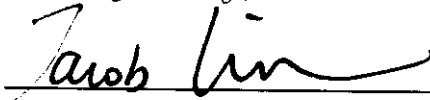
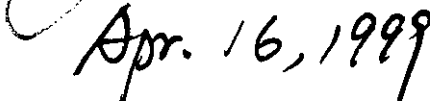


EXHIBIT B

Test Report

Report No.	A0415130
Specifications	FCC Part 15.109(g), Class B
Test Method	ANSI C63.4 1992
Applicant address	2F, NO. 2, Alley 1, Sze-Wei Lane, Chung-Cheng Rd., Hsin-Tien, Taipei, 23138, Taiwan, R.O.C.
Applicant	ACEEX CORPORATION
Items tested	PC Camera Kit (USB)
Model No.	VCS-USB (Sample # A04130)
Results	Compliance (As detailed within this report)
Sample received data	03/30/1999 (month / day / year)
Prepared by	 project engineer
Authorized by	 Vice General Manager (Jacob Lin)
Issue date	 Apr. 16, 1999 (month / day / year)
Modifications	Appendix C
Tested by	Training Research Co., Ltd.
Office and	No. 15, Lane 530, Pa-Lian RD., Sec. 1, Hsi-Chih Town,
Open site at	Taipei Hsien, Taiwan, R.O.C.

Conditions of issue:

- (1) This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.
- (2) This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.

FCC ID : IFAVCS-CAMERA

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Chapter 1 Introduction

Description of EUT:

The EUT is easy to plug to play, the users don't have to set the IRQ settings, I/O address, jumpers...etc. the EUT can be hot insertion, it means the users can plug in or out the USB connector at any time. The EUT has following features:

1. 307, 200 pixels, 1/3" lens, VGA/CIF format
2. Read out-progressive/Interlace
3. Data format-YCrCb 4:2:2, RGB Original
4. Electronic exposure/Gain/White balance control
5. Wide dynamic range, anti-blooming, zero smearing

Connections of EUT:

The USB plug of EUT was plugging into the USB #1 port of PC.

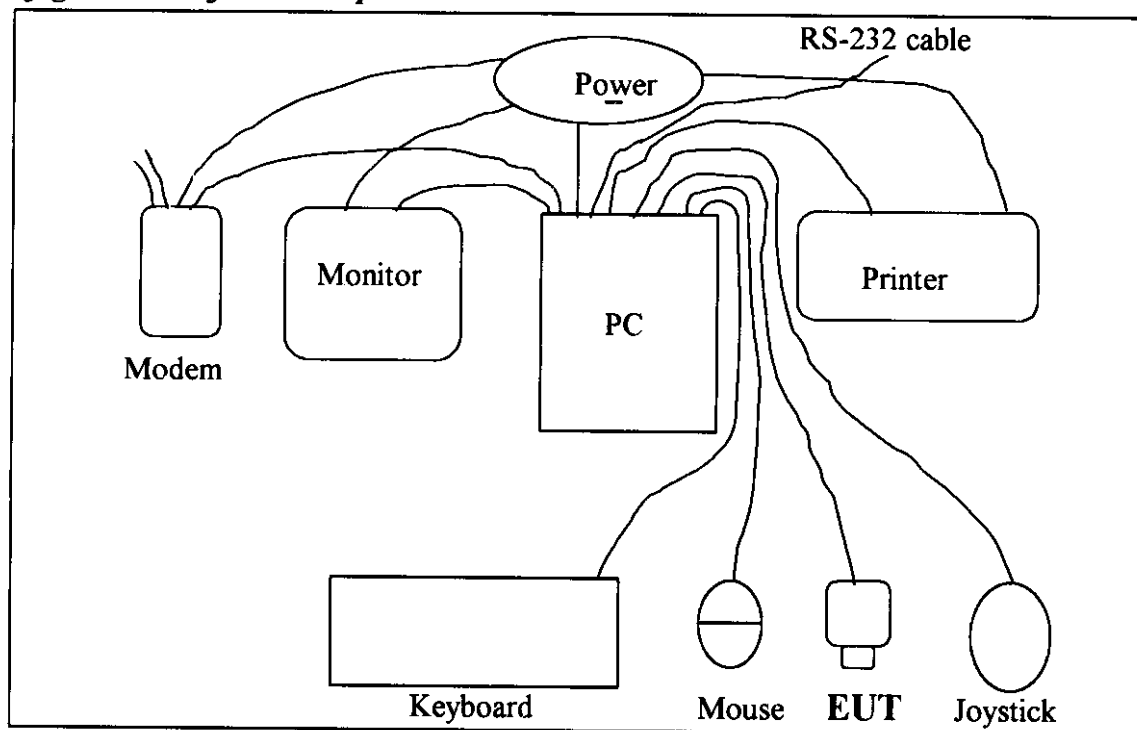
Test method:

Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

During testing, the EUT was operated at "transmitting" and "receiving" mode simultaneously.

The test placement as the photographs showed is the worst case emission placed. (If the emission is close to the ambient, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

The testing configuration of test setup is showing in the next page.

Configuration of test setup**Connections:****PC:**

- *Serial A port --- a external modem
 - *Serial B port --- a 76 cm shielded RS232 cable
 - *Printer port --- a Printer
 - *Monitor port --- a monitor
 - *Keyboard port --- a Keyboard
 - *Mouse port --- a Mouse
 - *USB #1 port --- EUT
 - *USB #2 port --- a USB joystick.
- (Each port on PC is connected with suitable device)

EUT:

- *USB plug --- via a 1.7m shielded, with ferrite core, metal hood, USB cable to the USB #1 port of PC.

List of support equipment**Conducted (Radiated) test:**

PC : **ACER**
Model : VKt33t-X30-0637X
Serial No. : TV69584
FCC ID : HLZV65X-IDCATX
Power type : AC 110~120 / 220~240 VAC, Switching
Power cord : non-Shielded, 1.7m long, Plastic, no ferrite core

Monitor : **HP**
Model No. : D2821
Serial No. : TW 73512262 (TW 73147163)
FCC ID : A3KMO64
Power type : AC 110~120 / 220~240 VAC, Switching
Power cord : Non-Shielded, 3m long, no ferrite core
Data cable : Shielded, 1.8m long, with ferrite core

Keyboard : **Digital**
Model No. : KB-5923
Serial No. : 9S74904837 (9S74904665)
FCC ID : E8HKB-5923
Power type : By PC
Data cable : Shielded, 1.8m long, with ferrite core

Printer : **HP**
Model No. : C2642A
Serial No. : SG69A196GV
FCC ID : B94C2642X
Power type : 220 VAC, 50Hz
Power cord : Non-shielded, 2m long, no ferrite core
Data cable : Shielded, 1.84m long, no ferrite core (1.7m)

Modem : **ACEEX**
Model No. : XDM-9624
FCC ID : IFAXDM-9624
Power type : 220VAC, 50HZ/ 9VAC, 1A
Power cord : Non-shielded, 1.9m long, no ferrite cord
Data cable : RS232, Shielded, 1.2m long, no ferrite core
RJ11C x 2, 7' long non-shielded, no ferrite core

Mouse : **Hewlett Packard Mouse**
Model No. : C3751B
Serial No. : LCA52707170
FCC ID : DZL210582
Power type : Powered by PC
Power Cable : Non – Shielded. 5.5' long, Plastic hoods, No ferrite bead

Joystick : **Padix**
Model : QF-707U (QF-3U), (DoC Approval)
Power Type : By PC

Chapter 2 Conducted emission test

Test condition and setup:

All the equipment is placed and setup according to the CISPR 22.

