Test Report

Product Name : Tablet PC System

Model No.: TTAB910

FCC ID.: BJM-TTAB910

Applicant : Tatung Company

Address : 22, Chungshan N. Rd., 3rd Sec.Taipei, Taiwan, 104, R.O.C.

Date of Receipt : Jan. 24, 2003

Date of Test : Mar. 14, 2003

Report No. : 031L068FI

Test Report Certification

Test Date : Mar. 14, 2003
Report No. : 031L068FI

Accredited by NIST (NVLAP)
NVLAP Lab Code: 200533-0

Product Name	:	Tablet PC System
Applicant	:	Tatung Company
Address	:	22, Chungshan N. Rd., 3rd Sec.Taipei, Taiwan, 104, R.O.C.
Manufacturer	:	Tatung Company
Model No.	:	TTAB910
FCC ID.	:	BJM-TTAB910
Rated Voltage	:	AC 120V/60Hz
Trade Name	:	TATUNG
Measurement Standard	:	FCC Part 15 Subpart C Paragraph 15.247
Measurement Procedure	:	ANSI C63.4: 1992
Test Result	:	Complied

NVLAP Lab Code: 200533-0

Test Results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : Grace Lin (Grace Lin)

Tested By : Tony Hsieh (Tony Hsieh)

Approved By : Gene Chang (Gene Chang)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	:	Tablet PC System
Trade Name	:	TATUNG
FCC ID.	:	BJM-TTAB910
Model No.	:	TTAB910
Frequency Range	:	2412MHz to 2462MHz
Channel Number	:	11
Chip Rate	:	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Type of Modulation	:	Direct Sequence Spread Spectrum
Antenna type	:	Connector
Antenna Gain	:	3dBi
Operator Selection of Operating Frequency	:	By software
Power Adapter	:	MAR:HIPRO M/N:HP-OD042D03 INPUT:Non-shielded, 1.8m ,100~240V,50~60HZ,1.2A,corex1 OUTPUT: Non-shielded, 1.8m, Non-core, 12V, 3.5A
VGA Cable	:	Non-shielded 0.15m x 1

EUT Configuration:

CPU	PIII 933MHz
PCB NO.	VT830MB, BN&HK-R00D, TT910BN
ADAPTER	HP-OD042D03 R1V:X01
BATTERY PACK	7.4V 3900/4300mAh
Mini PCI Modem	1456VQL1T(INT)
***Mini-PCI Module**	**WISTRON, EM9-NB**
SO-DIMM 256MB PC133	MICRON,MT8LSDT3264HG-133 256MB SAMSUNG, M464S3323DN1-L7A 256MB (Final Test) INFINEON, HYS64V32220GDL-7.5 256MB
SO-DIMM 128MB PC133	MICRON,MT4LSDT1664HG-133 128MB SAMSUNG, M464S1724DTS-L7A 128MB INFINEON, HYS64V16220GDL-7.5 128MB
20GB HDD 2.5”*9.5mm	TOSHIBA, MK2018GAP(5V) (Final Test) IBM, IC25N020ATCS04(5V) FUJITSU, MHS2020AT(5V)
Power Adapter	MFR:H1PRO,M/N:HP-OD042D03 Cable IN: Non-Shielded, 1.8m Cable Out: Non-Shielded, 1.8m, one ferrite core bonded.
Mother Board	VT830MB, TATUNG
VGA Card	On Board
Sound Card	On Board
LAN Card	On Board

Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 1:	2412 MHz	Channel 5:	2432 MHz	Channel 9:	2452 MHz
Channel 2:	2417 MHz	Channel 6:	2437 MHz	Channel 10:	2457 MHz
Channel 3:	2422 MHz	Channel 7:	2442 MHz	Channel 11:	2462 MHz
Channel 4:	2427 MHz	Channel 8:	2447 MHz		

Note:

1. This device is a 2.4GHz Tablet PC System included a 2.4GHz receiving function, a 2.4GHz transmitting function.
2. Regards to the frequency band operation; two rate that were included the lowest、middle and highest frequency of channel were selected to perform the test, then shown on this report.
3. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
4. This device is a composite device in accordance with Part 15 regulations. The function receiving was measured and made a test report that the report number is 031L068F under Declaration of Conformity.

1.2. Operational Description

EUT is a Tablet PC System with wireless LAN adapter. This device provided 11 channels and four kind of transmitting speed 1,2,5.5 and 11Mbps. The device of RF carrier is DQPSK, DB PSK and CCK.

The device adapts direct sequence spread spectrum modulation. The Connector antenna was provides diversity function to improve the receiving function.

This Tablet PC System is an IEEE 802.11b Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz Direst Sequence Spread Spectrum (DSSS) radio transmission, the Tablet PC System transfers data at speeds up to 64/128-bit Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any 802.11b network.

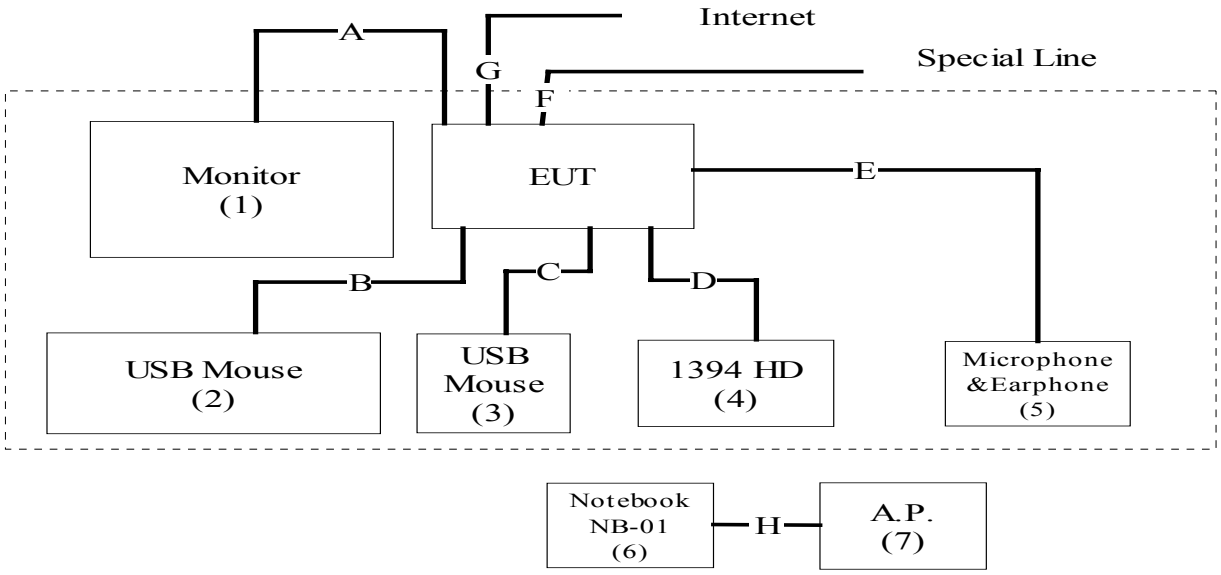
1.3. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID.	Power Cord
(1)	Monitor	ViewSonic	VLCDS23303-1	AOT021710465	DoC	Non-shielded, 1.8m
(2)	USB Mouse	ASUS	MOUSE	N/A	E5XKB5122U	N/A
(3)	USB Mouse	Logitech	M-BE58	HCA24311471	DoC	N/A
(4)	IEEE-1394 HDD	SKYMASTER	DEM-1351	N/A	DoC	Non-shielded, 1.8m
(5)	Microphone & Earphone	TOKTO	SX-MI	N/A	DoC	N/A
(6)	Notebook	DELL	PP01L	N/A	DoC	Non-shielded, 1.8m
(7)	A.P.	ASUS	AC300	N/A	N/A	Non-shielded, 1.8m Non-core

