FCC 47 CFR PART 15 SUBPART B AND ANSI C63.4:2003
IC ICES-003 Issue 4
TEST REPORT

For

IP CAM

Model : D5111

Trade Name : ZAVIO

Issued for

ZAVIO Inc.

2F, No.13, R&D Rd.II, Science Based Industrial Park,
Hsinchu, Taiwan

Issued by

Compliance Certification Services Inc.
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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	02/26/2011	Initial Issue	All Page 25	Kate Shi

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TITLE PAGE NO.

1. TEST REPORT CERTIFICATION

Applicant	：	ZAVIO Inc.
Address	：	2F, No.13, R&D Rd.II, Science Based Industrial Park, Hsinchu, Taiwan
Equipment Under Test	：	IP CAM
Model	：	D5111
Trade Name	：	ZAVIO
Tested Date	：	January 31 ~ February 25, 2011

APPLICABLE STANDARD		
Standard	**Item**	**Test Result**
FCC Part 15 Subpart B, CLASS B AND ANSI C63.4:2003 IC ICES-003 Issue 4	Radiated Emission	PASS
	Conducted Emission	PASS

WE HEREBY CERTIFY THAT: The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Sb. Lu
Sr. Engineer

Reviewed by:

Gundam Lin
Team Leader

2. EUT DESCRIPTION

2.1 DESCRIPTION OF EUT & POWER

Product Name	IP CAM
Model Number	D5111
Received Date	January 31, 2011
Power Rating	12Vdc
Test Voltage	120Vac, 60Hz
DC Power Cord Type	Unshielded cable, 1.5m (Non-detachable), with a ferrite core
I/O Port	DC IN x 1, RJ-45 x 1, Video Out x 1, Micro SD Card x 1, DI/DO x 1

Power Adapter :

No.	Manufacturer	Model No.	Power Input	Power Output
1	DVE	DSA-12CA-12 120100	100-240Vac, 0.3A, 50/60Hz	12Vdc, 1A

Remark : *For more details, please refer to the User's manual of the EUT.*

3. DESCRIPTION OF TEST MODES

The following test modes were scanned during the preliminary test:

No.	Pre-Test Mode
1	AC Mode
2	PoE Mode

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test Mode		
Emission	Radiated Emission	AC Mode
		PoE Mode
	Conducted Emission	AC Mode

Remark : *Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.*

4. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4:2003 and FCC CFR 47 Part 15 Subpart B, IC ICES-003 Issue 4.

5. FACILITIES AND ACCREDITATION

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

NO. 989-1 Wen Shan Rd., Shang Shan Village,
Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C

The sites are constructed in conformance with the requirements of ANSI C63.4:2003 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

5.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan	TAF

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Japan	VCCI
Taiwan	BSMI
USA	FCC MRA

Copies of granted accreditation certificates are available for downloading from our web site, http:///www.ccsrf.com

5.3 MEASUREMENT UNCERTAINTY

The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2.

PARAMETER	UNCERTAINTY
Open Area Test Site (OATS No.3) / Radiated Emission, 30 to 200 MHz	+/- 3.6037
Open Area Test Site (OATS No.3) / Radiated Emission, 200 to 1000 MHz	+/- 3.5800
Semi Anechoic Chamber (966 Chamber) / Radiated Emission, 30 to 200 MHz	+/- 3.1747
Semi Anechoic Chamber (966 Chamber) / Radiated Emission, 200 to 1000 MHz	+/- 2.9091
Semi Anechoic Chamber (966 Chamber) / Radiated Emission, 1 to 18GHz	+/- 2.8272
Semi Anechoic Chamber (966 Chamber) / Radiated Emission, 18 to 26 GHz	+/- 2.8097
Semi Anechoic Chamber (966 Chamber) / Radiated Emission, 26 to 40 GHz	+/- 3.0510
Conducted Emission, 9kHz to 30MHz	+/- 1.5384

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

Consistent with industry standard (e.g. CISPR 22: 2006, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.

6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.	FCC ID
1	NB	HP	ProBook 4421s	CNF03242PM	-----
2	LCD MONITOR	DELL	2407WFPb	CN-0FC255-46633-6CP-06JS	-----
3	8-poer fast Ethernet PoE Switch	Air Live	POE-FSH804	POEF80411700328	-----
4	Micro SD	SanDisk	1GB	-----	-----

No.	Signal Cable Description
1	Unshielded RJ-45 cable, 12m × 1
2	Unshielded Video Out cable, 2m × 1

SETUP DIAGRAM FOR TESTS

EUT & peripherals setup diagram is shown in appendix setup photos.

EUT OPERATING CONDITION

All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

AC MODE

1. Setup whole system for test as shown on diagram
2. Notebook PC ping 192.168.1.121 to EUT
3. Video output to LCD monitor.
4. All of the functions are under run.
5. Start test.

POE MODE

1. Remove AC POWER ADAPTER from EUT.
2. RJ-45 cable linking to POE Ethernet Switch.
3. Notebook PC ping 192.168.1.121 to EUT with POE Ethernet Switch.
4. Video output to LCD monitor.
5. All of the functions are under run.
6. Start test.

