HEALTH TEST REPORT

For

Shenzhen Huafurui Technology Co., Ltd.

Smartphone

Test Model: KINGKONG AX

Prepared for	:	Shenzhen Huafurui Technology Co., Ltd.
Address	:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
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Web	:	www.LCS-cert.com
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Date of receipt of test sample	:	December 19, 2023
Number of tested samples	:	2
Serial number	:	Prototype
Date of Test	:	December 19, 2023 ~ January 24, 2024
Date of Report	:	January 25, 2024

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HEALTHTEST REPORT
EN IEC 62311:2020

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

Report Reference No.....	:	**LCSA12153128EN**
Date of Issue.....	:	January 25, 2024
Testing Laboratory Name.....	:	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address.....	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Testing Location/Procedure.....	:	Full application of Harmonised standards ■ Partial application of Harmonised standards□ Other standard testing method□
Applicant's Name.....	:	**Shenzhen Huafurui Technology Co., Ltd.**
Address.....	:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Test Specification		
Standard.....	:	EN IEC 62311:2020
Test Report Form No.....	:	LCSEMC-1.0
TRF Originator.....	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF.....	:	Dated 2011-03

Test Item Description.....	:	**Smartphone**
Trade Mark.....	:	CUBOT
Test Model.....	:	KINGKONG AX
Ratings	:	Please Refer to Page 5
Result.....	:	**Positive**

Compiled by:	Supervised by:	Approved by:
Kevin Huang	Cary Luo	
Kevin Huang/ Administrator	Cary Luo/ Technique principal	Gavin Liang/ Manager

HEALTH--TEST REPORT

Test Report No. : LCSA12153128EN	January 25, 2024 Date of issue

Test Model.....	:	KINGKONG AX
EUT.....	:	Smartphone
Applicant.....	:	**Shenzhen Huafurui Technology Co., Ltd.**
Address.....	:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Telephone.....	:	/
Fax.....	:	/
Manufacturer.....	:	**Shenzhen Huafurui Technology Co., Ltd.**
Address.....	:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Telephone.....	:	/
Fax.....	:	/
Factory.....	:	**Shenzhen Huafurui Technology Co., Ltd.**
Address.....	:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Telephone.....	:	/
Fax.....	:	/

Test Result	Positive

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Report Version	Issue Date	Revision Content	Revised By
000	January 25, 2024	Initial Issue	---

1. GENERAL INFORMATION

1.1. Product Description for Equipment Under Test (EUT)

EUT	:	Smartphone
Test Model	:	KINGKONG AX
Power Supply	:	Input: 5/9V⎓3.0A For AC Adapter Input: 100-240V~, 50/60Hz, 0.8A Adapter Output: 5.0V⎓3.0A 15.0W OR 9.0V⎓3.0A 27.0W DC 3.87V by Rechargeable Li-ion Battery, 5100mAh
Hardware Version	:	M129-MUB-V2
Software Version	:	CUBOT_KINGKONG AX_D073_V01
Bluetooth	:	
Frequency Range	:	2402MHz~2480MHz
Channel Number	:	79 channels for Bluetooth V5.2 (BDR/EDR) 40 channels for Bluetooth V5.2 (BT LE/ BT 2LE)
Channel Spacing	:	1MHz for Bluetooth V5.2 (BDR/EDR) 2MHz for Bluetooth V5.2 (BT LE/ BT 2LE)
Modulation Type	:	GFSK, π/4-DQPSK, 8-DPSK for Bluetooth V5.2 (BDR/EDR) GFSK for Bluetooth V5.2 (BT LE/ BT 2LE)
Bluetooth Version	:	V5.2
Antenna Description	:	FPC Antenna, -0.19dBi(Max.)
WIFI(2.4G Band)	:	
Frequency Range	:	2412MHz~2472MHz
Channel Spacing	:	5MHz
Channel Number	:	13 Channel for 20MHz bandwidth(2412~2472MHz) 9 channels for 40MHz bandwidth(2422~2462MHz)
Modulation Type	:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Description	:	FPC Antenna, -0.19dBi(Max.)
WIFI(5.2G Band)	:	
Frequency Range	:	5180MHz~5240MHz
Channel Number	:	4 channels for 20MHz bandwidth(5180~5240MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 1 channels for 80MHz bandwidth(5210MHz)
Modulation Type	:	802.11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Antenna Description	:	FPC Antenna, -0.33dBi(Max.)
WIFI(5.8G Band)	:	

