FCC Test Report

APPLICANT : Corporativo Lanix S.A. de C.V.

EQUIPMENT : Smartphone

BRAND NAME : LANIX

MODEL NAME : Ilium L950
MARKETING NAME : Ilium L950
FCC ID : ZC4L950

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Jun. 11, 2015 and testing was completed on Jul. 08, 2015. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2009 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

Reviewed by: Louis Wu / Manager

Louis Wu

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 1 of 25

Testing Laboratory

Report No. : FC561107

Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

TABLE OF CONTENTS

RE	VISIO	N HISTORY	3
SII	ΜΜΔΕ	RY OF TEST RESULT	4
		ERAL DESCRIPTION	
	1.1. 1.2. 1.3. 1.4. 1.5. 1.6. 1.7.	Applicant Manufacturer Product Feature of Equipment Under Test Product Specification subjective to this standard. Modification of EUT Test Location Applicable Standards	5 5 6
2.	2.1. 2.2. 2.3. 2.4.	Support Unit used in test configuration and system	
3.	3.1. 3.2.		12
		OF MEASURING EQUIPMENT	
		IX A. SETUP PHOTOGRAPHS	

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 2 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC561107	Rev. 01	Initial issue of report	Jul. 10, 2015

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 3 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

SUMMARY OF TEST RESULT

Report Section	FCC Rule Description		Limit	Result	Remark
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	6.84 dB at
					0.580 MHz
					Under limit
2.2	45 400	Dadiated Emission	45 400 limita	DACC	1.38 dB at
3.2	15.109	15.109 Radiated Emission	< 15.109 limits	PASS	533.100 MHz
					for Quasi-Peak

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 4 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

1. General Description

1.1. Applicant

Corporativo Lanix S.A. de C.V.

Carretera Internacional Hermosillo-Nogales Km 8.5, Hermosillo Sonora, Mexico

1.2. Manufacturer

Shenzhen Tinno Mobile Technology Corp.

4/F, H-3 Building, OCT Eastern industrial Park, No.1 XiangShan East Road, Nan Shan District, Shenzhen, P.R. China

1.3. Product Feature of Equipment Under Test

Product Feature			
Equipment	Smartphone		
Brand Name	LANIX		
Model Name	Ilium L950		
Marketing Name	Ilium L950		
FCC ID	ZC4L950		
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+(Downlink Only)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/ HT40 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE		
IMEI Code	Radiation: 353924025867130 Conduction: 353924025867007		
HW Version	V1.0		
SW Version	ILIUM L950_TELCEL_SW_01		
EUT Stage	Pre-Production		

Remark:

The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 5 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

1.4. Product Specification subjective to this standard

Product Specification subjective to this standard				
· ·	GSM850: 824.2 MHz ~ 848.8 MHz			
	GSM1900: 1850.2 MHz ~ 1909.8MHz			
	WCDMA Band V: 826.4 MHz ~ 846.6 MHz			
	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz			
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz			
	LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz			
	LTE Band 7 :2502.5 MHz ~ 2567.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GSM850: 869.2 MHz ~ 893.8 MHz			
	GSM1900: 1930.2 MHz ~ 1989.8 MHz			
	WCDMA Band V: 871.4 MHz ~ 891.6 MHz			
Rx Frequency L	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz			
	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz			
	LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz			
	LTE Band 7 : 2622.5MHz ~ 2687.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GPS: 1.57542 GHz			
	WWAN : PIFA Antenna			
Automa Timo	WLAN: PIFA Antenna			
Antenna Type	Bluetooth :PIFA Antenna			
	GPS: PIFA Antenna			
	GSM: GMSK			
	GPRS: GMSK			
	EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK			
	WCDMA: QPSK (Uplink)			
	HSDPA: QPSK (Uplink)			
	HSUPA: QPSK (Uplink)			
	HSPA+: 16QAM (Downlink Only)			
Type of Modulation	LTE: QPSK / 16QAM			
	802.11b: DSSS (DBPSK / DQPSK / CCK)			
	802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)			
	Bluetooth v4.0 LE : GFSK			
	Bluetooth (1Mbps) : GFSK			
	Bluetooth (2Mbps) : π /4-DQPSK			
	Bluetooth (3Mbps) : 8-DPSK			
	GPS: BPSK			

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 6 of 25 Report Issued Date : Jul. 10, 2015

Report No. : FC561107

Report Version : Rev. 01

1.5. Modification of EUT

No modifications are made to the EUT during all test items.

