# Certificate of Test

**July 2008** 

# i-Tech Company LLC

Product Type : 8.4 Rugged LCD

Model Number : WRD0840

Brand Name : i-Tech Company
Test Report Number : 0806063F-01

Date of Test : June 19, 2008 – June 26, 2008

This Product was tested to the following standards at the laboratory of Global EMC Standard Tech. Corp., and found Compliance.

Standards:

FCC CFR 47, Part 15 Subpart B / CISPR 22 3rd Edition: 1997, Class B

ANSI C63.4: 2003 Canadian ICES-003

http://www.gestek.com.tw

Miller

Sharon Chang, President

GESTEK EINC LA3

N0. 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C. TEL:886-2-2603-5321 FAX:886-2-2603-5325

Date: July 02, 2008















# **DECLARATION OF CONFORMITY**

Per FCC Part 2 Section 2. 1077(a)



hereby declares that the product

Product Name: 8.4 Rugged LCD

Model Number: WRD0840

Conforms to the following specifications: FCC CFR 47, Part 15 Subpart B, Section 15.107(a), Section 15.109(a), Class B Digital Device

#### Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representati	ve Person's Name :
	Address:
	Telephone number:
	Signature :
	Date :



# i-Tech Company LLC

EUT: 8.4 Rugged LCD

Model Number: WRD0840

# Prepared for: i-Tech Company LLC 41758 Christy Street Fremont, CA 94538 USA

Report By: Global EMC Standard Tech. Corp.

> No.3 Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County,

Taiwan, R.O.C.

Tel: 886-2-2603-5321 Fax: 886-2-2603-5325

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#### 1. CERTIFICATION

Applicant : i-Tech Company LLC
EUT Description : 8.4 Rugged LCD

Model Number : WRD0840 Brand Name : i-Tech Company

Serial Number : N/A

#### MEASUREMENT PROCEDURES USED:

☑ CFR 47, Part 15
 Radio Frequency Device Subpart B Unintentional Radiators Class B

☑ CISPR 22 3<sup>rd</sup> Edition:1997 Limits and methods of measurement of radio disturbance Characteristics of

information technology equipment: 1997

☑ ANSI C63.4 Methods of Measurements of Radio-Noise Emissions from Low- Voltage

Electrical and Electronic Equipment in the range of 9kHz To 40GHz. 2003

☑ Canadian ICES-003 issue Implementation and Interpretation off the Interference-Causing Equipment

4 (2004) Standard for Digital Apparatus, ICES-003 issue 4 (2004)

THE MEASUREMENT SHOWN IN THE ATTACHMENT WAS MADE IN ACCORDANCE WITH THE PROCEDURES INDICATED, AND THE MAXIMUM ENERGY EMITTED BY THE EQUIPMENT WAS FOUND TO BE WITHIN THE ABOVE LIMITS APPLICABLE.



NVLAP LAB CODE 200085-0

Sample Received Date : June 19, 2008

Date of Test : June 19, 2008 - June 26, 2008

In order to ensure the quality and accuracy of this document, the contents have been thoroughly reviewed by the following qualified personnel from GesTek Lab.

Documented By:

Tested By:

Susan Chen / adm. Dept. Technical Report Author Nick Hsu / eng. Dept. Engineer

Approved By:

Tonny Lin General Manager

This test data shown below is traceable to National or international standard such as NIST/USA, etc. The laboratory's NVLAP accreditation in no way constitutes or implies product certification, approval, or endorsement by NVLAP or the United States government.

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## 2. SUMMARY OF TEST RESULTS

The Worst Emission data was found as following

STANDARD	TEST ITEM	TEST RESULT	REMARKS
(1)FCC Part 15 (2)CISPR 22 3 <sup>rd</sup>	Conducted emission (Mode 1)	PASS	The worst emission frequency is <u>0.1789 MHz</u> . And minimum passing margin is <u>-6.43</u> dB. The measurement uncertainty is <u>3.6 dB</u> .
Edition:1997 (3)Canadian ICES-003 issue 4 (2004) Class B	Radiated emission (Mode 1)	PASS	The worst emission frequency is <u>280.0920</u> MHz at Horizontal.  And minimum passing margin is <u>-3.03</u> dB. Height of antenna is <u>3.85</u> M.  Angle of turntable is <u>179°</u> .  The measurement uncertainty is <u>5.1 dB</u> .

