

**Exhibit B Test Report
Xanboo/Core Technologies
Repeater XRT750**

Project Number: 05230-10

Prepared for:

Xanboo/Core Technologies

115 West 30th Street
New York, NY 10001

By

Professional Testing (EMI), Inc.
1601 FM 1460, Suite B
Round Rock, Texas 78664

April 2005

CERTIFICATION
Electromagnetic Interference Test Report
Xanboo/Core Technologies
Repeater XRT750

Table of Contents

Title Page	1
Table of Contents	2
Certificate of Compliance	3
1.0 EUT Description	4
1.1 Applicable Documents	4
1.2 EUT Operation	4
2.0 Electromagnetic Emissions Testing	5
2.1 Conducted Emissions Measurements	5
2.1.1 Test Procedure	5
2.1.2 Test Criteria	5
2.1.3 Test Results	5
2.2 Radiated Emissions Measurements	6
2.2.1 Test Procedure	6
2.2.2 Test Criteria	6
2.2.3 Test Results	7
3.0 Occupied Bandwidth Measurements	7
3.1 Test Procedure	7
3.2 Test Criteria	7
3.3 Test Results	7
4.0 Antenna Requirement	8
4.1 Evaluation Procedure	8
4.2 Evaluation Criteria	8
4.3 Evaluation Results	8
5.0 Modifications to Equipment	8
6.0 List of Test Equipment	8
FIGURES	
Figure 1 Conducted Emissions Test Setup	10
Figure 2 Radiated Emissions Test Setup	11
APPENDICES	
Appendix A Emissions Data	12

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF PROFESSIONAL TESTING (EMI), INC.



Certificate Of Compliance

Applicant: Xanboo/Core Technologies
Applicant's Address: 115 West 30th Street
New York, NY 10001
FCC ID: OU4-XRT750
IC Number: 4576A-XRT750
Project Number: 05230-10
Test Dates: October 20-21, 2004 April 27, 2005

I, Michael A. Royer, for Professional Testing (EMI), Inc., being familiar with the FCC and IC rules and test procedures have reviewed the test setup, measured data and this report. I believe them to be true and accurate.

The **Xanboo/Core Technologies, Repeater XRT750** was tested to and found to be in compliance with FCC Part 15 Subpart C and RSS 210 6.1.1 for an Intentional Radiator.

The highest emissions generated by the above equipment are listed below:

	<u>Frequency (MHz)</u>	<u>Level (dBμV/m)</u>	<u>Limit (dBμV/m)</u>	<u>Margin (dB)</u>
Fundamental	418 (peak)	76.4	92.3	-15.9
	418 (avg)	63.8	72.3	-8.5
Spurious	1672	47.9	54	-8.6
Conducted	0.325	47.8	59.6	-11.8
Occupied Bandwidth	192 (kHz)			

Michael A. Royer, BSEE, NCE
EMC Department Manager

This report has been reviewed and accepted by Xanboo/Core Technologies. The undersigned is responsible for ensuring that **Xanboo/Core Technologies, Repeater XRT750** will continue to comply with the FCC and IC rules.

1.0 EUT Description

Using store and forward the repeater is used to extend the range of certain sensors. To accomplish this, each packet received is demodulated, decoded, and processed to determine if action is required. The repeater sends a “keep alive” packet every 15 minutes for system integrity purposes. The maximum system packet length is from the Home and Away module, which has a length of 23.3 mS. The minimum period between transmissions is 10 seconds. Apart from the above “keep alive” function, the following conditions are required for the repeater to transmit.

1. The repeater only repeats the signal of the device that it has been tethered to, not any device or any Xanboo system device.
2. The repeater only repeats if the main controller fails to acknowledge the tethered device’s original transmission.
3. The repeater will not repeat Xanboo packets intended for controllers other than the controller that it is registered to.
4. Repeaters will not function in cascade style. Two or more repeaters cannot be used in series to extend the system range.
5. A ten second watchdog timer prevents transmissions less than 10 seconds apart.