Signal Cable Type		Signal cable Description
A.	VGA D-SUB Cable	Shielded, 1.8m, one ferrite cores bonded
B.	USB Mouse Cable	Shielded, 1.5m
C.	USB Mouse Cable	Shielded, 1.5m
D.	1394 Data Cable	Shielded, 1.2m
E.	Earphone Cable	Non-Shielded, 1.8m
F.	Telephone Cable	Non-Shielded, 3m
G.	LAN Cable	Non-Shielded, 3m
H.	LAN Cable	Non-Shielded, 3m

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Setup the EUT and simulators as shown on 1.4

(2) Turn on the power of all equipment.

(3) Notebook PC reads data from disk.

(4) Data will be transmitting and receiving through EUT.

(5) The transmitted and receive status will be shown on the monitor.

(6) Repeat the above procedure (3) to (5)

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: June 22, 2001 File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Reference 31040/SIT1300F2

July 03, 2001 Accreditation on NVLAP
NVLAP Lab Code: 200533-0

NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation

Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

2. Conducted Emission

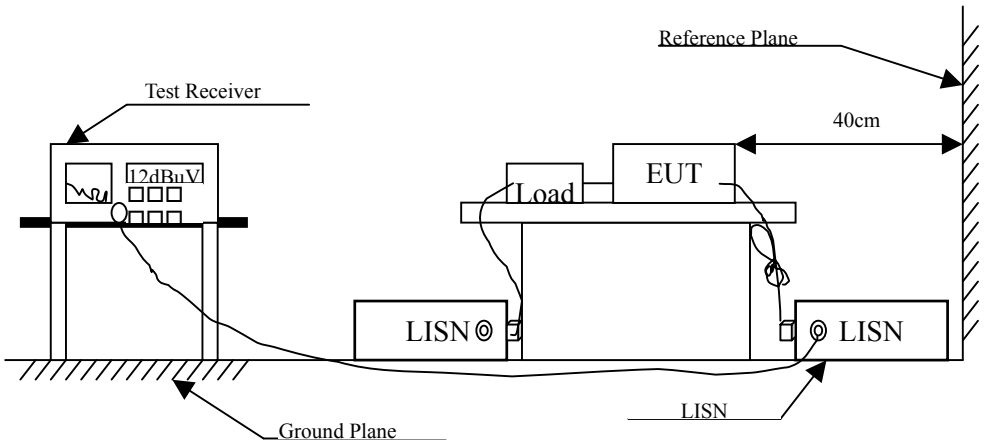
2.1. Test Equipment

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2002	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2002	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2002	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	N/A	
5	No.4 Shielded Room			N/A	

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart B Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	uV	dBuV
0.15 - 0.50	66-56(註)	56-46(註)
0.50-5.0	56	46
5.0 - 30	60	50

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:1992 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Test Result of Conducted Emission

Product : Tablet PC System
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Normal Operation

Frequency MHz	Cable Loss dB	LISN Factor dB	Reading Level dBuV	Measurement Level dBuV	Limits dBuV
Quasi-Peak					
0.154	0.21	0.10	37.77	38.08	65.78
0.236	0.21	0.10	31.43	31.74	62.24
0.550	0.21	0.10	32.55	32.86	56.00
*2.595	0.09	0.14	30.05	30.28	56.00
5.896	0.28	0.18	26.54	27.00	60.00
24.579	0.28	0.53	25.65	26.46	60.00
Average					
0.154	0.21	0.10	28.90	29.21	55.78
0.236	0.21	0.10	28.20	28.51	52.24
*0.550	0.21	0.10	30.00	30.31	46.00
2.595	0.09	0.14	27.00	27.23	46.00
5.896	0.28	0.18	22.20	22.66	50.00
24.579	0.28	0.53	26.50	27.31	50.00

Remarks :

1. All Readings below 1GHz are Quasi-Peak value.
2. " * " means that this data is the worst emission level.
3. Emission Level = Reading Level + LISN Factor + Cable Loss.

Product : Tablet PC System
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Normal Operation

Frequency MHz	Cable Loss dB	LISN Factor dB	Reading Level dBuV	Measurement Level dBuV	Limits dBuV
Quasi-Peak					
0.158	0.21	0.10	38.75	39.06	65.58
0.235	0.21	0.10	31.27	31.58	62.27
*0.552	0.21	0.10	31.37	31.68	56.00
2.829	0.23	0.15	29.25	29.62	56.00
7.553	0.33	0.19	29.63	30.15	60.00
19.711	0.39	0.45	26.76	27.60	60.00
Average					
0.158	0.21	0.10	29.30	29.61	55.57
0.235	0.21	0.10	26.80	27.11	52.27
*0.552	0.21	0.10	29.80	30.11	46.00
2.829	0.23	0.15	25.90	26.27	46.00
7.553	0.33	0.19	25.50	26.02	50.00
19.711	0.39	0.45	23.10	23.94	50.00

Remarks :

4. All Readings below 1GHz are Quasi-Peak value.
5. " * " means that this data is the worst emission level.
6. Emission Level = Reading Level + LISN Factor + Cable Loss.