7. EMISSION TEST

7.1 RADIATED EMISSION

LIMITS

(1) For Frequency Below 1GHz

☐ 47 CFR Part 15 Subpart B Section 15.109 (a) (b)

Frequency (MHz)	Class A			Class B		
	Field Strength (μV/m)	Field Strength (dBμV/m)	Distance (meters)	Field Strength (μV/m)	Field Strength (dBμV/m)	Distance (meters)
30 - 88	90	39.1	10	100	40.0	3
88 - 216	150	43.5	10	150	43.5	3
216 - 960	210	46.4	10	200	46.0	3
Above 960	300	49.5	10	500	54.0	3

☒ CISPR 22 (According to 47 CFR Part 15 Subpart B Section 15.109 (g))

Frequency (MHz)	Field Strengths (dBμV/m)		Distance (meters)
	Class A	Class B	
30 - 230	40	30	10
230 - 1000	47	37	10

(2) For Frequency Above 1GHz (According to 47 CFR Part 15 Subpart B Section 15.109)

Frequency (GHz)	Field Strength (dBμV/m)				Distance (meters)
	Class A		Class B		
	Peak	Average	Peak	Average	
Above 1GHz	80	60	74	54	3

(3) Frequency Range of Radiated Measurement (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

TEST EQUIPMENT

Radiated Emission below 1GHz / OATS3

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Bi-log Antenna	SCHAFFER	CBL6112B	2696	10/07/2011
EMI Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/24/2011
N Type Coaxial Cable	MIYAZAKIN	8D-FB	03	07/26/2011
Pre-Amplifier	Agilent	8447D	2944A10052	07/26/2011

Remark: *Each piece of equipment is scheduled for calibration once a year.*

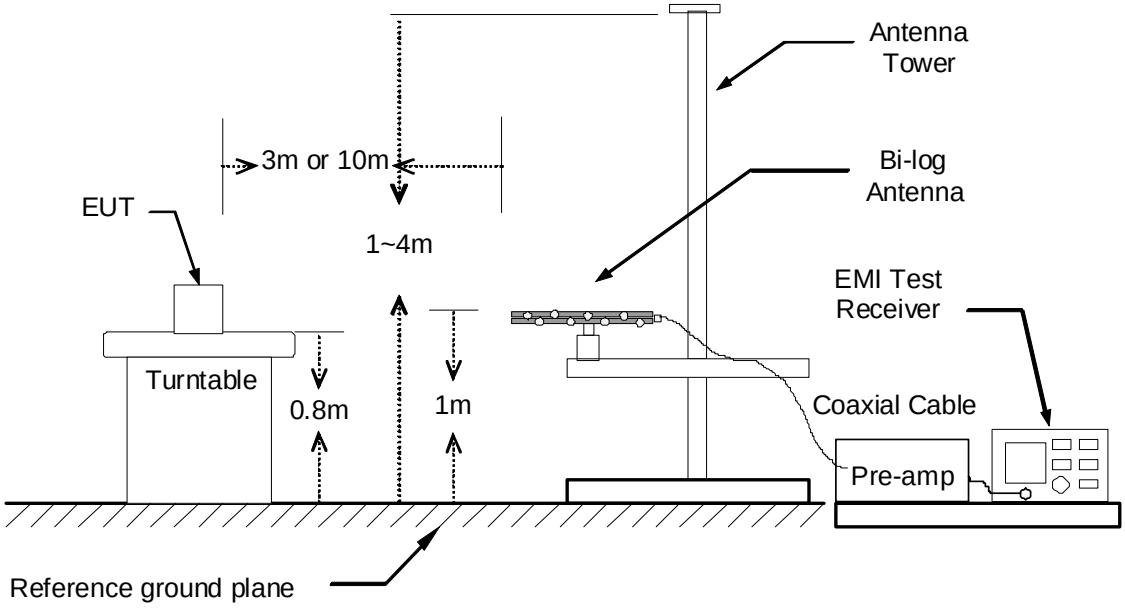
Radiated Emission above 1GHz / 966Chamber_B

Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/20/2011
EMI Receiver	ROHDE & SCHWARZ	ESCS 30	826547/004	11/15/2011
Broadband Hybrid Bi-Log Antenna	Sunol Sciences	JB1	A100209-4	10/07/2011
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078732	07/05/2011
Pre-Amplifier	Miteq	AM-1652-3000	1490937	10/10/2011
Pre-Amplifier	Agilent	8449B	3008A01916	09/21/2011
RF Coaxial Cable	HUBER-SUHNER	SUCOFLEX 104PEA	31346	10/07/2011
RF Coaxial Cable	HUBER-SUHNER	SUCOFLEX 104PEA	33957	10/07/2011
RF Coaxial Cable	HUBER-SUHNER	SUCOFLEX 104PEA	33958	10/07/2011
Notch Filters Band Reject	Micro-Tronics	BRM05702-01	026	N.C.R