The system tested consisted of the following:

Manufacturer & Model	FCC/IC Number	Description
Xanboo/Core Technologies, Repeater XRT750	OU4-XRT750 4576A-XRT750	Repeater
System Peripherals		
AC/DC converter		Power supply

1.1 Applicable Documents

Guidelines	FCC Rule Parts Part 15	IC Rule Parts RSS-210 Issue 5
Transmitter Characteristics	15.231e	6.1.1(e), 6.1.1(c)
Spurious Radiated Power	15.205, 15.209, 15.231e	6.3
Pwerline Conducted Limit	15.207	6.6
Antenna Requirement	15.203	5.5
Receiver Requirement	15.105, 15.107, 15.109	7.3, 7.4

1.2 EUT Operation

The EUT was operated in continuous transmit mode at max power to measure fundamental, harmonics, and spurious radiation.

2.0 Electromagnetic Emissions Testing

Professional Testing (EMI), Inc. (PTI), follows the guidelines of NIST for all uncertainty calculations, estimates and expressions thereof for EMC testing.

2.1 Conducted Emissions Measurements

Conducted emissions measurements were made on the Class II Power Supply mains terminals of the Repeater XRT750 to determine the line-to-ground radio noise emitted from each power-input terminal. Conducted emissions measurements on the mains terminals were performed at Professional Testing, located in Round Rock, Texas.

2.1.1 Test Procedure

The EUT was configured and operated in a manner consistent with typical applications. The EUT power cord in excess of one meter was folded back and forth forming a bundle 30 to 40 cm long in the approximate center of the cable. Power supply cords for the peripheral equipment were powered from an auxiliary LISN. Excess interface cable lengths were separately bundled in a non-inductive arrangement at the approximate center of the cable with the bundle 30 to 40 centimeters in length. The conducted emissions were maximized, by varying the operating states and configuration of the EUT.

The tests were performed in a 12' x 16' RayProof modular shielded room. The EUT was placed on a non-metallic table 0.4 meters from a vertical metal reference plane and 0.8 meters from a horizontal metal reference plane.

The measurements were taken using a Line Impedance Stabilization Network (LISN). A Spectrum Analyzer with a measurement bandwidth of 9 kHz was used to record the conducted emissions measurements. The configuration of the shielded room showing the location of the EUT and the measurement equipment is given as Figure 1.

2.1.2 Test Criteria

The FCC 15.207 and RSS-210 6.6 conducted emissions limits are given below.

Frequency (MHz)	Conducted Limits (dBuV)	
	Average	Quasi-Peak
0.15 – .50	66-56	56 - 46
.50 - 5	56	46
5 – 30	60	50

The lower limit shall apply at the transition frequency.

2.1.3 Test Results

The conducted emissions data is included as Appendix A. The conducted emissions generated by the Repeater XRT750 as measured on the Class II Power Supply mains terminals were found to be below FCC 15.207 and RSS 210 6.6 maximum emissions criteria.

2.2 Radiated Emissions Measurements

Radiated emission measurements were made of the Fundamental and Spurious Emission levels for Repeater XRT750. Measurements of the occupied bandwidth were also made for the EUT.

Measurements of the maximum emission levels for the fundamental and the spurious/harmonic emissions of the Repeater XRT750 were made at the Professional Testing "Open Field" Site 3, located in , Texas to determine the radio noise radiated from the EUT. A "Description of Measurement Facilities" has been submitted to the FCC and approved pursuant to Section 2.948 of CFR 47 of the FCC rules.

Tests of the fundamental for the device were performed to determine the worst case polarization of the devices. The fundamental emissions of the device were measured with the antenna of the device in the three orthogonal axes.

2.2.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a motorized turntable which allows 360 degree rotation. For measurements of the fundamental signal, a measurement antenna was positioned at a distance of 3 meters as measured from the closest point of the EUT. For spurious/harmonic measurements above 1 GHz, the measurement antenna was placed 3 meter from the EUT. The radiated emissions were maximized by rotating the EUT.

A Spectrum Analyzer with peak detection was used to find the maximums of the radiated emissions during the variability testing. A drawing showing the test setup is given as Figure 2.

2.2.2 Test Criteria

The table below shows FCC Part 15.231e and RSS 210 6.1.1(e) radiated limits for an intentional radiator operating at 418 MHz band. FCC Part 15.231e allows the use of its spurious limit except for the restricted bands outlined in 15.205. The measurements of the harmonic were performed to the 10th harmonic of the fundamental. The reference distance for each limit is also shown in this table.

Frequency MHz	Test Distance (Meters)	Field Strength	
		(uV/m)	(dBuV/m)
Fundamental (418)	3	4133	72.3
Harmonics (2 through 10)	3	413.3	52.3
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0

Note: Fundamental and Harmonic Limits are expressed in Average field strengths. The spurious limits are expressed in Quasi-Peak.

