FCC Test Report

APPLICANT : CT Asia (HK) Ltd

EQUIPMENT : Smartphone

BRAND NAME : BLU

MODEL NAME : STUDIO 7.0 LTE

MARKETING NAME : STUDIO 7.0 LTE

FCC ID : YHLBLUST70LTE

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on May 19, 2015 and testing was completed on Jun. 05, 2015. We, SPORTON INTERNATIONAL 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 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 INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

SPORTON INTERNATIONAL INC.

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Report No. : FC551902

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC551902	Rev. 01	Initial issue of report	Jul. 30, 2015

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	ICES003	AC Conducted Emission	< 15.107 limits	PASS	Under limit 4.60 dB at
5.1	13.107	Section 6.1	AC Conducted Emission	< ICES003 6.1 limits	17.00	0.190 MHz
2.0	45 400	ICES003	Dedicted Environmen	< 15.109 limits	DAGG	Under limit 0.62 dB at
3.2	15.109	Section 6.2	Radiated Emission	< ICES003 6.2 limits	PASS	44.310 MHz for Quasi-Peak

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1. General Description

1.1. Applicant

CT Asia (HK) Ltd

Unit1309-11, 13th Floor 9 Wing Hong Street Cheung Sha Wan Kowloon, Hong Kong

1.2. Manufacturer

QUANTA COMPUTER INC.

211, Wen Hwa 2nd Rd., Guishan Dist., Tao Yuan City 33377, Taiwan

1.3. Product Feature of Equipment Under Test

Product Feature					
Equipment	Smartphone				
Brand Name	BLU				
Model Name	STUDIO 7.0 LTE				
Marketing Name	STUDIO 7.0 LTE				
FCC ID	YHLBLUST70LTE				
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(Downlink only)/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE				
HW Version	С				
SW Version	BLU-S0010QU 05-29-2015 14:11				
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 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 IV: 1712.4 MHz ~ 1752.6 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				
	LTE Band 12: 699.7 MHz ~ 715.3 MHz				
	LTE Band 17 : 706.5 MHz ~ 713.5 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				
	WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz				
	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz				
	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz				
D. F	LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz				
Rx Frequency	LTE Band 7 : 2622.5 MHz ~ 2687.5 MHz				
	LTE Band 12: 729.7 MHz ~ 745.3 MHz				
	LTE Band 17 : 736.5 MHz ~ 743.5 MHz				
	802.11b/g/n: 2412 MHz ~ 2462 MHz				
	Bluetooth: 2402 MHz ~ 2480 MHz				
	GPS : 1.57542 GHz				
	Glonass: 1602 MHz + n× 0.5625MHz (n=-7,-6,-5,0,,6)				
	WWAN : PIFA Antenna				
	WLAN: Chip Antenna				
Antenna Type	Bluetooth : Chip Antenna				
	GPS/Glonass : Chip Antenna				
	GSM: GMSK				
	GPRS: GMSK				
	EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK				
	WCDMA: QPSK (Uplink)				
	HSDPA/DC-HSDPA: QPSK (Uplink)				
	HSUPA: QPSK (Uplink)				
	HSPA+: 16QAM(Downlink only)				
	DC-HSDPA: 64QAM				
Type of Modulation					
	LTE: QPSK / 16QAM				
	802.11b : DSSS (DBPSK / DQPSK / CCK)				
	802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)				
	Bluetooth LE: GFSK				
	Bluetooth (1Mbps) : GFSK				
	Bluetooth (2Mbps) : π /4-DQPSK				
	Bluetooth (3Mbps): 8-DPSK				
	GPS/Glonass : BPSK				

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1.5. Modification of EUT

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

1.6. Test Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.				
	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park,				
Toot Site Leastion	Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.				
Test Site Location	TEL: +886-3-327-3456				
	FAX: +886-3-328-497	8			
Took Cita No	Sporton Site No. IC Registration		IC Registration No.		
Test Site No.	CO05-HY	03CH06-HY	4086B		

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
- IC ICES-003 Issue 5
- IC RSS-Gen Issue 4

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 C63.4-2009 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.

