	27.9	60.0

**Final Result 2**

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.198000	36.3	Off	N	19.4	17.4	53.7
0.262000	30.7	Off	N	19.4	20.7	51.4
0.526000	32.8	Off	N	19.4	13.2	46.0
7.014000	24.4	Off	N	19.6	25.6	50.0
12.918000	27.0	Off	N	19.7	23.0	50.0
23.262000	25.6	Off	N	19.8	24.4	50.0



### 3.4 Radiated Emission Measurement

#### 3.4.1 Limit of Radiated Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/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

#### 3.4.2 Measuring Instruments

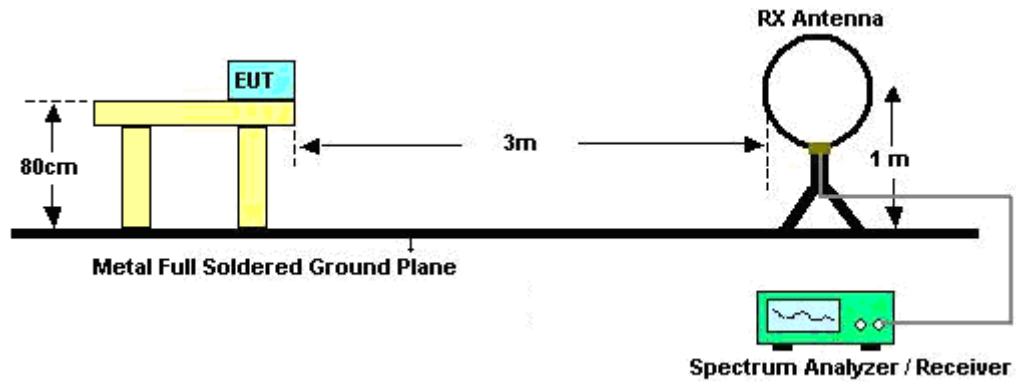
See list of measuring instruments of this test report.

#### 3.4.3 Test Procedures

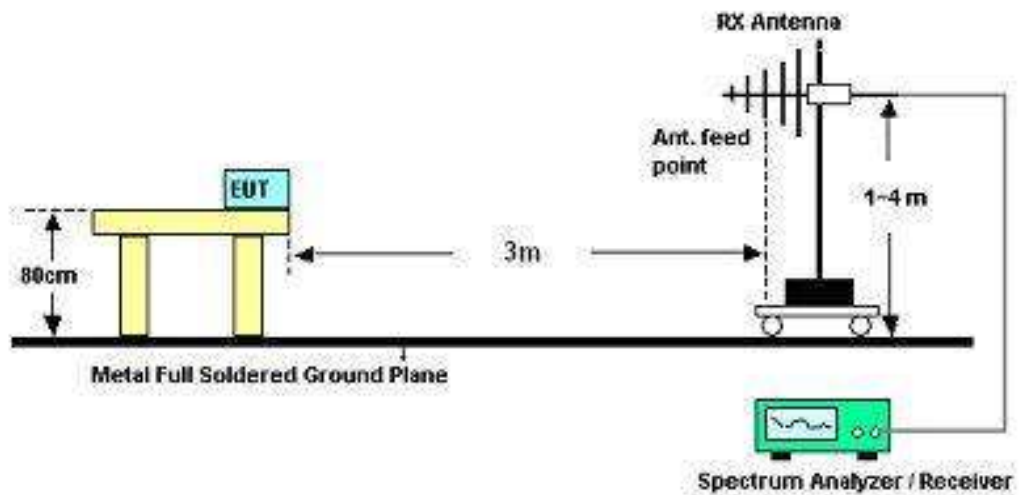
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
  - (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold.
  - (2) Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.  
Distance extrapolation factor =  $20 \log(\text{specific distance [3m]} / \text{test distance [1m]})$  (dB)
3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

### 3.4.4 Test Setup

For radiated emissions below 30MHz

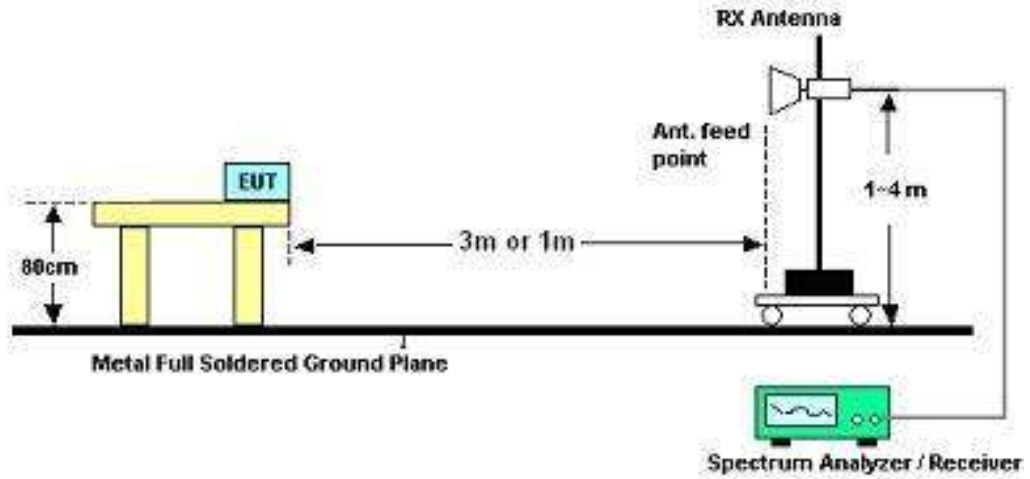


For radiated emissions from 30MHz to 1GHz





For radiated emissions above 1GHz



### 3.4.5 Test Results of Radiated Emissions (9kHz ~ 30MHz)

Test Engineer :	Wii Chang	Temperature :	23~26°C	
		Relative Humidity :	53~56%	
Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.



3.4.6 Test Result of Radiated Emission (30MHz ~ 10<sup>th</sup> Harmonic)

Test Mode :	Mode 1	Temperature :	23~26°C
Test Channel :	01	Relative Humidity :	53~56%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
36.75	35.6	-4.4	40	51.79	14.59	0.74	31.52	100	54	Peak
116.67	28.71	-14.79	43.5	48.45	10.6	1.18	31.52	-	-	Peak
233.31	34.43	-11.57	46	53.82	10.52	1.59	31.5	-	-	Peak
311.9	33.09	-12.91	46	50.07	12.49	1.81	31.28	-	-	Peak
479.9	36.96	-9.04	46	49.27	16.61	2.19	31.11	-	-	Peak
528.2	34.14	-11.86	46	45.32	17.54	2.29	31.01	-	-	Peak
2369.28	43.69	-10.31	54	41.2	32	4.57	34.08	126	22	Average
2369.28	53.79	-20.21	74	51.3	32	4.57	34.08	126	22	Peak
2412	98.31	-	-	95.77	32.03	4.59	34.08	126	22	Average
2412	102.59	-	-	100.05	32.03	4.59	34.08	126	22	Peak
2498	37.27	-16.73	54	34.61	32.1	4.64	34.08	126	22	Average
2498	47.53	-26.47	74	44.87	32.1	4.64	34.08	126	22	Peak



Test Mode :	Mode 1	Temperature :	23~26°C
Test Channel :	01	Relative Humidity :	53~56%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
79.95	29.02	-10.98	40	53.05	6.54	0.98	31.55	100	21	Peak
116.13	22.13	-21.37	43.5	41.87	10.6	1.18	31.52	-	-	Peak
264.09	21.85	-24.15	46	39.82	11.8	1.69	31.46	-	-	Peak
300	26.05	-19.95	46	43.38	12.16	1.78	31.27	-	-	Peak
331.5	21.15	-24.85	46	37.6	12.99	1.86	31.3	-	-	Peak
456.1	27.54	-18.46	46	40.48	16.05	2.15	31.14	-	-	Peak
2389.04	43.35	-10.65	54	40.83	32.02	4.58	34.08	100	329	Average
2389.04	52.88	-21.12	74	50.36	32.02	4.58	34.08	100	329	Peak
2412	96.75	-	-	94.21	32.03	4.59	34.08	100	329	Average
2412	101.53	-	-	98.99	32.03	4.59	34.08	100	329	Peak
2494	34.41	-19.59	54	31.75	32.1	4.64	34.08	100	329	Average
2494	46.22	-27.78	74	43.56	32.1	4.64	34.08	100	329	Peak



<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.97	35.14	-4.86	40	49.33	16.63	0.72	31.54	100	22	Peak
67.8	20.14	-19.86	40	45.04	5.7	0.9	31.5	-	-	Peak
163.11	28.74	-14.76	43.5	49.46	9.44	1.35	31.51	-	-	Peak
311.9	33.09	-12.91	46	50.07	12.49	1.81	31.28	-	-	Peak
400.1	27.19	-18.81	46	41.58	14.78	2.01	31.18	-	-	Peak
449.8	23.82	-22.18	46	36.91	15.92	2.14	31.15	-	-	Peak
2358	39.35	-14.65	54	36.87	31.99	4.57	34.08	124	1	Average
2358	49.35	-24.65	74	46.87	31.99	4.57	34.08	124	1	Peak
2437	99.94	-	-	97.35	32.06	4.61	34.08	124	1	Average
2437	104.33	-	-	101.74	32.06	4.61	34.08	124	1	Peak
2484	36.25	-17.75	54	33.6	32.09	4.64	34.08	124	1	Average
2484	48.8	-25.2	74	46.15	32.09	4.64	34.08	124	1	Peak



<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
57.81	25.37	-14.63	40	50.26	5.8	0.85	31.54	100	31	Peak
99.66	19.26	-24.24	43.5	40.36	9.39	1.09	31.58	-	-	Peak
149.34	17.39	-26.11	43.5	37.33	10.29	1.27	31.5	-	-	Peak
381.2	21.92	-24.08	46	36.9	14.28	1.97	31.23	-	-	Peak
449.8	24.21	-21.79	46	37.3	15.92	2.14	31.15	-	-	Peak
647.9	24.84	-21.16	46	34.11	18.92	2.58	30.77	-	-	Peak
2358	38.91	-15.09	54	36.43	31.99	4.57	34.08	101	332	Average
2358	50.34	-23.66	74	47.86	31.99	4.57	34.08	101	332	Peak
2437	95.77	-	-	93.18	32.06	4.61	34.08	101	332	Average
2437	100.49	-	-	97.9	32.06	4.61	34.08	101	332	Peak
2484	34.8	-19.2	54	32.15	32.09	4.64	34.08	101	332	Average
2484	46.44	-27.56	74	43.79	32.09	4.64	34.08	101	332	Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
38.1	32.24	-7.76	40	48.85	14.15	0.75	31.51	100	23	Peak
82.92	23.05	-16.95	40	46.42	7.16	1.02	31.55	-	-	Peak
233.31	31.43	-14.57	46	50.82	10.52	1.59	31.5	-	-	Peak
359.5	29.89	-16.11	46	45.52	13.73	1.92	31.28	-	-	Peak
479.9	33.96	-12.04	46	46.27	16.61	2.19	31.11	-	-	Peak
600.3	29.58	-16.42	46	39.31	18.72	2.42	30.87	-	-	Peak
2388	38.44	-15.56	54	35.92	32.02	4.58	34.08	121	5	Average
2388	48.72	-25.28	74	46.2	32.02	4.58	34.08	121	5	Peak
2462	98.94	-	-	96.33	32.07	4.62	34.08	121	5	Average
2462	102.76	-	-	100.15	32.07	4.62	34.08	121	5	Peak
2498.29	44.94	-9.06	54	41.48	32.1	4.64	34.08	121	5	Average
2498.29	52.24	-21.76	74	49.58	32.1	4.64	34.08	121	5	Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
38.64	27.9	-12.1	40	44.96	13.7	0.75	31.51	-	-	Peak
79.95	28.02	-11.98	40	52.05	6.54	0.98	31.55	100	21	Peak
209.55	22.89	-20.61	43.5	44.03	8.83	1.5	31.47	-	-	Peak
300	25.05	-20.95	46	42.38	12.16	1.78	31.27	-	-	Peak
487.6	31.83	-14.17	46	43.93	16.79	2.21	31.1	-	-	Peak
647.9	23.84	-22.16	46	33.11	18.92	2.58	30.77	-	-	Peak
2384	36.63	-17.37	54	34.13	32	4.58	34.08	100	339	Average
2384	48.25	-25.75	74	45.75	32	4.58	34.08	100	339	Peak
2462	94.97	-	-	92.36	32.07	4.62	34.08	100	339	Average
2462	98.67	-	-	96.06	32.07	4.62	34.08	100	339	Peak
2499.24	37.96	-16.04	54	35.3	32.1	4.64	34.08	100	339	Average
2499.24	49.02	-24.98	74	46.36	32.1	4.64	34.08	100	339	Peak