The EUT is assembled on a wooden table that is 80 cm high, is placed 40 cm from the back-wall which is a vertical conducting plane. One LISN is for EUT, the other LISN is for support equipment. They are all placed on the conductive ground. The EUT's LISN connect a line switch box for selecting L1 or L2, then connect to a preamplifier and spectrum.

The spectrum scans from 150KHz to 30MHz. Conducted emission levels are detected at max. peak mode. But if the max. peak mode failed, it will be measured by CISPR's quasi-peak detection mode.

While testing, there is the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

List of test Instrument:

<u>Instrument Name</u>	<u>Model No.</u>	<u>Brand</u>	<u>Serial No.</u>	<u>Calibration Date</u>	
				<u>Last time</u>	<u>Next time</u>
Spectrum analyzer	8594EM	H P	3710A00279	01/07/99	01/07/00
LISN (EUT)	3825/2	EMCO	9411-2284	05/15/98	05/15/99
LISN (Support E.)	AC3-001	TRC	-----	05/15/98	05/15/99
Preamplifier	AC3-002	TRC	-----	05/15/98	05/15/99
Line switch box	AC3-003	TRC	-----	05/15/98	05/15/99

The level of confidence of 95%, the uncertainty of measurement of conducted emission is ± 2.4 dB.

Test Result: Pass (Appendix A)

Chapter 3 Radiated emission test

Test condition and setup:

Pretest: Prior to the final test (OATS test), the EUT is placed in a anechoic chamber and scan from 30MHz to 1GHz. This is done to ensure the radiation exactly emits form the EUT.

Final test: Final radiation measurements are made on a **10 - meter, open-field** test site. The EUT is placed on a nonconductive table that is 0.8m height, the top surface is 1.0 x 1.5 meter. The placement is according to CISPR 22.

The spectrum is examined from 30 MHz to 1000 MHz measured by HP spectrum.

The EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum HP 8594EM.

Measure more than six top marked frequencies generated form pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading. The spectrum analyzer's 6dB bandwidth is set to 120 KHz, and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambient, the data will be rechecked by the tester and the corrected data will be written in the test data sheet. If the emission is just within the ambient, the data from anechoic chamber will be taken as the final data.

List of test Instrument:

Calibration Date

<u>Instrument Name</u>	<u>Model No.</u>	<u>Brand</u>	<u>Serial No.</u>	<u>Last</u>	<u>Next</u>
Spectrum analyzer	8594EM	H P	3619A00198	11/17/98	11/17/99
RF Pre-selector	AC4-001	TRC	-----	05/15/98	05/15/99
Antenna (30M-2G Hz)	3141	EMCO	9711-1076	12/17/98	12/17/99
Open test side (Antenna, Amplify, cable calibrated together)				05/15/98	05/15/99

The level of confidence of 95%, the uncertainty of measurement of radiated emission is ± 4.96 dB.

Test Result: Pass (Appendix B)

Appendix A

Conducted Emission Test Result:

Testing room : Temperature : 22 ° C Humidity : 45 % RH

Line 1

FREQUENCY (KHz)	READING AMPLITUDE			LIMIT		MARGIN (dB)
	Peak (dB μ V/m)	Quasi-peak (dB μ V/m)	Average (dB μ V/m)	Quasi-Peak (dB μ V/m)	Average (dB μ V/m)	
166	49.79	*** **	*** **	65.54	55.54	-5.75
205	42.01	*** **	*** **	64.43	54.43	-12.42
232	42.62	*** **	*** **	63.66	53.66	-11.04
301	43.19	*** **	*** **	61.69	51.69	-8.50
364	38.24	*** **	*** **	59.89	49.89	-11.65
436	36.90	*** **	*** **	57.83	47.83	-10.93
512	36.89	*** **	*** **	56.00	46.00	-9.11
633	32.87	*** **	*** **	56.00	46.00	-13.13
1135	34.24	*** **	*** **	56.00	46.00	-11.76
1232	32.52	*** **	*** **	56.00	46.00	-13.48

