

CE

SPORTON LAB.

Certificate No: EH030518-04

CERTIFICATE

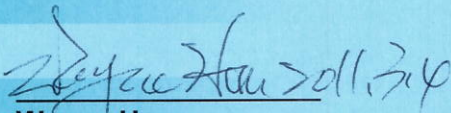


- **EQUIPMENT** : 150N Wireless LAN USB Adapter
- MODEL NO.** : EW-7811GLn,EW-7811Un,EW-7811UWn,GWU-H811GLn
- APPLICANT** : EDIMAX TECHNOLOGY CO., LTD
No.3, Wu Chuan 3rd Road, Wu-Ku Industrial Park, Taipei Hsien, Taiwan



I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **EN 301 489-1 V1.8.1 (2008-04) EN 301 489-17 V2.1.1 (2009-05)**. Testing was carried out on **Mar. 31, 2010** at SPORTON International Inc. LAB.


Wayne Hsu
Vice Manager

CE EMC TEST REPORT

according to

EN 301 489-1 V1.8.1 (2008-04)
EN 301 489-17 V2.1.1 (2009-05)

Equipment : 150N Wireless LAN USB Adapter
Model No. : EW-7811GLn,EW-7811Un,EW-7811UWn,GWU-H811GLn
Brand Name : EDIMAX
Filing Type : Existing Change
Applicant : EDIMAX TECHNOLOGY CO., LTD
No.3, Wu Chuan 3rd Road, Wu-Ku Industrial Park, Taipei
Hsien, Taiwan
Manufacturer : EDIMAX TECHNOLOGY CO., LTD
No.3, Wu Chuan 3rd Road, Wu-Ku Industrial Park, Taipei
Hsien, Taiwan
Received Date : Mar. 23, 2010
Final Test Date : Mar. 31, 2010
Multiple Listing : Please refer to section 2.3

Statement

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.



SPORTON International Inc.

No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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History of This Test Report

Original Issue Date: Mar. 04, 2011

Report No.: EH030518-04

No additional attachment.

■ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description
EH030518	Apr. 07, 2010	Original.
EH030518-03	Sep. 01, 2010	Update layout and standard version EN 301 489-17 V1.3.2 (2008-04) to EN 301 489-17 V2.1.1 (2009-05). For EMS tests were retested in this report.
EH030518-04	Mar. 04, 2011	Update standard version EN 61000-3-3:1995/A2:2005 to EN 61000-3-3:2008.




CERTIFICATE OF COMPLIANCE

according to

EN 301 489-1 V1.8.1 (2008-04)
EN 301 489-17 V2.1.1 (2009-05)

Equipment : 150N Wireless LAN USB Adapter
Model No. : EW-7811GLn,EW-7811Un,EW-7811UWn,GWU-H811GLn
Brand Name : EDIMAX
Applicant : EDIMAX TECHNOLOGY CO., LTD
No.3, Wu Chuan 3rd Road, Wu-Ku Industrial Park, Taipei Hsien, Taiwan

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Mar. 23, 2010 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.



Wayne Hsu / Vice Manager

SPORTON International Inc.

No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



1 SUMMARY OF THE TEST RESULT

1.1 Emission Tests

Applicable Standard : EN 301 489-1 V1.8.1 (2008-04)				
Part	Test Standard	Description of Test	Result	Under Limit
3.1	EN 55022:2006	AC Power Conducted Emissions	Complies	8.90 dB
-	EN 55022:2006	Telecom Line Conducted Emissions	-	-
-	EN 55022:2006	Radiated Emissions	-	-
-	EN 61000-3-2:2006	Harmonic Current Emissions	-	-
-	EN 61000-3-3:2008	Voltage Fluctuations and Flicker	-	-

1.2 Immunity Tests

Applicable Standard : EN 301 489-1 V1.8.1 (2008-04)				
Part	Test Standard	Description of Test	Result	Criteria
4.1	EN 61000-4-2:2001	ESD (EUT of Enclosure)	Complies	A
4.2	EN 61000-4-3:2006	RS (EUT of Enclosure)	Complies	A
-	EN 61000-4-4:2004	EFT (EUT of AC Power Port)	-	-
-	EN 61000-4-4:2004	EFT (EUT of Telecom Port)	-	-
-	EN 61000-4-5:2006	Surge (EUT of AC Power Port)	-	-
-	EN 61000-4-5:2006	Surge (EUT of Telecom Port)	-	-
-	EN 61000-4-6:2005	CS (EUT of AC Power Port)	-	-
-	EN 61000-4-6:2005	CS (EUT of Telecom Port)	-	-
-	EN 61000-4-11:2004	DIP (EUT of AC Power Port)	-	-

1.3 Uncertainty

Test Items	Uncertainty	Remark
Conducted Emissions	±2.3dB	Confidence levels of 95%
Radiated Emissions	±3.7dB	Confidence levels of 95%



1.4 EMS Performance Criteria Description

Criteria	During test	After test
A	Shall operate as intended. May show degradation of performance (see note 1). Shall be no loss of function. Shall be no unintentional transmissions.	Shall operate as intended. Shall be no degradation of performance (see note 2). Shall be no loss of function. Shall be no loss of stored data or user programmable functions.
B	May show loss of function (one or more). May show degradation of performance (see note 1). No unintentional transmissions.	Functions shall be self-recoverable. Shall operate as intended after recovering. Shall be no degradation of performance (see note 2). Shall be no loss of stored data or user programmable functions.
C	May be loss of function (one or more).	Functions shall be recoverable by the operator. Shall operate as intended after recovering. Shall be no degradation of performance (see note 2).