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

Abbreviations:

EMI AC: AC conducted emissions

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

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

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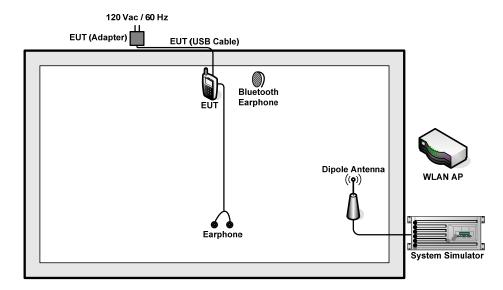
Test Items	EUT Configure Mode	Function Type
	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera <fig.1></fig.1>
AC Conducted Emission		Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4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

Remark:

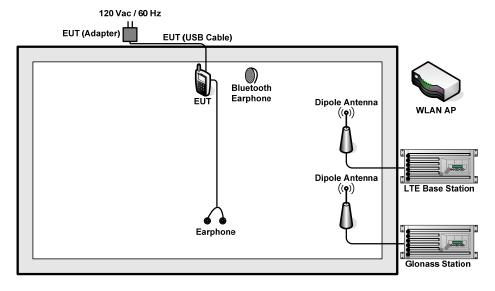
- 1. The worst case of AC is mode 4; only the test data of this mode was reported.
- The worst case of RE < 1G is mode 3; and the USB Link mode of RE is mode 4; the test data of these modes are reported.
- **3.** Data Link with Notebook means data application transferred mode between EUT and Notebook.

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2.2. Connection Diagram of Test System



<Fig.1>

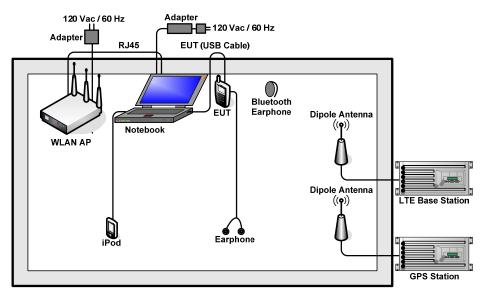


<Fig.2>

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<Fig.3>

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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	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded,1.8m
4.	Glonass Station	RACELOGIC	RLLS03-2RP	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded,1.8m
6.	Bluetooth Earphone	SonyErricsson	MW600	PY700A2029	N/A	N/A
7.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0m	N/A
9.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
10.	Earphone	Lenovo	SH100	N/A	N/A	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. Execute "GPS test" to make the EUT receive continuous signals from GPS/Glonass station.
- 3. Execute "Video player" to play MPEG4 files.
- 4. Turn on camera to capture images.

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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

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.

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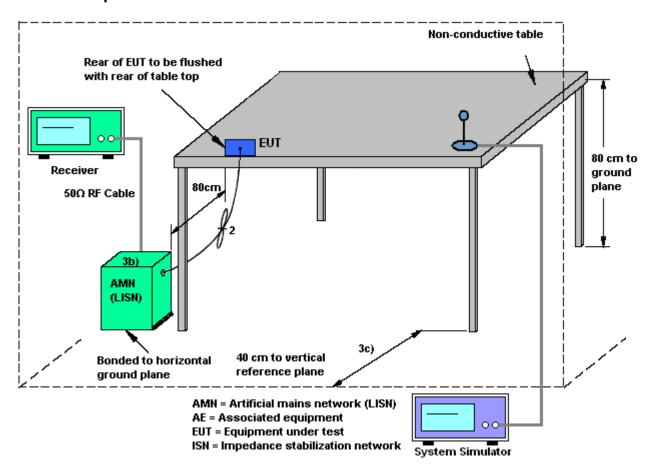
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3.1.4 Test Setup

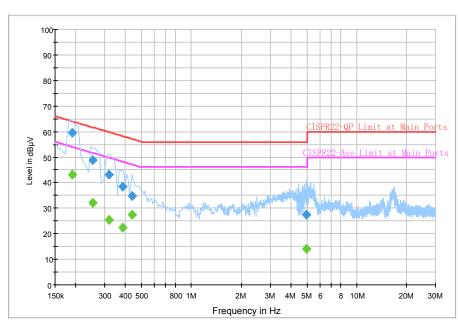


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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 4	Temperature :	26~27℃		
Test Engineer :	Cosmo Xu	Relative Humidity :	49~52%		
Test Voltage :	120Vac / 60Hz	Phase :	Line		
Function Type :	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with				
Function Type :	Notebook) + Earphone + GF	PS Rx			





Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	59.4	Off	L1	19.5	4.6	64.0
0.254000	48.7	Off	L1	19.4	12.9	61.6
0.318000	43.1	Off	L1	19.5	16.7	59.8
0.382000	38.5	Off	L1	19.5	19.7	58.2
0.438000	34.6	Off	L1	19.5	22.5	57.1
4.950000	27.6	Off	L1	19.8	28.4	56.0

Final Result : Average

Frequency	Average	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Filler	Lille	(dB)	(dB)	(dBµV)
0.190000	43.1	Off	L1	19.5	10.9	54.0
0.254000	32.1	Off	L1	19.4	19.5	51.6
0.318000	25.3	Off	L1	19.5	24.5	49.8
0.382000	22.4	Off	L1	19.5	25.8	48.2
0.438000	27.5	Off	L1	19.5	19.6	47.1
4.950000	14.1	Off	L1	19.8	31.9	46.0

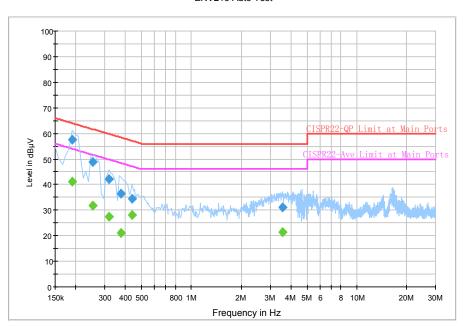
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Test Mode :	Mode 4	Temperature :	26~27℃			
Test Engineer :	Cosmo Xu	Relative Humidity :	49~52%			
Test Voltage :	120Vac / 60Hz	Phase :	Neutral			
Function Type	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with					
Function Type :	Notebook) + Earphone + GPS Rx					

ENV216 Auto Test



Final Result : Quasi-Peak

Frequency	Quasi-Peak	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Filler	Lille	(dB)	(dB)	(dBµV)
0.190000	57.5	Off	N	19.5	6.5	64.0
0.254000	48.7	Off	N	19.4	12.9	61.6
0.318000	42.2	Off	N	19.5	17.6	59.8
0.374000	36.5	Off	N	19.5	21.9	58.4
0.438000	34.3	Off	N	19.5	22.8	57.1
3.550000	31.2	Off	N	19.7	24.8	56.0

Final Result : Average

Frequency	Average	Filter Line		Corr.	Margin	Limit
(MHz)	(dBµV)	Filler	Line	(dB)	(dB)	(dBµV)
0.190000	41.1	Off	N	19.5	12.9	54.0
0.254000	31.9	Off	N	19.4	19.7	51.6
0.318000	27.3	Off	N	19.5	22.5	49.8
0.374000	21.0	Off	N	19.5	27.4	48.4
0.438000	28.0	Off	N	19.5	19.1	47.1
3.550000	21.4	Off	N	19.7	24.6	46.0

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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

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

3.2.3. Test Procedures

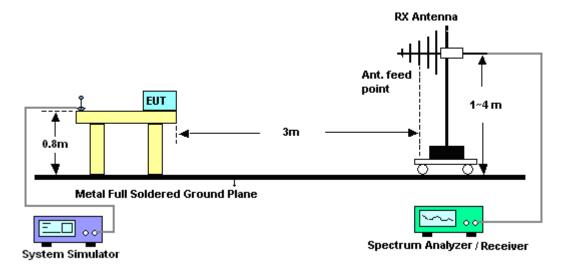
- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna 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.
- 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 (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

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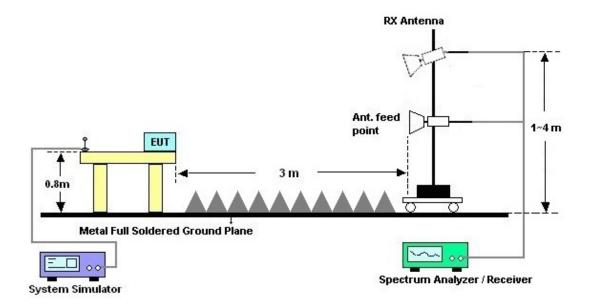
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