2.2.3 Test Results

The radiated test data for the fundamental is included in Appendix A. Peak detection was used during the test and the corrected signal level was then averaged to account for the duty cycle of the pulsed transmission of the 418 MHz transmitter. The radiated emission test data for the harmonics is included in Appendix A. The radiated emissions generated by the Repeater XRT750 are below the FCC Part 15.231e and RSS 210 6.1.1(e).

3.0 Occupied Bandwidth Measurements

Measurements of the occupied bandwidth for the fundamental signals were made at Professional Testing Round Rock, Texas site. All measurements were made in a controlled indoor environment in a configuration which did not present measurement distortion or ambient interference.

3.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the floor. The table was rotated to an angle which presented the highest signal level. The occupied bandwidth was based on a 20 dB criteria (20 dB down either side of the emission from the peak emission). A drawing showing the test setup is given as Figure 1.

3.2 Test Criteria

According to FCC Part 15.231e and RSS 210 6.1.1(c), the bandwidth of the emission shall not be wider than 0.25 % of the center frequency for the devices operating above 70 MHz and below 900 MHz. The limit is 1.045 MHz for the transmitter working at 418 MHz. Measurement of the occupied bandwidth was performed to verify that the emission bandwidth from the EUT did not exceed 1.045 MHz

3.3 Test Results

The occupied bandwidth test data is included in Appendix B. The occupied bandwidth for the fundamental frequency 418MHz is 192 kHz. This occupied bandwidth complies with the FCC and IC requirement.

4.0 Antenna Requirement

An analysis of the Repeater XRT750 was performed to determine compliance with FCC Section 15.203 and RSS 210 5.5 of the Rules. This section requires specific handling and control of antennas used for devices subject to regulations.

4.1 Evaluation Procedure

The structure and application of the Repeater XRT750 was analyzed with respect to the rules. The antenna is an external antenna, which is molded as part of the EUT housing and is not accessible to the user. An auxiliary antenna port is not present.

4.2 Evaluation Criteria

Section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

- (a) Antenna must be permanently attached to the unit.
- (b) Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

4.3 Evaluation Results

The Repeater XRT750 meets the criteria of this rule by virtue of having an external antenna permanently attached to the unit. The EUT is therefore compliant.

5.0 Modifications to Equipment

No modifications were made on the EUT for testing.

6.0 List of Test Equipment

A list of the test equipment utilized to perform the testing is given below. The date of calibration is given for each.

<u>Device</u>	<u>Description</u>	<u>Calibration Due</u>
EMCO 3115	Horn Antenna	July 2005
MITEQ AFS4-00101800-40-10P	Preamp	July 2005
HP8566B	Spectrum Analyzer	March 2006
HP85650	Quasi-peak Adapter	March 2006
Tektronix 2706	Preselector	March 2006
Compliance Design B-100	Biconical Antenna	December 2004
EMCO 3146	Log Periodic Antenna	July 2005
HP8447D	Preamplifier	November 2005