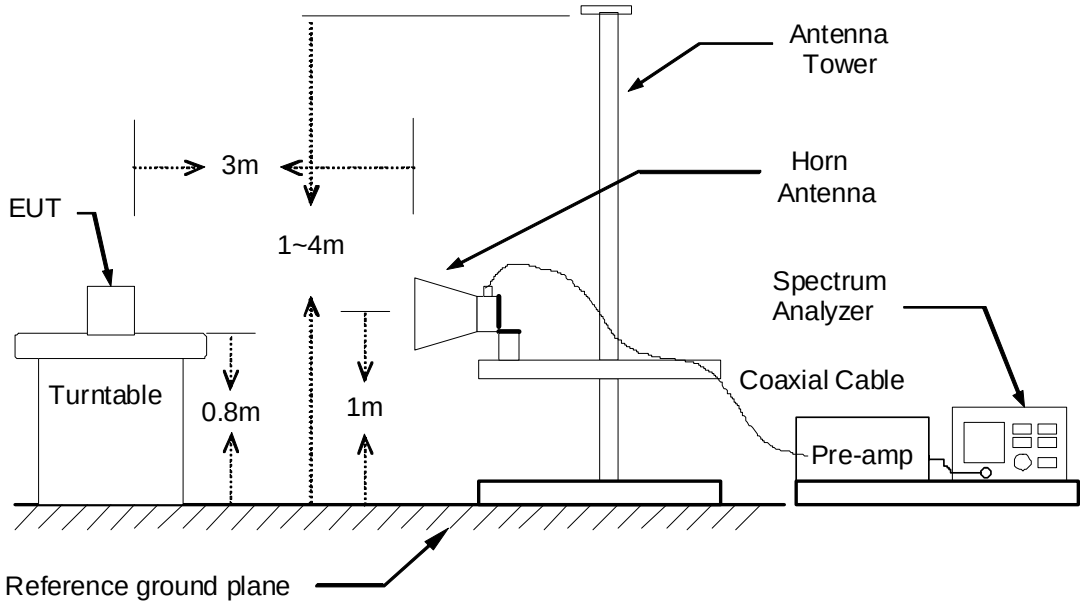
Remark: *1. Each piece of equipment is scheduled for calibration once a year.*
2. N.C.R = No Calibration Request.

TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission from below 1GHz.



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4:2003.

The devices under test were placed on a rotatable table top 0.8 meter above ground. The table was rotated 360 degrees to determine the position of the highest radiation. EUT is set 3 or 10m meters from the interference receiving antenna which is mounted on the top of a variable height mast. The antenna height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.

Note：

1. The bandwidth setting on the E.M.I. meter (EMI TEST RECEIVER) is 120 KHz. The levels are Quasi-Peak value readings. The frequency spectrum from 30MHz to 1000MHz was investigated.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

TEST RESULTS

Below 1 GHz

Product Name	IP CAM	Test By	Albert.Lai
Model	D5111	Test Date	2011/02/08
Test Mode	AC Mode	TEMP & Humidity	21°C, 65%

OATS3 at 10Meter / Horizontal

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Limits (dBμV/m)	Emission Level (dBμV/m)	Margin Limit (dB)	Azimuth (°)	Height (cm)	Remark
125.00	11.71	1.93	8.60	30.00	22.23	-7.77	165	400	QP
159.98	10.02	2.20	4.30	30.00	16.52	-13.48	320	400	QP
250.00	12.73	3.10	10.30	37.00	26.13	-10.87	162	352	QP
350.00	14.47	3.95	6.40	37.00	24.82	-12.18	110	312	QP
431.90	16.27	4.62	8.10	37.00	28.99	-8.01	130	295	QP
647.90	18.79	6.04	4.10	37.00	28.93	-8.07	320	162	QP

OATS3 at 10Meter / Vertical

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Limits (dBμV/m)	Emission Level (dBμV/m)	Margin Limit (dB)	Azimuth (°)	Height (cm)	Remark
75.37	6.72	1.35	15.30	30.00	23.37	-6.63	321	100	QP
125.00	11.71	1.93	13.10	30.00	26.73	-3.27	85	100	QP
135.00	11.40	1.98	11.40	30.00	24.78	-5.22	216	100	QP
250.00	12.73	3.10	13.60	37.00	29.43	-7.57	228	100	QP
431.90	16.27	4.62	10.50	37.00	31.39	-5.61	15	331	QP
539.90	17.95	5.34	11.30	37.00	34.59	-2.41	231	250	QP
593.90	18.60	5.66	8.10	37.00	32.36	-4.64	260	226	QP

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Emission Level = Antenna Factor (dB/m) + Cable Loss (dB) + Meter Reading (dBμV)*
4. *Margin (dB) = Emission Level (dBuV/m) - Quasi-peak limit (dBuV/m)*

Product Name	IP CAM	Test By	Albert.Lai
Model	D5111	Test Date	2011/02/08
Test Mode	PoE Mode	TEMP & Humidity	21°C, 65%

OATS3 at 10Meter / Horizontal

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Limits (dBμV/m)	Emission Level (dBμV/m)	Margin Limit (dB)	Azimuth (°)	Height (cm)	Remark
135.00	11.40	1.98	6.80	30.00	20.18	-9.82	285	400	QP
189.00	9.08	2.45	7.30	30.00	18.82	-11.18	165	400	QP
250.00	12.73	3.10	11.40	37.00	27.23	-9.77	227	400	QP
324.00	13.83	3.72	8.60	37.00	26.15	-10.85	314	312	QP
374.99	15.08	4.17	7.80	37.00	27.06	-9.94	285	300	QP
621.00	18.72	5.85	3.60	37.00	28.17	-8.83	231	135	QP
809.99	19.92	7.06	4.00	37.00	30.98	-6.02	200	100	QP

