

MRT Technology (Taiwan) Co., Ltd Phone: +886-3-3288388

Web: www.mrt-cert.com

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

# **RF Exposure Evaluation Declaration**

FCC ID: 2ACS5-E90

APPLICANT: Yuneec Technology Co., Limited

**Application Type:** Certification

3-Axis Gimbal Camera **Product:** 

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.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Taiwan) Co., Ltd.

FCC ID: 2ACS5-E90 Page Number: 1 of 5



# **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

FCC ID: 2ACS5-E90 Page Number: 2 of 5



## 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

FCC ID: 2ACS5-E90 Page Number: 3 of 5



## 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.

FCC ID: 2ACS5-E90 Page Number: 4 of 5





## 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

FCC ID: 2ACS5-E90 Page Number: 5 of 5