Test Mode :	Mode 4	Temperature :	23~26°C
Test Channel :	01	Relative Humidity :	53~56%
Test Engineer :	Wii Chang	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.35	34.47	-5.53	40	47.53	17.78	0.71	31.55	100	32	Peak
82.92	26.05	-13.95	40	49.42	7.16	1.02	31.55	-	-	Peak
233.31	34.43	-11.57	46	53.82	10.52	1.59	31.5	-	-	Peak
331.5	27.71	-18.29	46	44.16	12.99	1.86	31.3	-	-	Peak
464.5	28.8	-17.2	46	41.51	16.25	2.17	31.13	-	-	Peak
600.3	32.58	-13.42	46	42.31	18.72	2.42	30.87	-	-	Peak
2389.99	36.66	-17.34	54	34.14	32.02	4.58	34.08	156	8	Average
2389.99	50.64	-23.36	74	48.12	32.02	4.58	34.08	156	8	Peak
2412	85.57	-	-	83.03	32.03	4.59	34.08	156	8	Average
2412	99.68	-	-	97.14	32.03	4.59	34.08	156	8	Peak
2494	33.39	-20.61	54	30.73	32.1	4.64	34.08	156	8	Average
2494	46	-28	74	43.34	32.1	4.64	34.08	156	8	Peak





<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
36.75	27.27	-12.73	40	43.46	14.59	0.74	31.52	100	45	Peak
116.13	22.13	-21.37	43.5	41.87	10.6	1.18	31.52	-	-	Peak
199.83	25.62	-17.88	43.5	47.46	8.15	1.46	31.45	-	-	Peak
300	24.05	-21.95	46	41.38	12.16	1.78	31.27	-	-	Peak
456.1	27.54	-18.46	46	40.48	16.05	2.15	31.14	-	-	Peak
724.9	23.56	-22.44	46	31.89	19.6	2.7	30.63	-	-	Peak
2389.8	39.15	-14.85	54	36.63	32.02	4.58	34.08	108	241	Average
2389.8	52.21	-21.79	74	49.69	32.02	4.58	34.08	108	241	Peak
2412	86.96	-	-	84.42	32.03	4.59	34.08	108	241	Average
2412	101.17	-	-	98.63	32.03	4.59	34.08	108	241	Peak
2490	34.93	-19.07	54	32.27	32.1	4.64	34.08	108	241	Average
2490	47.05	-26.95	74	44.39	32.1	4.64	34.08	108	241	Peak



<b>Test Mode :</b>	Mode 5	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.35	36.21	-3.79	40	49.27	17.78	0.71	31.55	-	-	Peak
36.75	36.41	-3.59	40	52.6	14.59	0.74	31.52	200	147	Peak
203.07	35.37	-8.13	43.5	57	8.35	1.47	31.45	-	-	Peak
479.9	37.11	-8.89	46	49.42	16.61	2.19	31.11	-	-	Peak
600.3	36.63	-9.37	46	46.36	18.72	2.42	30.87	-	-	Peak
787.9	34.94	-11.06	46	41.89	20.78	2.81	30.54	-	-	Peak
2390	36.62	-17.38	54	34.1	32.02	4.58	34.08	153	10	Average
2390	48.05	-25.95	74	45.53	32.02	4.58	34.08	153	10	Peak
2437	86.67	-	-	84.08	32.06	4.61	34.08	153	10	Average
2437	100.82	-	-	98.23	32.06	4.61	34.08	153	10	Peak
2484	34.68	-19.32	54	32.03	32.09	4.64	34.08	153	10	Average
2484	48.39	-25.61	74	45.74	32.09	4.64	34.08	153	10	Peak



Test Mode :	Mode 5	Temperature :	23~26°C
Test Channel :	06	Relative Humidity :	53~56%
Test Engineer :	Wii Chang	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
36.75	31.23	-8.77	40	47.42	14.59	0.74	31.52	200	25	Peak
60.51	25.05	-14.95	40	50.42	5.32	0.87	31.56	-	-	Peak
216.03	27.2	-18.8	46	47.85	9.3	1.53	31.48	-	-	Peak
479.9	29.66	-16.34	46	41.97	16.61	2.19	31.11	-	-	Peak
600.3	27.87	-18.13	46	37.6	18.72	2.42	30.87	-	-	Peak
750.1	28.96	-17.04	46	36.68	20.07	2.75	30.54	-	-	Peak
2390	38.08	-15.92	54	35.56	32.02	4.58	34.08	104	242	Average
2390	49.56	-24.44	74	47.04	32.02	4.58	34.08	104	242	Peak
2437	86.27	-	-	83.68	32.06	4.61	34.08	104	242	Average
2437	100.77	-	-	98.18	32.06	4.61	34.08	104	242	Peak
2486	36.47	-17.53	54	33.82	32.09	4.64	34.08	104	242	Average
2486	48.73	-25.27	74	46.08	32.09	4.64	34.08	104	242	Peak



<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
38.64	33.67	-6.33	40	50.73	13.7	0.75	31.51	198	26	Peak
76.71	29.45	-10.55	40	53.71	6.32	0.97	31.55	-	-	Peak
199.83	35.98	-7.52	43.5	57.82	8.15	1.46	31.45	-	-	Peak
479.9	37.74	-8.26	46	50.05	16.61	2.19	31.11	-	-	Peak
600.3	35.87	-10.13	46	45.6	18.72	2.42	30.87	-	-	Peak
825	34.05	-11.95	46	40.48	21.21	2.88	30.52	-	-	Peak
2374	34.62	-19.38	54	32.13	32	4.57	34.08	183	36	Average
2374	47.57	-26.43	74	45.08	32	4.57	34.08	183	36	Peak
2462	85.8	-	-	83.19	32.07	4.62	34.08	183	36	Average
2462	99.97	-	-	97.36	32.07	4.62	34.08	183	36	Peak
2498.1	36.46	-17.54	54	33.8	32.1	4.64	34.08	183	36	Average
2498.1	49.51	-24.49	74	46.85	32.1	4.64	34.08	183	36	Peak



<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
36.75	33.49	-6.51	40	49.68	14.59	0.74	31.52	200	21	Peak
44.85	29.93	-10.07	40	50.35	10.37	0.77	31.56	-	-	Peak
216.03	27.14	-18.86	46	47.79	9.3	1.53	31.48	-	-	Peak
479.9	29.41	-16.59	46	41.72	16.61	2.19	31.11	-	-	Peak
600.3	30.33	-15.67	46	40.06	18.72	2.42	30.87	-	-	Peak
750.1	28.94	-17.06	46	36.66	20.07	2.75	30.54	-	-	Peak
2376	35.78	-18.22	54	33.29	32	4.57	34.08	103	239	Average
2376	47.48	-26.52	74	44.99	32	4.57	34.08	103	239	Peak
2462	86.27	-	-	83.66	32.07	4.62	34.08	103	239	Average
2462	100.84	-	-	98.23	32.07	4.62	34.08	103	239	Peak
2483.5	37.87	-16.13	54	35.22	32.09	4.64	34.08	103	239	Average
2483.5	52.35	-21.65	74	49.7	32.09	4.64	34.08	103	239	Peak



<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2387.14	38.64	-15.36	54	36.12	32.02	4.58	34.08	155	7	Average
2387.14	52.2	-21.8	74	49.68	32.02	4.58	34.08	155	7	Peak
2412	81.02	-	-	78.48	32.03	4.59	34.08	155	7	Average
2412	102.79	-	-	100.25	32.03	4.59	34.08	155	7	Peak
2484	33.84	-20.16	54	31.19	32.09	4.64	34.08	155	7	Average
2484	45.35	-28.65	74	42.7	32.09	4.64	34.08	155	7	Peak

<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.61	39.74	-14.26	54	37.22	32.02	4.58	34.08	109	238	Average
2389.61	54.46	-19.54	74	51.94	32.02	4.58	34.08	109	238	Peak
2412	81.33	-	-	78.79	32.03	4.59	34.08	109	238	Average
2412	101.67	-	-	99.13	32.03	4.59	34.08	109	238	Peak
2496	34.95	-19.05	54	32.29	32.1	4.64	34.08	109	238	Average
2496	46.76	-27.24	74	44.1	32.1	4.64	34.08	109	238	Peak



<b>Test Mode :</b>	Mode 8	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	38.8	-15.2	54	36.28	32.02	4.58	34.08	151	13	Average
2390	52.23	-21.77	74	49.71	32.02	4.58	34.08	151	13	Peak
2437	82	-	-	79.41	32.06	4.61	34.08	151	13	Average
2437	103.38	-	-	100.79	32.06	4.61	34.08	151	13	Peak
2484	35.92	-18.08	54	33.27	32.09	4.64	34.08	151	13	Average
2484	49.21	-24.79	74	46.56	32.09	4.64	34.08	151	13	Peak

<b>Test Mode :</b>	Mode 8	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	38.24	-15.76	54	35.72	32.02	4.58	34.08	106	240	Average
2390	50.98	-23.02	74	48.46	32.02	4.58	34.08	106	240	Peak
2437	81.63	-	-	79.04	32.06	4.61	34.08	106	240	Average
2437	102.9	-	-	100.31	32.06	4.61	34.08	106	240	Peak
2484	36.28	-17.72	54	33.63	32.09	4.64	34.08	106	240	Average
2484	48.96	-25.04	74	46.31	32.09	4.64	34.08	106	240	Peak



<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2368	35.21	-18.79	54	32.73	31.99	4.57	34.08	183	12	Average
2368	47.77	-26.23	74	45.29	31.99	4.57	34.08	183	12	Peak
2462	81.78	-	-	79.17	32.07	4.62	34.08	183	12	Average
2462	102.68	-	-	100.07	32.07	4.62	34.08	183	12	Peak
2483.5	36.88	-17.12	54	34.23	32.09	4.64	34.08	183	12	Average
2483.5	50.92	-23.08	74	48.27	32.09	4.64	34.08	183	12	Peak

<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2384	35.4	-18.6	54	32.9	32	4.58	34.08	102	235	Average
2384	48.18	-25.82	74	45.68	32	4.58	34.08	102	235	Peak
2462	81.31	-	-	78.7	32.07	4.62	34.08	102	235	Average
2462	101.35	-	-	98.74	32.07	4.62	34.08	102	235	Peak
2485.56	38.2	-15.8	54	35.55	32.09	4.64	34.08	102	235	Average
2485.56	52.3	-21.7	74	49.65	32.09	4.64	34.08	102	235	Peak