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### 3. GENERAL INFORMATION

#### 3.1 PRODUCTION DESCRIPTION

Product Name : 8.4 Rugged LCD

Model Number : WRD0840

Brand Name : i-Tech Company

Serial Number : N/A

Applicant : i-Tech Company LLC

Address : 41758 Christy Street Fremont, CA 94538 USA

Manufacturer : i-Tech Company LLC

Address : 41758 Christy Street Fremont, CA 94538 USA

Power Supply : AC Input: 100-240V~1.8A, 50-60Hz, DC Output: 12-17V, 4.2A

Power Cord : 3pins, Detachable, 1.8m, Non-Shielded

#### 3.2 TEST MODES & EUT COMPONENTS DESCRIPTION

EUT: 8.4 G-WIN Rugged LCD, M/N: WRD0840				
Toot Made	Mode 1- VGA			
Test Mode	800x600 60Hz			

#### Note:

- 1. According to pre-scan data, we determine the data shown in this test report, which reflects the worst-case data for each operation mode.
- 2. The EUT has a series model numbers for the requirement of marketing.

#### 3.3 CONFIGURATION OF THE TESTED SYSTEM

The FCC IDs/Types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards, which have grants) are:

Device	No.		Configuration			
		Manufacturer	: detrois			
		Model Number	: CanMouse CM-309			
DO0.14	1400 004	Serial Number	: N/A			
PS2 Mouse	M02-394	BSMI ID	: R63159			
		FCC ID	: N/A			
		Data Cable	: Shielded, Undetachable, 1.5m			
		Manufacturer	: acer			
		Model Number	: T200-P			
PS2 Keyboard	K01-107	BSMI ID	: R41097			
		FCC ID	: N/A			
		Data Cable	: Shielded, Undetachable, 1.8 m			
		Manufacturer	: Good Vision			
	E01-155	Model Number	: LY-MIC02			
Headset &		Serial Number	: N/A			
Earphone		Data Cable	: Non-Shielded, Undetachable, 1.8 m			
		Power Cord	: N/A			
		Manufacturer	: Hewlett Packard			
		Model Number	: 2225C			
		Serial Number	: 2645S40295			
Printer	P01-020	BSMI ID	: 3892A957			
		FCC ID	: BS46XU2225C			
		Data Cable	: Shielded, Detachable, 1.2m, Parallel Cable			
		Power Cord	: Non-Shielded, Detachable, 1.8m			
		Manufacturer	: D-Link			
HUB		Model Number	: DGS-1005D			
		Power Cord	: Non- Shielded, Detachable, 2.0m, 2pin			
21 21 TAN 9 12		Manufacturer	: ASUS			
Far End Network		Model Number	: AP160R			
Server		Power Cord	: Non- Shielded, Detachable, 1.8m			

Device	No.		Configuration
		Model Number	: VECTRA VL 400 DT
		Serial Number	: SG04202404
		System Number	: D9816A
		C.P.U	: Intel Celeron 633/66MHz
		F.D.D	: Manufacturer: Panasonic
			Model Number : JU-256A316P
		Serial Number : D2035-60391	
1		H.D.D	: Manufacturer : Maxtor 10.1G
PC System	HP PC 04		Model Number: 31024h1
			Serial Number : L1H438XC
			BSMI ID : 3892C064
		Mother Board	: Manufacturer: HP
			Serial Number : S630YKH0501DF
		S.P.S	: Manufacturer: DELTA
			Model Number : DPS-125EB A REV:02
			Serial Number : V5D0038474395
		Power Cord	: Non-Shielded, Detachable, 1.5m

# 3.4 BLOCK DIAGRAM OF CONNECTIONS BETWEEN EUT AND SIMULATORS Far End Network Server **LAN Cable** HUB AC Source **VGA** DC In Printer Adapter P.C. EUT: 8.4 Rugged LCD 0000000 PS<sub>2</sub> 0000000 ---- Keyboard PS<sub>2</sub>

Mouse

Headset &

Microphone

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#### 3.5 TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-2003.