Frequency Range	:	5745MHz~5825MHz
Channel Number	:	5 channels for 20MHz bandwidth(5745~5825MHz) 2 channels for 40MHz bandwidth(5755~5795MHz) 1 channels for 80MHz bandwidth(5775MHz)
Modulation Type	:	802.11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Antenna Description	:	FPC Antenna, -0.33dBi(Max.)
2G	:	
Support Band	:	☒GSM 900 (EU-Band) ☒DCS 1800 (EU-Band) ☒GSM 850 (U.S.-Band) ☒PCS 1900 (U.S.-Band)
Release Version	:	R99
GPRS Class	:	Class 12
EGPRS Class	:	Class 12
Uplink	:	GSM 900: 880MHz~915MHz DCS 1800: 1710MHz~1785MHz
Downlink	:	GSM 900: 925MHz~960MHz DCS 1800: 1805MHz~1880MHz
Type Of Modulation	:	GMSK for GSM/GPRS; GMSK/8PSK for EGPRS
Antenna Description	:	FPC Antenna -0.69dBi (max.) For GSM 900 -0.33dBi (max.) For DCS 1800
Power Class	:	GSM 900: Level 5, DCS 1800: Level 0 EGPRS 900: Level 8, EGPRS 1800: Level 2
3G	:	
Support Band	:	☒WCDMA Band I (EU-Band) ☒WCDMA Band VIII (EU-Band)
Release Version	:	R8
Uplink	:	WCDMA Band I: 1920MHz~1980MHz WCDMA Band VIII: 880MHz~915MHz
Downlink	:	WCDMA Band I: 2110MHz~2170MHz WCDMA Band VIII: 925MHz~960MHz
Type Of Modulation	:	QPSK/16QAM
Antenna Description	:	FPC Antenna -0.46dBi (max.) For WCDMA Band I -0.69dBi (max.) For WCDMA Band VIII
Power Class	:	Level 3
LTE	:	
Support Band	:	☒E-UTRA Band 1(EU-Band) ☒E-UTRA Band 3(EU-Band) ☒E-UTRA Band 7(EU-Band) ☒E-UTRA Band 8(EU-Band)

		☒E-UTRA Band 20(EU-Band) ☒E-UTRA Band 28(EU-Band) ☒E-UTRA Band 38(EU-Band) ☒E-UTRA Band 40(EU-Band)
LTE Release Version	:	R12
FDD Band	:	Uplink: E-UTRA Band 1: 1920MHz~1980MHz E-UTRA Band 3: 1710MHz~1785MHz E-UTRA Band 7: 2500MHz~2570MHz E-UTRA Band 8: 880MHz~915MHz E-UTRA Band 20: 832MHz~862MHz E-UTRA Band 28: 703MHz~748MHz Downlink: E-UTRA Band 1: 2110MHz~2170MHz E-UTRA Band 3: 1805MHz~1880MHz E-UTRA Band 7: 2620MHz~2690MHz E-UTRA Band 8: 925MHz~960MHz E-UTRA Band 20: 791MHz~821MHz E-UTRA Band 28: 758MHz~803MHz
TDD Band	:	E-UTRA Band 38: 2570MHz ~ 2620MHz E-UTRA Band 40: 2300MHz ~ 2400MHz
Type Of Modulation	:	QPSK/16QAM
Antenna Description	:	FPC Antenna -0.46dBi (max.) For E-UTRA Band 1 -0.33dBi (max.) For E-UTRA Band 3 -0.29dBi (max.) For E-UTRA Band 7 -0.69dBi (max.) For E-UTRA Band 8 -0.56dBi (max.) For E-UTRA Band 20 -0.72dBi (max.) For E-UTRA Band 28 -0.36dBi (max.) For E-UTRA Band 38 -0.43dBi (max.) For E-UTRA Band 40
Power Class	:	Class 3
GPS Receiver	:	
Receive Frequency	:	1575.42MHz
Channel Number	:	1
Antenna Description	:	FPC Antenna, -0.21dBi(Max.)
GLONASS Receiver	:	
Receive Frequency	:	1602.5625MHz
Channel Number	:	1
Antenna Description	:	FPC Antenna, -0.21dBi(Max.)
Galileo Receiver	:	
Receive Frequency	:	1589.74MHz
Channel Number	:	1

