FCC TEST REPORT

REPORT NO.:	FC970516L11A
MODEL NO.:	E-BLOCKS/ALFABETO 4.0
RECEIVED:	May 16, 2008
TESTED:	May 19 ~ May 20, 2008
ISSUED:	Nov. 06, 2008

APPLICANT:	Positivo Informatica S.A.
ADDRESS:	Av. Sen. Accioly Filho, 1021 – CIC, 80310-000 Curitiba/PR - BRAZIL

ISSUED BY:	Advance Data Technology Corporation
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, Taiwan, R.O.C.
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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1 CERTIFICATION

PRODUCT: E-BLOCKS/ALFABETO PANEL
MODEL: E-BLOCKS/ALFABETO 4.0
APPLICANT: Positivo Informatica S.A.
TESTED: May 19 ~ May 20, 2008
TEST SAMPLE: ENGINEERING SAMPLE
STANDARD: **FCC Part 15: 2008, Subpart B, Class B**
CISPR 22: 1997, Class B
ICES-003: 2004, Class B
ANSI C63.4: 2003

The above equipment (model: E-BLOCKS/ALFABETO 4.0) has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ **, DATE :** Nov. 06, 2008
Ivy Lin / Specialist

TECHNICAL ACCEPTANCE : _____ **, DATE :** Nov. 06, 2008
Responsible for EMI Ban Hsieh/ Supervisor

APPROVED BY : _____ **, DATE:** Nov. 06, 2008
David Liu / Senior Engineer

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications.

Standard	Test Type	Result	Remarks
FCC Part 15: 2008, Subpart B, Class B	Conducted emission test	PASS	Meet the requirement of limit Minimum passing margin is -18.49 dB at 0.170 MHz
CISPR 22: 1997, Class B ICES-003: 2004, Class B	Radiated emission test	PASS	Meet the requirement of limit Minimum passing margin is -6.26 dB at 885.31 MHz

NOTE: The limit for radiated test for 30-1000 MHz was performed according to CISPR 22: 1997, which was specified in FCC PART 15 Subpart B 15.109(g). Also the limits of ICES-003: 2004 and CISPR 22: 1997 are same.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.69 dB
	200MHz ~1000MHz	3.84 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	E-BLOCKS/ALFABETO PANEL
MODEL NO.	E-BLOCKS/ALFABETO 4.0
FCC ID	SD6-028596
POWER SUPPLY	5Vdc from host equipment
DATA CABLE SUPPLIED	1.2m non-shielded USB cable with one core
POWER CORD	NA

NOTE:

1. This report is issued as a duplicate report to the original ADT report no.: FD970516L11. The differences are changing the product name, model name and applicant.
2. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Typical test configuration.

3.3 DESCRIPTION OF SUPPORT UNITS

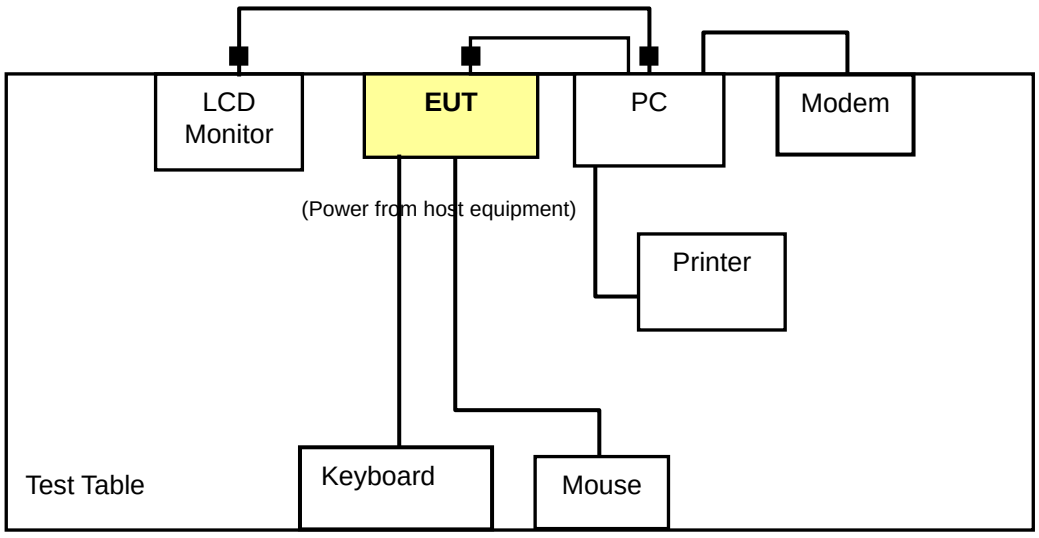
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PC	DELL	DIMENSION 4700	JN39F1S	FCC DoC Approved
2	24" LCD MONITOR	DELL	2408WFPb	CN-0NN792-74261-82B-0EFS	FCC DoC Approved
3	KEYBOARD	DELL	SK-8110	MY-05N456-71619-4B5-1043	FCC DoC Approved
4	MOUSE	DELL	M071KC	504008969	FCC DoC Approved
5	MODEM	ACEEX	1414V/3	0401008270	IFAXDM1414
6	PRINTER	EPSON	LQ-300+	DCGY046020	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.2m non-shielded USB cable with one core
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, with two cores
3	2m foil shielded wire, PS/2 Connector, w/o core.
4	2m foil shielded wire, PS/2 Connector, w/o core.
5	1.2m braid shielded wire , DB25 & DB9 connector , w/o core.
6	1.8m braid shielded wire , DB25 connector , w/o core.

