



EMC - Test Report

Model : ZioCam**Product type**

USB PC CAMERA

Serial No.

ZC002845

Applicant

Digitra Systems Inc.

Manufacturer

Digitra Systems Inc.

Address

8-61, GalWol-Dong, YongSan-Ku, Seoul, Korea

Test specification (Standard) : FCC Part15 Subpart B Class B**Test Result :** PassTested by
(Test engineer)

2000-08-11

Date

Young Joon, Park

Name

Signature

Reviewed by
(EMC Manager)

2000-08-11

Date

James, Hong

Name

Signature

Definition

Pass: Test passed,

☐ : Not Applicable,

Fail : Test failed,

N/A : Not Applicable,

☒ : Applicable,

- : Not Applicable

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1. EUT description

Introduction

ZioCam is a USB PC CAMERA.

Identification

Model : ZioCam
Manufacturer : Digitra Systems Inc.
Address : 8-61, GalWol-Dong, YongSan-Ku, Seoul, Korea
Contact person : Dong-Jun Lim
Telephone : +82 - 2 - 778 - 0025 (#37)
Serial No : ZC002845
EUT size : 3.27(W)x2.3(H)x1.48(D)

Peripheral Device Ports

Port name	Description
USB	Connect to PC' s USB Port

Electrical rating

Input : From PC' s USB Port

Output : -

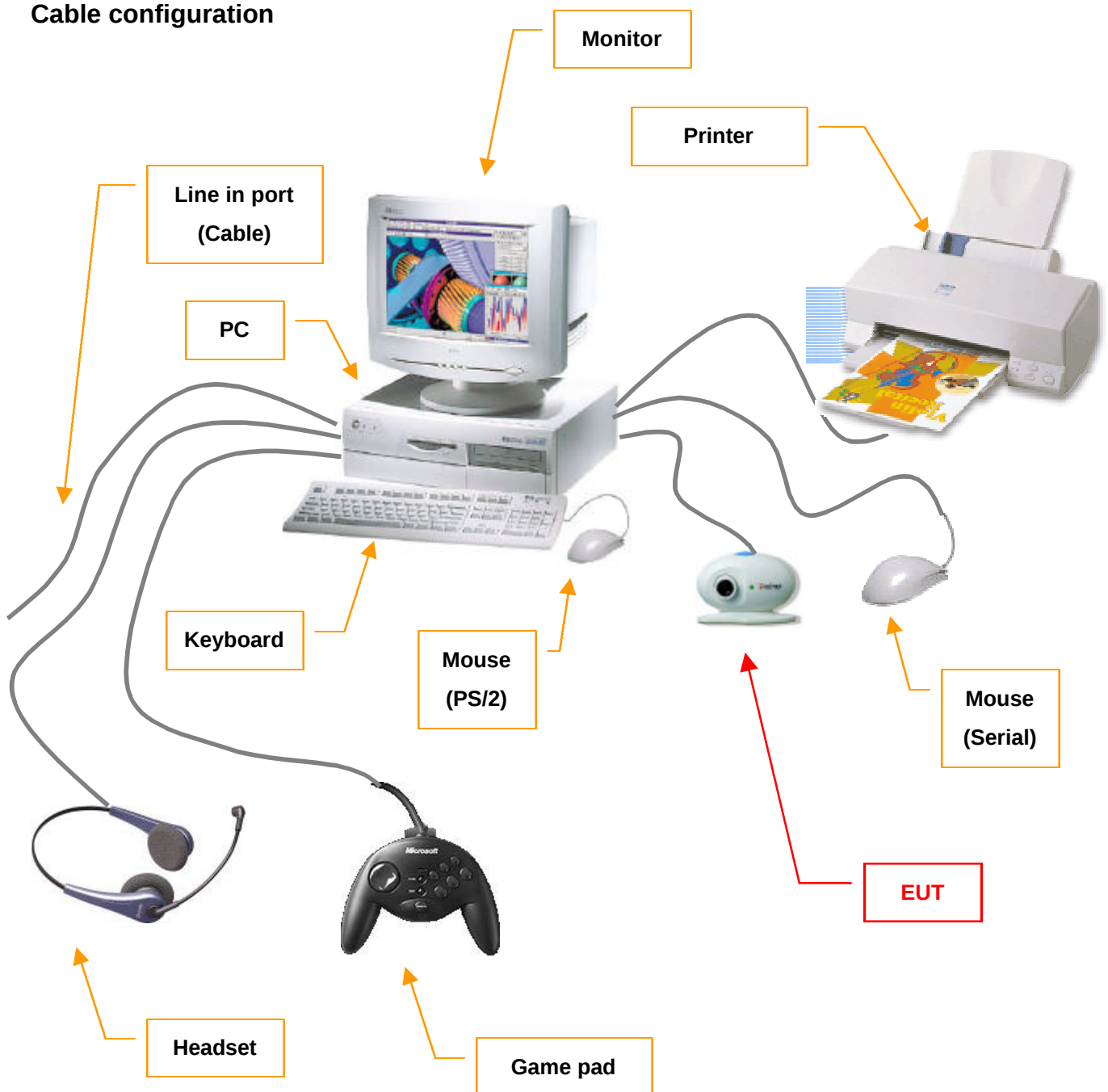


2. Test Set-up

Test Mode

Normal operation mode. Display image to monitor screen

Cable configuration



**Cable description**

	Port name (start / end)	Type	Length (m)	Remark
A	EUT's USB / PC's USB	Shielded	1.5	Connected to PC's USB Port
B	Printer's Parallel / PC's Parallel	Shielded (With Ferrite Core)	1.8	Connected to PC's Parallel port
C	PC's Serial / Mouse	Shielded	1.6	Connected Serial Mouse
D	PC's Keyboard / Keyboard	Shielded	1.5	Connected PS/2 Keyboard
E	PC's Mouse / Mouse	Shielded	1.6	Connected PS/2 Mouse
F	PC's Sound (Speaker / Mic / Line in) / Headset & Cable	Unshielded	2.0	Connected Headset & Cable