Radiated testing was performed at an antenna to EUT distance of <u>10</u> meters. (For frequencies below 1000MHz)

#### 3.6 TEST FACILITY

Ambient conditions in the laboratory:

ITEMS	Requirement
TEMPERATURE (°C)	10-40
HUMIDITY (%RH)	10-90
BAROMETRIC PRESSURE (mbar)	860-1060
FCC SITE DESCRIPTION	Aug. 10, 1995 /Aug. 25, 1998 File on
	FCC Engineering Laboratory
	Federal Communication Commission
	7435 Oakland Mills Road
	Columbia, MD 21046
	Reference 31040/SIT1300F2
NVLAP LAB. CODE	200085-0
	United Stated Department of commerce
	National Institute of Standards and Technology
	National Voluntary Laboratory Accreditation Program
	Accreditation on NVLAP effective through Sep. 30, 2008
	For CISPR 22, FCC Method and AS/NZS CISPR 22
	Measurement.
Taiwan Accreditation	Recognized by the Council of Taiwan Accreditation
Foundation (TAF)	Foundation and confirmed to meet the requirements of
	ISO/IEC 17025.
	Registration No.: 1082
	Registration on TAF effective through Sep. 19, 2009

#### 4. CONDUCTED EMISSION MEASUREMENT

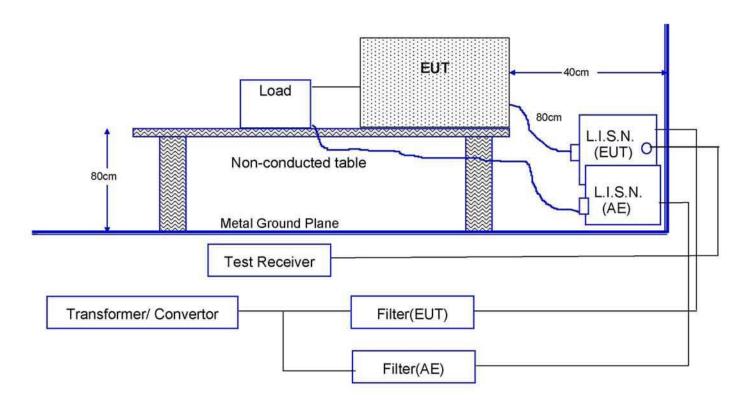
#### 4.1 TEST EQUIPMENTS

The following test equipment are used during the conducted power line tests:

Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Test Receiver	R&S	ESCS30	100393	2009.03.16
2	L.I.S.N.(EUT)	R&S	ENV216	100006	2009.05.28
3	L.I.S.N.(AE)	ROLF HEINE	NNB-2/16Z	99042	2008.12.23
4	RF CABLE	GTK	N/A	GTK-E-A154-01	2008.11.26
5	50 Ohm Terminator	GTK	N/A	GTK-E-A130-01	N/A
6	Shielded Room	GTK	N/A	B5	N/A

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

#### 4.2 BLOCK DIAGRAM OF TEST SETUP



Note: This is a representative setup diagram for Table-top EUT.

For Floor-standing EUT, the table will be removed with all others setup condition remain the same.

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#### 4.3 CONDUCTED EMISSION LIMIT

#### ☐FCC Limit

Frequency	Maximum RF Line Voltage						
	Clas	ss A	Cla	ss B			
MHz	μV	dΒμV	μV	dΒμV			
0.45 to 1.705	1000	60.0	250	48.0			
1.705 to 30	3000	69.5	250	48.0			

Remarks:

RF Line Voltage (dBμV) = 20 log RF Line Voltage (μV).

#### **⊠CISPR** Limit

Frequency	Maximum RF Line Voltage dB(μV)							
	Clas	s A	Class B					
MHz	QUASI-PEAK	AVERAGE	QUASI-PEAK	AVERAGE				
0.15 to 0.50	79	66	66 to 56	56 to 46				
0.50 to 5.0	73	60	56	46				
5.0 to 30	73	60	60	50				

Remarks: In the Above Table, the tighter limit applies at the band edges.

#### 4.4 EUT CONFIGURATION ON MEASUREMENT

The equipments that are listed 4.1 are installed on Conducted Power Line Test to meet the Commission requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

The device under test, installed in a representative system as described in section 4.2, was placed on a non-conductive table whose total height equal to 80cm. Powered from one L.I.S.N. which signal output to receiver, and the other peripherals was powered from another L.I.S.N. which signal output was terminated by  $50\Omega$ .