<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	03	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2422 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386.95	39.78	-14.22	54	37.26	32.02	4.58	34.08	120	14	Average
2386.95	57.67	-16.33	74	55.15	32.02	4.58	34.08	120	14	Peak
2422	70.82	-	-	68.27	32.04	4.59	34.08	120	14	Average
2422	100.22	-	-	97.67	32.04	4.59	34.08	120	14	Peak
2500	34.36	-19.64	54	31.7	32.1	4.64	34.08	120	14	Average
2500	46.97	-27.03	74	44.31	32.1	4.64	34.08	120	14	Peak

<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	03	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2422 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386.57	40.55	-13.45	54	38.03	32.02	4.58	34.08	107	231	Average
2386.57	58.26	-15.74	74	55.74	32.02	4.58	34.08	107	231	Peak
2422	71.76	-	-	69.21	32.04	4.59	34.08	107	231	Average
2422	99.55	-	-	97	32.04	4.59	34.08	107	231	Peak
2484	34.78	-19.22	54	32.13	32.09	4.64	34.08	107	231	Average
2484	46.97	-27.03	74	44.32	32.09	4.64	34.08	107	231	Peak



<b>Test Mode :</b>	Mode 11	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.42	37.29	-16.71	54	34.77	32.02	4.58	34.08	152	14	Average
2389.42	51.83	-22.17	74	49.31	32.02	4.58	34.08	152	14	Peak
2437	72.61	-	-	70.02	32.06	4.61	34.08	152	14	Average
2437	100.63	-	-	98.04	32.06	4.61	34.08	152	14	Peak
2483.5	35.32	-18.68	54	32.67	32.09	4.64	34.08	152	14	Average
2483.5	49.05	-24.95	74	46.4	32.09	4.64	34.08	152	14	Peak

<b>Test Mode :</b>	Mode 11	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.61	37.45	-16.55	54	34.93	32.02	4.58	34.08	107	237	Average
2389.61	51.87	-22.13	74	49.35	32.02	4.58	34.08	107	237	Peak
2437	71.97	-	-	69.38	32.06	4.61	34.08	107	237	Average
2437	99.14	-	-	96.55	32.06	4.61	34.08	107	237	Peak
2484.23	35.91	-18.09	54	33.26	32.09	4.64	34.08	107	237	Average
2484.23	50.81	-23.19	74	48.16	32.09	4.64	34.08	107	237	Peak



<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	09	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2452 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	35.94	-18.06	54	33.42	32.02	4.58	34.08	150	19	Average
2390	49.41	-24.59	74	46.89	32.02	4.58	34.08	150	19	Peak
2452	72.22	-	-	69.63	32.06	4.61	34.08	150	19	Average
2452	100.29	-	-	97.7	32.06	4.61	34.08	150	19	Peak
2483.66	39.34	-14.66	54	36.69	32.09	4.64	34.08	150	19	Average
2483.66	55.51	-18.49	74	52.86	32.09	4.64	34.08	150	19	Peak

<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	09	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2452 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2380	36.33	-17.67	54	33.83	32	4.58	34.08	130	353	Average
2380	50.21	-23.79	74	47.71	32	4.58	34.08	130	353	Peak
2452	72.38	-	-	69.79	32.06	4.61	34.08	130	353	Average
2452	100.31	-	-	97.72	32.06	4.61	34.08	130	353	Peak
2484.23	39.41	-14.59	54	36.76	32.09	4.64	34.08	130	353	Average
2484.23	57.47	-16.53	74	54.82	32.09	4.64	34.08	130	353	Peak



<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5745 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.08	33.76	-6.24	40	46.82	17.78	0.71	31.55	200	182	Peak
203.61	35.04	-8.46	43.5	56.6	8.42	1.48	31.46	-	-	Peak
216.03	33.81	-12.19	46	54.46	9.3	1.53	31.48	-	-	Peak
311.9	33.61	-12.39	46	50.59	12.49	1.81	31.28	-	-	Peak
479.9	37.16	-8.84	46	49.47	16.61	2.19	31.11	-	-	Peak
600.3	35.92	-10.08	46	45.65	18.72	2.42	30.87	-	-	Peak
5725	63.47	-11.63	75.1	54.83	34.66	7.17	33.19	100	22	Peak
5745	83.12	-	-	74.43	34.69	7.19	33.19	100	22	Average
5745	95.1	-	-	86.41	34.69	7.19	33.19	100	22	Peak
5850	49.82	-25.28	75.1	40.88	34.85	7.29	33.2	100	22	Peak



<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5745 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
33.24	32.52	-7.48	40	46.71	16.63	0.72	31.54	211	347	Peak
53.22	25.89	-14.11	40	49.6	7.01	0.82	31.54	-	-	Peak
216.03	27.9	-18.1	46	48.55	9.3	1.53	31.48	-	-	Peak
479.9	29.67	-16.33	46	41.98	16.61	2.19	31.11	-	-	Peak
600.3	30.34	-15.66	46	40.07	18.72	2.42	30.87	-	-	Peak
909.7	35.36	-10.64	46	40.8	22	3.02	30.46	-	-	Peak
5725	60.86	-23.27	84.13	52.22	34.66	7.17	33.19	100	317	Peak
5745	91.94	-	-	83.25	34.69	7.19	33.19	100	317	Average
5745	104.13	-	-	95.44	34.69	7.19	33.19	100	317	Peak
5850	52.55	-31.58	84.13	43.61	34.85	7.29	33.2	100	317	Peak



<b>Test Mode :</b>	Mode 14	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5785 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
34.86	25.59	-14.41	40	40.89	15.48	0.74	31.52	-	-	Peak
167.97	29.94	-13.56	43.5	51	9.12	1.36	31.54	-	-	Peak
203.34	35.98	-7.52	43.5	57.54	8.42	1.48	31.46	200	360	Peak
311.9	32.75	-13.25	46	49.73	12.49	1.81	31.28	-	-	Peak
479.9	36.85	-9.15	46	49.16	16.61	2.19	31.11	-	-	Peak
600.3	35.99	-10.01	46	45.72	18.72	2.42	30.87	-	-	Peak
5725	51.12	-24.33	75.45	42.48	34.66	7.17	33.19	133	33	Peak
5785	83.39	-	-	74.62	34.74	7.22	33.19	133	33	Average
5785	95.45	-	-	86.68	34.74	7.22	33.19	133	33	Peak
5850	51.03	-24.42	75.45	42.09	34.85	7.29	33.2	133	33	Peak



<b>Test Mode :</b>	Mode 14	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5785 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
38.64	29.98	-10.02	40	47.04	13.7	0.75	31.51	200	24	Peak
60.78	25.2	-14.8	40	50.51	5.37	0.87	31.55	-	-	Peak
216.03	28.03	-17.97	46	48.68	9.3	1.53	31.48	-	-	Peak
359.5	26.46	-19.54	46	42.09	13.73	1.92	31.28	-	-	Peak
479.9	29.15	-16.85	46	41.46	16.61	2.19	31.11	-	-	Peak
600.3	30.46	-15.54	46	40.19	18.72	2.42	30.87	-	-	Peak
5725	52.98	-30.74	83.72	44.34	34.66	7.17	33.19	100	318	Peak
5785	91.53	-	-	82.76	34.74	7.22	33.19	100	318	Average
5785	103.72	-	-	94.95	34.74	7.22	33.19	100	318	Peak
5850	52.65	-31.07	83.72	43.71	34.85	7.29	33.2	100	318	Peak



<b>Test Mode :</b>	Mode 15	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5825 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.97	24.62	-15.38	40	38.81	16.63	0.72	31.54	-	-	Peak
82.92	25.17	-14.83	40	48.54	7.16	1.02	31.55	-	-	Peak
201.18	34.93	-8.57	43.5	56.7	8.22	1.46	31.45	-	-	Peak
479.9	37.58	-8.42	46	49.89	16.61	2.19	31.11	200	218	Peak
600.3	36.18	-9.82	46	45.91	18.72	2.42	30.87	-	-	Peak
900.6	33.78	-12.22	46	39.45	21.8	3.01	30.48	-	-	Peak
5725	49.55	-24.97	74.52	40.91	34.66	7.17	33.19	130	34	Peak
5825	83.03	-	-	74.14	34.82	7.27	33.2	130	34	Average
5825	94.52	-	-	85.63	34.82	7.27	33.2	130	34	Peak
5850	55.94	-18.58	74.52	47	34.85	7.29	33.2	130	34	Peak





<b>Test Mode :</b>	Mode 15	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5825 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
38.64	30.8	-9.2	40	47.86	13.7	0.75	31.51	214	30	Peak
62.13	24.63	-15.37	40	49.89	5.41	0.87	31.54	-	-	Peak
216.03	28.54	-17.46	46	49.19	9.3	1.53	31.48	-	-	Peak
479.9	29.44	-16.56	46	41.75	16.61	2.19	31.11	-	-	Peak
600.3	29.38	-16.62	46	39.11	18.72	2.42	30.87	-	-	Peak
750.1	28.07	-17.93	46	35.79	20.07	2.75	30.54	-	-	Peak
5725	52.27	-31.21	83.48	43.63	34.66	7.17	33.19	100	320	Peak
5825	91.42	-	-	82.53	34.82	7.27	33.2	100	320	Average
5825	103.48	-	-	94.59	34.82	7.27	33.2	100	320	Peak
5850	58.06	-25.42	83.48	49.12	34.85	7.29	33.2	100	320	Peak



<b>Test Mode :</b>	Mode 16	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5745 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	60.92	-16.74	77.66	52.28	34.66	7.17	33.19	121	25	Peak
5745	81.95	-	-	73.26	34.69	7.19	33.19	121	25	Average
5745	97.66	-	-	88.97	34.69	7.19	33.19	121	25	Peak
5850	50.32	-27.34	77.66	41.38	34.85	7.29	33.2	121	25	Peak

<b>Test Mode :</b>	Mode 16	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5745 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	73.45	-10.26	83.71	64.81	34.66	7.17	33.19	100	314	Peak
5745	88.26	-	-	79.57	34.69	7.19	33.19	100	314	Average
5745	103.71	-	-	95.02	34.69	7.19	33.19	100	314	Peak
5850	50.58	-33.13	83.71	41.64	34.85	7.29	33.2	100	314	Peak



<b>Test Mode :</b>	Mode 17	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5785 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	51.14	-25.68	76.82	42.5	34.66	7.17	33.19	109	20	Peak
5785	81.06	-	-	72.29	34.74	7.22	33.19	109	20	Average
5785	96.82	-	-	88.05	34.74	7.22	33.19	109	20	Peak
5850	50.89	-25.93	76.82	41.95	34.85	7.29	33.2	109	20	Peak

<b>Test Mode :</b>	Mode 17	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5785 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	52.33	-31.66	83.99	43.69	34.66	7.17	33.19	100	319	Peak
5785	88.19	-	-	79.42	34.74	7.22	33.19	100	319	Average
5785	103.99	-	-	95.22	34.74	7.22	33.19	100	319	Peak
5850	52.59	-31.4	83.99	43.65	34.85	7.29	33.2	100	319	Peak



<b>Test Mode :</b>	Mode 18	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5825 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	51.45	-24.13	75.58	42.81	34.66	7.17	33.19	110	13	Peak
5825	80.86	-	-	71.97	34.82	7.27	33.2	110	13	Average
5825	95.58	-	-	86.69	34.82	7.27	33.2	110	13	Peak
5850	61.23	-14.35	75.58	52.29	34.85	7.29	33.2	110	13	Peak

<b>Test Mode :</b>	Mode 18	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5825 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	52.08	-32.04	84.12	43.44	34.66	7.17	33.19	100	323	Peak
5825	88.47	-	-	79.58	34.82	7.27	33.2	100	323	Average
5825	104.12	-	-	95.23	34.82	7.27	33.2	100	323	Peak
5850	72.06	-12.06	84.12	63.12	34.85	7.29	33.2	100	323	Peak



