EMC TEST REPORT



Report No.: 16071505-FCC-E V2

Supersede Report No: N/A			
Applicant	Cedar Kingdom Corporation Limited		
Product Name	Feature photon	one	
Model No.	V105		
Serial No.	N/A		
Test Standard	FCC Part 1	5 Subpart B Class B:2016, A	NSI C63.4: 2014
Test Date	Dec 31, 20	16 to Jan 04, 2017	
Issue Date	Jan 16, 2017		
Test Result	Result Pass Fail		
Equipment compl	Equipment complied with the specification		
Equipment did not comply with the specification			
Loven Luo David Huang			
Loren Luo David Huang			
Test Engineer Checked By			
This test report may be reproduced in full only			
Test result p	Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108 Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn



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Laboratories Introduction

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In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

	•
Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

Accreditations for Conformity Assessment



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1. Report Revision History

Report No.	Report Version	Description	Issue Date
16071505-FCC-E	NONE	Original	Jan 05, 2017
16071505-FCC-E V1	V1	Updated the test date	Jan 13, 2017
16071505-FCC-E V2	V2	Updated the product name	Jan 16, 2017

2. Customer information

Applicant Name	Cedar Kingdom Corporation Limited
Applicant Add	11/F,AXA Centre 151 Gloucester Road,Wanchai
Manufacturer	Cedar Kingdom Corporation Limited
Manufacturer Add	11/F,AXA Centre 151 Gloucester Road,Wanchai

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China	
	518108	
FCC Test Site No.	718246	
IC Test Site No.	4842E-1	
Test Software	Radiated Emission Program-To Shenzhen v2.0	



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4. Equipment under Test (EUT) Information

Description of EUT:	Feature phone
Main Model:	V105
Serial Model:	N/A
Antenna Gain:	GSM850: -0.21dBi PCS1900: -0.39dBi Bluetooth:-5.7dBi
Antenna Type:	GSM: PIFA antenna BT: Monopole antenna
Input Power:	Adapter: Model: V105 Input: AC100-240V~50/60Hz,0.15A Output: DC 5.0V,500mA Battery: Model: V105 Spec: 3.7V,800mAh(2.96Wh) Voltage: 4.2V
Equipment Category :	JBP
Type of Modulation:	GSM / GPRS: GMSK Bluetooth: GFSK, π /4DQPSK, 8DPSK
RF Operating Frequency (ies):	GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz Bluetooth: 2402-2480 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH Bluetooth: 79CH
Port:	USB Port, Earphone Port



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Trade Name :

VIRZO

FCC ID:

2AKQUVZCK105

Date EUT received:

Dec 30, 2016

Test Date(s):

Dec 31, 2016 to Jan 04, 2017



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5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.107; ANSI C63.4: 2014	AC Power Line Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

Measurement Uncertainty

Emissions			
Test Item Description Uncertainty		Uncertainty	
AC Power Line Conducted	Confidence level of approximately 95% (in the case		
Emissions and Radiated	where distributions are normal), with a coverage	+5.6dB/-4.5dB	
Emissions	factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)		
-	-	-	



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6. <u>Measurements, Examination And Derived Results</u>

6.1 AC Power Line Conducted Emissions

Temperature	22°C
Relative Humidity	54%
Atmospheric Pressure	1002mbar
Test date :	Jan 04, 2017
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement			Applicable			
47CFR§15. 107	a)	For Low-power radio-fr connected to the public voltage that is conducted frequency or frequencied not exceed the limits in [mu] H/50 ohms line im lower limit applies at th Frequency ranges	K					
		(MHz) 0.15 ~ 0.5	QP	Average				
		0.15 ~ 0.5	66 – 56 56	56 – 46 46				
		5 ~ 30	60	50				
Test Setup		Vertical Ground Reference Plane EUT UT UT B0cm Horizontal Ground Reference Plane Horizontal Ground Reference Plane						
Procedure	the 2. The	the standard on top of a $1.5m \times 1m \times 0.8m$ high, non-metallic table.						

