

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2204000426AT
Applicant: KanDao Technology Co., Ltd.
Address of Applicant: RM503 Block 1, Software Town of Shenzhen, Universiade No.8288
 Longgang Avenue, Longgang Dist, Shenzhen, China
Manufacturer: KanDao Technology Co., Ltd.
Address of Manufacturer: RM503 Block 1, Software Town of Shenzhen, Universiade No.8288
 Longgang Avenue, Longgang Dist, Shenzhen, China
Factory: SKY LIGHT ELECTRONIC (SHENZHEN) LIMITED
Address of Factory: 1F-2F OF NO.9, 1F-5F OF NO.8, ANTUOSHAN HIGH-TECH. INDUSTRIAL
 PARK, SHAER COMMUNITY, SHAJING STREET, BAO'AN DISTRICT,
 SHENZHEN CITY, GUANGDONG PROVINCE, CHINA

Equipment Under Test (EUT):

EUT Name: QooCam EGO
Model No.: QG7018
Trade Mark: KanDao
Standard(s) : 47 CFR PART 1, Subpart I, Section 1.1310
 47 CFR PART 2, Subpart J, Section 2.1093
 KDB447498D01 General RF Exposure Guidance v06

Date of Receipt: 2022-03-22
Date of Evaluation: 2022-03-23 to 2022-04-19
Date of Issue: 2022-04-21

Evaluation Result:	Pass*
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* In the configuration evaluated, the EUT complied with the standards specified above.

Kobe Jian
EMC Laboratory Manager



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<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2022-04-21		Original

Authorized for issue by			
			
		<hr/> Curry Wu/Project Engineer	
			
		<hr/> Ricky Liu/Reviewer	



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2 Evaluation Summary

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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4 General Information

4.1 Details of E.U.T.

Power supply: DC 3.7V by rechargeable lithium battery and charged by DC 5V 2A.

Cable: USB Cable 50cm, shielded

For BLE:

Operation Frequency: 2402MHz to 2480MHz

Bluetooth Version: V4.2

Modulation Type: GFSK

Data Rate: 1M/bit

Number of Channels: 40

Channel Spacing: 2MHz

Antenna Type: FPC Antenna

Antenna Gain: 3.0dBi declared by applicant

For 2.4G:

Operation Frequency: 802.11b/g/n(HT20): 2412MHz to 2462MHz

Modulation Type: 802.11b: DSSS (CCK, DQPSK, DBPSK); 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)

Number of Channels: 802.11b/g/n(HT20):11

Channel Spacing: 5MHz

Antenna Type: FPC Antenna

Antenna Gain: 3.0dBi declared by applicant

For 5G:

Operation Frequency (20MHz): U-NII-1: 5180-5240MHz;

Operation Frequency (40MHz): U-NII-1: 5190-5230MHz;

Operation Frequency (80MHz): U-NII-1: 5210MHz;

Modulation Type: 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)

Channel Spacing: 802.11a/n(HT20)/ac(HT20): 20MHz; 802.11n(HT40)/ac(HT40): 40MHz; 802.11ac(HT80): 80MHz

DFS Function: Without DFS function

TPC Function: Without TPC function

Antenna Type: FPC Antenna

Antenna Gain: 3.0dBi



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4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
 Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

4.3 Facility

The facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.4 Deviation from Standards

None



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4.5 Abnormalities from Standard Conditions

None



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5 Radio Spectrum Technical Requirement

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion



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5.1.2 EUT RF Exposure Evaluation

For BLE:

The Max. power (including tune-up tolerance) is -2.21 dBm on the lowest channel 2.48 GHz (*)
 -2.21 dBm logarithmic terms convert to numeric result is nearly 0.60 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$$\frac{[\sqrt{f(\text{GHz})}]}{\text{General RF Exposure}} = (0.60 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 0.19 \tag{1}$$

SAR requirement:

$$S = 3.0 \tag{2}$$

(1) < (2)

So the SAR report is not required.

(*) Max. power refer to GZCR220400042601

For 2.4GHz Wifi:

The Max. power (including tune-up tolerance) is 9.78 dBm on the highest channel 2.462 GHz (*)
 9.78 dBm logarithmic terms convert to numeric result is nearly 9.51 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$$\frac{[\sqrt{f(\text{GHz})}]}{\text{General RF Exposure}} = (9.51 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.462 \text{ GHz}} = 2.98 \tag{1}$$

SAR requirement:

$$S = 3.0 \tag{2}$$

(1) < (2)

So the SAR report is not required.

(*) Max. power refer to GZCR220400042602

For 5GHz Wifi:

The Max. power (including tune-up tolerance) is 6.31 dBm on the highest channel 5.18 GHz (*)
 6.31 dBm logarithmic terms convert to numeric result is nearly 4.28 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$$\frac{[\sqrt{f(\text{GHz})}]}{\text{General RF Exposure}} = (4.28 \text{ mW} / 5 \text{ mm}) \times \sqrt{5.18 \text{ GHz}} = 1.95 \tag{1}$$

SAR requirement:

$$S = 3.0 \tag{2}$$

(1) < (2)

So the SAR report is not required.

(*) Max. power refer to GZCR220400042603

6 EUT Constructional Details (EUT Photos)

Refer to appendix - external and internal photos for GZCR2204000426AT

- End of the Report -



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