#### 4.5 CONDUCTED EMISSION DATA

The measurement range of conducted emission, which is from 0.15 MHz to 30 MHz, was investigated. All readings are quasi-peak and average values with a resolution Bandwidth of 9 KHz. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range for all the test modes. Then the worst modes were reported the following data pages.

In the Above Table, the tighter limit applies at the band edges.

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#### 4.6 OPERATING CONDITIONS OF THE EUT

The EUT exercise program used during conducted testing was designed to exercise the EUT in a manner similar to a typical use. The exercise sequence is listed as below:

- 1. Setup the EUT and simulators as shown on 4.2.
- 2. Turn on the power of all equipments.
- 3. Boot the P.C. from Hard Disk and setup the video to Windows XP, active all devices.
- 4. Active other internal devices such as network function.
- 5. Run "WinRFI" test program under Windows XP.
- 6. P.C. sent "H" pattern to monitor, make the "H" pattern full in the screen.
- 7. P.C. sent "H" pattern to parallel and serial port.
- Repeat above steps.

#### 4.7 CONDUCTED EMISSION MEASUREMENT RESULTS

Date of Test	June 26, 2008	Temperature	26 ℃	
EUT	8.4 Rugged LCD Humidity		60 %	
Test Mode	Mode 1	Display Pattern	H Pattern	
Test Power Supply	AC 120V/60Hz			

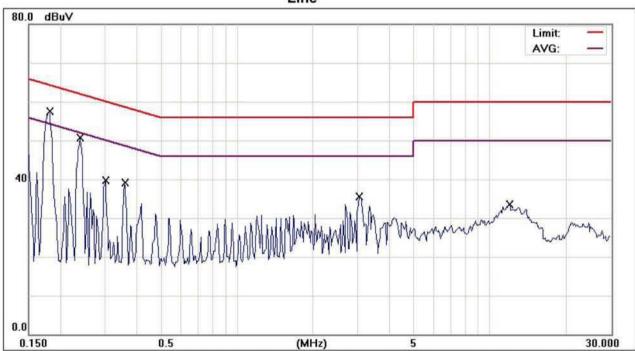
#### Line

No.	Frequency MHz	Reading Level dBµV	Factor dB	Measurement dBµV	Limit dBµV	Over Limit dB	Detector
1	0.1789	47.12	9.88	57.00	64.54	-7.54	QP
2	<b>★</b> 0.1789	38.23	9.88	48.11	54.54	-6.43	AVG
3	0.2394	40.34	9.88	50.22	62.12	-11.90	QP
4	0.2394	32.28	9.88	42.16	52.12	-9.96	AVG
5	0.2982	30.66	9.88	40.54	60.29	-19.75	QP
6	0.2982	24.22	9.88	34.10	50.29	-16.19	AVG
7	0.3597	28.64	9.88	38.52	58.74	-20.22	QP
8	0.3597	22.94	9.88	32.82	48.74	-15.92	AVG
9	3.0555	25.73	9.96	35.69	56.00	-20.31	QP
10	3.0555	20.73	9.96	30.69	46.00	-15.31	AVG
11	12.0436	21.72	10.05	31.77	60.00	-28.23	QP
12	12.0436	19.00	10.05	29.05	50.00	-20.95	AVG

#### Remarks:

- 1. All readings are Quasi-peak and Average values.
- 2. Measurement = Reading + Factor (Could have ±0.01 tolerance due to computer automatically round off calculation).
- 3. Over Limit (Margin Value)=Measurement level-Limit value.
- 4. Factor = L.I.S.N. insertion loss + cable loss
- 5. "★" means that this data is the worse case measurement level.
- 6. The measurement uncertainty is 3.6 dB.

#### Line



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak; "AVG" refers to the limit of Average.

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Date of Test	June 26, 2008	Temperature	26 ℃
EUT	8.4 Rugged LCD	Humidity	60 %
Test Mode	Mode 1	Display Pattern	H Pattern
Test Power Supply	AC 120V/60Hz	to	o≱.