<b>Test Mode :</b>	Mode 19	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5755 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	66.71	-7.45	74.16	58.07	34.66	7.17	33.19	100	19	Peak
5755	75.68	-	-	66.97	34.71	7.19	33.19	100	19	Average
5755	94.16	-	-	85.45	34.71	7.19	33.19	100	19	Peak
5850	50.93	-23.23	74.16	41.99	34.85	7.29	33.2	100	19	Peak

<b>Test Mode :</b>	Mode 19	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5755 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	74.92	-7.73	82.65	66.28	34.66	7.17	33.19	100	320	Peak
5755	82.23	-	-	73.52	34.71	7.19	33.19	100	320	Average
5755	102.65	-	-	93.94	34.71	7.19	33.19	100	320	Peak
5850	53.1	-29.55	82.65	44.16	34.85	7.29	33.2	100	320	Peak



<b>Test Mode :</b>	Mode 20	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 5795 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	52.57	-21.26	73.83	43.93	34.66	7.17	33.19	132	28	Peak
5795	75	-	-	66.18	34.77	7.24	33.19	132	28	Average
5795	93.83	-	-	85.01	34.77	7.24	33.19	132	28	Peak
5850	52.08	-21.75	73.83	43.14	34.85	7.29	33.2	132	28	Peak

<b>Test Mode :</b>	Mode 20	<b>Temperature :</b>	23~26°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	53~56%
<b>Test Engineer :</b>	Wii Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 5795 MHz is Fundamental Signals which can be ignored. 2. 5725 MHz and 5850 MHz is not within a restricted band.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5725	55.61	-26.31	81.92	46.97	34.66	7.17	33.19	100	319	Peak
5795	82.1	-	-	73.28	34.77	7.24	33.19	100	319	Average
5795	101.92	-	-	93.1	34.77	7.24	33.19	100	319	Peak
5850	56.88	-25.04	81.92	47.94	34.85	7.29	33.2	100	319	Peak



## **3.5 Antenna Requirements**

### **3.5.1 Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

### **3.5.2 Antenna Connected Construction**

The antennas type used in this product is PIFA Antenna without connector and it is considered to meet antenna requirement.

### **3.5.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	Jul. 27, 2012	Conducted (TH02-HY)
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 13, 2011	Jun. 12, 2012	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D35P	TBN-9307 01	N/A	Jul. 27, 2011	Jul. 26, 2012	Conducted (TH02-HY)
EMI Test Receive	R&S	ESCI 7	100724	9kHz~7GHz	Aug. 22, 2011	Aug. 21, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz - 30MHz	Dec. 03, 2010	Dec. 02, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz - 30MHz	Dec. 01, 2010	Nov. 30, 2011	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	FSP30	101352	9KHz-30GHz	Nov. 03, 2010	Nov. 02, 2011	Radiation (03CH05-HY)
COM-POWER	Double Ridge Horn	AH-118	701030	1HGz~18GHz	N/A	N/A	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 1GHz	Nov. 06, 2010	Nov. 05, 2011	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 - 360 degree	N/A	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m - 4 m	N/A	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	66584	1GHz ~ 18GHz	Aug. 04, 2011	Aug. 03, 2012	Radiation (03CH05-HY)
COM-POWER	COM-POWER	PA-103	161075	1KHz - 1GHz	Mar. 29, 2011	Mar. 28, 2012	Radiation (03CH05-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1HGz~18GHz	Jul. 19, 2011	Jul. 18, 2012	Radiation (03CH05-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	159087	1HGz~18GHz	Feb. 21, 2011	Feb. 20, 2012	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A019 17	1GHz- 26.5GHz	Apr. 14, 2011	Apr. 13, 2012	Radiation (03CH05-HY)



## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of $X_i$		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.10	Normal (k=2)	0.05
Cable Loss	0.10	Normal (k=2)	0.05
AMN Insertion Loss	2.50	Rectangular	0.63
Receiver Specification	1.50	Rectangular	0.43
Site Imperfection	1.39	Rectangular	0.80
Mismatch	+0.34 / -0.35	U-Shape	0.24
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>1.13</b>		
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>2.26</b>		

### Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of $X_i$		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>1.27</b>		
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>2.54</b>		



**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

Contribution	Uncertainty of $X_i$		$u(X_i)$	$C_i$	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>4.72</b>				



## **Appendix A. Photographs of EUT**

Please refer to Sporton report number EP170707 as below.



1. External Photograph of EUT

Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010





**Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010**





2. Photograph of Accessory

Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

List of Accessory:

Specification of Accessory		
AC Adapter	Brand Name	CINCON ELECTRONICS
	Model Name	TRG36A15 12E03
Battery 1	Brand Name	DAP
	Model Name	VE026-8034
Battery 2	Brand Name	DAP
	Model Name	VE026-8035
LCD Panel	Brand Name	SGD
	Model Name	GNTW70NNBA1E0
Camera 1	Brand Name	DEMARREN
	Model Name	Q5M03A
WWAN Module	Brand Name	Sierra Wireless
	Model Name	MC8355
WLAN Module	Brand Name	Summit Data Communications
	Model Name	SDC-PE15N
Bluetooth Module	Brand Name	Bluegiga
	Model Name	WT21-A
Zigbee Module	Brand Name	Atmel
	Model Name	ATmega128RFA1
Power Cord 1	Brand Name	QUAIL
	Model Name	1062.079(NAM032)
Power Cord 2	Brand Name	QUAIL
	Model Name	8002.079(NAM033)
Power Cord 3	Brand Name	QUAIL
	Model Name	9657.079(NAM034)

Remark: For accessories equipped with this EUT, please refer to the following photos.

Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010





Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

Battery 1



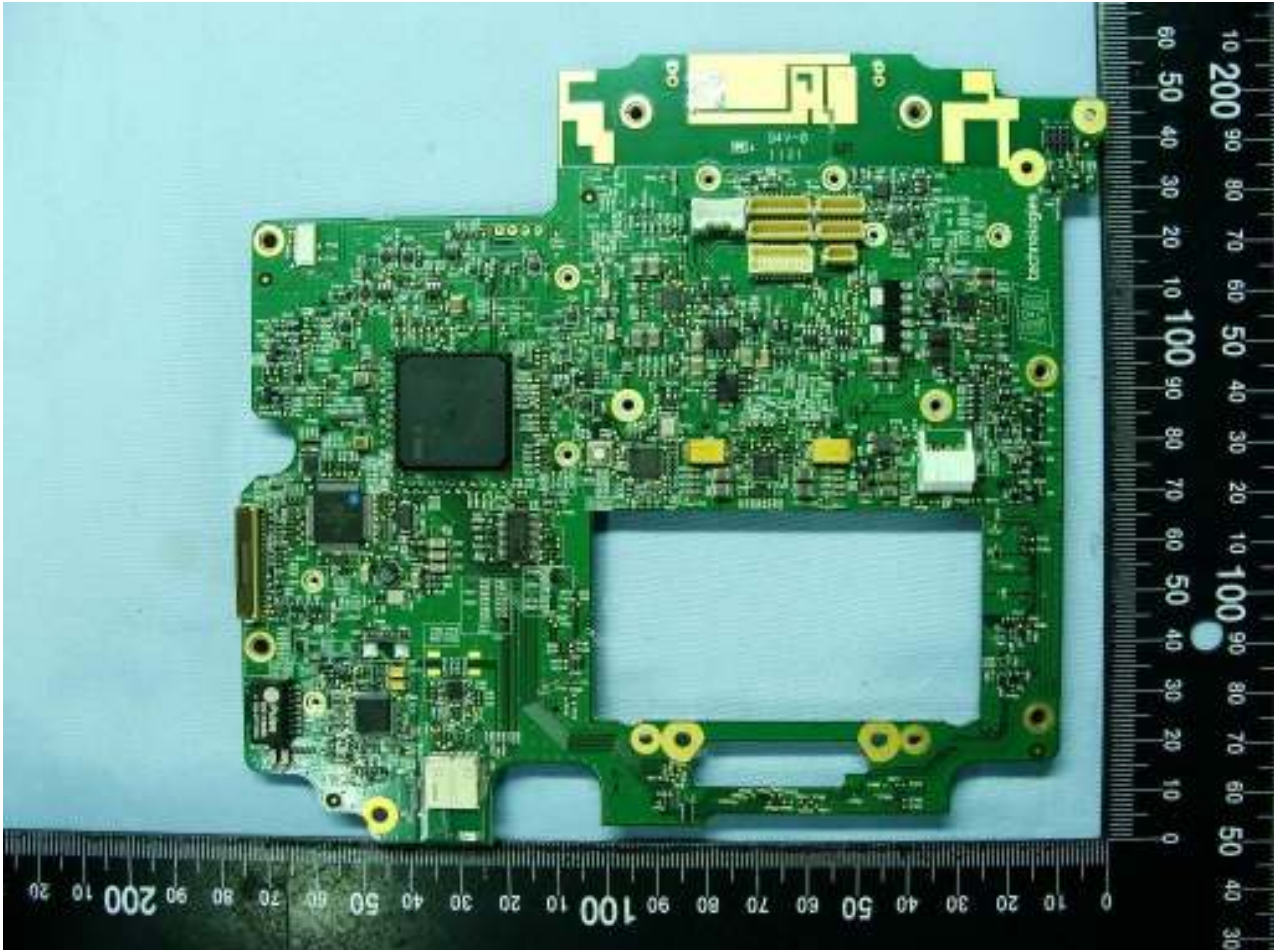
Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

