

Report No.: FC370202

FCC Test Report

APPLICANT : CORPORATIVO LANIX S.A. DE C.V.

EQUIPMENT: Mobile phone

BRAND NAME : LANIX

MODEL NAME : Ilium S105 FCC ID : ZC4S105

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : Certification

The product was received on Jul. 02, 2013 and completely tested on Jul. 08, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the 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 Win

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.

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Testing Laboratory 2353



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC370202	Rev. 01	Initial issue of report	Jul. 23, 2013

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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	6.69 dB at
					0.590 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	4.35 dB at
					240.060 MHz

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1. General Description

1.1. Applicant

CORPORATIVO LANIX S.A. DE C.V.

CARRETERA INTERNACIONAL HERMOSILLO-NOGALE KM 8.5 HERMOSILLO MEXICO

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1.2. Manufacturer

Shanghai Huaqin Telecom Technology Co., Ltd

Building1, 399 Keyuan Road, Pudong district, Shanghai, China

1.3. Feature of Equipment Under Test

	Product Feature
Equipment	Mobile phone
Brand Name	LANIX
Model Name	Ilium S105
FCC ID	ZC4S105
EUT supports Radios application	GSM/GPRS/WCDMA/HSPA /WLAN 11bgn/Bluetooth 2.1/4.0
HW Version	A100P_MB_V2.0
SW Version	ZA100EA_45A0_V8_1_H
EUT Stage	Production Unit

Remark:

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

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1.4. Product Specification of Equipment Under Test

Product Specification subjective to this standard				
Tx Frequency	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 802.11b/g/n: 2412 MHz ~ 2462 MHz			
Rx Frequency Range	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 WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz GPS: 1.57542 GHz FM: 88 MHz ~ 108 MHz WWAN: PIFA Antenna			
Antenna Type	WLAN : PIFA Antenna Bluetooth : PIFA Antenna			
Type of Modulation	GSM: GMSK GPRS: GMSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth 4.0 - LE: GFSK Bluetooth 2.1 BR (1Mbps): GFSK Bluetooth 2.1 EDR (2Mbps): π /4-DQPSK Bluetooth 2.1 EDR (3Mbps): 8-DPSK GPS: BPSK			

1.5. Modification of EUT

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

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1.6. Test Site

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.C.					
	TEL: +86-755- 3320-2398					
Took Cita No	Sporton	Site No.	FCC/IC Registration No.			
Test Site No.	CO01-SZ	03CH01-SZ	831040/4086F-1			

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1.7. Applied 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 C63.4-2003

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

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2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 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 AC	EMI	EMI	
			RE<1G	RE≥1G	
1.	Charging Mode (EUT with adapter)	\boxtimes	\boxtimes	Note 1	
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

Note 1: Testing for this mode is not required or not the worst case.

Remark: For signal above 1GHz, the worst case was test item 2.

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

Remark:

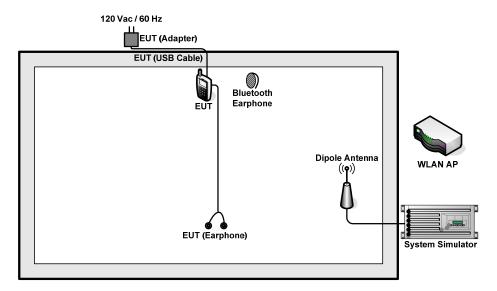
- 1. The worst case of AC is mode 1; the test data of this mode was reported.
- 2. The USB Link mode of AC Conducted Emission is mode 4; the test data of this mode was also reported.
- 3. The worst case of RE < 1G is mode 4; only the test data of this mode was reported.
- 4. Data Link with Notebook means data application transferred mode between EUT and Notebook.