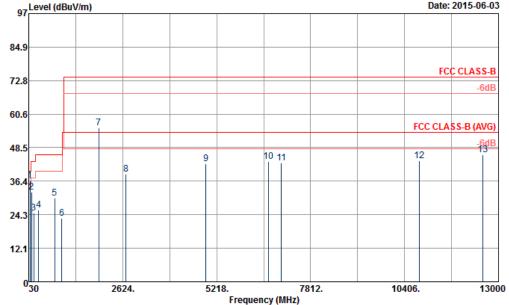
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3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 3			Temperature :		23~24°C				
Test Engineer :	Hayden	Wu		Relative Humidity :		55~56%				
Test Distance :	3m			Polariz	ation :		Horizontal			
Function Type	LTE Ba	LTE Band 2 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from								
Function Type	Adapter	Adapter) + Earphone + Glonass Rx								
Remark :	#7 is sy	stem simula	tor signa	al which	can be ign	nored				
97 ^{Le}	el (dBuV/m)							Date	e: 2015-06-03	
84.9										



Site : 03CH06-HY

Condition : FCC CLASS-B 3m HF-ANT_583_140731 HORIZONTAL

	Freq	Level	Over Limit	Limit Line		intenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	$\overline{d}\overline{B}\overline{u}\overline{V}7\overline{m}$	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$	$\overline{\mathtt{d}}\overline{\mathtt{B}}\overline{\mathtt{u}}\overline{\mathtt{V}}7\overline{\mathtt{m}}$	<u>dBu</u> ₹	$\overline{dB/m}$	<u>dB</u>	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$		deg	
1	62.40	36.54	-3.46	40.00	61.12	6.30	0.89	31.77	400	113	Peak
2 3	102.36	32.55	-10.95	43.50	52.08	11.08	1.12	31.73			Peak
3	165.27	24.90	-18.60	43.50	45.18	9.90	1.55	31.73			Peak
4	307.00	25.83	-20.17	46.00	42.36	13.25	1.93	31.71			Peak
5	745.90	30.30	-15.70	46.00	39.61	19.68	3.04	32.03			Peak
б	939.80	23.10	-22.90	46.00	30.16	20.70	3.35	31.11			Peak
7	1960.00	55.69			76.78	31.33	6.10	58.52			Peak
8	2714.00	38.83	-35.17	74.00	57.49	32.35	7.19	58.20			Peak
9	4922.00	42.62	-31.38	74.00	55.45	34.44	10.21	57.48			Peak
10	6654.00	43.63	-30.37	74.00	54.53	35.80	11.82	58.52			Peak
11	7004.00	42.93	-31.07	74.00	53.64	35.80	12.29	58.80			Peak
12	10816.00	43.84	-30.16	74.00	48.43	37.59	15.50	57.68			Peak
13	12566.00	46.01	-27.99	74.00	48.58	39.33	16.59	58.49	101	313	Peak

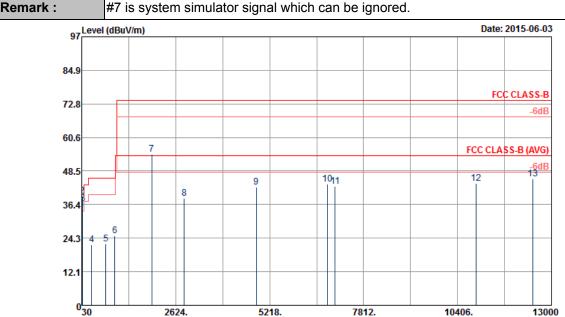
TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: YHLBLUST70LTE Page Number : 19 of 24
Report Issued Date : Jul. 30, 2015
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Test Mode: Mode 3 Temperature: 23~24°C

Test Engineer: Hayden Wu Relative Humidity: 55~56%

Test Distance: 3m Polarization: Vertical

Function Type: LTE Band 2 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Glonass Rx



Frequency (MHz)