3. Peak Power Output

3.1. Test Equipment

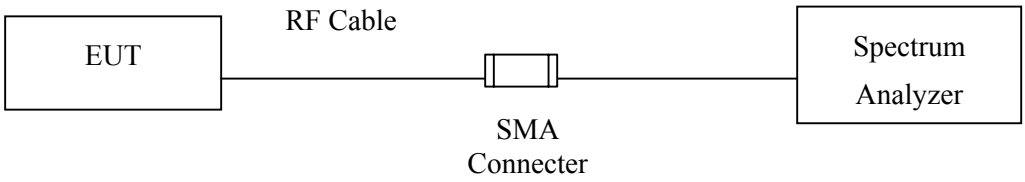
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Advantest	R3272 / 72421194	May, 2002

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

3.2. Test Setup

Conduction Power Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Result of Peak Power Output

Product : Tablet PC System
Test Item : Peak Power Output Data
Test Site : No.2 OATS
Test Mode : Normal Operation

Data Speed: 1Mbps

Channel No.	Frequency(MHz)	Measurement	Required Limit	Result
1	2412.9	8.94dBm	1Watt= 30 dBm	Pass
6	2437.9	8.17dBm	1Watt= 30 dBm	Pass
11	2462.9	9.65dBm	1Watt= 30 dBm	Pass

Data Speed: 11Mbps

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
1	2412.9	8.67dBm	1Watt= 30 dBm	Pass
6	2437.9	10.45dBm	1Watt= 30 dBm	Pass
11	2462.9	9.75dBm	1Watt= 30 dBm	Pass

4. RF Exposure Evaluation

4.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)
LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula
Friis transmission formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm^2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

4.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
The temperature and related humidity: 18℃and 78％ RH.

4.3. 15Test Result of RF Exposure Evaluation

Product : Tablet PC System
Test Item : RF Exposure Evaluation Data
Test Site : No.2 OATS
Test Mode : Normal Operation

Antenna Gain

Antenna Gain: The maximum Gain measured in fully anechoic chamber is **3dBi or 2** in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Channel Frequency (MHz)	Output Power to Antenna (mW)	Minimum Allowable Distance ® From Skin(cm)
1 (1Mbps)	2412.9	7.834296	1.115309115
1 (11Mbps)	2412.9	7.362071	1.081173149
6 (1Mbps)	2437.9	6.561453	1.02069327
6 (11Mbps)	2437.9	11.09175	1.327074339
11 (1Mbps)	2462.9	9.225714	1.210306182
11 (11Mbps)	2462.9	9.440609	1.224320867

The distance r (4th column) calculated from the Fries transmission formula is far shorter than 20 cm separation requirement. So, RF exposure limit warning or SAR test are not required.

5. Radiated Emission

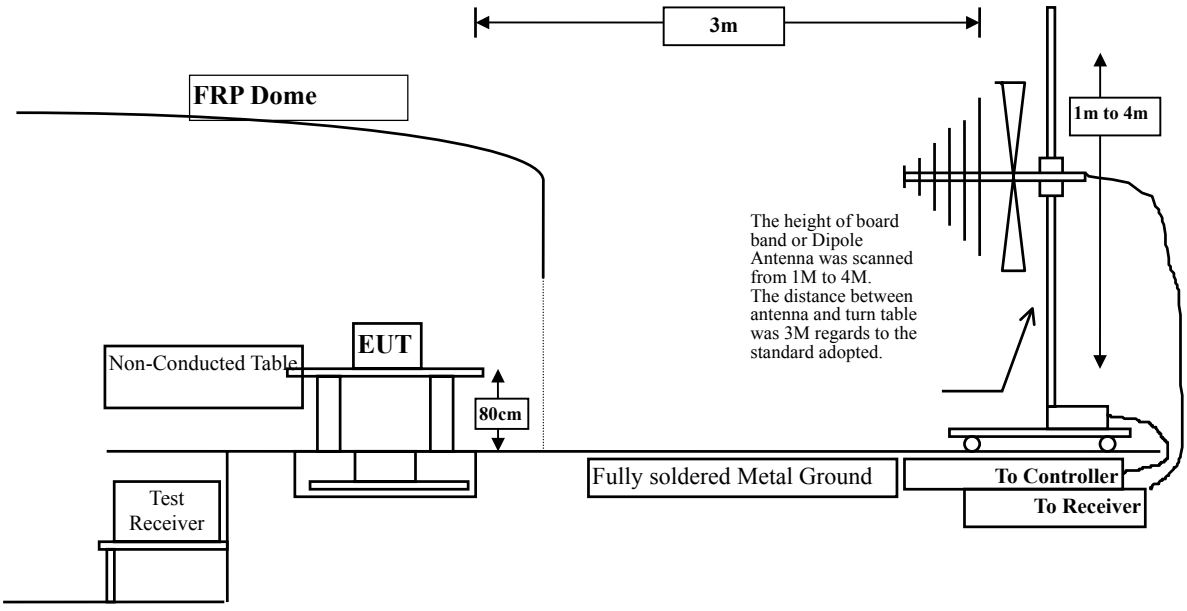
5.1. Test Equipment

The following test equipment are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 1		Test Receiver	R & S	ESCS 30 / 825442/14	May, 2002
		Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2002
		Pre-Amplifier	HP	8447D/3307A01812	May, 2002
		Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2002
		Horn Antenna	EM	EM6917 / 103325	May, 2002
Site # 2	X	Test Receiver	R & S	ESCS 30 / 825442/17	May, 2002
	X	Spectrum Analyzer	Advantest	R3261C / 71720609	May, 2002
	X	Pre-Amplifier	HP	8447D/3307A01814	May, 2002
	X	Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2002
	X	Horn Antenna	EM	EM6917 / 103325	May, 2002
Site # 3		Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2002
		Spectrum Analyzer	Advantest	3162 / 100803480	May, 2002
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2002
		Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2002
		Horn Antenna	ETS	3115 / 0005-6160	Jul., 2002
		Pre-Amplifier	QTK	QTK-AMP-01 / 0001	Jul., 2002

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.
2. Mark "X" test instruments are used to measure the final test results.

5.2. Test Setup



5.3. Limits

➢ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

5.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:1992 on radiated measurement.
The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field dtrength of harmonics measurement.
The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.
The frequency range from 30MHz to 10th harminics is checked.