1			
SIFM		Test Report	16071505-FCC-E V2
GLOBAL TESTING & C	ERTIFICATIONS	Page	10 of 30
YOUR CHOICE FOR- TCB FC	S CB NB CAB RCB		
	3. The RF OUT of the I	EUT LISN was co	nnected to the EMI test receiver via a low-loss
	coaxial cable.		
			powered separately from another main supply.
			ed to warm up to its normal operating condition.
			ne (for AC mains) or Earth line (for DC power)
			ng an EMI test receiver.
			he EMI test receiver was then tuned to the
		and the necessa	ary measurements made with a receiver bandwidth
	setting of 10 kHz.		
	8. Step 7 was then rep	eated for the LIVE	E line (for AC mains) or DC line (for DC power).
Remark			
Result	Pass I	-ail	
Test Data	Yes	N/A	
	103		
Test Plot	Yes (See below)	N/A	



-10

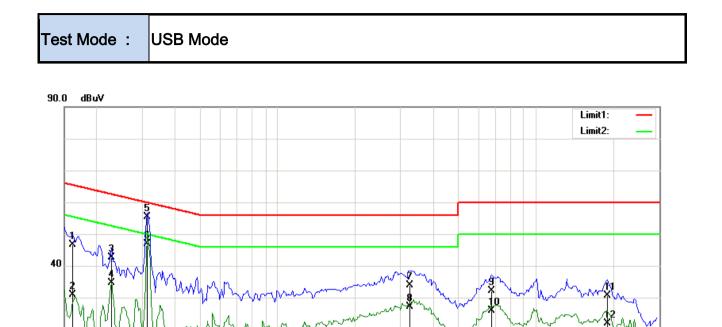
0.150 Test Data 0.5

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AVAK MHz

30.0



Phase Line Plot at 120Vac, 60Hz

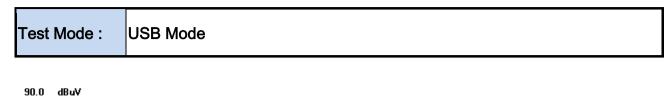
5

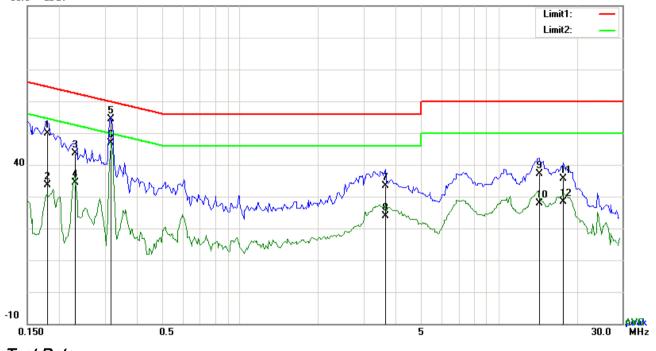
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1617	36.65	QP	10.03	46.68	65.38	-18.70
2	L1	0.1617	20.96	AVG	10.03	30.99	55.38	-24.39
3	L1	0.2280	32.61	QP	10.03	42.64	62.52	-19.88
4	L1	0.2280	24.48	AVG	10.03	34.51	52.52	-18.01
5	L1	0.3138	45.45	QP	10.03	55.48	59.87	-4.39
6	L1	0.3138	36.81	AVG	10.03	46.84	49.87	-3.03
7	L1	3.2613	23.89	QP	10.06	33.95	56.00	-22.05
8	L1	3.2613	17.03	AVG	10.06	27.09	46.00	-18.91
9	L1	6.7557	22.14	QP	10.10	32.24	60.00	-27.76
10	L1	6.7557	15.88	AVG	10.10	25.98	50.00	-24.02
11	L1	18.8496	20.39	QP	10.28	30.67	60.00	-29.33
12	L1	18.8496	11.63	AVG	10.28	21.91	50.00	-28.09