Battery 2

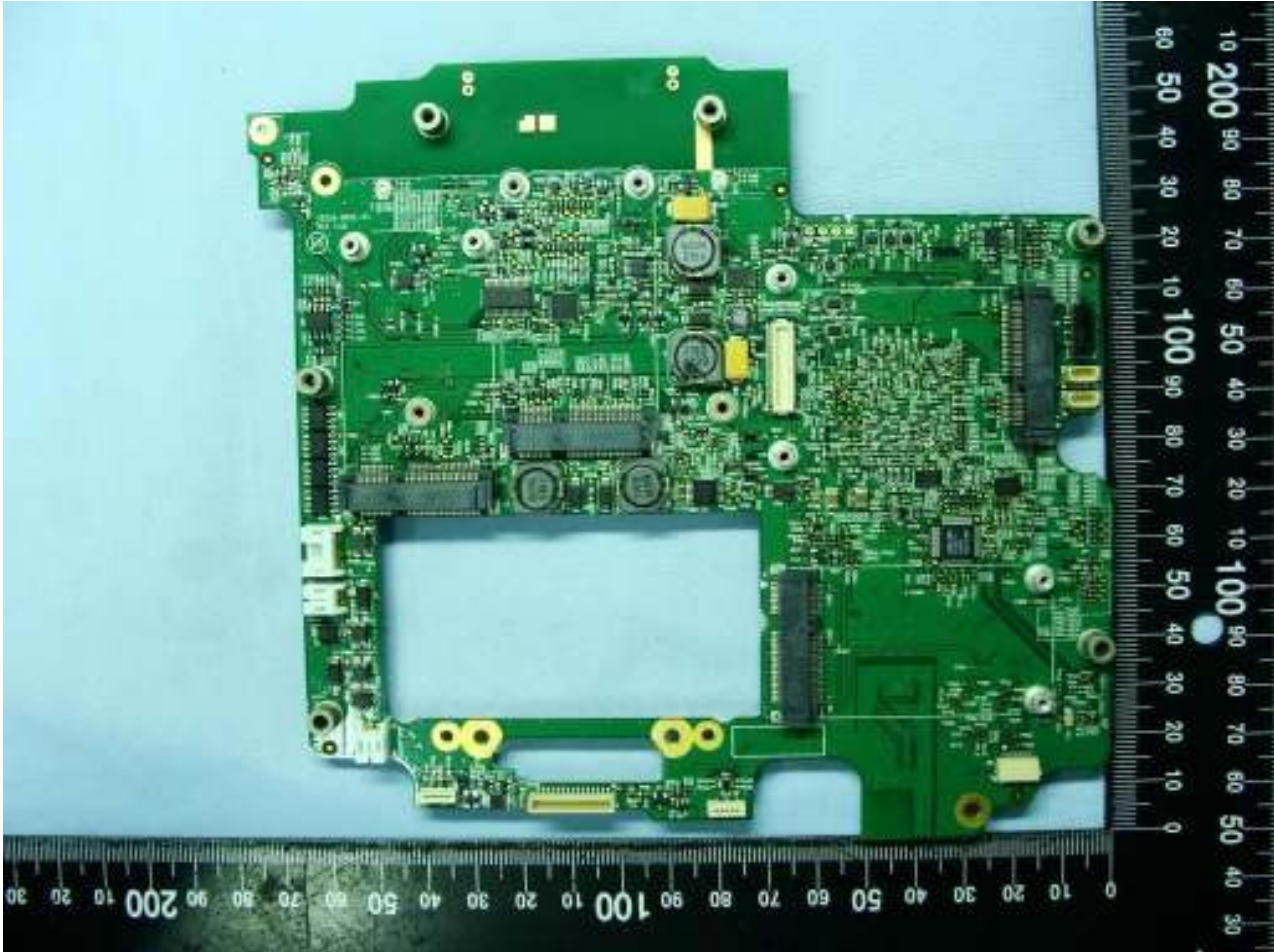


### 3. Internal Photograph of EUT

Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

WWAN and GPS Module



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

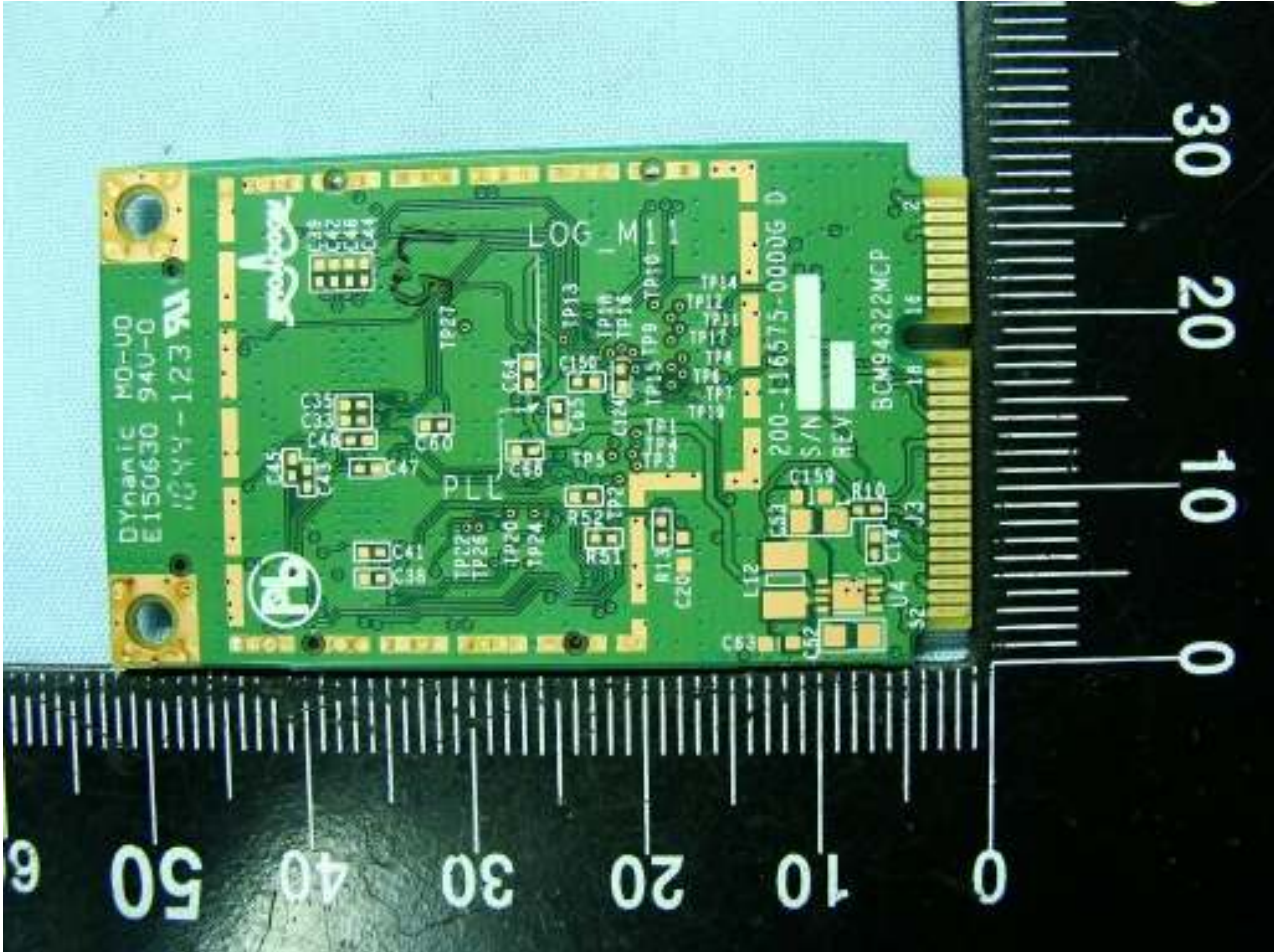


Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

**WLAN Module**



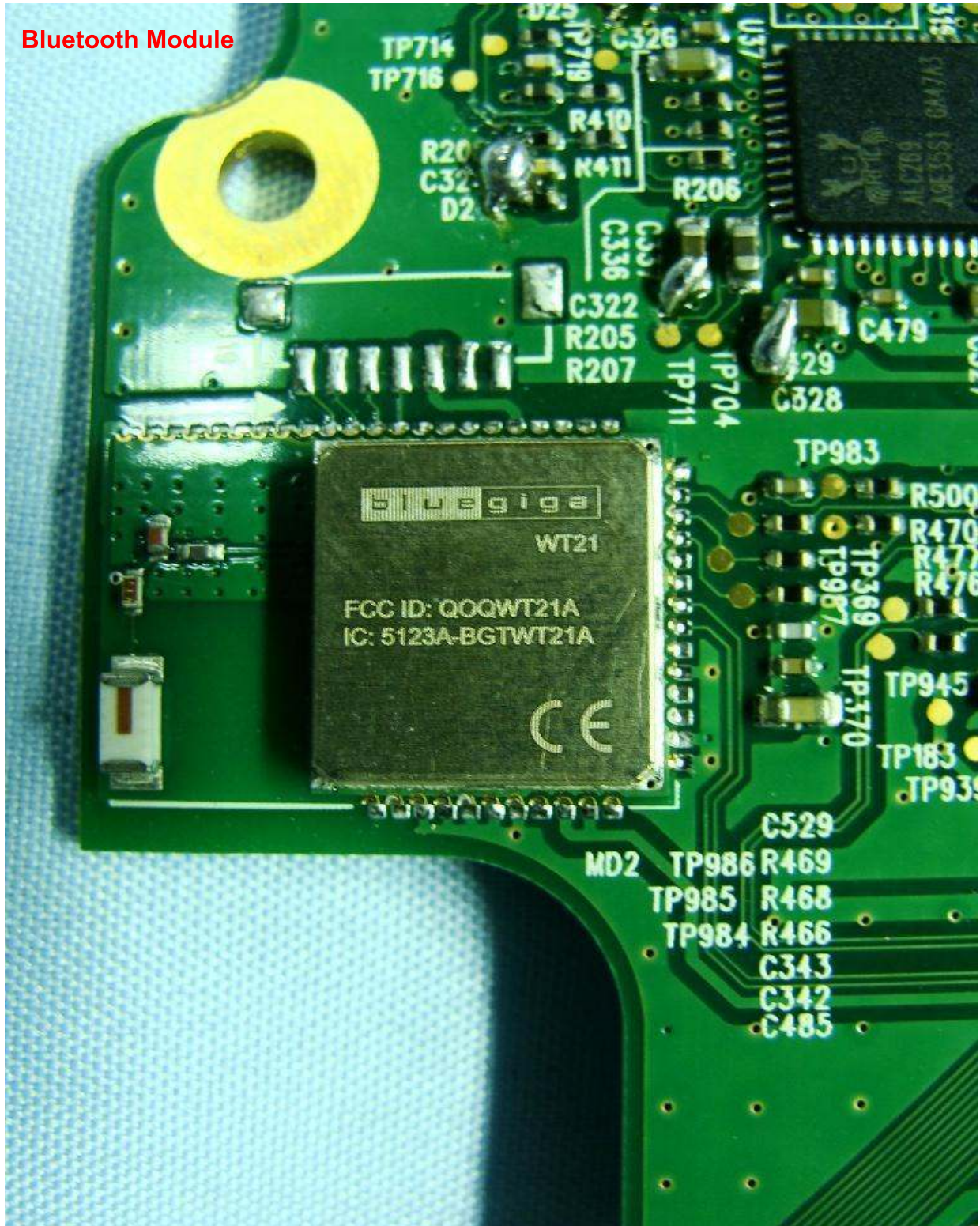
Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010





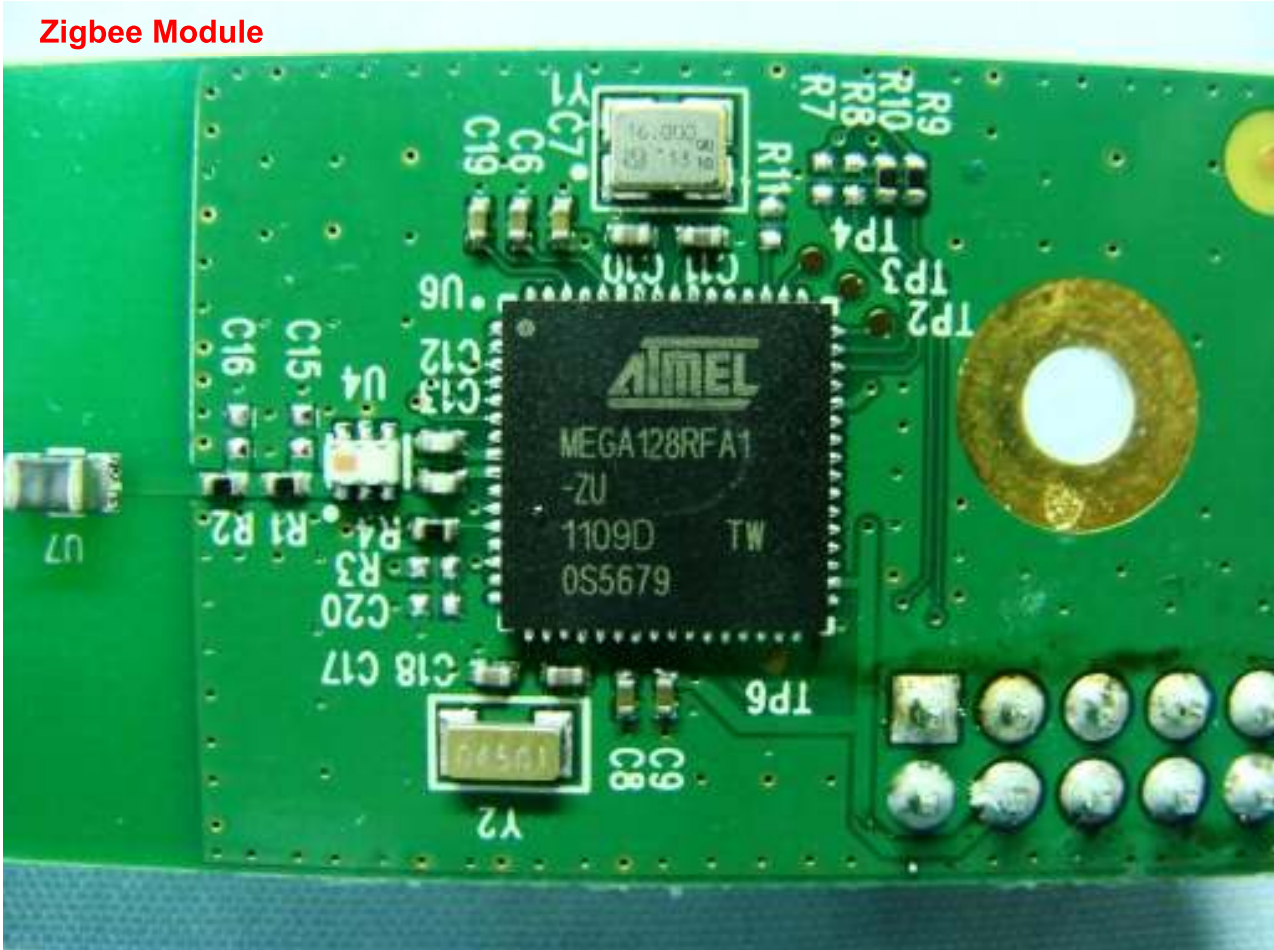
Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

