EMC TEST REPORT



Report No.: 17071342-FCC-E
Supersede Report No: N/A

Applicant SMT TELECOMM HK LIMITED				
Applicant	SWIT TELECOMM IN LIMITED			
Product Name	Mobile Pho	Mobile Phone		
Model No.	BLAZE X50	00		
Serial No.	N/A			
Test Standard	FCC Part 1	FCC Part 15 Subpart B Class B:2016, ANSI C63.4: 2014		
Test Date	December 15, 2017 to January 07, 2018			
Issue Date	January 08, 2018			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
mas. He David Huang				
Evans He		David Huang		
Test Engineer		Checked By		

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

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Accreditations for Conformity Assessment

	-
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



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1. Report Revision History

Report No.	Report Version	Description	Issue Date
17071342-FCC-E	NONE	Original	January 08, 2018

2. Customer information

Applicant Name	SMT TELECOMM HK LIMITED
Applicant Add	Unit C 8/F, CHARMHILL CTR 50 HILLWOOD RD TST KL
Manufacturer	SMT TELECOMM HK LIMITED
Manufacturer Add	Unit C 8/F, CHARMHILL CTR 50 HILLWOOD RD TST KL

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.	535293	
IC Test Site No.	4842E-1	
Test Software of	Dedicted Emission Program To Chamber v2.0	
Radiated Emission	Radiated Emission Program-To Shenzhen v2.0	
Test Software of	EZ-EMC(ver.lcp-03A1)	
Conducted Emission		



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4. Equipment under Test (EUT) Information

Main Model: BLAZE X500

Serial Model: N/A

Antenna Gain:

GSM850: 3.24dBi PCS1900: 3.02dBi

UMTS-FDD Band V: 3.16dBi
UMTS-FDD Band IV: 3.27dBi

UMTS-FDD Band II: 3.14dBi

WIFI: 2.64dBi

Bluetooth/BLE: 2.64dBi

GPS: 2.47dBi

Antenna Type: PIFA antenna

Adapter:

Model: PCX500

Input: AC100-240V~50/60Hz,0.15A

Output: DC 5.0V-700mAh

Input Power: Battery

Model: BPX500

Voltage: 3.7V/ 7.4Wh

Battery Capacity: 2000mAh Charging Limited Voltage: 4.2V

Equipment Category: JBP

GSM / GPRS: GMSK

EGPRS: GMSK

UMTS-FDD: QPSK

Type of Modulation: 802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

BLE: GFSK GPS:BPSK



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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

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;

RX: 1932.4 ~ 1987.6 MHz

RF Operating Frequency (ies): UMTS-FDD Band IV TX:1712.4 ~ 1752.6 MHz;

RX: 2112.4 ~ 2152.6 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz

GPS: 1575.42 MHz

GSM 850: 124CH PCS1900: 299CH

UMTS-FDD Band V: 102CH
UMTS-FDD Band IV: 202CH

UMTS-FDD Band II: 277CH

WIFI:802.11b/g/n(20M): 11CH

WIFI:802.11n(40M): 7CH

Bluetooth: 79CH

BLE: 40CH GPS:1CH

Port: USB Port, Earphone Port

Trade Name: N/A

Number of Channels:

FCC ID: 2AIMEX500

Date EUT received: December 15, 2017

Test Date(s): December 15, 2017 to January 07, 2018



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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

Parameter	Uncertainty		
AC Power Line Conducted Emissions	±3.11dB		
(150kHz~30MHz)	13.1105		
Radiated Emission(30MHz~1GHz)	±5.12dB		
Radiated Emission(1GHz~6GHz)	±5.34dB		



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6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	23°C		
Relative Humidity	54%		
Atmospheric Pressure	1020mbar		
Test date :	December 28, 2017		
Tested By:	Evans He		

Requirement(s):

Spec	Item	Requirement Applicable					
47CFR§15.	a)	For Low-power radio-freconnected to the public voltage that is conducted frequency or frequencied not exceed the limits in [mu] H/50 ohms line implower limit applies at the					
107		Frequency ranges	Limit (dBμV)			
		(MHz)	QP	Average			
		0.15 ~ 0.5	66 – 56	56 – 46			
		0.5 ~ 5	56	46			
		5 ~ 30	60	50			
Test Setup	Vertical Ground Reference Plane EUT 80cm Horizontal Ground						
Procedure	 The EUT and supporting equipment were set up in accordance with the return the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table. The power supply for the EUT was fed through a 50Ω /50mH EUT LISN, of filtered mains. 						



