

# RF Exposure Evaluation Report

**Product** : Hunting Camera  
**Trade mark** : BROWNING  
**Model/Type reference** : BTC-DWPS-ATT, BTC-DWPS-VZW  
**Serial Number** : N/A  
**Report Number** : EED32M00186506  
**FCC ID** : 2ALGTBTC-DWPS-AV  
**Date of Issue** : Jul. 02, 2020  
**Test Standards** : 47 CFR Part 1.1307  
47 CFR Part 2.1091  
KDB447498D01v06  
**Test result** : PASS

Prepared for:

**Prometheus Group LLC**

**P.O. Box 130100 Birmingham, Alabama 35213-0100 USA**

Prepared by:

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Jul. 02, 2020

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Check No.:2447635447



## 2 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | Jul. 02, 2020 | Original    |
|             |               |             |
|             |               |             |

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## 4 General Information

### 4.1 Client Information

|                          |                                                                                 |
|--------------------------|---------------------------------------------------------------------------------|
| Applicant:               | Prometheus Group LLC                                                            |
| Address of Applicant:    | P.O. Box 130100 Birmingham, Alabama 35213-0100 USA                              |
| Manufacturer:            | Hooray Innovation Limited                                                       |
| Address of Manufacturer: | Flat 3, 15/F, Wah Yiu Industrial Building, 30-32 Au Pui Wan Street, Shatin, HK. |
| Factory:                 | Hooray Innovation Limited                                                       |
| Address of Factory:      | Flat 3, 15/F, Wah Yiu Industrial Building, 30-32 Au Pui Wan Street, Shatin, HK. |

### 4.2 General Description of EUT

|                                 |                                                                                                                                                                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:                   | Hunting Camera                                                                                                                                                                                                                                      |
| Model No.(EUT):                 | BTC-DWPS-ATT, BTC-DWPS-VZW                                                                                                                                                                                                                          |
| Test Model No.:                 | BTC-DWPS-ATT                                                                                                                                                                                                                                        |
| Trade mark:                     | BROWNING                                                                                                                                                                                                                                            |
| EUT Supports Radios application | LTE Band 2: Tx: 1850-1910MHz, Rx: 1930-1990MHz<br>LTE Band 4: Tx: 1710-1755 MHz, Rx: 2110-2155 MHz<br>LTE Band 5: Tx: 824-849 MHz, Rx: 869-894MHz<br>LTE Band 12: Tx: 699-716 MHz, Rx: 729-746 MHz<br>LTE Band 13: Tx: 777-787 MHz, Rx: 746-756 MHz |