NOTE: All power cords of the above support units are non-shielded (1.8m).

3.4 CONFIGURATION OF SYSTEM UNDER TEST



4 EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD:
FCC Part 15: 2008, Subpart B (Section: 15.107)
CISPR 22: 1997 (Section 5)
ICES-003: 2004 (Class A: section 5.2)
(Class B: section 5.3)

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15-0.5	79	66	66-56	56-46
0.5-5	73	60	56	46
5-30	73	60	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Dec. 07, 2007	Dec. 06, 2008
RF signal cable Woken	5D-FB	Cable-HYC01-01	Jan. 07, 2008	Jan. 06, 2009
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jan. 31, 2008	Jan. 30, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Sep. 12, 2007	Sep. 11, 2008
Software ADT	ADT_Cond_V3	NA	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.1.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4: 2003 (section 7), CISPR 22 (section 9) and ICES-003: 2004 (section 4).

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

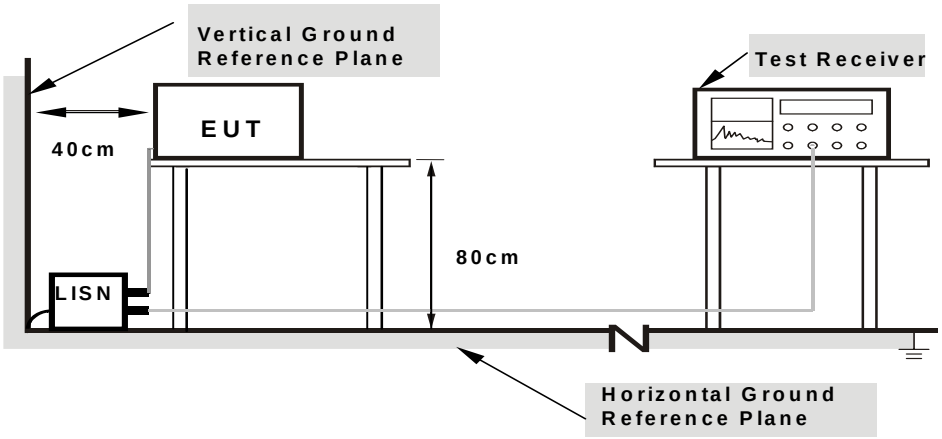
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit - 20dB) was not reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

a. Connected the EUT to PC via USB cable and placed on a testing table.

b. The PC ran a test program to enable all functions.