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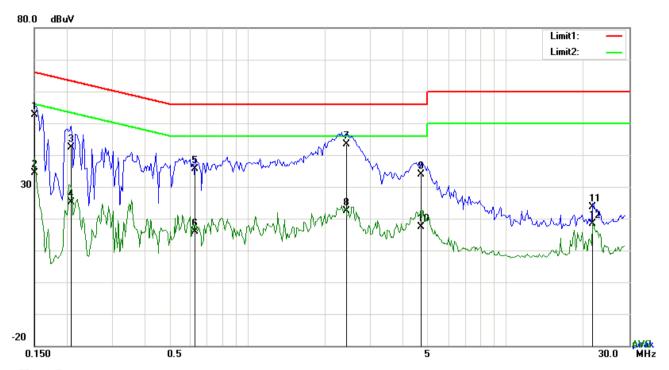
	3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss				
	coaxial cable.				
	4. All other supporting equipment were powered separately from another main supply.				
	5. The EUT was switched on and allowed to warm up to its normal operating condition.				
	6. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power)				
	over the required frequency range using an EMI test receiver.				
	7. High peaks, relative to the limit line, The EMI test receiver was then tuned to the				
	selected frequencies and the necessary measurements made with a receiver bandwidth				
	setting of 10 kHz.				
	8. Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).				
Remark					
Result	Pass Fail				
-	Yes N/A Yes (See below)				
Test Mode 1:	USB Mode				
Test Mode 2:	Test Mode 2: MP4 Mode				
Test Mode 3:	Camera Mode				
Test Mode 4:	FM Mode				

Note: All modes were investigated, the results below show only the worst case(USB mode).



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Test Mode 1:	USB Mode



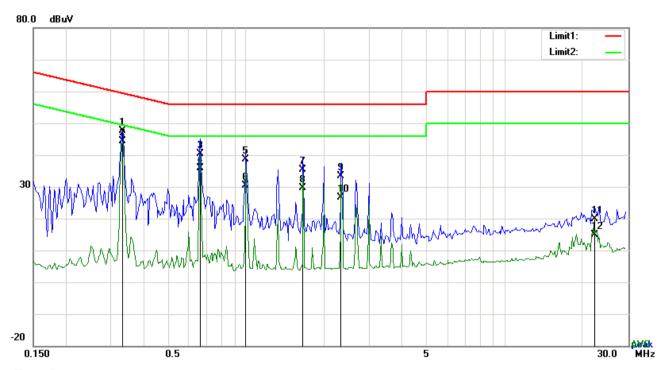
Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1500	42.52	QP	10.03	52.55	66.00	-13.45
2	L1	0.1500	24.42	AVG	10.03	34.45	56.00	-21.55
3	L1	0.2085	32.31	QP	10.03	42.34	63.26	-20.92
4	L1	0.2085	15.13	AVG	10.03	25.16	53.26	-28.10
5	L1	0.6297	25.64	QP	10.03	35.67	56.00	-20.33
6	L1	0.6297	5.87	AVG	10.03	15.90	46.00	-30.10
7	L1	2.4159	33.31	QP	10.05	43.36	56.00	-12.64
8	L1	2.4159	12.26	AVG	10.05	22.31	46.00	-23.69
9	L1	4.6965	23.76	QP	10.08	33.84	56.00	-22.16
10	L1	4.6965	7.22	AVG	10.08	17.30	46.00	-28.70
11	L1	21.6654	13.35	QP	10.33	23.68	60.00	-36.32
12	L1	21.6654	8.10	AVG	10.33	18.43	50.00	-31.57



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Test Data

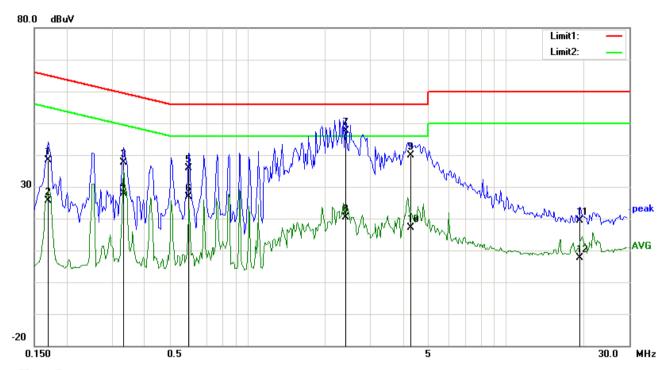
Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.3333	37.62	QP	10.02	47.64	59.37	-11.73
2	Ν	0.3333	34.47	AVG	10.02	44.49	49.37	-4.88
3	Ν	0.6648	30.38	QP	10.02	40.40	56.00	-15.60
4	N	0.6648	25.97	AVG	10.02	35.99	46.00	-10.01
5	Ν	0.9963	28.66	QP	10.03	38.69	56.00	-17.31
6	Ν	0.9963	20.25	AVG	10.03	30.28	46.00	-15.72
7	Ν	1.6593	25.25	QP	10.04	35.29	56.00	-20.71
8	N	1.6593	19.55	AVG	10.04	29.59	46.00	-16.41
9	N	2.3301	23.22	QP	10.04	33.26	56.00	-22.74
10	N	2.3301	16.69	AVG	10.04	26.73	46.00	-19.27
11	N	22.2114	9.51	QP	10.30	19.81	60.00	-40.19
12	N	22.2114	4.69	AVG	10.30	14.99	50.00	-35.01