1.6. Test Location

Test Site	Test Site SPORTON INTERNATIONAL (SHENZHEN) INC.			
	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town,			
	Nanshan District, Shenzhen, Guangdong, P. R. China			
Test Site Location	TEL: +86-755-8637-9589			
	FAX: +86-755-8637-9595			
Toot Site No	Sporton Site No.			
Test Site No.	CO01-SZ			

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.			
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China			
	TEL: +86-755- 3320-2398			
Took Cita No	Sporton Site No. FCC Registration N			
Test Site No.	03CH01-SZ	831040		

Note: The test site complies with ANSI C63.4 2009 requirement.

1.7. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC 47 CFR FCC Part 15 Subpart B
- ANSI C63.4-2009

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 7 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

		Test Condition			
Item	EUT Configuration	EMI	EMI	EMI	
			RE<1G	RE≥1G	
1.	Charging Mode (EUT with adapter)	\boxtimes	\boxtimes	\boxtimes	
2.	Data application transferred mode (EUT with notebook)	\boxtimes	\boxtimes	\boxtimes	

Abbreviations:

EMI AC: AC conducted emissions

• EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz

• EMI RE < 1G: EUT radiated emissions < 1GHz

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 8 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

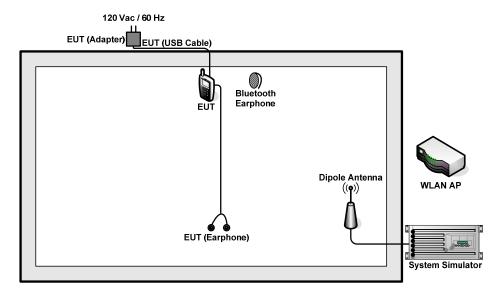
Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Link + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter 1) + Earphone + Camera <fig.1></fig.1>
AC Conducted	1/2	Mode 2: WCDMA Band II Link + Bluetooth Link + WLAN Link + Earphone + USB Cable (Charging from Adapter 2) + MPEG4 <fig.1></fig.1>
Emission		Mode 3: LTE Band 7 Link + Bluetooth Link + WLAN Link + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig.2></fig.2>
		Mode 4: GSM1900 Link + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter 3) + Earphone + Camera <fig.1></fig.1>
	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter 1) + Earphone + Camera <fig.1></fig.1>
Radiated		Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter 2) + MPEG4 <fig.1></fig.1>
Emissions < 1GHz		Mode 3: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig.2></fig.2>
		Mode 4: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter 3) + Earphone + Camera <fig.1></fig.1>
Radiated	4/0	Mode 1: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig.2></fig.2>
Emissions ≥ 1GHz	1/2	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter 3) + Earphone + Camera <fig.1></fig.1>

Remark:

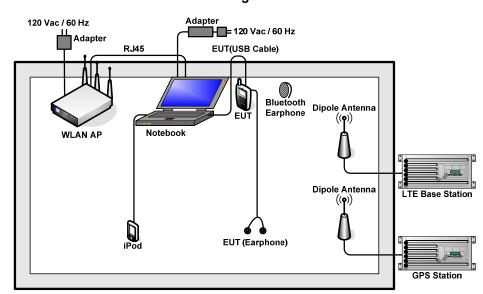
- 1. The worst case of AC is mode 1; and the USB Link mode of AC is mode 3; the test data of these modes are reported.
- The worst case of RE < 1G is mode 4; and the USB Link mode of RE is mode 3; only the test data of these modes are reported.
- 3. Link with notebook means data application transferred mode between EUT and notebook.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 9 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 10 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	FCC DoC	Shielded, 1.5 m	N/A
3.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-615	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,2.7m
6.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
7.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
8.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
9.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

- 1. Data application is transferred between notebook and EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
- 3. Execute "Video Player" to play MPEG4 files.
- 4. Turn on camera to capture images.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 11 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission	Conducted limit (dBuV)		
(MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