OATS3 at 10Meter / Vertical

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Limits (dBμV/m)	Emission Level (dBμV/m)	Margin Limit (dB)	Azimuth (°)	Height (cm)	Remark
54.21	7.29	1.14	15.80	30.00	24.23	-5.77	165	100	QP
86.06	8.34	1.52	13.10	30.00	22.96	-7.04	231	100	QP
107.31	11.23	1.71	10.50	30.00	23.44	-6.56	158	100	QP
135.00	11.40	1.98	13.10	30.00	26.48	-3.52	331	100	QP
189.00	9.08	2.45	12.10	30.00	23.62	-6.38	250	100	QP
250.00	12.73	3.10	16.10	37.00	31.93	-5.07	245	100	QP
323.99	13.83	3.72	14.10	37.00	31.65	-5.35	312	100	QP
621.00	18.72	5.85	7.80	37.00	32.37	-4.63	320	182	QP
702.00	18.94	6.41	6.80	37.00	32.15	-4.85	50	181	QP
810.00	19.92	7.06	8.30	37.00	35.28	-1.72	62	135	QP

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Emission Level = Antenna Factor (dB/m) + Cable Loss (dB) + Meter Reading (dBμV)*
4. *Margin (dB) = Emission Level (dBuV/m) - Quasi-peak limit (dBuV/m)*

Above 1 GHz

Product Name	IP CAM	Test By	Waternil Guan
Model	D5111	Test Date	2011/02/18
Test Mode	AC Mode	TEMP & Humidity	22°C, 60%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Azimuth (°)	Height (cm)	Remark
1450.00	45.75	---	-3.80	41.95	---	74.00	54.00	-12.05	162.70	100.00	Peak
1695.00	44.39	---	-1.77	42.62	---	74.00	54.00	-11.38	137.60	100.00	Peak
2205.00	44.70	---	1.61	46.31	---	74.00	54.00	-7.69	86.90	100.00	Peak
3105.00	43.27	---	4.56	47.83	---	74.00	54.00	-6.17	20.50	100.00	Peak
3170.00	43.15	---	4.54	47.68	---	74.00	54.00	-6.32	0.10	200.00	Peak
4465.00	41.28	---	7.44	48.71	---	74.00	54.00	-5.29	259.30	100.00	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Azimuth (°)	Height (cm)	Remark
1045.00	47.26	---	-5.29	41.98	---	74.00	54.00	-12.02	146.80	100.00	Peak
1110.00	48.45	---	-5.05	43.41	---	74.00	54.00	-10.59	102.90	100.00	Peak
2195.00	44.68	---	1.59	46.27	---	74.00	54.00	-7.73	352.80	100.00	Peak
2590.00	44.65	---	2.72	47.37	---	74.00	54.00	-6.63	34.40	200.00	Peak
3670.00	42.60	---	4.77	47.37	---	74.00	54.00	-6.63	160.50	200.00	Peak
4260.00	41.03	---	6.59	47.61	---	74.00	54.00	-6.39	231.10	100.00	Peak

Remark:

1. *Average test would be performed if the peak result were greater than the average limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
4. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	IP CAM	Test By	Waternil Guan
Model	D5111	Test Date	2011/02/18
Test Mode	PoE Mode	TEMP & Humidity	22°C, 60%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Azimuth (°)	Height (cm)	Remark
1110.00	46.99	---	-5.05	41.94	---	74.00	54.00	-12.06	191.10	200.00	Peak
1445.00	46.08	---	-3.82	42.26	---	74.00	54.00	-11.74	130.60	100.00	Peak
2175.00	44.20	---	1.54	45.74	---	74.00	54.00	-8.26	112.40	100.00	Peak
2560.00	45.21	---	2.58	47.79	---	74.00	54.00	-6.21	339.60	100.00	Peak
3205.00	42.71	---	4.52	47.23	---	74.00	54.00	-6.77	289.80	200.00	Peak
4490.00	40.63	---	7.54	48.17	---	74.00	54.00	-5.83	126.30	100.00	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Azimuth (°)	Height (cm)	Remark
1815.00	44.88	---	-0.63	44.25	---	74.00	54.00	-9.75	54.70	200.00	Peak
2240.00	44.34	---	1.69	46.03	---	74.00	54.00	-7.97	174.50	100.00	Peak
3035.00	42.95	---	4.59	47.55	---	74.00	54.00	-6.45	288.70	200.00	Peak
3210.00	42.80	---	4.52	47.32	---	74.00	54.00	-6.68	169.80	100.00	Peak
4435.00	41.16	---	7.31	48.47	---	74.00	54.00	-5.53	336.90	200.00	Peak
4870.00	40.88	---	8.33	49.21	---	74.00	54.00	-4.79	160.60	100.00	Peak

Remark:

1. *Average test would be performed if the peak result were greater than the average limit.*
2. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
3. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
4. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

7.2 CONDUCTED EMISSION

LIMITS

Frequency Range (MHz)	Voltage Limits (dBμV)			
	Class A		Class B	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.50	79	66	66 - 56*	56 - 46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