FIGURE 1: Conducted Emissions Test Setup

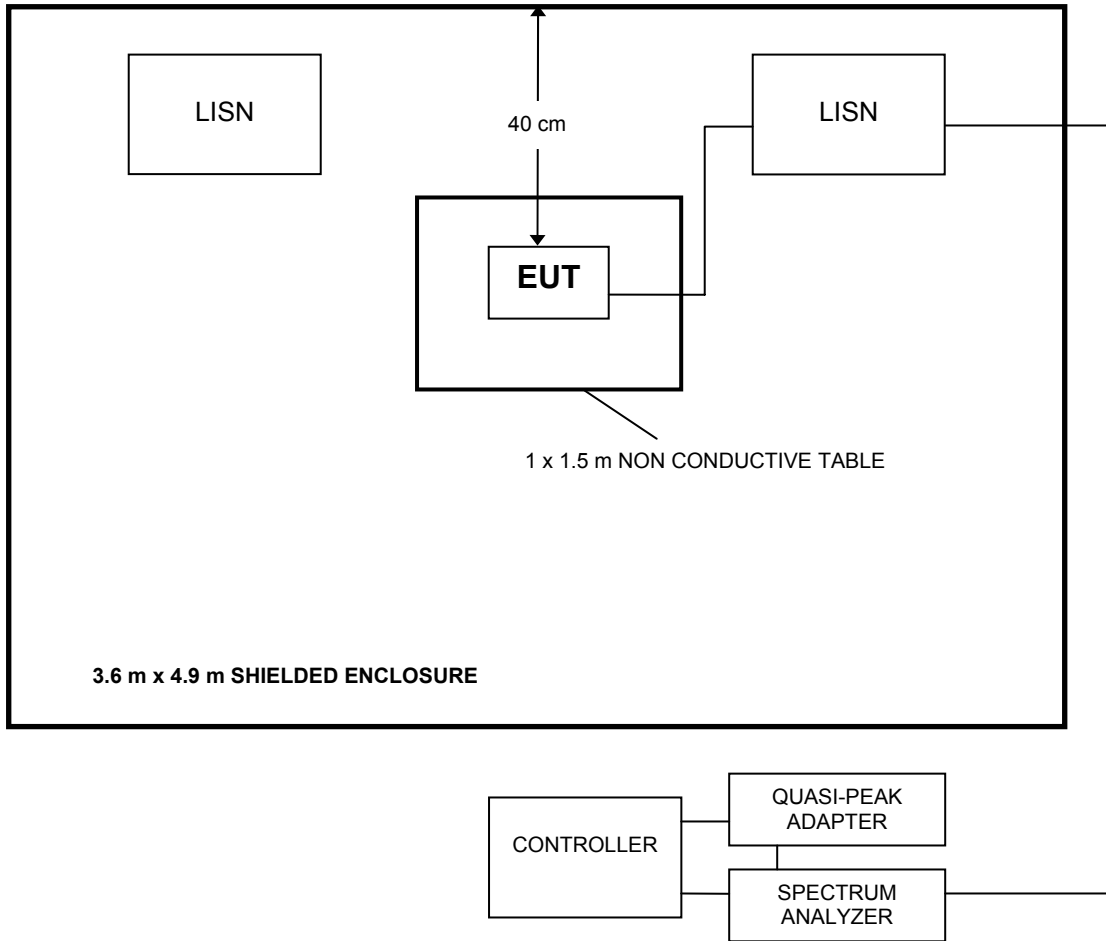
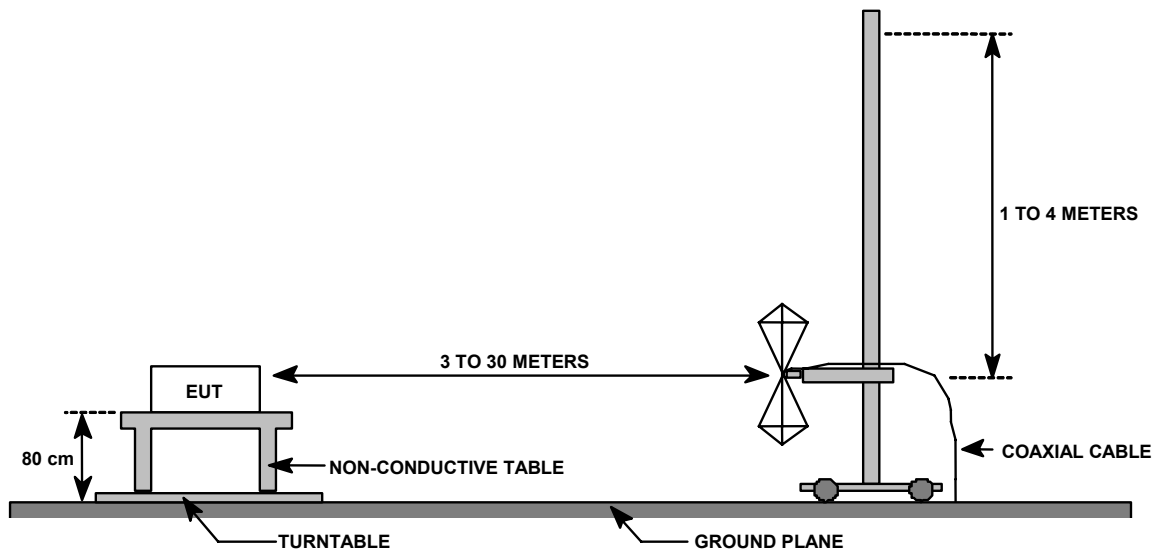