G	PC's Game Port / Game pad	Unshielded	2.0	Connected Game pad
H	PC's Video / Monitor	Shielded (With Ferrite Core)	1.8	Connected Monitor

Auxiliary equipment

	Description	Model name	Serial No.	Manufacturer
1	PC	DTPC-17	G1703009	HEWLETT PACKARD
2	Monitor	PG17HS	301661	SAMSUNG
3	Keyboard	SK-2502C	M000351491	HEWLETT PACKARD
4	Mouse (PS/2)	M-S48	LZA84601000	LOGITECH
5	Mouse (USB)	M-BB48	LZE93853176	LOGITECH
6	Mouse (Serial)	M-S48	LZA91153127	SOTEC
7	Printer	Stylus COLOR 460	BWCE143331	EPSON
8	Game pad	Side Winder	03421317	MICROSOFT
9	Headset	Hi-sonic	-	-

Test software

Software name	Manufacturer	Version	Description
-	-	-	-



Measurement Procedures

Preliminary AC power line conducted emissions tests were performed shielded room. To find worst mode, several typical mode and typical cable position were tested.

Final AC power line conducted emissions test was performed shielded room.(location is same as Preliminary test)

Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

Preliminary radiated emissions test were performed anechoic chamber (Distance of antenna and EUT was 3m). To find worst mode, several typical mode and typical cable position were tested and peak level and frequency were recorded.

Final radiated emissions test was performed Open Area Test Site. Based on the preliminary tests of the EUT, final test was proceeded worst-case test mode and cable configuration.

* Measurement procedures was In accordance with ANSI C63.4-1992 7.2.3, 7.2.4 and 8.3.1.1, 8.3.1.2



3. Test Result

Test summary

Test	Result	Remark
Emission test (EMI)		
Radiated emission	Pass	
Conducted emission	Pass	

The tested ZioCam fully meets the Requirements of ANSI C63.4-1992 ,when operated as described in this report.