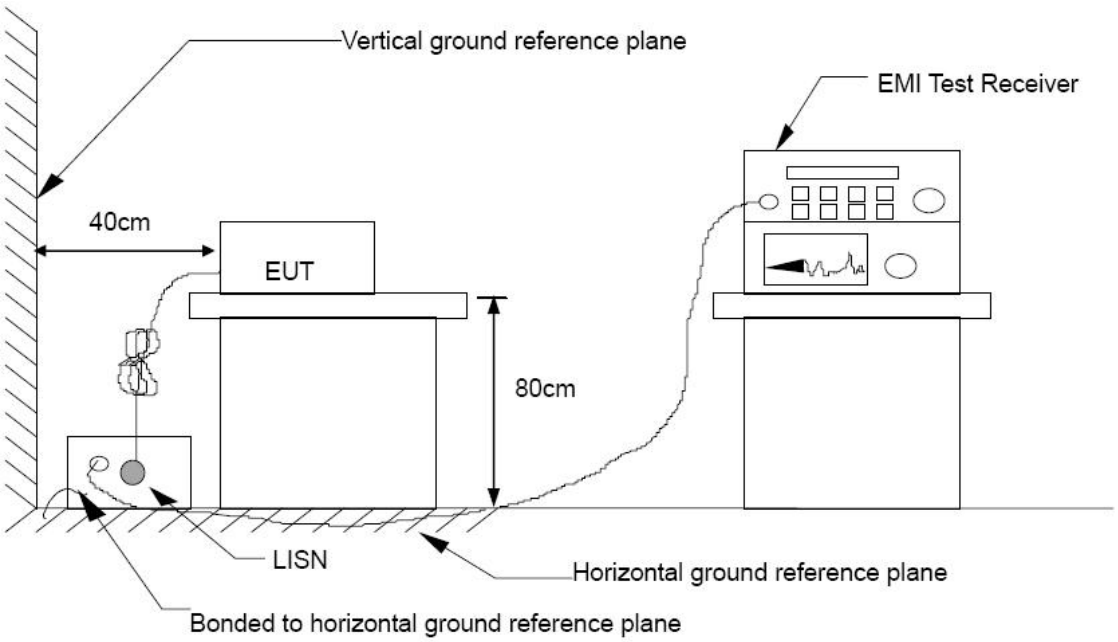
Remark: *(1) The limit decreases linearly with logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.*
(2) The lower limit shall apply at the transition frequency.
*(3) * Decreasing linearly with the logarithm of the frequency.*

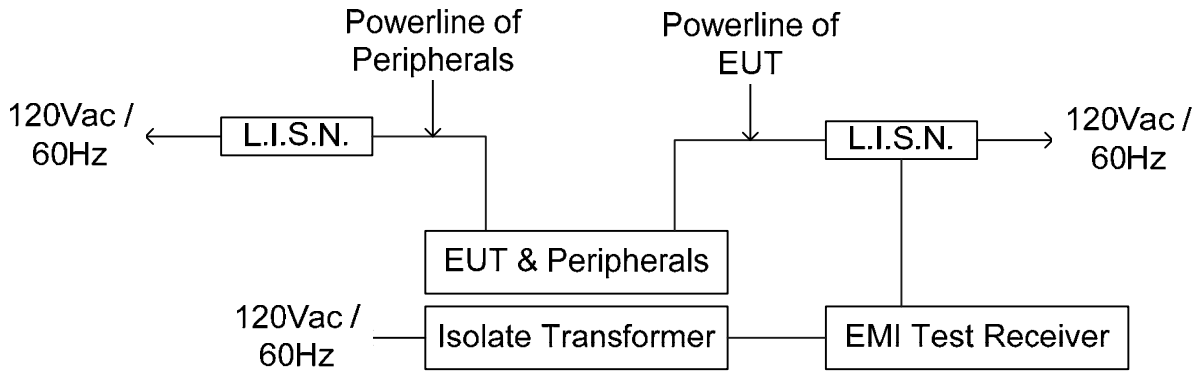
TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-465	08/08/2011
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-473	03/22/2011
EMI Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/24/2011
Pulse Limit	ROHDE & SCHWARZ	ESH3-Z2	100117	09/17/2011
N Type Coaxial Cable	BELDEN	8268 M17/164	003	07/09/2011

Remark: *Each piece of equipment is scheduled for calibration once a year.*

TEST SETUP





TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4:2003.

The test procedure is performed in a 4m × 3m × 2.4m (L×W×H) shielded room.

The EUT along with its peripherals were placed on a 1.0m (W) × 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