5.5. Test Result of Radiated Emission

Product : Tablet PC System
Test Item : Harmonic Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 1 (1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Peak Limit	Average Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	dBuV/m
Horizontal								
Peak Detector:								
4822.246	6.17	33.64	18.88	32.93	53.86	20.14	74.00	54.00
7237.252	7.33	36.77	18.05	27.12	53.17	20.83	74.00	54.00
9523.000	8.63	38.13	16.04	22.52	53.24	20.76	74.00	54.00
Vertical								
Peak Detector:								
4824.751	6.17	33.64	18.88	32.34	53.27	20.73	74.00	54.00
7236.250	7.33	36.77	18.08	26.66	52.68	21.32	74.00	54.00
9649.252	8.73	38.25	15.83	22.29	53.44	20.56	74.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Tablet PC System
Test Item : Harmonic Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 6 (1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Peak Limit	Average Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	dBuV/m
Horizontal								
Peak Detector:								
4874.250	6.21	33.77	18.88	32.68	53.78	20.22	74.00	54.00
7312.753	7.37	36.98	17.95	27.04	53.44	20.56	74.00	54.00
9747.749	8.87	38.35	15.73	21.29	52.78	21.22	74.00	54.00
Vertical								
Peak Detector:								
4873.248	6.21	33.77	18.88	32.16	53.26	20.74	74.00	54.00
7311.753	7.37	36.98	17.95	26.49	52.89	21.11	74.00	54.00
9748.749	8.87	38.35	15.73	21.85	53.34	20.66	74.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Tablet PC System
Test Item : Harmonic Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 11 (1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Peak Limit	Average Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	dBuV/m
Horizontal								
Peak Detector:								
4924.630	6.23	33.90	18.89	31.87	53.12	20.88	74.00	54.00
7385.570	7.42	37.14	17.78	25.39	52.16	21.84	74.00	54.00
9848.540	8.97	38.44	15.57	21.77	53.61	20.39	74.00	54.00
Vertical								
Peak Detector:								
4924.540	6.23	33.90	18.89	30.00	51.25	22.75	74.00	54.00
7386.590	7.42	37.14	17.78	25.45	52.22	21.78	74.00	54.00
9848.663	8.97	38.44	15.57	21.33	53.17	20.83	74.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Tablet PC System
Test Item : Harmonic Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 1 (11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Peak Limit	Average Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	dBuV/m
Horizontal								
Peak Detector:								
4823.749	6.17	33.64	18.88	32.41	53.34	20.66	74.00	54.00
7237.252	7.33	36.77	18.05	25.97	52.02	21.98	74.00	54.00
9647.749	8.73	38.25	15.83	22.03	53.18	20.82	74.00	54.00
Vertical								
Peak Detector:								
4823.749	6.17	33.64	18.88	32.62	53.55	20.45	74.00	54.00
7236.250	7.33	36.77	18.08	26.70	52.72	21.28	74.00	54.00
9649.252	8.73	38.25	15.83	22.27	53.42	20.58	74.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Tablet PC System
Test Item : Harmonic Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 6 (11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Peak Limit	Average Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	dBuV/m
Horizontal								
Peak Detector:								
4874.753	6.21	33.77	18.88	32.34	53.44	20.56	74.00	54.00
7311.250	7.37	36.98	17.95	25.57	51.97	22.03	74.00	54.00
9748.250	8.87	38.35	15.73	21.20	52.69	21.31	74.00	54.00
Vertical								
Peak Detector:								
4874.250	6.21	33.77	18.88	31.37	52.47	21.53	74.00	54.00
7310.248	7.37	36.98	17.95	27.16	53.56	20.44	74.00	54.00
9749.252	8.87	38.35	15.73	19.85	51.34	22.66	74.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Tablet PC System
Test Item : Harmonic Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 11 (11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Peak Limit	Average Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m	dBuV/m
Horizontal								
Peak Detector:								
4924.420	6.23	33.90	18.89	29.94	51.19	22.81	74.00	54.00
7385.579	7.42	37.14	17.78	24.59	51.36	22.64	74.00	54.00
9847.930	8.97	38.44	15.57	20.81	52.65	21.35	74.00	54.00
Vertical								
Peak Detector:								
4923.579	6.23	33.90	18.89	30.86	52.11	21.89	74.00	54.00
7387.260	7.42	37.14	17.78	25.64	52.41	21.59	74.00	54.00
9848.060	8.97	38.44	15.57	20.85	52.69	21.31	74.00	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz。
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz。
4. Emission Level = Reading Level + Probe Factor + Cable Loss- PreAMP.
5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product : Tablet PC System
Test Item : General Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 1 (1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:							
47.460	0.96	9.32	0.00	11.46	21.74	18.26	40.00
165.800	1.57	9.12	0.00	20.54	31.23	12.27	43.50
335.550	2.45	12.68	0.00	22.41	37.54	8.46	46.00
*597.450	3.79	17.71	0.00	17.53	39.04	6.96	46.00
779.810	4.73	19.03	0.00	14.87	38.63	7.37	46.00
981.570	5.78	20.56	0.00	13.35	39.69	14.31	54.00
Vertical:							
59.100	1.02	5.30	0.00	22.30	28.62	11.38	40.00
143.490	1.45	9.96	0.00	18.65	30.06	13.44	43.50
335.550	2.45	12.63	0.00	19.74	34.82	11.18	46.00
598.420	3.80	19.54	0.00	10.07	33.42	12.58	46.00
*779.810	4.73	19.88	0.00	10.97	35.58	10.42	46.00
982.540	5.78	19.96	0.00	10.96	36.70	17.30	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Tablet PC System
Test Item : General Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 6 (1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:							
47.460	0.96	9.32	0.00	11.25	21.53	18.47	40.00
165.800	1.57	9.12	0.00	23.04	33.73	9.77	43.50
*331.670	2.42	12.44	0.00	23.66	38.52	7.48	46.00
565.440	3.62	17.04	0.00	17.84	38.50	7.50	46.00
861.290	5.15	19.72	0.00	10.39	35.26	10.74	46.00
979.630	5.76	20.54	0.00	11.85	38.15	15.85	54.00
Vertical:							
40.670	0.92	12.68	0.00	7.46	21.06	18.94	40.00
143.490	1.45	9.96	0.00	17.48	28.89	14.61	43.50
*309.360	2.31	12.17	0.00	22.02	36.50	9.50	46.00
498.510	3.28	16.30	0.00	14.06	33.63	12.37	46.00
850.620	5.10	19.10	0.00	10.93	35.13	10.87	46.00
981.570	5.78	19.96	0.00	9.14	34.88	19.12	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Tablet PC System
Test Item : General Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 11 (1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:							
43.581	0.94	11.19	0.00	11.30	23.43	16.57	40.00
143.490	1.45	10.87	0.00	16.42	28.75	14.75	43.50
331.670	2.42	12.44	0.00	20.04	34.90	11.10	46.00
*565.400	3.62	17.04	0.00	17.03	37.69	8.31	46.00
864.200	5.16	19.72	0.00	10.91	35.80	10.20	46.00
978.660	5.76	20.54	0.00	9.60	35.90	18.10	54.00
Vertical:							
*34.850	0.89	16.04	0.00	13.34	30.27	9.73	40.00
143.490	1.45	9.96	0.00	19.16	30.57	12.93	43.50
331.670	2.42	12.69	0.00	21.04	36.15	9.85	46.00
497.540	3.28	16.30	0.00	13.88	33.45	12.55	46.00
847.710	5.08	18.89	0.00	10.34	34.32	11.68	46.00
981.570	5.78	19.96	0.00	6.49	32.23	21.77	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Tablet PC System
Test Item : General Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 1 (11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:							
38.730	0.91	14.34	0.00	13.22	28.47	11.53	40.00
165.800	1.57	9.12	0.00	22.41	33.10	10.40	43.50
331.660	2.42	12.44	0.00	21.69	36.55	9.45	46.00
*498.520	3.28	16.31	0.00	19.74	39.33	6.67	46.00
863.230	5.16	19.72	0.00	10.10	34.99	11.01	46.00
979.610	5.76	20.54	0.00	12.41	38.71	15.29	54.00
Vertical:							
47.450	0.96	7.33	0.00	14.85	23.14	16.86	40.00
143.490	1.45	9.96	0.00	18.86	30.27	13.23	43.50
265.710	2.08	12.86	0.00	18.13	33.07	12.93	46.00
497.540	3.28	16.30	0.00	13.13	32.70	13.30	46.00
*852.560	5.12	19.13	0.00	11.69	35.93	10.07	46.00
983.510	5.78	19.96	0.00	7.16	32.90	21.10	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Tablet PC System
Test Item : General Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 6 (11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:							
47.480	0.96	9.32	0.00	15.33	25.61	14.39	40.00
*165.810	1.57	9.12	0.00	23.21	33.90	9.60	43.50
331.690	2.42	12.44	0.00	21.46	36.32	9.68	46.00
532.460	3.45	16.61	0.00	18.64	38.70	7.30	46.00
864.200	5.16	19.72	0.00	10.47	35.36	10.64	46.00
980.600	5.76	20.54	0.00	11.24	37.54	16.46	54.00
Vertical:							
*55.230	1.00	5.80	0.00	28.34	35.14	4.86	40.00
143.490	1.45	9.96	0.00	17.92	29.33	14.17	43.50
316.150	2.34	12.38	0.00	21.97	36.69	9.31	46.00
498.510	3.28	16.30	0.00	13.83	33.40	12.60	46.00
850.620	5.10	19.10	0.00	10.61	34.81	11.19	46.00
979.630	5.76	19.94	0.00	7.10	32.80	21.20	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ * ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

