



VERIFICATION OF COMPLIANCE

This Verification of Compliance is hereby issued to the product designated below.

Product	Panel PC with Touch Screen
Model	POC-174XX-YY-ZZ (X = 0 ~ 9 or A ~ Z, Y = 0 ~ 9 or A ~ Z, Z = 0 ~ 9, A ~ Z or Blank)
Trade name	ADVANTECH
Applicant	Advantech Co., Ltd. No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Applicable Standard(s)	EN 60601-1-2: 2001 EN 55011: 1998 + A1: 1999 + A2: 2002 IEC 61000-4-2: 1995 + A1: 1998 + A2: 2000; IEC 61000-4-3: 2002 + A1: 2000; IEC 61000-4-4: 1994: 1995 + A1: 2000 + A2: 2001; IEC 61000-4-5: 1995 + A1: 2000; IEC 61000-4-6: 1996 + A1: 2000; IEC 61000-4-8: 1993 + A1: 2000; IEC 61000-4-11: 1994 + A1: 2000 EN 61000-3-2: 2000 EN 61000-3-3: 1994 + A1: 2001
Report No.	60123110-E1
Test Laboratory	Compliance Certification Services Inc. No. 81-1, Lane 210, Bade Rd., 2, Luchu Hsiang, Taoyuan Hsien, Taiwan, R.O.C. Tel: +886-3-3240332/ Fax: +886-3-3245235

This device has been tested and found to comply with the stated standard(s), which is(are) required by the Council Directive of 89/336/EEC and Amendment Directive of 93/42/EEC. The test results are indicated in the test report and are applicable only to the tested sample identified in the report.

Kurt Chen / Director of Linkou Laboratory
Date: February 20, 2006



EMC UPDATE TEST REPORT

For

Advantech Co., Ltd.

Panel PC with Touch Screen

Model: POC-174XX-YY-ZZ

(X = 0 ~ 9 or A ~ Z, Y = 0 ~ 9 or A ~ Z, Z = 0 ~ 9, A ~ Z or Blank)

Trade Name: ADVANTECH

Revision: 03

Description of Rev. 03:

1. Applicant adds two DVD-ROMs and one CD-ROM for Type 1 of EUT and upgrades standard version to re-test.
(Please refer to have ** mark items on this report)
2. Other information, please refer to the B31107201-E1, 40917201-E1, 50506104-E1 and this test report.

Approved by:

Reviewed by:

Kurt Chen
Director of Linkou Laboratory
Compliance Certification Services Inc.

Susan Su
Section Manager of Linkou Laboratory
Compliance Certification Services Inc.

Note: This report shall not be reproduced except in full, without the written approval of Compliance Certification Services Inc. Ltd. This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document.



TABLE OF CONTENTS

1	TEST RESULT CERTIFICATION.....	3
2	EUT DESCRIPTION.....	4
3	TEST METHODOLOGY	6
3.1	DECISION OF FINAL TEST MODE.....	6
4	SETUP OF EQUIPMENT UNDER TEST.....	7
5	FACILITIES AND ACCREDITATIONS.....	8
5.1	MEASURING INSTRUMENT CALIBRATION	8
5.2	TEST AND MEASUREMENT EQUIPMENT.....	8
6	TEST RESULTS.....	11
7	POWER HARMONICS TEST	15
8	POWER VOLTAGE FLUCTUATION / FLICKER TEST	17
9	ELECTROSTATIC DISCHARGE (ESD) IMMUNITY TEST	19
10	RADIATED ELECTROMAGNETIC FIELD IMMUNITY TEST	24
11	FAST TRANSIENTS/BURST IMMUNITY TEST.....	26
12	SURGE IMMUNITY TEST	28
13	CONDUCTED DISTURBANCE/INDUCED RADIO-FREQUENCY FIELD IMMUNITY TEST	30
14	POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST.....	32
15	VOLTAGE DIPS / SHORT INTERRUPTIONS	34
	APPENDIX I - PHOTOGRAPHS OF TEST SETUP	37
	APPENDIX II – TEST RESULT OF EN 61000-3-2/-3	46



1 TEST RESULT CERTIFICATION

Applicant: Advantech Co., Ltd.
No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District,
Taipei 114, Taiwan, R.O.C.

Manufacturer: Advantech Co., Ltd.
No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District,
Taipei 114, Taiwan, R.O.C.

Equipment Under Test: Panel PC with Touch Screen

Trade Name: ADVANTECH

Model: POC-174XX-YY-ZZ
(X = 0 ~ 9 or A ~ Z, Y = 0 ~ 9 or A ~ Z, Z = 0 ~ 9, A ~ Z or Blank)

Detailed EUT Description: See Item 2 of this report

Date of Test: February 16 ~ 17, 2006

Applicable Standard	Class/Limit/Criterion	Test Result
EN 60601-1-2: 2001, including		
EN 55011: 1998 + A1: 1999 + A2: 2002	Class B	No non-compliance noted
IEC 61000-4-2: 1995 + A1: 1998 + A2: 2000	See Item 10 of this report	No non-compliance noted
IEC 61000-4-3: 2002 + A1: 2000	See Item 11 of this report	No non-compliance noted
IEC 61000-4-4: 1995 + A1: 2000 + A2: 2001	See Item 12 of this report	No non-compliance noted
IEC 61000-4-5: 1995 + A1: 2000	See Item 13 of this report	No non-compliance noted
IEC 61000-4-6: 1996 + A1: 2000	See Item 14 of this report	No non-compliance noted
IEC 61000-4-8: 1993 + A1: 2000	See Item 15 of this report	No non-compliance noted
IEC 61000-4-11: 1994 + A1: 2000	See Item 16 of this report	No non-compliance noted
EN 61000-3-2: 2000	Class D	No non-compliance noted
EN 61000-3-3: 1994 + A1: 2001	Limit	No non-compliance noted
Deviation from Applicable Standard		
None		

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the EMC Directive 93/42/EEC and the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.



2 EUT DESCRIPTION

Product	Panel PC with Touch Screen		
Trade Name	ADVANTECH		
Model	POC-174XX-YY-ZZ (X = 0 ~ 9 or A ~ Z, Y = 0 ~ 9 or A ~ Z, Z= 0 ~ 9, A ~ Z or Blank)		
Housing Type	Plastic		
Power Supply Manufacturer	FSP	Model	FSP180-50MP
Power Supply Power Rating	100-240VAC, 50-60Hz, 4A		
AC Power Cord Type	Unshielded, 1.8m (Detachable) to Power Adapter		
CPU Manufacturer	Intel	Model	P4 1.7GHz
			P4 2.2GHz
OSC/Clock Frequencies	100MHz		
Memory Capacity		Installed	256MB / 512MB
Main Board Manufacturer	Advantech	Model	PCM-9682
LCD Panel Manufacturer	AU	Model	M170EN07
			M170EG01
HDD Manufacturer	Fujitsu	Model	MHS2020AT (20GB)
			MHT2020AT (20GB)
FDD Manufacturer	NEC	Model	FD3238TGRP
CD-ROM Manufacturer **	QSI	Model	SCR-242 (24X)
	TEAC	Model	CD-224E
DVD-ROM Manufacturer	ASUS	Model	SCD-2400
**	QSI	Model	SBW-243
			SDW-082S
I/O Board Manufacturer	CANOPUS	Model	MPEG2 ENCODER-2

**I/O Port of EUT (Type 1)**

I/O PORT TYPES	Q'TY	TESTED WITH
1). Parallel Port	1	1
2). Serial Port	4	4
3). Video Out Port (VGA)	1	1
4). PS/2 Keyboard/ Mouse Port	1	1
5). Line In Port	1	1
6). Line Out Port	1	1
7). Microphone Port	1	1
8). LAN Port	2	2
9). USB Port	2	2

I/O Port of EUT (Type 2)

I/O PORT TYPES	Q'TY	TESTED WITH
10). Parallel Port	1	1
11). Serial Port	4	4
12). Video Out Port (VGA)	1	1
13). PS/2 Keyboard/ Mouse Port	1	1
14). Line In Port	1	1
15). Line Out Port	1	1
16). Microphone Port	1	1
17). LAN Port	2	2
18). USB Port	2	2
19). Speaker Out Port (On I/O Board)	1	1
20). S-Video In Port (On I/O Board)	1	1
21). S-Video Out Port (On I/O Board)	1	1
22). AV-Audio In Port (On I/O Board)	1	1
23). AV-Audio Out Port (On I/O Board)	1	1

Note: 1. The means of "XX" (X = A~Z, 0 ~ 9 or Blank) on the model number is different Panel as per customer Declaration.

- The "CD" is Panel PC with the CD-ROM Device.
- The "CR" is Panel PC with the CD-RW Device.
- The "DR" is Panel PC with the DVD-ROM Device.
- The "EW" is Panel PC Without Device.

2. The means of "YY" (Y = 0 ~ 9 or A ~ Z) on the model number is different Power Supply as per customer

- The "AC" is for the AC Power Supply.

3. The means of "ZZ" (Z = 0 ~ 9, A ~ Z or Blank) on the model number is for the touch screen function as per customer declaration.

- The "VT" is Panel PC with Touch Screen.
- The "Blank" is Panel PC without Touch Screen.

4. Client consigns only one model sample (Model Number : POC-174CD-AC-VT) to test. Therefore, testing Lab. just guarantees the units, which have been tested.

5. Client consigns only one model sample (Model Number : POC-174T) to test. Therefore, testing Lab. just guarantees the units, which have been tested.

**6. Client consigns only one model sample (Model Number : POC-174XX-YY-ZZ) to test. Therefore, testing Lab. just guarantees the units, which have been tested.



3 TEST METHODOLOGY

3.1 DECISION OF FINAL TEST MODE

1. The following test mode(s) were scanned during the preliminary test:

Mode 1

1280 × 1024 Resolution with QSI/SBW-243 DVD-ROM

Mode 2

1280 × 1024 Resolution with QSI/SDW-082S DVD-ROM

Mode 3

1280 × 1024 Resolution with TEAC/CD-224E CD-ROM

Mode 2

1024 × 768 Resolution with QSI/SBW-243 DVD-ROM

Mode 3

800 × 600 Resolution with QSI/SBW-243 DVD-ROM

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Mode 1

Then, the EUT configuration and cable configuration of the above highest emission mode was chosen for all final test items.



