TEST REPORT

Product Name	**:**	**Gimbal Drone（Controller）**
Model Number	**:**	**DRC448, DRC448-NOC, DRC448-NOC-2**
FCC ID	**:**	**2AWZK-210602**

Prepared for	:	SDI Technologies Inc.
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Report Number	:	EDG2211280014E00402R
Date(s) of Tests	:	November 28, 2022 to January 31, 2023
Date of issue	:	January 31, 2023

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1. TEST RESULT CERTIFICATION

Applicant	:	Guangdong Hengdi Technology Corp., Ltd
Address：		Building C, Jinhui Industrial Building, South of Yuting Road, East of Taian Road
Manufacturer	:	Guangdong Hengdi Technology Corp., Ltd
Address：		No.70, Qiguang Industrial Park, Taian Road, Chenghai District, Shantou City, Guangdong Province, China
EUT	:	Gimbal Drone (Controller)
Model Name	:	DRC448, DRC448-NOC, DRC448-NOC-2
Trademark	:	N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
§ 15.247(i), § 2.1093	**PASS**

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : November 28, 2022 to January 31, 2023

Prepared by : Xia Yang /Editor

Reviewer : Tim Dong/ Supervisor

Approve & Authorized Signer : Sam Lv / Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2211280014E00402R	/	Original Report

2. EUT Specification

Characteristics	Description
Product:	Gimbal Drone (Controller)
Model Number:	DRC448, DRC448-NOC, DRC448-NOC-2 All products are the same, only the model number and color of appearance are different Here we selected DRC448 for all the test
Modulation:	GFSK
Operating Frequency Range(s) :	2420MHz-2470MHz
Number of Channels:	51 Channels
Transmit Power Max:	82.49 dBuV/m
Antenna Gain:	2 dBi
Power supply:	DC 5V from USB, DC 3.7V from battery
Evaluation applied:	☐ MPE Evaluation ☒ SAR Evaluation

3. Test Requirement

RF EXPOSURE EVALUATION

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[24] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[25]
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by §2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to quality for TCB approval.
One antenna is available for the EUT. The minimum separation distance is 5mm.

According to ANSI C63.10-2013
9.5 Equations to calculate EIRP
Calculate the EIRP from the radiated field strength in the far field using Equation (22):
EIRP = E + 20log (d) −104.7 (22)
where
EIRP is the equivalent isotropically radiated power, in dBm
E is the field strength of the emission at the measurement distance, in dBμV/m
d is the measurement distance, in m
Calculate the EIRP from the conducted power using Equation (23):
EIRP = P − G (23)
where
EIRP is the equivalent isotropically radiated power, in dBm
P is the measured power at feedpoint of the EUT antenna, in dBm
G is the gain of the EUT radiating element (antenna), in dBi
By combining Formula (22) and Formula (23), the result is
P = E + 20log (d) −104.7 + G

4. Measurement Result

Antenna gain: 2 dBi

Channel Freq. (MHz)	Max Field Strength (dBuV/m)	peak output power (dBm)	Tune upPower (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
2420	81.56	-11.5976	-12±1	-11	0.02471369	3
2445	82.49	-10.6676	-11±1	-10	0.03127299	3
2470	80.64	-12.5176	-13±1	-12	0.01983255	3

According to KDB 447498, no stand-alone required for BT antenna, and no simultaneous SAR measurement is required.

*** End of Report ***