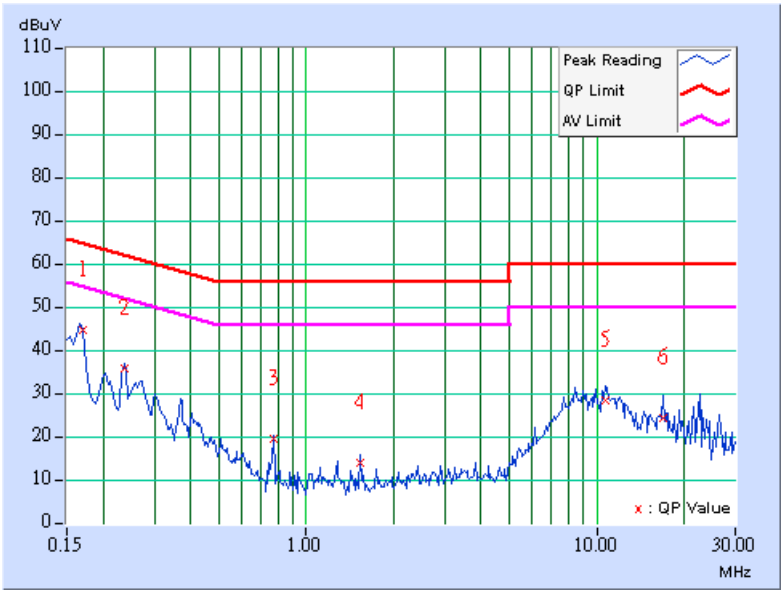
c. The necessary accessories enable the system in full functions.

4.1.7 TEST RESULTS

INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**6dB BANDWIDTH**	9 kHz
ENVIRONMENTAL CONDITIONS	25 deg. C, 68% RH, 981 hPa	**PHASE**	Line 1
TESTED BY	Scott Yang		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.169	0.21	43.89	-	44.10	-	64.99	54.99	-20.89	-
2	0.237	0.21	34.99	-	35.20	-	62.19	52.19	-26.99	-
3	0.769	0.23	18.88	-	19.11	-	56.00	46.00	-36.89	-
4	1.536	0.25	13.35	-	13.60	-	56.00	46.00	-42.40	-
5	10.758	0.57	27.64	-	28.21	-	60.00	50.00	-31.79	-
6	16.906	0.86	23.46	-	24.32	-	60.00	50.00	-35.68	-

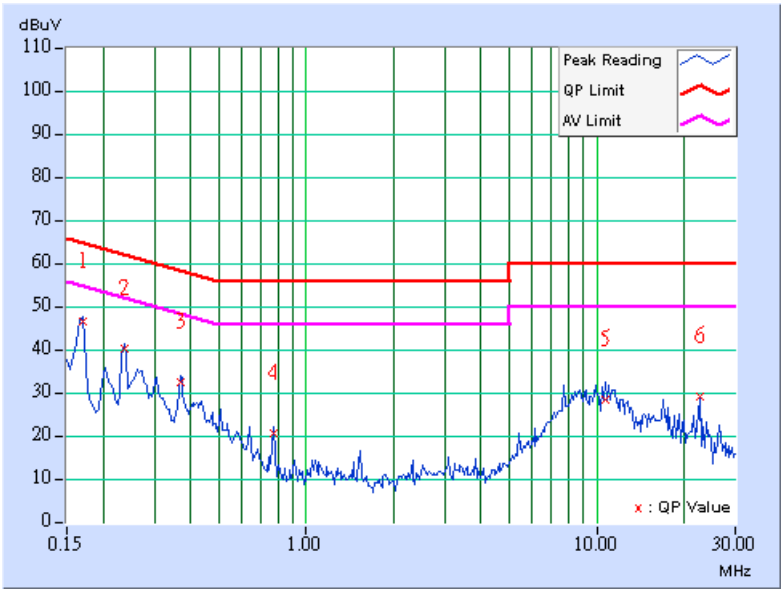
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**6dB BANDWIDTH**	9 kHz
ENVIRONMENTAL CONDITIONS	25 deg. C, 68% RH, 981 hPa	**PHASE**	Line 2
TESTED BY	Scott Yang		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.170**	**0.21**	**46.29**	**-**	**46.50**	**-**	**64.98**	**54.98**	**-18.49**	**-**
2	0.236	0.21	39.65	-	39.86	-	62.24	52.24	-22.38	-
3	0.371	0.21	31.96	-	32.17	-	58.49	48.49	-26.32	-
4	0.771	0.23	20.09	-	20.32	-	56.00	46.00	-35.68	-
5	10.758	0.53	27.90	-	28.43	-	60.00	50.00	-31.57	-
6	22.570	0.54	28.61	-	29.15	-	60.00	50.00	-30.85	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD:
FCC Part 15: 2007, Subpart B (Section: 15.109)
CISPR 22: 1997 (section 6)
ICES-003: 2004 (Class A: section 5.4)
(Class B: section 5.5)