**Bluetooth Module**



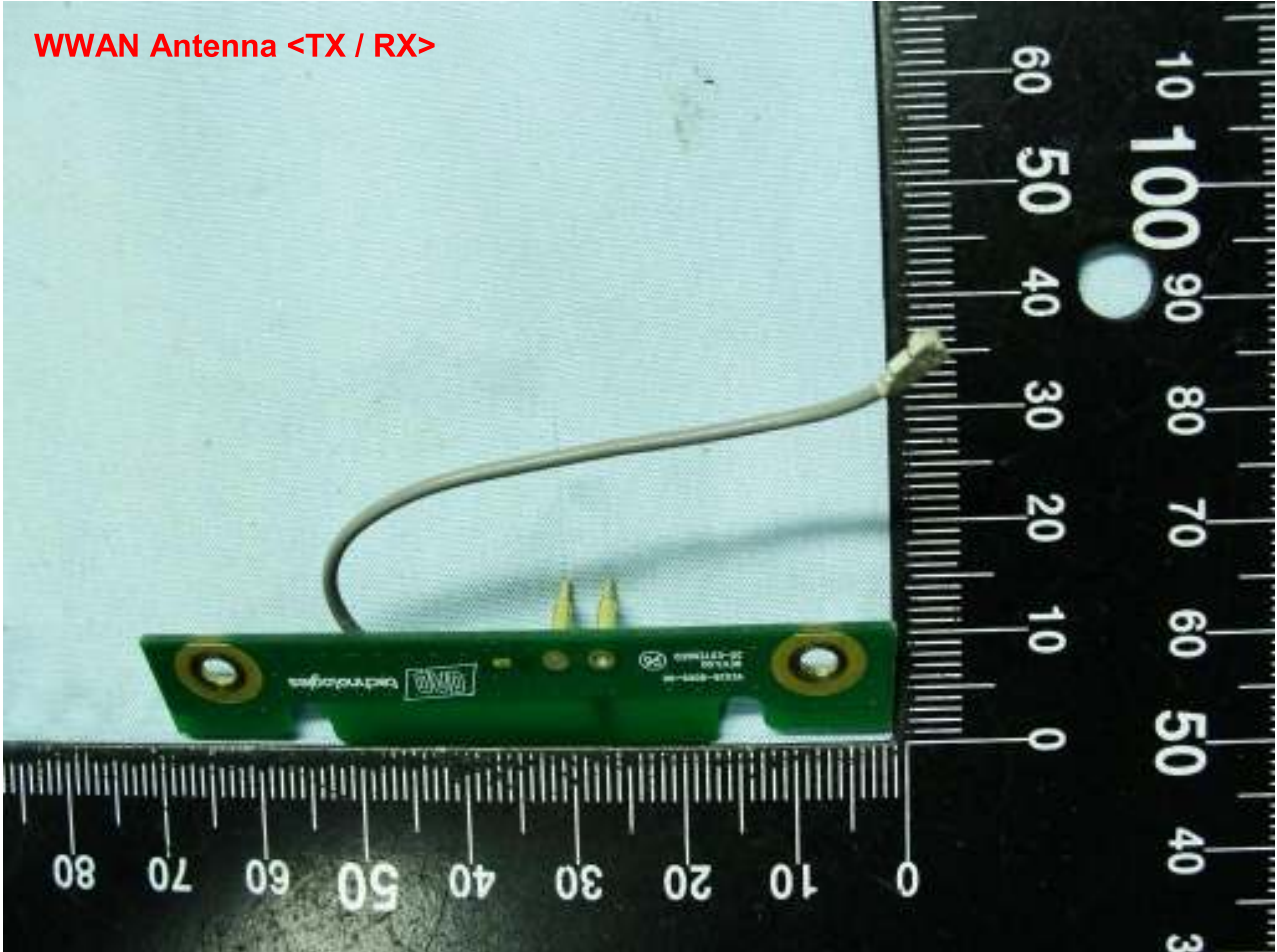
Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