NOTE 1: Degradation of performance during the test is understood as a degradation to a level not below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance.
If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

NOTE 2: No degradation of performance after the test is understood as no degradation below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. After the test no change of actual operating data or user retrievable data is allowed. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.



2 GENERAL INFORMATION

2.1 Product Category

The RF detail of EUT is shown in this report. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

2.2 Table for Testing Locations

Test Site No.	Site Category	Location	Test Site No.	Site Category	Location
CO01-HY	CON	Hwa Ya	ES01-HY	ESD	Hwa Ya
RS01/02-HY	RS	Hwa Ya	EX01-HY	EFT, DIP, Surge	-
CS01-HY	CS	-	CL01-HY	Clamp	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

2.3 Table for Multiple Listing

Brand and models that are exactly the same EUT, products with different models only because of market segmentation.

No.	Brand Name	Model Name
1	Edimax	EW-7811 GLn,EW-7811Un,EW-7811UWn,GWU-H811 GLn

2.4 Table for Supporting Units

Support Unit	Brand	Model	FCC ID	Remark
Notebook	DELL	E5500	N/A	EMI
(USB) Mouse	Microsoft	1004	N/A	
Modem	ACEEX	DM1414	IFAXDM1414	
P.C.	DELL	760	N/A	EMS
LCD Monitor	IBM	4943-17X	N/A	
(USB) Keyboard	DELL	SK-8175	DoC	
(USB) Mouse	LOGITECH	M-BE58	DoC	
Notebook (Remote Workstation)	DELL	PP19S	N/A	

2.5 EUT Operation during Test

An executive program, "EMCTEST.EXE" under WIN XP, which generates a complete line of continuously repeating "H" pattern was used as the test software.

The program was executed as follows :

- Turn on the power of all equipment.
- The NB (P.C.) reads the test program from the hard disk drive and runs it.
- The NB (P.C.) sends "H" messages to the panel (LCD monitor) and displays "H" patterns on the screen.
- The NB (P.C.) sends messages to the modem.

Only EMS used:

-Executed "ping.exe" to link with the remote workstation to receive and transmit data by WLAN.

3 EMISSION TESTS RESULT

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit

For this product, which is designed to be connected to the 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 below limits table.

Class A

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	79	66
0.5~30	73	60

Class B

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

3.1.2 Measuring Instruments and Setting

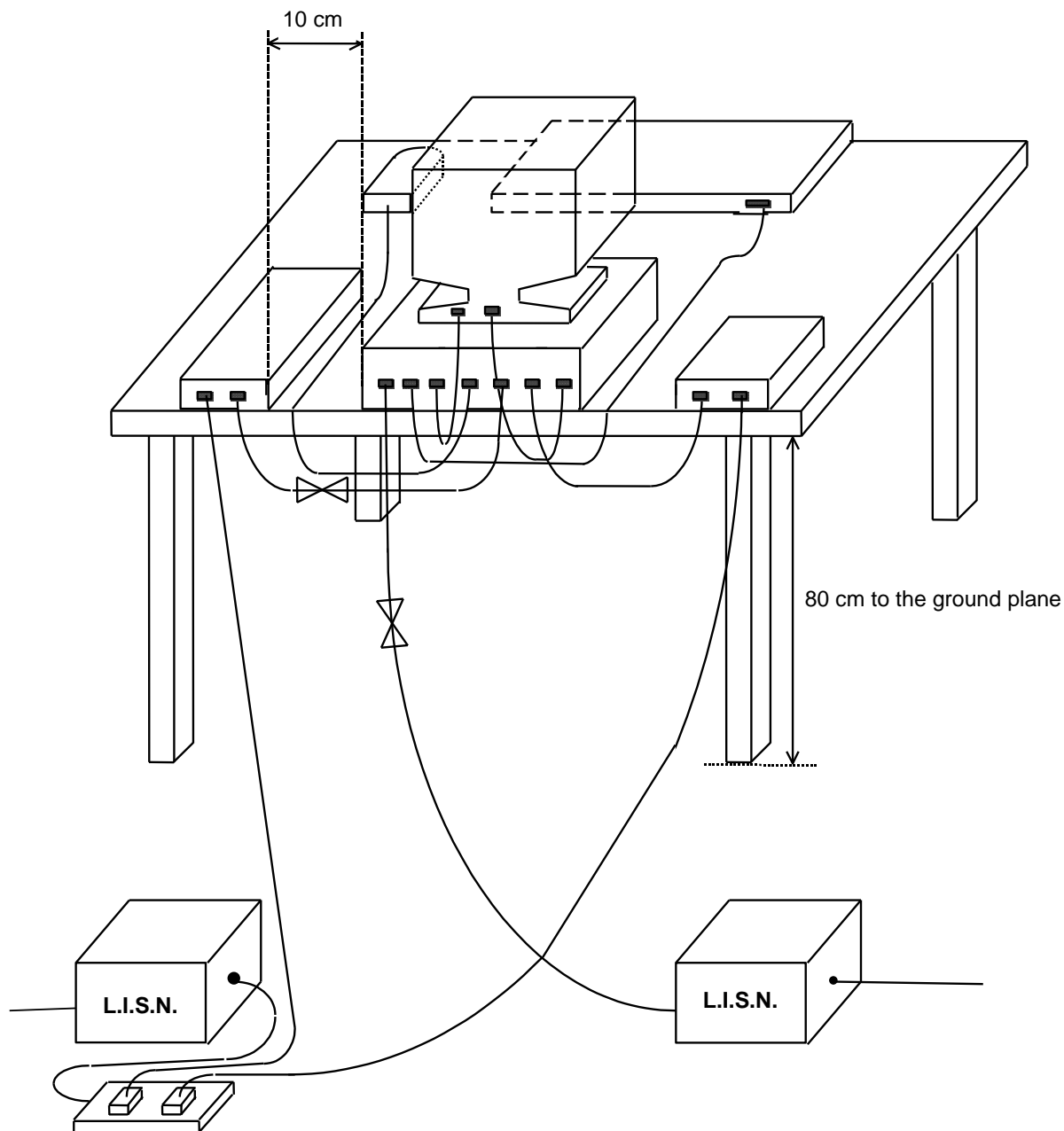
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