Representative of Certitek standards laboratory.

2000-08-11

Date

Kedin, Lyoum

Name

Signature

**Radiated emission**Test result: **Pass**

Date of testing : 2000/08/11

Ambient temperature: 28°C, Relative humidity: 52%, Atmospheric pressure: 1004hPa(mbar)

Test site type: Open area test site

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

Model name	Manufacturer	Description	Serial No.
BBA9106	Schwarzbeck	Biconical antenna	41-00210
UHALP9107	Schwarzbeck	Log-periodic antenna	1452
ESVS30	Rohde Schwarz	Field strength meter	826638/008
-	-	-	-

Frequency Band 30MHz - 1000MHz

Antenna distance 3m (From the EUT)

Test data sheet

Frequency [MHz]	Reading [dBuV/m]	Pol.	Height [m]	Correction Factor		Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
				Antenna	Cable			
98.06	18.6	V	1.0	10.05	1.30	43.5	29.95	13.55
101.95	22.9	H	2.0	10.35	1.50	43.5	34.75	8.75
105.07	20.6	V	3.0	10.50	1.50	43.5	32.60	10.90
155.39	16.3	H	2.0	12.55	2.10	43.5	30.95	12.55
167.99	23.6	V	2.5	12.85	2.10	43.5	38.55	4.95
225.69	22.8	H	2.0	17.10	2.50	46.0	42.40	3.60
240.01	21.5	H	1.0	18.20	2.60	46.0	42.30	3.70
328.06	20.8	V	1.0	15.18	3.50	46.0	39.48	6.52
337.06	23.7	H	1.0	15.14	3.50	46.0	42.33	3.67
433.19	22.6	V	1.0	16.26	4.00	46.0	42.86	3.14

Comment: -

**Conducted emission**Test result: **Pass**

Date of testing : 2000/08/11

Ambient temperature: 23°C, Relative humidity: 51%, Atmospheric pressure: 1002hPa(mbar)

Test site type: Shielded room

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

Model name	Manufacturer	Description	Serial No.
3825/2	EMCO	LISN	9206-1971
ESHS30	Rohde Schwarz	Field strength meter	828144/002
-	-	-	-

