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Project: 11CA39270 File: TC8352 Report: 11CA16184-A1-FCC Date: August 9, 2011 Model: AMVX2408

# **FCC Certification Report**

For

# **LCD Color Medical Monitor**

AMPRONIX INC. 15 Whatney Irvine CA 92618 USA

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Project Number:	11CA39270	File Number	TC8352	Page	2 of 29
Model Number:	AMVX2408				
Client Name:	Ampronix Inc.				

# **Summary of Test Results:**

The foll	The following tests were performed on a sample submitted for evaluation of compliance with 47 CFR Part					
15.107 (	a) / 47 CFR Part 15.109 (g) Class B.					
Test	Test Name	Compliant	Not	See Remark		
#	Test Requirement/Specification	_	Compliant			
1	AC Power line Conducted Emission Test	Х	-	-		
2	Radiated Emission Test	X	_	_		

# **Conclusion**:

The tests listed in the Summary of Testing section of this report have been performed as a witness testing and the results recorded by UL Korea Ltd. in accordance with the procedures stated in each test requirement and specification. The test list was determined by the Applicant as being applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

The equipment under test has

- Met the technical requirements
- Not met the technical requirements

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Tested by Sung Hoon Baek, Project Engineer Conformity Assessment Services – 3014ASEO UL Korea Ltd. August 09, 2011

Un.

Reviewed by Jeawoon, Choi, Senior Project Engineer Conformity Assessment Services - 3014ASEO UL Korea Ltd. August 09, 2011

Project Number: Model Number: Client Name:	11CA39270 AMVX2408 Ampronix Inc	File Number	TC8352	Page	3 of 29
<u>Test Report Details</u>					
Test Report No:		11CA16184-A1-FCC			
File No		ГС8352			
Tests Performed By:		UL Korea Ltd. 33 <sup>rd</sup> FL. GFC Bldg. 737 Y 984, Korea	eoksam-dong,	Kangnam-ku	, Seoul, 135-
Test Site:		CHUNGBUK TECHNOP 685-3 Yangcheong-ri, Ocl province, Republic of Kor The test facility was deem necessary to perform the t	ARK nang-eub, Cheon ea ed to have the e ests included in	ngwon-kun, ( nvironment a the test pack	Chungbuk- and capabilities age.
Applicant:		AMPRONIX INC. 15 Whatney Irvine CA 92	618 USA		
Manufacturer:		AMPRONIX INC. 15 Whatney Irvine CA 92	618 USA		
Factory		D&T Inc. 59-9 JANG-DONG YUSI	EONG-GU DAE	EJEON 305-3	343 KOREA
Trademark:		MEDVIX			

Project Number:	11CA39270	File Number	TC8352	Page	4 of 29
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Client Name:	Ampronix Inc.				

Applicant Contact:	Brian Yamada
Title:	General Manager
Phone:	949-273-8000
E-mail:	andyjang@advancorp.com
Product Type:	LCD Color Medical Monitor
Model Number:	AMVX2408
Model Number multiple listing:	N/A
-	The manufacturer has declared to all the multiple Model names into the basic Model without any further evaluation by UL.
Product standards:	47 CFR Part 15.107 (a) / 47 CFR Part 15.109 (g) Class B.
Test Procedure	ANSI C63.4 : 2003
Sample Serial Number:	N/A
Sample Receive Date:	April 18, 2011
Testing Start Date:	April 18, 2011
Date Testing Complete:	April 22, 2011
Test Report Date:	August 09, 2011
<b>Overall Results:</b>	Pass

UL Korea Ltd. reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this Model are manufactured with identical electrical and mechanical components. UL Korea Ltd. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from UL Korea Ltd. issued reports.

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# 1. General product description

#### **1.1 Equipment Description**

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	Description:
LCD Color Medical Monitor	

#### 1.2 Details of Test Equipment (EUT)

	Equipment Configuration:				
No.	Product Type	Manufacturer	Model	Comments	
1	LCD Color Medical Monitor	Ampronix Inc.	AMVX2408	-	
2	AC/DC Adapter	BridgePower Corp	JMW1150KA2400F04	-	
3	DVI cable	-	-	1 EA	
4	VGA cable	-	-	1 EA	
5	BNC cable	-	-	1 EA	
6	S-Video cable	-	-	1 EA	