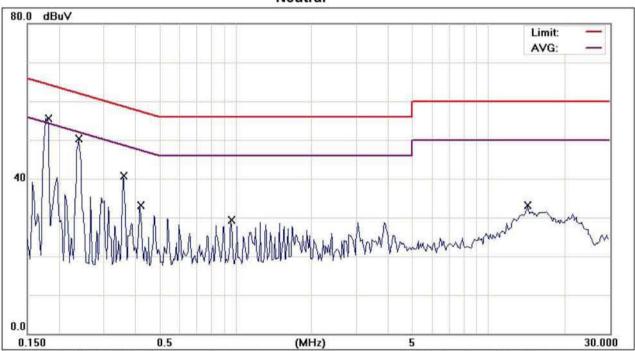
#### Neutral

No.	Frequency MHz	Reading Level dBµV	Factor dB	Measurement dB <sub>µ</sub> V	Limit dBµV	Over Limit dB	Detector
1	0.1788	46.92	9.75	56.67	64.54	-7.87	QP
2	<b>★</b> 0.1788	37.50	9.75	47.25	54.54	-7.29	AVG
3	0.2394	39.78	9.74	49.52	62.12	-12.60	QP
4	0.2394	31.41	9.74	41.15	52.12	-10.97	AVG
5	0.3602	30.36	9.74	40.10	58.72	-18.62	QP
6	0.3602	22.17	9.74	31.91	48.72	-16.81	AVG
7	0.4190	22.27	9.75	32.02	57.47	-25.45	QP
8	0.4190	15.27	9.75	25.02	47.47	-22.45	AVG
9	0.9575	18.20	9.76	27.96	56.00	-28.04	QP
10	0.9575	16.92	9.76	26.68	46.00	-19.32	AVG
11	14.3120	20.51	9.98	30.49	60.00	-29.51	QP
12	14.3120	19.03	9.98	29.01	50.00	-20.99	AVG

#### Remarks:

- 1. All readings are Quasi-peak and Average values.
- 2. Measurement = Reading + Factor (Could have ±0.01 tolerance due to computer automatically round off calculation).
- 3. Over Limit (Margin Value)=Measurement level-Limit value.
- 4. Factor = L.I.S.N. insertion loss + cable loss
- 5. "★" means that this data is the worse case measurement level.
- 6. The measurement uncertainty is 3.6 dB.

#### Neutral



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak; "AVG" refers to the limit of Average.

#### 5. RADIATED EMISSION MEASUREMENT

#### 5.1 TEST EQUIPMENT

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

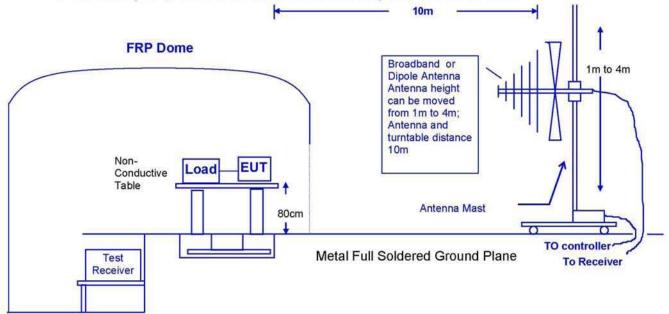
Item	Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
1	Test Receiver	R&S	ESCS30	100352	2009.06.25
2	Spectrum Analyzer	ADVANTEST	U3751	161000226	2009.01.03
3	Pre-Amplifier	HP	8447D	2944A08610	2008.09.09
4	BILOG Antenna	SCHAFFNER	CBL6112B	2833	2008.11.22
5	CABLE	GTK	N/A	GTK-E-A150-01	2008.12.13
6	Open Site	GTK	N/A	A2	2008.07.04

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

#### 5.2 OPEN TEST SITE SETUP DIAGRAM

Note: This is a representative setup diagram for Table-top EUT.

For Floor-standing EUT, the table will be removed with all others setup condition remain the same.



#### 5.3 RADIATED EMISSION LIMIT

#### ☐FCC Class B Limit at 3m

Frequency	Distance	Field Strength	
MHz	Meter	μV/m	dBμV/m
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0

Note: The frequencies above 1000MHz, as measured using instrumentation with a peak detector function was corresponding to 20dB above the maximum permitted average limit. (Refer 47CFR Ch. 1 (10-1-98 Edition §15.35(b))

#### □FCC Class A Limit at 10m

Frequency	Distance	Field Strength	
MHz	Meter	μV/m	dBμV/m
30 to 88	10	90	39.0
88 to 216	10	150	43.5
216 to 960	10	210	46.4
Above 960	10	300	49.5

Remark :1. The tighter limit shall apply at the edge between two frequency bands.