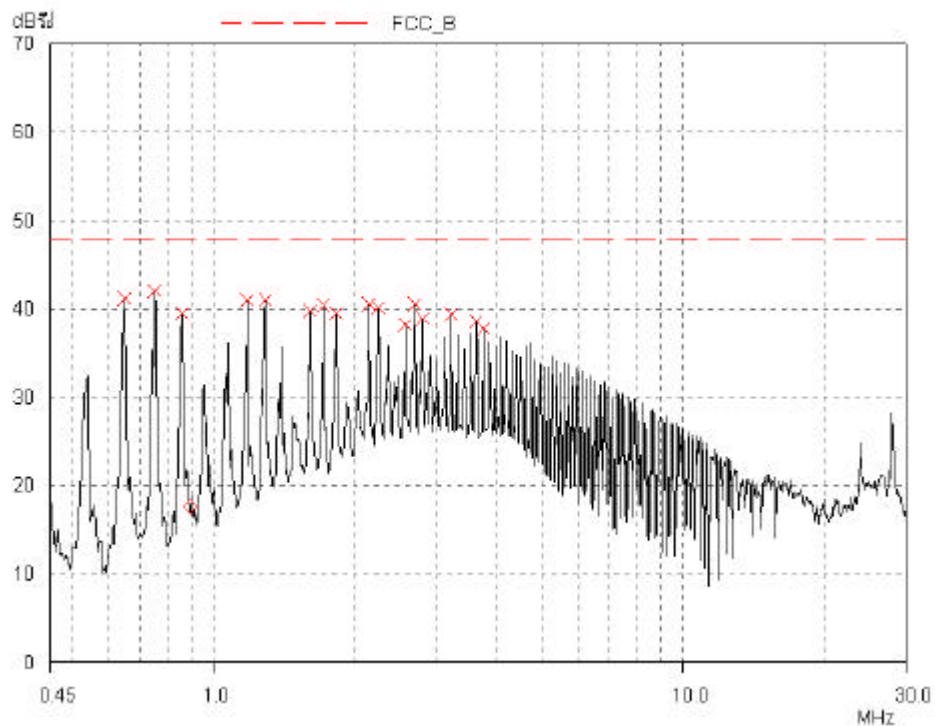
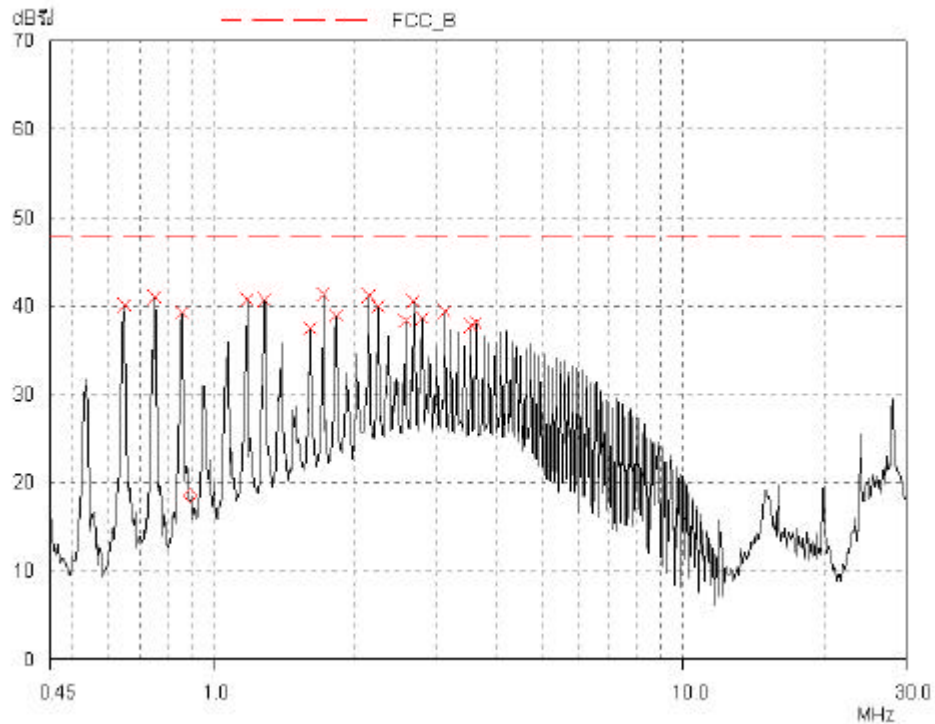
Test data sheet

Frequency [MHz]	Correction Factor		Line	Quasi-peak				Average			
	LISN	Cable		Limit [dBuV]	Reading [dBuV]	Result [dBuV]	Margin [dB]	Limit [dBuV]	Reading [dBuV]	Result [dBuV]	Margin [dB]
0.645	0.2	0.1	N	48.00	42.00	42.30	5.70				
0.775	0.2	0.1	H	48.00	41.97	42.27	5.73				
0.860	0.2	0.1	H	48.00	39.90	40.20	7.80				
1.180	0.2	0.1	H	48.00	41.03	41.33	6.67				
1.306	0.2	0.1	N	48.00	42.01	42.31	5.69				
1.610	0.3	0.1	N	48.00	37.76	38.16	9.84				
1.800	0.3	0.1	H	48.00	41.01	41.41	6.59				
1.825	0.3	0.1	N	48.00	39.48	39.88	8.12				
2.145	0.3	0.1	N	48.00	40.50	40.90	7.10				
2.315	0.3	0.1	H	48.00	40.13	40.53	7.47				
2.575	0.2	0.1	N	48.00	40.69	40.99	7.01				
2.685	0.2	0.1	H	48.00	40.56	40.86	7.14				