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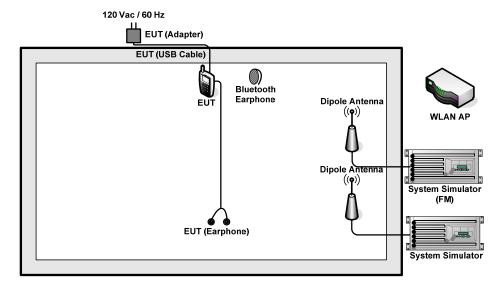


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2.2. Connection Diagram of Test System



<Fig.1>



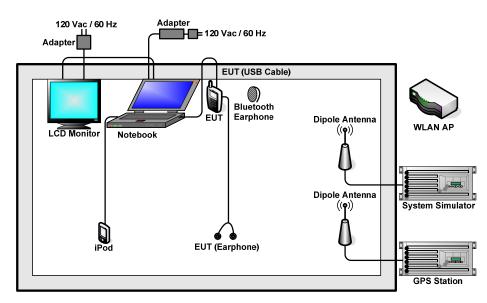
<Fig.2>

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<Fig.3>

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(FM)	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-link	DIR-612	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-link	DIR-615	N/A	N/A	Unshielded, 1.8 m
6.	Bluetooth Earphone	Nokia	BH-108	2010DP1340	N/A	N/A
7.	Notebook	DELL	P08S	Fcc DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
8.	Monitor	Dell	IN1940MWB	FCC DoC	shielded, 1.2 m	Unshielded, 1.8 m
9.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A

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2.4. Description of RF Function Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and was 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. Execute the program, "Winthrax" under WIN7 installed in notebook for files transfer with EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
- 3. Turn on FM function to make the EUT receive continuous signals from System Simulator(FM)
- 4. Turn on camera to capture images.
- 5. Execute "Video Player" to play MPEG4 files.

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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

See list of measuring instruments 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 with Maximum Hold Mode.

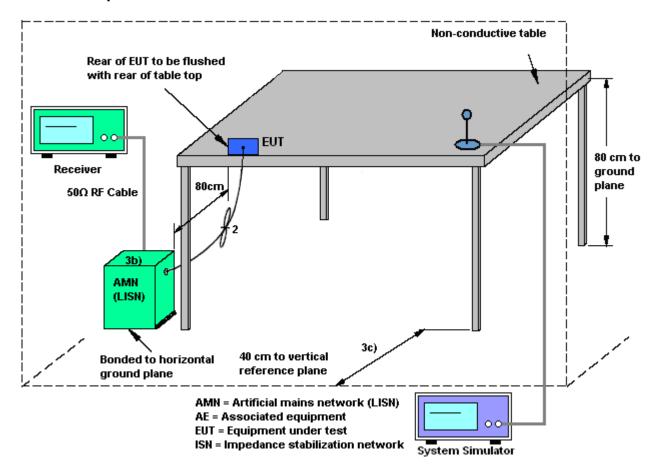
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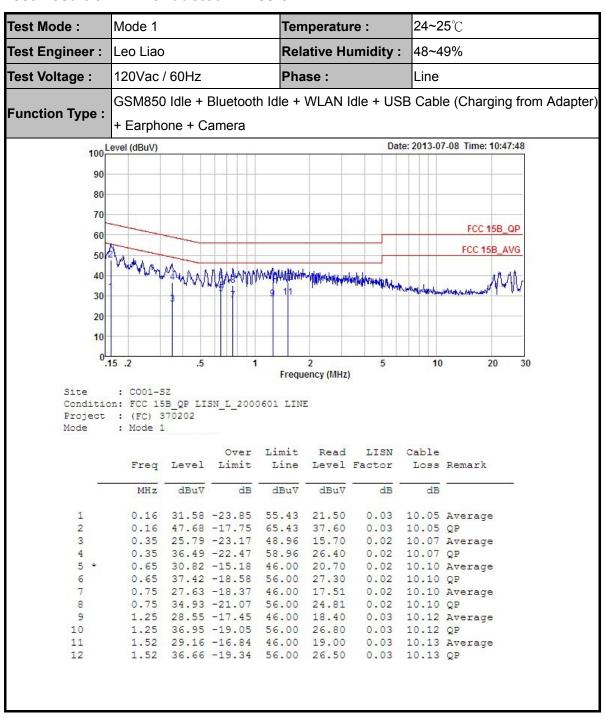
3.1.4 Test Setup



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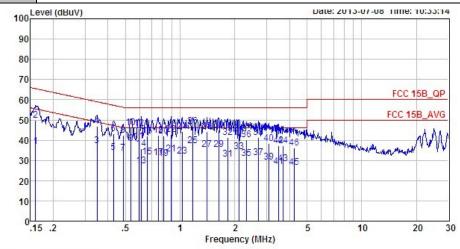
3.1.5 Test Result of AC Conducted Emission



