

RF Exposure Evaluation Report

Product : Blackhawk LTE
Trade mark : COVERT
Model/Type reference : 5465
Serial Number : N/A
Report Number : EED32J00239602
FCC ID : 2ANR6-5465
Date of Issue : Dec. 5, 2017
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
KDB447498D01v06
Test result : PASS

Prepared for:

Covert Scouting Cameras, Inc
4338 Greenridge Spa Rd, Lewisburg, Kentucky 42256 , United States

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385



Tested By:

Tom chen

Compiled by:

Mill chen

Tom chen (Test Project)

Mill chen (Project Engineer)

Reviewed by:

Kevin Yang

Approved by:

Sheek Luo

Kevin yang (Reviewer)

Sheek Luo (Lab supervisor)

Date:

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2 Version

Version No.	Date	Description
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4 General Information

4.1 Client Information

Applicant:	Covert Scouting Cameras, Inc
Address of Applicant:	4338 Greenridge Spa Rd, Lewisburg, Kentucky 42256 , United States
Manufacturer:	UOVision Technology (Shenzhen) Co.,Ltd.
Address of Manufacturer:	4th Floor, A1 Building, Shunheda Factory, liuxiandong Industrial Zone, Xili street, Nanshan District, Shenzhen, China

4.2 General Description of EUT

Product Name:	Blackhawk LTE
Model No.(EUT):	5465
Trade Mark:	COVERT
EUT Supports Radios application	GPS: L1:1575.42MHz 4G LTE: FDD Band 4, FDD Band 13
Power Supply:	DC 6-18V
Hardware Version:	L4V52MG(manufacturer declare)
Software Version:	V1.00.01(manufacturer declare)
Sample Received Date:	Oct. 27, 2017
Sample tested Date:	Oct. 27, 2017 to Nov. 16, 2017

4.3 Product Specification subjective to this standard

Frequency Band:	LTE Band 4:TX(1710 MHz to 1755 MHz), RX(2110 MHz to 2155 MHz). LTE Band 13: TX(777MHz to 787MHz), RX(746MHz to 756MHz)
Modulation Type:	QPSK, 16QAM
Sample Type:	portable production
Antenna Type:	External antenna
Antenna Gain:	LTE Band 4: 3 dBi LTE Band 13: 3 dBi
Test Voltage:	DC 18V
The tested samples and the sample information are provided by the client.	

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385

No tests were sub-contracted.

4.5 Test Facility

FCC Designation No.: CN1164

FCC-Registration No.: 886427

Centre Testing International 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 886427.

4.6 Deviation from Standards

None.

4.7 Abnormalities from Standard Conditions

None.

4.8 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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

A rough estimation of the expected exposure in power flux density on a given point can be made with the following equation:

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R= distance to the centre of radiation of the antenna

EIRP = P*G

The antenna of the product, under normal use condition is at least 20 cm away from the body of the user.

Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. Therefore, the S of the device is calculated with R=20cm, and if it is below the limit S, then we can conclude the device complies with the rules.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

Antenna Gain: LTE Band 4: 3 dBi, LTE Band 13: 3 dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Band	Max Conducted Peak Output Power(dBm)	Gain (dBi)	EIRP* (dBm)	EIRP (mW)	R (cm)	S (mW/cm ²)	Limit (mW/cm ²)	Result
LTE Band 4	23.64	3	26.64	461.31	20	0.092	1	Pass
LTE Band 13	22.76	3	25.76	376.70	20	0.075	0.52	Pass

Note: Refer to report No.EED32J00239601 for EUT test Max Conducted Peak Output Power value.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32J00239601 for EUT external and internal photos.

*** End of Report ***

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