Comment: -



Test data graphic





4. Photographs

EUT (Front)



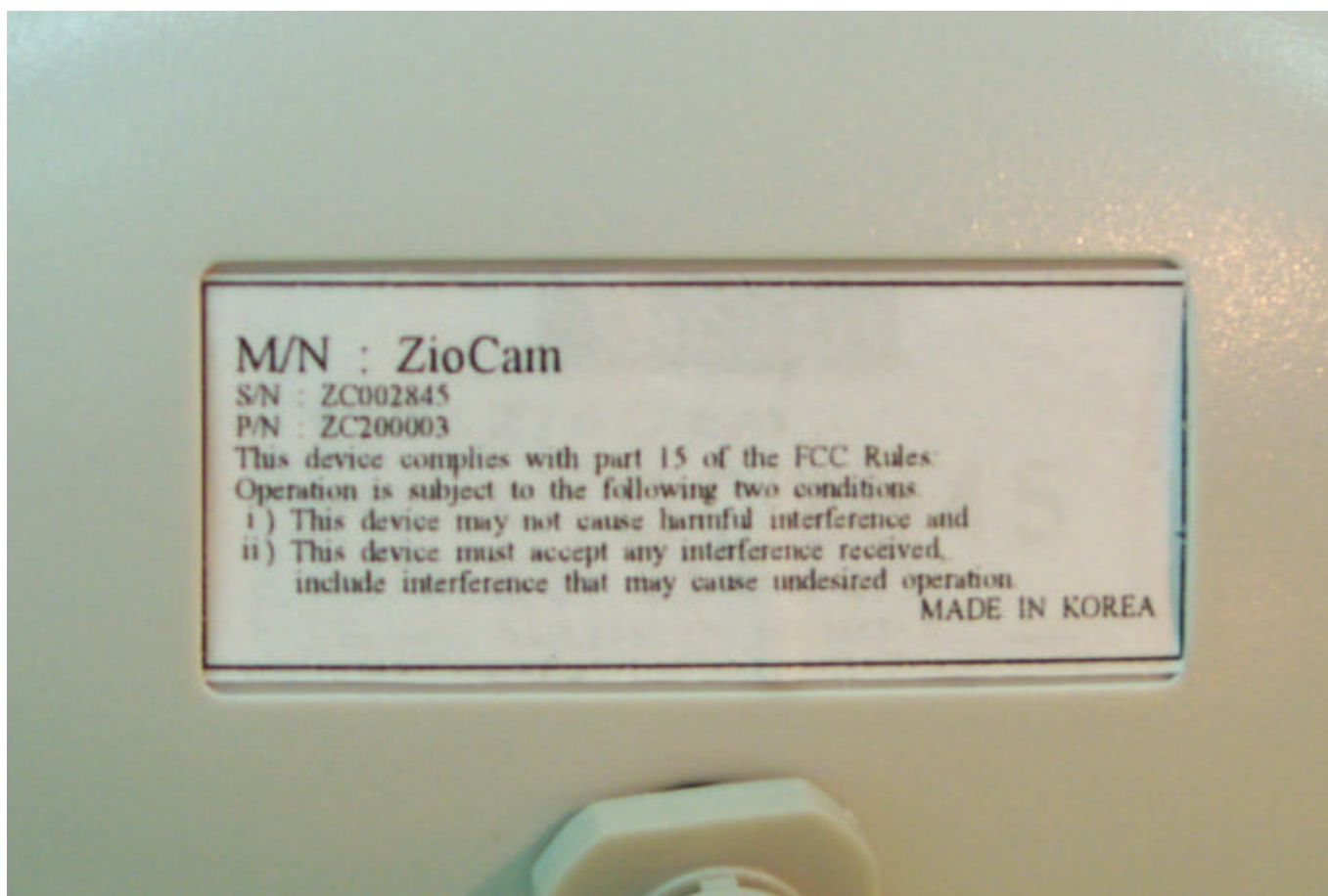


EUT (Rear)