4 SETUP OF EQUIPMENT UNDER TEST

Setup Diagram

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

Support Equipment

No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1.	Monitor	959NF	AQ19H2RT706132L	FCC DoC	SAMSUNG	Shielded, 1.8m with two cores	Unshielded, 1.8m
2.	Modem	DM-1414	304012265	IFAXDM1414	ACEEX	Unshielded, 1.8m	Unshielded, 1.8m
3.	Modem	DM-1414	304012266	IFAXDM1414	ACEEX	Unshielded, 1.8m	Unshielded, 1.8m
4.	Printer	STYLUS C60	DR3K039099	FCC DoC	EPSON	Shielded, 1.8m	Unshielded, 1.8m
5.	PS/2 Keyboard (One to two adapter)	Y-SP29	SYU30272826	FCC DoC	Logitech	Unshielded, 1.8m	N/A
6.	PS/2 Mouse (One to two adapter)	M-S34	HCA25200473	DZL211029	Logitech	Unshielded, 1.8m	N/A
7.	Mouse	M-MM43	LZE95250096	FCC DoC	Logitech	Unshielded, 1.8m	N/A
8.	Mouse	M-MM43	LZE93353074	FCC DoC	Logitech	Unshielded, 1.8m	N/A
9.	USB 2.0 External HDD	F12-UF	A0100214-39t0001	FCC DoC	TeraSyS	Shielded, 1.8m	N/A
10.	USB 2.0 External HDD	F12-UF	A0100214-39t0005	FCC DoC	TeraSyS	Shielded, 1.8m	N/A
11.	Walkman	RQ-L10	DB001392	FCC DoC	Panasonic	Unshielded, 1.8m	N/A
12.	Multimedia Earphone	Axis-301	N/A	FCC DoC	Labtec	Unshielded, 1.8m	N/A
13.	Notebook PC (Remote)	M285	NU2503544	FCC DoC	LEO	LAN Cable: Unshielded, 1.0m x 2	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.5m with a core

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.



5 FACILITIES AND ACCREDITATIONS

5.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

5.2 TEST AND MEASUREMENT EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and other required standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective manual.

Equipment Used for Emission Measurement

Conducted Emission Test Site # 3				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCS30	845552/030	03/16/2006
LISN	R&S	ESH2-Z5	843285/010	01/04/2007
LISN	R&S	ESH3-Z5	848773/014	10/24/2006

Note: The measurement uncertainty is less than +/- 2.83dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.

Open Area Test Site # 1				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	ADVANTEST	R3261C	71720533	N.C.R
EMI Test Receiver	SCHAFFNER	SCR 3501	436	11/24/2006
Pre-Amplifier	HP	8447D	2944A09173	03/22/2006
Bilog Antenna	Sunol Sciences	JB1	A111203	03/25/2006
Turn Table	EMCO	2081-1.21	N/A	N.C.R
Antenna Tower	EMCO	2075-2	9707-2604	N.C.R
Controller	EMCO	2090	N/A	N.C.R
RF Switch	Anritsu	MP59B	M54367	N.C.R
Site NSA	CCS	N/A	N/A	08/26/2006

Note: The measurement uncertainty is less than +/- 3.36dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.



Power Harmonic & Voltage Fluctuation/Flicker Measurement (EN 61000-3-2&-3-3)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
HARMONICS SYSTEM	EMC-PARTNER	HARMONICS-1000	094	11/22/2006

Equipment Used for Immunity Measurement

ESD Test Site (IEC/EN 61000-4-2)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
ESD Generator	EM TEST	P30C	0603-01	07/10/2006

Radiated Electromagnetic Field Immunity Test Site (IEC/EN 61000-4-3) (80-1000MHz)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
S.G.	R&S	SMY02	100094	08/09/2006
Power Meter	R&S	NRVD	837794/029	08/09/2006
Power Sensor	R&S	URV5-Z2	835640/015	08/09/2006
Power Sensor	R&S	URV5-Z2	835640/016	08/09/2006
Power Amplifier	ar	150W1000	300300	N.C.R

Radiated Electromagnetic Field Immunity Test Site (IEC/EN 61000-4-3) (1400-2500MHz)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Signal Generator	Agilent	8648C	4108A05772	07/29/2006
150 Watts 80-1000MHz Amplifier	Amplifier Research	150W1000M3	306730	Not Required
30 Watts 0.8-3.0GHz Amplifier	Amplifier Research	30S1G3M1	306722	Not Required
Power Meter	Boonton	4232A-01-02	98501	07/29/2006
Power Sensor	Boonton	51011-EMC	32920	07/29/2006
Power Sensor	Boonton	51011-EMC	32863	07/29/2006
Log-Periodic Antenna	Amplifier Research	AT1080	306709	Not Required
Microwave Horn Antenna	Amplifier Research	AT4002A	306750	Not Required
6 MHz Sweep/Function Generator	AMREL	FG-506	50608090006	05/18/2006
RF Test System Controller	Amplifier Research	SC1000M3	306666	Not Required



Fast Transients/Burst Test Site (IEC/EN 61000-4-4)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMC TEST SYSTEM	EMC-PARTNER	TRANSIENT-2000	754	09/07/2006
Clamp	HAEFELY TRENCH	093 506.1	080 421.13	N.C.R

Surge Immunity Test Site (IEC/EN 61000-4-5)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Surge Tester	HAEFELY TRENCH	PSUGER 4010	583 334-71	08/30/2006

CS Test Site (IEC/EN 61000-4-6)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
S.G.	R&S	SMY02	100094	08/09/2006
Power Meter	R&S	NRVD	837794/029	08/09/2006
Power Sensor	R&S	URV5-Z2	835640/015	08/09/2006
Power Sensor	R&S	URV5-Z2	835640/016	08/09/2006
Power Amplifier	ar	500A100A	300299	N.C.R
CDN	Lüthi	801-M3	1879	03/04/2006
CDN	FRANKONIA	CDN-M2	A3002010	08/02/2006
CDN	SCHAFFNER	T200	16892	10/27/2006
CDN	SCHAFFNER	T400	16906	12/28/2006

Power Frequency Magnetic Field Immunity Test Site (IEC/EN 61000-4-8)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
TRIAX ELF Magnetic Field Meter	F.W.BELL	4090	9711	11/27/2006
Clamp Meter	National	300K	11-5980 K	11/22/2006
Magnetic Field Tester	HAEFELY TRENCH	MAG 100.1	080 938-01	N.C.R

Voltage Dips/Short Interruption and Voltage Variation Immunity Test Site (IEC/EN 61000-4-11)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Dips/Interruption and Variations Simulator	HAEFELY TRENCH	PLINE 1610	080 344-05	04/10/2006



6 TEST RESULTS

Line Conducted Emission

CCS Conduction Test#3

Job No.:60123110

Date:2006/2/16

Time:PM 08:11

Temp.(°C)/Hum.(%):23 °C / 55 %

Tested by: Harry wang

Standard:CISPR 22 / EN 55022 Class B

Power Source:230 Vac / 50Hz

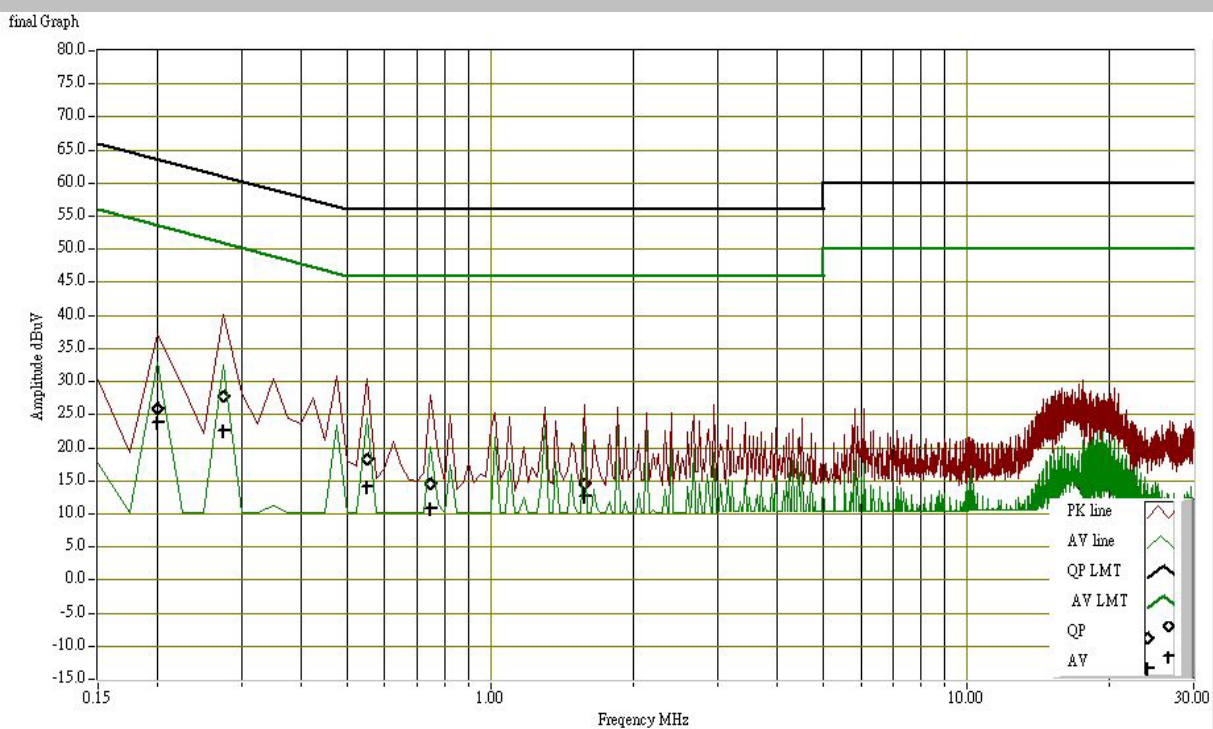
Measured Line:L1

Company:ADVANTECH

Product : Panel PC with Touch Screen

Model :PPOC-174XX-YY-ZZ

Test Mode: 1



Freq. (MHz)	QP Reading (dBuV)	AV Reading (dBuV)	Corr. Factor (dBuV)	QP Result (dBuV)	AV Result (dBuV)	QP Limit (dBuV)	AV Limit (dBuV)	QP Margin (dBuV)	AV Margin (dBuV)	Remark
0.200	25.960	23.750	10.100	36.060	33.850	63.611	53.611	-27.551	-19.761	PASS
0.275	27.840	22.660	10.100	37.940	32.760	60.966	50.966	-23.026	-18.206	PASS
0.550	18.280	14.040	10.110	28.390	24.150	56.000	46.000	-27.610	-21.850	PASS
0.750	14.520	10.830	10.150	24.670	20.980	56.000	46.000	-31.330	-25.020	PASS
1.575	14.480	12.580	10.200	24.680	22.780	56.000	46.000	-31.320	-23.220	PASS
17.600	14.180	9.450	10.856	25.036	20.306	60.000	50.000	-34.964	-29.694	PASS

