RF EXPOSURE REPORT



Report No.: Q181203S001-FCC-H

Supersede Report No.: N/A

Applicant	Remote Solution Co., Ltd.			
Product Name	REMOTE CONTROL UNIT			
Model No.	Nagra			
Serial No.	RC98XBB	RC98XBB (X stands for A~Z, BB stands for 00~99)		
Test Standard	FCC 2.109	FCC 2.1093		
Test Date	January 03 to 04, 2018			
Issue Date	January 04, 2018			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
Janan Liona		David Huang		
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

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park
South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn



Test Report	Q181203S001-FCC-H
Page	2 of 8

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



Test Report	Q181203S001-FCC-H
Page	3 of 8

This page has been left blank intentionally.



Test Report	Q181203S001-FCC-H
Page	4 of 8

CONTENTS

1.	REPORT REVISION HISTORY	5
2.	CUSTOMER INFORMATION	5
3.	TEST SITE INFORMATION	.5
4.	EQUIPMENT UNDER TEST (EUT) INFORMATION	6
5.	FCC §2.1093 - RADIOFREQUENCY RADIATION EXPOSURE EVALUATION: PORTABLE DEVICES	.7
5.1	RF EXPOSURE	7
52	TEST RESULT	Q



Test Report	Q181203S001-FCC-H
Page	5 of 8

1. Report Revision History

Report No.	Report Version	Description	Issue Date
Q181203S001-FCC-H	NONE	Original	January 04, 2018

2. Customer information

Applicant Name	Remote Solution Co., Ltd.	
Applicant Add	92, Chogokri, Nammyun, Kimchon City, Kyungbuk, South Korea	
Manufacturer	Remote Solution Co., Ltd.	
Manufacturer Add	92, Chogokri, Nammyun, Kimchon City, Kyungbuk, South Korea	

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	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	Radiated Emission Program-To Shenzhen v2.0	



Test Report	Q181203S001-FCC-H
Page	6 of 8

4. Equipment under Test (EUT) Information

Description of EUT:	REMOTE CONTROL UNIT
Main Model:	Nagra
Serial Model:	RC98XBB (X stands for A~Z, BB stands for 00~99)
Date EUT received:	December 07, 2018
Test Date(s):	January 03 to 04, 2018
Antenna Gain:	-1.7dBi
Antenna Type:	Chip antenna
Type of Modulation:	BLE: GFSK
RF Operating Frequency (ies):	BLE: 2402-2480 MHz
Number of Channels:	BLE: 40CH
Port:	Please refer to user's manual
Input Power:	Battery: Spec: DC 3V
Trade Name :	N/A
FCC ID:	TX4RC98B



Test Report	Q181203S001-FCC-H
Page	7 of 8

5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §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.

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)] $\cdot [\sqrt{f_{(GHz)}}] \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, ¹⁶ 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.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result = $P\sqrt{F}/D$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



Test Report	Q181203S001-FCC-H	
Page	8 of 8	

5.2 Test Result

BLE Mode:

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	-0.106	0±1	1	1.259	0.39	3
	Mid	2440	-0.213	0±1	1	1.259	0.39	3
	High	2480	-0.413	0±1	1	1.259	0.40	3

Result: Compliance

No SAR measurement is required.