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Test Mode :	Mode 1	Temperature :	24~25 ℃		
Test Engineer :	Leo Liao	Relative Humidity :	48~49%		
Test Voltage :	120Vac / 60Hz	Phase :	Neutral		
Eurotion Type	GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter)				
Function Type :	+ Earphone + Camera				



Site : C001-SZ Condition: FCC 15B_QP LISN_N_2000601 NEUTRAL Project : (FC) 370202

Mode : Mode 1

				Over	Limit	Read	LISN	Cable	
		Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	-	MHz	dBuV	dB	dBu∇	dBuV	dB	dB	
1		0.16	37.07	-18.40	55.47	27.00	0.02	10.05	Average
2		0.16	49.87	-15.60	65.47	39.80	0.02	10.05	QP
3		0.35	37.09	-11.91	49.00	27.00	0.02	10.07	Average
4		0.35	46.89	-12.11	59.00	36.80	0.02	10.07	QP
5		0.43	34.09	-13.15	47.24	23.99	0.02	10.08	Average
6		0.43	43.29	-13.95	57.24	33.19	0.02	10.08	QP
7		0.49	33.70	-12.53	46.23	23.60	0.02	10.08	Average
8		0.49	42.60	-13.63	56.23	32.50	0.02	10.08	QP
9		0.54	38.40	-7.60	46.00	28.29	0.02	10.09	Average
10		0.54	46.30	-9.70	56.00	36.19	0.02	10.09	QP
11	4	0.59	39.31	-6.69	46.00	29.20	0.02	10.09	Average
12		0.59	45.91	-10.09	56.00	35.80	0.02	10.09	QP
13		0.61	27.21	-18.79	46.00	17.09	0.02	10.10	Average
14		0.61	35.91	-20.09	56.00	25.79	0.02	10.10	QP
15		0.66	31.62	-14.38	46.00	21.50	0.02	10.10	Average
16		0.66	41.92	-14.08	56.00	31.80	0.02	10.10	QP
17		0.76	31.22	-14.78	46.00	21.10	0.02	10.10	Average
18		0.76	42.32	-13.68	56.00	32.20	0.02	10.10	QP
19		0.81	31.13	-14.87	46.00	21.00	0.02	10.11	Average
20		0.81	41.93	-14.07	56.00	31.80	0.02	10.11	QP
21		0.89	33.23	-12.77	46.00	23.10	0.02	10.11	Average
22		0.89	42.93	-13.07	56.00	32.80	0.02	10.11	
23		1.03	32.14	-13.86	46.00	22.01	0.02	10.11	Average
24		1.03	44.24	-11.76	56.00	34.11	0.02	10.11	QP
25		1.18	37.34	-8.66	46.00	27.20	0.02	10.12	Average
26		1.18	46.94	-9.06	56.00	36.80	0.02		
27		1.41	35.45	-10.55		25.30	0.03	10.12	Average
28		1.41	44.35	-11.65	56.00	34.20			
29		1.63	35.36	-10.64	46.00	25.20	0.03	10.13	Average