FIGURE 2: Radiated Emissions Test Setup



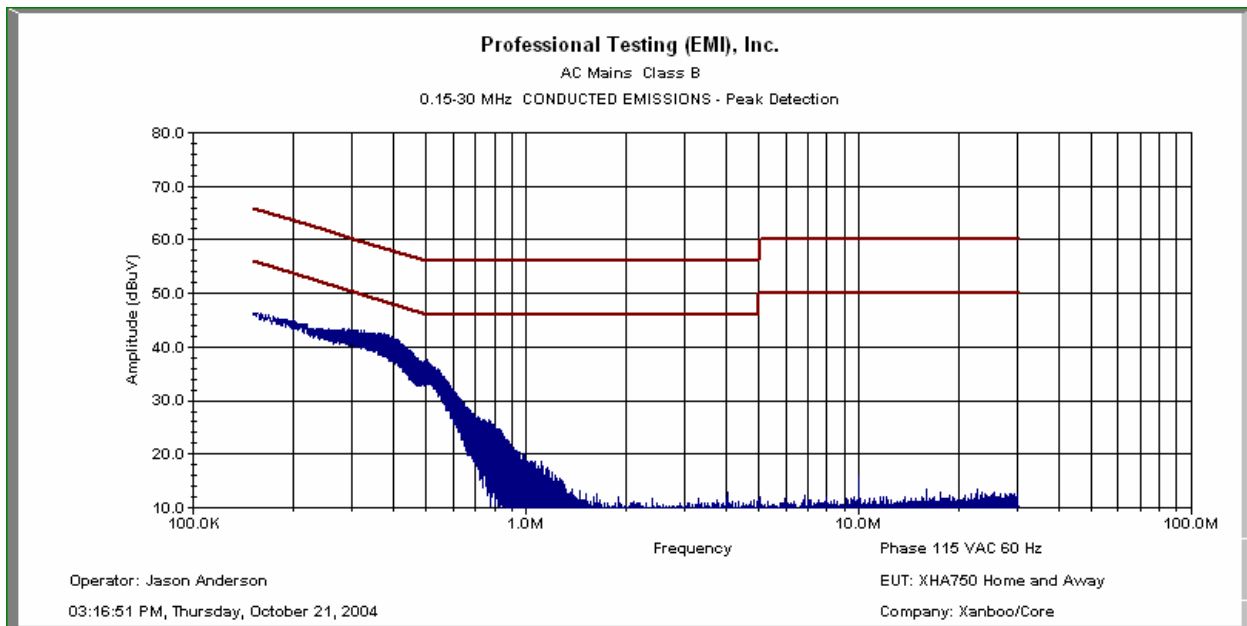
APPENDIX A EMISSIONS DATA SHEET

Conducted Emissions Data Sheet
AC Mains Class B
Xanboo/Core Technologies
Repeater XRT750

Test Date: October 21, 2004

Line Selection: Phase

FREQ INPUT MHz	READING INPUT dBuV	CORR FACTOR dB	CORR READING dBuV	Limit dBuV	Margin dB	Detector Function
0.15	48.8	3.1	51.9	66.0	-14.1	Quasi-peak
0.15	13.3	3.1	16.4	56.0	-39.6	Average
0.325	44.7	3.1	47.8	59.6	-11.8	Quasi-peak
0.325	6.4	3.1	9.5	49.6	-40.1	Average
0.45	37.7	3.2	40.9	56.9	-16.0	Quasi-peak
0.45	5.8	3.2	9.0	46.9	-37.9	Average
1	24.2	3.3	27.5	56.0	-28.5	Quasi-peak
1	5.3	3.3	8.6	46.0	-37.4	Average
10	24.2	3.8	28.0	60.0	-32.0	Quasi-peak
10	7	3.8	10.8	50.0	-39.2	Average
29	23.9	4.6	28.5	60.0	-31.6	Quasi-peak
29	5.3	4.6	9.9	50.0	-40.2	Average



