

# Test Report

**Report No.:** MTi220627015-01E2

**Date of issue:** 2022-10-27

**Applicant:** Longconn Electronics (Shenzhen) Co., Ltd.

**Product:** Samba

**Model(s):** Samba

**FCC ID:** 2AXXSAMBAS

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

## Instructions

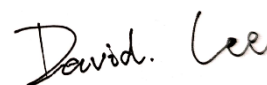
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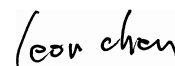
<b>Test Result Certification</b>	
<b>Applicant:</b>	<b>Longconn Electronics (Shenzhen) Co., Ltd.</b>
Address:	Floor 3, B1 Block, Xu Jing Chang Industrial Park, NO.39 HaoyeRoad, FuhaiStreet, Bao'an, Shenzhen, China
<b>Manufacturer:</b>	<b>Longconn Electronics (Shenzhen) Co., Ltd.</b>
Address:	Floor 3, B1 Block, Xu Jing Chang Industrial Park, NO.39 HaoyeRoad, FuhaiStreet, Bao'an, Shenzhen, China
<b>Factory:</b>	<b>Longconn Electronics (Shenzhen) Co., Ltd.</b>
Address:	Floor 3, B1 Block, Xu Jing Chang Industrial Park, NO.39 HaoyeRoad, FuhaiStreet, Bao'an, Shenzhen, China
<b>Product description</b>	
Product name:	Samba
Trademark:	Zechin
Model name:	Samba
Series Model:	N/A
Standards:	FCC CFR 47 PART 1, § 1.1310
Test method:	KDB 680106 v03r01
<b>Date of Test</b>	
Date of test:	2022-08-05 ~ 2022-10-27
Test result:	Pass

Test Engineer :



(David Lee)

Reviewed By :



(Leon Chen)

Approved By :



(Tom Xue)

# 1 General Description

## 1.1 Description of the EUT

Product name:	Samba
Model name:	Samba
Series Model:	N/A
Model difference:	N/A
Electrical rating:	Input: DC 12V/2.88A, USB-A: DC 5V/3A, 9V/2A, 12V/1.5A, USB-C: DC 5V/3A, 9V/2.22A, 12V/1.67A, USB-A+ USB-C: DC 5V/3.4A Wireless output: Phone: 7.5W; Air pods: 5W; Watch: 2.5W
Accessories:	1. Adapter: Model: KA3601A-1252880US Input: 100-240V~ 50/60Hz 1.0A Max Output: 12.5V=2880mA
Hardware version:	V3.0
Software version:	V2.0
Test sample(s) number:	MTi220627015-01S1001
<b>RF specification:</b>	
Operation frequency:	transmitter 1(Phone): 115 kHz – 205 kHz transmitter 2(Phone): 115 kHz – 205 kHz transmitter 3(Air pods): 115 kHz – 205 kHz transmitter 4(Watch): 326.525 kHz
Modulation type:	ASK
Antenna type:	Coil Antenna

## 1.2 Description of test modes

All the test modes were carried out with the EUT in normal operation, the final test mode of the EUT was the worst test mode for emission test, which was shown in this report and defined as:

No.	Test modes
Mode 1	Wireless output (Transmitter 1 for Phone 7.5W)
Mode 2	Wireless output (Transmitter 1 for Phone 5W)
Mode 3	Wireless output (Transmitter 2 for Phone 7.5W)
Mode 4	Wireless output (Transmitter 2 for Phone 5W)
Mode 5	Wireless output (Earphone 5W)
Mode 6	Wireless output (Watch 2.5W)
Mode 7	Wireless output (Transmitter 1 for Phone 7.5W+ Earphone 5W+ Watch 2.5W)
Mode 8	Wireless output (Transmitter 1 for Phone 7.5W+ Watch 2.5W)
Mode 9	Wireless output (Transmitter 1 for Phone 7.5W+ Earphone 5W)
Mode 10	Wireless output (Transmitter 1 for Phone 5W+ Earphone 5W+ Watch 2.5W)
Mode 11	Wireless output (Transmitter 1 for Phone 5W+ Earphone 5W)
Mode 12	Wireless output (Transmitter 1 for Phone 5W+ Watch 2.5W)
Mode 13	Wireless output (Transmitter 2 for Phone 7.5W+ Earphone 5W+ Watch 2.5W)
Mode 14	Wireless output (Transmitter 2 for Phone 7.5W+ Watch 2.5W)
Mode 15	Wireless output (Transmitter 2 for Phone 7.5W+ Earphone 5W)
Mode 16	Wireless output (Transmitter 2 for Phone 5W+ Earphone 5W+ Watch 2.5W)
Mode 17	Wireless output (Transmitter 2 for Phone 5W+ Earphone 5W)
Mode 18	Wireless output (Transmitter 2 for Phone 5W+ Watch 2.5W)
Mode 19	Wireless output (Earphone 5W+ Watch 2.5W)
Mode 20	Stand-by

### 1.3 Description of support units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support equipment list			
Description	Model	Serial No.	Manufacturer
Watch	/	/	Apple
Air pods	/	/	Apple
IPhone 12	/	/	Apple
Adapter	HW-090200CH0	/	Huizhou BYD Electronics Co., Ltd.
Support cable list			
Description	Length (m)	From	To
/	/	/	/

## 2 Measurement uncertainty

Parameter	Expanded Uncertainty
Magnetic field measurement (9kHz~30MHz)	$\pm 7.8\%$
Electric field measurements (9kHz~30MHz)	$\pm 7.8\%$

### 3 Test facilities and accreditations

#### 3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.
Test site location:	101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86-755)88850135
Fax:	(86-755)88850136
CNAS Registration No.:	CNAS L5868
FCC Registration No.:	448573



#### 4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due
MTI-E115	Electric and Magnetic Field Probe – Analyzer	Narda	EHP-200A	101166	2022/07/15	2023/07/14

## 5 Test result

### 5.1.1 Requirement

§1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of this chapter.