^{*}Decreases with the logarithm of the frequency.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedure

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: ZC4L950

TEL: 86-755-8637-9589

Page Number : 12 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

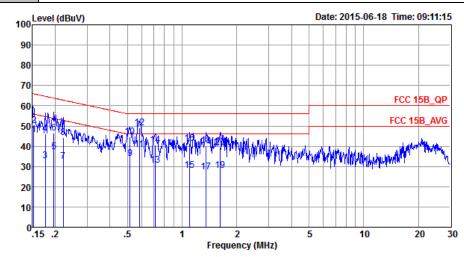
3.1.4 Test Setup



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 13 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	21~22℃
Test Engineer :	Jack Tian	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type	GSM850 Link + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter		
Function Type :	1) + Earphone + Camera		



: CO01-SZ

Condition: FCC 15B_QP LISN_L_20150304 LINE

Project : (FC) 561107 Mode

: Mode 1 : 353924025867007 IMEI

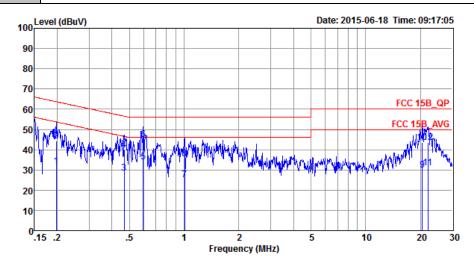
				Over	Limit	Read	LISN	Cable	
	F	req	Level	Limit	Line	Level	Factor	Loss	Remark
		MHz	dBu∀	dB	dBu∀	dBuV	dB	dB	
1	0	1.15	45.59	-10.28	55.87	34.79	0.44	10.36	Average
2	(1.15	50.09	-15.78	65.87	39.29	0.44	10.36	QP
3	(18	33.00	-21.64	54.64	22.20	0.48	10.32	Average
4	(18	46.20	-18.44	64.64	35.40	0.48	10.32	QP
5	(.20	37.11	-16.65	53.76	26.30	0.51	10.30	Average
6	0	.20	46.61	-17.15	63.76	35.80	0.51	10.30	QP
7	0	.22	32.50	-20.24	52.74	21.70	0.53	10.27	Average
8	0	.22	44.10	-18.64	62.74	33.30	0.53	10.27	QP
9	(.52	33.81	-12.19	46.00	22.99	0.66	10.16	Average
10	0	.52	44.71	-11.29	56.00	33.89	0.66	10.16	QP
11	0	.58	38.46	-7.54	46.00	27.70	0.61	10.15	Average
12 *		.58	49.16	-6.84	56.00	38.40	0.61	10.15	QP
13	(.71	30.79	-15.21	46.00	20.10	0.54	10.15	Average
14	(.71	40.69	-15.31	56.00	30.00	0.54	10.15	QP
15	1	1.10	28.16	-17.84	46.00	17.50	0.50	10.16	Average
16	1	1.10	41.46	-14.54	56.00	30.80	0.50	10.16	QP
17	1	1.36	27.45	-18.55	46.00	16.79	0.49	10.17	Average
18	1	.36	40.15	-15.85	56.00	29.49	0.49	10.17	QP
19	1	.62	27.95	-18.05	46.00	17.29	0.48	10.18	Average
20	1	.62	39.55	-16.45	56.00	28.89	0.48	10.18	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950

: 14 of 25 Page Number Report Issued Date: Jul. 10, 2015 Report Version : Rev. 01



Test Mode :	Mode 1	Temperature :	21~22 ℃			
Test Engineer :	Jack Tian	Relative Humidity :	41~42%			
Test Voltage :	120Vac / 60Hz	Phase :	Neutral			
	GSM850 Link + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter					
Function Type :	1) + Earphone + Camera					