## 1.3 Technical Data:

Item		Description	
Model		AMVX2408	
LCD Panel	Description	24.1Inch(61.13cm) diagonal	
	Resolution	1920 x 1200 @ 60hz	
	Display color	1,073,741,824 colors	
	Pixel Pitch	0.270 mm x 0.270 mm	
Brightness	Brightness	280 cd/m2	
Contrast	Contrast	700 : 1	
Display Size		518.4mm x 324.0mm)	
Scanning	Horizontal	31.47~79.98Khz	
requency	Vertical	50~85Hz	

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Input / Output		Input	Output
		1 x DVI 1 x D-SUB 1 x Y-C 1 x C-Video/SOG 2 x SDI 1 x R/Pr, G/Y, B/Pb, H/CS,VS	1 x Y-C 1 x C-Video 1 x SDI 1 x R/Pr, G/Y, B/Pb, H/CS,VS
Temperature	Operating	32° ~ 95°F (0° - 35°C)	
	Storage	$-4^{\circ} \sim 140^{\circ} F (-20^{\circ} - 60^{\circ} C)$	
Power Source	Monitor	DC 24V 6.25A	
	AC-Adaptor	AC 100~240V 50/60Hz	
Unit Dimension		598(W) x 382.9(H) x 111.5(I	D) (mm) - Without stand

# **1.4 EUT Internal operating frequency**

Frequency (MHz)	Description	Frequency (MHz)	Description
77MHz	Display Frequency	10.00MHz	CPLD Clock
11.0592MHz	U-Com Frequency	27.00MHz	System Clock
324.00MHz	Memory Clock	-	-

# **1.5** Technical descriptions and documents:

No.	Document Title and Description				
1	Auto-Scanning with Digital Control LCD Color Medical Monitor Operation Manual				
Note: T	Note: The manufacturer provided the following document.				

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#### **1.6 Equipment Marking Plate:**



Project Number:11CA39270Model Number:AMVX2408Client Name:Ampronix Inc.

# 2. Test condition

## 2.1 Equipment Used During Test:

Use*	Product Type	Manufacturer	Model	Comments			
EUT	LCD Color Medical Monitor	AMPRONIX INC.	AMVX2408	-			
EUT	AC/DC adapter	Bridge Power Corp.	JMW1150KA2400F**	-			
AE	PC	DELL	OPTIPLEX 760	Used for DVI, D-sub			
AE	USB mouse	DELL	M-UAR DEL7	-			
AE	USB Keyboard	DELL	SK8175	-			
AE	Headset	PILLAR	CH-1700	-			
AE	Printer	SAMSUNG	ML-2250G	-			
AE	HD & SD Test Generator	Doremi	HDG-20	Used for SDI Mode			
AE	Pattern generator	Chroma	22291	Used for C-video, S-Video and Component Mode			
AE	LCD Color Display	ADVAN Int'l Corp.	0240030990	Used for SDI out function			
AE	AC/DC adapter	Bridge Power Corp.	JMW1150KA2400F**	Connected to LCD monitor			
AE	Extension Cable	-	1501047006	75-ft DC extension Cable			
AE	Extension Cable	-	1501047005	15-ft DC extension Cable			
AE	Extension Cable	-	1501047004	5-ft DC extension Cable			
* Note:	* Note: EUT - Equipment Under Test, AE - Auxiliary/Associated Equipment, SIM - Simulator (Not Subjected to Test)						

#### 2.2 Input/output Ports:

Port	Name	Type*	Cable	Cable	Comments
#			Max. >3m	Shielded	
1	Mains	AC	1.8 m	Unshielded	Hospital-grade AC Power cord
2	DVI In	I/O	1.8 m	Shielded	29 pin DVI-I
3	VGA In	I/O	1.8 m	Shielded	15 pin D-Sub
4	SDI In, Out	I/O	1.8 m	Shielded	BNC
5	S-Video In	I/O	1.8 m	Shielded	S-Video
6	C-Video In	I/O	1.8 m	Shielded	BNC
7	Component (Y/Pb/Pr) In	I/O	1.8 m	Shielded	5 Port BNC
* NT-4					$\mathbf{C}^{\prime}$ 1 $\mathbf{L}^{\prime}$ $\mathbf{O}^{\prime}$ $\mathbf{O}^{\prime}$ $\mathbf{D}^{\prime}$ $\mathbf{O}^{\prime}$ $\mathbf{L}^{\prime}$

\* Note: \*AC= AC Power Port, DC = DC Power Port, N/E = Non-Electrical, I/O = Signal Input or Output Port (Not Involved in Process Control),

TP = Telecommunication Ports

\* RS-232 port is used for service purpose only. No user interface port.

