

APPLICATION FOR CERTIFICATION

On Behalf of

SHENZHEN JIEHE TECHNOLOGY DEVELOPMENT Co., Ltd

Mini PC

Model Number: Giada D2301

FCC ID: YIKD2301

Prepared for : SHENZHEN JIEHE TECHNOLOGY DEVELOPMENT
Co., Ltd
2/F, Block A, Tsinghua Information Harbor, North Section,
Shenzhen Hi-tech Park, Nanshan District, Shenzhen, China
P. R

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F10328

Date of Test : Nov.15~25, 2010

Date of Report : Dec.02, 2010

TABLE OF CONTENTS

Description	Page
1. SUMMARY OF STANDARDS AND RESULTS	1-1
1.1. Description of Standards and Results.....	1-1
2. GENERAL INFORMATION	2-1
2.1. Description of Device (EUT)	2-1
2.2. Test configuration with EUT	2-2
2.3. Tested Supporting System Details	2-3
2.4. Block Diagram of connection between EUT and simulators	2-4
2.5. Test Facility	2-5
2.6. Test Uncertainty (95% confidence levels, k=2)	2-5
3. POWER LINE CONDUCTED EMISSION TEST	3-1
3.1. Test Equipments	3-1
3.2. Block Diagram of Test Setup	3-1
3.3. Power Line Conducted Emission Test Limits	3-1
3.4. Configuration of EUT on Test	3-2
3.5. Operating Condition of EUT	3-2
3.6. Test Procedure	3-2
3.7. Power Line Conducted Emission Test Results	3-3
4. RADIATED EMISSION TEST	4-1
4.1. Test Equipment	4-1
4.2. Block Diagram of Test Setup	4-2
4.3. Radiated Emission Limit	4-3
4.4. EUT Configuration on Test	4-3
4.5. Operating Condition of EUT	4-3
4.6. Test Procedure	4-3
4.7. Radiated Emission Test Results	4-4
5. DEVIATION TO TEST SPECIFICATIONS	5-1
6. PHOTOGRAPH OF TEST	6-1
6.1. Photos of Power Line Conducted Emission Test	6-1
6.2. Photos of Radiated Emission Test for 30~1000MHz	6-2
6.3. Photos of Radiated Emission Test for above 1GHz	6-3
7. PHOTOGRAPH OF EUT	7-1

TEST REPORT CERTIFICATION

Applicant : SHENZHEN JIEHE TECHNOLOGY DEVELOPMENT Co., Ltd
Manufacturer : CHEER ASCENT Electronics Co., Ltd
EUT Description : Mini PC
FCC ID : YIKD2301
(A)MODEL NO. : Giada D2301
(B)SERIAL NO. : N/A
(C)POWER SUPPLY : AC 120V/60Hz
(D)TEST VOLTAGE : AC 120V/60Hz

Test Standard and Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B 2008, ANSI C63.4-2009

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B limits for radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : Nov.15~25, 2010 Report of date: Dec.02,2010

Prepared by : Annie Wu Reviewer by : Jamy Yu
Annie Wu / Supervisor Jamy Yu / Supervisor

Approved & Authorized Signer :



Ken Lu / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Power Line Conducted Emission Test	FCC Part 15: 2008 ANSI C63.4: 2009	Class B	PASS
Radiated Emission Test	FCC Part 15: 2008 ANSI C63.4: 2009	Class B	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name : Mini PC

Model Number : Giada D2301

FCC ID : YIKD2301

Applicant : SHENZHEN JIEHE TECHNOLOGY DEVELOPMENT Co., Ltd
2/F, Block A, Tsinghua Information Harbor, North Section, Shenzhen Hi-tech Park, Nanshan District, Shenzhen, China P.R

Manufacturer : CHEER ASCENT Electronics Co., Ltd
Block 1, Fuhai Industrial Park, Fuyong town, Baoan District, Shenzhen, China P.R

Date of Test : Nov.15~25, 2010

Date of Receipt : Nov.14, 2010

Sample Type : Series production

Note1: This EUT is Class B Mini PC, for test purpose, a typical Class B personal computer was configured by applicant with this EUT

Note2: Note: This device contains a wireless module, and this wireless module have been certificated as module approval.

2.2. Test configuration with EUT

Category	Model
CPU	Intel core i5-430UM@1.2GHz
Chipset	Intel HM55
GPU	Next generation Nvidia ION
RAM	Kingston DDR3 1066 2G
HDD	Samsung SATA 500G 5400RPM 2.5"
Wireless	Samsung SWB-A91 WiFi+BT
DVD Writer	TS-T633
Power adapter	Huntkey HKA06519034-6C
Note: For details configuration of EUT and ports can refer user manual for this device.	

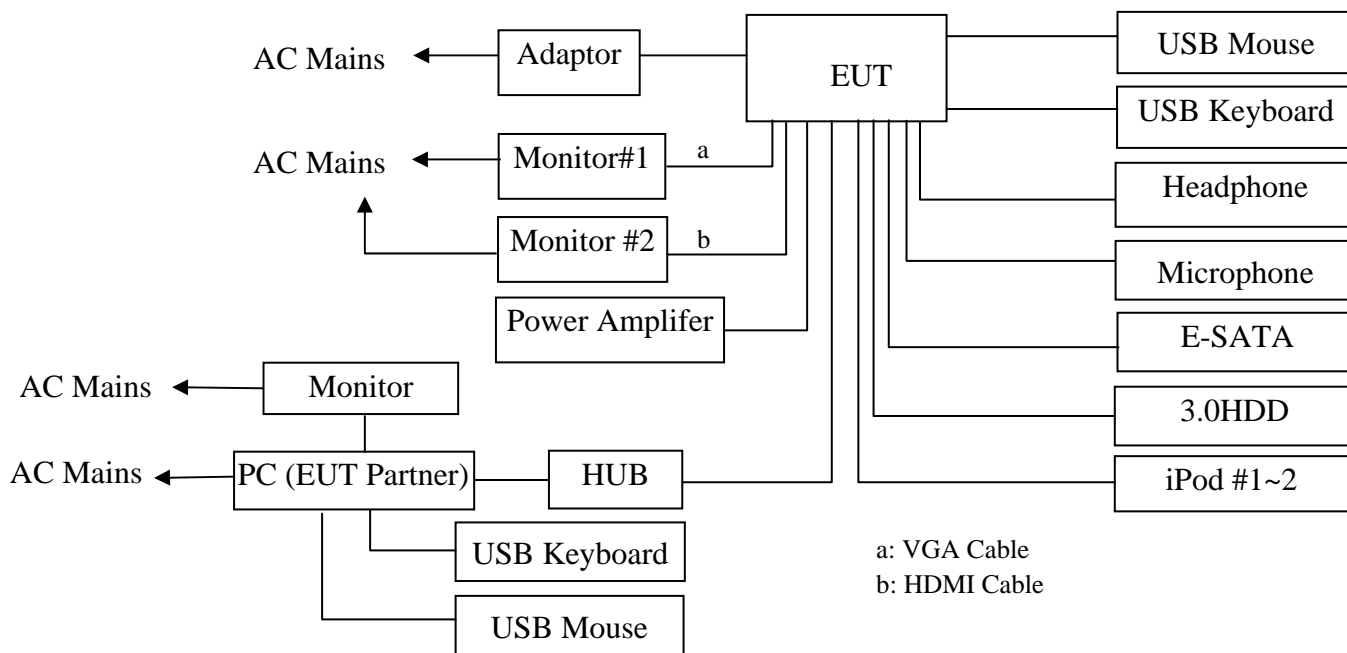
A special PC test software “BurnInTest.exe” was used to exercise all functions of PC (full efficiency running of CPU, read and write data from Hard disk, output “H” character, all output and input port of EUT were also exercised by typical accessories)