Site : CO01-SZ

Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL

Project : (FC)561107 Mode : Mode 1

IMEI : 353924025867007

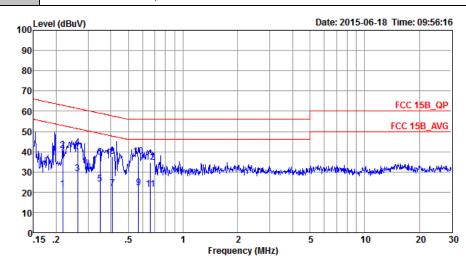
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu∀	dB	dBuV	dBu∀	dB	dB	
1	0.20		-21.91	53.71	20.99	0.51		Average
2 3	0.20 0.47	28.55	-19.61 -17.99	63.71 46.54	33.29 17.80	0.51 0.59		Average
4 5	0.47 0.59		-16.59 -11.87	56.54 46.00	29.20 23.40			QP Average
6 * 7	0.59		-10.97 -20.79	56.00 46.00	34.30 14.50			QP Average
8 9	1.00	35.31	-20.69	56.00	24.60	0.56	10.15	QP
10	20.49		-19.98 -16.38	50.00 60.00	18.70 32.30	0.70 0.70		Average QP
11 12	22.06 22.06		-19.07 -16.57	50.00 60.00	19.60 32.10	0.74 0.74	10.59 10.59	Average QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 15 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01



Test Mode :	Mode 3	Temperature :	21~22℃
Test Engineer :	Jack Tian	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line

Function Type : LTE Band 7 Link + Bluetooth Link + WLAN Link + Earphone + USB Cable (Data Link with Notebook) + GPS Rx



Site : CO01-SZ

Condition: FCC 15B_QP LISN_L_20150304 LINE

Project : (FC)561107 Mode : Mode 3

IMEI : 353924025867007

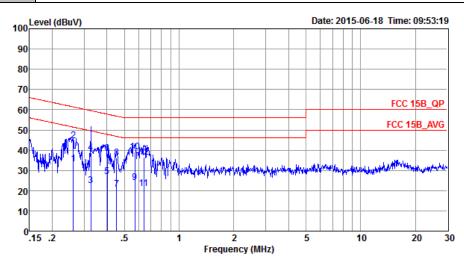
			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBu∀	dBu∀	dB	dB	
1	0.22	21.41	-31.51	52.92	10.61	0.53	10.27	Average
2	0.22	40.51	-22.41	62.92	29.71	0.53	10.27	QP
3	0.26	29.18	-22.16	51.34	18.40	0.55	10.23	Average
4	0.26	41.98	-19.36	61.34	31.20	0.55	10.23	QP
5	0.35	23.94	-25.06	49.00	13.20	0.55	10.19	Average
6	0.35	37.14	-21.86	59.00	26.40	0.55	10.19	QP
7	0.41	21.62	-26.06	47.68	10.90	0.55	10.17	Average
8	0.41	37.72	-19.96	57.68	27.00	0.55	10.17	QP
9	0.57	22.27	-23.73	46.00	11.50	0.62	10.15	Average
10 *	0.57	37.47	-18.53	56.00	26.70	0.62	10.15	QP
11	0.66	21.31	-24.69	46.00	10.60	0.56	10.15	Average
12	0.66	34.71	-21.29	56.00	24.00	0.56	10.15	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 16 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01



Test Mode :	Mode 3	Temperature :	21~22℃					
Test Engineer :	Jack Tian	Relative Humidity :	41~42%					
Test Voltage :	120Vac / 60Hz	Phase :	Neutral					
	LTE Band 7 Link + Bluetoot	E Band 7 Link + Bluetooth Link + WLAN Link + Earphone + USB Cable (Da						

Function Type: Link with Notebook) + GPS Rx



Site : CO01-SZ

Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL Project : (FC)561107

Mode : Mode 3

IMEI : 353924025867007

	Freq	Level	Over	Limit Line	Read Level	Factor	Loss	Remark
	MHz	dBu∇	dB	dBuV	dBu∀	dB	dB	
1	0.26	33.19	-18.19	51.38	22.40	0.56	10.23	Average
2	0.26	44.59	-16.79	61.38	33.80	0.56	10.23	QP
3	0.33	22.57	-26.96	49.53	11.80	0.58	10.19	Average
4	0.33	38.67	-20.86	59.53	27.90	0.58	10.19	QP
5	0.40	27.12	-20.69	47.81	16.40	0.55	10.17	Average
6	0.40	38.42	-19.39	57.81	27.70	0.55	10.17	QP
7	0.45	20.64	-26.21	46.85	9.90	0.58	10.16	Average
8	0.45	36.34	-20.51	56.85	25.60	0.58	10.16	QP
9	0.57	23.94	-22.06	46.00	13.20	0.59	10.15	Average
10 *	0.57	39.24	-16.76	56.00	28.50	0.59	10.15	QP
11	0.64	21.02	-24.98	46.00	10.30	0.57	10.15	Average
12	0.64	36.42	-19.58	56.00	25.70	0.57	10.15	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950