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Test Data

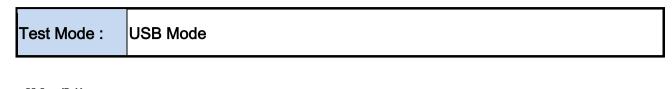
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin		
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)		
1	Ν	0.1796	39.78	QP	10.02	49.80	64.50	-14.70		
2	Ν	0.1796	23.57	AVG	10.02	33.59	54.50	-20.91		
3	Ν	0.2304	33.57	QP	10.02	43.59	62.44	-18.85		
4	Ν	0.2304	24.36	AVG	10.02	34.38	52.44	-18.06		
5	Ν	0.3177	44.38	QP	10.02	54.40	59.77	-5.37		
6	Ν	0.3177	36.83	AVG	10.02	46.85	49.77	-2.92		
7	Ν	3.6513	23.40	QP	10.06	33.46	56.00	-22.54		
8	Ν	3.6513	13.84	AVG	10.06	23.90	46.00	-22.10		
9	Ν	14.3529	26.84	QP	10.19	37.03	60.00	-22.97		
10	Ν	14.3529	17.62	AVG	10.19	27.81	50.00	-22.19		
11	Ν	17.7888	25.49	QP	10.23	35.72	60.00	-24.28		
12	Ν	17.7888	18.19	AVG	10.23	28.42	50.00	-21.58		

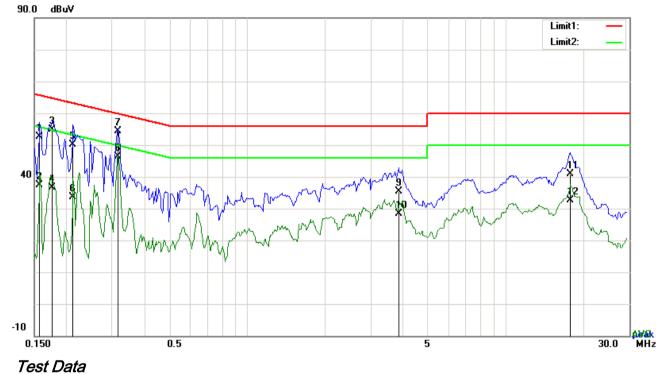
Phase Neutral Plot at 120Vac, 60Hz



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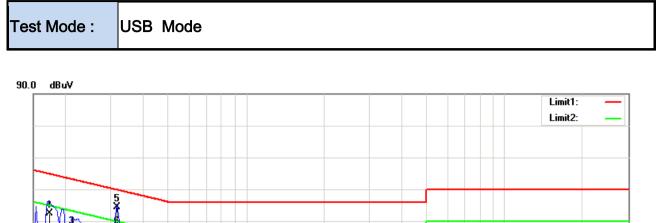
Phase Line Plot at 240Vac, 60Hz

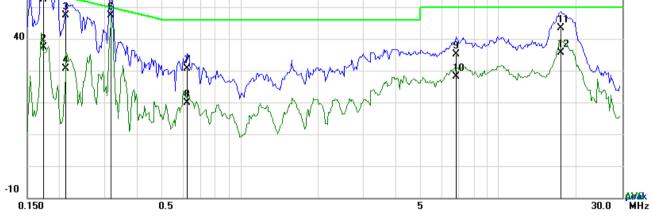
No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1578	42.53	QP	10.03	52.56	65.58	-13.02
2	L1	0.1578	27.32	AVG	10.03	37.35	55.58	-18.23
3	L1	0.1758	44.88	QP	10.03	54.91	64.68	-9.77
4	L1	0.1758	26.63	AVG	10.03	36.66	54.68	-18.02
5	L1	0.2124	40.10	QP	10.03	50.13	63.11	-12.98
6	L1	0.2124	23.55	AVG	10.03	33.58	53.11	-19.53
7	L1	0.3177	44.23	QP	10.03	54.26	59.77	-5.51
8	L1	0.3177	36.30	AVG	10.03	46.33	49.77	-3.44
9	L1	3.8424	25.37	QP	10.07	35.44	56.00	-20.56
10	L1	3.8424	18.39	AVG	10.07	28.46	46.00	-17.54
11	L1	17.6952	30.49	QP	10.27	40.76	60.00	-19.24
12	L1	17.6952	22.24	AVG	10.27	32.51	50.00	-17.49