2.3. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	USB Mouse	ACS-EMC-M07R	DELL	M-UARDEL7	HS852130JEH	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T41126
		Power Cord: shielded, Undetachable, 2.0m				
2.	USB Keyboard	ACS-EMC- K03R	DELL	SK-8115	CN-ODJ313-716 16-711-04WJ	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
3.	LCD Monitor	ACS-EMC-LM05R	DELL	2407WFPb	CN-0YY528-466 33-764-1TCS	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R43002
		Power Cord: Unshielded, Detachable, 1.8m DVI Cable: Shielded, Detachable, 2.0m (with two cores)				
4	LCD Monitor	ACS-EMC-LM07R	DELL	3008WFPt	CN-0RW915-716 18-846-397L	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R3A002
		Power Cord: Unshielded, Detachable, 1.8m HDMI Cable: Shielded, Detachable, 2.0m				
5	Headphone	ACS-EMC-EP01	OVANN	OV880V	N/A	<input type="checkbox"/> FCC ID <input type="checkbox"/> BSMI ID
		Cable: Shielded, Undetachable, 4.0m				
6	Microphone	ACS-EMC-MIC01	SONCN	SM-300	N/A	<input checked="" type="checkbox"/> FCC DoC <input type="checkbox"/> BSMI ID
		Cable: Shielded, Undetachable, 1.7m				
7	Power Amplifier	ACS-EMC-AMP01	SANGU	AV-805	N/A	<input type="checkbox"/> FCC ID <input type="checkbox"/> BSMI ID
		Data Cable: Unshielded, Undetachable 1.2m				
8	iPod nano	ACS-EMC-IP01	APPLE	A1199	YM706MLDVQ 5	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33057
		Data Cable: Shielded, Detachable, 1.0m				
9	iPod nano	ACS-EMC-IP02	APPLE	A1199	YM706MCQVQ 5	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33057
		Data Cable: Shielded, Detachable, 1.0m				
10	3.0 HDD	ACS-EMC-HDD20	Buffalo	HD-HX1.0TU 3-AP	45564800401144	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: D33093
		USB Cable: Unshielded, Detachable, 1.0m				
11	HDD (eSATA)	ACS-EMC-HDD11	Seagate	9NL7A6-510	9QM3Q574	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: D33027
		USB Cable: Unshielded, Detachable, 1.5m*2, 0.5m				

【PC system which transmitting 】

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Personal Computer	Test PC N	DELL	Studio 540	J14XK2X	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID:R33002
		Power Cord: Unshielded, Detachable, 1.8m LAN Cable: Unshielded, Detachable, 10m Display Card: HD3650 (DVI+Display+HDMI)				
2.	USB Keyboard	ACS-EMC- K02R	DELL	SK-8115	CN-ORH656-658 90-686-007J	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
3.	USB Mouse	ACS-EMC-M02R	DELL	M056UO	512024264	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R41108
		Power Cord: shielded, Undetachable, 1.8m				
4.	Monitor	ACS-EMC-LM04R	DELL	1907FPt	CN-009759-71618 -6AP-ACPP	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R3A002
		Power Cord: Unshielded, Detachable, 1.8m VGA Cable: Shielded, Detachable, 2.0m				

2.4.Block Diagram of connection between EUT and simulators

(EUT: Mini PC)

2.5. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block, Shenzhen
Science & Industrial Park, Nantou, Shenzhen,
Guangdong, China

3m Anechoic Chamber : Mar. 31, 2009 File on
Federal Communication Commission
Registration Number: 90454

3m & 10m Anechoic Chamber : Dec. 30, 2009 File on
Federal Communication Commission
Registration Number: 794232

EMC Lab. : Accredited by DATech, German
Registration Number: DAT-P-091/99-01
Feb. 02, 2009

Accredited by NVLAP, USA
NVLAP Code: 200372-0
Apr.01, 2010

2.6. Test Uncertainty (95% confidence levels, k=2)

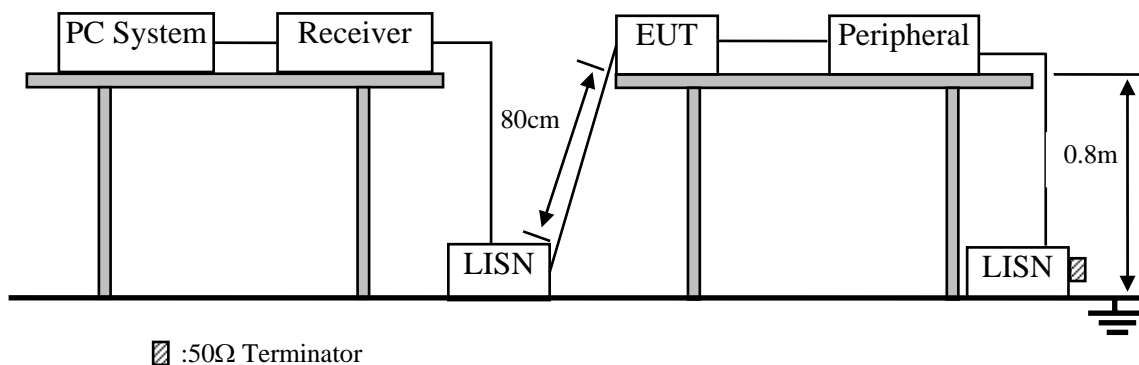
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	3.48 dB
Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m)	4.86dB (30~200MHz, Polarize: H)
	4.98dB (30~200MHz, Polarize: V)
	5.10dB (200M~1GHz, Polarize: H)
	4.98dB (200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	3.12 dB (Distance: 3m Polarize: V)
	3.74 dB (Distance: 3m Polarize: H)
Uncertainty for SVSWR in 10m Chamber	2.42 dB (Distance: 3m Polarize: V)
	2.44 dB (Distance: 3m Polarize: H)
Uncertainty for test site temperature and humidity	0.3°C
	2%

3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESCI	100843	Mar.30, 10	1 Year
2	L.I.S.N.#1	Rohde & Schwarz	ENV4200	100041	May.08, 10	1 Year
3	L.I.S.N.#2	Kyoritsu	KNW-407	8-1628-5	May.08, 10	1 Year
4	Terminator	Hubersuhner	50Ω	No. 2	May.08, 10	1 Year
5	RF Cable	Fujikura	3D-2W	LISN Cable 2#	May.08, 10	1 Year
6	Coaxial Switch	Anritsu	MP59B	6200298346	May.08, 10	1 Year
7	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	May.08, 10	1 Year

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. Mini PC (EUT)

Model Number : Giada D2301
Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2

3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turned on the power of all equipment.

3.5.3. PC run test software "BurnInTest.exe" to exercise all functions of EUT

3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4-2009 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test results are reported and test results for Conducted Disturbance Test on Section 3.7.

3.7. Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

EUT: Mini PC Model No. : Giada D2301

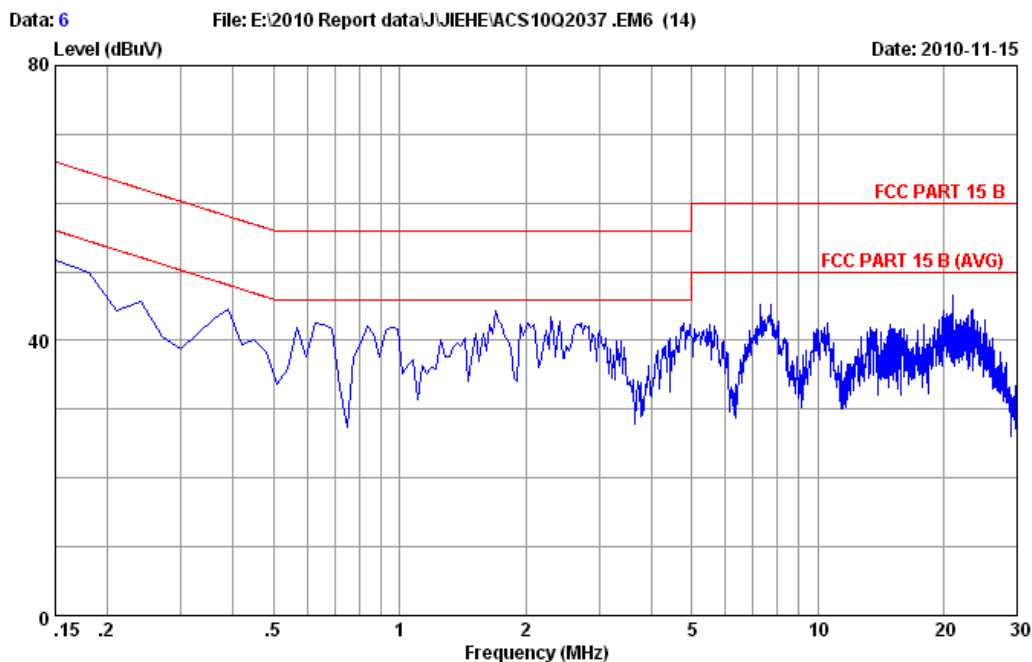
The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Nov.15, 2010 Temperature: 24°C Humidity: 56%

