



Report No.: SZEM190501435002

Page: 1 of 8

Human Exposure Report

Application No.: SZEM1905014350AT
Applicant: iOttie, Inc
Address of Applicant: 20W, 37th Street, 6th FL. New York, NY 10018 United States
Manufacturer: iOttie, Inc
Address of Manufacturer: 20W, 37th Street, 6th FL. New York, NY 10018 United States
Factory: Shenzhen ICHECKKEY Technology Co., Ltd
Address of Factory: B302, Building 4, Tianyanxuan, No.1, Lane 14, Bantian East Village, Bantian Street, Longgang District, Shenzhen 518000 ShenzhenShiGuangdongsheng

Equipment Under Test (EUT):

EUT Name: Auto Sense Wireless
Model No.: HLCRIO161, HLCRIO162, HLCRIO163 ♣
♣ Please refer to section 2.1 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark: iOttie
FCC ID: 2AMRO-HLCRIO161
Standards: 47 CFR PART 1, SUBPART I, SECTION 1.1310
Date of Receipt: 2019-05-24
Date of Test: 2019-05-24 to 2019-06-20
Date of Issue: 2019-06-20

Test Result :	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Kenx. Xu

Kenx Xu
EMC Laboratory Manager



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Shenzhen Branch, EMC Laboratory

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2 General Information

2.1 Details of E.U.T.

- Power supply: for Car charger,
Input: DC 12V-24V
Output: DC 5V/3A, DC 9V/2A, DC 12V/1.5A
for wireless charger,
Input: DC 5V/2A, DC 9V/1.67A
Output: 5W/7.5W/10W
USB Type A output: DC 5V, 2.4A
- Cable: DC cable: 120cm, unshielded
- Operation frequency: 118.59kHz to 151.12kHz
- Modulation type: Load Modulation
- Antenna type: Loop Antenna
- Remark: 1) Tests were conducted in all three load modes and the worst case (10W) is reported only.
2) All tests were conducted in both supply mode of DC 12V and DC 24V and the worst case (DC 12V) were reported only.

Remark:

Model No.: HLCRIO161, HLCRIO162, HLCRIO163

Only the model HLCRIO161 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on accessories parts.

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
DC power	ZHAOXIN	RXN-305D	REF. No.SEA2700
iPhone 8	Apple	A1863	F4GVQ656JC6D
SAMSUNG Galaxy S8	SAMSUNG	SM-G9500	R28J9140LPB



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2.3 Test Location

All tests were performed at:

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No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

2.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.



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2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.



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3 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date
1	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2020-02-06



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4 Test Results

4.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310

Measurement Distance: 15cm

Limit:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

4.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C

Humidity: 51 % RH

Atmospheric Pressure: 1015 mbar

EUT Operation:

This device has been tested with mobile phone at zero charge, intermediate charge, and full charge.



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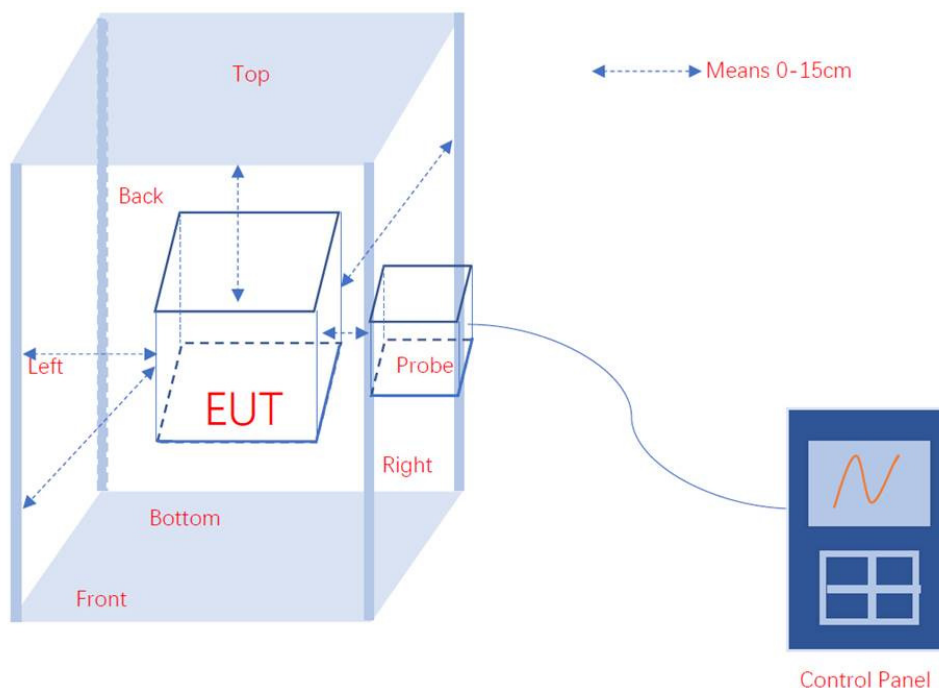
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4.1.2 Measurement Data

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
132.6 kHz	15	Side 1	0.0566	0.0472	0.0364	0.815
		Side 2	0.0108	0.0031	0.0942	0.815
		Side 3	0.0552	0.0478	0.0386	0.815
		Side 4	0.0891	0.0795	0.0697	0.815
		Top	0.0320	0.0214	0.0123	0.815

5 Photographs- Test photos



- End of the Report -



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