#### ⊠CISPR Class B Limit at 10m

Frequency	Distance	Field Strength
MHz	Meter	dB(μV/m)
30 to 230	10	30
230 to 1000	10	37

Remark: 1. The tighter limit shall apply at the edge between two frequency bands.

#### 5.4 EUT CONFIGURATION

The equipment which is listed 5.1 are installed on Radiated Emission Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

The device under test, installed in a representative system as described in section 5.2, was placed on a non-conductive table whose total height equaled 80 cm. This table can be rotated 360 degree. The measurement antenna was mounted to a non-conductive mast capable of moving the antenna vertically. Antenna height was varied from 1 meter to 4 meters and the system under test was rotated from 0 degree through 360 degrees relative to the antenna position and polarization (Horizontal and Vertical). Also the I/O cable position was investigated to find the maximum emission condition.

<sup>2.</sup> Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

<sup>2.</sup> Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

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#### 5.5 OPERATING CONDITION OF EUT

Same as section 4.6.

#### 5.6 RADIATED EMISSION DATA

The measurement range of radiated emission, which is from 30 MHz to 1GHz, was investigated. All readings are quasi-peak values with a resolution Bandwidth of 120 KHz. The initial step in collecting radiated emission data is a spectrum analyzer peak scans of the measurement range for all the test modes and then use test receiver for final measurement. Then the worst modes were reported the following data pages.

#### 5.7 RADIATED EMISSIONS MEASUREMENT RESULTS

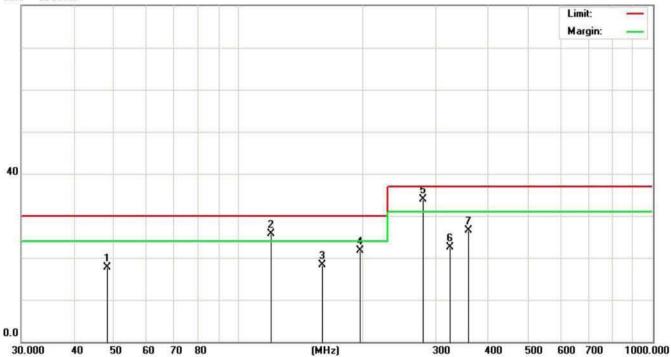
Date of Test	June 19, 2008	Temperature	26 deg/C
EUT	8.4 Rugged LCD	Humidity	60 %RH
Working Cond.	Mode 1	Display Pattern	H Pattern
Antenna distance	10m at Horizontal	Frequency Range	30-1000MHz
Test Power Supply	AC 120V/60Hz		

No.	Frequency MHz	Reading Level	Factor dB	Measurement dBµV/m	Limit dBµV/m	Over Limit dB	Detector
1	48.0180	35.50	-17.83	17.67	30.00	-12.33	QP
2	120.0403	38.00	-12.20	25.80	30.00	-4.20	QP
3	159.9821	31.75	-13.54	18.21	30.00	-11.79	QP
4	196.5991	35.25	-13.63	21.62	30.00	-8.38	QP
5	<b>★</b> 280.0920	42.80	-8.83	33.97	37.00	-3.03	QP
6	324.1270	30.07	-7.57	22.50	37.00	-14.50	QP
7	360.1174	33.00	-6.56	26.44	37.00	-10.56	QP

#### Remarks:

- 1. All Readings below 1GHz are Quasi-Peak.
- 2. Measurement = Reading + Factor (Could have ±0.01 tolerance due to computer automatically round off calculation).
- 3. Over Limit (Margin Value)=Measurement level-Limit value.
- 4. Factor = antenna factor + cable loss amplifier gain.
- 5. " \* " means that this data is the worse case measurement level.
- 6. The measurement uncertainty is 5.1 dB.