L1 = Line One (Live Line)



CCS Conduction Test#3

Job No.:60123110

Date:2006/2/16

Time:PM 08:23

Temp.(°C)/Hum.(%):23 °C / 55 %

Tested by: Harry wang

Standard:CISPR 22 / EN 55022 Class B

Power Source:230 Vac / 50Hz

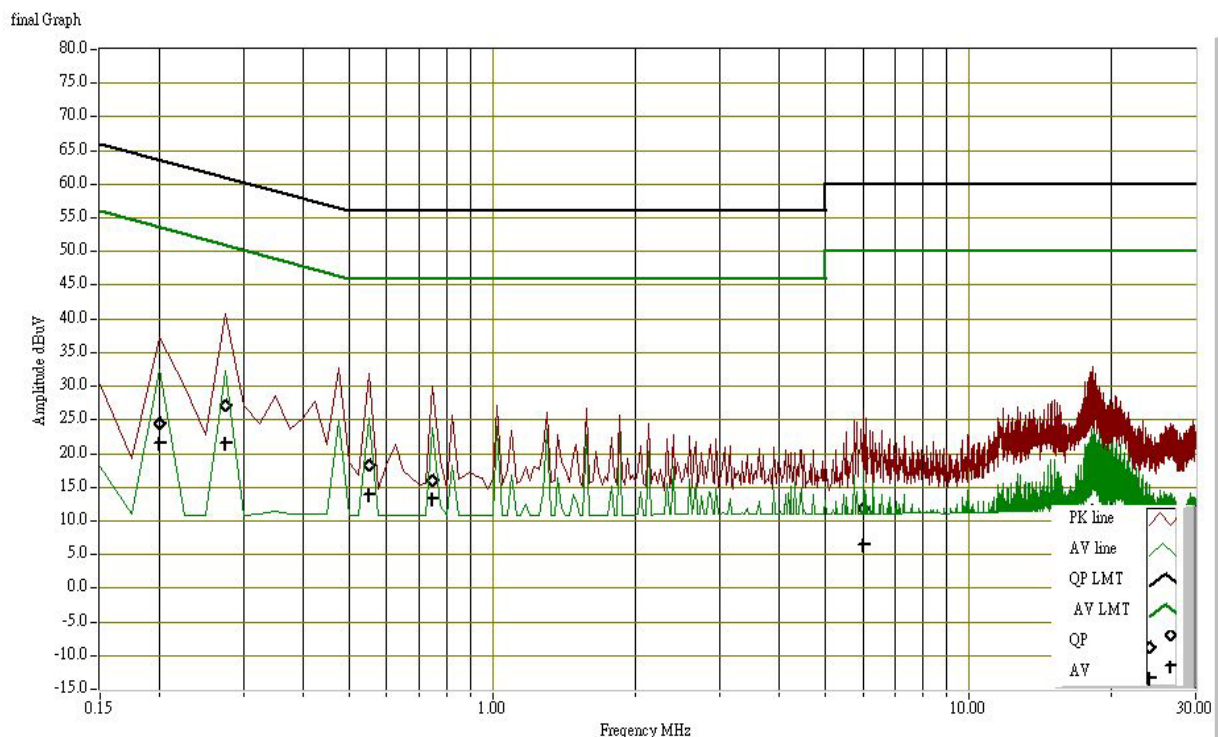
Measured Line:L2

Company:ADVANTECH

Product : Panel PC with Touch Screen

Model :PPOC-174XX-YY-ZZ

Test Mode: 1



Freq. (MHz)	QP Reading (dBuV)	AV Reading (dBuV)	Corr. Factor (dBuV)	QP Result (dBuV)	AV Result (dBuV)	QP Limit (dBuV)	AV Limit (dBuV)	QP Margin (dBuV)	AV Margin (dBuV)	Remark
0.200	24.460	21.490	10.900	35.360	32.390	63.611	53.611	-28.251	-21.221	PASS
0.275	27.140	21.610	10.900	38.040	32.510	60.966	50.966	-22.926	-18.456	PASS
0.550	18.220	13.970	10.900	29.120	24.870	56.000	46.000	-26.880	-21.130	PASS
0.750	15.880	13.220	10.900	26.780	24.120	56.000	46.000	-29.220	-21.880	PASS
6.025	11.820	6.560	11.100	22.920	17.660	60.000	50.000	-37.080	-32.340	PASS
18.275	17.320	11.700	11.596	28.916	23.296	60.000	50.000	-31.084	-26.704	PASS

L2 = Line Two (Neutral Line)

**Radiated Emission (A)****Model:** POC-174XX-YY-ZZ**Test Mode:** Mode 1**Temperature:** 15°C**Humidity:** 58% RH**Detector Function:** Quasi-peak.**Antenna:** Vertical at 10m**Tested by:** Harry Wang**Test Results:** Pass

(The chart below shows the highest readings taken from the final data)

Freq. (MHz)	Raw Data (dBuV)	Corr. Factor (dB/m)	Emiss. Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)
62.80	16.79	9.91	26.70	30.00	-3.30
71.50	17.03	10.67	27.70	30.00	-2.30
171.30	13.20	14.46	27.66	30.00	-2.34
202.17	12.70	15.10	27.80	30.00	-2.20
477.50	10.82	22.08	32.90	37.00	-4.10
625.17	8.90	25.00	33.90	37.00	-3.10
733.20	7.70	26.50	34.20	37.00	-2.80

**Radiated Emission (B)****Model:** POC-174XX-YY-ZZ**Test Mode:** Mode 1**Temperature:** 15°C**Humidity:** 58% RH**Detector Function:** Quasi-peak.**Antenna:** Horizontal at 10m**Tested by:** Harry Wang**Test Results:** Pass

(The chart below shows the highest readings taken from the final data)

Freq. (MHz)	Raw Data (dBuV)	Corr. Factor (dB/m)	Emiss. Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)
177.30	11.92	14.28	26.20	30.00	-3.80
202.11	12.60	15.11	27.71	30.00	-2.29
400.10	10.90	19.40	30.30	37.00	-6.70
434.29	11.97	20.63	32.60	37.00	-4.40
466.19	11.98	21.72	33.70	37.00	-3.30
644.20	9.10	25.46	34.56	37.00	-2.44
735.20	7.28	26.52	33.80	37.00	-3.20



7 POWER HARMONICS TEST

Port : AC mains

Basic Standard : EN 61000-3-2 (2000)

Limits : ☐ CLASS A ; ☐ CLASS B; ☐ CLASS C ; ☒ CLASS D

Tested by : Michael Chen

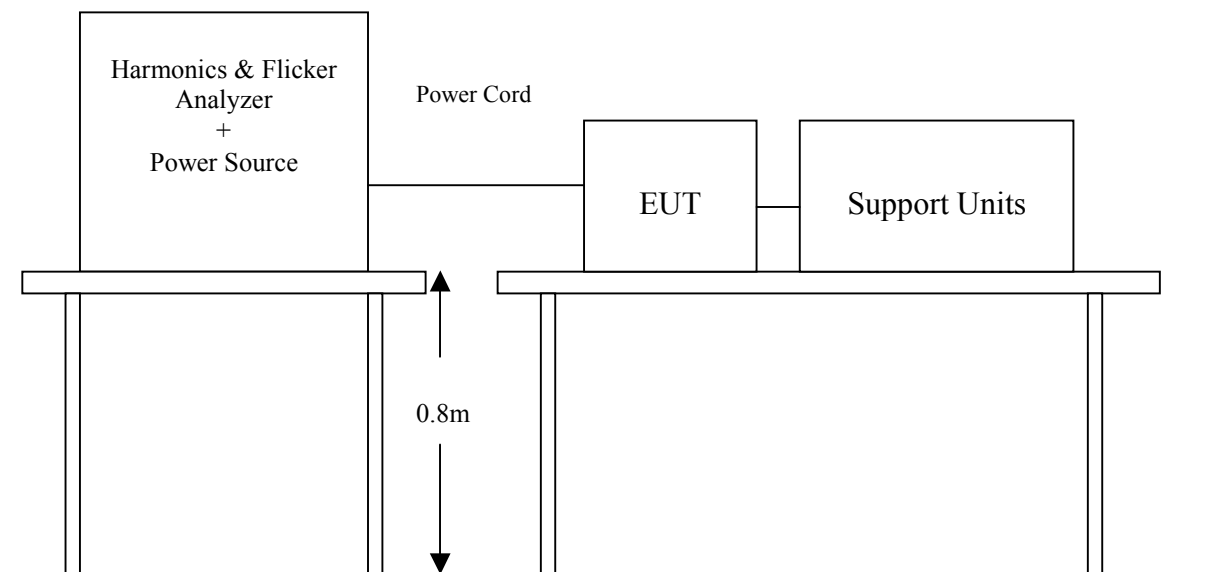
Temperature : 21°C

Humidity : 56%

Limit:

Limits for Class A equipment		Limits for Class D equipment		
Harmonics Order n	Max. permissible harmonics current A	Harmonics Order n	Max. permissible harmonics current per watt mA/W	Max. permissible harmonics current A
Odd harmonics		Odd Harmonics only		
3	2.30	3	3.4	2.30
5	1.14	5	1.9	1.14
7	0.77	7	1.0	0.77
9	0.40	9	0.5	0.40
11	0.33	11	0.35	0.33
13	0.21	13	0.30	0.21
15<=n<=39	0.15x15/n	15<=n<=39	3.85/n	0.15x15/n
Even harmonics				
2	1.08			
4	0.43			
6	0.30			
8<=n<=40	0.23x8/n			

Block Diagram of Test Setup:



Test Procedure:

- The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn.
- The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

Test Result : (See Appendix II for details)