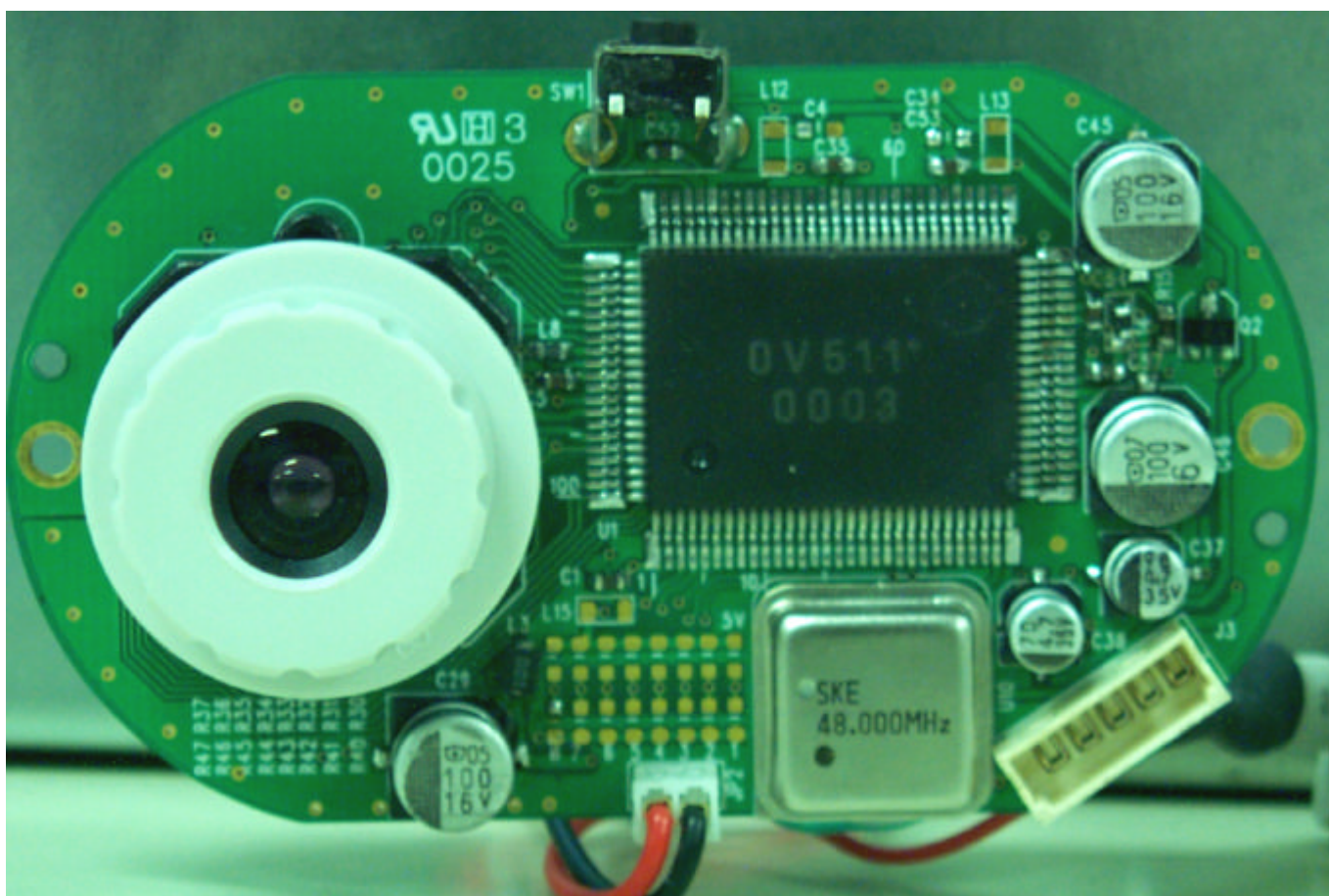


EUT (Label)