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## 2.3 Power Interface:

Mode #	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Comments
Rated	100-240Vac	-	150W	50-60Hz	-
1	AC 120 V	-	-	60Hz	-

# 2.4 EUT Operation Modes:

Mode #	Mode	Comments
1	DVI Mode	Worst case condition
2	VGA Mode	-
3	SDI In/Out Mode	Worst case condition
4	S-VIDEO Mode	-
5	C-Video / SOG Mode	-
6	Component (Y/Pb/Pr) Mode/ Analog RGBS Mode	-
* Note:	•	·

**Note:** 

1. All the configuration described above has been investigated during the preliminary testing and selected two cases as worst-case condition for final measurements.

2. EUT have been performed under continuous displaying "H" Patten for configuration Modes of 1 to 2

3. EUT has been performed under continuous displaying "Color Bar" Patten for configuration Modes of 3 to 6.

#### 2.5 Modes of Video resolution

-	Mode #	Resolution	Comments		
1		800 * 600 @ 60Hz	-		
2	DVI Mode	1024 * 768 @ 60Hz	-		
3		1920 * 1200 @ 60Hz	Worst case condition		
4	SDI In/Out Mode	1080p	Worst case condition		
* Note: Video resolution where it refers from above is representative worst case.					

#### 2.6 Used D.C. Extension Cable for EMC Test:

No.	Cable Length	Preliminary Test	Comment		
1	5ft	DVI and SDI In/Out Mode	-		
2	15ft		-		
3	75ft		Worst case condition		
* Note: Radiated emission and conducted emission test were performed for all extension power cable during the					
preliminary testing and selected worst-case condition (75ft) for final measurements.					

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# 2.7 Test Configuration:



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#### 2.8 Extension cable of Adapter to EUT Test Configuration:



# 3. RESULT OF TESTING:

No	Test requirements	Standard	Results	Verdict		
1	AC Power line Conducted Emission Test	47 CFR Part 15.107(a) / 47 CFR Part 15.109(g) Class B	Part 15.107(a) / 47 CFR Met limit Class B			
2	Radiated Emission Test		Met limit Class B Compl			
* Note: 7	This product has been tested in a	accordance with the measurement proc	cedures specified 47 CFR	Part 15.107		
(a) / 47 CFR Part 15.109 (g) Class B at the CBTP EMC Laboratory and the test results has been shown to be						
complied	complied with the EMC requirements specified in the standard above.					

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# 4. TEST CONDITION AND RESULTS

#### 4.1 MAINS TERMINAL DISTURBANCE VOLTAGE TEST

	TES	T: Limit	ts of mains terminal distu	ırbance	voltage	e	
Method Measurements were made on a ground plane that extends 1-meter minimum beyond all sides of the system under test. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN.							
Donomotons recorded	huming the test	L	aboratory Ambient Tem	peratur	e	24.2 °C	
Parameters recorded (	luring the test	R	elative Humidity			34.7 %	
-		F	requency range on each	side of	line	Measuren	nent Point
Fully configured samp following frequency r	ple scanned over ange	the 0	.15 MHz to 30 MHz			AC input	port of Adapter
			Limits - Class B				
			Limit (dBµV)				
Frequency (MHz)	Frequency (MHz) Quasi-Peak		Result Avera		Averag	age Result	
0.15 to 0.50	66 to 56		Pass	56 to 46		46	Pass
0.50 to 5	56		Pass	46			Pass
5 to 30	60		Pass	50			Pass
		E	UT Configuration Setti	ngs:			
Power Interface	e Mode #		EUT Operation Mode #		I	EUT Configurations Mode #	
(See Section	n 2.3)		(See 2.4)			(See Section 2.7)	
1			1, 3			1, 2	
	С	onducte	d Emissions Test Equip	oment u	used:		
Description	Manufacturer		Model	Identi	fier		Cal. Due
Test Receiver	Test Receiver Rohde & Schwarz		ESPI 101088		101088 201		2011.06.17
LISN	Rohde & Sch	warz	ESH2-Z5 100146		46		2011.06.18
LISN	Schwarzbeck		NNLK8129	8129	162		2011.06.18
Pulse Limiter	Rohde & Sch	warz	ESH3-Z2	3057.8810.54		4	2011.06.18

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# Figure 1. Conducted Emission Test Setup for DVI Mode:



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Figure 3. Graphical representation for DVI Mode:



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Test Frequency	Corre Factor	ection r (dB)	Readin (dB	g value uV)	Line	Level	(dBuV)	Liı (dB	mit uV)	Ma (d	rgin B)
(MHz)	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.161	9.78	0.12	41.20	36.80	N	51.10	46.70	65.00	55.00	13.90	8.30
0.162	9.78	0.12	40.90	36.70	L1	50.80	46.60	65.00	55.00	14.20	8.40
0.215	9.78	0.12	35.80	33.20	L1	45.70	43.10	63.00	53.00	17.30	9.90
0.592	9.75	0.15	27.00	27.10	L1	36.90	37.00	56.00	46.00	19.10	9.00
1.131	9.82	0.18	26.60	26.60	N	36.60	36.60	56.00	46.00	19.40	9.40
1.509	9.81	0.19	26.40	26.10	Ν	36.40	36.10	56.00	46.00	19.60	9.90
4.205	10.03	0.27	28.80	27.80	Ν	39.10	38.10	56.00	46.00	16.90	7.90
4.691	10.01	0.29	26.10	22.60	L1	36.40	32.90	56.00	46.00	19.60	13.10
6.580	10.13	0.37	28.80	26.30	L1	39.30	36.80	60.00	50.00	20.70	13.20
* Note:	•	•	•		•	•			•	•	

# Table 1. Test data of DVI Mode:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)

2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

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# Figure 4. Conducted Emission Test Setup for SDI In/Out Mode:



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# Figure 5. Graphical representation for SDI In/Out Mode:

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Client Name:	Ampronix Inc.				



# Figure 6. Graphical representation for SDI In/Out Mode:

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Test Frequency	Correction Factor (dB)		Reading value (dBuV) I		Line	Level (dBuV)		Limit (dBuV)		Margin (dB)	
(MHz)	Cable	LISN	QP	AV		QP	AV	QP	AV	QP	AV
0.162	9.78	0.12	41.40	36.90	Ν	51.30	46.80	65.00	55.00	13.70	8.20
0.215	9.78	0.12	35.80	33.20	L1	45.70	43.10	63.00	53.00	17.30	9.90
0.217	9.78	0.12	35.30	33.20	Ν	45.20	43.10	63.00	53.00	17.80	9.90
0.485	9.76	0.14	26.70	26.80	Ν	36.60	36.70	56.00	46.00	19.40	9.30
0.592	9.75	0.15	27.00	27.10	L1	36.90	37.00	56.00	46.00	19.10	9.00
0.864	9.83	0.17	27.80	27.90	Ν	37.80	37.90	56.00	46.00	18.20	8.10
1.024	9.82	0.18	25.80	25.60	L1	35.80	35.60	56.00	46.00	20.20	10.40
1.131	9.82	0.18	26.20	26.30	L1	36.20	36.30	56.00	46.00	19.80	9.70
1.407	9.81	0.19	26.00	26.00	Ν	36.00	36.00	56.00	46.00	20.00	10.00
1.509	9.81	0.19	26.00	25.60	L1	36.00	35.60	56.00	46.00	20.00	10.40
2.054	9.90	0.20	26.40	25.90	N	36.50	36.00	56.00	46.00	19.50	10.00
4.205	10.03	0.27	27.40	26.40	L1	37.70	36.70	56.00	46.00	18.30	9.30
4.376	10.02	0.28	27.40	25.40	Ν	37.70	35.70	56.00	46.00	18.30	10.30

# Table 2. Test data for SDI In/Out Mode:

Note:

1. Margin (dB)= Limit (dBuV) - Level (dBuV)

2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

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# 4.2 RADIATED DISTURBANCE

		TEST: Limits for	radiated disturbance			
MethodA pretest was performed at 3m distances in an anechoic screened enclosure, scanning the frequency range, and locating any frequencies at the which EUT radiated. Frequency scans were conducted with a peak detector with horizontal and vertical polarization of the antenna. Measurements were done in the frequency range 30-1000 MHz. The main test was then conducted by measurements at each frequency found in the pretest. These measurements were done at an open area test site at 10m distances, with a quasi-peak detector. EUT was positioned on a wooden table 0.8m above the floor, at the edge of the turntable. Cables connected to EUT were fixed to cause maximum emission. A maximum emitting point for each frequency was found by turning EUT 0-360 degrees, and adjust the antenna height between 1-4m. A quasi- peak detector measurement was then done at the maximum emitting point.						
Parameters recorde	d during the test	Laboratory A	mbient Temperature	10 °C		
		Relative Hum	idity	54 %		
-		Frequency rar	ige	Measurement P	oint	
Fully configured sa following frequenc	umple scanned over t y range	he 30 MHz to 2.0	) GHz	3 meter measure	ement distance	
		Limits	– Class B			
Energy	Encourse $(MHz)$ Limit $(dB\mu V/m)$					
Fieque	ency (MHZ)	Q	Quasi-Peak		esults	
30	) to 88		40.00	]	Pass	
88	to 216		43.52		Pass	
210	6 to 960		46.02		Pass	
960	to 1000		53.97		Pass	
		EUT Configu	ration Settings:			
Power Int	erface Mode #	EUT O	peration Mode #	EUT Config	urations Mode #	
(See S	ection 2.3)		(See 2.4)	(See S	ection 2.7)	
	1		1, 3		1, 2	
	]	Radiated Emission	ns Test Equipment:			
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
Test Receiver	Rohde & Schwarz	ESPI	101206	2010.07.08	2011.07.08	
Amplifier	HP	Amplifier	3113A05153	2010.07.08	2011.07.08	
BiconiLog Antenna	Schwarzbeck	VULB9168	9168-289	2010.05.17	2011.05.17	

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Project Number: Model Number: Client Name:

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Figure 7. Photo of Radiated emission test setup for DVI Mode:



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#### Figure 8. Graphical representation, 30 MHz to 1000 MHz

Table 3. Radiated emission Test data for	r DVI Mode, 30 to 1000MHz:
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Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Cable Loss Factor (dB)	Antenna Factor (dB/m)	Level dBuV/ m	Limit dBuV/ m	Margin (dB)
50.71	13.80	QP	V	114.0	1.00	1.21	7.39	22.40	40.00	17.60
85.18	19.50	QP	V	10.0	1.00	1.62	8.08	29.20	40.00	10.80
107.81	14.70	QP	V	0.0	1.00	1.79	11.11	27.60	43.50	15.90
211.67	14.30	QP	Н	281.0	2.00	2.58	11.12	28.00	43.50	15.50
385.73	17.60	QP	Н	141.0	1.00	3.44	15.66	36.70	46.00	9.30
617.18	13.40	QP	Н	115.0	2.00	4.28	18.22	35.90	46.00	10.10
847.04	15.40	QP	Н	99.0	3.00	5.02	18.78	39.20	46.00	6.80
* Note:	dB)– Limi	t (dBuV)	Loval (dE	QuiV)						

1. Margin (dB)= Limit (dBuV) - Level (dBuV)

2. If no frequencies are specified in the tables, no measurement for quasi-peak or average was necessary.

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# Figure 10. Graphical representation, 1.0 GHz to 2.0 GHz

Table 5. Radiated emission Test data, DVI Mode, 1.0 GHz to 2.0 GHz

	Corre	ection Fa	ctor			Peak						Average		
Frequency (MHz)	Antenna (dB/m)	Amp (dB)	Cable (dB)	Antenna Height (m)	Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)	Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)
1080.16	24.18	0	3.12	0.01	Н	74.00	18.20	45.50	28.50	Н	54.00	7.60	34.90	19.10
1186.37	24.32	0	3.58	0.01	Н	74.00	19.10	47.00	27.00	Н	54.00	9.10	37.00	17.00
1222.44	24.50	0	3.90	0.01	Н	74.00	17.30	45.70	28.30	Н	54.00	3.30	31.70	22.30
1386.77	25.13	0	4.77	0.01	V	74.00	16.40	46.30	27.70	V	54.00	7.10	37.00	17.00
1499.00	24.90	0	6.00	0.01	V	74.00	15.50	46.40	27.60	V	54.00	4.40	35.30	18.70
1595.19	24.86	0	6.54	0.02	V	74.00	18.60	50.00	24.00	V	54.00	6.50	37.90	16.10
1813.63	25.02	0	7.58	0.02	V	74.00	23.18	48.20	25.80	V	54.00	11.18	36.20	17.80
1953.91	25.64	0	7.46	0.02	Н	74.00	23.16	48.80	25.20	Н	54.00	11.46	37.10	16.90

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# Figure 8. Photo of Radiated emission test setup for SDI In/Out Mode, 30 to 1000MHz:

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# Figure8. Graphical representation, 30 MHz to 1000 MHz



Table	4.	Radiated	emission	Test	data	for	SDI	In/Out	t Mode	, 30 to	1000MHz:

Test Frequency (MHz)	Meter Reading (dBuV)	Detector (Pk/QP)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (m)	Cable Loss Factor (dB)	Antenna Factor (dB/m)	Level dBuV/ m	Limit dBuV/ m	Margin (dB)
31.55	5.90	QP	V	133.00	1.00	1.02	17.68	24.60	40.00	15.40
43.44	9.70	QP	V	0.00	1.00	1.10	10.70	21.50	40.00	18.50
86.19	16.10	QP	V	299.00	1.00	1.66	8.24	26.00	40.00	14.00
150.15	9.80	QP	V	0.00	1.00	2.02	10.38	22.20	43.50	21.30
214.33	14.70	QP	Н	280.00	2.00	2.54	11.26	28.50	43.50	15.00
296.54	1.70	QP	V	290.00	2.00	2.89	13.81	18.40	46.00	27.60
444.92	0.50	QP	Н	40.00	1.00	3.60	16.40	20.50	46.00	25.50
847.02	14.50	QP	Н	123.00	1.00	5.02	18.78	38.30	46.00	7.70
* Note: 1. Margin ( 2. If no free	dB)= Limi	it (dBuV) -	Level (dE	BuV)	rement fo	r quasi-r	beak or avera	ge was ne	cessary	

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# Figure 9. Graphical representation, 1.0 GHz to 2.0 GHz

Table 6	. Radiated	emission	Test data.	DVI Mode.	. 1.0 GHz	to 2.0 GHz
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	Corre	ection Fa	ctor			Peak						Average		
Frequency (MHz)	Antenna (dB/m)	Amp (dB)	Cable (dB)	Antenna Height (m)	Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)	Polarity	Limit (dBuV/m)	Reading (dBuV)	Result (dBuV)	Margin (dB)
1132.26	24.22	0	3.48	0.02	V	74.00	20.60	48.30	25.70	V	54.00	4.80	32.50	21.50
1342.69	25.08	0	4.52	0.02	V	74.00	17.80	47.40	26.60	V	54.00	4.70	34.30	19.70
1501.00	24.90	0	6.00	0.01	V	74.00	16.10	47.00	27.00	V	54.00	4.70	35.60	18.40
1709.42	24.72	0	6.98	0.03	Н	74.00	15.30	47.00	27.00	Н	54.00	4.00	35.70	18.30
1797.60	24.96	0	7.44	0.01	Н	74.00	15.50	47.90	26.10	Н	54.00	4.00	36.40	17.60
1887.78	25.30	0	7.60	0.04	V	74.00	14.90	47.80	26.20	V	54.00	3.70	36.60	17.40
1925.85	25.49	0	7.51	0.02	Н	74.00	24.21	49.70	24.30	Н	54.00	12.61	38.10	15.90
1969.94	25.73	0	7.37	0.03	Н	74.00	22.87	48.60	25.40	Н	54.00	11.07	36.80	17.20

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**Appendix A: Test Facility** 



MIC: Designated as a testing laboratory by Radio Research Laboratory in accordance with the Regulation on Designation of Testing Laboratory for Information and Communication Equipment. Registration No. : KR0017



KOLAS: Accredited by Korea Laboratory Accreditation Scheme (KOLAS) as Testing Laboratory in accordance with the provisions of Article 23 of the National Standards Act. These criteria encompass the requirements of ISO/IEC 17025:2000. For a scope listing search at <a href="http://kolas.kats.go.kr/02\_english/m02\_01\_s01.asp?OlapCode=KOLU19">http://kolas.kats.go.kr/02\_english/m02\_01\_s01.asp?OlapCode=KOLU19</a>



FCC: Details of the measurement facilities used for these tests have been filed with the Federal Communications Commission's Laboratory in Columbia, Maryland and accepted in a letter dated July 17, 2005 (Reg. No. 553281). As a Conformity Assessment Body (CAB), our organization is designated to perform compliance testing on equipment subject to Declaration Of Conformity (DOC) and Certification under Part 15 and 18 of the Commission's Rules in a letter dated July 14, 2005.



VCCI: Accepted as an Associate Member to the VCCI. The measurement facilities detailed in this test report have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. Registration Nos.: (Radiated Emissions) R-2414, (Conducted Emissions) C-2641.

#### **Appendix B: Measurement Uncertainties**

Test	Uncertainty
Radiated Emissions	U = k * Uc(xi) = 4.20 dB
Conducted Emissions	U = k * Uc(xi) = 3.14 dB

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