Product : Tablet PC System
Test Item : General Radiated Emission Data
Test Site : No.2 OATS
Test Mode : Channel 11 (11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal:							
47.470	0.96	9.32	0.00	15.48	25.76	14.24	40.00
143.490	1.45	10.87	0.00	19.27	31.60	11.90	43.50
332.690	2.43	12.54	0.00	23.42	38.39	7.61	46.00
*530.520	3.45	16.59	0.00	20.42	40.46	5.54	46.00
779.810	4.73	19.03	0.00	14.54	38.30	7.70	46.00
981.530	5.78	20.56	0.00	11.96	38.30	15.70	54.00
Vertical:							
*43.590	0.94	9.57	0.00	19.79	30.30	9.70	40.00
143.490	1.45	9.96	0.00	18.83	30.24	13.26	43.50
331.690	2.42	12.69	0.00	20.69	35.80	10.20	46.00
519.800	3.39	16.74	0.00	14.98	35.10	10.90	46.00
779.820	4.73	19.88	0.00	9.09	33.70	12.30	46.00
981.590	5.78	19.96	0.00	8.81	34.55	19.45	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable Loss.

6. EMI Reduction Method During Compliance Testing

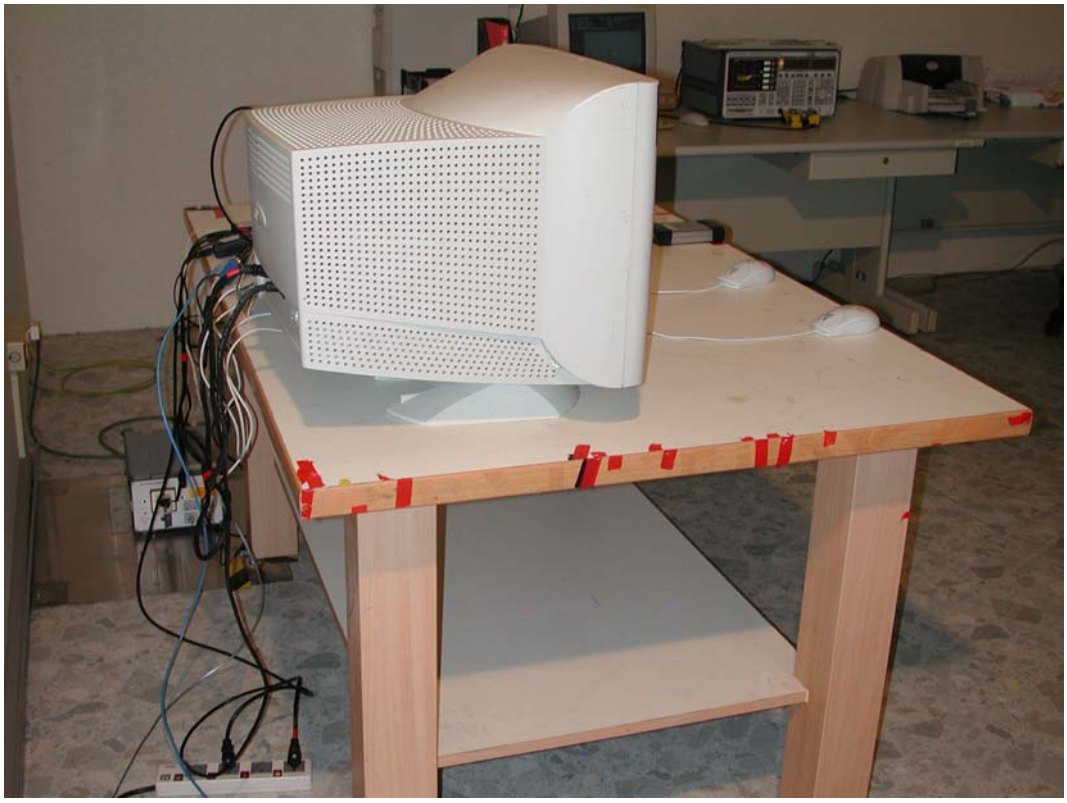
No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 1: EUT Test Setup Photographs

Front View of Conducted Test

Back View of Conducted Test



Front View of Radiated Test

Back View of Radiated Test

Front View of Radiated Test (Horn)

