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Report No.: 1704TW0101-U2 Report Version: Issue Date: 05-10-2017

# **RF Exposure Evaluation Declaration**

FCC ID: 2ACS5-E90

Yuneec Technology Co., Limited APPLICANT:

**Application Type:** Certification

**Product:** 3-Axis Gimbal Camera

Model No.: E90

**Brand Name:** YUNEEC

FCC Classification: Unlicensed National Information Infrastructure (UNII)

Reviewed By : Paddy Chen (Paddy Chen)
Approved By : Amy her





The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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## **Revision History**

Report No.	Version	Description	Issue Date	Note
1704TW0101-U2	Rev. 01	Initial report	04-20-2017	Invalid
1704TW0101-U2	Rev. 02	Revised the power level	05-10-2017	Valid

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## 1. PRODUCT INFORMATION

## 1.1. Equipment Description

Product Name	3-Axis Gimbal Camera
Model No.	E90
Power Type	DC 12V
Wi-Fi Specification:	802.11a
Type of Modulation	802.11a: OFDM

### 1.2. Antenna Description

Antenna Type	Manufacturer	Frequency Band (GHz)	Max Peak Gain (dBi)
Omni-directional Antenna	Yuneec International (China) Co., Ltd.	5.8	-3.66

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### 2. RF Exposure Evaluation

#### 2.1. Limits

According to FCC 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)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density	Average Time
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm <sup>2</sup> )	(Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500			f/1500	6
1500-100,000			1	30

f= Frequency in MHz

Calculation Formula:  $Pd = (Pout*G)/(4*pi*r^2)$ 

#### Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

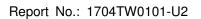
G = gain of antenna in linear scale

Pi = 3.1416

r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

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## 2.2. Test Result of RF Exposure Evaluation

Product	3-Axis Gimbal Camera
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to Clause 1.2 of antenna description.

Test Mode	Frequency Band	Maximum Average	Power Density at	Limit
	(MHz)	Output Power	R = 20 cm	(mW/cm <sup>2</sup> )
		(dBm)	(mW/cm <sup>2</sup> )	
802.11a	5745 ~ 5825	25.00	0.0271	1

#### **CONCULISON:**

The Max Power Density at R (20 cm) =  $0.0271 \text{mW/cm}^2 < 1 \text{mW/cm}^2$ . So the EUT complies with the requirement.

The End

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