: 17 of 25 Page Number Report Issued Date: Jul. 10, 2015 Report Version : Rev. 01

Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(meters)		
30 – 88	100	3		
88 – 216	150	3		
216 - 960	200	3		
Above 960	500	3		

3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- For each suspected emission, the EUT was arranged to its worst case and then tune the 5. antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- 6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
- 7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
- 8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950

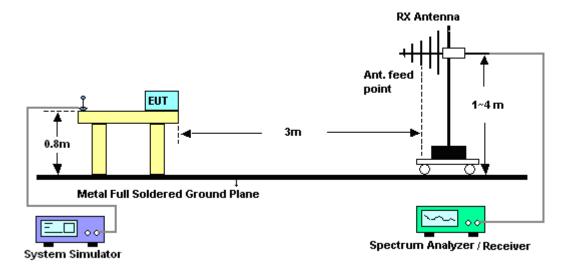
Page Number : 18 of 25 Report Issued Date: Jul. 10, 2015

Report No. : FC561107

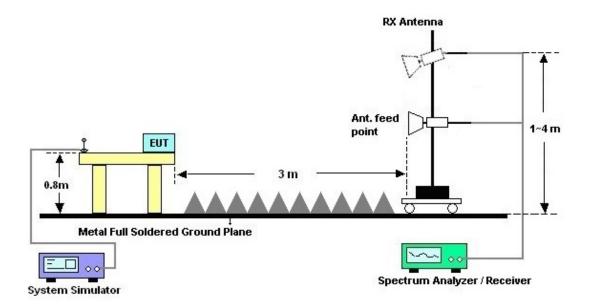
Report Version : Rev. 01

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

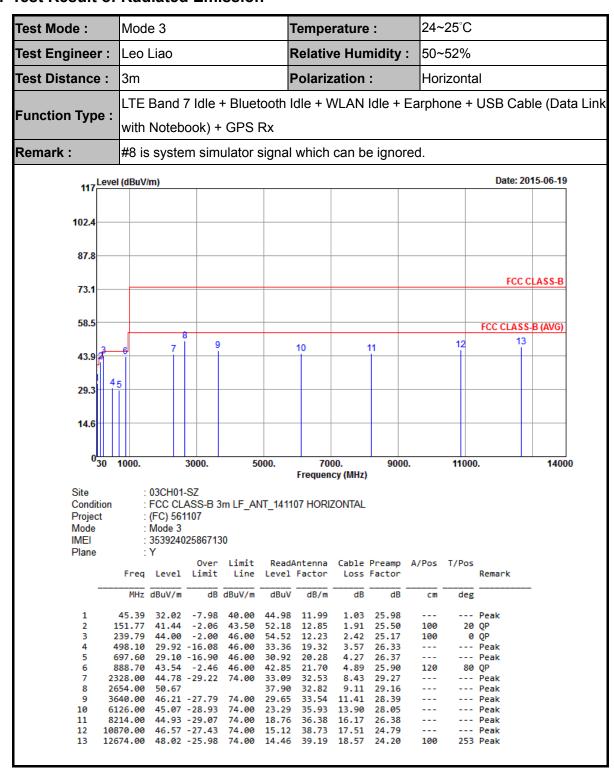


For radiated emissions above 1GHz



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 19 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

3.2.5. Test Result of Radiated Emission



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 20 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