Frequency (MHz)	Class A (at 10m)	Class B (at 10m)
	Quasi-peak (dBuV/m)	Quasi-peak (dBuV/m)
30-230	40	30
230-1000	47	37

NOTE: The limit for radiated test was performed according to CISPR 22:1997, which was specified in FCC PART 15B 15.109(g). Also the limits of ICES-003:2004 and CISPR 22:1997 are same.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100186	Dec. 07, 2007	Dec. 06, 2008
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	Sep. 26, 2007	Sep. 25, 2008
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100025	Oct. 18, 2007	Oct. 17, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Nov. 30, 2007	Nov. 29, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-149	Nov. 30, 2007	Nov. 29, 2008
Preamplifier Agilent	8447D	2944A10637	Dec. 06, 2007	Dec. 05, 2008
Preamplifier Agilent	8447D	2944A10636	Dec. 06, 2007	Dec. 05, 2008
RF signal cable Woken	8D-FB	Cable-Hych1-01	Oct. 14, 2007	Oct. 13, 2008
RF signal cable Woken	8D-FB	Cable-Hych1-02	Oct. 14, 2007	Oct. 13, 2008
Software ADT	ADT_Radiated_V7	NA	NA	NA
Antenna Tower HD Deisel GmbH	MA240	11030	NA	NA
Antenna Tower HD Deisel GmbH	MA240	12030	NA	NA
Turn Table HD Deisel GmbH	DS430	50303	NA	NA
Controller HD Deisel GmbH	HD2000	18303	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 1.

3. The FCC Site Registration No. is 477732.

4. The IC Site Registration No. is IC3789B-1.

5. The VCCI Site Registration No. is R-1893.

4.2.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4: 2003 (section 8), CISPR 22 (section 10) and ICES-003: 2004 (section 4).

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

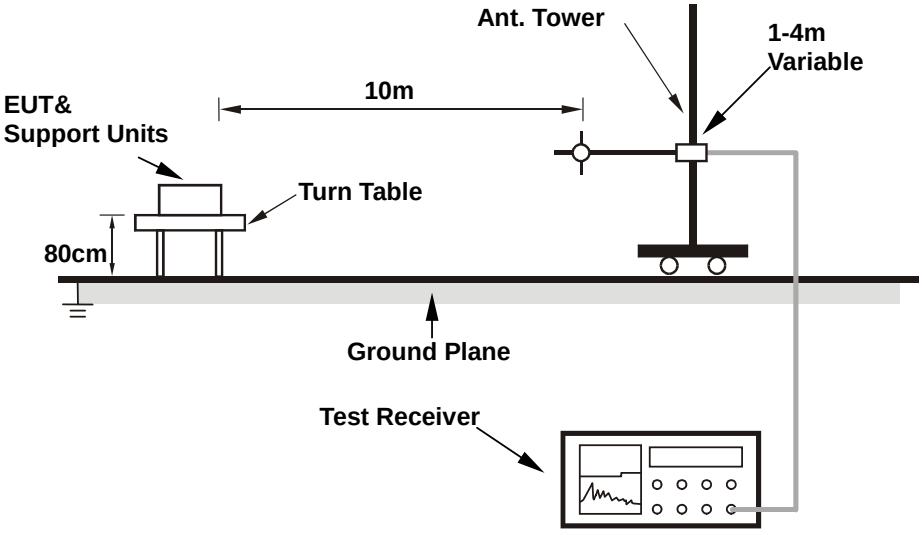
NOTE:

The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

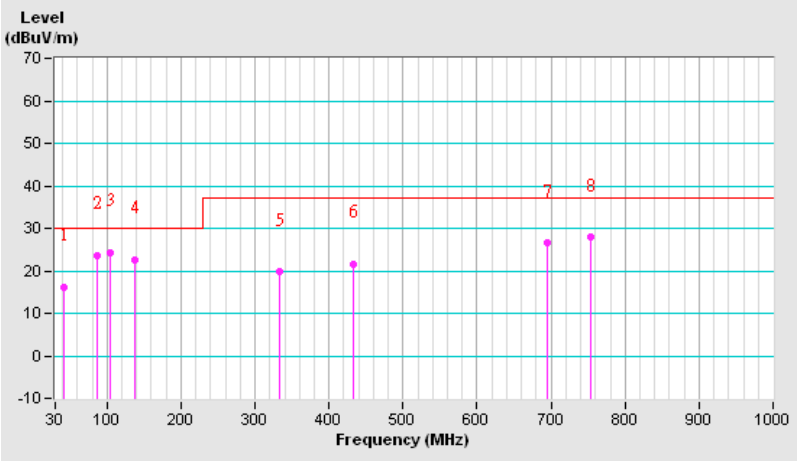
Same as 4.1.6.

4.2.7 TEST RESULTS

INPUT POWER (SYSTEM)	120 Vac, 60 Hz	FREQUENCY RANGE	30-1000MHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 65 %RH, 988 hPa	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120 kHz
TESTED BY	Scott Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.66	16.25 QP	30.00	-13.75	4.00 H	35	1.30	14.96
2	86.37	23.65 QP	30.00	-6.35	4.00 H	228	14.06	9.59
3	103.87	24.28 QP	30.00	-5.72	3.50 H	260	14.30	9.98
4	136.91	22.59 QP	30.00	-7.41	3.50 H	66	8.81	13.78
5	333.25	19.67 QP	37.00	-17.33	3.00 H	354	2.97	16.70
6	432.38	21.53 QP	37.00	-15.47	1.50 H	223	2.32	19.21
7	694.81	26.49 QP	37.00	-10.51	3.00 H	151	1.31	25.17
8	753.13	27.86 QP	37.00	-9.14	3.00 H	46	0.57	27.29

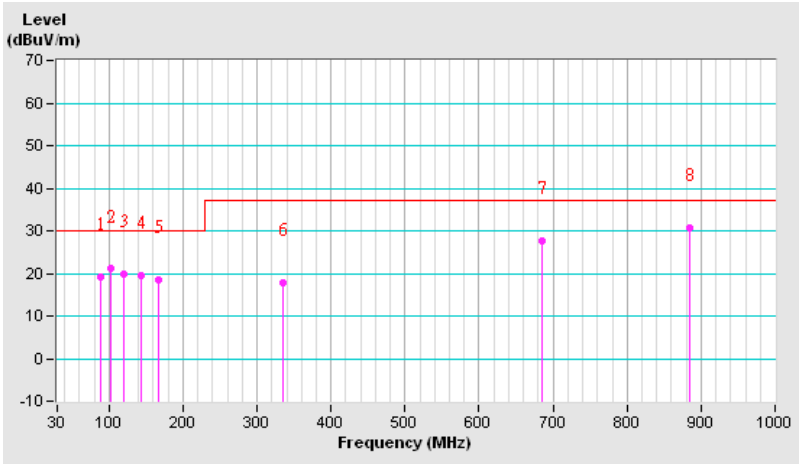
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**FREQUENCY RANGE**	30-1000MHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 65 %RH, 988 hPa	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120 kHz
TESTED BY	Scott Yang		

