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Report No.: 1607RSU01404
Report Version: V02
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RF Exposure Evaluation Declaration

FCC ID: 2ACS5-ST16P

APPLICANT: Yuneec Technology Co., Limited

Application Type: Certification

Product: Personal Ground Station

Model No.: ST16***** (The “*” can be 0 to 9, a to z, A to Z, blank or plus, for marketing purpose.)

Brand Name: YUNEEC

FCC Classification: Digital Transmission System (DTS)

Unlicensed National Information Infrastructure (UNII)

Reviewed By
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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 |
|--------------|---------|----------------------|------------|---------|
| 1607RSU01404 | Rev. 01 | Initial report | 07-25-2016 | Invalid |
| 1607RSU01404 | Rev. 02 | Add one 5GHz antenna | 08-13-2016 | Valid |
| | | | | |

1. PRODUCT INFORMATION

1.1. Equipment Description

| | |
|--------------------|--|
| Product Name | Personal Ground Station |
| Model No. | ST16***** (The “*” can be 0 to 9, a to z, A to Z, blank or plus, for marketing purpose.) |
| Power Type | DC 3.6V |
| Frequency Range | For 2.4GHz Band: 802.15.4: 2405 ~ 2475 MHz 802.11b/g/n-HT20 2412 ~ 2462MHz For 5.0GHz Band: 802.11a: 5745 ~ 5825MHz |
| Type of Modulation | 802.15.4: OQPSK 802.11b: DSSS 802.11a/g/n-HT20: OFDM |

1.2. Antenna Description

| Antenna Type | Manufacturer | Frequency Band (MHz) | Max Peak Gain (dBi) |
|--------------------------|--------------------------------|----------------------|---------------------|
| Dipole Antenna A | Cortec Technology Inc. | 2405~2475 | 1.50 |
| Dipole Antenna B | | 2405~2475 | 1.50 |
| Dipole Antenna | Yuneec Technology Co., Limited | 2412~2462 | -0.11 |
| Directional Antenna | Cortec Technology Inc. | 5745~5825 | 1.50 |
| Omni-directional Antenna | Yuneec Technology Co., Limited | 5745~5825 | -3.48 |

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 (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) | Average Time (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/cm²

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/cm². 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.

2.2. Test Result of RF Exposure Evaluation

| | |
|-----------|-------------------------|
| Product | Personal Ground Station |
| Test Item | RF Exposure Evaluation |

Antenna Gain: Refer to Clause 1.2 of antenna description.

| Test Mode | Frequency Band (MHz) | Maximum Average Output Power (dBm) | Power Density at R = 20 cm (mW/cm ²) | Limit (mW/cm ²) |
|------------------|----------------------|------------------------------------|--|-----------------------------|
| 802.15.4 | 2405 ~ 2475 | 19.32 | 0.0240 | 1 |
| 802.11b/g/n-HT20 | 2412 ~ 2462 | 7.78 | 0.0012 | 1 |
| 802.11a | 5745 ~ 5825 | 21.55 | 0.0402 | 1 |

CONCLUSION:

Both of the Zig-Bee 2.4GHz and WLAN 2.4GHz or WLAN 5GHz can transmit simultaneously.

Therefore, the Max Power Density at R (20 cm) = $0.0240\text{mW/cm}^2 + 0.0402\text{mW/cm}^2 = 0.0642\text{mW/cm}^2 < 1\text{mW/cm}^2$.

So the EUT complies with the requirement.

The End