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Test Data

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin		
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)		
1	Ν	0.1734	42.39	QP	10.02	52.41	64.80	-12.39		
2	Ν	0.1734	27.27	AVG	10.02	37.29	54.80	-17.51		
3	Ν	0.2124	37.47	QP	10.02	47.49	63.11	-15.62		
4	Ν	0.2124	20.58	AVG	10.02	30.60	53.11	-22.51		
5	Ν	0.3177	44.32	QP	10.02	54.34	59.77	-5.43		
6	Ν	0.3177	37.31	AVG	10.02	47.33	49.77	-2.44		
7	Ν	0.6219	20.71	QP	10.02	30.73	56.00	-25.27		
8	Ν	0.6219	9.79	AVG	10.02	19.81	46.00	-26.19		
9	Ν	6.8103	24.98	QP	10.10	35.08	60.00	-24.92		
10	Ν	6.8103	18.11	AVG	10.10	28.21	50.00	-21.79		
11	Ν	17.3754	33.13	QP	10.23	43.36	60.00	-16.64		
12	Ν	17.3754	25.28	AVG	10.23	35.51	50.00	-14.49		

Phase Neutral Plot at 240Vac, 60Hz



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6.2 Radiated Emissions

Temperature	22°C
Relative Humidity	54%
Atmospheric Pressure	1002mbar
Test date :	Jan 04, 2017
Tested By :	Loren Luo

Requirement(s):

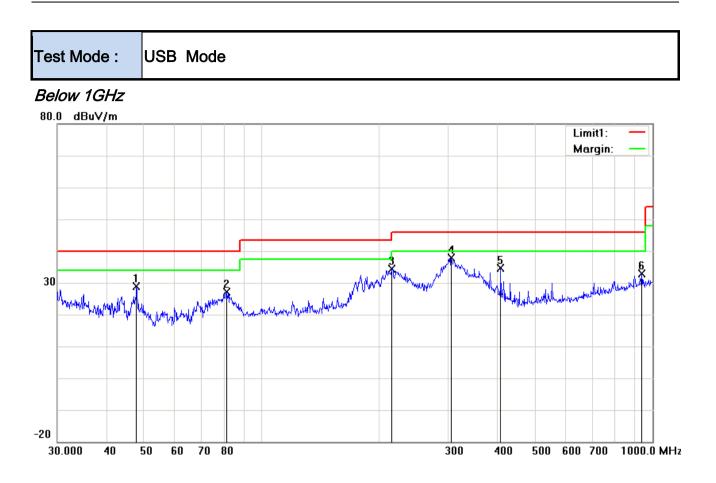
Spec	Item	Requirement		Applicable				
47CFR§15. 109(d)	a)	Except higher limit as specified else emissions from the low-power radio exceed the field strength levels spe the level of any unwanted emission the fundamental emission. The tigh edges	2					
		Frequency range (MHz) 30 – 88	Field Strength (µV/m) 100					
		88 - 216	150					
		216 960	200					
		Above 960	500					
Test Setup		Ant. Tower LUT& Support Units Turn Table Ground Plane Test Receiver						
Procedure	 The EUT was switched on and allowed to warm up to its normal operating condition. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: Vertical or horizontal polarization (whichever gave the higher emission level 							

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GLOBAL TESTING & O YOUR CHOICE FOR- TCB FO	CERTIFICATIONS C8 C8 NB CA8 RC8	Page	16 of 30						
[over a f	ull rotation of the E	UT) was chosen.						
	b. The EUT was then rotated to the direction that gave the maximum								
	emissio	emission.							
	c. Finally, emissio	-	was adjusted to the height that gave the maximum						
	3. The resolution b	andwidth and vide	o bandwidth of test receiver/spectrum analyzer is						
	120 kHz for Qua	siy Peak detection	at frequency below 1GHz.						
	4. The resolution ba	ndwidth of test rec	eiver/spectrum analyzer is 1MHz and video						
	bandwidth is 3M 1GHz.	Hz with Peak dete	ction for Peak measurement at frequency above						
	The resolution	pandwidth of test re	eceiver/spectrum analyzer is 1MHz and the video						
	bandwidth with above 1GHz.	Peak detection for	Average Measurement as below at frequency						
		cycle < 98%) □ 10	Hz (Duty cycle > 98%)						
			e next frequency point, until all selected frequency						
	points were mea	sured.							
Remark									
Result	Pass	Fail							
Test Data	Yes	N/A							
Test Plot	Yes (See below)	N/A							



