TEST REPORT

Reference No.	:	WTD23D03064187W003
FCC ID	:	2BADD-R4G
Applicant	:	Black Gate Hunting Products, LLC
Address	:	8200 Canthy Circle, Garner, NC 27529, United States
Manufacturer	:	HuaRui Technology(ShenZhen)CO.,Ltd
Address	:	401, Building 3, No.32, Dafu Road, Zhangge Community, Fucheng Street, Longhua District, Shenzhen, China
Product	:	Wireless Trail camera
Model(s)	:	R4G, R4GA, R4GV
Standards	:	FCC Part 2.1091
Date of Receipt sample	:	2021-12-06
Date of Test	:	2021-12-07 to 2021-12-14
Date of Issue	:	2023-06-15
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Approved by:

Deval Qin / Designated Reviewer

2 Contents

3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD23D03064187W003	2021-12-06	2021-12-07 to 2021-12-14	2023-06-15	Original	-	Valid
Note: This report refer to the FCC ID: 2APJQ-R4G to change applicant. The original test report number is WTD21D12134638W003, and issue date is 2021-12-17.						

4 General Information

4.1 General Description of E.U.T.

Product:	Wireless Trail camera
Model(s):	R4G, R4GA, R4GV
Model Description:	Only the model names are different. the models R4G for testing
WCDMA Band(s):	FDD Band II/IV/V
LTE Band(s):	FDD Band 2/4/5/12/13/14/66/71
Hardware Version:	R4GMV02
Software Version:	R4GNC2Dx14617037
Highest frequency (Exclude Radio):	26MHz
Storage Location:	Internal Storage

4.2 Details of E.U.T.

Operation Frequency:	WCDMA Band II: 1850~1910MHz WCDMA Band V: 824~849MHz WCDMA Band IV:1710~1755MHz LTE Band 2: 1850~1910MHz LTE Band 4: 1710~1755MHz LTE Band 5: 824~849MHz LTE Band 12: 699~716MHz LTE Band 13: 777~787MHz LTE Band 14: 788~798MHz LTE Band 66: 1701~1780MHz LTE Band 71: 663~698MHz
Type of Modulation:	BPSK, QPSK, 16QAM
Antenna installation:	External antenna with RP-SMA connector
Antenna Gain:	WCDMA Band II: 3.0dBi WCDMA Band V: 3.0dBi WCDMA Band IV: 3.0dBi LTE Band 2: 3.0dBi LTE Band 4: 3.0dBi LTE Band 5: 3.0dBi LTE Band 12: 3.0dBi LTE Band 13: 3.0dBi LTE Band 14: 3.0dBi LTE Band 66: 3.0dBi LTE Band 71: 3.0dBi
Ratings:	DC 9V

4.3 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

5 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1) 2.1091	PASS

6 RF Exposure

Test Requirement: FCC Part 1.1307

Test Mode: The EUT work in test mode(Tx).

6.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

6.2 The procedures / limit

FCC Part 1.1307:

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ;

*Plane-wave equivalent power density

6.3 MPE Calculation Method

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, d=20cm, as well as the gain of the used antenna, the RF power density can be obtained

Remark:

FCC Part 1.1307:

Mode	Antenna Gain (dBi)	Antenna Gain (numeric)	Max.Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm^2)	Limit of Power Density (mW/cm^2)
WCDMA (Band II)	3.00	1.995	23.00	199.53	0.079199	1
WCDMA (Band IV)	3.00	1.995	23.00	199.53	0.079199	0.558
WCDMA (Band V)	3.00	1.995	23.00	199.53	0.079199	1
LTE (Band 2)	3.00	1.995	24.00	251.19	0.099706	1
LTE (Band 4)	3.00	1.995	23.00	199.53	0.079199	1
LTE (Band 5)	3.00	1.995	24.00	251.19	0.099706	0.558
LTE (Band 12)	3.00	1.995	24.00	251.19	0.099706	0.477
LTE (Band 13)	3.00	1.995	24.00	251.19	0.099706	0.52
LTE (Band 14)	3.00	1.995	23.00	199.53	0.079199	0.529
LTE (Band 66)	3.00	1.995	23.00	199.53	0.079199	1
LTE (Band 71)	3.00	1.995	24.00	251.19	0.099706	0.444

WCDMA (Band IV): Power Density (S)(mW/cm2)=836.6/1500=0.558

LTE (Band 5): Power Density (S)(mW/cm2)=836.5/1500=0.558

LTE (Band 12): Power Density (S)(mW/cm2)=715.3/1500=0.477

LTE (Band 13): Power Density (S)(mW/cm2)=779.5/1500=0.52

LTE (Band 14): Power Density (S)(mW/cm2)=793/1500=0.529

LTE (Band 71): Power Density (S)(mW/cm2)=665.5/1500=0.444

======End of Report======