3.1.3 Test Procedures

1. The EUT warm up about 15 minutes then start test.
2. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
5. The frequency range from 150 KHz to 30 MHz was searched.
6. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
7. The measurement has to be done between each power line and ground at the power terminal.

3.2 Typical Test Setup Layout of Conducted Powerline

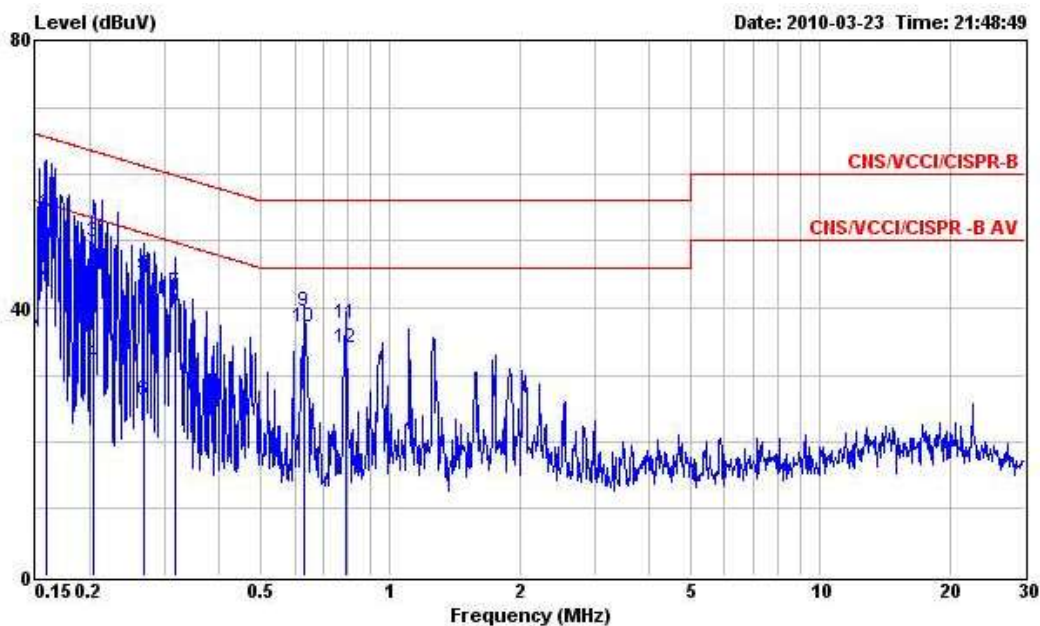




3.2.1 Results of AC Power Line Conducted Emissions Measurement

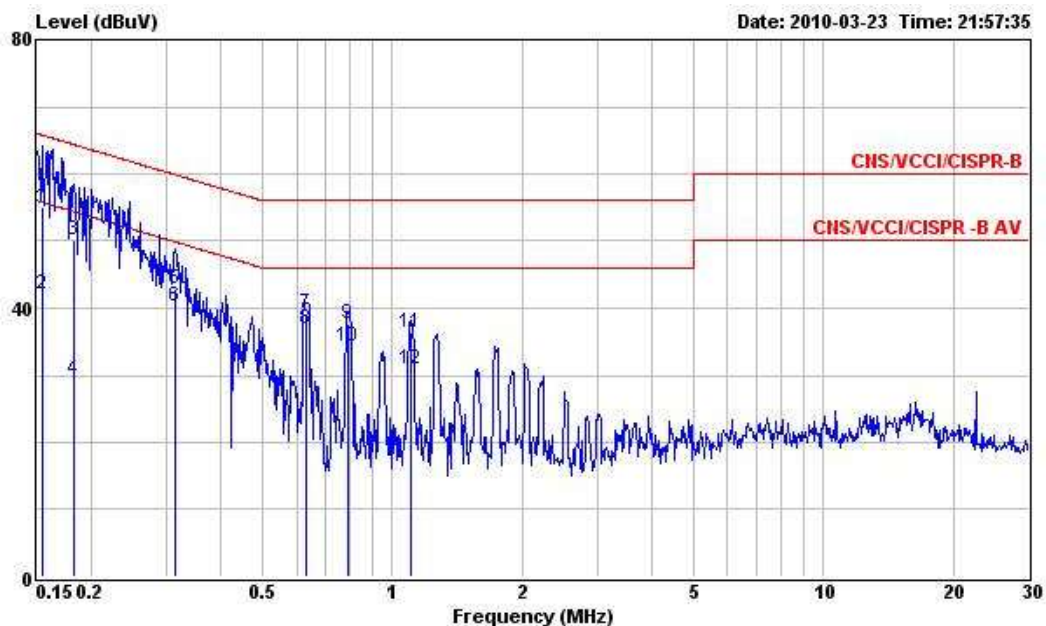
Final Test Date	Mar. 23, 2010	Test Site No.	CO01-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	Normal Mode