Antenna Description	:	FPC Antenna, -0.21dBi(Max.)
BDS Receiver	:	
Receive Frequency	:	1561.098MHz
Channel Number	:	1
Antenna Description	:	FPC Antenna, -0.21dBi(Max.)
FM	:	
Frequency Range	:	87.5MHz~108MHz
Modulation Type	:	FM
Antenna Description	:	External Antenna(Earphone)
NFC	:	
Frequency Range	:	13.56MHz
Modulation Type	:	ASK
Antenna Description	:	FPC Antenna, 0dBi(Max.)

1.2. Objective

According to its specifications, the EUT must comply with the requirements of the following standards:
EN IEC 62311:2020–Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

1.3. Test Methodology

All measurements contained in this report were conducted with EN IEC 62311:2020.

1.4. Facilities

All measurement facilities used to collect the measurement data are located at Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 32.

1.5. Support Equipment List

Manufacturer	Description	Model	Serial Number	Certificate
Shenzhen Huajin Electronics Co.,Ltd	Fast Charger	HJ-PD33W-EU	---	CE

1.6. External I/O

I/O Port Description	Quantity	Cable
Type-C USB Port	1	USB Cable: 1.2m, unshielded Headphone Cable: 1.2m, unshielded

1.7. Equipment

Radiated emissions are measured with one or more of the following types of linearly polarizedantennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrumanalyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.Conducted emissions are measured with Line Impedance Stabilization Networks and EMI TestReceivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for makingmeasurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference MeasuringApparatus and Measurement Methods.”

1.8. Laboratory Accreditations And Listings

Site Description

EMC Lab. : NVLAP Accreditation Code is 600167-0.
FCC Designation Number is CN5024.
CAB identifier is CN0071.
CNAS Registration Number is L4595.

Name of Firm : Shenzhen LCS Compliance Testing Laboratory Ltd.

Site Location : Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao’an District, Shenzhen, Guangdong, China

1.9. Measurement Uncertainty(95% confidence levels, k=2)

Test Item		Uncertainty
Radio Frequency	:	0.9×10^{-4}
Total RF Power, Conducted	:	1.0 dB
RF Power Density, Conducted	:	1.8 dB
Spurious Emissions, Conducted	:	1.8 dB
All Emissions, Radiated	:	3.1 dB
Temperature	:	0.5°C
Humidity	:	1 %
DC And Low Frequency Voltages	:	1 %

2.HUMAN EXPOSURE TO THE ELECTROMAGNETIC FIELDS

2.1 Basic Restrictions Reference levels

Council Recommendation 1999/519/EC Annex III

Basic restrictions for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

Frequency range	Magnetic flux density (mT)	Current density (Ma/m2) (rms)	Whole body average SAR (W/kg)	Localised SAR (head and trunk) (W/kg)	Localised SAR (limbs) (W/kg)	Power density (W/m2)
0Hz	40	-	-	-	-	-
>0-1Hz	-	8	-	-	-	-
1-4Hz	-	8/f	-	-	-	-
4-1000Hz	-	2	-	-	-	-
1000Hz-100kHz	-	f/500	-	-	-	-
100kHz-10MHz	-	f/500	0.08	2	4	-
10MHz-10GHz	-	-	0.08	2	4	-
10-300GHz	-	-	-	-	-	10

Note:

1. f is the frequency in Hz.
2. The basic restriction on the current density is intended to protect against acute exposure effects on central nervous system tissues in the head and trunk of the body and includes a safety factor. The basic restrictions for ELF fields are based on established adverse effects on the central nervous system. Such acute effects are essentially instantaneous and there is no scientific justification to modify the basic restrictions for exposure of short duration. However, since the basic restriction refers to adverse effects on the central nervous system, this basic restriction may permit higher current densities in body tissues other than the central nervous system under the same exposure conditions.
3. Because of electrical inhomogeneity of the body, current densities should be averaged over a cross section of 1cm2 perpendicular to the current direction.
4. For frequencies up to 100 kHz, peak current density values can be obtained by multiplying the rms value by √2(=1.414). For pulses of duration tp the equivalent frequency to apply in the basic restrictions should be calculated as=1/(2tp)
5. For frequencies up to 100kHz and for pulsed magnetic fields, the maximum current density associated with the pulses can be calculated from the rise/fall times and the maximum rate of change of magnetic flux density. The induced current density can then be compared with the appropriate basic restriction.
6. All SAR values are to be averaged over any six-minute period.
7. Localised SAR averaging mass is any 10g of contiguous tissue; the maximum SAR so obtained should be the value used for the estimation of exposure. These 10g of tissue are intended to be a mass of contiguous tissue with nearly homogeneous electrical properties. In specifying a contiguous mass of tissue, it is recognised that this concept can be used in computational dosimetry but may present difficulties for direct physical measurements. A simple geometry such as cubic tissue mass can be used provided that the calculated dosimetric quantities have conservation values relative to the exposure guidelines.

