

RF EXPOSURE REPORT

FOR

Applicant	:	Lorenz High Definition LLC
Address	:	230 Rt 206 STE 401, Flanders, New Jersey, United States
Equipment under Test	:	800LR Z-Wave GPIO module
Model No.	:	ZAC93 LR
Trade Mark	:	zooZ TM
FCC ID	:	2AZ2V-101222-ZAC93
Manufacturer	:	Shenzhen ZVIDAR Technologies CO.,Ltd.
Address	:	Room 468, Building F1, TCL Technologies Park, 1001, Zhongshanyuan Road, Shuguang Community, Xili Street Office, Nanshan District, Shenzhen City

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
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REPORT

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Test Report Declare

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Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No.:	DDT-RE23060515-1E03		
Date of Receipt:	Jun. 05, 2023	Date of Test:	Jun. 07, 2023 ~ Jul. 11, 2023

Prepared By:

Jacky Huang

Jacky Huang/Engineer

Approved By:



Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jul. 12, 2023	

1. General Information

1.1. Description of equipment

EUT Name	: 800LR Z-Wave GPIO module
Model Number	: ZAC93 LR
EUT function description	: Please reference user manual of this device
Power Supply	: DC 3.3V
Operation Frequency	: 908.40 - 920.00 MHz
Modulation	: 2FSK, 2GFSK, OQPSK
Antenna Gain	: -2.75 dBi
Sample Number	: S23060515-01 for radiated, S23060515-02 for conducted

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City,
Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2. RF Exposure evaluation for FCC

According to 447498 D01 General RF Exposure Guidance v06

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:

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

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

Manufacturing Tolerance

Channel (MHz)	908.40	908.42	912	916	920
Target (dBm)	-8.75*	-8.50*	7.96	-8.16*	7.72
Tolerance $\pm(\text{dB})$	1.5	1.5	1.5	1.5	1.5

Note: * The results of dBm are calculate according to ANSI C63.10-2020 section 12.7.3 d) and e) and the results of dB μ V/m are quoted from report: DDT-RE23060515-1E01.

Estimation Result

Worse case is as below: [912.00 MHz, 9.46 dBm, (8.83 mW) output power]

$(8.83/5) \cdot [\sqrt{0.912(\text{GHz})}] = 1.69 < 3.0$ for 1-g SAR

Then SAR evaluation is not required.

END OF REPORT