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Test Data

Horizontal Polarity Plot @3m

No.	P/L	Frequency	Readin g	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/ m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	н	47.8260	41.02	peak	-12.20	28.82	40.00	-11.18	110	99
2	Н	81.2117	40.77	peak	-13.71	27.06	40.00	-12.94	150	136
3	н	215.2678	43.22	peak	-8.87	34.35	43.50	-9.15	200	227
4	Н	305.6800	44.73	peak	-6.73	38.00	46.00	-8.00	100	168
5	Н	408.9460	38.72	peak	-4.08	34.64	46.00	-11.36	120	302
6	Н	938.8326	27.92	peak	5.03	32.95	46.00	-13.05	100	155



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300

400

Limit1: Margin:

> 6 X

500 600 700 1000.0 MHz



Test Data

40

50

60 70 80

-20

30.000

Vertical Polarity Plot @3m

No.	P/L	Frequency	Readin g	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/ m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	V	32.4059	34.03	peak	-2.03	32.00	40.00	-8.00	100	67
2	V	56.5929	47.32	peak	-13.96	33.36	40.00	-6.64	150	158
3	V	99.5281	46.16	peak	-10.92	35.24	43.50	-8.26	120	234
4	V	216.0240	41.51	peak	-8.88	32.63	46.00	-13.37	100	196
5	V	408.9460	35.28	peak	-4.08	31.20	46.00	-14.80	200	215
6	V	758.0408	27.99	peak	2.54	30.53	46.00	-15.47	150	322



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Above 1GHz

Frequency (MHz)	Amplitude (dBµV/m)	Azimuth	Height (cm)	Polarity (H/V)	Factors (dB)	Limit (dBµV/m)	Margin (dB)	Detector (PK/AV)
1557.68	50.57	88	128	V	-22.35	74	-23.43	PK
2082.42	50.33	67	132	V	-21.57	74	-23.67	PK
1688.62	49.64	38	142	V	-22.65	74	-24.36	PK
2193.57	50.33	66	110	Н	-22.32	74	-23.67	PK
2882.45	49.21	46	130	Н	-22.44	74	-24.79	PK
1876.35	50.43	92	105	Н	-22.65	74	-23.57	PK

*Note1: The highest frequency of the EUT is 2480 MHz, so the testing has been conformed to 5*2480MHz=12,400MHz.*

Note2: The frequency that above 3GHz is mainly from the environment noise.

Note3: The AV measurement performed, more than 20dB below limit so AV test data was not presented.



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Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use	
AC Line Conducted Emissions						
EMI test receiver	ESCS30	8471241027	09/16/2016	09/15/2017		
Line Impedance Stabilization Network	LI-125A	191106	09/24/2016	09/23/2017	•	
Line Impedance Stabilization Network	LI-125A	191107	09/24/2016	09/23/2017	K	
LISN	ISN T800	34373	09/24/2016	09/23/2017	V	
Transient Limiter	LIT-153	531118	08/31/2016	08/30/2017	•	
Radiated Emissions						
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017		
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	V	
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/24/2016	03/23/2017	V	
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	K	
Double Ridge Horn Antenna	AH-118	71259	09/23/2016	09/22/2017	K	



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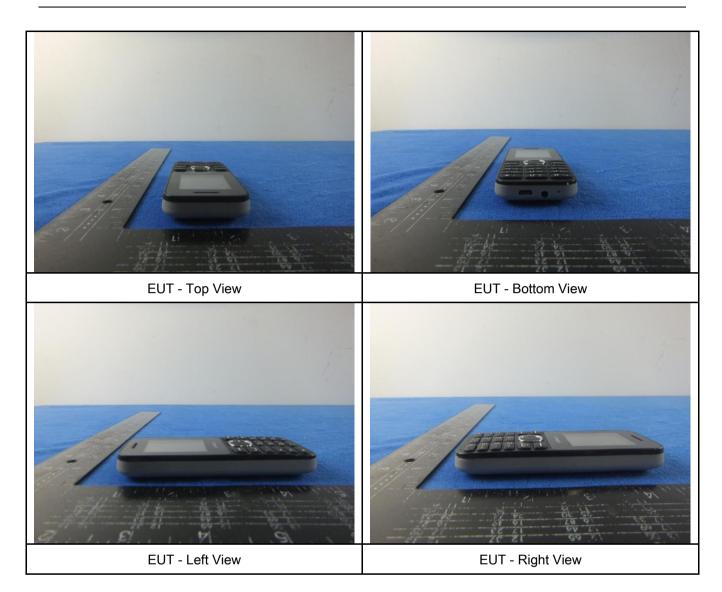
Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo





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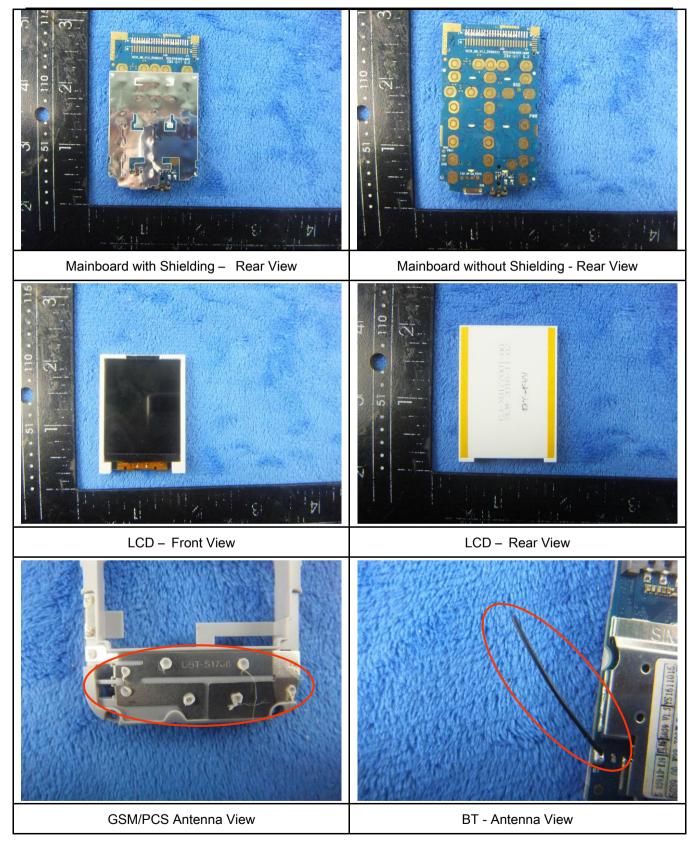
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Annex B.ii. Photograph: EUT Internal Photo





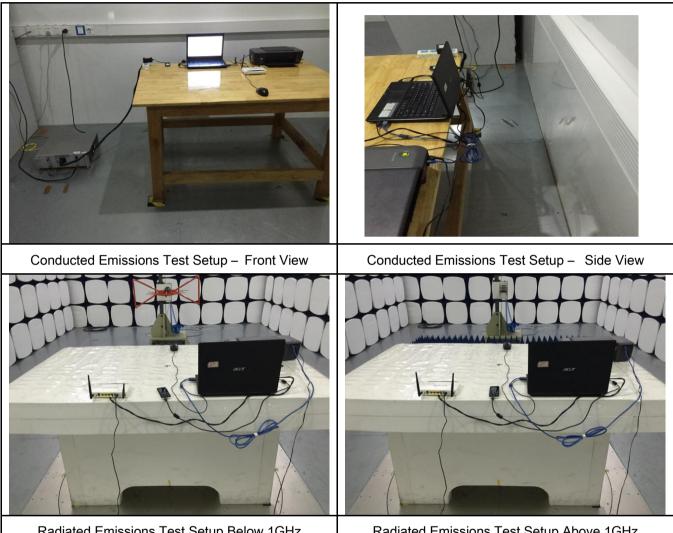
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Annex B.iii. Photograph: Test Setup Photo