24~25°C Test Mode: Mode 3 Temperature: Test Engineer: Leo Liao **Relative Humidity:** 50~52% Test Distance: Polarization: 3m Vertical LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link Function Type: with Notebook) + GPS Rx Remark: #8 is system simulator signal which can be ignored. 117 Level (dBuV/m) Date: 2015-06-19 102.4 87.8 FCC CLASS-B 73.1 58.5 FCC CLASS-B (AVG) 13 10 11 43.9 29.3 14.6 11000. 14000 1000. 5000. 7000. 9000. Frequency (MHz) : 03CH01-SZ Condition : FCC CLASS-B 3m LF_ANT_141107 VERTICAL Project (FC) 561107 Mode Mode 3 353924025867130 IMFI Plane : Y Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Freq Level Limit Line Level Factor Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB cmdeg 44.31 33.36 -6.64 40.00 45.91 12.41 1.02 25.98 --- Peak 2 143.67 40.59 -2.91 43.50 50.70 13.58 1.86 25.55 180 50 QP 35.58 -10.42 --- Peak 3 244.92 46.00 45.96 12.32 2.45 25.15 ---3.72 533.10 35.49 -10.51 46.00 38.64 19.50 26.37 --- Peak 36.84 710.90 46.00 --- Peak 42.50 -3.50 888.70 46.00 41.81 21.70 4.89 25.90 ------ Peak --- Peak 2394.00 46.61 -27.39 74.00 34.79 32.60 8.60 29.38 2654.00 --- Peak 51.37 38.60 32.82 9.11 29.16 4942.00 44.67 -29.33 74.00 25.34 34.47 13.04 28.18 Peak 6328.00 45.44 -28.56 74.00 23.07 14.21 27.96 --- Peak 8840.00 46.19 -27.81 74.00 19.05 36.60 16.52 25.98 Peak --- Peak 10274.00 47.53 -26.47 74.00 12 16.82 38.33 17.50 25.12

11772.00 48.19 -25.81

74.00

14.47

39.37

18.84

24.49

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 21 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01

200 Peak

FCC Test Report

Test Mode :	Mode 4		Temperatu	re:	24~25°C				
Test Engineer :	Leo Liao		Relative Hu	ımidity :	50~52%				
Test Distance :	3m		Polarizatio	n :	Horizonta	-lorizontal			
Function Type :	GSM1900 Idle 3) + Earphone		dle + WLAN	ldle + US	B Cable (0	Cable (Charging from Ada			
Remark :	#8 is system si	mulator signa	l which can	be ignore	d.				
117 Level	(dBuV/m)					Date: 2015-0	07-08		
102.4									
87.8									
73.1						FCC CLAS	SS-B		
58.5	8					FCC CLASS-B (A			
43.9 51 13 ₄	6 <mark>- </mark> 7	9	10	11	12		3		
29.3									
030	1000. 3000). 5000.	7000 Frequency (MF		000.	11000.	13000		
Site Condition Project Mode IMEI Plane	: 03CH01-SZ : FCC CLASS-E : (FC) 561107 : Mode 4 : 353924025867 : Y	er Limit Read	iAntenna Cabl		./Pos T/Pos	Remark			
	MHz dBuV/m	dB dBuV/m dBuV	dB/m d	B dB	cm deg				
2 10 3 2' 4 33 5 5 5: 6 7: 7 180 8 190 9 36: 10 57: 11 87:	02.36 34.05 -9.4 68.51 26.08 -17.4 73.81 35.84 -10.5 55.30 32.77 -13.3 33.10 43.19 -2.4 10.90 43.21 -2.5 60.00 40.50 -33.5 60.00 50.24 40.00 41.21 -32.5 52.00 41.69 -32.4 40.00 43.17 -30.4 40.00 43.17 -30.4 40.00 43.82 -30.6 80.00 46.09 -27.5	42 43.50 37.57 46.46.00 45.15 46.00 46.34 47.400 31.36 40.24 47.400 24.55 47.400 20.56 47.400 20.56 47.400 16.66 47.400 13.11	7 11.90 2.0 6 13.20 2.5 8 14.82 2.5 8 19.50 3.7 1 20.53 4.2 6 30.97 7.5 8 31.74 7.9 6 33.54 11.4 6 35.46 13.8 8 36.48 16.6 1 38.33 17.5	9 25.47 2 26.37 9 26.35 1 29.34 0 29.64 1 28.39 17 28.20 19 26.03 0 25.12	100 50 150 80	-			

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950

: 22 of 25 Page Number Report Issued Date: Jul. 10, 2015 Report Version : Rev. 01