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Test Mode 1: U	SB Mode
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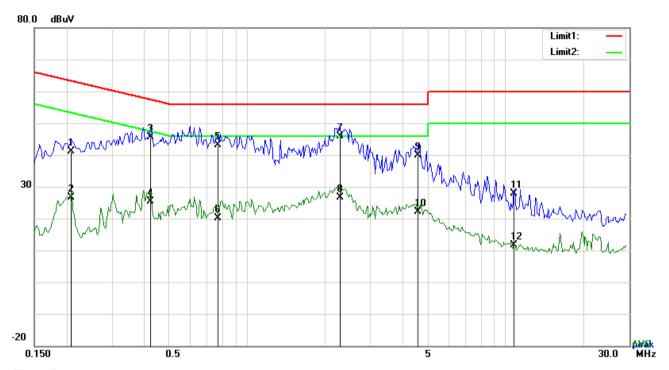
Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1695	28.46	QP	10.03	38.49	64.98	-26.49
2	L1	0.1695	15.69	AVG	10.03	25.72	54.98	-29.26
3	L1	0.3333	27.62	QP	10.03	37.65	59.37	-21.72
4	L1	0.3333	17.83	AVG	10.03	27.86	49.37	-21.51
5	L1	0.5946	25.74	QP	10.03	35.77	56.00	-20.23
6	L1	0.5946	16.94	AVG	10.03	26.97	46.00	-19.03
7	L1	2.4003	37.70	QP	10.05	47.75	56.00	-8.25
8	L1	2.4003	10.24	AVG	10.05	20.29	46.00	-25.71
9	L1	4.2831	29.85	QP	10.07	39.92	56.00	-16.08
10	L1	4.2831	7.17	AVG	10.07	17.24	46.00	-28.76
11	L1	19.4073	9.08	QP	10.29	19.37	60.00	-40.63
12	L1	19.4073	-2.54	AVG	10.29	7.75	50.00	-42.25



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Test Data

Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	N	0.2085	31.02	QP	10.02	41.04	63.26	-22.22
2	N	0.2085	16.54	AVG	10.02	26.56	53.26	-26.70
3	N	0.4230	35.63	QP	10.02	45.65	57.39	-11.74
4	N	0.4230	15.29	AVG	10.02	25.31	47.39	-22.08
5	N	0.7740	33.07	QP	10.03	43.10	56.00	-12.90
6	N	0.7740	10.16	AVG	10.03	20.19	46.00	-25.81
7	N	2.2950	35.79	QP	10.04	45.83	56.00	-10.17
8	N	2.2950	16.63	AVG	10.04	26.67	46.00	-19.33
9	N	4.5834	29.74	QP	10.07	39.81	56.00	-16.19
10	N	4.5834	11.95	AVG	10.07	22.02	46.00	-23.98
11	N	10.7688	17.65	QP	10.15	27.80	60.00	-32.20
12	N	10.7688	1.49	AVG	10.15	11.64	50.00	-38.36



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6.2 Radiated Emissions

Temperature	23°C
Relative Humidity	54%
Atmospheric Pressure	1020mbar
Test date :	December 28, 2017
Tested By:	Evans He

Requirement(s):

Spec	Item	Requirement	Requirement			
47CFR§15. 109(d)	a)	Except higher limit as specified else emissions from the low-power radio exceed the field strength levels spethe level of any unwanted emission the fundamental emission. The tight edges Frequency range (MHz) 30 - 88 88 - 216	e-frequency devices shall not excified in the following table and is shall not exceed the level of ter limit applies at the band Field Strength (µV/m) 100 150	\\		
		216 - 960 Above 960	200 500			
Test Setup	Ant. Tower Support Units Turn Table Ground Plane Test Receiver					
Procedure 1. The EUT was switched on and allowed to warm up to its normal operating cond. 2. The test was carried out at the selected frequency points obtained from the EU characterization. Maximization of the emissions, was carried out by rotating the changing the antenna polarization, and adjusting the antenna height in the followanner: a. Vertical or horizontal polarization (whichever gave the higher emission)						