Attachment 2: EUT Detailed Photographs

Attachment 2 : EUT Detailed Photographs

(1) EUT Photo

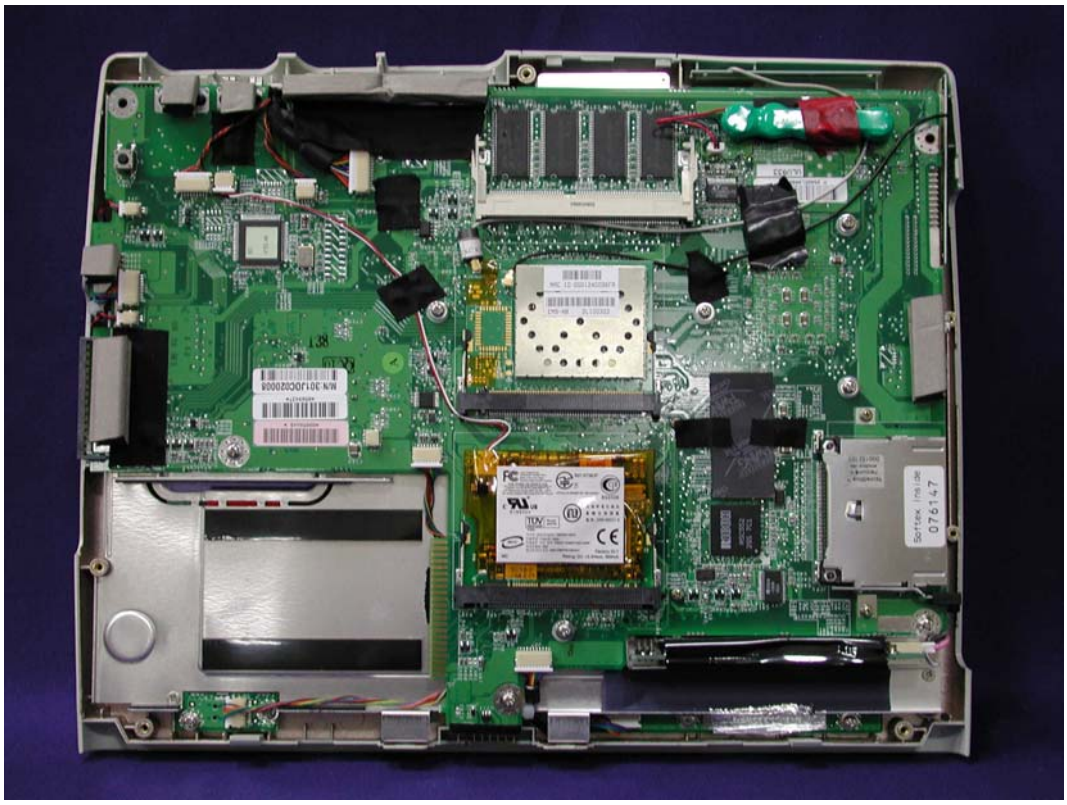
(2) EUT Photo

(3) EUT Photo

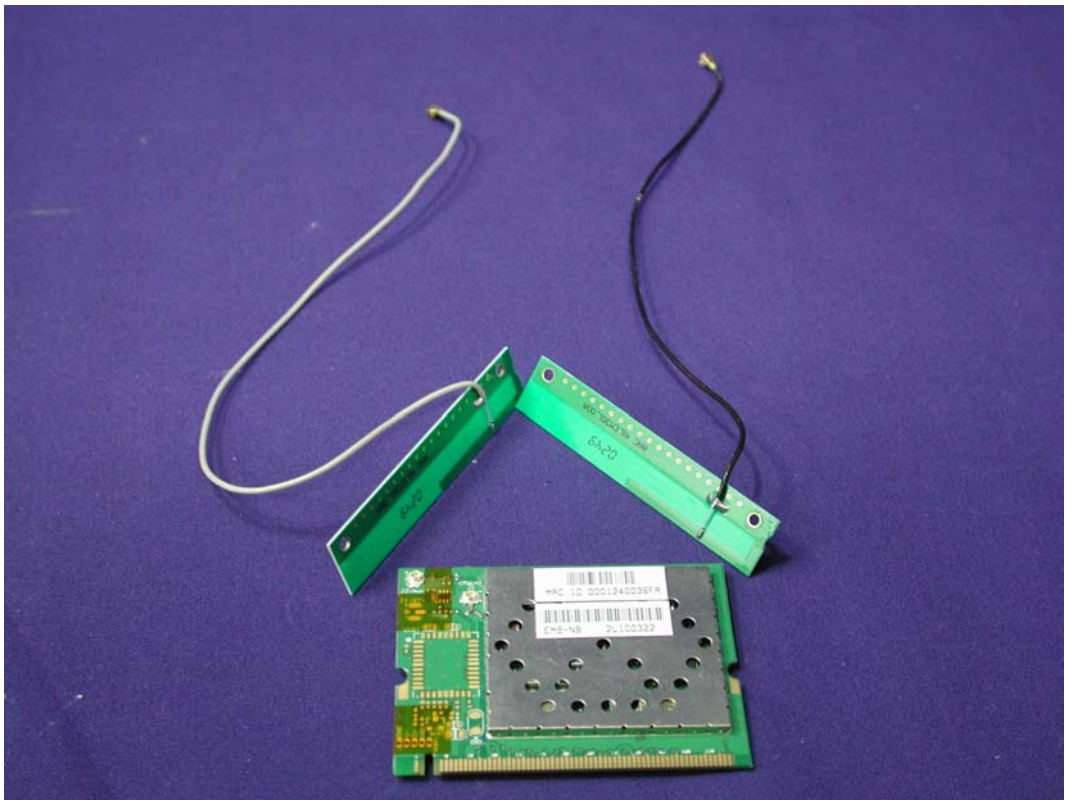
(4) EUT Photo