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24~25°C Test Mode: Mode 1 Temperature: Test Engineer: Leo Liao Relative Humidity: 48~49% Phase: Test Voltage: 120Vac / 60Hz Neutral GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) Function Type: + Earphone + Camera 100 Level (dBuV) Date: 2013-07-08 Time: 10:33:14 90 80 70 FCC 15B_QP 60 FCC 15B_AVG 50 40 30 20 10 0.15 .2 Frequency (MHz) : C001-SZ Condition: FCC 15B_QP LISN_N_2000601 NEUTRAL Project : (FC) 370202 Mode : Mode 1 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dB MHz dBuV dB dBuV dBuV dB 1.63 44.96 -11.04 56.00 34.80 0.03 10.13 QP 30 31 1.84 30.47 -15.53 46.00 20.30 0.03 10.14 Average 1.84 41.47 -14.53 56.00 31.30 2.11 34.29 -11.71 46.00 24.10 0.03 10.14 QP 32 33 0.03 10.16 Average 2.11 43.29 -12.71 56.00 33.10 0.03 10.16 QP 2.32 30.90 -15.10 46.00 20.69 2.32 40.20 -15.80 56.00 29.99 0.04 10.17 Average 0.04 10.17 QP 35 36 2.69 31.52 -14.48 46.00 21.30 37 0.04 10.18 Average 38 2.69 41.32 -14.68 56.00 31.10 0.04 10.18 QP 0.05 39 3.09 29.04 -16.96 46.00 18.80 10.19 Average 3.09 38.24 -17.76 56.00 28.00 0.05 10.19 QP 40 41 3.47 26.84 -19.16 46.00 16.60 0.05 10.19 Average 3.47 37.44 -18.56 56.00 27.20 3.68 28.25 -17.75 46.00 18.00 42 0.05 10.19 QP 0.06 10.19 Average 43 3.68 37.25 -18.75 56.00 27.00 0.06 10.19 QP 45 4.27 26.66 -19.34 46.00 16.40 0.07 10.19 Average

