

FCC TEST REPORT

FCC ID NO. : OU4-QC101200

Applicant : **Xanboo Inc.**
400 Columbus Ave. Valhalla, New York, United States

Equipment Under Test (EUT) :

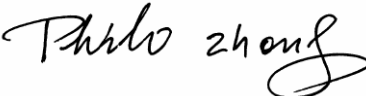
Product Name : Zigbee Coordinator

Model No. : QC101200

Standards : FCC Part 15 Subpart B

Date of Test : Mar. 06, 2008

Test Engineer : **Tiger Su**

Reviewed By : 

PERPARED BY:

Waltek Services (Shenzhen) Co., Ltd.

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2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15 : 2003	ANSI C63.4: 2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15 : 2003	ANSI C63.4: 2003	Class B	N/A

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4 General Information

4.1 Client Information

Applicant: **Xanboo Inc.**
Address of Applicant: 400 Columbus Ave. Valhalla, New York, United States
Manufacturer: RDI Technology (Shenzhen) Co., Ltd.
Address of Manufacturer: Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan, Shenzhen, P.R.C.

4.2 General Description of E.U.T.

Product Name: Zigbee Coordinator
Model No.: QC101200

4.3 Details of E.U.T.

Power Supply: USB Signal input

4.4 Description of Support Units

Compliance test was performed test in ON mode and connect to Notebook.

The customer requested FCC tests for a Zigbee Coordinator

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC – Registration No.: 759397**
Solid Industrial Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 759397, December 28, 2006.

4.6 Test Location

All Emissions tests were performed at:-

Solid Industrial (Shenzhen) Co., Ltd. at 333 Bulong Highway Buji Longgang, Shenzhen, Guangdong, China.

5 Equipment Used during Test

List Of Test Equipment For EMI

Equipment	Brand Name	Model	Cal. Int Months	Last Cal. Date
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3m Anechoic chamber

EMC Analyzer	Agilent	E7402A	12	2007-08
EMI Test Receiver	R&S	ESS	12	2007-08
Pre Amplifier	Anritsu	MH648A	12	2007-08
Bilog Antenna	SCHAFFNER	CBL6111C	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Signal Generator	R&S	SMG	12	2007-08
RF Selector	TOYO	NS4901A	-	-
Turn Disc	HD	DS4150S	-	-
Antenna Mast	HD	MA2400	-	-

EMI Shielded Room

Spectrum analyzer	ADVANTEST	R3261C	12	2007-08
EMI Test Receiver	R&S	ESS	12	2007-08
Pre Amplifier	Anritsu	MH648A	12	2007-08
LISN	R&S	ENV216	12	2007-08
LISN	Kyoritsu	KNW-407	12	2007-08
LISN	Kyoritsu	KNW-242C	12	2007-08
Absorbing Clamp	R&S	MDS-21	12	2007-08
Absorbing Clamp	R&S	MDS-21	12	2007-08
Absorbing Clamp	Kyoritsu	KT-20	12	-
Distortion Meter	MEGURO	MAK-6578A	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Oscilloscope	LEADER	LS1020	12	2007-08
Function	National	VP-7422A	12	2007-08

Generator				
Signal Generator	R&S	SMG	12	2007-08
RF Selector	TOYO	NS4000	-	-
RF Selector	TOYO	NS4900	-	-
Remote Controller	TOYO	MAC	-	-

Harmonic & Flicker Test

Signal Conditioning Unit	SCHAFFNER	CCN1000-1	12	2007-08
Signal Phase Impedance Network	SCHAFFNER	INA2152		
5KVA AC Power Source	SCHAFFNER	NSG1007		

List Of Test Equipment For EMS

Equipment	Brand Name	Model	Cal. Int Months	Last Cal. Date
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3m Anechoic chamber

EMC Analyzer	Agilent	E7402A	12	2007-08
EMI Test Receiver	R&S	ESS	12	2007-08
Pre Amplifier	Anritsu	MH648A	12	2007-08
Bilog Antenna	CHASE	CBL6111A	12	2007-08
Signal Generator	R&S	SMG	12	2007-08
Power Reflection Meter	R&S	NAP	12	2007-08
RF Power Amplifier	TOYO	AS300SSS	12	2007-08
Distortion Meter	HM-250	KNEWOOD	12	2007-08
Synthesized Function Generator	FC110	YOKOGAWA	12	2007-08
Noise Meter	MEGURO	MN-446A	12	2007-08
AM/FM Stereo Signal	Panasonic	VP-8122A	12	2007-08