Line 2

FREQUENCY (KHz)	READING AMPLITUDE			LIMIT		MARGIN (dB)
	Peak (dB μ V/m)	Quasi-peak (dB μ V/m)	Average (dB μ V/m)	Quasi-Peak (dB μ V/m)	Average (dB μ V/m)	
167	49.27	*** **	*** **	65.51	55.51	-6.24
200	42.80	*** **	*** **	64.57	54.57	-11.77
232	44.42	*** **	*** **	63.66	53.66	-9.24
299	41.87	*** **	*** **	61.74	51.74	-9.87
364	39.40	*** **	*** **	59.89	49.89	-10.49
433	39.57	*** **	*** **	57.91	47.91	-8.34
499	36.78	*** **	*** **	56.03	46.03	-9.25
564	37.58	*** **	*** **	56.00	46.00	-8.42
633	34.07	*** **	*** **	56.00	46.00	-11.93
1027	35.09	*** **	*** **	56.00	46.00	-10.91

* The reading amplitudes are all under average limit.

Appendix B

Radiated Emission Test Result: (Horizontal)

Test Conditions:

Testing room : Temperature : 19 ° C Humidity : 71 % RH

Testing site : Temperature : 21 °C Humidity : 68 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B limit	Margin
MHz	dBμV	m	degree	dB/m	dBμV/m	dBμV/m	dB

648.000	48.24	0.99	79	-17.15	31.09	37.00	-5.91
744.020	48.70	0.99	267	-15.84	32.86	37.00	-4.14
792.030	52.44	0.99	113	-18.08	34.36	37.00	-2.64
816.010	48.58	0.99	248	-18.97	29.61	37.00	-7.39
840.040	56.21	0.99	149	-19.75	36.46	37.00	-0.54
864.010	47.25	0.99	273	-19.20	28.05	37.00	-8.95
888.000	54.87	0.99	96	-18.95	35.92	37.00	-1.08
912.050	45.54	0.99	264	-18.63	26.91	37.00	-10.09
960.000	45.17	0.99	266	-16.55	28.62	37.00	-8.38

Note:

1. Margin = Amplitude - limit, if margin is minus means under limit.

2. Corrected Amplitude = Reading Amplitude + Correction Factors

3. Correction factor = Antenna factor + (Cable Loss - Amplitude gain)

(For example: 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)

Appendix C

Modification List :

1. Remove R32, L5
2. L6, L7 = TOKIN N2012Z221
3. C17, C18 = 100pf
4. Add a 62ohm resister at the pin 10, pin11 of U3.
5. R13, R15 = 33ohm + TOKIN N2012Z221
6. Add a ferrite bead (TOKIN N1608ZA121) at the pin 89 of U2.
7. Add some isolating glue at the pins of switch and RAM.
8. R21, R23, R25, R27, R29, R30 = TOKIN Z2012T (R21, R23 → P1 tower to chip; R25, R27, R29, R30 → P3 tower to chip)
9. There are two ferrite cores winded on the two ends of the USB cable of EUT. On the USB end is CF-50(B) (Crown Ferrite Enterprise Co.); on the EUT end is RT 9.5*4.8*20 (Crown Ferrite Enterprise Co.)
10. Add parallel three bypass capacitors 1 μ f, 0.1 μ f, 0.47 μ f at the pin 1 of JP4, then add serially a ferrite bead (TOKIN N2012Z202) between two bypass capacitors 1 μ f, 0.1 μ f. (Add a π type circuit at the pin 1 of JP4.)

Statement of Applicant:

I acknowledge that the modifications made to the EUT for compliance during testing will be incorporated into mass production units.

Applicant :Aceex Corporation.

By : Sen-Chiung Peng Sen-Chiung Peng

Date: APR 13, 1999

Signature

Printed

Title: General Manager