**Table 1 to §1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)**

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(i) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30-300	61.4	0.163	1.0	<6
300-1500			f/300	<6
1500-100000			5	<6
<b>(ii) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	<30
30-300	27.5	0.073	0.2	<30
300-1500			f/1500	<30
1500-100000			1.0	<30

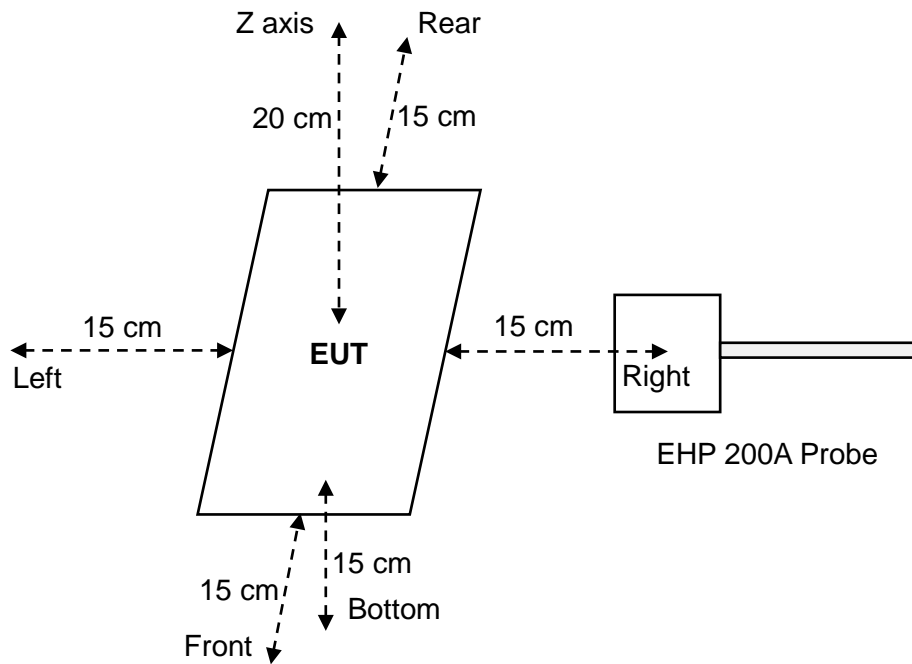
f = frequency in MHz

\* = Plane-wave equivalent power density

**Note 1:** Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

**Note 2:** General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

## 5.2 Test setup



## 5.3 Test Procedures

- The RF exposure test was performed in anechoic chamber.
- E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.
- The highest emission level was recorded and compared with limit.
- The EUT was measured according to the dictates of KDB 680106 v03r01.

**5.4 Equipment Approval Considerations item 5 b) of KDB 680106 D01 v03r01**

Requirement	Device
1. Power transfer frequency is less than 1 MHz.	Yes. The operating frequencies are: transmitter 1(Phone): 115 kHz – 205 kHz transmitter 2(Phone): 115 kHz – 205 kHz transmitter 3(Air pods): 115 kHz – 205 kHz transmitter 4(Watch): 326.525 kHz
2. Output power from each primary coil is less than or equal to 15 watts	Yes. The maximum output power is: Phone: 7.5W; Air pods: 5W; Watch: 2.5W
3. The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes. The EUT has four source primary coils.
4. Client device is placed directly in contact with the transmitter.	Yes. The client device is placed directly in contact with the transmitter.
5. Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes. Mobile exposure conditions only.
6. The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes. See the test result in item 4.5.

**5.5 Test results**
**Test condition 1: Mode 16 operating mode with client device (1 % battery status of client device)**

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
Coil 2 +Coil 3 +Coil 4	Z axis	7.6674	614	1.25%	0.0644	1.63	5.03%
	Left	3.6740			0.0501		
	Right	5.5141			0.0717		
	Front	7.6674			0.0644		
	Rear	4.2460			0.0482		
	Bottom	7.1005			0.0820		

**Test condition 2: Mode 16 operating mode with client device (50 % battery status of client device)**

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Coil 2 +Coil 3 +Coil 4	Z axis	7.6655	614	1.25%	0.0673	1.63	4.47%
	Left	3.6871			0.0423		
	Right	5.5081			0.0648		
	Front	7.6565			0.0631		
	Rear	4.2275			0.0395		
	bottom	7.1112			0.0728		

**Test condition 3: Mode 16 operating mode with client device (99 % battery status of client device)**

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Percentage (%)	Measurement	Limit	Percentage (%)
Coil 2 +Coil 3 +Coil 4	Z axis	7.6617	614	1.25%	0.0589	1.63	4.62%
	Left	3.6637			0.0449		
	Right	5.4981			0.0673		
	Front	7.6587			0.0623		
	Rear	4.2397			0.0435		
	bottom	7.0992			0.0753		

## Photographs of the Test Setup

See the Appendix - Test Setup Photos.

## Photographs of the EUT

See the Appendix - EUT Photos.

**----End of Report----**