36.26 -19.74 56.00 26.00

0.07

10.19 QP

46

4.27

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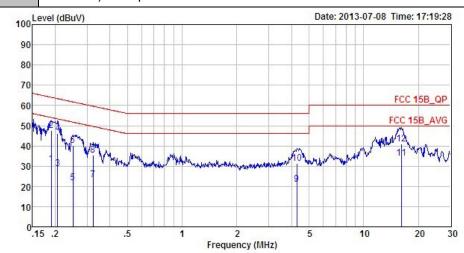
	Mode 4			Ten	Temperature :			24~25℃			
Test Engineer :	Leo Liao	1		Rel	Relative Humidity :			48~49%			
Test Voltage :	120Vac	/ 60Hz		Pha	Phase :						
Function Type :	WCDMA	band I	l Idle + I	Bluetoot	h Idle +	WLAN	ldle + L	JSB (Cable	e (D	ata Link
i dilotion Type :	Noteboo	k) + Ea	rphone +	- GPS R	Х						
400	evel (dBuV)					Da	te: 2013-07	7-08 Tir	me: 17	:24:0	6
90											
80											
70											
70								E	CC 158	R OD	
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20											
20											
20- 10-			2 2 4 10		9 8			0			
10											
10	15 .2 : C001-S	.5	1		2 ency (MHz)	5	10		20		30
Site Condition		Z B_QP LI: 170202		Frequ	ency (MHz)	203	10		20		30
Site Condition Project	: CO01-S on: FCC 15 : (FC) 3	Z B_QP LI: 170202		Frequ	ency (MHz)	203	10		20		30
Site Condition Project	: CO01-S on: FCC 15 : (FC) 3	Z B_QP LI: 170202	SN_L_2000	Frequ 0601 LIN Dimit	ency (MHz) E Read)					30
Site Condition Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 4	EZ B_QP LI: 170202 Level	SN_L_2000 Over Limit	Frequ	Read Level	LISN Factor	Cable Loss				30
Site Condition Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 4	5Z 5B_QP LI: 570202	SN_L_2000	Frequ 0601 LIN Dimit	ency (MHz) E Read	LISN	Cable				30
Site Condition Project Mode	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz	Level	SN_L_2000 Over Limit dB	Frequence of Limit Line dBuV	Read Level	LISN Factor	Cable Loss dB	Rema	rk		30
Site Condition Project Mode	: C001-S pn: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20	Level	Over Limit dB	Frequence of Limit Line dBuV	Read Level dBuV	LISN Factor dB	Cable Loss dB	Rema -	rk		30
Site Condition Project Mode	: C001-S pn: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20	DE_QP LI 170202 Level dBuV 30.98 47.08	Over Limit dB -22.51 -16.41	Frequence of Limit Line dBuV	Read Level	LISN Factor dB 0.03 0.03	Cable Loss dB 10.06 10.06	Rema Aver QP	rk		30
Site Condition Project Mode	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26	B_QP LI: 170202 Level dBuV 30.98 47.08 25.79	Over Limit dB	Limit Line dBuV 53.49	Read Level dBuV	LISN Factor dB 0.03 0.03 0.03	Cable Loss dB 10.06 10.06 10.06	Rema Aver QP Aver	rk		30
Site Condition Project Mode	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26 0.26	B_QP LI. 170202 Level dBuV 30.98 47.08 25.79 40.99	Over Limit dB -22.51 -16.41 -25.77	Limit Line dBuV 53.49 63.49 51.56 61.56	Read Level dBuV 20.89 36.99 15.71	LISN Factor dB 0.03 0.03 0.02 0.02	Cable Loss dB 10.06 10.06	Rema Aver QP Aver	rk age		30
Site Condition Project Mode	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26 0.26 0.32	B_QP LI. 170202 Level dBuV 30.98 47.08 25.79 40.99 24.09	Over Limit dB -22.51 -16.41 -25.77 -20.57	Limit Line dBuV 53.49 63.49 51.56 61.56	Read Level dBuV 20.89 36.99 15.71 30.91	LISN Factor dB 0.03 0.03 0.02 0.02 0.02 0.02	Cable Loss dB 10.06 10.06 10.06	Rema Aver QP Aver QP Aver	rk age		30
Site Condition Project Mode	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26 0.26 0.32 0.32	B_QP LI. 170202 Level dBuV 30.98 47.08 25.79 40.99 24.09 35.89	Over Limit dB -22.51 -16.41 -25.77 -20.57 -25.57	Limit Line dBuV 53.49 63.49 51.56 61.56 49.66	Read Level dBuV 20.89 36.99 15.71 30.91 14.00	LISN Factor dB 0.03 0.02 0.02 0.02 0.02 0.02	Cable Loss dB 10.06 10.06 10.06 10.06	Rema Aver QP Aver QP Aver QP	rk age age		30
Site Condition Project Mode	: C001-8 on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26 0.26 0.32 0.32 4.43	dBuV 30.98 47.08 25.79 40.99 24.09 35.89 19.46	Over Limit dB -22.51 -16.41 -25.77 -20.57 -25.57 -23.77 -26.54	Limit Line dBuV 53.49 63.49 51.56 61.56 49.66 59.66	Read Level dBuV 20.89 36.99 15.71 30.91 14.00 25.80 9.21	LISN Factor dB 0.03 0.03 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss dB 10.06 10.06 10.06 10.07 10.07	Aver QP Aver QP Aver QP Aver	rk age age		30
Site Condition Project Mode 1 2 3 4 5 6 7	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26 0.26 0.32 0.32 4.43 4.43	Level dBuV 30.98 47.08 25.79 40.99 24.09 35.89 19.46 31.96	Over Limit dB -22.51 -16.41 -25.77 -20.57 -25.57 -23.77 -26.54 -24.04	Limit Line dBuV 53.49 63.49 51.56 61.56 49.66 59.66 46.00	Read Level dBuV 20.89 36.99 15.71 30.91 14.00 25.80 9.21 21.71	LISN Factor dB 0.03 0.03 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss dB 10.06 10.06 10.06 10.07 10.07 10.07	Aver QP Aver QP Aver QP Aver	rk age age age age		30
Site Condition Project Mode 1 2 3 4 5 6 7	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.20 0.26 0.26 0.32 0.32 4.43 4.43 12.92	dBuV 30.98 47.08 25.79 40.99 24.09 35.89 19.46 31.96 27.32	Over Limit dB -22.51 -16.41 -25.77 -20.57 -25.57 -23.77 -26.54 -24.04 -22.68	Limit Line dBuV 53.49 63.49 51.56 61.56 49.66 59.66 46.00 56.00	Read Level dBuV 20.89 36.99 15.71 30.91 14.00 25.80 9.21 21.71 16.70	LISN Factor dB 0.03 0.03 0.02 0.02 0.02 0.02 0.06 0.06 0.25	Cable Loss dB 10.06 10.06 10.06 10.07 10.07 10.19 10.19	Aver QP Aver QP Aver QP Aver QP	rk age age age age		30
Site Condition Project Mode 1 2 3 4 5 6 7 8 9	: C001-S on: FCC 15 : (FC) 3 : Mode 4 Freq MHz 0.20 0.26 0.26 0.26 0.32 4.43 4.43 12.92 12.92	dBuV 30.98 47.08 25.79 40.99 24.09 35.89 19.46 31.96 27.32 33.82	Over Limit dB -22.51 -16.41 -25.77 -20.57 -25.57 -23.77 -26.54 -24.04 -22.68	D601 LIN	Read Level dBuV 20.89 36.99 15.71 14.00 25.80 9.21 21.71 16.70 23.20	LISN Factor dB 0.03 0.03 0.02 0.02 0.02 0.02 0.06 0.06 0.25 0.25	Cable Loss dB 10.06 10.06 10.07 10.07 10.07 10.19 10.19 10.37	Aver QP Aver QP Aver QP Aver QP Aver	rk age age age age		30