Line



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.158	54.41	-11.16	65.57	54.26	0.08	0.07	QP
2	0.158	44.25	-11.32	55.57	44.10	0.08	0.07	Average
3	0.204	49.74	-13.71	63.45	49.60	0.08	0.06	QP
4	0.204	31.58	-21.87	53.45	31.44	0.08	0.06	Average
5	0.267	44.86	-16.35	61.21	44.72	0.08	0.06	QP
6	0.267	26.29	-24.92	51.21	26.15	0.08	0.06	Average
7	0.317	42.39	-17.40	59.79	42.23	0.09	0.07	QP
8	0.317	39.98	-9.81	49.79	39.82	0.09	0.07	Average
9	0.630	39.46	-16.54	56.00	39.26	0.10	0.10	QP
10	0.630	37.10	-8.90	46.00	36.90	0.10	0.10	Average
11	0.791	37.67	-18.33	56.00	37.45	0.10	0.12	QP
12	0.791	34.11	-11.89	46.00	33.89	0.10	0.12	Average

Neutral



	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.154	55.13	-10.65	65.78	54.98	0.07	0.08	QP
2	0.154	41.95	-13.83	55.78	41.80	0.07	0.08	Average
3	0.182	50.09	-14.30	64.39	49.96	0.06	0.07	QP
4	0.182	29.41	-24.98	54.39	29.28	0.06	0.07	Average
5	0.314	42.81	-17.05	59.86	42.67	0.07	0.07	QP
6	0.314	40.24	-9.62	49.86	40.10	0.07	0.07	Average
7	0.633	39.10	-16.90	56.00	38.91	0.08	0.11	QP
8	0.633	36.91	-9.09	46.00	36.72	0.08	0.11	Average
9	0.791	37.63	-18.37	56.00	37.43	0.08	0.12	QP
10	0.791	34.31	-11.69	46.00	34.11	0.08	0.12	Average
11	1.104	36.41	-19.59	56.00	36.18	0.09	0.14	QP
12	1.104	30.98	-15.02	46.00	30.75	0.09	0.14	Average

Note:

Level = Read Level + LISN Factor + Cable Loss.

4 IMMUNITY TESTS RESULT

4.1 Electrostatic Discharge Immunity Measurement (ESD)

4.1.1 Limit

Air discharges and contact charges are estimated to enclosure of EUT on all connectors and conducting surfaces.

Contact Discharges to the conductive surfaces and to coupling planes:

The EUT shall be exposed to at least 20 discharges 10 each at negative and positive polarity One of the test points shall be subjected to at least 50 indirect discharges (contact) to the center of the front edge of the horizontal coupling plane(HCP). The remaining three test points shall each receive at least 50 direct contact discharges. If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode [see IEC 61000-4-2 for use of the Vertical Conducting Plane (VCP)]. Tests shall be performed at a maximum repetition rate of one discharge per second.

Air Discharge at seam between apertures and insulation surfaces:

On those parts of the EUT where it is not possible to perform contact discharge testing, the equipment should be investigated to identify user accessible points where breakdown may occur. This investigation should be restricted to those areas normally handled by the user. A minimum of 10 single air discharges of each polarity and test level shall be applied to the selected test point for each area.

The preferential range of test levels for the ESD test is given in following levels:

Contact discharge Test voltage ± 4 kV; Air discharge Test voltage ± 8 kV

Performance criteria is the criteria B (Transient Phenomena for Transmitter / Receiver).

4.1.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the electrostatic discharge simulator.

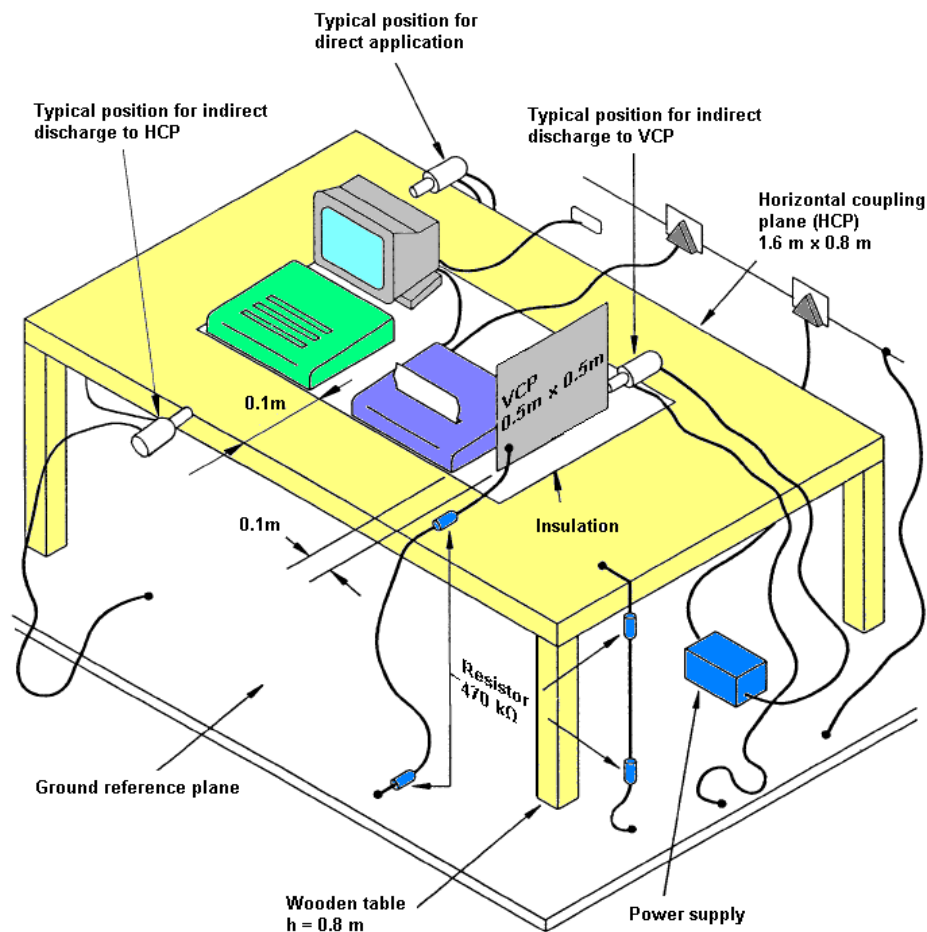
Electrostatic Discharge Simulator	Discharge Setting
Contact Charge Voltage	± 4 kV
Air Charge Voltage	± 8 kV
Rise Time	5nS + 30%
Half-Value width	30nS + 30%
Polarity	Positive/Negative
Single Discharge Mode	1 discharge per 1s