(5) EUT Photo

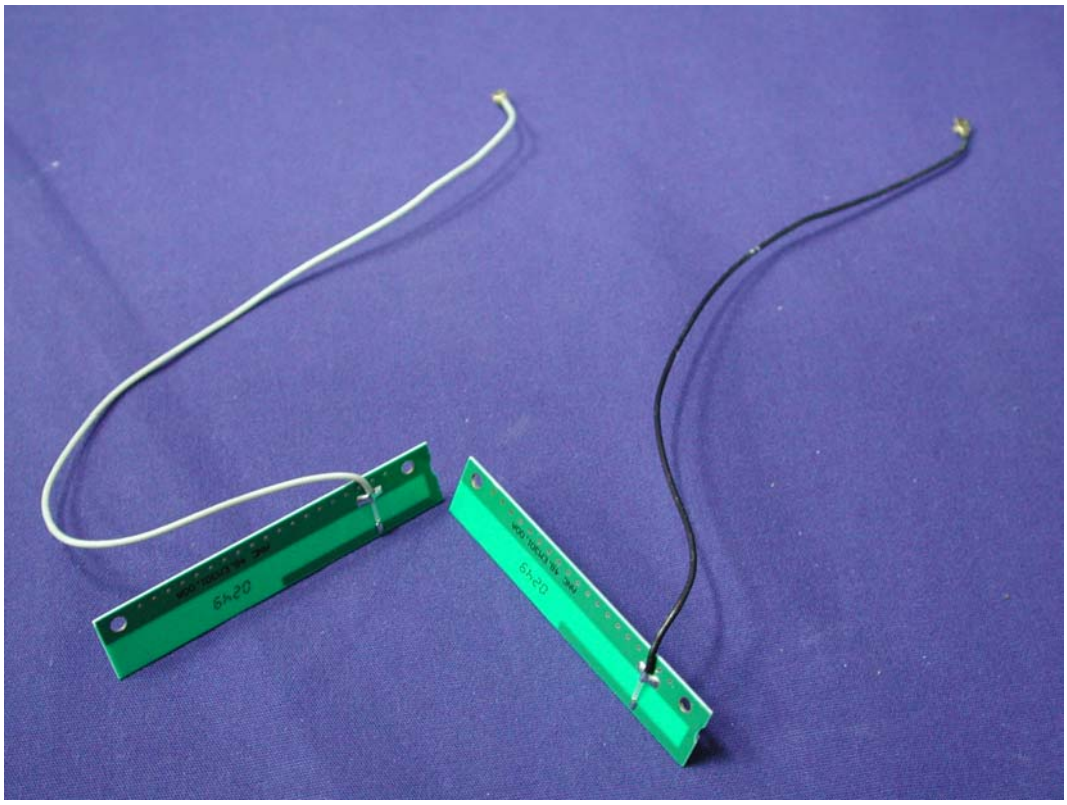
(6) EUT Photo



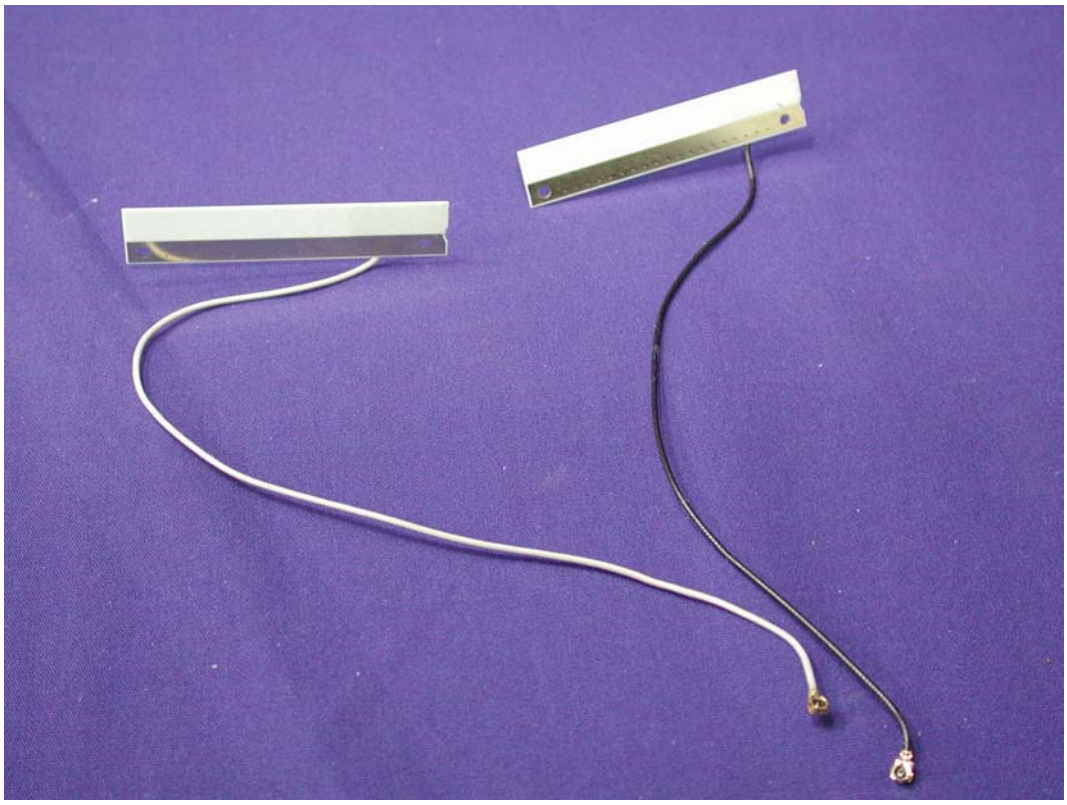
(7) EUT Photo



(8) EUT Photo

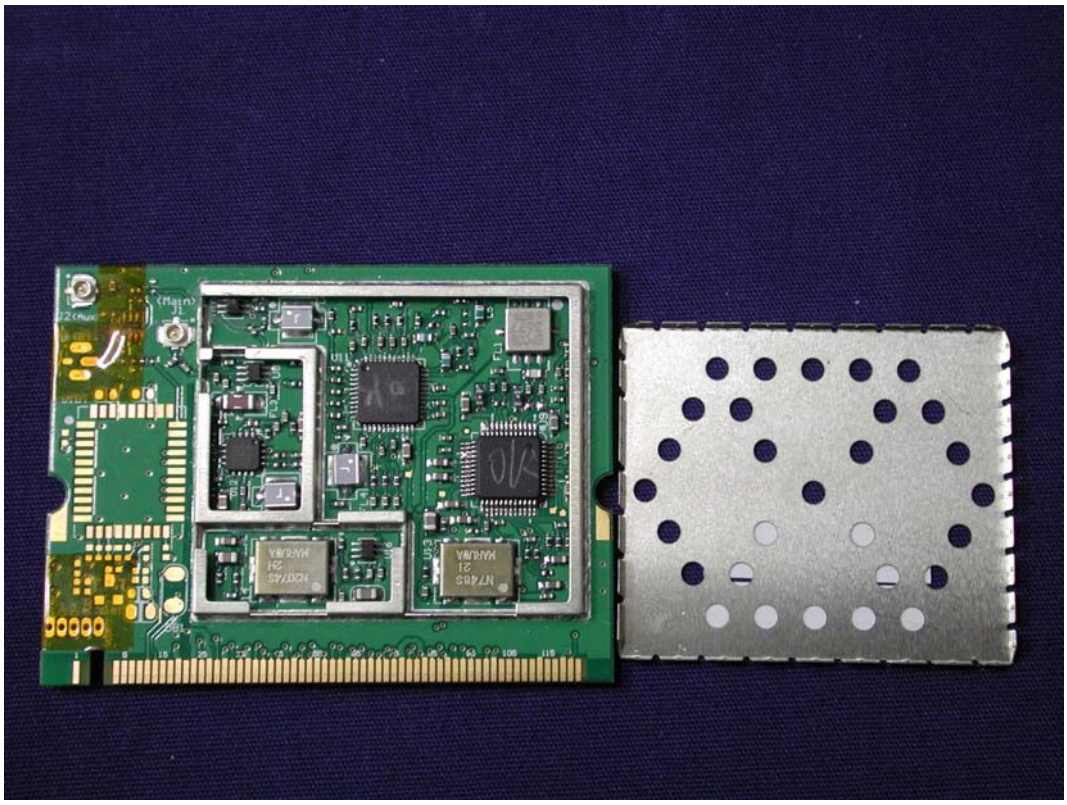


(9) EUT Photo