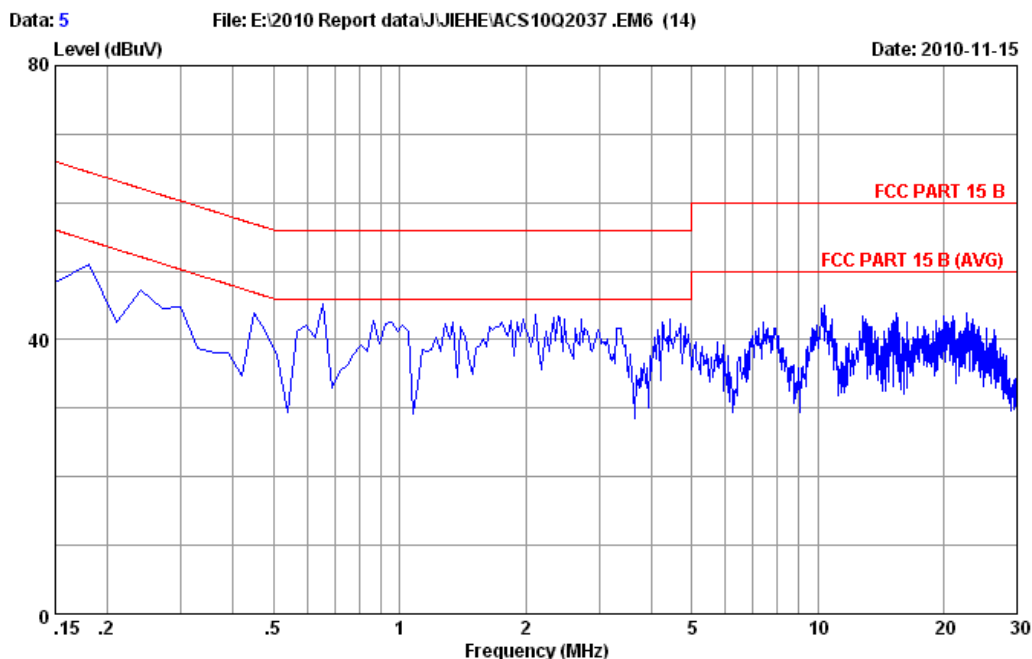
The details of test modes are as follows :

No.	Test Mode	Reference Test Data No.	
		Line	Neutral
1.	DVI+HDMI 640*480/60Hz	#6	#5
2.	DVI+HDMI 1280*1024/75Hz	#4	#3
3. ※	HDMI+DVI 1920*1200/60Hz	#2	#1

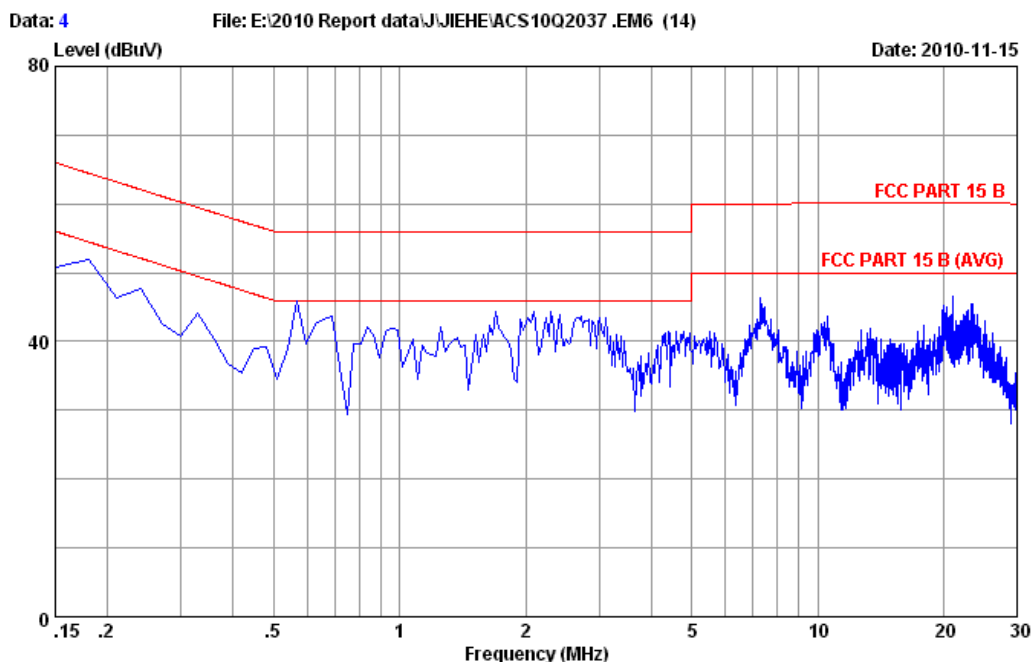
(※ Worst test mode)



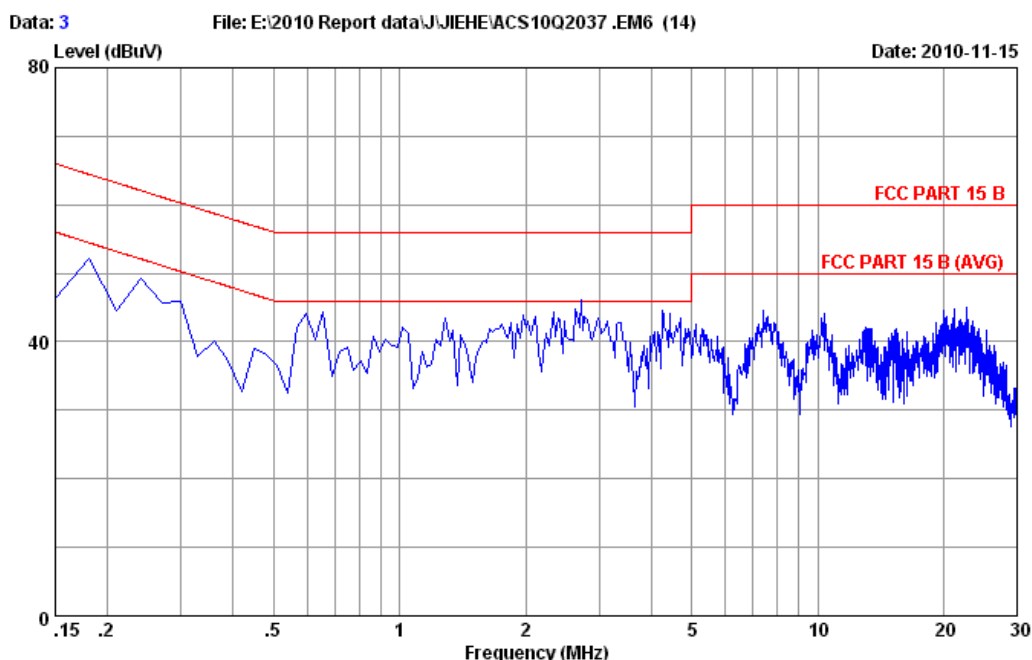
Site no : Audix No.2 Conduction Data No : 6
 Dis./Ant. : ** 2010 ENV4200 LISN phase: LINE
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55% Engineer : Restar
 EUT : Mini PC M/N: Giada D2301
 Power Rating : DC 19V Adapter Input AC 120V/ 60Hz
 Test Mode : Running BurnInTest v5.3
 HDMI+DVI: 640*480@60Hz