<input checked="" type="checkbox"/> PASS	<input type="checkbox"/> FAIL
---	--------------------------------------

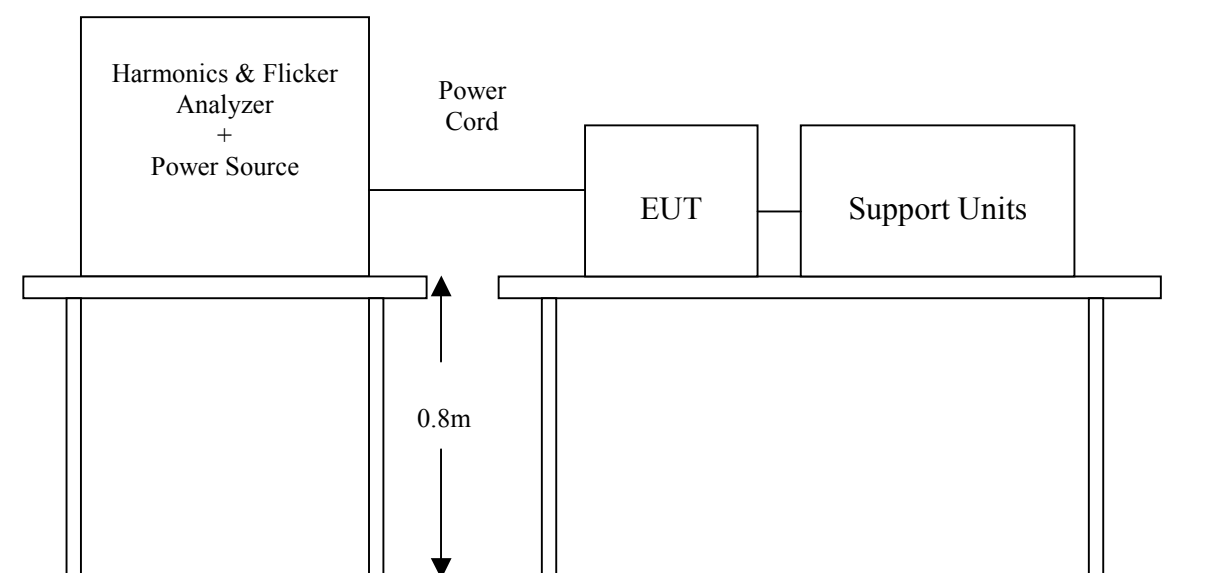
8 POWER VOLTAGE FLUCTUATION / FLICKER TEST

Port : AC mains
Basic Standard : EN 61000-3-3 (1995 + A1: 2001)
Limits : §5 of EN 61000-3-3
Tested by : Michael Chen
Temperature : 21°C
Humidity : 56%

Limit:

TEST ITEM	LIMIT	REMARK
P_{st}	1.0	P_{st} means short-term flicker indicator.
P_{lt}	0.65	P_{lt} means long-term flicker indicator.
T_{dt} (ms)	500	T_{dt} means maximum time that dt exceeds 3 %.
d_{max} (%)	4%	d_{max} means maximum relative voltage change.
dc (%)	3.3%	dc means relative steady-state voltage change

Block Diagram of Test Setup:



**Test Procedure:**

- a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the most unfavorable sequence of voltage changes under normal operating conditions.
- b. During the flick measurement, the measure time shall include that part of whole operation cycle in which the EUT produce the most unfavorable sequence of voltage changes. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

Test Result: (See Appendix II for details)**Continue**

Test Parameter	Measurement Value	Limit	Result
P _{st}	0.072	1.0	Pass
P _{lt}	0.072	0.65	Pass
T _{dt} (ms)	0	500	Pass
d _{max} (%)	0%	4%	Pass
dc (%)	0.01%	3.3%	Pass

Manual Switch

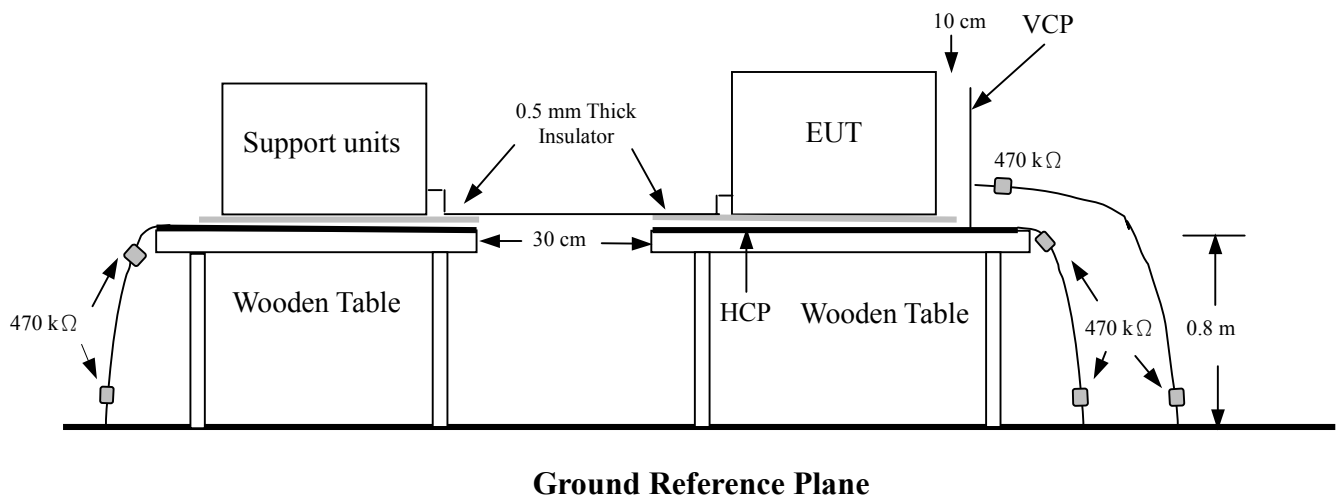
Test Parameter	Measurement Value	Limit	Result
P _{st}	0.072	1.0	Pass
P _{lt}	0.072	0.65	Pass
T _{dt} (ms)	0	500	Pass
d _{max} (%)	0%	4%	Pass
dc (%)	0.04%	3.3%	Pass

9 ELECTROSTATIC DISCHARGE (ESD) IMMUNITY TEST

Port	: Enclosure
Basic Standard	: IEC/EN 61000-4-2
Test Level	: $\pm 2, 4, 8$ kV (Air Discharge) $\pm 2, 4, 6$ kV (Contact Discharge) $\pm 2, 4, 6$ kV (Indirect Discharge)
Performance Criterion	: The Equipment or System shall be able to provide the essential performance and remain safe.
Tested by	: Harry Wang
Temperature	: 24°C
Humidity	: 47% RH
Pressure	: 1007mbar

Block Diagram of Test Setup:

(The 470 k ohm resistors are installed per standard requirement.)



**Test Procedure:**

The electrostatic discharges were applied as follows:

Amount of Discharges	Voltage	Coupling	Result (Pass/Fail)
≥ 10 / Point	$\pm 2, 4, 8$ kV	Air Discharge	Pass
≥ 10 / Point	$\pm 2, 4, 6$ kV	Contact Discharge	Pass
≥ 10 / Point	$\pm 2, 4, 6$ kV	Indirect Discharge HCP	Pass
≥ 10 / Point	$\pm 2, 4, 6$ kV	Indirect Discharge VCP (Left)	Pass
≥ 10 / Point	$\pm 2, 4, 6$ kV	Indirect Discharge VCP (Back)	Pass
≥ 10 / Point	$\pm 2, 4, 6$ kV	Indirect Discharge VCP (Right)	Pass

For the tested points to EUT, please refer to attached page.

(Blue Arrow Mark For Contact Discharge And Red Arrow Mark For Air Discharge)

Observation: No any function degraded during the tests.

Compliance Criteria:

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Change of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

The Tested Points of EUT

Photo 1 of 5



Photo 2 of 5



Photo 3 of 5



Photo 4 of 5



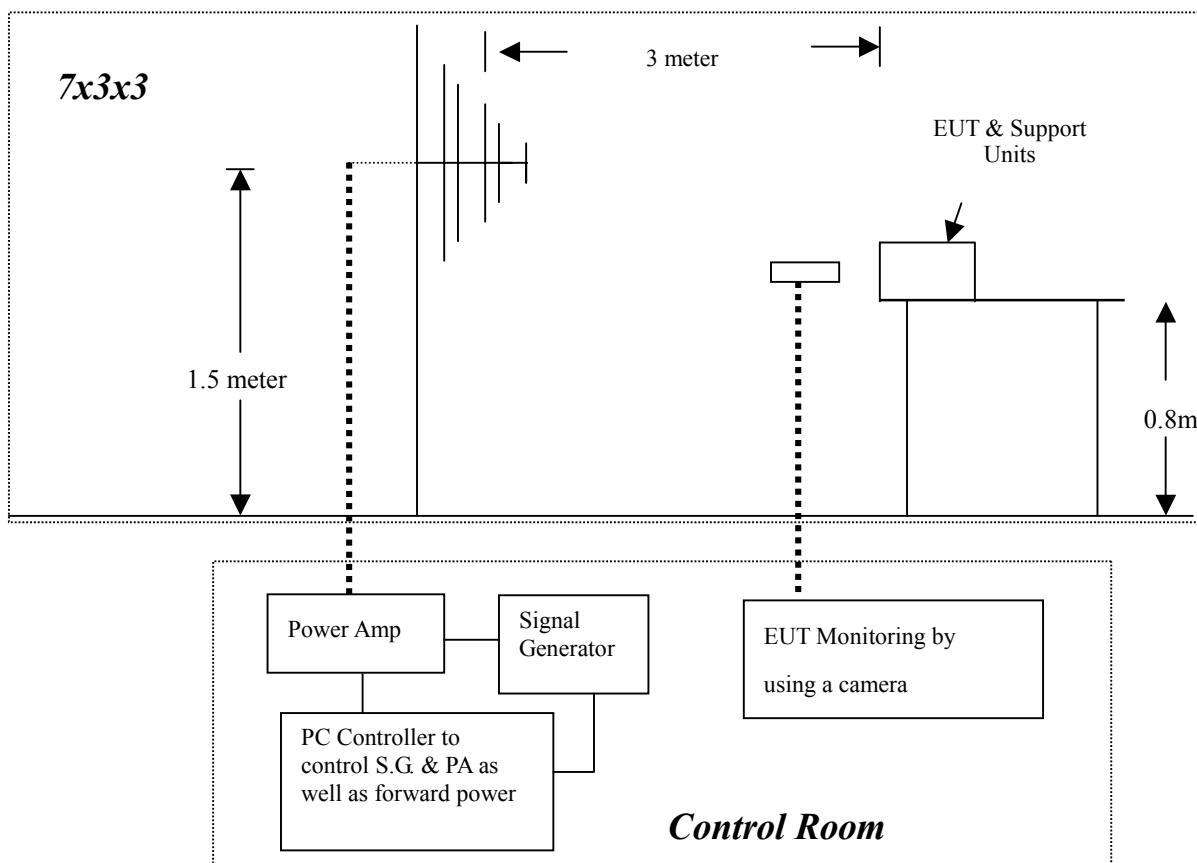
Photo 5 of 5



10 RADIATED ELECTROMAGNETIC FIELD IMMUNITY TEST

Port	: Enclosure
Basic Standard	: IEC/EN 61000-4-3
Requirements	: 10 V/m / with 80% AM. 1KHz Modulation.
Performance Criterion	: The Equipment or System shall be able to provide the essential performance and remain safe.
Tested by	: Harry Wang
Temperature	: 25°C
Humidity	: 44% RH
Pressure	: 1007mbar