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24~25℃ Test Mode: Mode 4 Temperature: 48~49% Test Engineer: Leo Liao Relative Humidity: 120Vac / 60Hz Phase: Test Voltage: Neutral

WCDMA band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Function Type: Notebook) + Earphone + GPS Rx



: C001-SZ

Condition: FCC 15B_QP LISN_N_2000601 NEUTRAL Project : (FC) 370202

: Mode 4 Mode

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	-	MHz	dBuV	dB	dBuV	dBuV	dB	dB	75
1		0.19	30.97	-23.05	54.02	20.90	0.02	10.05	Average
2		0.19	47.77	-16.25	64.02	37.70	0.02	10.05	QP
3		0.21	28.77	-24.59	53.36	18.69	0.02	10.06	Average
4		0.21	46.17	-17.19	63.36	36.09	0.02	10.06	QP
5		0.25	21.68	-30.05	51.73	11.60	0.02	10.06	Average
6		0.25	40.38	-21.35	61.73	30.30	0.02	10.06	QP
7 8		0.32	23.28	-26.34	49.62	13.19	0.02	10.07	Average
8		0.32	35.58	-24.04	59.62	25.49	0.02	10.07	QP
9		4.29	20.86	-25.14	46.00	10.60	0.07	10.19	Average
10		4.29	31.26	-24.74	56.00	21.00	0.07	10.19	QP
11	*	16.23	33.85	-16.15	50.00	23.00	0.38	10.47	Average
12		16.23	40.85	-19.15	60.00	30.00	0.38	10.47	QP

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3.2. 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

See list of measuring instruments 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 is a Bi-Log antenna and its 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.
- 5. For each suspected emission, the EUT was arranged to its worst case and then tune the 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.
- 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 (dBuV/m) = 20 log Emission level (uV/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

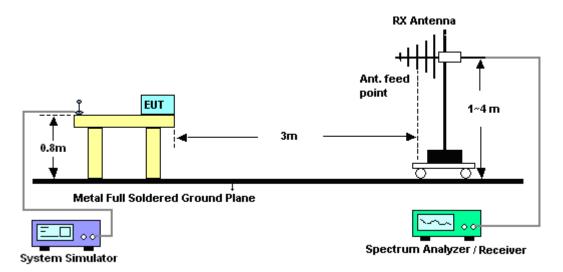
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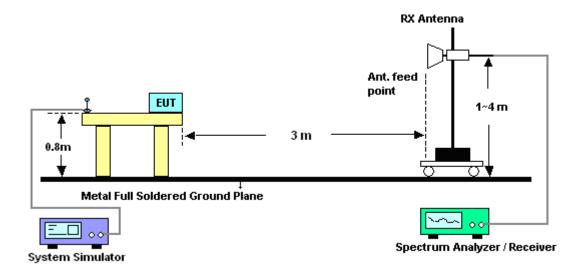
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