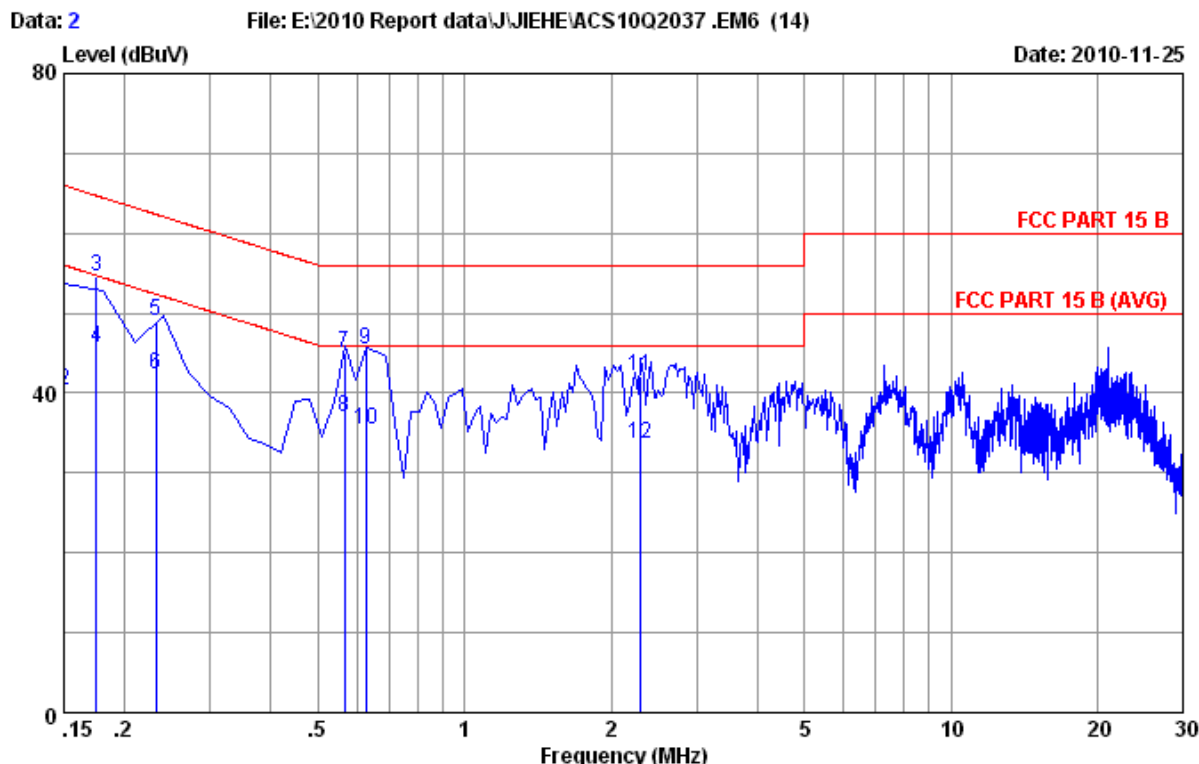
Site no : Audix No.2 Conduction Data No : 5
 Dis./Ant. : ** 2010 ENV4200 LISN phase: NEUTRAL
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55% Engineer : Restar
 EUT : Mini PC M/N: Giada D2301
 Power Rating : DC 19V Adapter Input AC 120V/ 60Hz
 Test Mode : Running BurnInTest v5.3
 HDMI+DVI: 640*480@60Hz



Site no :Audix No.2 Conduction Data No :4
 Dis./Ant. :** 2010 ENV4200 LISN phase:LINE
 Limit :FCC PART 15 B
 Env./Ins. :29.5°C/55% Engineer :Restar
 EUT :Mini PC M/N:Giada D2301
 Power Rating :DC 19V Adapter Input AC 120V/ 60Hz
 Test Mode :Running BurnInTest v5.3
 HDMI+DVI:1280*1024@75Hz



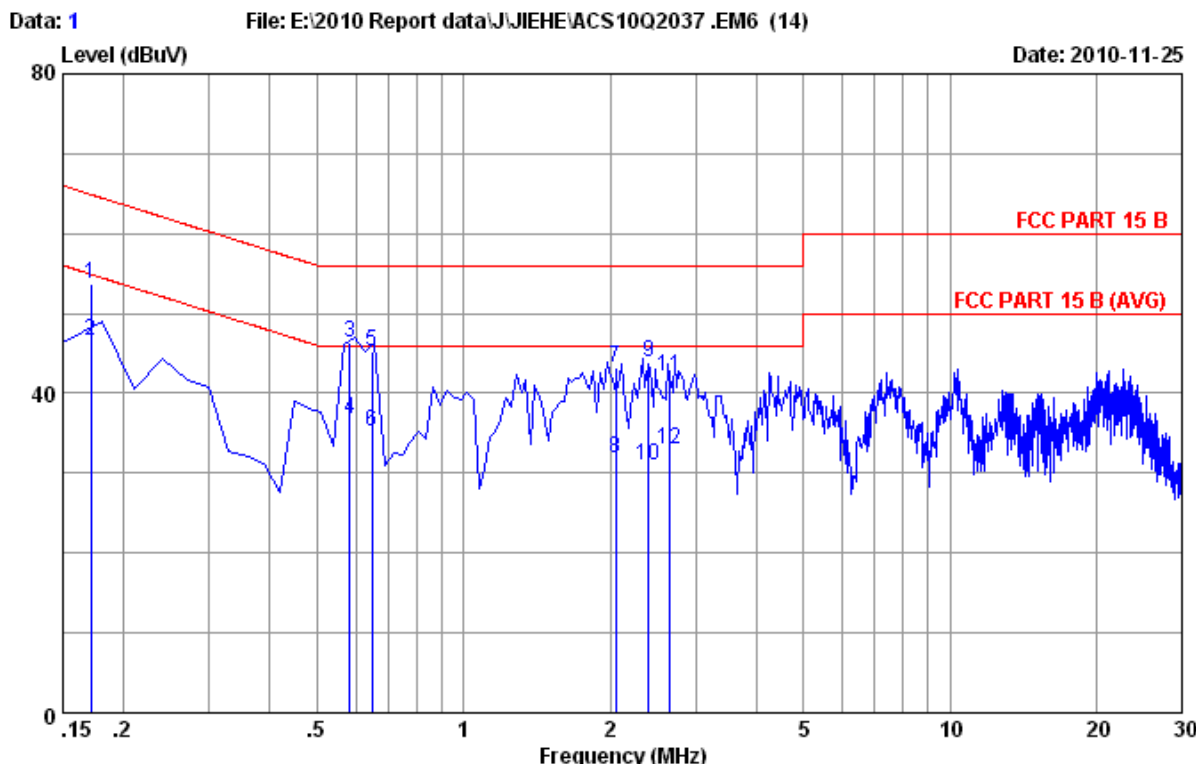
Site no :Audix No.2 Conduction Data No :3
 Dis./Ant. :** 2010 ENV4200 LISN phase:NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :29.5°C/55% Engineer :Restar
 EUT :Mini PC M/N:Giada D2301
 Power Rating :DC 19V Adapter Input AC 120V/ 60Hz
 Test Mode :Running BurnInTest v5.3
 HDMI+DVI:1280*1024@75Hz