8. For pulses of duration tp the equivalent frequency to apply in the basic restrictions should be calculated as=1/(2tp). Additionally, for pulsed exposures, in the frequency range 0,3 to 10GHz and for localised exposure of the head, in order to limit and avoid auditory effects caused by thermoelastic expansion, an additional basic restriction is recommended. This is that SA should not exceed 2mJ kg-1 averaged over 10g of tissue.

2.2 Reference Levels

Council Recommendation 1999/519/EC Annex III
Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density Seq (W/m2)
0-1Hz	-	$3,2\times10^4$	4×10^4	-
1-8Hz	1000	$3,2\times10^4/f^2$	$4\times10^4/f^2$	-
8-25Hz	1000	4000/f	5000/f	-
0.025Hz-0,8kHz	250/f	4/f	5/f6,25	-
0,8-3kHz	250/f	5	6,25	-
3-150kHz	87	5	6,25	-
0,15-1MHz	87	0.73/f	0,92/f	-
1-10MHz	$87/f^{1/2}$	0.73/f	0,92/f	-
10-400MHz	28	0.073	0,092	2
400-2000MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046f^{1/2}$	f/200
2-300GHz	61	0,16	0,20	10

Note:
1. As indicated in the frequency range column.
2. For frequencies between 100kHz and 10GHz, Seq, E2, H2 and B2 are to be averaged over any six-minute period.
3. For frequencies exceeding 10GHz, Seq, E2, H2 and B2 are to be averaged over any 68/.1.05-minute period (.in GHz).
4. No E-field value is provided for frequencies <1Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 20kV/m. Spark discharges causing stress or annoyance should be avoided.

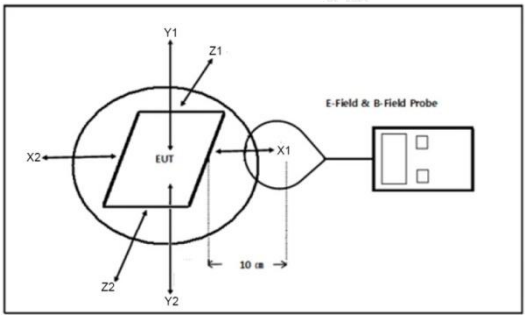
3. RF EXPOSURE EVALUATION

3.1.Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
1	Exposure Level Tester	Narda	ELT-400	N-0713	2023-10-18	2024-10-17
2	B-Field Probe	Narda	ELT-400	M-1154	2023-10-18	2024-10-17

3.2.Block Diagram of Test Setup



*Note:
Position A: Back Side of the EUT
Position B: Left Side of the EUT
Position C: Front Side of the EUT
Position D: Right Side of the EUT
Position E: Top Side of the EUT
Position F: Bottom Side of the EUT

3.3. Test Results

H-field Strength Test Result:

Test condition: NFC mode

Frequency Range(KHz)	Probe Position Hx1 (A/m)	Probe Position Hx2 (A/m)	Probe Position Hy1 (A/m)	Probe Position Hy2 (A/m)	Probe Position Hz1 (A/m)	Probe Position Hz2 (A/m)	ResultH (A/m)	Limit (A/m)
13.56	0.02	0.03	0.03	0.04	0.03	0.02	0.058	0.073

$$H = \sqrt{H_X^2 + H_Y^2 + H_Z^2} = \sqrt{0.03^2 + 0.04^2 + 0.03^2}\ A/m = 0.058A/m$$

Note: All test modes have been tested and only record the worst result.

----------THE END OFREPORT----------