The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

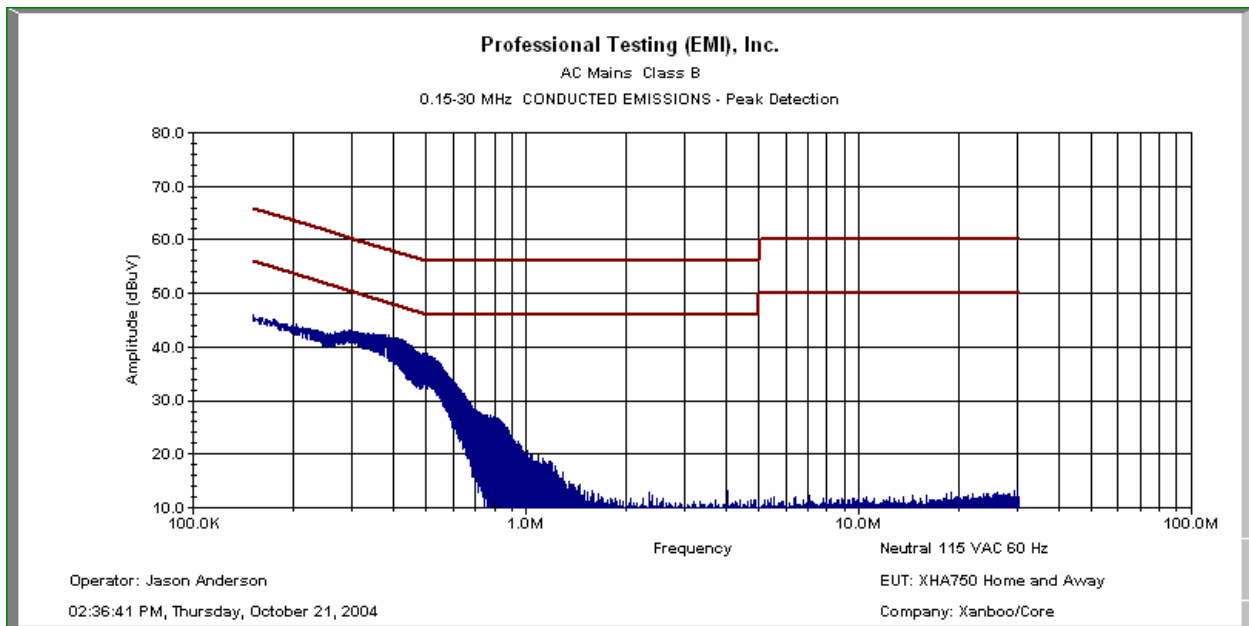
TEST ENGINEER: Jason Anderson

Conducted Emissions Data Sheet
AC Mains Class B
Xanboo/Core Technologies
Repeater XRT750

Test Date October 21, 2004

Line Selection: Neutral

FREQ INPUT MHz	READING INPUT dBuV	CORR FACTOR dB	CORR READING dBuV	Limit dBuV	Margin dB	Detector Function
0.15	33.3	3.1	36.4	66.0	-29.6	Quasi-peak
0.15	13.4	3.1	16.5	56.0	-39.5	Average
0.3	29.1	3.1	32.2	60.2	-28.0	Quasi-peak
0.3	6.4	3.1	9.5	50.2	-40.7	Average
0.5	14.7	3.2	17.9	56.0	-38.1	Quasi-peak
0.5	6	3.2	9.2	46.0	-36.8	Average
1	14.5	3.3	17.8	56.0	-38.2	Quasi-peak
1	5.3	3.3	8.6	46.0	-37.4	Average
10	14.6	3.8	18.4	60.0	-41.6	Quasi-peak
10	6.1	3.8	9.9	50.0	-40.1	Average
29	14.8	4.5	19.3	60.0	-40.7	Quasi-peak
29	6.4	4.5	10.9	50.0	-39.1	Average



The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

TEST ENGINEER: Jason Anderson

**Radiated Data Sheet
Fundamental
Xanboo/Core Technologies
Repeater XRT750
Peak Detection RBW =100 kHz**

Test Date: April 27, 2005
Measurement Distance (Meters): 3

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
418	275	2.5	54.2	0.0	16.1	6.2	76.4	92.3	-15.9	Peak
418	275	2.5	41.6	0.0	16.1	6.2	63.8	72.3	-8.5	Average

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
418	320	2.5	53.6	0.0	16.1	6.2	75.8	92.3	-16.5	Peak
418	320	2.5	39.9	0.0	16.1	6.2	62.1	72.3	-10.2	Average

The average is calculated using a correction factor of -12.6 dB. The calculation can be found in Appendix A.