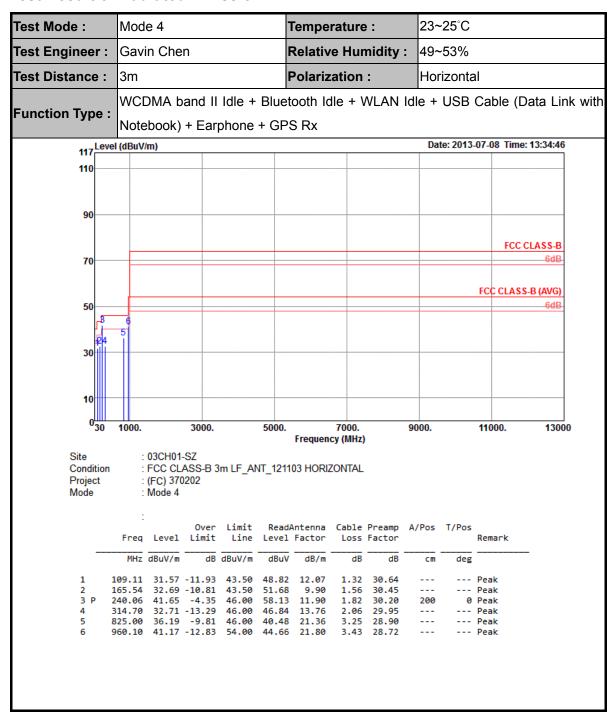


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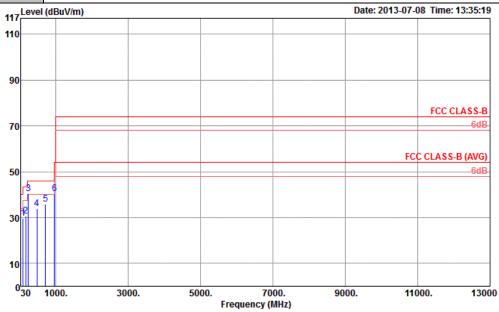
3.2.5. Test Result of Radiated Emission



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23~25°C Test Mode: Mode 4 Temperature: Gavin Chen 49~53% Test Engineer: Relative Humidity: Test Distance : 3m Polarization: Vertical WCDMA band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Function Type: Notebook) + Earphone + GPS Rx 117 Level (dBuV/m) Date: 2013-07-08 Time: 13:35:19



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF_ANT_121103 VERTICAL

Project : (FC) 370202 Mode : Mode 4

1

	Enna	Laval		Limit						T/Pos		
	rreq	rever	Limit	Line	revel	ractor	LOSS	ractor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	92.91	29.81	-13.69	43.50	49.04	10.20	1.22	30.65			Peak	
2	172.56	30.71	-12.79	43.50	49.92	9.63	1.58	30.42			Peak	
3 P	240.06	40.55	-5.45	46.00	57.03	11.90	1.82	30.20	200	0	Peak	
4	479.90	33.83	-12.17	46.00	43.55	17.20	2.48	29.40			Peak	
5	720.00	35.90	-10.10	46.00	41.95	20.00	2.99	29.04			Peak	
5	060 10	40 32	-13 68	54 00	/13 91	21 80	3 /13	28 72			Dask	

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC LISN	ETS-LINDGREN	3816/2SH	00103912	0.1MHz~108MHz	Feb. 28, 2011	Jul. 08, 2013	Feb. 27, 2014	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	ETS-LINDGREN	3816/2SH	00103892	0.1MHz~108MHz	Feb. 28, 2011	Jul. 08, 2013	Feb. 27, 2014	Conduction (CO01-SZ)
ESCIO TEST Receiver	R&S	1142.8007.0 3	100724	9K-3GHz	Mar. 08, 2011	Jul. 08, 2013	Mar. 07, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000 891N/A	N/A	Oct. 12, 2011	Jul. 08, 2013	Oct. 11, 2013	Conduction (CO01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9K-3GHz	Mar. 28, 2013	Jul. 08, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jul. 08, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jul. 08, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30Mhz~2Ghz	Nov. 03, 2012	Jul. 08, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9K-3000MHz GAIN 30db	Mar. 28, 2013	Jul. 08, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Jul. 08, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Turn Table	EM Electronice	EM 1000	N/A	0 ~ 360 degree	N/A	Jul. 08, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronice	EM 1000	N/A	1 m - 4 m	N/A	Jul. 08, 2013	N/A	Radiation (03CH01-SZ)

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5. Uncertainty of Evaluation

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

Macauring Uncortainty for a Loyal of	
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.26

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

Measuring Uncertainty for a Level of	2.54
Confidence of 95% (U = 2Uc(y))	

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of	4.70
Confidence of 95% (U = 2Uc(y))	4.72

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Appendix A. Photographs of EUT

Please refer to Sporton report number EP370202 as below.

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