**Zigbee Module**

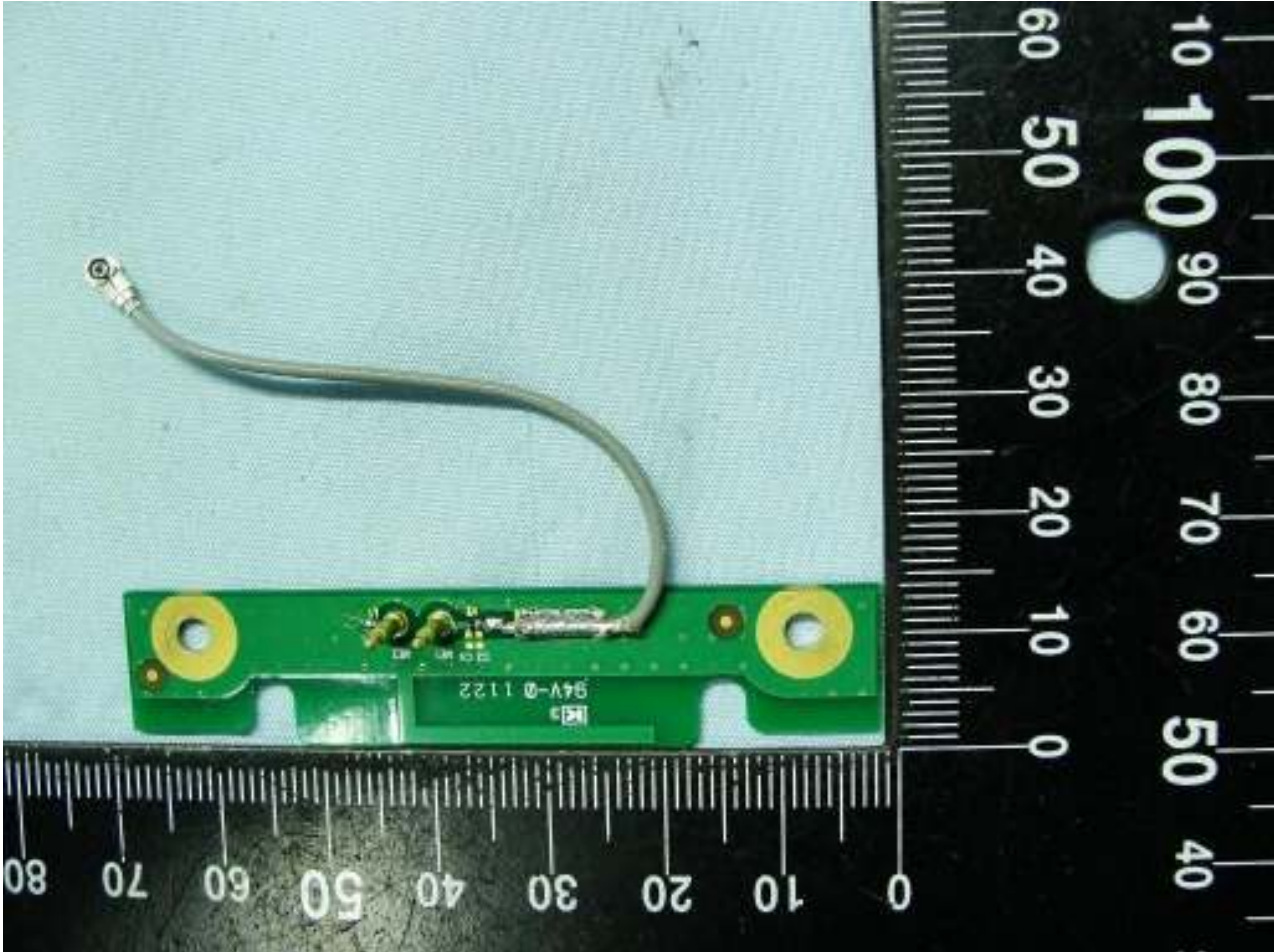


Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

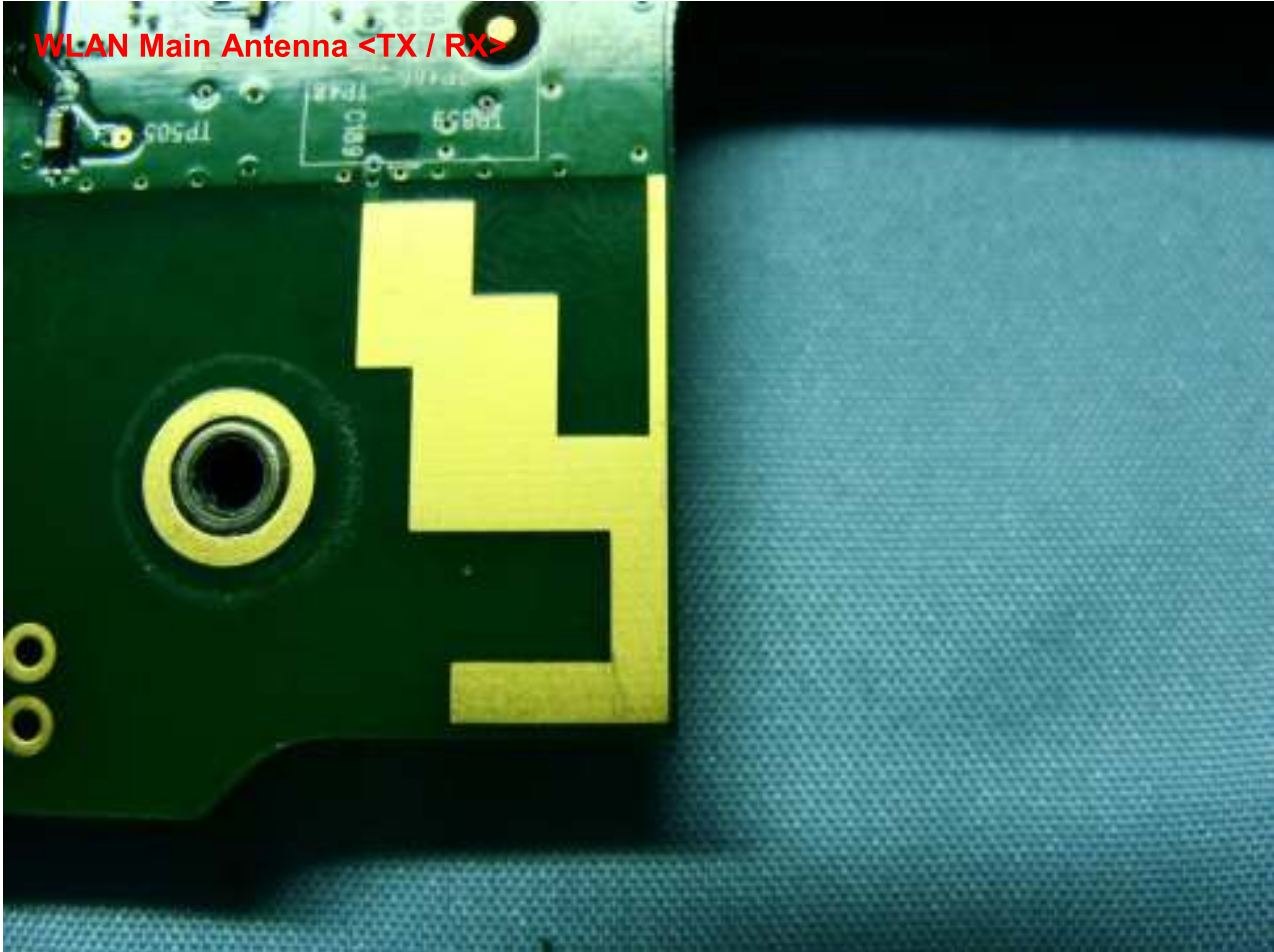
WWAN Antenna <TX / RX>



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



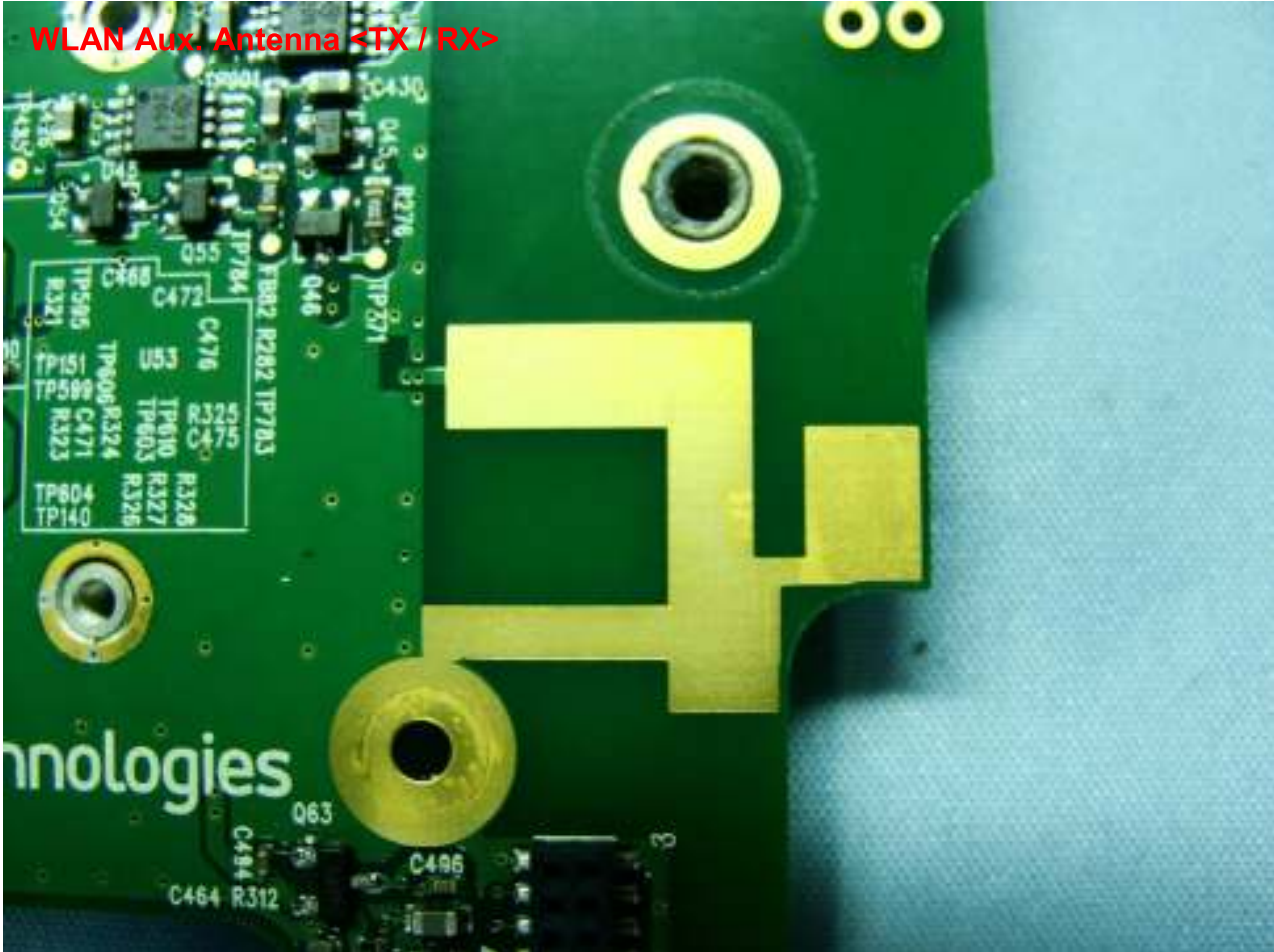
Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