4.1.3 Test Procedures

1. In the case of air discharge testing the climatic conditions shall be within the following ranges:
Ambient temperature: 15°C to 35°C;
Relative humidity: 30% to 60%;
Atmospheric pressure: 86 kPa (860 mbar) to 106 kPa (1060 mbar).
2. Test programs and software shall be chosen so as to exercise all normal modes of operation of the EUT. The use of special exercising software is encouraged, but permitted only where it can be shown that the EUT is being comprehensively exercised.
3. The test voltage shall be increased from the minimum to the selected test severity level, in order to determine any threshold of failure. The final severity level should not exceed the product specification value in order to avoid damage to the equipment.
4. The test shall be performed with both air discharge and contact discharge. On pre-selected points at least 10 single discharges (in the most sensitive polarity) shall be applied on air discharge. On pre-selected points at least 10 single discharges (in the most sensitive polarity) shall be applied on contact discharge.
5. For the time interval between successive single discharges an initial value of one second is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.
6. In the case of contact discharges, the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.
7. In the case of painted surface covering a conducting substrate, the following procedure shall be adopted:
 - If the coating is not declared to be an insulating coating by the equipment manufacturer, then the pointed tip of the generator shall penetrate the coating so as to make contact with the conducting substrate.
 - Coating declared as insulating by the manufacturer shall only be submitted to the air discharge.
 - The contact discharge test shall not be applied to such surfaces.
8. In the case of air discharges, the round discharge tip of the discharge electrode shall be approached as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator (discharge electrode) shall be removed from the EUT. The generator is then re-triggered for a new single discharge. This procedure shall be repeated until the discharges are completed. In the case of an air discharge test, the discharge switch, which is used for contact discharge, shall be closed.

4.1.4 Test Setup Layout



A ground reference plane was provided on the floor of the test site. It was a metallic sheet (copper or aluminum) of 0.25 mm, minimum thickness; other metallic may be used but they shall have at least 0.65 mm thickness. In the SPORTON EMC LAB, we provided 1 mm thickness aluminum ground reference plane or 1 mm thickness stainless steel ground reference plane. The minimum size of the ground reference plane is 1 m x 1 m, the exact size depending on the dimensions of the EUT. It was connected to the protective grounding system.

The EUT was arranged and connected according to its functional requirements. A distance of 1m minimums was provided between the EUT and the wall of the lab. And any other metallic structure. In cases where this length exceeds the length necessary to apply the discharges to the selected points, the excess length shall, where possible, be placed non-inductively off the ground reference plane and shall not come closer than 0.2m to other conductive parts in the test setup.

Where the EUT is installed on a metal table, the table was connected to the reference plane via a cable with a 470k-ohm resistor located at each end, to prevent a build-up of charge. The test setup was consisting a wooden table, 0.8m high, standing on the ground reference plane. A HCP, 1.6 m x 0.8 m, was placed on the table. The EUT and cables was isolated from the HCP by an insulating support 0.5 mm thick. The VCP size, 0.5 m x 0.5 m.



4.1.5 Test Deviation

There is no deviation with the original standard.

4.1.6 Test Result of Electrostatic Discharge Immunity

Final Test Date	Aug. 09, 2010	Test Site	ES01-HY
Temperature	23.9°C	Humidity	51%
Pressure	100 kPa	Test Engineer	Kero
Discharge Mode	Contact Discharge	Test Voltage	±4 kV
Tested No.	10 single	Configuration	Normal Mode
Performance	Required Criteria B		

Test Point	Observation	Criteria
HCP (At front, left, right, rear)	No performance degradation was observed.	A
VCP (At front, left, right, rear)	No performance degradation was observed.	A

Final Test Date	Aug. 09, 2010	Test Site	ES01-HY
Temperature	23.9°C	Humidity	51%
Pressure	100 kPa	Test Engineer	Kero
Discharge Mode	Air Discharge	Test Voltage	±8 kV
Tested No.	10 single	Configuration	Normal Mode
Performance	Required Criteria B		

Test Point	Observation	Criteria
Case	No performance degradation was observed.	A
LED	No performance degradation was observed.	A
USB Port	No performance degradation was observed.	A



4.2 Radio Frequency Electromagnetic Field Immunity Measurement (RS)

4.2.1 Limit

Most electronic equipment is in some manner affected by electromagnetic radiation. RF immunity test entails subjecting the equipment under test to a uniform field of radiated electromagnetic energy of specified electromagnetic field strength and frequency and monitoring the functionality of the device as the frequency is swept over a specified frequency range.