Block Diagram of Test Setup:



**Test Procedure:**

Frequency Range 80MHz ~ 2500MHz

Steps : 1 % of fundamental

Dwell Time : 3 sec

Range (MHz)	Field	Modulation	Polarity	Position	Result (Pass/Fail)
80-2500	10V/m	Yes	H	0	Pass
80-2500	10V/m	Yes	V	0	Pass
80-2500	10V/m	Yes	H	90	Pass
80-2500	10V/m	Yes	V	90	Pass
80-2500	10V/m	Yes	H	180	Pass
80-2500	10V/m	Yes	V	180	Pass
80-2500	10V/m	Yes	H	270	Pass
80-2500	10V/m	Yes	V	270	Pass

Observation: No any function degraded during the tests.**Compliance Criteria:**

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Chang of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

11 FAST TRANSIENTS/BURST IMMUNITY TEST

Port : On Power Supply Line and LAN Cable

Basic Standard : IEC/EN 61000-4-4

Requirements : ± 2 kV for Power Supply Line
 ± 1 kV for LAN Cable

Performance Criterion : The Equipment or System shall be able to provide the essential performance and remain safe.

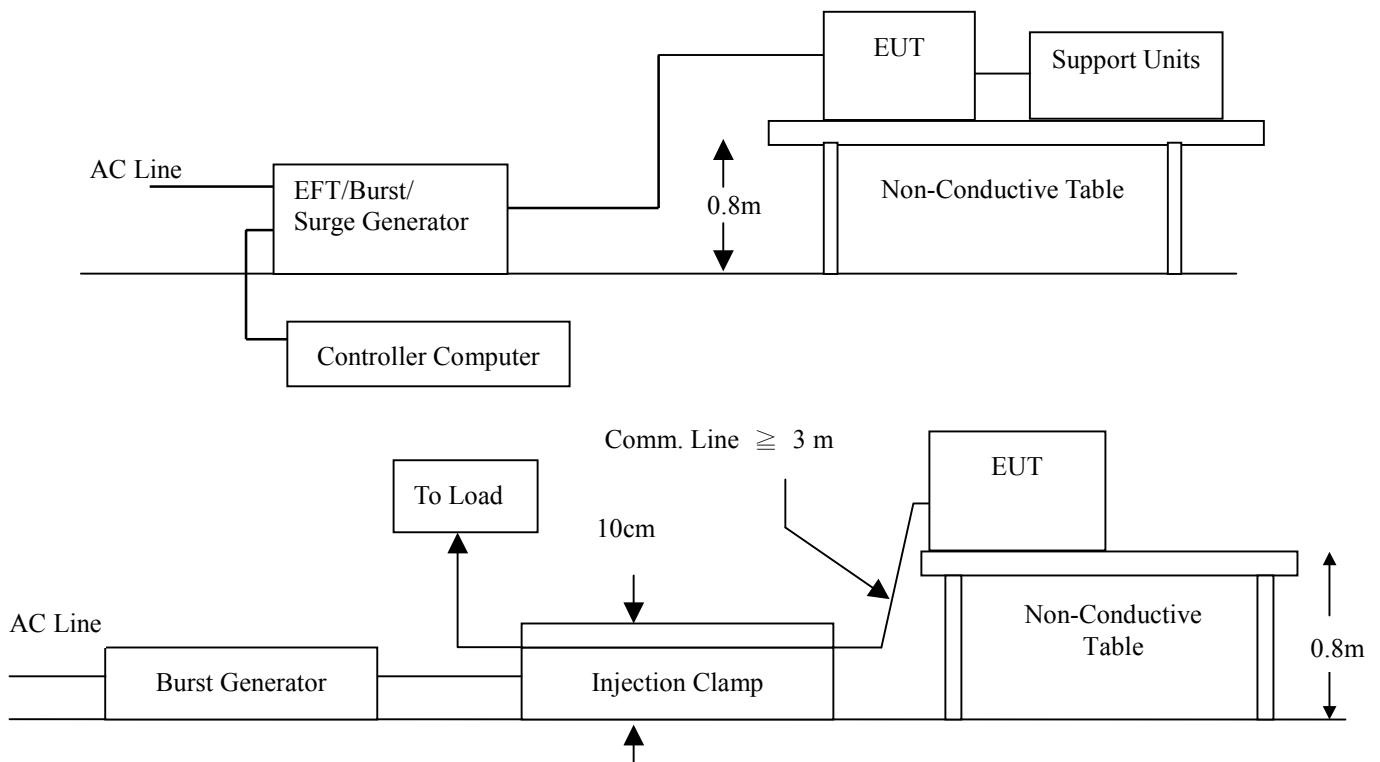
Tested by : Harry Wang

Temperature : 24°C

Humidity : 47% RH

Pressure : 1007mbar

Block Diagram of Test Setup:



**Test Procedure:**

Impulse Frequency : 5kHz
Tr/Th : 5/50ns
Burst Duration : 15ms
Burst Period : 3Hz

Inject Line	Voltage kV	Inject Method	Result (Pass/Fail)
L	± 2	Direct	Pass
N	± 2	Direct	Pass
PE	± 2	Direct	Pass
L + N	± 2	Direct	Pass
L + PE	± 2	Direct	Pass
N + PE	± 2	Direct	Pass
L + N + PE	± 2	Direct	Pass
RJ 45 Port (LAN Cable)	± 1	Clamp	Pass

Observation: No any function degraded during the tests.

Compliance Criteria:

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Chang of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

12 SURGE IMMUNITY TEST

Port : Power Cord

Basic Standard : IEC/EN 61000-4-5

Requirements : $\pm 0.5, 1 \text{ kV}$ (Line to Line)
 $\pm 0.5, 1, 2 \text{ kV}$ (Line to Ground)

Performance Criteria : The Equipment or System shall be able to provide the essential performance and remain safe.

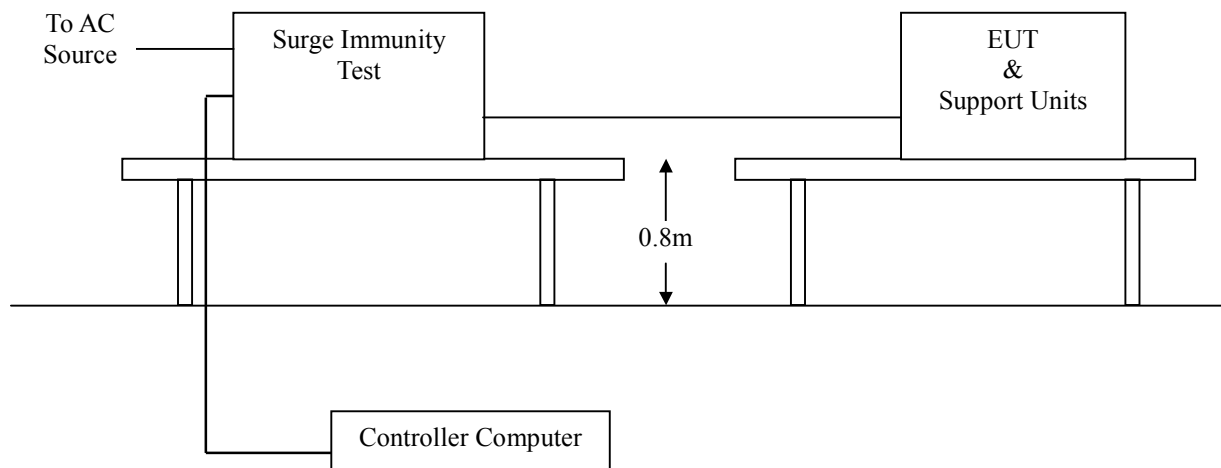
Tested by : Harry Wang

Temperature : 24°C

Humidity : 47% RH

Pressure : 1007mbar

Block Diagram of Test Setup:



**Test Procedure:**

Voltage Waveform : 1.2/50 *us*
Current Waveform : 8/20 *us*
Polarity : Positive/Negative
Phase angle : 0°, 90°, 270°
Number of Test : 5

Coupling Line	Voltage (kV)	Polarity	Coupling Method	Result (Pass/Fail)
L1-L2	0.5, 1	Positive	Capacitive	Pass
L1-PE	0.5, 1, 2	Positive	Capacitive	Pass
L2-PE	0.5, 1, 2	Positive	Capacitive	Pass
L1-L2	0.5, 1	Negative	Capacitive	Pass
L1-PE	0.5, 1, 2	Negative	Capacitive	Pass
L2-PE	0.5, 1, 2	Negative	Capacitive	Pass

Observation: No any function degraded during the tests.