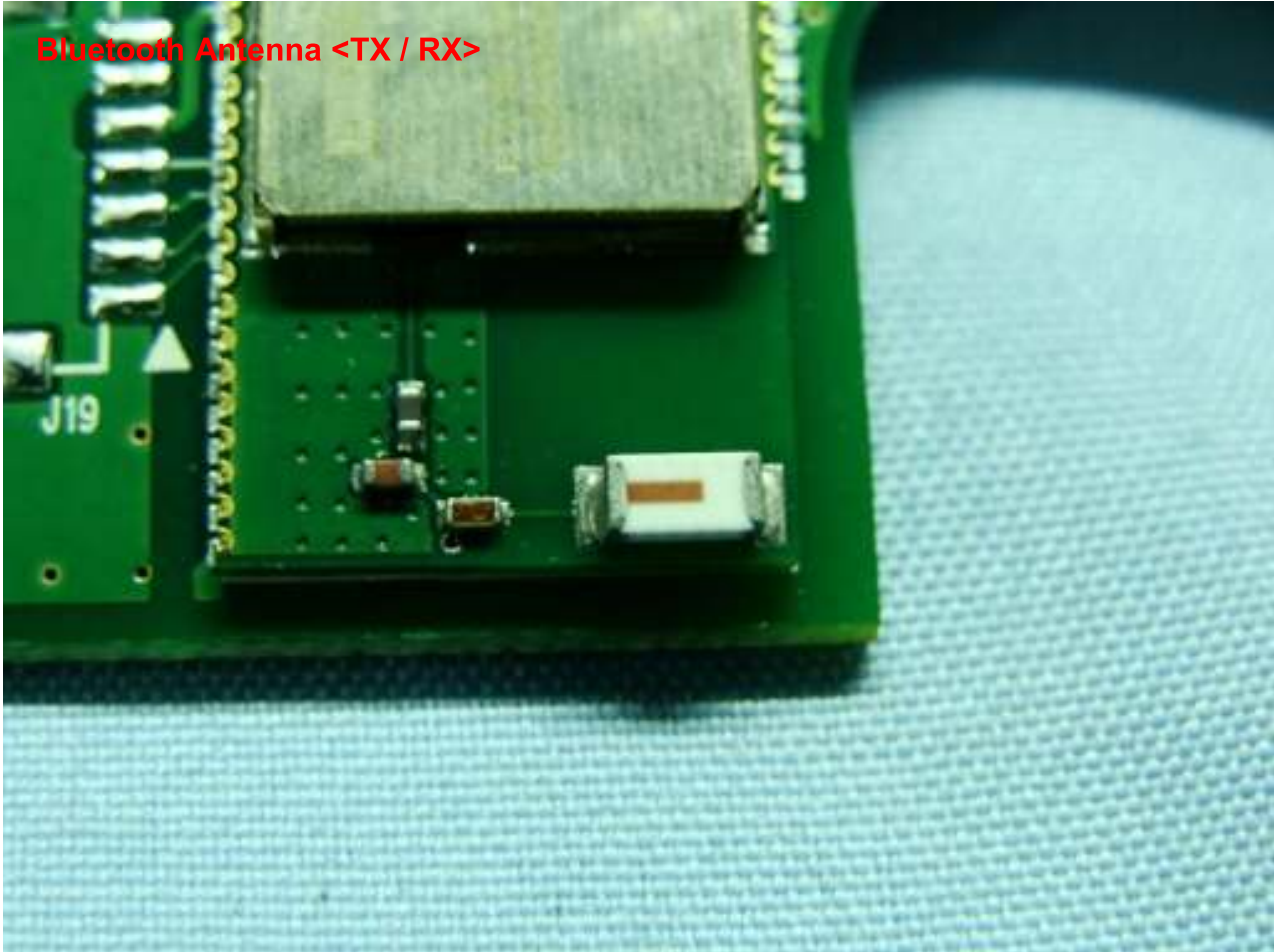


Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

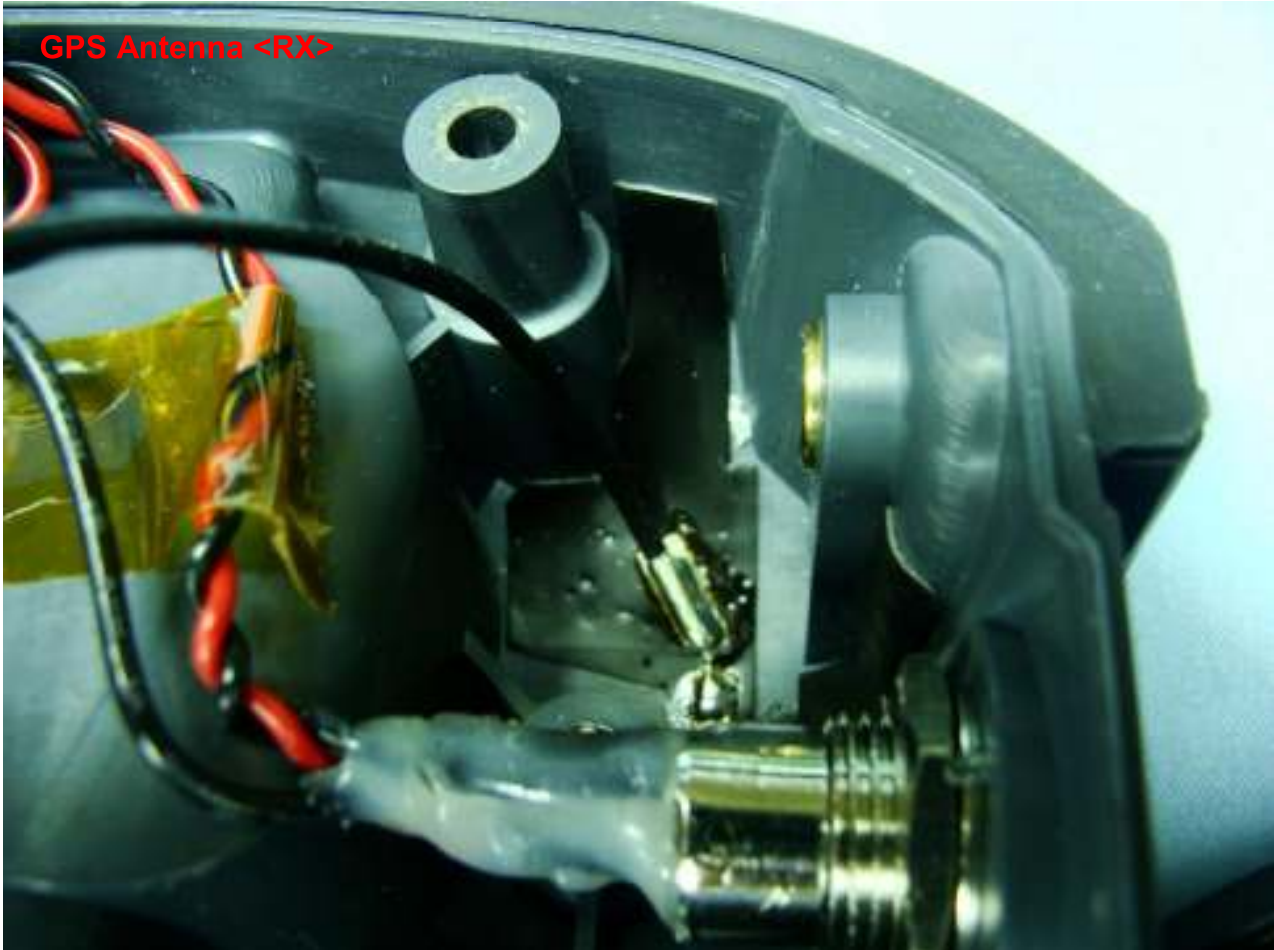
WLAN Aux. Antenna <TX / RX>



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



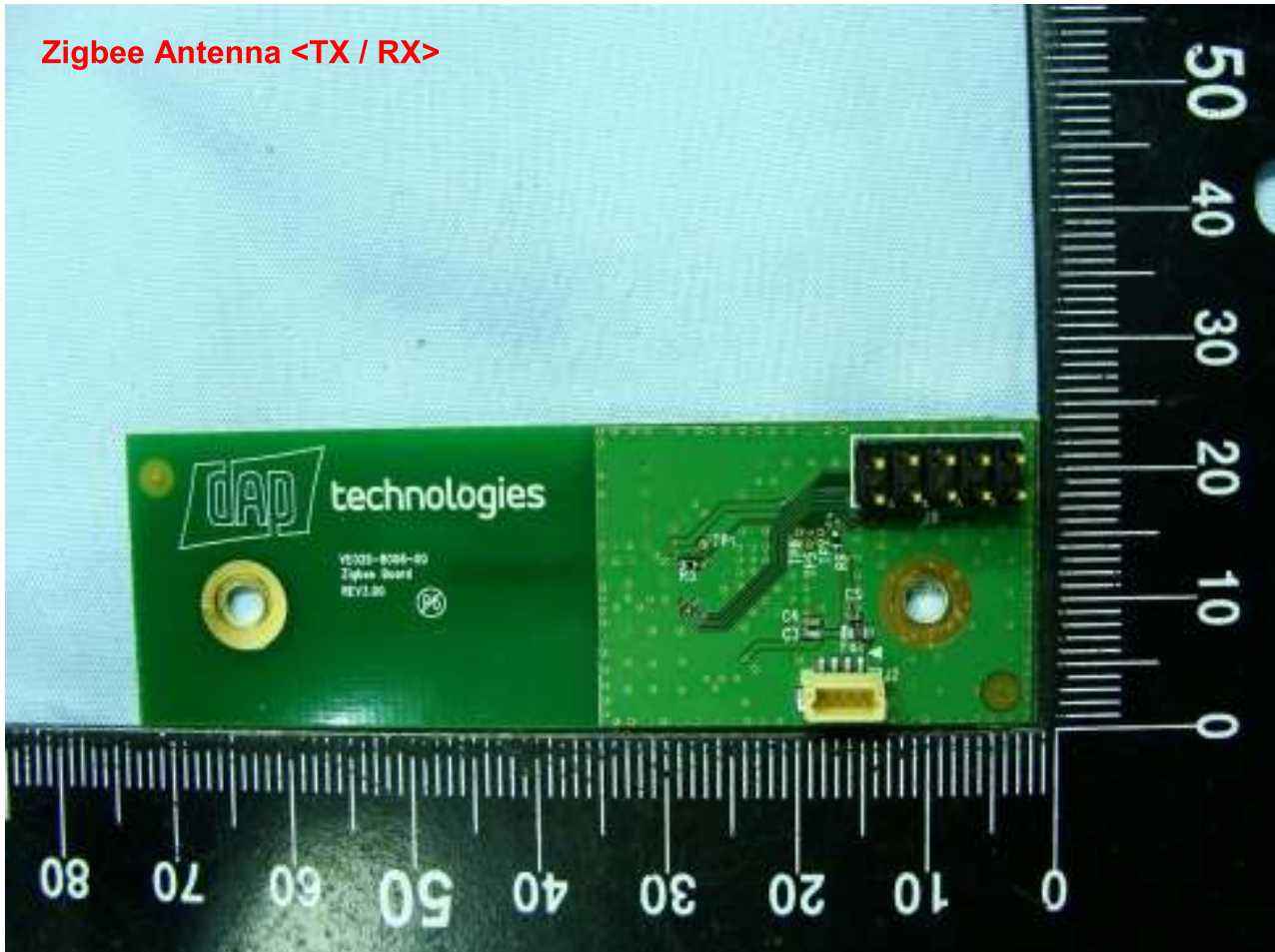
Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



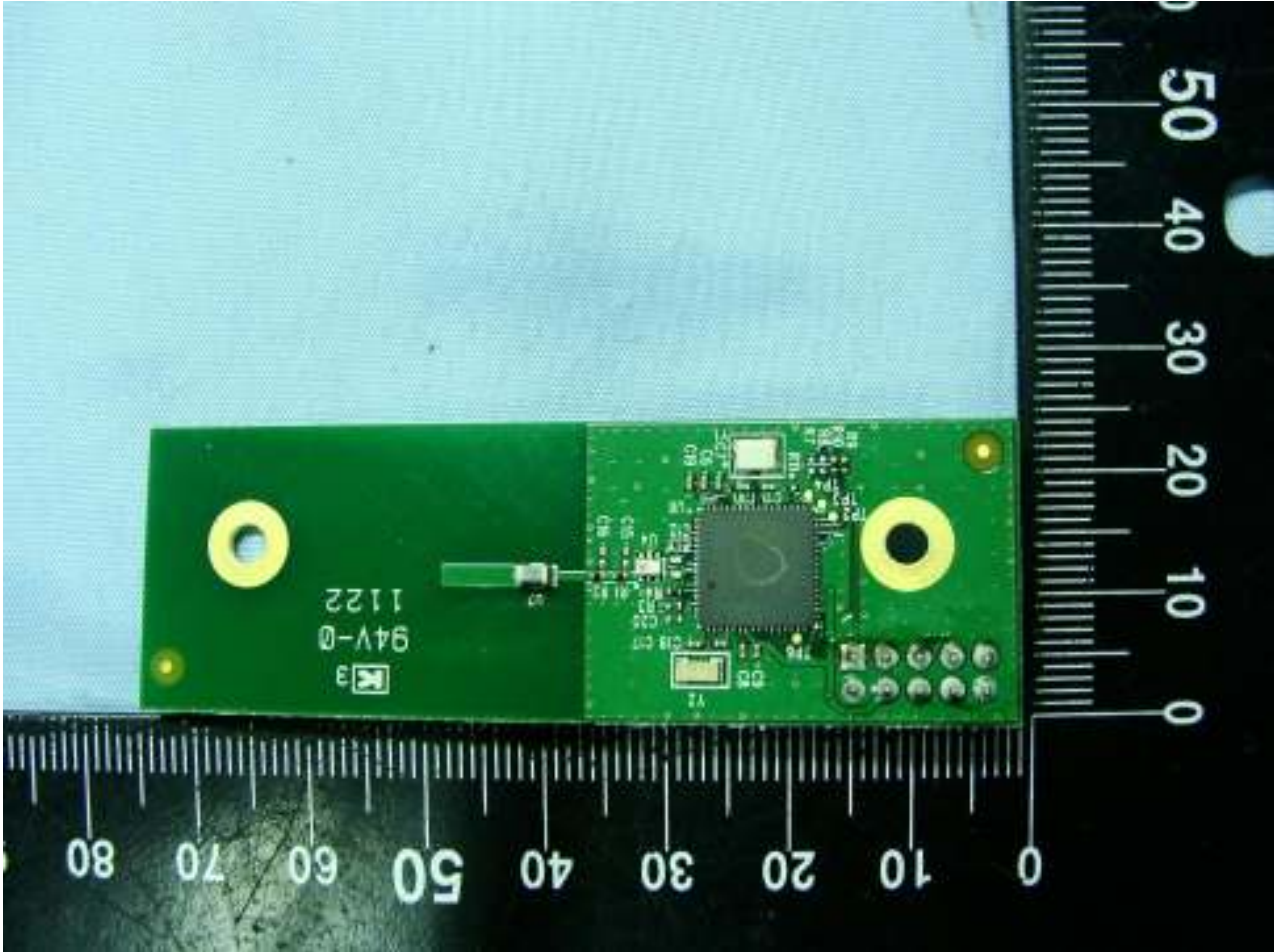


Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010

Zigbee Antenna <TX / RX>



Brand Name: DAP / Model Name: 9000WBWZV1 / Marketing Name: M9010



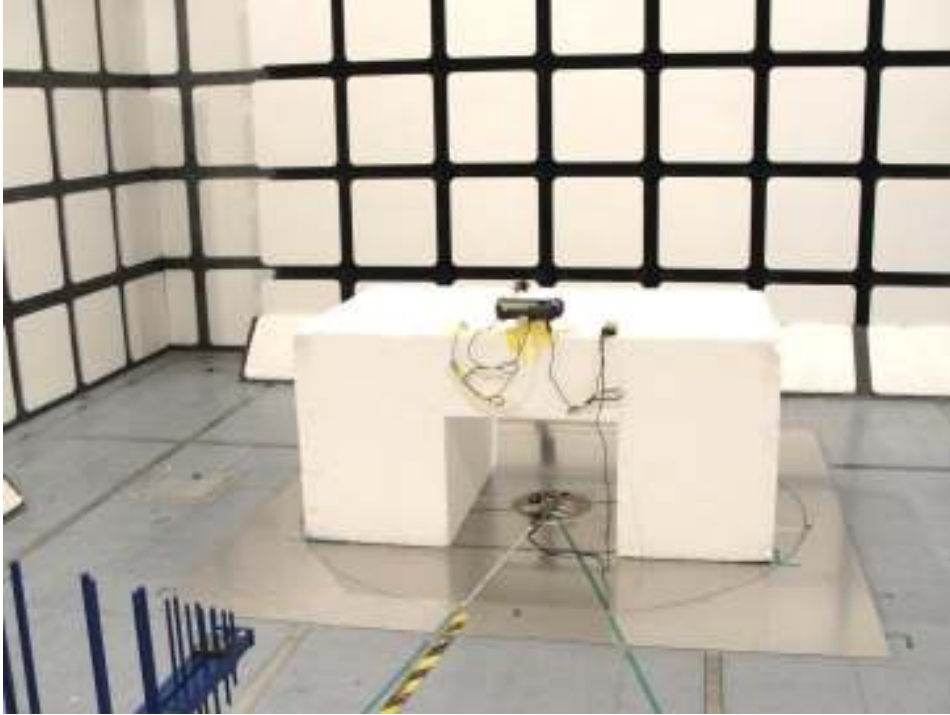
## Appendix B. Setup Photographs

### <Conducted Emission>



## &lt;Radiated Emission for 2.4GHz&gt;

LF



HF



**<Radiated Emission for 5GHz>**

LF



HF