Site no :Audix No.2 Conduction Data No :2
Dis./Ant. **: 2010 ENV4200 LISN phase:LINE
Limit :FCC PART 15 B
Env./Ins. :29.5°C/55% Engineer :Restar
EUT :Mini PC M/N:Giada D2301
Power Rating :DC 19V Adapter Input AC 120V/ 60Hz
Test Mode :Running BurnInTest v5.3
HDMI+DVI:1920*1200@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	10.11	9.87	29.70	49.68	66.00	16.32	QP
2	0.15000	10.11	9.87	20.40	40.38	56.00	15.62	Average
3	0.17500	10.13	9.87	34.60	54.60	64.72	10.12	QP
4	0.17500	10.13	9.87	25.70	45.70	54.72	9.02	Average
5	0.23200	10.15	9.87	28.90	48.92	62.38	13.46	QP
6	0.23200	10.15	9.87	22.40	42.42	52.38	9.96	Average
7	0.56700	10.15	9.88	24.91	44.94	56.00	11.06	QP
8	0.56700	10.15	9.88	16.91	36.94	46.00	9.06	Average
9	0.62700	10.13	9.88	25.41	45.42	56.00	10.58	QP
10	0.62700	10.13	9.88	15.41	35.42	46.00	10.58	Average
11	2.299	10.20	9.94	21.91	42.05	56.00	13.95	QP
12	2.299	10.20	9.94	13.41	33.55	46.00	12.45	Average

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



Site no :Audix No.2 Conduction Data No :1
Dis./Ant. **: 2010 ENV4200 LISN phase:NEUTRAL
Limit :FCC PART 15 B
Env./Ins. :29.5°C/55% Engineer :Restar
EUT :Mini PC M/N:Giada D2301
Power Rating :DC 19V Adapter Input AC 120V/ 60Hz
Test Mode :Running BurnInTest v5.3
HDMI+DVI:1920*1200@60Hz

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17100	10.20	9.87	33.70	53.77	64.91	11.14	QP
2	0.17100	10.20	9.87	26.40	46.47	54.91	8.44	Average
3	0.58300	10.17	9.88	26.40	46.45	56.00	9.55	QP
4	0.58300	10.17	9.88	16.70	36.75	46.00	9.25	Average
5	0.64700	10.15	9.89	25.20	45.24	56.00	10.76	QP
6	0.64700	10.15	9.89	15.20	35.24	46.00	10.76	Average
7	2.055	10.30	9.93	22.90	43.13	56.00	12.87	QP
8	2.055	10.30	9.93	11.70	31.93	46.00	14.07	Average
9	2.401	10.29	9.94	23.71	43.94	56.00	12.06	QP
10	2.401	10.29	9.94	10.71	30.94	46.00	15.06	Average
11	2.645	10.29	9.95	21.90	42.14	56.00	13.86	QP
12	2.645	10.29	9.95	12.70	32.94	46.00	13.06	Average

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency rang: 30~1000MHz

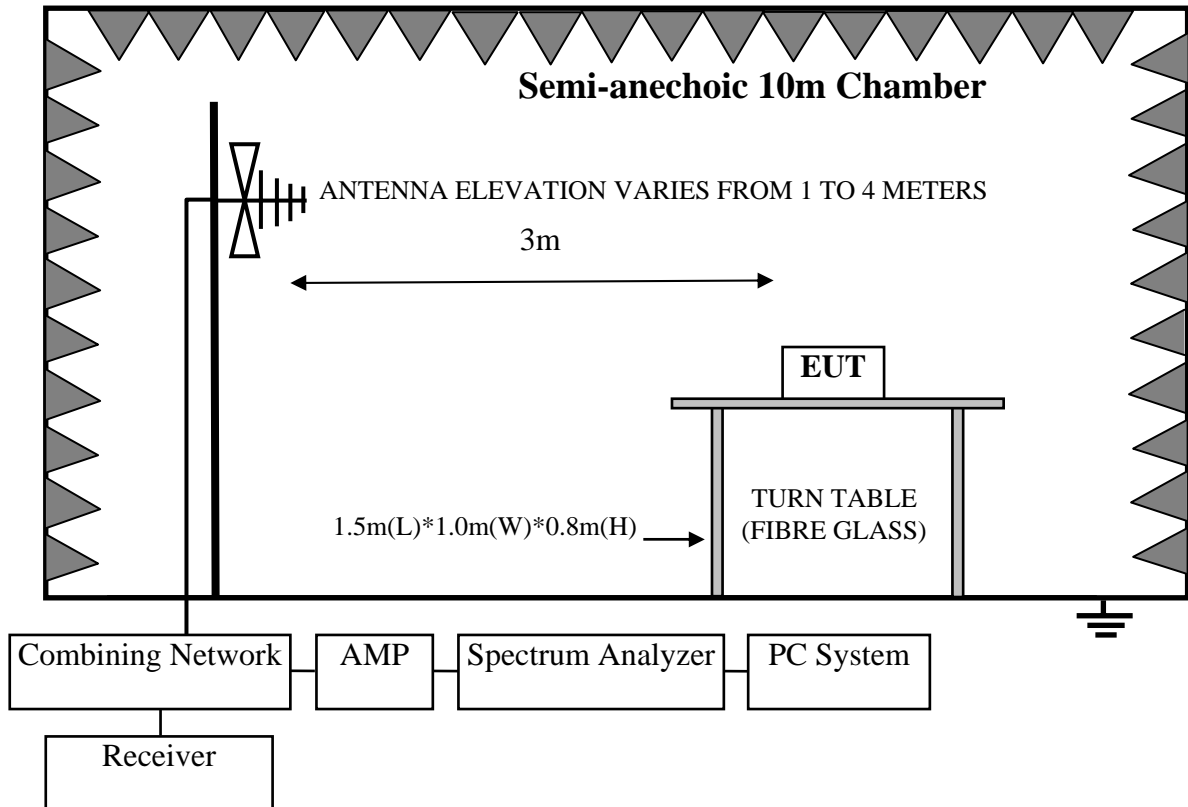
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	10m Chamber	AUDIX	N/A	N/A	Dec.05,09	1 Year
2	EMC Analyzer	Agilent	E7405A	MY42000131	May.08, 10	1 Year
3	EMC Analyzer	Agilent	E7405A	MY45116588	May.08, 10	1 Year
4	Test Receiver	Rohde & Schwarz	ESCI	100842	May.08, 10	1 Year
5	Amplifier	Agilent	8447D	2944A10684	May.08, 10	1 Year
6	Amplifier	Agilent	8447D	2944A11140	May.08, 10	1 Year
7	Bilog Antenna	Schaffner	CBL6112D	25238	Mar.27, 10	1 Year
8	Bilog Antenna	Schaffner	CBL6112D	25237	Mar.27, 10	1 Year
9	RF Cable	MIYAZAKI	8D-FB	10m Chamber No.1	May.08, 10	1 Year
10	RF Cable	MIYAZAKI	8D-FB	10m Chamber No.2	May.08, 10	1 Year
11	Coaxial Switch	Anritsu	MP59B	6200766906	May.08, 10	1 Year
12	Coaxial Switch	Anritsu	MP59B	6200766905	May.08, 10	1 Year
13	Coaxial Switch	Anritsu	MP59B	6200313662	May.08, 10	1 Year