The preferential range of test field strength levels for the RS test is given in following levels:

80~1GHz: 3V/m / 1.4~2.7GHz: 3V/m

Performance criteria is the criteria A (Continuous Phenomena for Transmitter/ Receiver).

4.2.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the RS Immunity Test System.

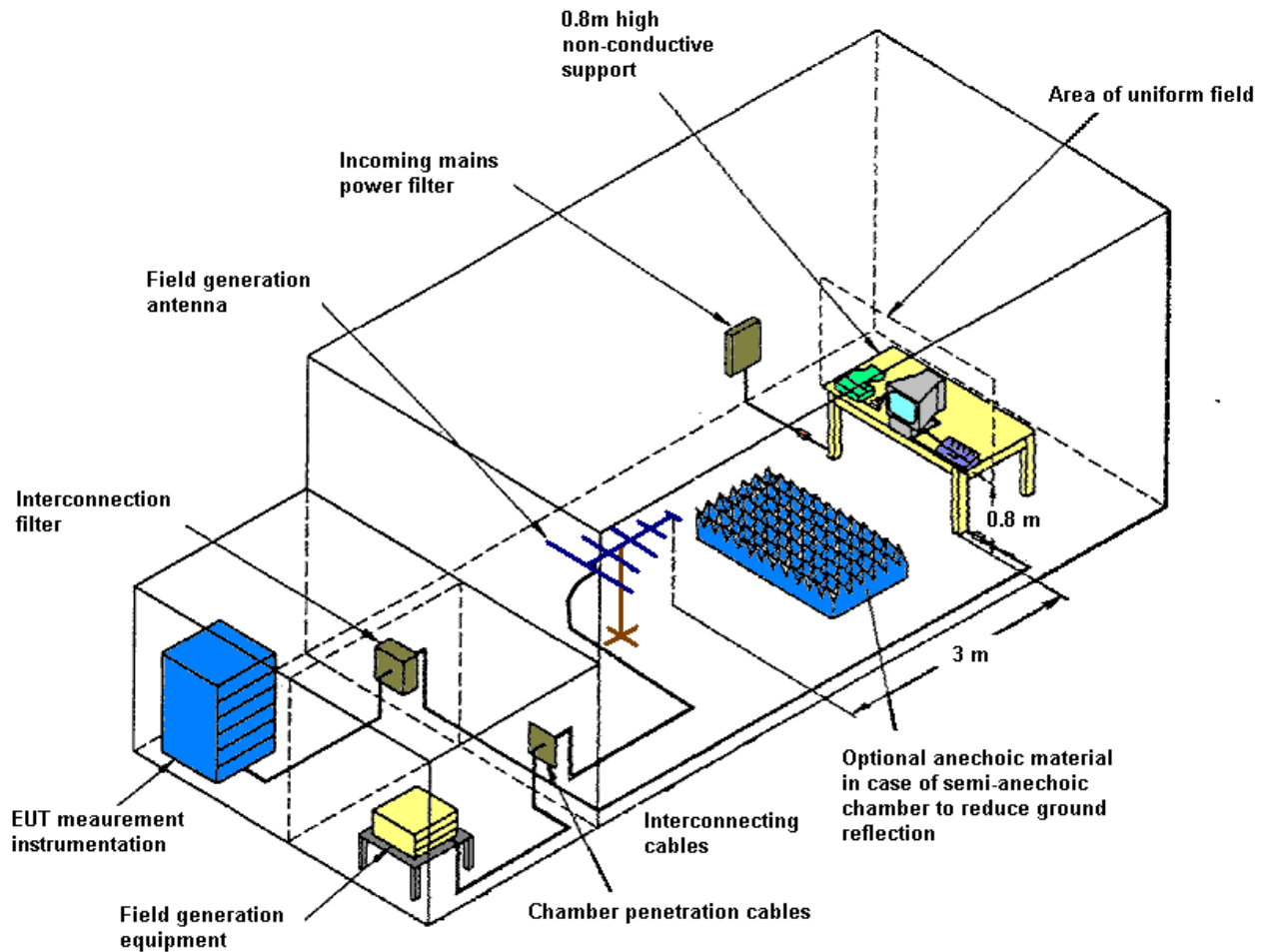
RS Immunity Test System	Setting
Method Used	Bilog antenna and semi-anechoic chamber
Field Strength Exposure	3 V/m
Frequency Range/Modulation	80-1000MHz and 1400-2700 MHz, 80% AM modulation
Antenna Polarization	Vertical & Horizontal
Test Distance	3m
Frequency Steps	1% step
Dwell Time	2.9 sec
Exposures	Front, Back, Left and Right of the EUT

4.2.3 Test Procedures

1. The equipment to be tested is placed in the center of the enclosure on a wooden table. The equipment is then connected to power and signal leads according to pertinent installation instructions.
2. The Bilog antenna which is enabling the complete frequency range of 80-1000MHz and 1400-2700 MHz is placed 3m away from the equipment. The required field strength is determined by placing the field strength meter(s) on top of or directly alongside the equipment under test and monitoring the field strength meter via a remote field strength indicator outside the enclosure while adjusting the continuous-wave to the applicable antennae.
3. The test is normally performed with the generating antenna facing each of four sides of the EUT. The polarization of the field generated by the bi-conical antenna necessitates testing each position twice, once with the antenna positioned vertically and again with the antenna positioned horizontally. The circular polarization of the field from the log-spiral antenna makes a change of position of the antenna unnecessary.
4. At each of the above conditions, the frequency range is swept 80-1000MHz and 1400-2700 MHz pausing to adjust the R.F. signal level or to switch oscillators and antenna. The rate of sweep is in the

order of $1.5 \cdot 10^{-3}$ decades/s. The sensitive frequencies or frequencies of dominant interest may be discretely analyzed.

