RF Exposure Evaluation Declaration

Applicant:	Suzhou EICCOMM Technology CO., Ltd.
Address:	Room 304, Building 4, Zhuyuan Road 209, GAOXIN District, Suzhou, Jiangsu Province, China
Product:	BLE Controller
Model No.:	LCBLUECONTROL/W
Brand Name:	RAB
FCC Classification:	Digital Transmission System (DTS)
Test Procedure(s):	FCC Part 2.1091
Test Date:	February 05, 2021

Reviewed By: Sherry Jiang

Sherry Jiang

Approved By: Robin Wu

Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

Revision History

Report No.	Version	Description	Issue Date	Note
2012RSU046-U3	Rev. 01	Initial Report	02-24-2021	Valid

CONTENTS

1. GENERAL INFORMATION

1.1. Applicant

Suzhou EICCOMM Technology CO., Ltd.

Room 304, Building 4, Zhuyuan Road 209, GAOXIN District, Suzhou, Jiangsu Province, China

1.2. Manufacturer

RAB LIGHTING INC

170 Ludlow Ave,PO BOX 970,Northvale, NJ 07647-2305 USA

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou – Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou – SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020	
☐	**Test Site – MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen)	
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: L3261-190725	
	FCC: 291082, TW3261	ISED: TW3261

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	BLE Controller
Model No.	LCBLUECONTROL/W
Serial Model No.	LCBLUECONTROL/SS/W
Bluetooth Version	v5.0 single mode, LE only
Serial Number	20201214Sample#03
Power Supply	Input :120-277Vac 50/60Hz
Remark	LCBLUECONTROL/SS/W has 3 more lines than LCBLUECONTROL/W, used to adjust the color of the product, the other parts are identical.

2.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Antenna Gain (dBi)
External PCB Antenna	2.4~2.5	2.00

3. RF Exposure Evaluation

3.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

3.2. Test Result of RF Exposure Evaluation

Product	BLE Controller
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)
BLE	2402 ~ 2480	3.85	0.0005	1

CONCLUSION:

So, the safety distance is 20cm for BLE Controller installed without any other radio equipment.

The End

Appendix A - EUT Photograph

Refer to “2012RSU046-UE” file.