Compliance Criteria:

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Chang of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

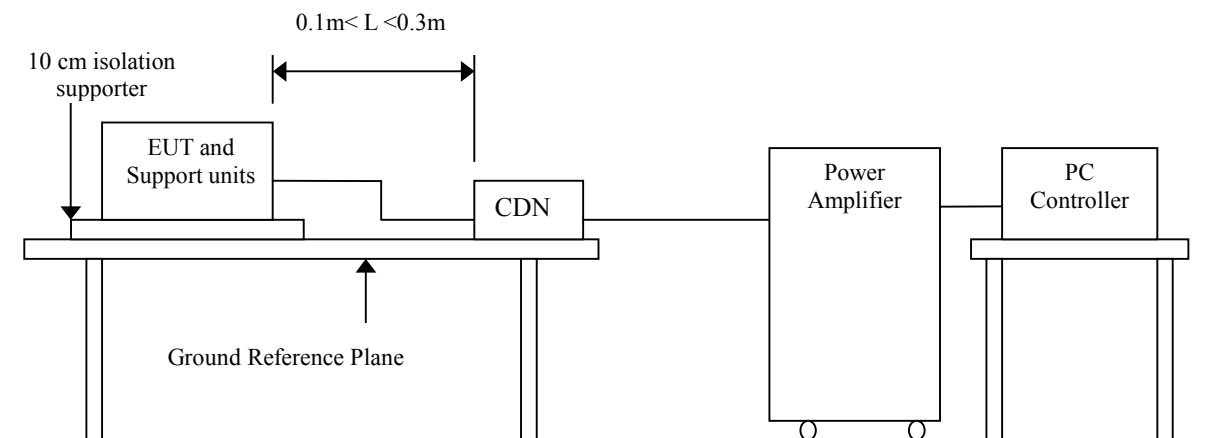
The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

13 CONDUCTED DISTURBANCE/INDUCED RADIO-FREQUENCY FIELD IMMUNITY TEST

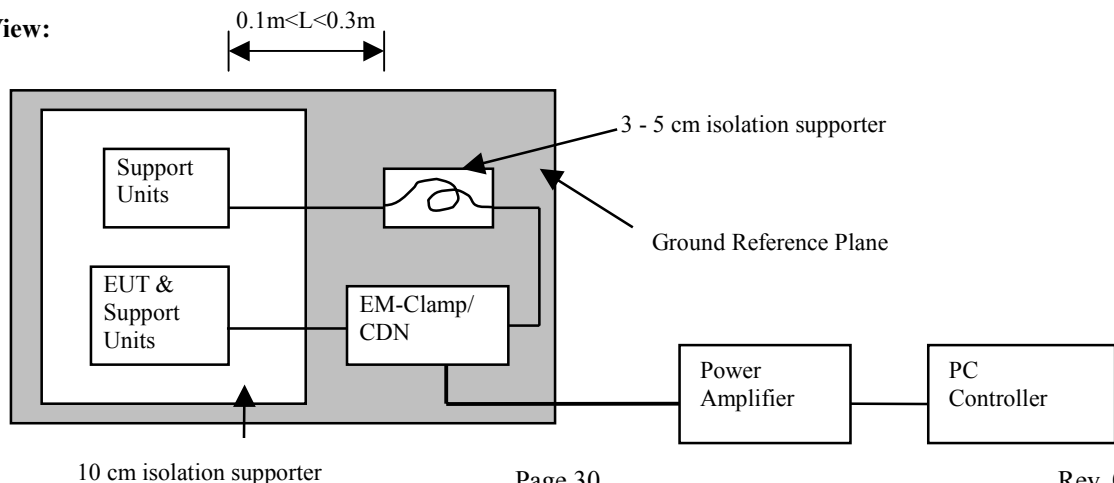
Port	: AC Port and LAN Cable
Basic Standard	: IEC/EN 61000-4-6
Requirements	: 10 V with 80% AM. 1KHz Modulation.
Injection Method	: CDN-M3 for Power Cord CDN-T4 for LAN Cable
Performance Criterion	: The Equipment or System shall be able to provide the essential performance and remain safe.
Tested by	: Harry Wang
Temperature	: 25°C
Humidity	: 44% RH
Pressure	: 1007mbar

Block Diagram of Test Setup:

Side View:



Top View:



**Test Procedure:**

Frequency Range : 0.15MHz-80MHz

Frequency Step : 1% of fundamental

Dwell Time : 3 sec

Range (MHz)	Field	Modulation	Result (Pass/Fail)
0.15-80	10V	Yes	Pass

Observation: No any function degraded during the tests.**Compliance Criteria:**

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Chang of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

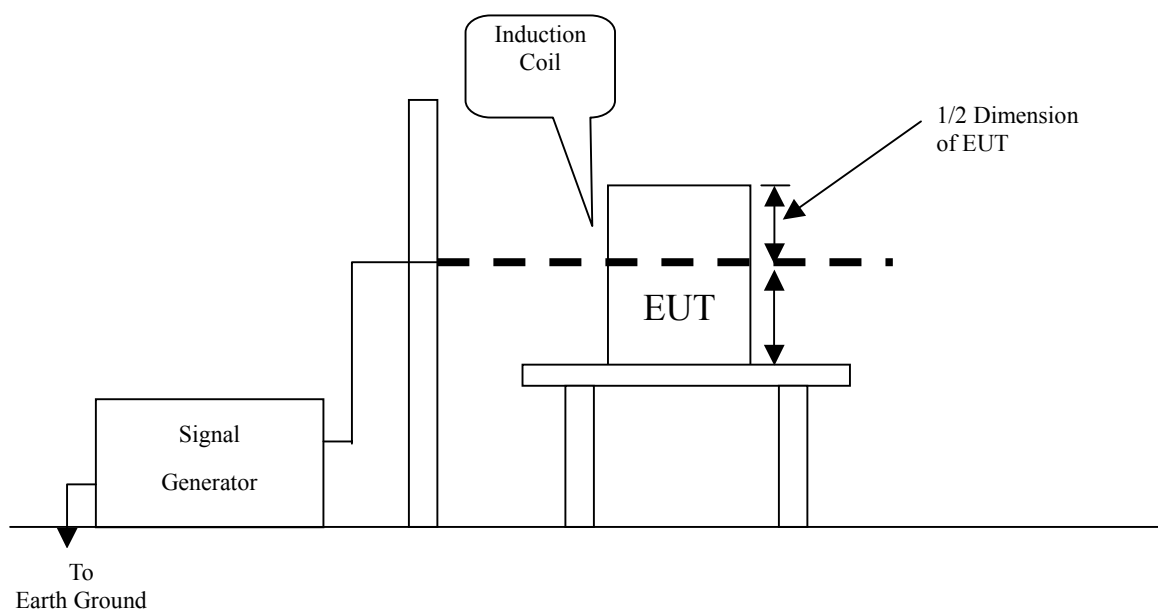
For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

14 POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST

Port	: Enclosure
Basic Standard	: IEC/EN 61000-4-8
Requirements	: 3 A/m
Performance Criterion	: The Equipment or System shall be able to provide the essential performance and remain safe.
Tested by	: Harry Wang
Temperature	: 24°C
Humidity	: 47% RH
Pressure	: 1007mbar

Block Diagram of Test Setup:



**Test Procedure:**

Field Strength : 3A/m

Power Freq. : 50Hz

Orientation : X, Y, Z

Orientation	Field	Result (Pass/Fail)	Remark
X	3A/m	Pass	
Y	3A/m	Pass	
Z	3A/m	Pass	

Observation: No any function degraded during the tests.**Compliance Criteria:**

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Change of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

15 VOLTAGE DIPS / SHORT INTERRUPTIONS

Port : AC mains

Basic Standard : IEC/EN 61000-4-11

Requirement : PHASE ANGLE 0, 45, 90, 135, 180, 225, 270, 315 degrees

Voltage Dips	Test Level % U_T	Reduction (%)	Duration (periods)
	<5	>95	0.5
	40	60	5
	70	30	25

Voltage Interceptions	Test Level % U_T	Reduction (%)	Duration (periods)
	<5	>95	250

Test Interval : Min. 10 sec.

Performance Criteria : The Equipment or System shall be able to provide the essential performance and remain safe.

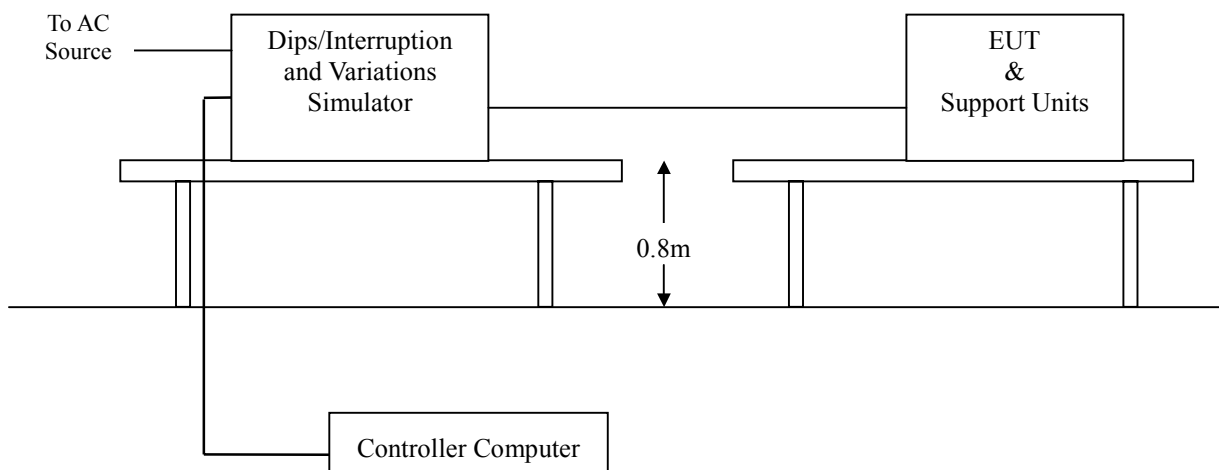
Tested by : Harry Wang

Temperature : 24°C

Humidity : 47% RH

Pressure : 1007mbar

Block Diagram of Test Setup:



**Test Procedure:**

The duration with a sequence of three dips/interruptions with interval of 10 s minimum
(Between each test event)

Voltage Dips:

Test Level % U _T	Reduction (%)	Duration (periods)	Observation	Result
0	100	0.5	Normal	PASS
40	60	5	Normal	PASS
70	30	25	Normal	PASS

Voltage Interruptions:

Test Level % U _T	Reduction (%)	Duration (periods)	Observation	Result
0	100	250	EUT shut down but can be recovered by manual, as the events disappear.	PASS

Note:

1. Normal - No any functions degrade during and after the test.
2. For Voltage Interruption, EQUIPMENT and SYSTEMS are allowed a deviation from the requirements of 36.202.1 j) at the IMMUNITY TEST LEVEL specified in Table 211, provided the EQUIPMENT or SYSTEM remains safe, experiences no component failures and is restorable to the pre-test state with OPERATOR intervention. Determination of compliance is based upon performance of the EQUIPMENT or SYSTEM during and after application of the test sequence.