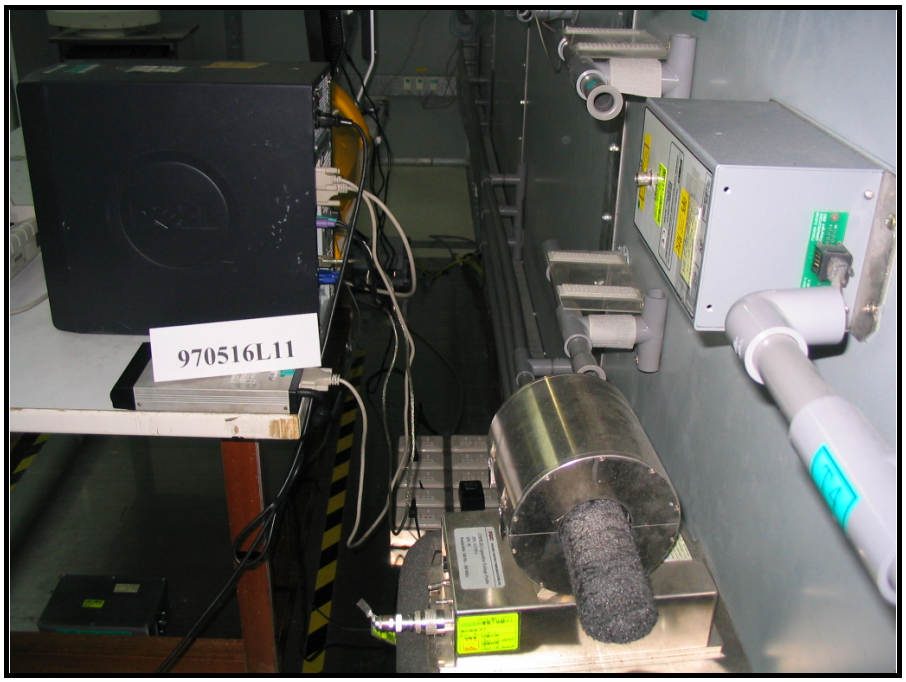
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	88.32	19.30 QP	30.00	-10.70	2.00 V	2	9.42	9.89
2	101.92	21.04 QP	30.00	-8.96	2.00 V	2	10.69	10.35
3	119.42	19.80 QP	30.00	-10.20	1.50 V	326	8.48	11.32
4	142.75	19.65 QP	30.00	-10.35	2.00 V	2	5.04	14.61
5	166.07	18.64 QP	30.00	-11.36	2.00 V	2	4.83	13.82
6	335.19	17.78 QP	37.00	-19.22	2.50 V	304	0.06	17.72
7	685.09	27.66 QP	37.00	-9.34	2.00 V	2	1.82	25.85
8	**885.31**	**30.74 QP**	**37.00**	**-6.26**	**4.00 V**	**254**	**0.65**	**30.08**

REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

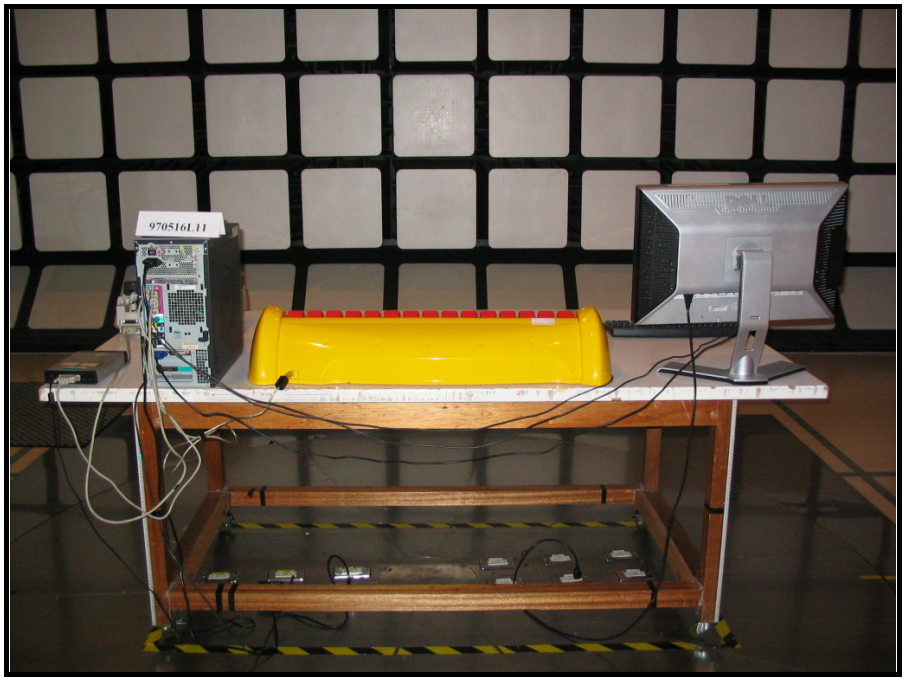


5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Conducted Emission Test



Radiated Emission Test



6 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025:

USA	FCC, UL
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab
Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7 APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

--- END ---