

RF EXPOSURE REPORT



Report No.: 18071115-FCC-H

Applicant	IoTGizmo Corporation	
Product Name	Smart Dimming Light Switch	
Main Model No.	D6932	
Serial Model No.	N/A	
Test Standard	FCC 2.1091	
Test Date	September 29 to October 11, 2018	
Issue Date	October 15, 2018	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification		<input checked="" type="checkbox"/>
Equipment did not comply with the specification		<input type="checkbox"/>
Aaron Liang Test Engineer	David Huang Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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CONTENTS

1. REPORT REVISION HISTORY.....	5
2. CUSTOMER INFORMATION	5
3. TEST SITE INFORMATION.....	5
4. EQUIPMENT UNDER TEST (EUT) INFORMATION	6
5. FCC §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)	7
5.1 APPLICABLE STANDARD.....	7
5.2 TEST RESULT	8

1. Report Revision History

Report No.	Report Version	Description	Issue Date
18071115-FCC-H	NONE	Original	October 15, 2018

2. Customer information

Applicant Name	IoTGizmo Corporation
Applicant Add	255 Old New Brunswick, Suite N330, Piscataway, New Jersey, United States 08854
Manufacturer	Earda Technologies Co., Ltd
Manufacturer Add	Block A, LianFeng Creative Industry Park, NO.2 JiSheng Road, HuangGe Town, Nansha District, Guangzhou, PRC.

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Labview of SIEMIC version 2.0

4. Equipment under Test (EUT) Information

Description of EUT: Smart Dimming Light Switch

Main Model: D6932

Serial Model: N/A

Equipment Category : DTS

Antenna Gain: 3dBi

Antenna type : 3D antenna

Input Power: 100-240V AC 50/60Hz

Trade Name : Touch Dimmer

Port: Please refer to the user manual

FCC ID: 2AHVE-D6932

Type of Modulation: 802.11b/g/n: DSSS, OFDM

RF Operating Frequency (ies):
WIFI: 802.11b/g/n(20M): 2412-2462 MHz
WIFI: 802.11n(40M): 2422-2452 MHz

Number of Channels:
WIFI :802.11b/g/n(20M): 11CH
WIFI :802.11n(40M): 7CH

5. FCC §2.1091 - Maximum Permissible exposure (MPE)

5.1 Applicable Standard

According to §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.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

5.2 Test Result

Type	Test mode	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)
Output power	802.11b	Low	2412	13.70	13±1
		Mid	2437	13.96	13±1
		High	2462	13.23	13±1
	802.11g	Low	2412	12.36	12±1
		Mid	2437	12.85	12±1
		High	2462	12.24	12±1
	802.11n (20M)	Low	2412	11.55	11±1
		Mid	2437	11.99	11±1
		High	2462	11.84	11±1
	802.11n (40M)	Low	2422	11.56	11±1
		Mid	2437	10.62	11±1
		High	2452	11.88	11±1

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.4G WIFI:

For the antenna manufacturer provide only used limited to ERP/EIRP or radiated spurious emission test. The MPE evaluation as below:

Maximum output power at antenna input terminal: 14(dBm)

Maximum output power at antenna input terminal: 25.12(mW)

Predication distance: >20 (cm)

Predication frequency: 2437 (MHz) Middle frequency

Antenna Gain (typical):3 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.010(mW/cm²)

MPE limit for general population exposure at prediction frequency: 1.0 (mW/cm²)

$0.010(\text{mW/cm}^2) < 1.0 (\text{mW/cm}^2)$

Result: Pass