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RF Exposure Evaluation Report

Report No. :	CQASZ20180900055E-02
Applicant:	GAZELAB INC.
Address of Applicant:	3F,117, Bongeunsa-ro, Gangnam-gu, Seoul, Korea (postal code06120)
Manufacturer:	SHENZHEN KING YARD INT'L TRADING CO., LIMITED
Address of Manufacturer:	3/F,Building1, Baicai Intelligent Technology Park,No.30,Cuibao Road, Baolong Street, Longgang District, Shenzhen, China
Factory:	SHENZHEN KING YARD INT'L TRADING CO., LIMITED
Address of Factory:	3/F,Building1, Baicai Intelligent Technology Park,No.30,Cuibao Road, Baolong Street, Longgang District, Shenzhen, China
Equipment Under Test (EUT):	
Product:	GAZEGO Translator
All Model No.:	GAZEGOT-1, GAZEGOT-2, GAZEGOT-3, GAZEGOT-4, GAZEGOT-5, GAZEGOT-6, GAZEGOT-7, GAZEGOT-8
Test Model No.:	GAZEGOT-1
Brand Name:	GAZELAB
FCC ID:	2ARHJ-GAZEGOT
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2018-09-27 to 2018-10-09
Date of Issue:	2018-10-09
Test Result :	**PASS***

Tested By: Tiny You

(Tiny You)

Reviewed By: Aaron Ma

(Aaron Ma)

Approved By:

(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO.,LTD 华夏准测 APPROVED

* In the configuration tested, the EUT complied with the standards specified above.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20180900055E-02	Rev.01	Initial report	2018-10-09

2 Contents

3 General Information

3.1 Client Information

Applicant:	GAZELAB INC.
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3.2 General Description of EUT

Product Name:	GAZEGO Translator
Model No.:	GAZEGOT-1, GAZEGOT-2, GAZEGOT-3, GAZEGOT-4, GAZEGOT-5, GAZEGOT-6, GAZEGOT-7, GAZEGOT-8
Test Model No.:	GAZEGOT-1
Trade Mark:	GAZELAB
Hardware version：	P18A_37_TL_JYD_20180829_V1.0
Software version：	P18A-A303
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps IEEE for 802.11n(HT40) : 13.5Mbps/27Mbps/40.5Mbps/54Mbps/81Mbps/108Mbps/121.5Mbps/135Mbps
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	RF test (manufacturer declare)
Antenna Type:	internal antenna
Antenna Gain:	-1.5dBi
Power Supply:	DC3.7V, 2100mAh; Charge by USB

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 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 calculation[17]
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

4.1.3 EUT RF Exposure

For WIFI:

Measurement Data

802.11b mode	
Test channel	Average Output Power (dBm)
Lowest(2412MHz)	9.23
Middle(2437MHz)	9.59
Highest(2462MHz)	9.42
802.11g mode	
Test channel	Average Output Power (dBm)
Lowest(2412MHz)	9.42
Middle(2437MHz)	9.35
Highest(2462MHz)	8.91
802.11n(HT20)mode	
Test channel	Average Output Power (dBm)
Lowest(2412MHz)	9.33
Middle(2437MHz)	9.36
Highest(2462MHz)	9.1
802.11n(HT40)mode	
Test channel	Average Output Power (dBm)
Lowest(2422MHz)	9.17
Middle(2437MHz)	9.53
Highest(2452MHz)	8.96

The Max Conducted Average Output Power is 9.59dBm in Middle channel(2.437GHz);

The best case gain of the antenna is -1.5dBi.

EIRP= 9.59dBm – 1.5dBi = 8.09dBm

8.09dBm logarithmic terms convert to numeric result is nearly 6.44mW

According to the formula. calculate the EIRP test result:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

General RF Exposure = (6.44mW / 5 mm) x √2.437GHz = 2.01 ①

SAR requirement:

S= 3.0 ② ;

① < ②.

So the SAR report is not required.

Remark: The Max Conducted Average Output Power data refer to report Report No.: CQASZ20180900055E-01