SPORTON LAB.	FCC Test Repor

Test Mode :	Mode 4		Temp	erature :	24~	·25°C			
Test Engineer :	Leo Liao		Relat	ive Humidity	·: 50~	50~52%			
Test Distance :	3m		Polar	ization :	Ver	Vertical			
Function Type :		SM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Ada) + Earphone + Camera						n Adapter	
Remark :	#7 is syste	m simulator si	ignal whic	h can be igno	red.				
117 Level	(dBuV/m)						Date: 2015-07	-08	
102.4									
87.8									
73.1							FCC CLASS	<u>-B</u>	
58.5	7						CC CLASS-B (AV	(G) 3	
43.9	5 8	9		10 11		12	2		
14.6									
030	1000.	3000.	5000.	7000.	9000.	11	000. 1:	3000	
Site Condition Project Mode IMEI Plane	: 03CH01- : FCC Cb1 : (FC) 561 : Mode 4 : 3539240 : Y Freq Level	ASS-B 3m LF_ANT 107 25867130 Over Limit	Г_141107 VEF	a Cable Preamp r Loss Factor			mark 		
2 3 1 4 5 5 7 6 8 7 19 8 20	48.90 34.22 00.74 34.64 33.10 44.62 10.90 42.12 89.40 36.67 60.00 51.94 74.00 41.36	-5.04 40.00 4 -5.78 40.00 4 -8.86 43.50 4 -1.38 46.00 4 -9.33 46.00 4 -9.33 46.00 4 -32.64 74.00 4 -32.33 74.00 4	48.40 10.74 47.01 11.84 47.77 19.56 43.65 20.53 35.98 21.76 41.94 31.74 30.45 32.22	4 1.06 25.98 4 1.56 25.77 9 3.72 26.37 3 4.29 26.35 9 4.89 25.90 4 7.90 29.64 7 8.10 29.46	120	Pe Pe 0 QP Pe Pe Pe Pe	ak ak ak ak ak ak		
10 68 11 82 12 108	38.00 43.38 72.00 45.29 22.00 45.38	-30.62 74.00 -28.71 74.00 -28.62 74.00 -26.18 74.00	20.02 36.1 19.05 36.3 14.11 38.7	7 14.51 27.32 3 16.26 26.35 9 17.39 24.82		Pe Pe Pe 80 Pe	ak ak ak		

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950

: 23 of 25 Page Number Report Issued Date: Jul. 10, 2015 Report Version : Rev. 01

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Jun. 19, 2015~ Jul. 08, 2015	May 25, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz~2GHz	Nov. 07, 2014	Jun. 19, 2015~ Jul. 08, 2015	Nov. 06, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Jun. 19, 2015~ Jul. 08, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan. 28, 2015	Jun. 19, 2015~ Jul. 08, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5G Hz	Jan. 28, 2015	Jun. 19, 2015~ Jul. 08, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Jun. 19, 2015~ Jul. 08, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jun. 19, 2015~ Jul. 08, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jun. 19, 2015~ Jul. 08, 2015	NCR	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESCI7	100724	9kHz~3GHz	Jan. 28, 2015	Jun. 18, 2015	Jan. 27, 2016	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	103892	9kHz~30MHz	Feb. 02, 2015	Jun. 18, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	AN3016	16850	9kHz~30MHz	Feb. 02, 2015	Jun. 18, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Sep. 29, 2014	Jun. 18, 2015	Sep. 28, 2015	Conduction (CO01-SZ)
Pulse Limiter	COM-POWER	LIT-153 Transient Limiter	53139	150kHz~30MHz	Oct. 24, 2014	Jun. 18, 2015	Oct. 23, 2015	Conduction (CO01-SZ)

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 24 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01



5. Uncertainty of Evaluation

<u>Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)</u>

Measuring Uncertainty for a Level of	2.3dB
Confidence of 95% (U = 2Uc(y))	2.30B

<u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Managerian Unacetainty for a Lavel of	T
Measuring Uncertainty for a Level of	3.9dB
Confidence of 95% (U = 2Uc(y))	0.5dB

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: ZC4L950 Page Number : 25 of 25
Report Issued Date : Jul. 10, 2015
Report Version : Rev. 01