Frequency rang: above 1000MHz

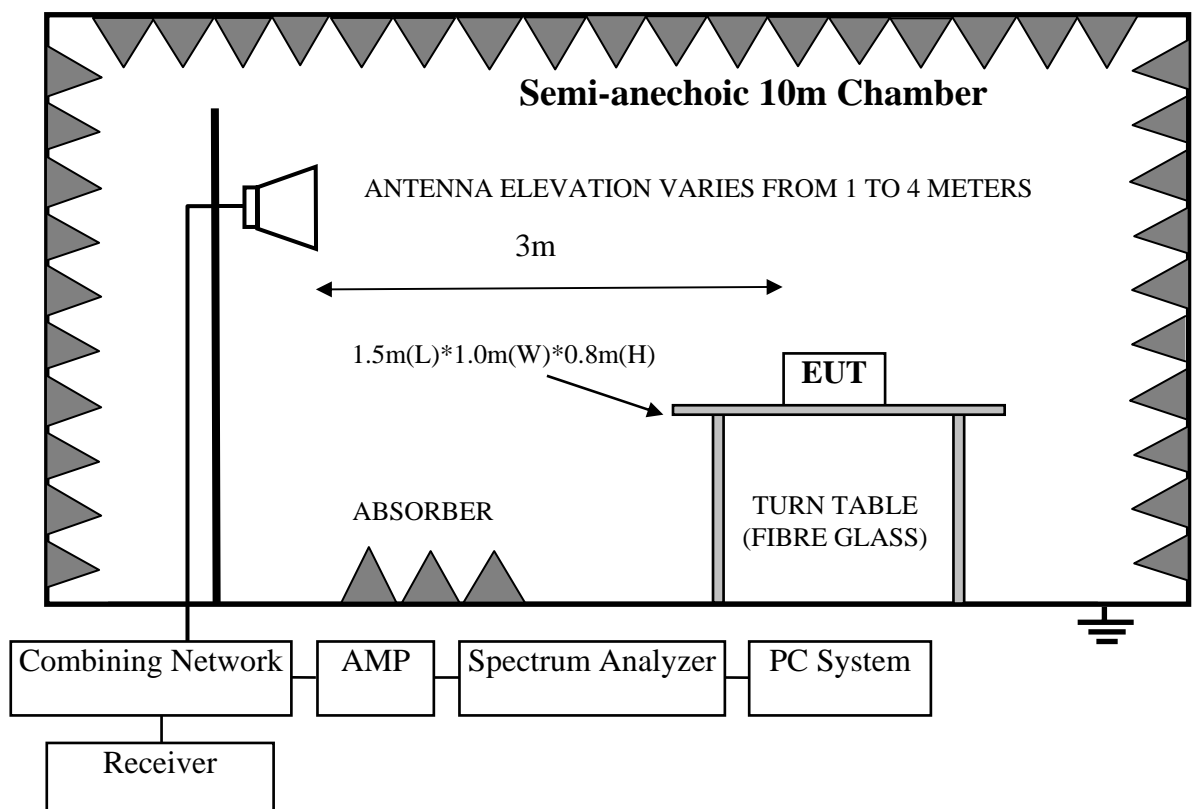
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	Nov.19, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

4.2. Block Diagram of Test Setup

4.2.1. Anechoic Chamber Setup Diagram (30-1000MHz)



4.2.2. In Anechoic (10m) Chamber Test Setup Diagram for above 1GHz



4.3. Radiated Emission Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
Above 1000	3	74(Peak)54(Average)

Remark: (1) Emission level = Antenna Factor + Cable Loss + Reading

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 4.2.

4.6. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission Test.

According FCC Part15A:15.32 requirements, test was performed with device installed in a typical enclosure, and both with enclosure's cover removed and installed. Test also performed with enclosure in vertical and horizontal position.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

4.7. Radiated Emission Test Results

PASS.

EUT: Mini PC Model No. : Giada D2301

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Nov.16, 2010 Temperature: 24℃ Humidity: 56%

The details of test modes are as follows :

No.	Test Mode
1.	HDMI+DVI 1920*1200/60Hz

For frequency range 1GHz~18GHz

The EUT with below test modes were measured within Anechoic Chamber and the test results listed in next pages

Test Date: Nov.25, 2010 Temperature: 24℃ Humidity: 56%

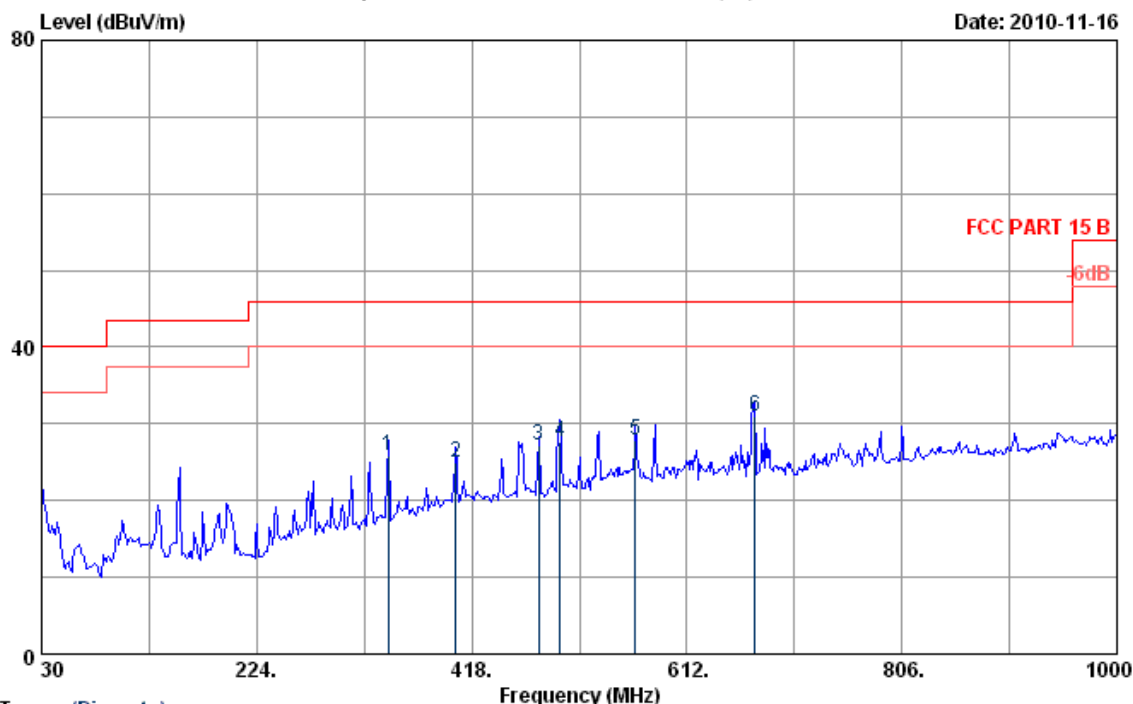
No.	Test Mode
1.	HDMI+DVI 1920*1200/60Hz

Test Frequency: 30MHz-1000MHz

Data: 33

File: E:\2010 Report Data\JJIEHE\ACS10Q2037.EM6 (33)

Date: 2010-11-16

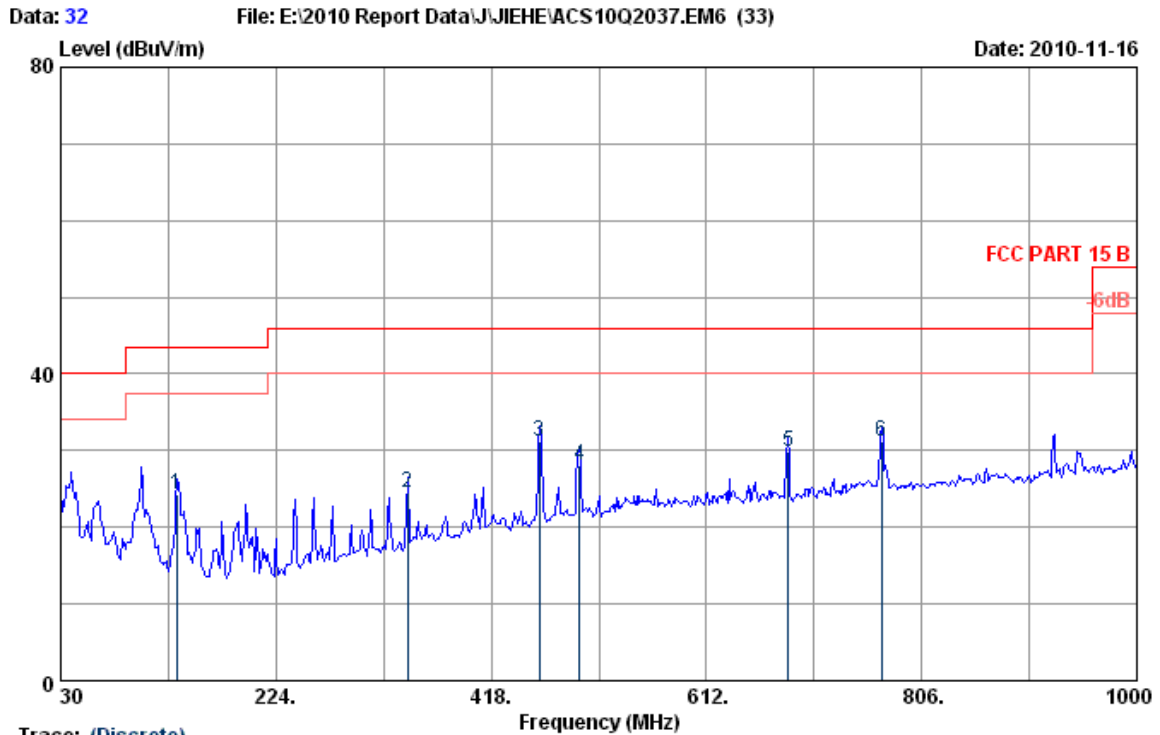


Trace: (Discrete)