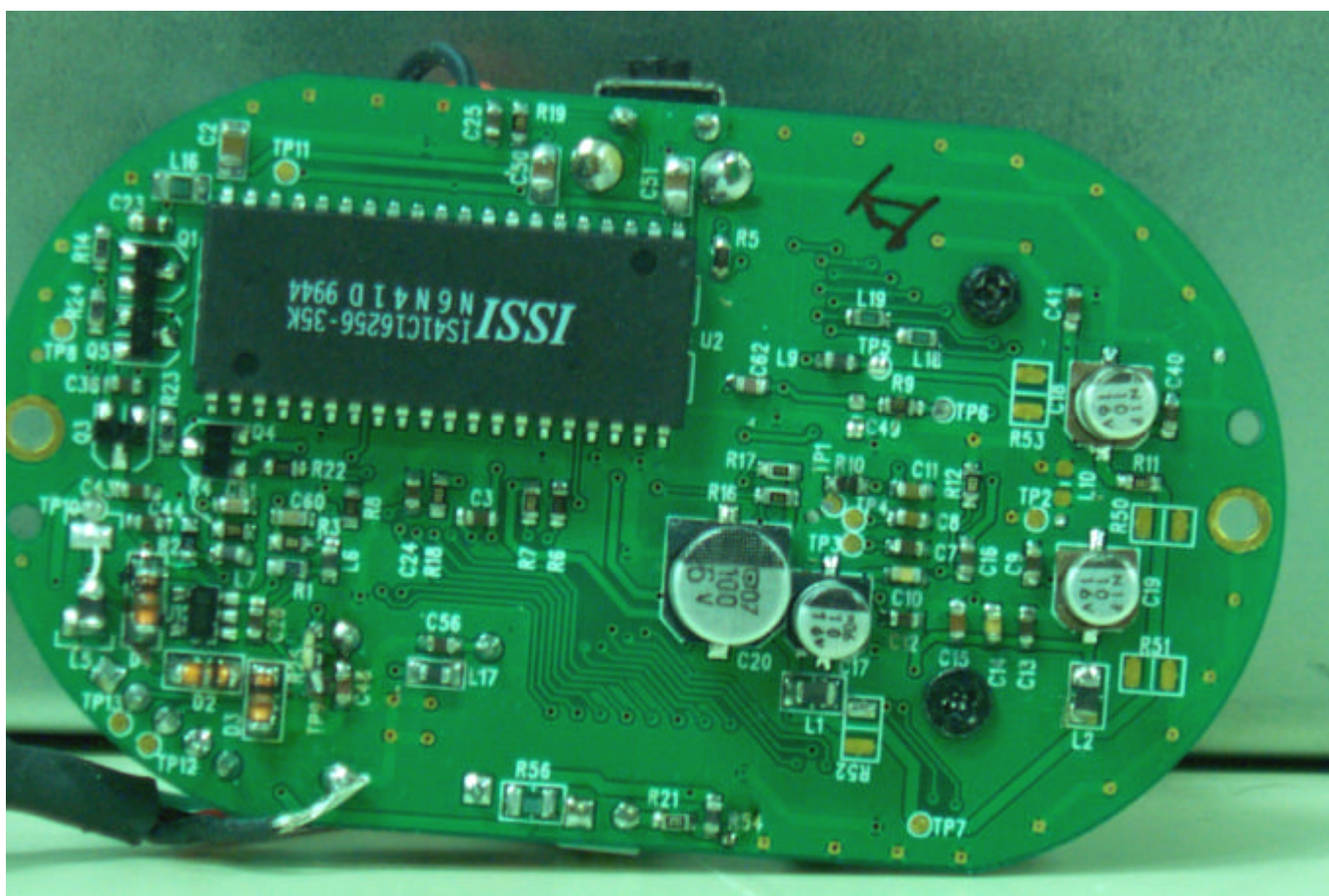


Main Board (Front)





Main Board (Rear)





Radiated emission





Conducted emission

