GIANT TELECOM LTD.

Application
For
Certification

Internet Radio Player with WiFi

(FCC ID: RAQIT3500)

SZ09080395-1
Billy Li
Mar 1, 2010

TRF No.: FCC 15C_PC_a
FCC ID: RAQIT3500

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INTERTEK TESTING SERVICES

LIST OF EXHIBITS

Exhibit type	File Description	filename
Test Report	Test Report	report.pdf
Test Setup Photos	Radiated & Conducted Emission	config photos.pdf
Test Report	Conducted Emission Test Result	conduct.pdf
External Photos	External Photo	external photos.pdf
Internal Photos	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
ID Label/Location Info	Label Artwork and Location	label.pdf
Users Manual	User Manual	manual.pdf
Cover Letter	Letter of Agency	letter of agency.pdf

INTERTEK TESTING SERVICES

MEASUREMENT / TECHNICAL REPORT

GIANT TELECOM LTD. – MODEL: IT3500

FCC ID: RAQIT3500

Mar 1, 2010

This report concerns (check one:) Original Grant ___X___ Class II Change _____

Equipment Type: JBP-Class B Computing Device Peripheral

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes _____ No ___X___

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date
of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes _____ No ___X___

If no, assumed Part 15, Subpart C for intentional radiator – the new 47 CFR [10-1-08 Edition] provision.

Report prepared by:

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Appendix Ehibits of Application for Certification

EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The Equipment Under Test (EUT) is a Internet Radio Player with WiFi. It is an internet radio with SD Card, internal Memory play function and data transfer function. The device is powered by an input AC 100-240V, 50/60Hz 0.35A, Output 5.0V, 2000mA adapter.

1.2 Related Submittal(s) Grants

This is an application for certification of a computer peripheral.

The device complies with ICES-003 (Issue 4) requirements. The test results in FCC test report are deemed satisfactory evidence of compliance with Industry Canada Interference-Causing equipment Standard ICES-003.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). Radiated emission measurement was performed in Semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

1.4 Test Facility

The Semi-anechoic chamber and conducted measurement facility used to collect the radiated data is **Interterk Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2003).

The device is powered by an input AC 100-240V, 50/60Hz 0.35A, Output 5.0V, 2000mA adapter.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. The step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

The frequency range from 30MHz to 1GHz was searched for spurious emissions from the device. Only those emissions reported were detected. All other emissions were at least 20 dB below the applicable limits.

2.2 EUT Exercising Software

There was no special software to exercise the device.

2.3 Special Accessories

The device is tested with an adapter with ferrite bead. They are marked together with the device.

2.4 Equipment Modification

Any modifications installed previous to testing by GIANT TELECOM LTD. will be incorporated in each production model sold / leased in the United States. No modifications were installed by Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch.

2.5 Measurement Uncertainty

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

2.6 Support Equipment List and Description

This product was tested in the following configuration:

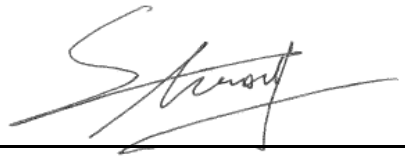
Refer List:

Description	Manufacturer	Model No.
Test PC	BIM	X60
Hard Disk	Smart.drive	HD3-SU2FW
USB Cable	Smart.drive	Length 155cm
1394 Cable	Smart.drive	Length 180cm
SD Card	Panasonics	1G/ KAPWR1514147428

All the items listed under section 2.0 of this report are

Confirmed by:

Shawn Xing
Assistant Manager
Intertek Testing Services Shenzhen Ltd.
Kejiyuan Branch
Agent for GIANT TELECOM LTD.