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	over a full rotation of the EUT) was chosen.
	 The EUT was then rotated to the direction that gave the maximum emission.
	c. Finally, the antenna height was adjusted to the height that gave the maximum emission.
	 The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is
	120 kHz for Quasiy Peak detection at frequency below 1GHz.
	4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video
	bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz.
	The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video
	bandwidth with Peak detection for Average Measurement as below at frequency
	above 1GHz.
	■ 1 kHz (Duty cycle < 98%) □ 10 Hz (Duty cycle > 98%)
	5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency
	points were measured.
Remark	
Result	Pass Fail
Test Data	Yes N/A
Test Plot	Yes (See below)
Test Mode 1:	USB Mode
Test Mode 2:	MP4 Mode
Test Mode 3:	Camera Mode
Test Mode 4:	FM Mode

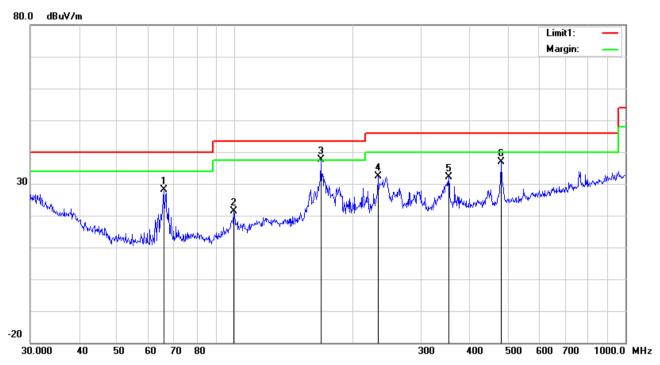
Note: All modes were investigated, the results below show only the worst case(USB mode).



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Test Mode 1: USB Mode

Below 1GHz



Test Data

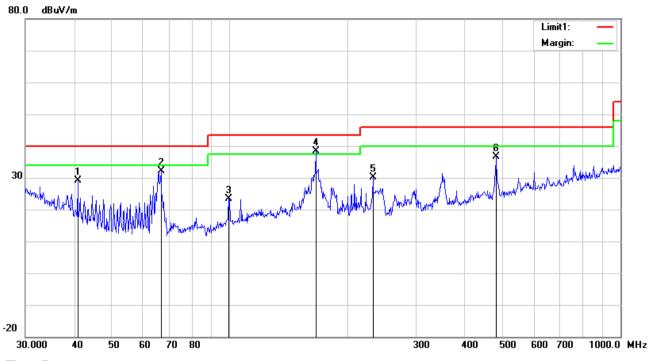
Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	(cm)	()
1	Τ	65.8031	41.98	peak	7.59	22.39	0.90	28.08	40.00	-11.92	100	139
2	I	99.5281	32.21	peak	10.29	22.32	1.11	21.29	43.50	-22.21	100	291
3	Н	166.0680	46.53	QP	12.11	22.26	1.37	37.75	43.50	-5.75	100	29
4	Н	232.5318	41.30	peak	11.64	22.32	1.64	32.26	46.00	-13.74	100	311
5	Н	352.9434	37.41	peak	14.71	22.14	2.04	32.02	46.00	-13.98	100	269
6	Ι	480.5276	39.08	peak	17.31	21.85	2.31	36.85	46.00	-9.15	100	332



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Below 1GHz



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	(cm)	()
1	٧	40.8446	37.20	peak	13.34	22.28	0.78	29.04	40.00	-10.96	100	204
2	٧	66.7325	45.92	peak	7.64	22.39	0.91	32.08	40.00	-7.92	200	20
3	٧	99.5281	34.27	peak	10.29	22.32	1.11	23.35	43.50	-20.15	100	125
4	V	166.0680	47.08	QP	12.11	22.26	1.37	38.30	43.50	-5.20	100	129
5	V	232.5318	39.12	peak	11.64	22.32	1.64	30.08	46.00	-15.92	100	154
6	V	480.5276	38.93	peak	17.31	21.85	2.31	36.70	46.00	-9.30	100	71