4.2.4 Test Setup Layout



NOTE: The chamber is compliance with the sixteen points uniform field requirement as stated in IEC 61000-4-3 Section 6.2.

The procedure defined in this part requires the generation of electromagnetic fields within which the test sample is placed and its operation observed. To generate fields that are useful for simulation of actual (field) conditions may require significant antenna drive power and the resultant high field strength levels. To comply with local regulations and to prevent biological hazards to the testing personnel, it is recommended that these tests be carried out in a shielded enclosure or semi-anechoic chamber.

4.2.5 Test Deviation

There is no deviation with the original standard.



4.2.6 Test Result of Radio Frequency Electromagnetic Field Immunity

Final Test Date	Aug. 09, 2010	Test Site	RS01/02-HY
Temperature	21.8°C	Humidity	52%
Pressure	100 kPa	Test Engineer	Kero
Performance	Required Criteria A	Configuration	Normal Mode

EUT Face Exposed	Observation	Performance
Front	No performance degradation was observed.	A
Back	No performance degradation was observed.	A
Left	No performance degradation was observed.	A
Right	No performance degradation was observed.	A



5 LIST OF MEASURING EQUIPMENTS

Original < Conducted Emissions >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Sep. 01, 2009	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Jan. 19, 2010	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 01, 2010	Conduction (CO01-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832010001	9kHz – 30MHz	May 05, 2009	Conduction (CO01-HY)

Note: Calibration Interval of instruments listed above is one year.

Update <EMS >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
ESD Simulator	KEYTEK	MZ-15/EC	0711355	Air: 0 kV - 15 kV Contact: 0 kV - 8 kV	Mar. 10, 2010	ESD

Note: Calibration Interval of instruments listed above is one year.

< RS > -- to 1G test

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Probe	ETS-LINDGREN	HI-6005	00052473	0.1 MHz - 5 GHz	Aug. 12, 2009	RS
Amplifier	AR	250W 1000AM1	320482	80 MHz - 1 GHz	Sep. 21, 2009	RS
DUAL DIRECTIONAL COUPLER	AMPLIFIER& RESEARCH	DC7144A	312782	80-1GHz	Sep. 21, 2009	RS
Antenna	FRANKONIA	BTA-L	02002L	26 MHz - 1 GHz	Sep. 21, 2009	RS

Note: Calibration Interval of instruments listed above is one year.

< RS > -- to 3G test

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Amplifier	AMPLIFIER& RESEARCH	30S1G3	312505	80M-3GHz	Sep. 21, 2009	RS
DUAL DIRECTIONAL COUPLER	AMPLIFIER& RESEARCH	DC6180A	312453	0.8-4.2GHz	Sep. 21, 2009	RS
Antenna	ETS	3115	6744	1GHz - 18 GHz	Sep. 21, 2009	RS
INTEGRATED MEASUREMENT SYSTEM	ROHDE& SCHWARZ	IMS	100007	9kHz-3GHz	Nov. 03, 2009	RS
NRP-Z91 POWER SENSOR 6GHZ	ROHDE& SCHWARZ	1168.8004.02	100095	9kHz-3GHz	Nov. 03, 2009	RS

Note: Calibration Interval of instruments listed above is one year.



6 TEST LOCATION

SHIJR	ADD : 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C. TEL : 886-2-2696-2468 FAX : 886-2-2696-2255
HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
LINKOU	ADD : No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C TEL : 886-2-2601-1640 FAX : 886-2-2601-1695
DUNGHU	ADD : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C. TEL : 886-2-2631-4739 FAX : 886-2-2631-9740
JUNGHE	ADD : 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C. TEL : 886-2-8227-2020 FAX : 886-2-8227-2626
NEIHU	ADD : 4Fl., No. 339, Hsin Hu 2 nd Rd., Taipei 114, Taiwan, R.O.C. TEL : 886-2-2794-8886 FAX : 886-2-2794-9777
JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

7 TAF CERTIFICATE OF ACCREDITATION



Certificate No. : L1190-110111

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.**EMC & Wireless Communications Laboratory**

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,
Taiwan, R.O.C.