Generator				
Oscilloscope	LEADER	LS1020	12	2007-10
Function Generator	National	VP-7422A	12	2007-08
Signal Generator	R&S	SMG	12	2007-08
Turn Disc	HD	DS4150S	-	-
Isotropic Monitor	Field AR	FM2000	-	-
Antenna Mast	HD	MA2400	-	-
RF Selector	TOYO	NS4901A	-	-
Remote Controller	TOYO	MAC	-	-

TEST Room

Fast Transient Burst Generator	SCHAFFENR	NSG3025	12	2007-08
AC Power Supply	KIKUSUI	PCR2000L	12	2007-10
Electrostatic Discharge Simulator	EMTEST	Dito	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Function Generator	National	VP-7422A	12	2007-08
AC Power Supply	KIKUSUI	PCR4000L	12	2007-08

Shielded Room

Spectrum analyzer	ADVANTEST	R3261C	12	2007-08
EMI Test Receiver	R&S	ESS	12	2007-08
Absorbing Clamp	R&S	MDS-21	12	2007-08
Milli-Voltmeter	R&S	URV3	12	2007-08
Absorbing Clamp	Kyoritsu	KT-20	12	-
Signal Generator	R&S	SMG	12	2007-08
Oscilloscope	LEADER	LS8022	12	2007-08
Audio Analyzer	R&S	UPA	12	2007-08
Milli-voltmeter	R&S	URV5	12	2007-08
Filter Unit	TOYO	NF8900	12	2007-08
RF Power Amplifier	EN	411LA	12	2007-08
RF Selector	TOYO	NS8900	-	-

RF Selector	TOYO	NS4000	-	-
RF Selector	TOYO	NS4900	-	-
Injection&Output Network for Audio Output	Kyoritsu	KSI-5104U	-	-
Mains Rejection Network	Kyoritsu	KSI-2004S	-	-
Mains Rejection Network	Kyoritsu	KSI-2005	-	-
Coupling Network”L”	Erika Fiedler	-	-	-
Coupling Network”A”	Erika Fiedler	-	-	-
Coupling Network”M”	Erika Fiedler	-	-	-
Rco Network(8Ω)	Erika Fiedler	-	-	-
Mains Filter	Erika Fiedler	-	-	-

Common Used Equipment

Notebook	Sony	VGN-SZ22CP/B	N/A	N/A
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5.1 Conduction Emissions, 0.15MHz to 30MHz

Test Requirement:	FCC Part 15 ,Paragraph 15.207
Test Method:	Based on ANSI C63.4: 2003
Test Date:	Mar. 06, 2008
Frequency Range:	150kHz to 30MHz
Class/Severity:	B
Limit:	66-56 dB μ V/m between 0.15MHz & 0.5MHz 56 dB μ V/m between 0.5MHz & 5MHz 60 dB μ V/m between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

5.1.1 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

EUT Operation :

Compliance test was performed in ON mode and connect to Notebook.

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

Owing to the DC operation of EUT, this test is not performed.

5.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part 15, Paragraph 15.109
Test Method:	ANSI C63.4: 2003
Test Date:	Mar.06, 2008
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Detector:	Peak for pre-scan (120kHz resolution bandwidth) Quasi-Peak if maximised peak within 6dB of limit

5.2.1 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

EUT Operation :

Compliance test was performed in ON mode and connect to Notebook.

5.2.2 EUT Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003.

5.2.3 Spectrum Analyzer Setup

According to FCC Part 15 Class B Rules, the system was tested to 1000 MHz.

Start Frequency	30 MHz
Stop Frequency	1000 MHz
Sweep Speed	Auto
IF Bandwidth.....	100KHz
Video Bandwidth	1 MHz
Quasi-Peak Adapter Bandwidth	120 kHz
Quasi-Peak Adapter Mode.....	Normal
Resolution Bandwidth	1MHz

5.2.4 Test procedure

For the radiated emissions test, since the EUT does not have a power source, there was no connection to AC outlets.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data was recorded in the peak and average detection mode.

The EUT was under normal mode during the final qualification test and the configuration was used to represent the worst case results.

5.2.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Class B L}$$

5.2.6 Summary of Test Results

According to the data in section 5.2.6, the EUT complied with the FCC Part 15 Class B standards.

polarity	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	()	(cm)
Horizontal	176.8953	20.74	9.46	30.20	43.50	-13.30	270	1.5
Horizontal	235.9622	21.48	11.91	33.39	46.00	-12.61	279	1.4
Horizontal	297.5459	20.23	13.01	33.24	46.00	-12.76	260	1.4
Vertica	117.6815	21.67	10.89	32.56	43.50	-10.94	274	1.3
Vertica	176.8953	23.15	9.46	32.61	43.50	-10.89	260	1.4
Vertica	209.3924	19.97	10.87	30.84	43.50	-12.66	255	1.5