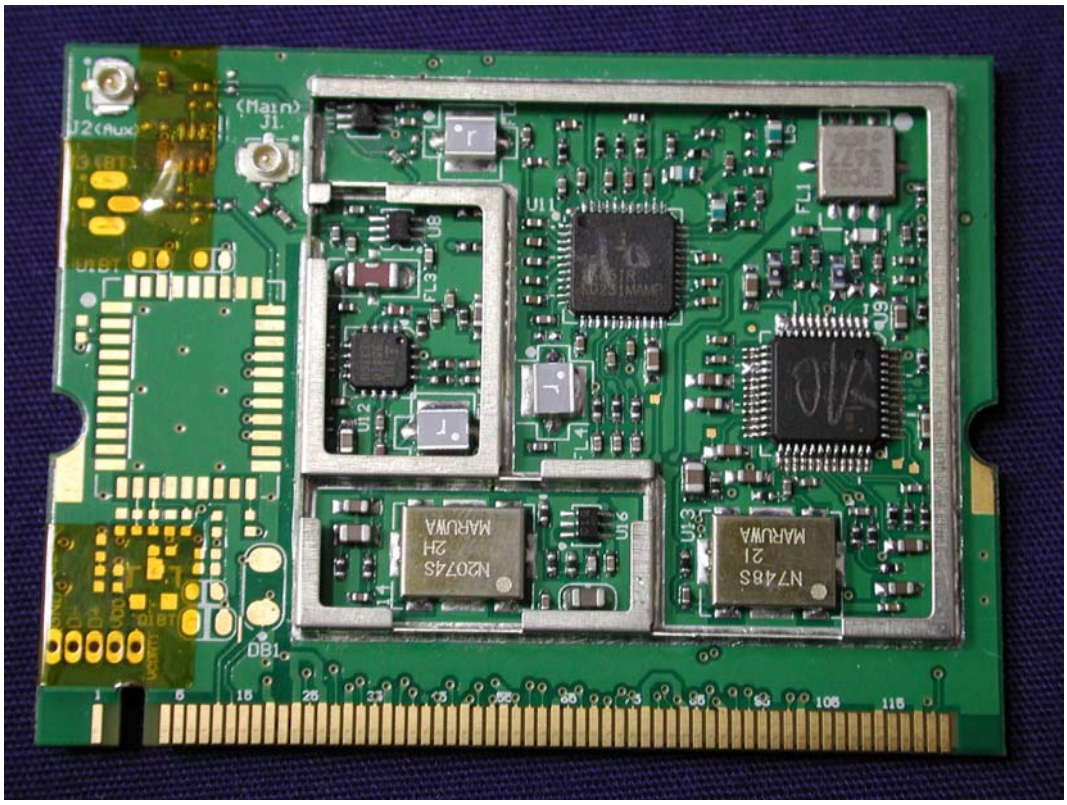


(10) EUT Photo

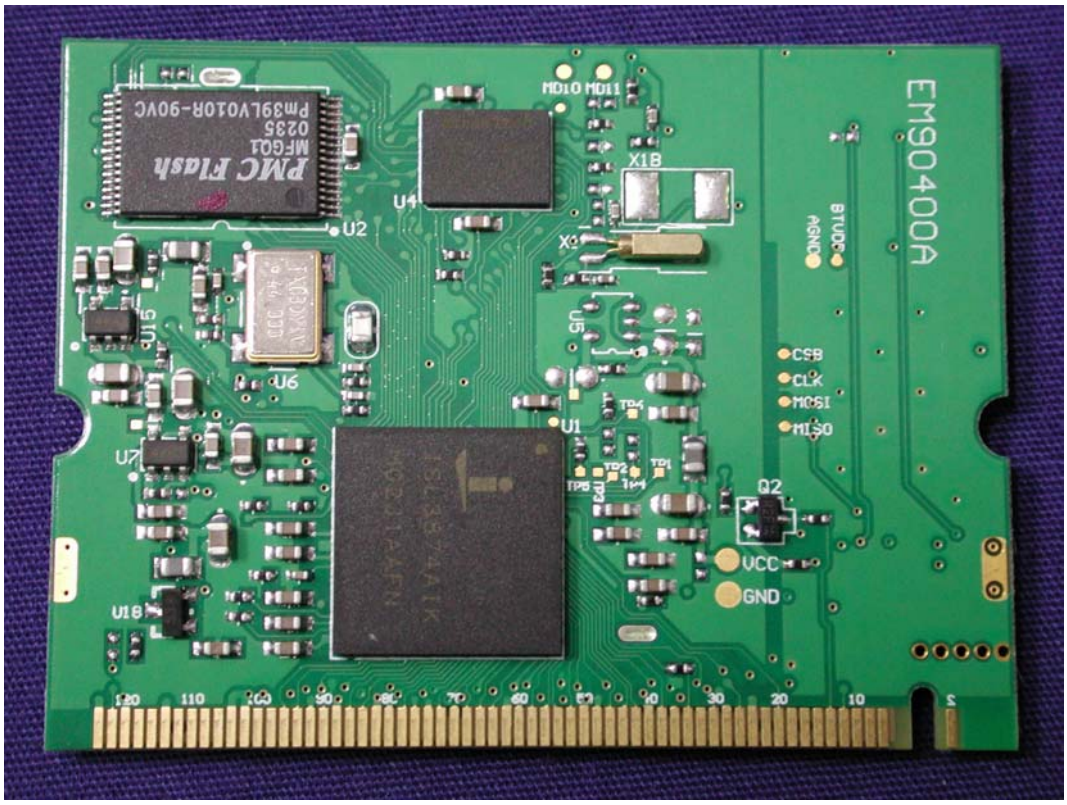
(11) EUT Photo



(12) EUT Photo



(13) EUT Photo


EM90400A
PMC Flash
U1
U2
U4
U5
U6
U7
U16
X1B
X3
Q2
VCC
GND
CSB
CLK
MOSI
MISO