Site no. : 10m Chamber Test Site Data No. : 33
 Dis. / Ant. : 3m 10 CBL6112D 25238 3M Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B
 Env. / Ins. : 24°C/56% Engineer : Chris
 EUT : Mini PC M/N: Giada D2301
 Power Rating : DC 19V Adapter Input AC 120V/60Hz
 Test Mode : Running Burn In Test V5.3
 M/N : HDMI+DVI:1920*1200@60Hz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	342.340	14.98	3.32	7.62	25.92	46.00	20.08	QP
2	403.450	16.78	3.70	4.54	25.02	46.00	20.98	QP
3	478.140	17.68	4.07	5.51	27.26	46.00	18.74	QP
4	497.540	17.86	4.17	5.56	27.59	46.00	18.41	QP
5	565.440	18.85	4.49	4.60	27.94	46.00	18.06	QP
6	673.110	19.60	5.00	6.27	30.87	46.00	15.13	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Trace: (Discrete)

Site no. : 10m Chamber Test Site Data No. : 32
 Dis. / Ant. : 3m 10 CBL6112D 25238 3M Ant. pol. : VERTICAL
 Limit : FCC PART 15 B
 Env. / Ins. : 24°C/56% Engineer : Chris
 EUT : Mini PC M/N: Giada D2301
 Power Rating : DC 19V Adapter Input AC 120V/60Hz
 Test Mode : Running Burn In Test V5.3
 M/N : HDMI+DVI:1920*1200@60Hz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Margin (dB)	Remark
1	134.760	12.50	1.73	10.11	24.34	43.50	19.16	QP
2	342.340	14.98	3.32	6.26	24.56	46.00	21.44	QP
3	461.650	17.36	3.99	9.92	31.27	46.00	14.73	QP
4	497.540	17.86	4.17	5.95	27.98	46.00	18.02	QP
5	685.720	19.66	5.06	5.24	29.96	46.00	16.04	QP
6	770.110	20.40	5.40	5.29	31.09	46.00	14.91	QP

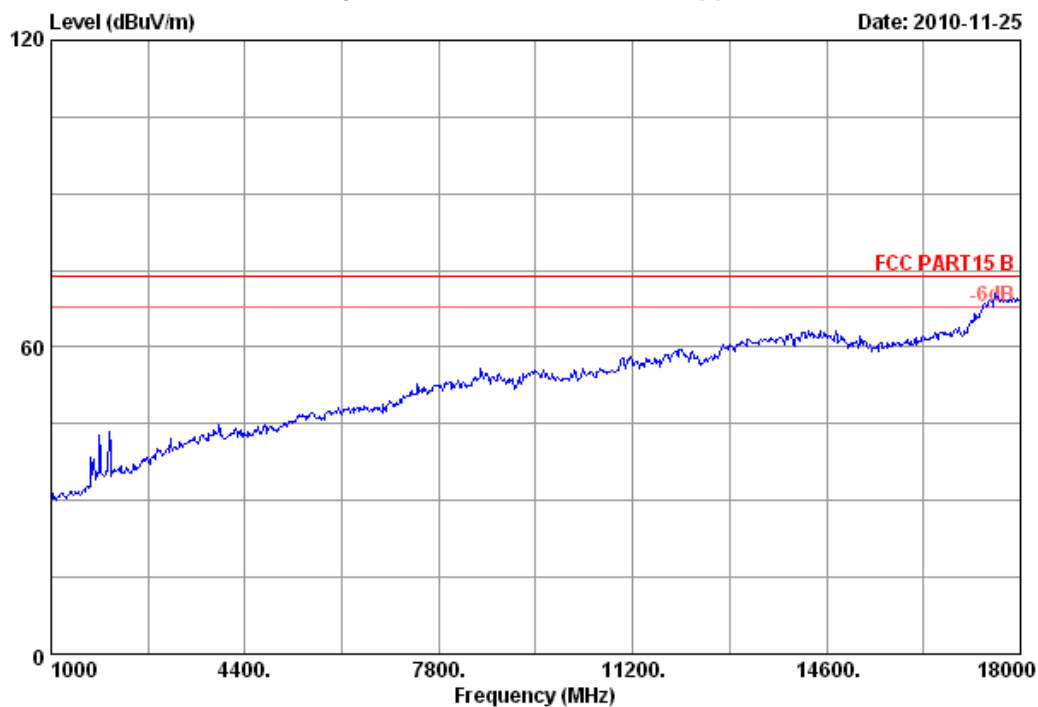
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Test Frequency: Above 1GHz

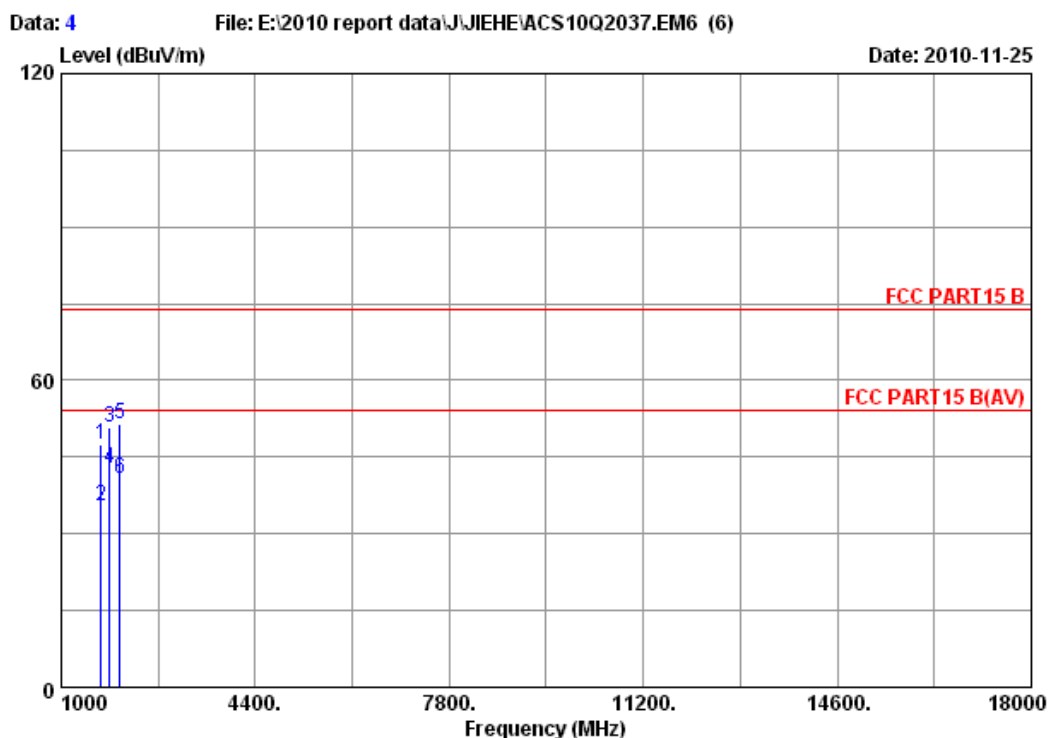
Data: 3

File: E:\2010 report data\JJIEHE\ACS10Q2037.EM6 (6)