TEST ENGINEER: Jason Anderson

**Radiated Data Sheet
Spurious and Harmonics
Xanboo/Core Technologies
Repeater XRT750
Peak Detection**

RBW=100kHz/<1GHz RBW=1MHz/>1GHz

Test Date: April 27, 2005
Measurement Distance (Meters): 3

Vertical

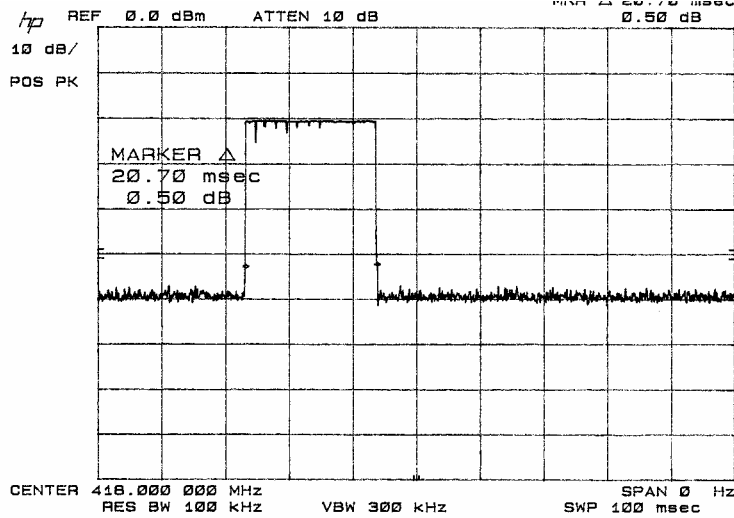
Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
836	275	2.5	2.1	0.0	22.4	9.7	34.2	52.3	-18.1	Peak
1254	190	1.5	45.4	29.3	24.4	3.4	43.9	54	-10.1	Peak
1672	190	1.5	47.9	32.7	26.0	4.1	45.4	54	-8.6	Peak
2090	noise	floor	40.5	34.1	27.7	4.8	39.0	54	-15.0	Peak
2508	noise	floor	39.4	34.9	28.3	5.5	38.3	54	-15.7	Peak
2926	noise	floor	41.2	34.8	30.3	5.9	42.7	54	-11.3	Peak

Horizontal

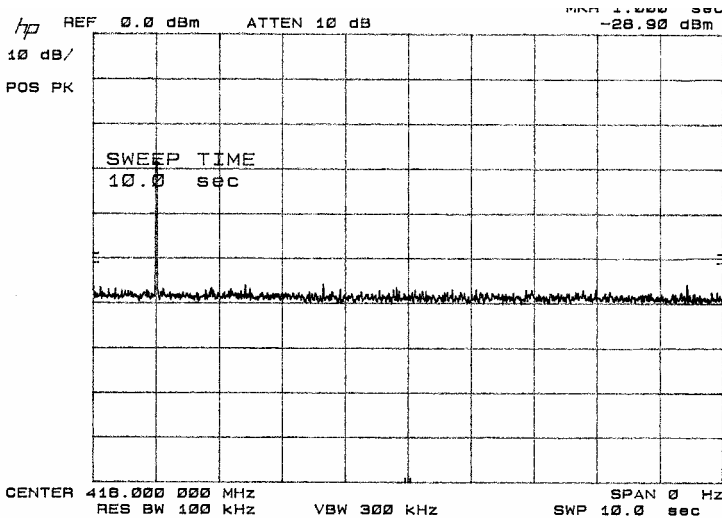
Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
836	47	2.5	1.7	0.0	22.4	9.7	33.8	52.3	-18.5	Peak
1254	130	1.5	44.1	29.3	24.4	3.4	42.6	54	-11.4	Peak
1672	130	1.5	42.7	32.7	26.0	4.1	40.2	54	-13.8	Peak
2090	noise	floor	40.5	34.1	27.7	4.8	39.0	54	-15.0	Peak
2508	noise	floor	39.4	34.9	28.3	5.5	38.3	54	-15.7	Peak
2926	noise	floor	41.2	34.8	30.3	5.9	42.7	54	-11.3	Peak

TEST ENGINEER: Jason Anderson

Pulse Datasheet Xanboo/Core Technologies Repeater XRT750



Note: Maximum duty cycle cover letter states maximum duty cycle to be 23.3 mS with encrypted packet.



Average Formula

$$Average.Correction = 20 * \log\left(\frac{pos.edge.width}{comp.period.width}\right)$$

$$Average = Peak - Average.Correction$$

Average Calculation

$$Average.Correction = 20 * \log\left(\frac{23.3}{100}\right) \approx 12.6dB$$

$$Average \approx Peak - 12.6dB$$

Occupied Bandwidth Datasheet
Xanboo/Core Technologies
Repeater XRT750