Site : 03CH06-HY

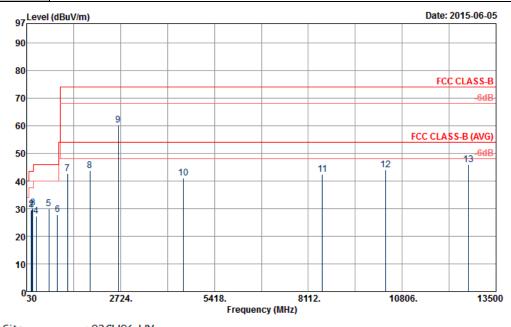
Condition : FCC CLASS-B 3m HF-ANT_583_140731 VERTICAL

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	<u>M</u> Hz	$\overline{d}\overline{B}\overline{u}\overline{V}\overline{/}\overline{m}$	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$	$\overline{d}\overline{B}\overline{u}\overline{V}\overline{/}\overline{m}$	<u>dBu</u> ₹	dB7m	<u>dB</u>	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$		deg	
1	36.21 44.31	34.62 39.38	-5.38 -0.62	40.00 40.00	49.80 60.40	15.90 10.00	0.70 0.76	31.78 31.78	100 100	217 239	
2	51.06	36.69	-3.31	40.00	59.44	8.22	0.81	31.78			Peak
4 5 6	307.00 694.10	21.91 22.16	-24.09 -23.84	46.00 46.00	38.44 32.52	13.25 18.85	1.93 2.88	31.71 32.09			Peak Peak
б 7	939.10 1960.00	25.06 54.57	-20.94	46.00	32.14 75.66	20.69 31.33	3.35 6.10	31.12 58.52			Peak Peak
8	2862.00 4850.00	38.75 42.73	-35.25 -31.27	74.00 74.00	56.93 55.79	32.59 34.38	7.43	58.20 57.59			Peak Peak
10	6812.00	43.67	-30.33	74.00	54.51	35.80	12.01	58.65			Peak
11 12	7026.00 10924.00	43.00 44.06	-31.00 -29.94	74.00 74.00	53.78 48.46	35.80 37.66	12.24 15.57	58.82 57.63			Peak Peak
13	12476.00	45.58	-28.42	74.00	48.21	39.28	16.58	58.49	100	319	Peak

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Test Mode :	Mode 4	Temperature :	23~24°C			
Test Engineer :	Hayden Wu	Relative Humidity :	55~56%			
Test Distance :	3m	Polarization :	Horizontal			
Function Type	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with					
Function Type :	Notebook) + Earphone + GPS Rx					
Remark :	#9 is system simulator signal which can be ignored.					



Site : 03CH06-HY

Condition : FCC CLASS-B 3m HF-ANT_583_140731 HORIZONTAL

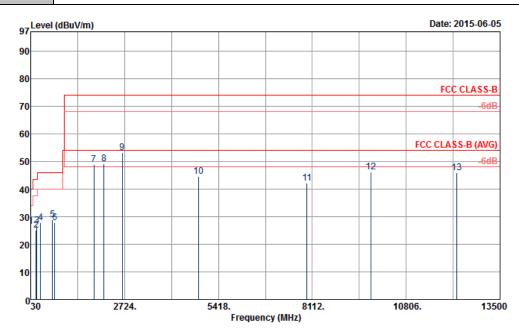
			0ver	Limit	Read/	Intenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	163.65	29.37	-14.13	43.50	49.63	9.94	1.53	31.73			Peak
2	177.69	29.80	-13.70	43.50	50.63	9.40	1.50	31.73			Peak
3	204.69	30.37	-13.13	43.50	51.30	9.25	1.55	31.73	100	101	Peak
4	307.00	27.27	-18.73	46.00	43.80	13.25	1.93	31.71			Peak
5	666.10	30.00	-16.00	46.00	40.30	18.96	2.83	32.09			Peak
6	916.70	27.71	-18.29	46.00	35.16	20.50	3.36	31.31			Peak
7	1198.00	42.65	-31.35	74.00	69.12	27.82	4.76	59.05			Peak
8	1848.00	43.89	-30.11	74.00	65.98	30.59	5.88	58.56			Peak
9	2655.00	60.32			79.17	32.24	7.11	58.20			Peak
10	4524.00	41.12	-32.88	74.00	55.35	34.11	9.64	57.98			Peak
11	8520.00	42.49	-31.51	74.00	52.43	35.61	13.45	59.00			Peak
12	10324.00	44.07	-29.93	74.00	49.92	37.25	15.03	58.13			Peak
13	12710.00	45.88	-28.12	74.00	48.35	39.39	16.60	58.46	100	0	Peak

SPORTON INTERNATIONAL INC.