#### 80.0 dBuV/m



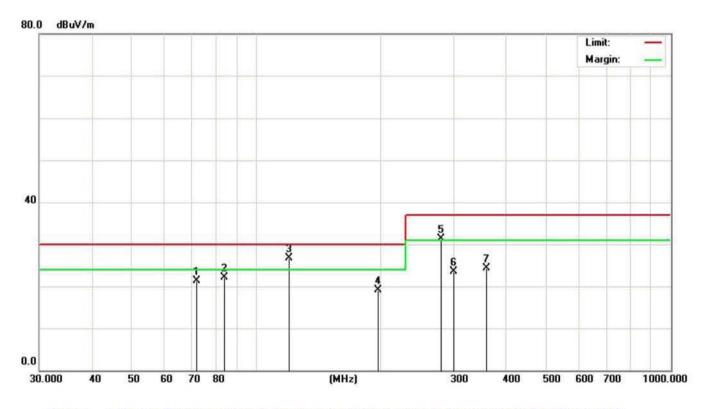
Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak; "Margin" refers to the data under 6dB.

Date of Test	June 19, 2008	Temperature	25 deg/C
EUT	8.4 Rugged LCD	Humidity	60 %RH
Working Cond.	Mode 1	Display Pattern	H Pattern
Antenna distance	10m at Vertical	Frequency Range	30-1000MHz
Test Power Supply	AC 120V/60Hz	* ***	***

No.	Frequency MHz	Reading Level dBµV	Factor dB	Measurement dBµV/m	Limit dBµV/m	Over Limit dB	Detector
1	72.0053	40.00	-18.78	21.22	30.00	-8.78	QP
2	83.9810	39.50	-17.40	22.10	30.00	-7.90	QP
3	<b>★</b> 120.0399	39.00	-12.20	26.80	30.00	-3.20	QP
4	196.6009	32.69	-13.63	19.06	30.00	-10.94	QP
5	280.0920	40.10	-8.83	31.27	37.00	-5.73	QP
6	300.0018	31.80	-8.24	23.56	37.00	-13.44	QP
7	360.1193	30.80	-6.56	24.24	37.00	-12.76	QP

#### Remarks:

- 1. All Readings below 1GHz are Quasi-Peak.
- 2. Measurement = Reading + Factor (Could have ±0.01 tolerance due to computer automatically round off calculation).
- 3. Over Limit (Margin Value)=Measurement level-Limit value.
- 4. Factor = antenna factor + cable loss amplifier gain.
- 5. "★" means that this data is the worse case measurement level.
- 6. The measurement uncertainty is 5.1 dB.



Remark: 1. The "Limit" in right-up corner in above diagram refers to Quasi-peak; "Margin" refers to the data under 6dB.

# 6. PHOTOGRAPHS FOR TEST

## 6.1 TEST PHOTOGRAPHS FOR CONDUCTION

Mode 1

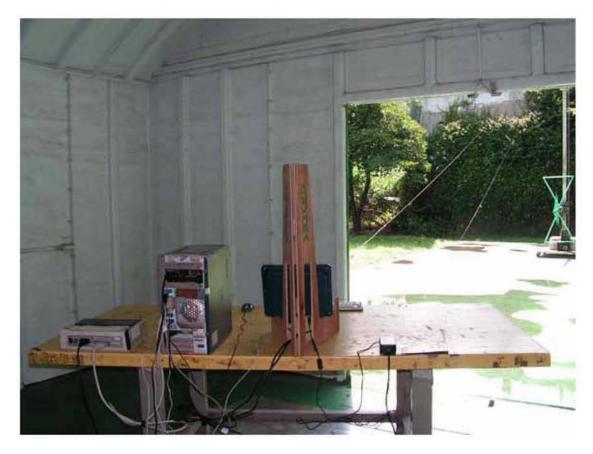




### 6.2 TEST PHOTOGRAPHS FOR RADIATED

Mode 1





#### 7. PHOTOGRAPHS FOR PRODUCT











AC Cable
 RS 232 Cable







GESTEK <sub>Lab</sub> Report No.: 0806063F-01 No 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C. Tel:886-2-2603-5321 Fax:886-2-2603-5325

## 8. EMI REDUCTION METHOD DURING COMPLIANCE TESTING

No modification was made during testing.

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# Appendix A Circuit (Block) Diagram

(Shall be added by Applicant)

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# Appendix B User Manual

(Shall be added by Applicant)