Observation: No any function degraded during the tests.



Compliance Criteria:

Under the test conditions specified in 36.202, the EQUIPMENT or SYSTEM shall be able to provide the ESSENTIAL PERFORMANCE and remain safe. The following DEGRADATIONS associated with ESSENTIAL PERFORMANCE and safety shall not be allowed:

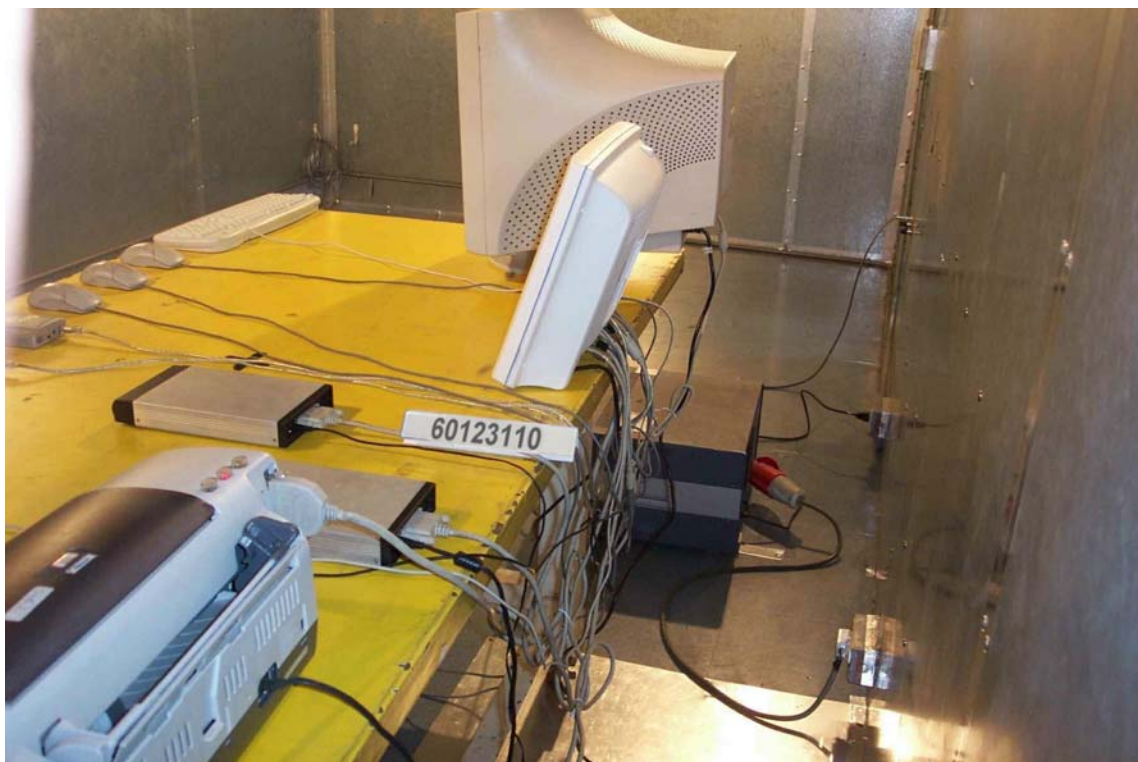
- Component failures
- Changes in programmable parameters
- Reset to factory defaults (manufacturer's presets)
- Change of operating mode
- False alarms
- Cessation or interruption of any intended operation, even if accompanied by an alarm
- Initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm
- Error of a displayed numerical value sufficiently large to affect diagnosis or treatment
- Noise on a waveform in which the noise is indistinguishable from physiologically-produced signals or the noise interferes with interpretation of physiologically-produced signals
- Artefact or distortion in an image in which the artefact is indistinguishable from physiologically-produced signals or the distortion interferes with interpretation of physiologically-produced signals
- Failure of automatic diagnosis or treatment EQUIPMENT and SYSTEMS to diagnose or treat, even if accompanied by an alarm.

For EQUIPMENT and SYSTEMS with multiple FUNCTIONS, the criteria apply to each FUNCTION, parameter and channel.

The EQUIPMENT or SYSTEM may exhibit DEGRADATION of performance (e.g. deviation from manufacturer's specifications) that does not affect ESSENTIAL PERFORMANCE or safety.

APPENDIX I - PHOTOGRAPHS OF TEST SETUP

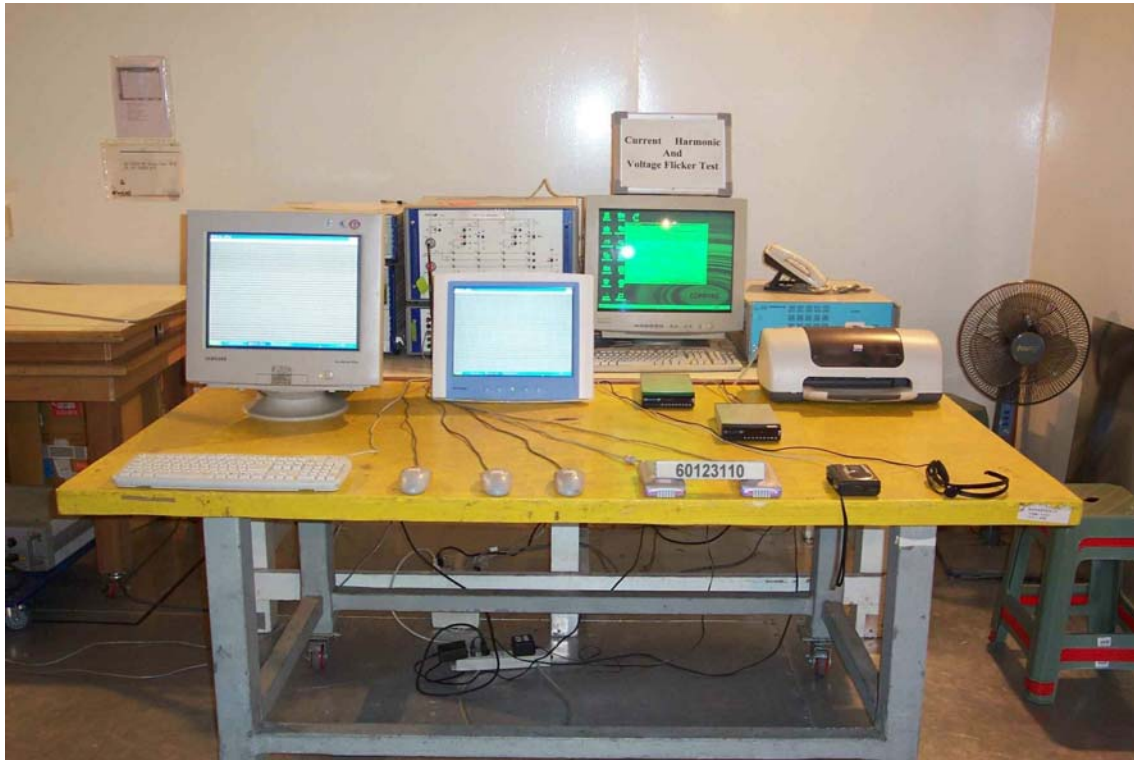
LINE CONDUCTED EMISSION TEST (EN 55011)



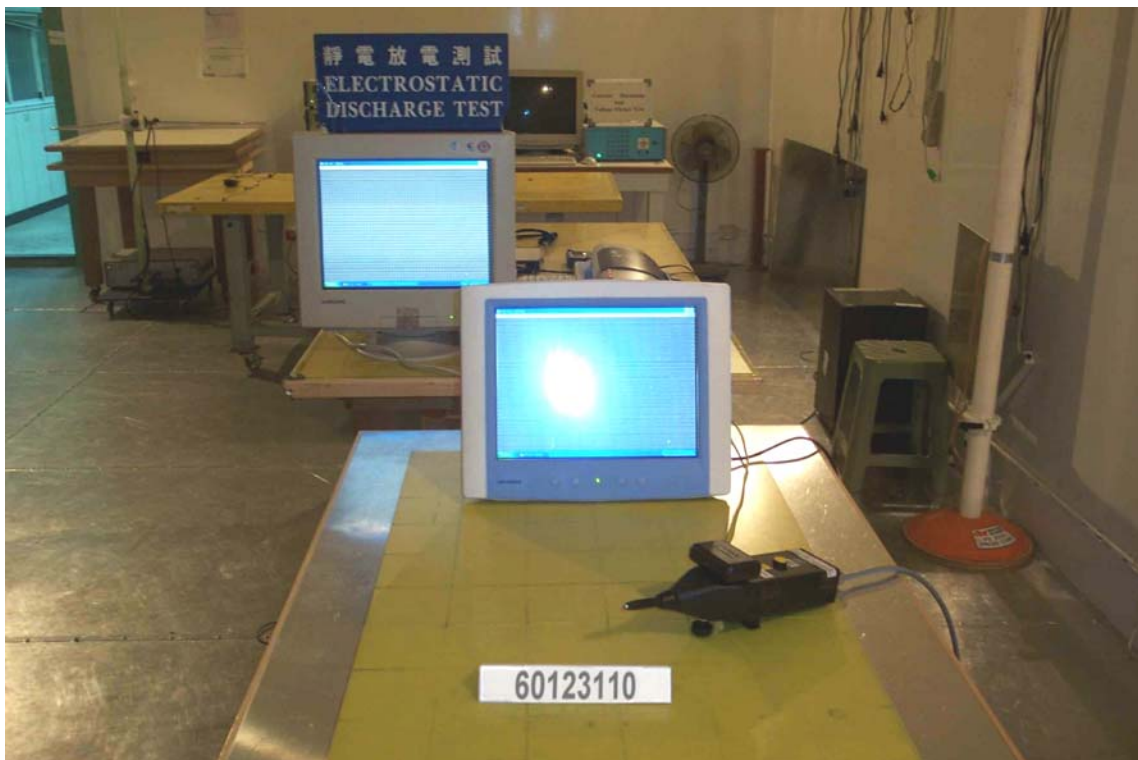
RADIATED EMISSION TEST (EN 55011)