is accredited in respect of laboratory

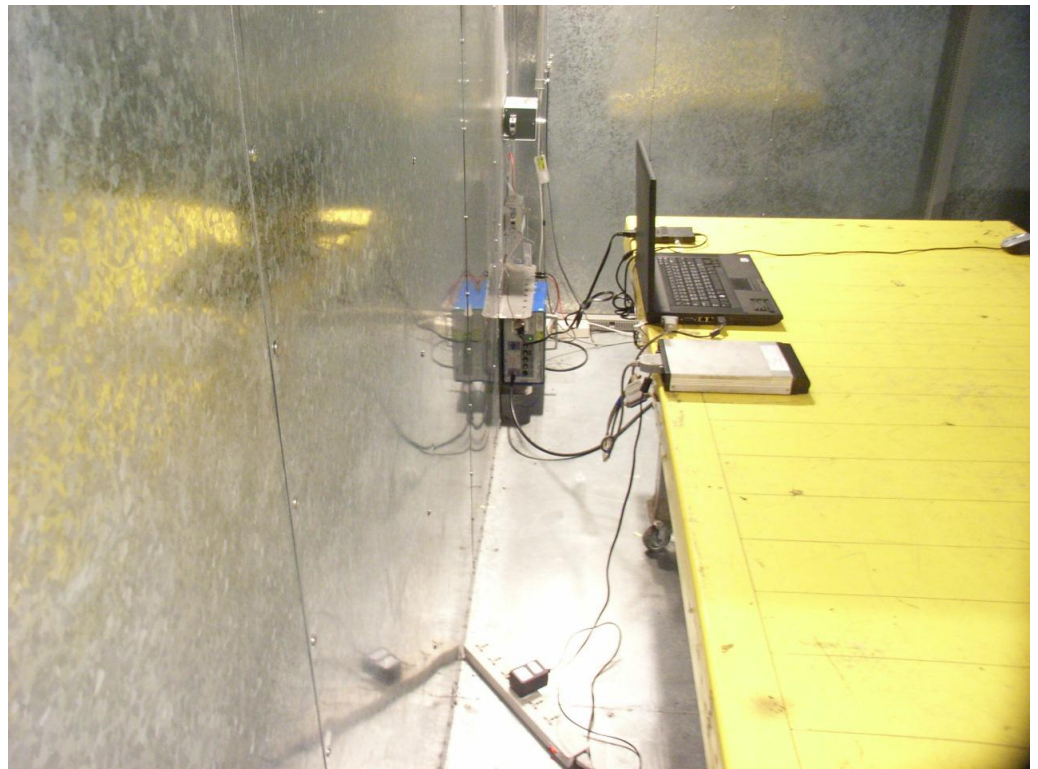
Accreditation Criteria : ISO/IEC 17025:2005
Accreditation Number : 1190
Originally Accredited : December 15, 2003
Effective Period : January 10, 2010 to January 09, 2013
Accredited Scope : Testing Field, see described in the Appendix
Specific Accreditation Program : Accreditation Program for Designated Testing Laboratory for Commodities Inspection
Accreditation Program for Telecommunication Equipment Testing Laboratory
Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 11, 2011

PI, total 24 pages

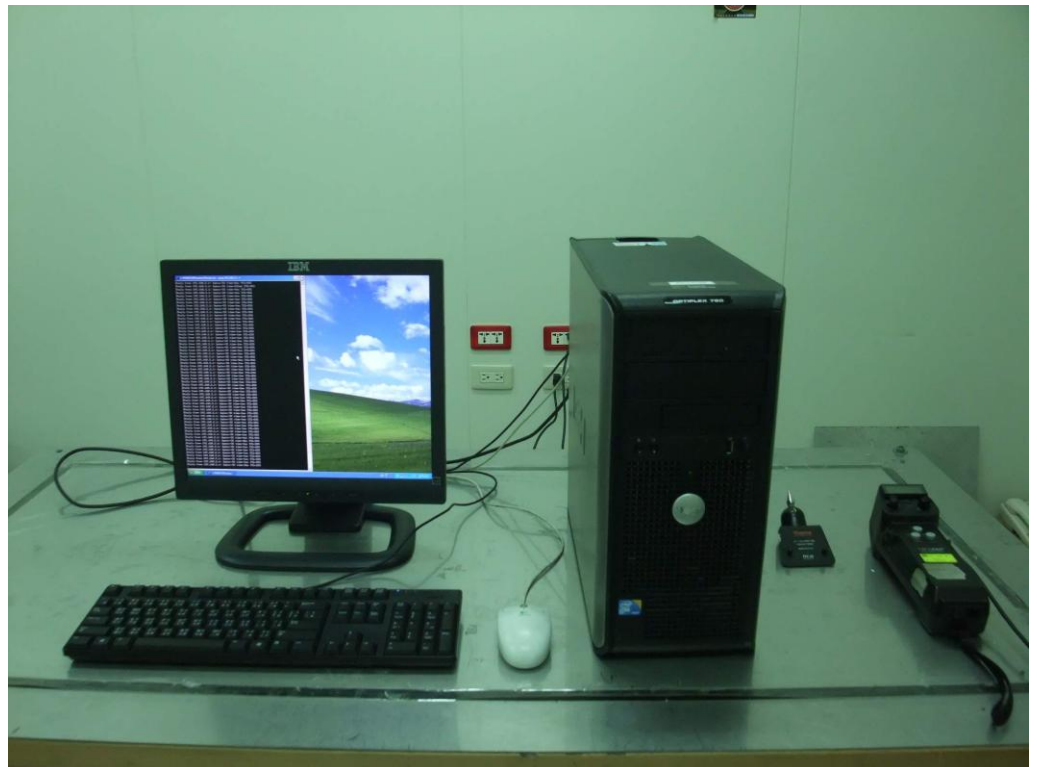


Appendix A. Test Photos

1. Photographs of Conducted Emissions Test Configuration**FRONT VIEW****REAR VIEW**

SIDE VIEW



2. Photographs of ESD Immunity Test Configuration**FRONT VIEW****REAR VIEW**

3. Photographs of RS Immunity Test Configuration

FRONT VIEW



REAR VIEW



APPENDIX B. Photographs of EUT