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Above 1GHz

Frequency	Read_level	A-!ath	Height	Polarity	Level	Factors	Limit	Margin	Detector
(MHz)	(dBµV/m)	Azimuth	(cm)	(H/V)	(dBµV/m)	(dB)	(dBµV/m)	(dB)	(PK/AV)
1234.47	68.52	107	100	V	-19.83	48.69	74	-25.31	PK
1768.96	64.52	165	100	V	-17.24	47.28	74	-26.72	PK
2184.79	62.21	75	100	V	-14.35	47.86	74	-26.14	PK
1253.08	63.63	3	100	Н	-19.38	44.25	74	-29.75	PK
1998.22	61.99	2	100	Н	-15.1	46.89	74	-27.11	PK
2723.79	60.76	297	100	Н	-13.41	47.35	74	-26.65	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 Emis	ssions				
EMI test receiver	ESCS30	8471241027	09/15/2017	09/14/2018	<
Line Impedance Stabilization Network	LI-125A	191106	09/23/2017	09/22/2018	<u><</u>
Line Impedance Stabilization Network	LI-125A	191107	09/23/2017	09/22/2018	V
LISN	ISN T800	34373	09/23/2017	09/22/2018	<
Transient Limiter	LIT-153	531118	08/30/2017	08/29/2018	<u><</u>
Radiated Emissions					
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018	~
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	(
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	<u>\</u>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	>
Double Ridge Horn Antenna	AH-118	71259	09/22/2017	09/21/2018	<u><</u>



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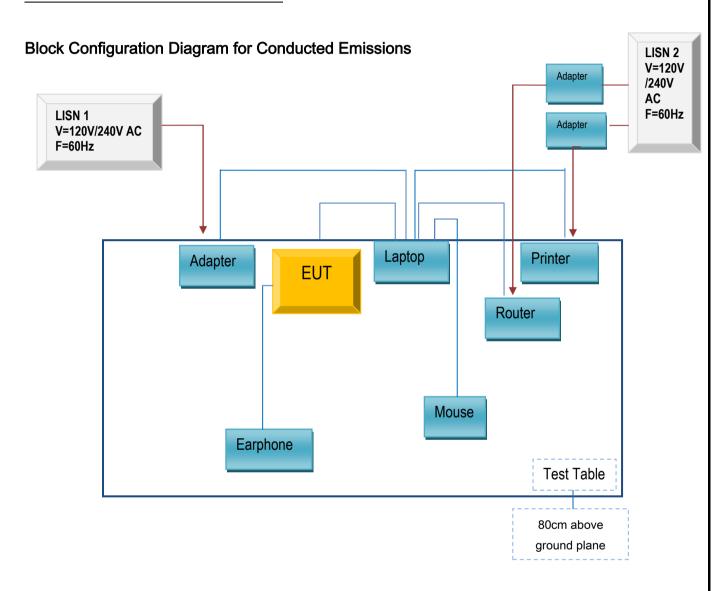
Annex B. EUT And Test Setup Photographs



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Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

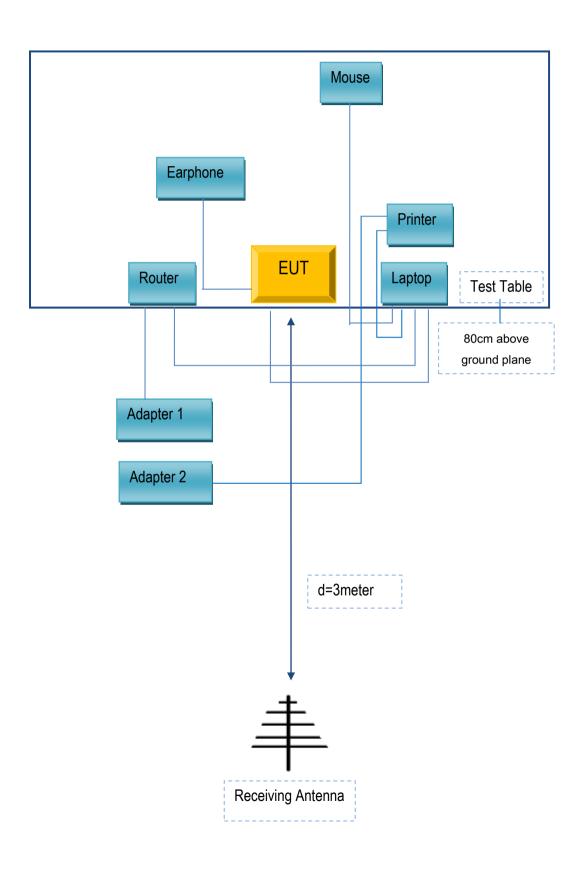
Annex C.ii. TEST SET UP BLOCK





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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
N/A	Earphone	N/A	N/A

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