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FCC Test Report	Report No. : FC551902

Test Mode :	Mode 4	Temperature :	23~24°C				
Test Engineer :	Hayden Wu	Relative Humidity :	55~56%				
Test Distance :	3m	Polarization :	Vertical				
Function Type	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with						
Function Type :	Notebook) + Earphone + GPS Rx						
Remark :	#9 is system simulator signal which can be ignored.						



Site : 03CH06-HY

Condition : FCC CLASS-B 3m HF-ANT_583_140731 VERTICAL

	Freq	Level	Over Limit	Limit Line		ntenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.35	26.52	-13.48	40.00	39.63	18.02	0.65	31.78	101	163	Peak
2	188.76	25.13	-18.37	43.50	46.38	9.00	1.48	31.73			Peak
3	204.69	26.85	-16.65	43.50	47.78	9.25	1.55	31.73			Peak
4	312.60	27.71	-18.29	46.00	44.12	13.36	1.94	31.71			Peak
5	660.50	28.83	-17.17	46.00	39.19	18.91	2.82	32.09			Peak
6	722.10	27.80	-18.20	46.00	37.72	19.18	2.96	32.06			Peak
7	1846.00	48.97	-25.03	74.00	71.06	30.59	5.88	58.56			Peak
8	2136.00	49.31	-24.69	74.00	69.63	31.78	6.32	58.42	100	0	Peak
9	2655.00	53.36			72.21	32.24	7.11	58.20			Peak
10	4846.00	44.69	-29.31	74.00	57.75	34.38	10.15	57.59			Peak
11	7960.00	42.21	-31.79	74.00	52.73	35.79	13.17	59.48			Peak
12	9788.00	46.22	-27.78	74.00	53.88	36.79	14.46	58.91			Peak
13	12256.00	46.04	-27.96	74.00	48.81	39.06	16.57	58.40			Peak

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Dec. 01, 2014	Jun. 04, 2015	Nov. 30, 2015	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 08, 2014	Jun. 04, 2015	Dec. 07, 2015	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 02, 2014	Jun. 04, 2015	Dec. 01, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 04, 2015	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	FSP30	101067	9kHz ~ 30GHz	Nov. 21, 2014	Jun. 03, 2015~ Jun. 05, 2015	Nov. 20, 2015	Radiation (03CH06-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9kHz ~ 26.5GHz	Nov. 27, 2014	Jun. 03, 2015~ Jun. 05, 2015	Nov. 26, 2015	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/0003	20MHz ~ 1000MHz	May 06, 2015	Jun. 03, 2015~ Jun. 05, 2015	May 05, 2016	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL6112B	2885	30MHz ~ 2GHz	Sep. 27, 2014	Jun. 03, 2015~ Jun. 05, 2015	Sep. 26, 2015	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Jul. 24, 2014	Jun. 03, 2015~ Jun. 05, 2015	Jul. 23, 2015	Radiation (03CH06-HY)
Amplifier	SONOMA	310N	187312	9kHz ~ 1GHz	Nov. 24, 2014	Jun. 03, 2015~ Jun. 05, 2015	Nov. 23, 2015	Radiation (03CH06-HY)
Preamplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 17, 2014	Jun. 03, 2015~ Jun. 05, 2015	Jul. 16, 2015	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	Jun. 03, 2015~ Jun. 05, 2015	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1 m ~ 4 m	N/A	Jun. 03, 2015~ Jun. 05, 2015	N/A	Radiation (03CH06-HY)

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5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2 240			
Confidence of 95% (U = 2Uc(y))	2.3dB			

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

Measuring Uncertainty for a Level of	4.5.40
Confidence of 95% (U = 2Uc(y))	4.5dB

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