Shenzhen Huatongwei International Inspection Co., Ltd.
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MPE TEST REPORT

FCC Per 47 CFR 2.1091(b)

Report Reference No. ..... :	**TRE1312011102 R/C: 37910**
FCC ID. ..... :	**ZF3- LTL-5310MG**
Compiled by (position+printed name+signature)..:	File administrators Jerome Luo
Supervised by (position+printed name+signature)..:	Test Engineer Yuchao Wang
Approved by (position+printed name+signature)..:	Manager Wenliang Li
Date of issue ..... :	Jan 22, 2014
Testing Laboratory Name ..... :	**Shenzhen Huatongwei International Inspection Co., Ltd**
Address ..... :	Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Applicant's name ..... :	**Shenzhen Ltl Acorn Electronics Co., Ltd**
Address ..... :	2th floor, Building 8, ShiLing Industrial Park, XinWei, XiLi Town, Nanshan District, Shenzhen, Guangdong, China
Test specification ..... :	
Standard ..... :	**FCC Per 47 CFR 2.1091(b)**
	KDB447498 v05r02
TRF Originator ..... :	Shenzhen Huatongwei International Inspection CO., Ltd
Master TRF ..... :	Dated 2006-06

Test item description ..... :	Infrared Scouting Camera
Trade Mark ..... :	LTL ACORN
Manufacturer ..... :	**Shenzhen Ltl Acorn Electronics Co., Ltd**
Model/Type reference ..... :	Ltl-5310MG
Listed Models ..... :	/
Ratings ..... :	DC 6.00V2.0A
Modulation ..... :	GMSK for GPRS/EDGE
GPRS/ EGPRS Class	12
GPRS operation mode	Class B
Frequency	GSM850/ PCS1900
Result ..... :	**PASS**

MPE TEST REPORT

Test Report No. :	TRE1312011102	Jan 22, 2014 Date of issue

Equipment under Test	:	Infrared Scouting Camera
Model /Type	:	Ltl-5310MG
Listed Models	:	/
Applicant	:	**Shenzhen Ltl Acorn Electronics Co., Ltd**
Address	:	2th floor, Building 8, ShiLing Industrial Park, XinWei, XiLi Town, Nanshan District, Shenzhen, Guangdong, China
Manufacturer		**Shenzhen Ltl Acorn Electronics Co., Ltd**
Address	:	2th floor, Building 8, ShiLing Industrial Park, XinWei, XiLi Town, Nanshan District, Shenzhen, Guangdong, China

Test Result	PASS

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. SUMMARY

1.1. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

○	Power Cable	Length (m) :	/
		Shield :	/
		Detachable :	/
○	Multimeter	Manufacturer :	/
		Model No. :	/

1.2. Product Description

The **Shenzhen Ltl Acorn Electronics Co., Ltd.**'s Model:Ltl-5310MG or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

Name of EUT	Infrared Scouting Camera
Model Number	Ltl-5310MG
FCC ID	ZF3- Ltl-5310MG
Modilation Type	GMSK for GPRS/EGPRS
Antenna Type	External
Hardware version	Ltl-5310MG_V003
GSM/EDGE/GPRS	Supported GPRS/EDGE
Extreme temp. Tolerance	-30°C to +60°C
Extreme vol. Limits	5.10VDC to 6.90VDC (nominal: 6.00VDC)
GPRS Operation Frequency Band	GPRS850/EGPRS850/GPRS1900/EGPRS1900
GPRS operation mode	Class B
GPRS Multislot Class	12
EGPRS Multislot Class	12

1.3. NOTE

1. The EUT is a Infrared Scouting Camera with GPRS function,The functions of the EUT listed as below:

	Test Standards	Reference Report
GPRS/EGPRS	FCC Part 22/FCC Part 24	TRE1312011101
MPE	FCC Part 2 §2.1093	TRE1312011102

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2. TEST ENVIRONMENT

2.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Phone: 86-755-26715686 Fax: 86-755-26748089

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2009) and CISPR Publication 22.

2.2. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

2.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

3. Method of measurement

3.1. Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.
According to §1.1310 and §2.1091 RF exposure is calculated.
KDB447498 v05r02:Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

3.2. Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f2)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	($180/f^2$)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density

3.3. MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S=power density
P=power input to antenna
G=power gain of the antenna in the direction of interest relative to an isotropic radiator
R=distance to the center of radiation of the antenna

As declared by the Applicant, the EUT transmits with the maximum soure-baed Duty Cycle of 100%-see the User manual, and the EUT is a wireless device used in a mobile application, at least 25 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum mobile separation distance, r =25cm, as well as the gain of the used antenna is 3.00dBi, the RF power density can be obtained.

TEST RESULTS

GPRS850

Test Frequency (MHz)	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Numeric)	Power Density At 25 cm (mW/cm^2)	Power Density Limit (mW/cm^2)	Test Results
824.20	25.00	31.64	1475.71	1.9953	0.3706	0.5495	PASS
836.60	25.00	31.86	1531.09	1.9953	0.3899	0.5577	PASS
848.80	25.00	31.55	1428.90	1.9953	0.3630	0.5659	PASS

EGPRS850

Test Frequency (MHz)	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Numeric)	Power Density At 25 cm (mW/cm^2)	Power Density Limit (mW/cm^2)	Test Results
824.20	25.00	31.56	1432.19	1.9953	0.3638	0.5495	PASS
836.60	25.00	31.76	1499.68	1.9953	0.3810	0.5577	PASS
848.80	25.00	31.52	1419.06	1.9953	0.3605	0.5659	PASS

GPRS1900

Test Frequency (MHz)	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Numeric)	Power Density At 25 cm (mW/cm^2)	Power Density Limit (mW/cm^2)	Test Results
1850.20	25.00	29.78	950.60	1.9953	0.2415	1.0000	PASS
1880.00	25.00	30.02	1047.13	1.9953	0.2552	1.0000	PASS
1909.80	25.00	29.86	968.28	1.9953	0.2460	1.0000	PASS

EGPRS1900

Test Frequency (MHz)	Minimum Separation Distance (cm)	Output Power (dBm)	Output Power (mW)	Antenna Gain (Numeric)	Power Density At 25 cm (mW/cm^2)	Power Density Limit (mW/cm^2)	Test Results
1850.20	25.00	30.02	981.75	1.9953	0.2552	1.0000	PASS
1880.00	25.00	29.89	957.19	1.9953	0.2477	1.0000	PASS
1909.80	25.00	29.97	903.65	1.9953	0.2523	1.0000	PASS

4. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure.

.....End of Report.....