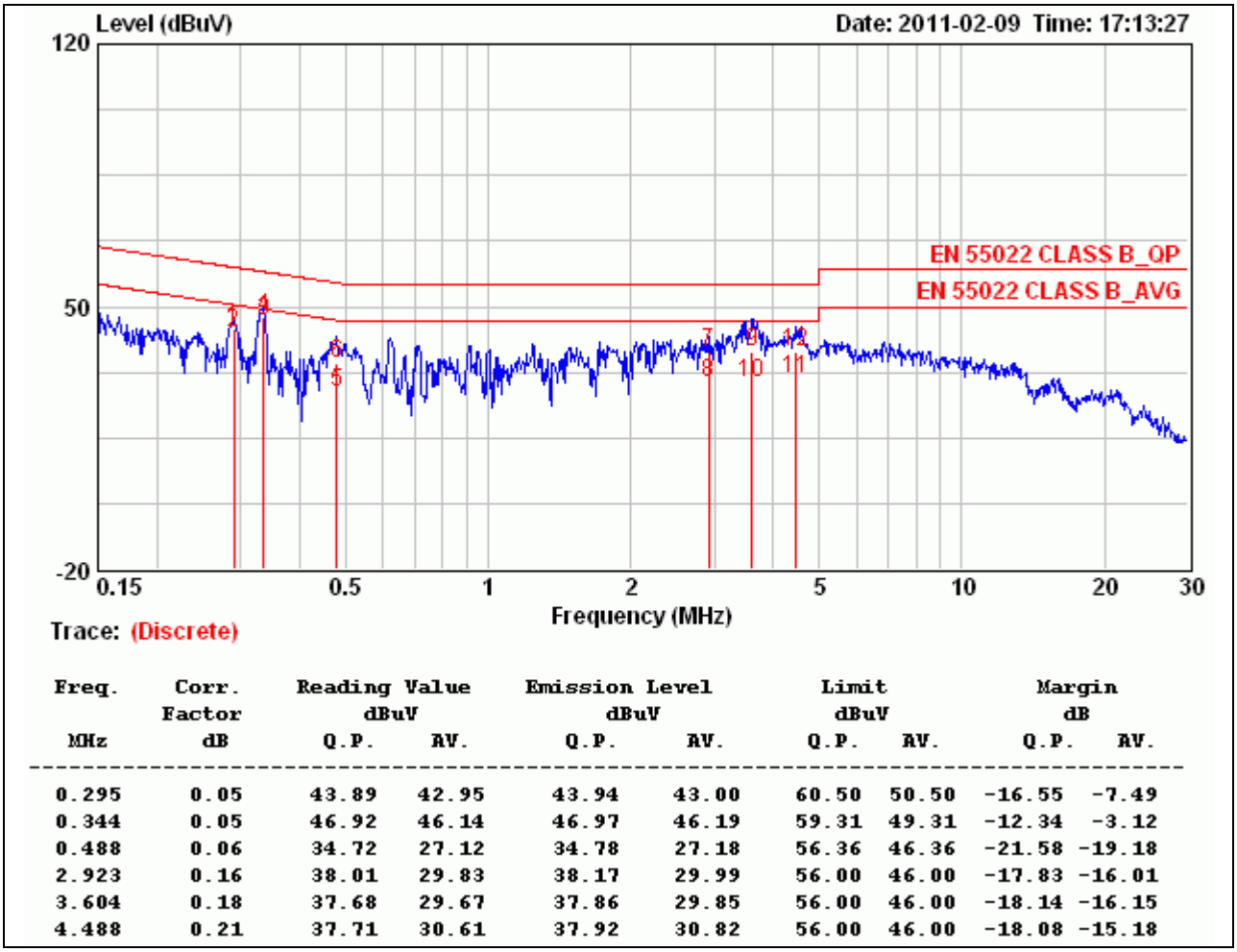
The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

TEST RESULTS

Product Name	IP CAM	Test By	Bell Huang
Model	D5111	Test Date	2011/02/09
Test Mode	AC Mode	TEMP & Humidity	19°C, 51%

LINE



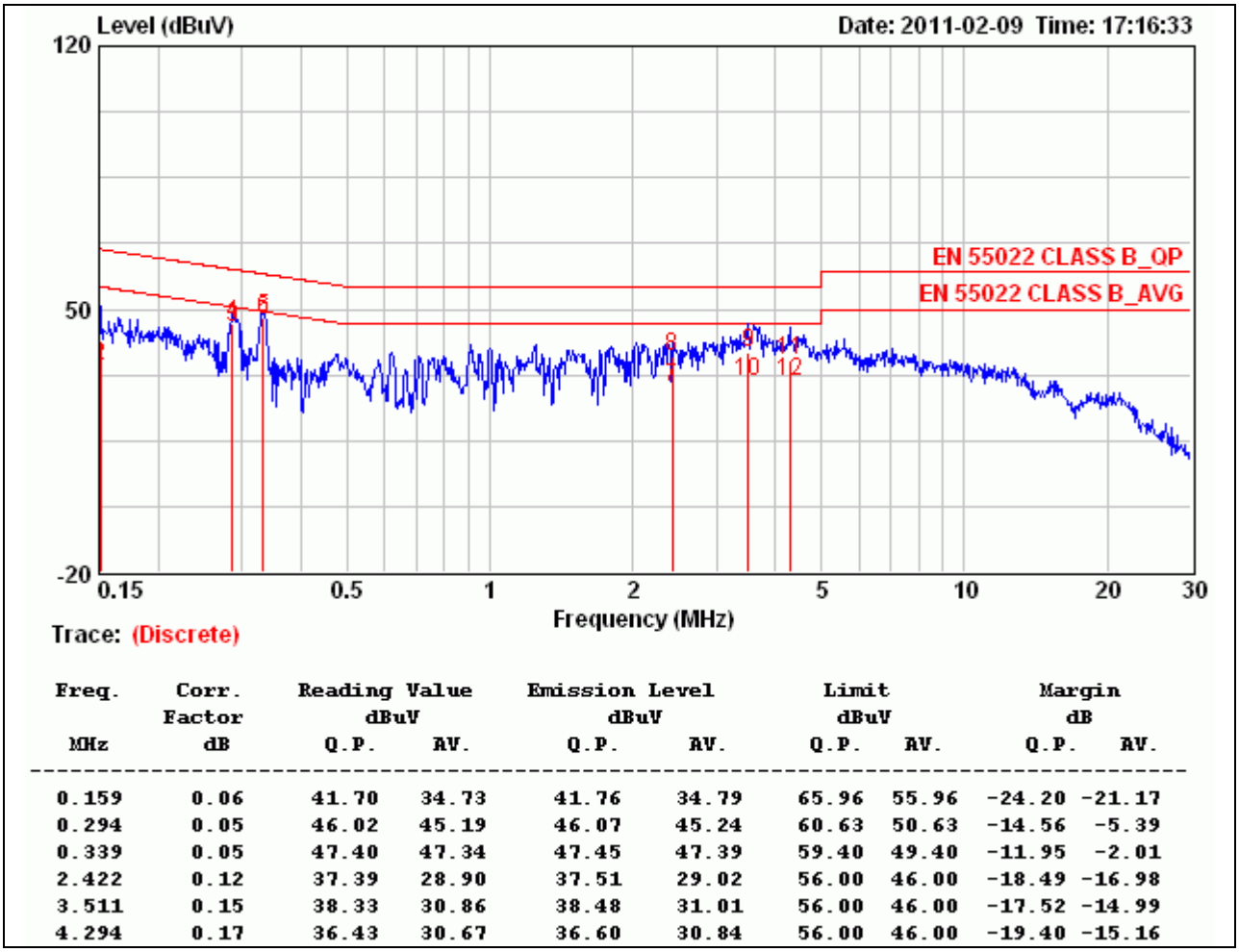
Freq. MHz	Corr. Factor dB	Reading Value dBuV Q.P.	Reading Value dBuV AV.	Emission Level dBuV Q.P.	Emission Level dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.295	0.05	43.89	42.95	43.94	43.00	60.50	50.50	-16.55	-7.49
0.344	0.05	46.92	46.14	46.97	46.19	59.31	49.31	-12.34	-3.12
0.488	0.06	34.72	27.12	34.78	27.18	56.36	46.36	-21.58	-19.18
2.923	0.16	38.01	29.83	38.17	29.99	56.00	46.00	-17.83	-16.01
3.604	0.18	37.68	29.67	37.86	29.85	56.00	46.00	-18.14	-16.15
4.488	0.21	37.71	30.61	37.92	30.82	56.00	46.00	-18.08	-15.18

Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Emission level = Reading Value + Correction factor
3. Margin value = Emission level – Limit value

Product Name	IP CAM	Test By	Bell Huang
Model	D5111	Test Date	2011/02/09
Test Mode	AC Mode	TEMP & Humidity	19°C, 51%

NEUTRAL



Freq. MHz	Corr. Factor dB	Reading Value dBuV Q.P.	Reading Value dBuV AV.	Emission Level dBuV Q.P.	Emission Level dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.159	0.06	41.70	34.73	41.76	34.79	65.96	55.96	-24.20	-21.17
0.294	0.05	46.02	45.19	46.07	45.24	60.63	50.63	-14.56	-5.39
0.339	0.05	47.40	47.34	47.45	47.39	59.40	49.40	-11.95	-2.01
2.422	0.12	37.39	28.90	37.51	29.02	56.00	46.00	-18.49	-16.98
3.511	0.15	38.33	30.86	38.48	31.01	56.00	46.00	-17.52	-14.99
4.294	0.17	36.43	30.67	36.60	30.84	56.00	46.00	-19.40	-15.16

Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Emission level = Reading Value + Correction factor
3. Margin value = Emission level – Limit value

APPENDIX SETUP PHOTOS

RADIATED EMISSION SETUP

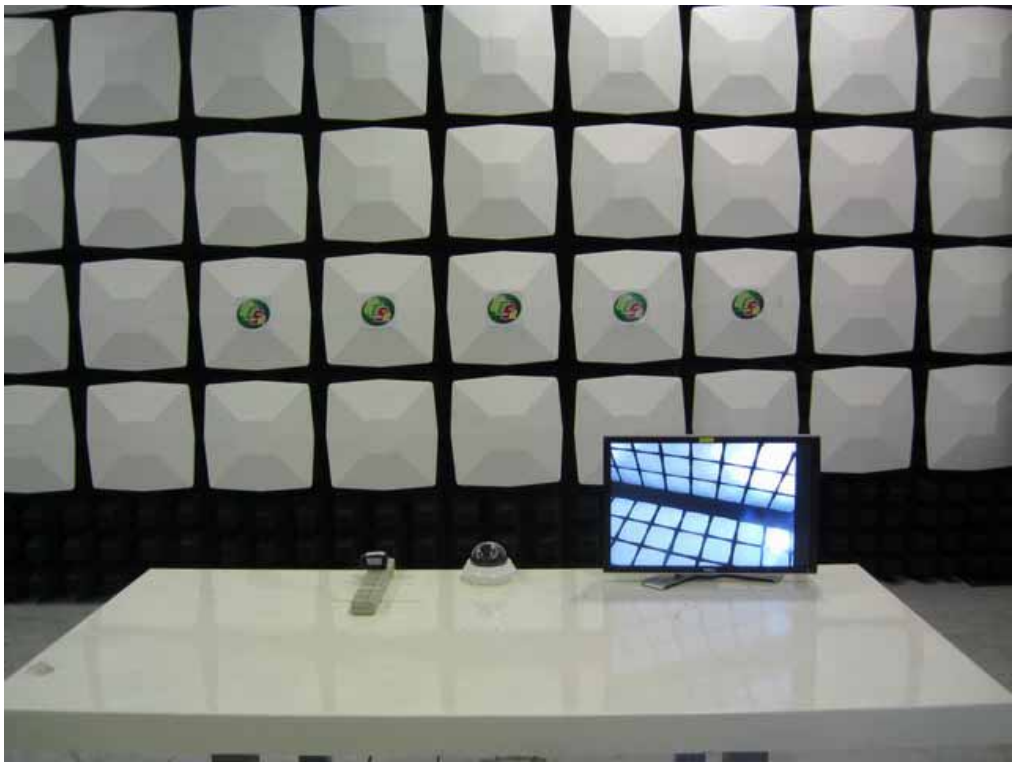
Below 1 GHz

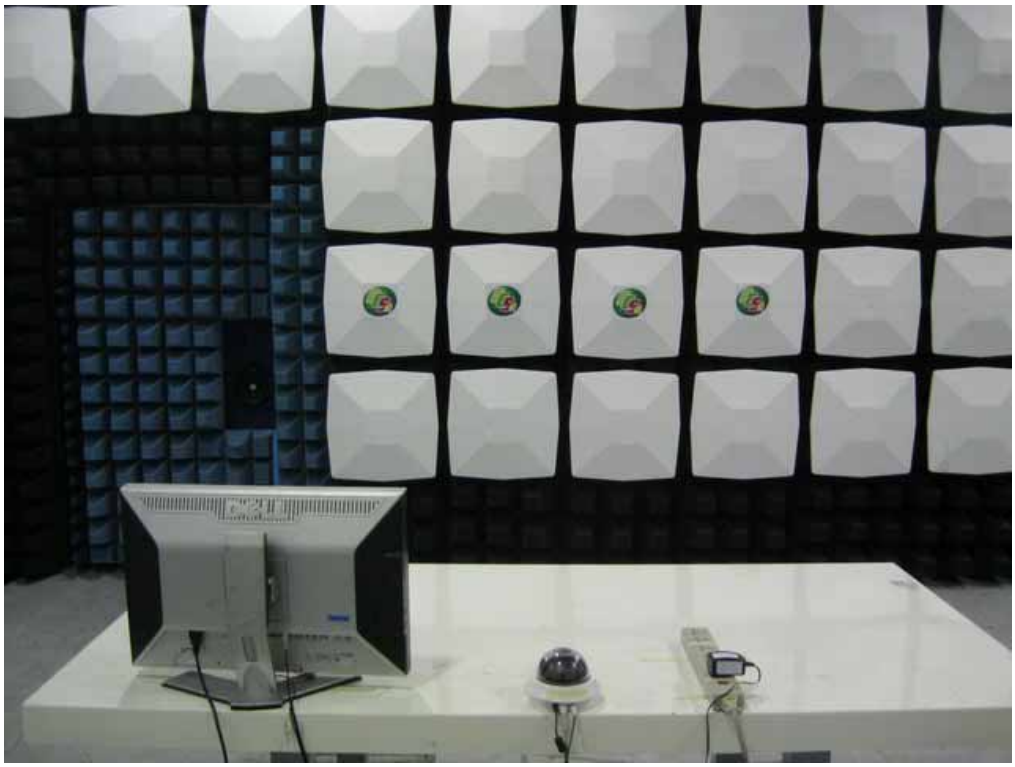
AC Mode

PoE Mode

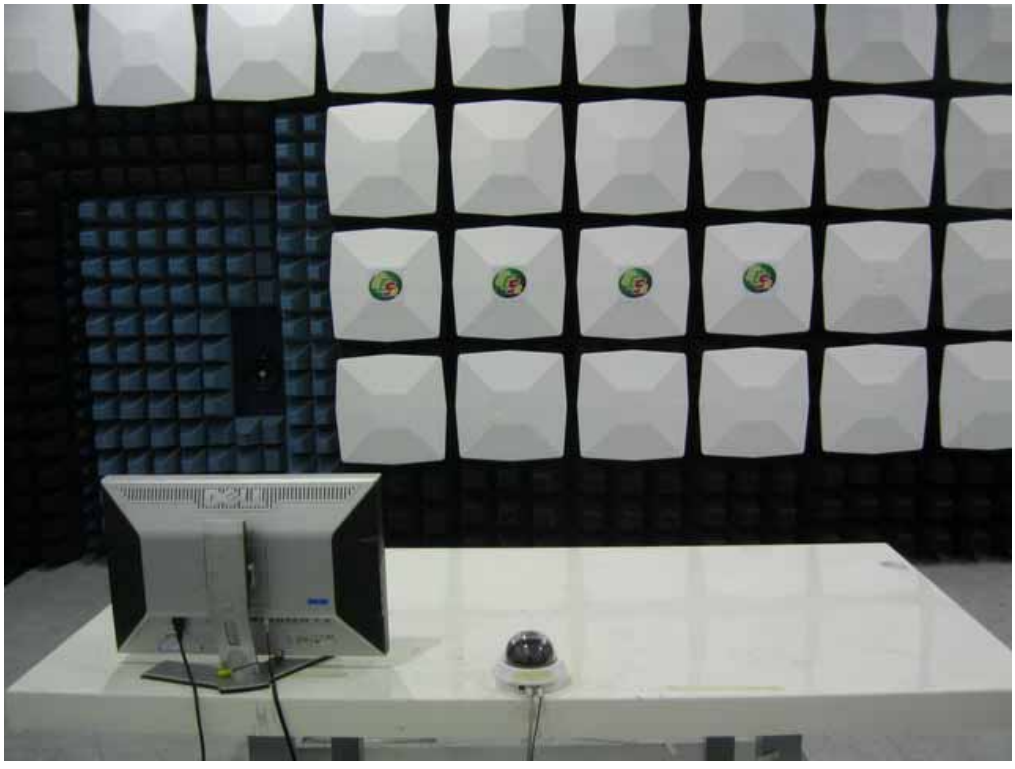
Above 1 GHz

AC Mode





PoE Mode



CONDUCTED EMISSION SETUP

AC Mode