POWER HARMONIC & VOLTAGE FLUCTUATION / FLICKER TEST



ELECTROSTATIC DISCHARGE TEST



RADIATED ELECTROMAGNETIC FIELD TEST



FAST TRANSIENTS/BURST TEST

SURGE IMMUNITY TEST



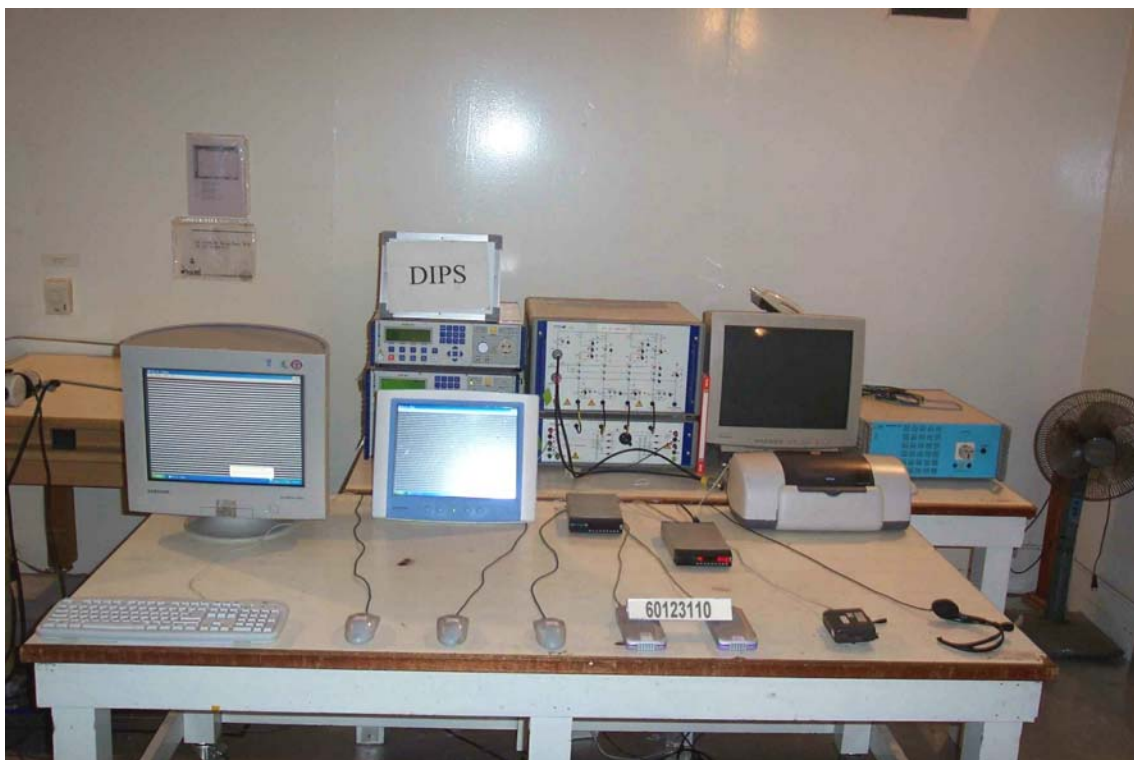
CONDUCTED DISTURBANCE, INDUCED BY RADIO-FREQUENCY FIELDS TEST



POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST



VOLTAGE DIPS / INTERRUPTION TEST





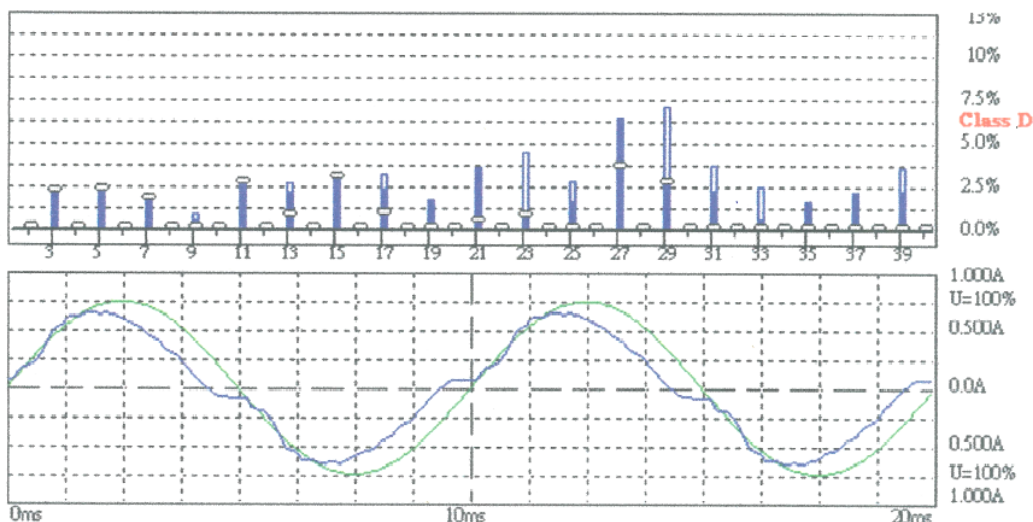
APPENDIX II – TEST RESULT OF EN 61000-3-2/-3

**Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2)**

Comply: IEC 61000-3-2 Ed.2.1 :2001 (incl. Amd.14) - IEC 61000-4-7 Ed.1.0 :1991

ADVANTECHHARCS Setup File : [unnamed](#)HARCS Report File : [unnamed](#)

Operator : Michael Chen
EUT : Panel PC with Touch Screen
Model No : POC-174XX-YY-ZZ
Remarks : TEMP:21 HUMD:56

**Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2)**

2006/2/16 下午 05:27

U_{rms} = 230.1 V P = 93.46 W THD = 0.067 A Range: 1 A
I_{rms} = 0.426 A pf = 0.953 P_{max} = 102.2 W V_{nom}: 230 V
TestTime: 5 min (100%)

Panel PC with Touch Screen

Test completed, Result: PASSED

TEMP:21 HUMD:56

HAR-1000 EMC-Report

Full Bar : Actual Values
Empty Bar : Maximum Values
Blue : Current , Green : Voltage , Red : Failed

Measurement

ADVANTECH

Date : 2006/2/16 下午 05:27 V4.10

File :

Operator : Michael Chen
EUT : Panel PC with Touch Screen
Model No : POC-174XX-YY-ZZ



Remarks

TEMP:21 HUMD:56

Urms = 230.1V Freq = 49.987 Range: 1 A
Irms = 0.426A Ipk = 0.679A cf = 1.593
P = 93.46W S = 98.09VA pf = 0.953
THDi = 15.8 % THDu = 0.10 % Class D

Test - Time : 5min (100 %)

Limit Reference: Pmax = 102.23W

Test completed, Result: PASSED

Order	Freq. [Hz]	Imax [A]	Imax% [%]	Imax%L [%]	Limit [A]	Status
1	50	0.4585	107.56			
2	100	0.0019	0.4439			
3	150	0.0630	14.777	18.122	0.3476	
4	200	0.0004	0.1002			
5	250	0.0366	8.5911	18.854	0.1942	
6	300	0.0003	0.0716			
7	350	0.0145	3.3935	14.150	0.1022	
8	400	0.0003	0.0716			
9	450	0.0029	0.6873	5.7317	0.0511	
10	500	0.0002	0.0430			
11	550	0.0081	1.9044	22.688	0.0358	
12	600	0.0004	0.0859			
13	650	0.0060	1.4175	19.959	0.0303	
14	700	0.0003	0.0716			
15	750	0.0066	1.5464	25.123	0.0262	
16	800	0.0003	0.0716			
17	850	0.0056	1.3030	23.991	0.0232	
18	900	0.0004	0.0859			
19	950	0.0026	0.6014	12.375	0.0207	
20	1000	0.0002	0.0573			
21	1050	0.0051	1.2027	27.356	0.0187	
22	1100	0.0003	0.0716			
23	1150	0.0058	1.3603	33.885	0.0171	
24	1200	0.0002	0.0573			
25	1250	0.0032	0.7589	20.548	0.0157	
26	1300	0.0005	0.1289			
27	1350	0.0073	1.7039	49.827	0.0146	
28	1400	0.0005	0.1145			
29	1450	0.0075	1.7612	55.316	0.0136	
30	1500	0.0005	0.1289			
31	1550	0.0037	0.8591	28.845	0.0127	
32	1600	0.0004	0.0859			
33	1650	0.0022	0.5155	18.423	0.0119	
34	1700	0.0004	0.0859			
35	1750	0.0013	0.3150	11.941	0.0112	
36	1800	0.0002	0.0573			
37	1850	0.0017	0.4009	16.066	0.0106	
38	1900	0.0004	0.0859			
39	1950	0.0028	0.6586	27.821	0.0101	
40	2000	0.0004	0.1002			



ADVANTECH

Date : 2006/2/16 下午 05:39 V4.10

File :

Operator : Michael Chen
EUT : Panel PC with Touch Screen
Model No : POC-174XX-YY-ZZ
Remarks TEMP:21 HUMD:56(Continue)

Urms = 230.1V Freq = 49.987 Range: 1 A
Irms = 0.408A Ipk = 0.651A cf = 1.596
P = 89.19W S = 93.93VA pf = 0.949

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : SLIN 0.24ohm +j0.15ohm N:0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Plt = 0.072

	Pst	dmax	dc	dt>Lim	Fail
		[%]	[%]	[ms]	
1	0.072	0.000	0.010	0.000	



ADVANTECH

Date : 2006/2/16 下午 05:50 V4.10

File :

Operator : Michael Chen
EUT : Panel PC with Touch Screen
Model No : POC-174XX-YY-ZZ
Remarks TEMP:21 HUMD:56 (Manual Switch)

Urms = 230.3V Freq = 49.987 Range: 1 A
Irms = 0.409A Ipk = 0.647A cf = 1.584
P = 89.28W S = 94.12VA pf = 0.949

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : SLIN 0.24ohm +j0.15ohm N:0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Plt = 0.072

	Pst	dmax	dc	dt>Lim	Fail
		[%]	[%]	[ms]	
1	0.072	0.000	0.040	0.000	