5.3 Photographs - Test Setup

5.3.1 Radiated Emissions Test Setup



6 Photographs - Constructional Details

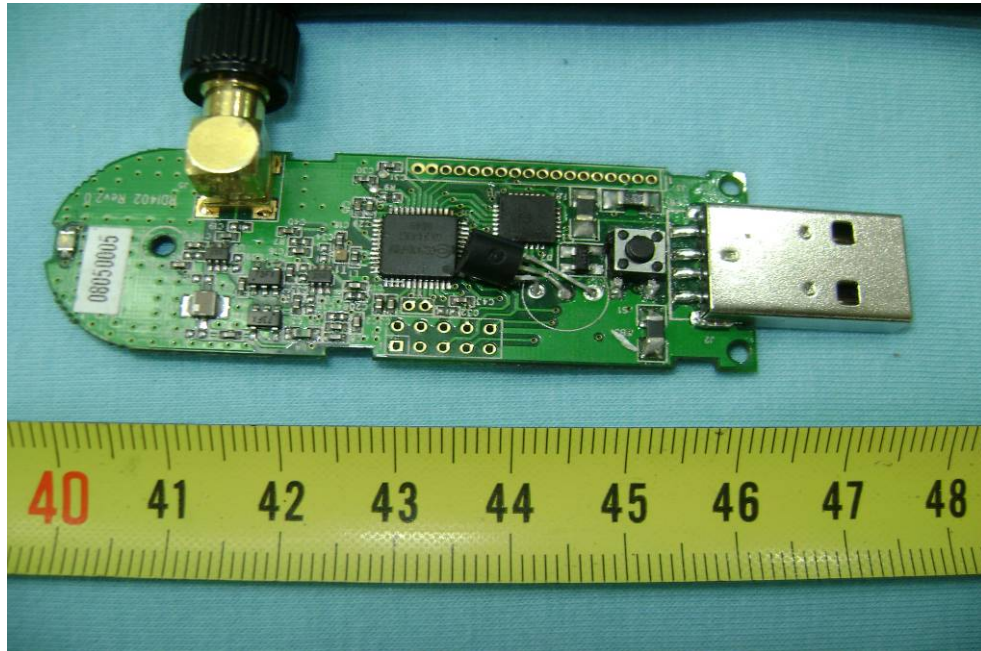
6.1 EUT - Front View



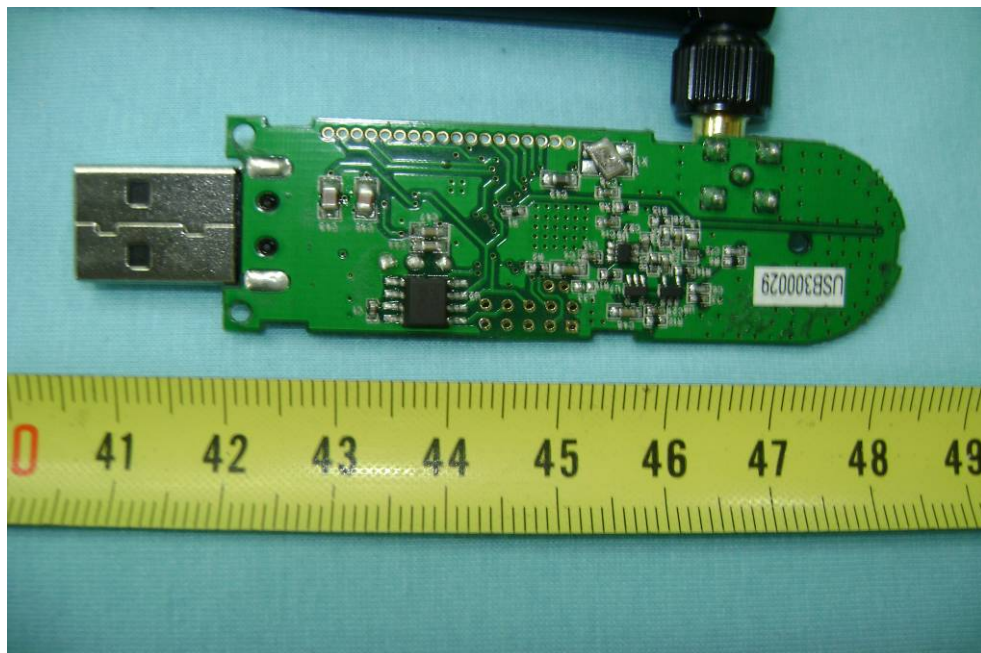
6.2 EUT - Back View



6.3 PCB – Front View



6.4 PCB - Back View



7 FCC ID Label

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)this device may not cause harmful interference,and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT
EUT Top View/ proposed FCC Mark Location