Date: 2010-11-25



Site no.	: 10m Chamber Test Site	Data no. :	3
Dis. / Ant.	: 3m 3115(0911)	Ant. pol. :	HORIZONTAL
Limit	: FCC PART15 B		
Env. / Ins.	: 23°C/54%	Engineer :	Leo-Li
EUT	: Mini PC	M/N:Giada	D2301
Power	: DC 19V Adapter Input AC 120V/60Hz		
Test mode	: Running Burnin Test V5.3		
	DVI+HDMI:1920*1200@60Hz		

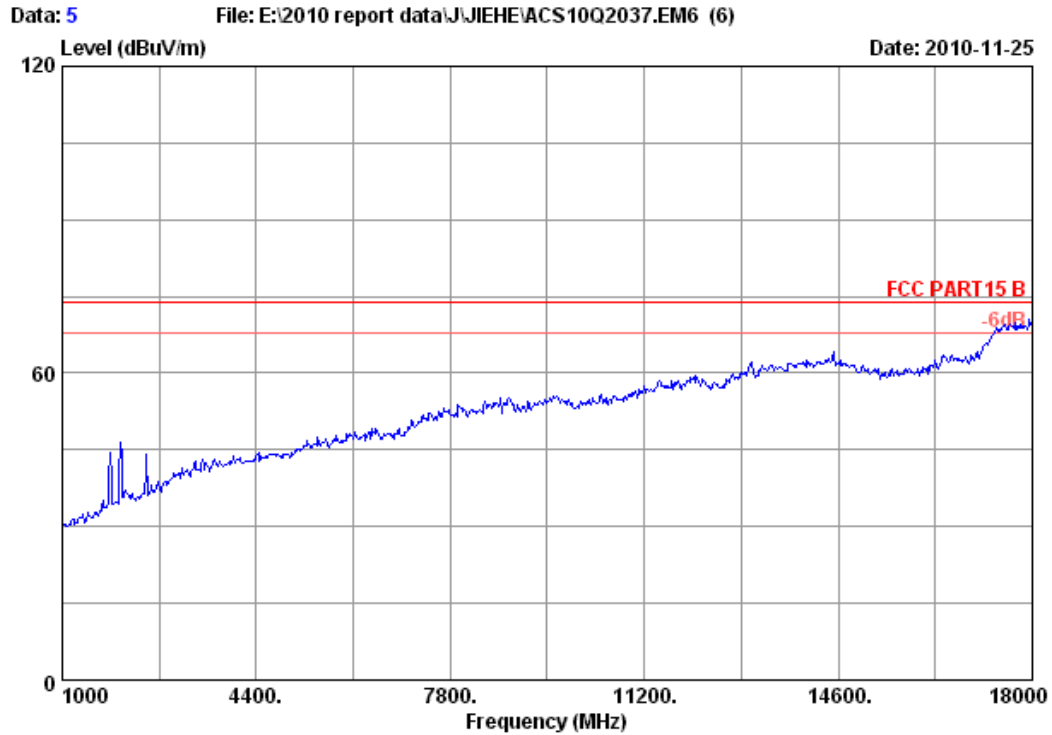


Site no. : 10m Chamber Test Site Data no. : 4
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : Mini PC M/N:Giada D2301
 Power : DC 19V Adapter Input AC 120V/60Hz
 Test mode : Running Burnin Test V5.3
 DVI+HDMI:1920*1200@60Hz

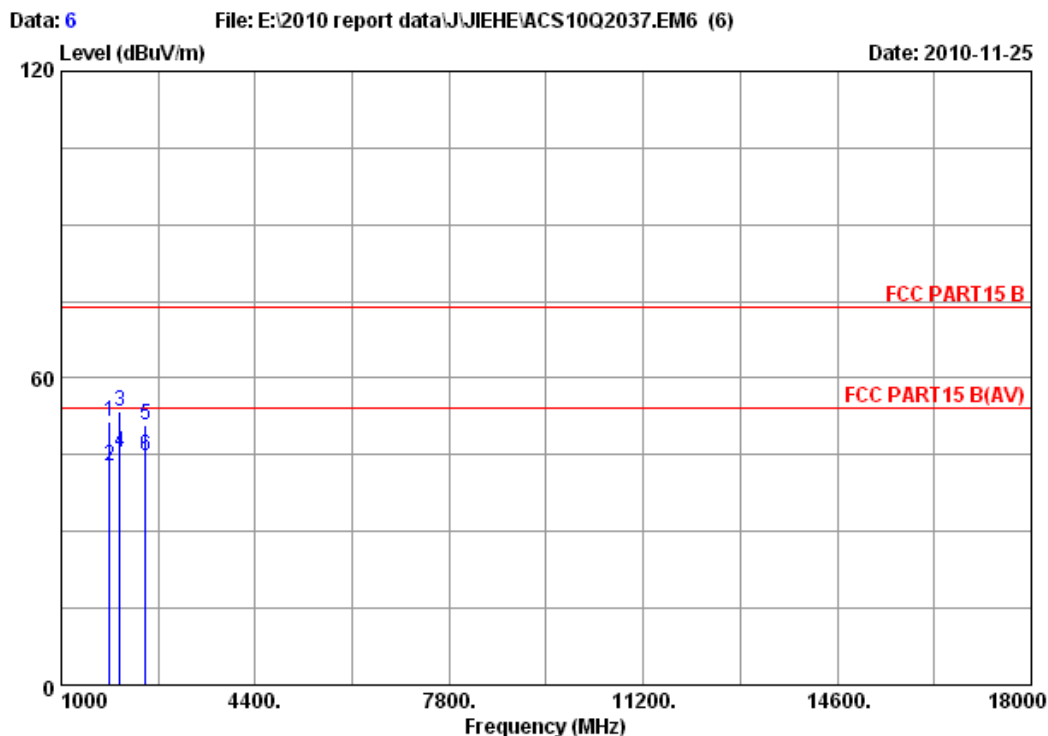
	Ant.	Cable	Amp.		Emission				
Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1697.000	27.52	6.07	36.89	50.69	47.39	26.61	Peak	
2	1697.000	27.52	6.07	36.89	38.74	35.44	18.56	Average	
3	1850.000	28.36	6.37	36.79	52.74	50.68	23.32	Peak	
4	1850.000	28.36	6.37	36.79	44.88	42.82	11.18	Average	
5	2020.000	29.21	6.71	36.69	52.29	51.52	22.48	Peak	
6	2020.000	29.21	6.71	36.69	41.51	40.74	13.26	Average	

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Test Site Data no. : 5
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : Mini PC M/N:Giada D2301
 Power : DC 19V Adapter Input AC 120V/60Hz
 Test mode : Running Burnin Test V5.3
 DVI+HDMI:1920*1200@60Hz



Site no. : 10m Chamber Test Site Data no. : 6
 Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
 Limit : FCC PART15 B
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : Mini PC M/N:Giada D2301
 Power : DC 19V Adapter Input AC 120V/60Hz
 Test mode : Running Burnin Test V5.3
 DVI+HDMI:1920*1200@60Hz

	Ant. Freq. (MHz)	Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1850.000	28.36	6.37	36.79	53.61	51.55	74.00	22.45	Peak
2	1850.000	28.36	6.37	36.79	44.77	42.71	54.00	11.29	Average
3	2020.000	29.21	6.71	36.69	54.28	53.51	74.00	20.49	Peak
4	2020.000	29.21	6.71	36.69	46.14	45.37	54.00	8.63	Average
5	2479.000	29.49	7.58	36.60	50.49	50.96	74.00	23.04	Peak
6	2479.000	29.49	7.58	36.60	44.38	44.85	54.00	9.15	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5. DEVIATION TO TEST SPECIFICATIONS

[NONE]