Signature

Mar 1, 2010 *Date*

EXHIBIT 3

EMISSION RESULTS

3.0 Emission Results

Data is included worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

3.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$FS = RA + AF + CF - AG + PD + AV$

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in –dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$FS = RA + AF + CF - AG + PD + AV$

3.1 Field Strength Calculation (cont'd)

Example

Assume a receiver reading of 62.0dBμV is obtained. The antenna factor of 7.4dB and cable factor of 1.6dB is added. The amplifier gain of 29dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0dB, and the resultant average factor was −10dB. The net field strength for comparison to the appropriate emission limit is 32dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0dBμV
AF = 7.4dB
CF = 1.6dB
AG = 29.0dB
PD = 0dB

AV = −10dB

FS = 62 + 7.4 + 1.6 − 29 + 0 + (−10) = 32dBμV/m

Level in μV/m = Common Antilogarithm [(32dBμV/m)/20] = 39.8μV/m

3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
At
160.019MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: config photos.pdf.

3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 2.2dB margin

TEST PERSONNEL:

Signature

Billy Li Compliance Engineer
Typed / Printed Name

Mar 1, 2010
Date

Company: GIANT TELECOM LTD.
Date of Test: Mar 1, 2010
Model: IT3500
Worst Case Operating Mode: Data transfer (Download with SD Card)

Table 1

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	80.016	45.7	20.0	8.8	34.5	40.0	-5.5
Horizontal	160.003	48.2	20.0	10.9	39.1	43.5	-4.4
Horizontal	248.003	47.9	20.0	13.7	41.6	46.0	-4.4
Vertical	30.091	33.7	20.0	19.2	32.9	40.0	-7.1
Vertical	36.790	37.3	20.0	15.3	32.6	40.0	-7.4
Vertical	160.015	49.1	20.0	7.2	36.3	43.5	-7.2
Vertical	451.934	53.2	20.0	6.4	39.6	46.0	-6.4
Vertical	615.880	56.4	20.0	4.8	41.2	46.0	-4.8

NOTES: 1. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

2. Negative value in the margin column shows emission below limit.

3. All emissions are below the QP limit.

Test Engineer: Billy Li

Company: GIANT TELECOM LTD.
Date of Test: Mar 1, 2010
Model: IT3500
Worst Case Operating Mode: Internal Memory Play

Table 2

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	80.016	38.2	20.0	19.0	37.2	40.0	-2.8
Horizontal	160.003	45.0	20.0	15.3	40.3	43.5	-3.2
Vertical	57.319	45.3	20.0	10.0	35.3	40.0	-4.7
Vertical	63.950	34.8	20.0	21.4	36.2	40.0	-3.8
Vertical	159.980	29.4	20.0	23.7	33.1	43.5	-10.4
Vertical	600.360	35.8	20.0	27.0	42.8	46.0	-3.2

NOTES: 1. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

2. Negative value in the margin column shows emission below limit.

3. All emissions are below the QP limit.

Test Engineer: Billy Li

Company: GIANT TELECOM LTD.
Date of Test: Mar 1, 2010
Model: IT3500
Worst Case Operating Mode: SD Card Play

Table 3

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	80.007	46.3	20.0	10.5	36.8	40.0	-3.2
Horizontal	160.019	44.5	20.0	16.8	41.3	43.5	-2.2
Horizontal	240.000	35.8	20.0	19.8	35.6	46.0	-10.4
Vertical	36.790	36.9	20.0	16.7	33.6	40.0	-6.4
Vertical	62.980	33.9	20.0	18.6	32.5	40.0	-7.5
Vertical	231.760	44.5	20.0	12.2	36.7	46.0	-9.3
Vertical	600.360	34.9	20.0	24.7	39.6	46.0	-6.4

NOTES: 1. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

2. Negative value in the margin column shows emission below limit.

3. All emissions are below the QP limit.

Test Engineer: Billy Li

3.4 Conducted Emission Configuration Photograph

Worst Case Live-Conducted Configuration
at
27.080 MHz

For electronic filing, the worst case conducted emission configuration photograph is saved with filename: config photos.pdf.

3.5 Conducted Emission Data

Judgement: Passed by 10.5 dB margin

For electronic filing, the conducted emission test result is saved with filename: conduct.pdf

TEST PERSONNEL:

Signature

Billy Li, Compliance Engineer
Typed/Printed Name

Mar 1, 2010
Date

APPENDIX
EXHIBITS OF APPLICATION FOR CERTIFICATION