### 4.3 Product Specification subjective to this standard

|                       |                                                                                                                                                                                                                                                                                                                  |               |           |                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------|----------------------|
| Frequency Range:      | LTE Band 2: Tx: 1850 MHz – 1910MHz, Rx: 1930 MHz – 1990MHz<br>LTE Band 4: Tx: 1710 MHz – 1755 MHz, Rx: 2110 MHz – 2155 MHz<br>LTE Band 5: Tx: 824 MHz – 849 MHz, Rx: 869 MHz – 894MHz<br>LTE Band 12: TX: 699 MHz to 716 MHz RX: 729 MHz to 746 MHz<br>LTE Band 13: Tx: 777 MHz – 787 MHz, Rx: 746 MHz – 756 MHz |               |           |                      |
| Modulation Type:      | QPSK, 16QAM                                                                                                                                                                                                                                                                                                      |               |           |                      |
| Test Power Grade:     | Default                                                                                                                                                                                                                                                                                                          |               |           |                      |
| Test Software of EUT: | Default                                                                                                                                                                                                                                                                                                          |               |           |                      |
| Antenna Type:         | Dipole Antenna                                                                                                                                                                                                                                                                                                   |               |           |                      |
| Antenna Specification | LTE Band 2:                                                                                                                                                                                                                                                                                                      | Antenna Gain: | 1.65 dBi  | (Numeric gain: 1.46) |
|                       | LTE Band 4:                                                                                                                                                                                                                                                                                                      | Antenna Gain: | 1.65 dBi  | (Numeric gain: 1.46) |
|                       | LTE Band 5:                                                                                                                                                                                                                                                                                                      | Antenna Gain: | -0.14 dBi | (Numeric gain: 0.97) |
|                       | LTE Band 12:                                                                                                                                                                                                                                                                                                     | Antenna Gain: | 1.42 dBi  | (Numeric gain: 1.39) |
|                       | LTE Band 13:                                                                                                                                                                                                                                                                                                     | Antenna Gain: | 1.42 dBi  | (Numeric gain: 1.39) |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |           |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|--------------|
| Maximum tune up power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LTE Band 2:                    | 24.00 dBm | (251.189 mW) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LTE Band 4:                    | 24.00 dBm | (251.189 mW) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LTE Band 5:                    | 24.00 dBm | (251.189 mW) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LTE Band 12:                   | 24.00 dBm | (251.189 mW) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LTE Band 13:                   | 24.00 dBm | (251.189 mW) |
| Power Supply:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Battery                        | AA 1.5V*8 |              |
| Sample Received Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Jun. 28, 2020                  |           |              |
| Sample tested Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Jun. 28, 2020 to Jun. 30, 2020 |           |              |
| <p>The tested sample(s) and the sample information are provided by the client.</p> <p>Model No.:BTC-DWPS-ATT, BTC-DWPS-VZW</p> <p>Only the model BTC-DWPS-ATT was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with only model number is different for the marketing requirement.</p> <p>The marketing requirement is as below,</p> <p>BTC-DWPS-ATT operates on the ATT Network</p> <p>BTC-DWPS-VZW operates on the Verizon Network</p> <p>The certified module ID is FCC ID: RI7LE910NAV2, and report numbers of this certified module are 1506FR21-01 and RF exposure analysis dated on 04/14/2016.</p> <p>This certified module will be integrated into a host that is a hunting camera. Therefore, it is the same mobile condition as the original filling.</p> <p>In this report, this certified module is same as the original filling. We have verified the power and test for new radiated emission/exposure evaluation to demonstrate full compliance.</p> |                                |           |              |

#### 4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

#### 4.5 Deviation from Standards

None.

#### 4.6 Abnormalities from Standard Conditions

None.

#### 4.7 Other Information Requested by the Customer

None.



## 5 RF Exposure Evaluation

### 5.1 RF Exposure Compliance Requirement

Given  $E = \frac{\sqrt{30 \times P \times G}}{d}$  &  $S = \frac{E^2}{377}$

Where  $E$  = Field strength in Volts / meter

$P$  = Power in Watts

$G$  = Numeric antenna gain

$d$  = Distance in meters

$S$  = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where  $d$  = Distance in cm

$P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

## 5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using  $d = 20$  cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where  $P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

### LTE Band 2:

| Ch.   | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in W / m <sup>2</sup> | Limit (W/m <sup>2</sup> ) |
|-------|-----------|--------|-------------|--------|-------------------------------------|---------------------------|
| 18900 | 1880      | 0.251  | 1.46        | 20     | 0.7293                              | 4.526                     |

### LTE Band 4:

| Ch.   | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in W / m <sup>2</sup> | Limit (W/m <sup>2</sup> ) |
|-------|-----------|--------|-------------|--------|-------------------------------------|---------------------------|
| 20050 | 1720      | 0.251  | 1.46        | 20     | 0.7293                              | 4.259                     |

### LTE Band 5:

| Ch.   | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in W / m <sup>2</sup> | Limit (W/m <sup>2</sup> ) |
|-------|-----------|--------|-------------|--------|-------------------------------------|---------------------------|
| 20600 | 844       | 0.251  | 0.97        | 20     | 0.4845                              | 2.618                     |

### LTE Band 12:

| Ch.   | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in W / m <sup>2</sup> | Limit (W/m <sup>2</sup> ) |
|-------|-----------|--------|-------------|--------|-------------------------------------|---------------------------|
| 23130 | 711       | 0.251  | 1.39        | 20     | 0.6943                              | 2.329                     |

### LTE Band 13:

| Ch.   | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in W / m <sup>2</sup> | Limit (W/m <sup>2</sup> ) |
|-------|-----------|--------|-------------|--------|-------------------------------------|---------------------------|
| 23230 | 782       | 0.251  | 1.39        | 20     | 0.6943                              | 2.485                     |



## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00186501 for EUT external and internal photos.

\*\*\* End of Report \*\*\*

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