Radiated Emissions Test Setup Below 1GHz

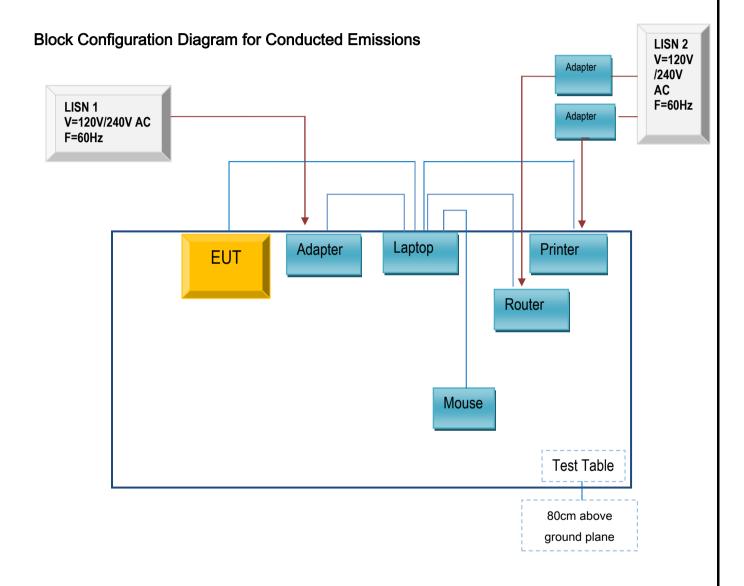
Radiated Emissions Test Setup Above 1GHz



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Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

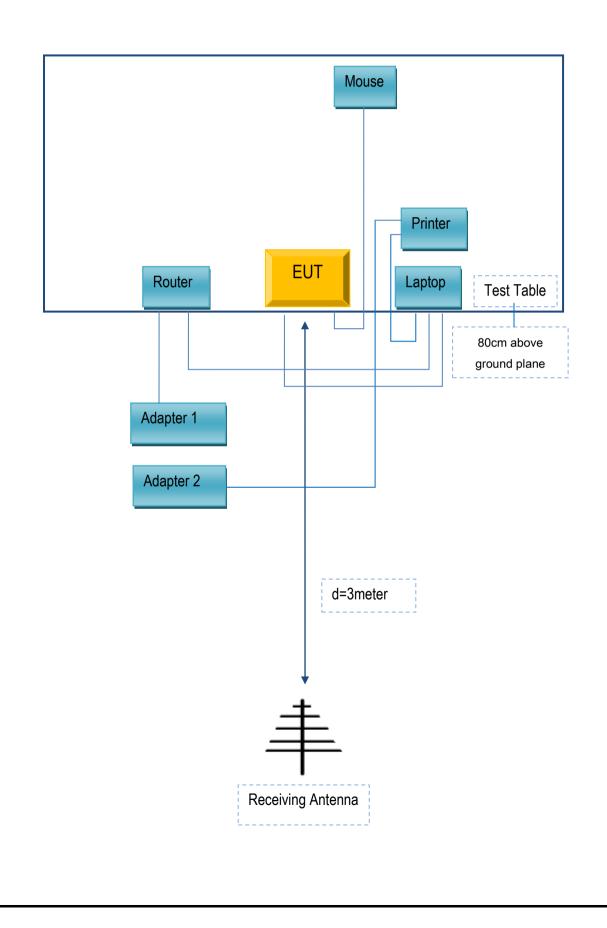
Annex C.ii. TEST SET UP BLOCK





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Block Configuration Diagram for Radiated Emissions





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Annex C. il. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
Lenovo	Laptop	E40	LR-1EHRX
GOLDWEB	Router	R102	1202032094
Lenovo	AC Adapter	42T4416	21D9JU
HP	Printer	VCVRA-1003	CN36M19JWX
DELL	Mouse	E100	912NMTUT41481
BULL	Socket	GN-403	GN201203

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	2m	JX120051274
USB Cable	Un-shielding	No	2m	CBA3000AH0C1
RJ45 Cable	Un-shielding	No	2m	KX156327541
Router Power cable	Un-shielding	No	2m	13274630Z
Printer Power cable	Un-shielding	No	2m	127581031
Power Cable	Un-shielding	No	0.8m	GT211032



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Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see the attachment



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Annex E. DECLARATION OF SIMILARITY

N/A