

# ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

**Test Report No.** : OT-203-RWD-052

**AGR No.** : A201A-244

**Applicant** : Remote Solution Co., Ltd.

**Address** : 92, Chogokri, Nammyun, Kimchon City, Kyungbuk, 740-871, South Korea

**Manufacturer** : Remote Solution Co., Ltd.

**Address** : 326-14, Apo-daero, Nam-myeon, Gimcheon-si, Gyeongsangbuk-do, Republic of Korea

**Type of Equipment** : Zigbee Module

**FCC ID.** : TX4MC85A00

**Model Name** : MC85A00

**Multiple Model Name** : MC85B00

**Serial number** : N/A

**Total page of Report** : 6 pages (including this page)

**Date of Incoming** : February 24, 2020

**Date of issue** : March 13, 2020

## SUMMARY

The equipment complies with the regulation; *FCC PART 15 SUBPART C Section 15.247*

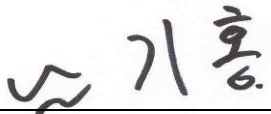
This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:

  
Tae-Ho, Kim / Senior Manager  
ONETECH Corp.

Approved by:

  
Ki-Hong, Nam / General Manager  
ONETECH Corp.

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**Revision History**

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	W17NR-D087	November 30, 2017	Initial Release	All
1	OT-203-RWD-052	March 13, 2020	Added multiple model	All

## 1. VERIFICATION OF COMPLIANCE

Applicant : Remote Solution Co., Ltd.  
 Address : 92, Chogokri, Nammyun, Kimchon City, Kyungbuk, 740-871, South Korea  
 Contact Person : Shin Sang Hyun / Researcher  
 Telephone No. : +82-54-420-4517  
 FCC ID : TX4MC85A00  
 Model Name : MC85A00  
 Brand Name : -  
 Serial Number : N/A  
 Date : March 13, 2020

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	Zigbee Module
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

## 2. GENERAL INFORMATION

### 2.1 Product Description

The Remote Solution Co., Ltd., Model MC85A00 (referred to as the EUT in this report) is a Zigbee Module. The product specification described herein was obtained from product data sheet or user’s manual.

Device Type	Zigbee Module
Temperature Range	-40 °C ~ 80 °C
Operating Frequency	2 405 MHz ~ 2 480 MHz
RF Output Power	-0.24 dBm
Number of Channel	16 Channel
Modulation Type	O-QPSK (Zigbee)
Antenna Type	MC85A00(Basic Model): PCB Pattern Antenna
	MC85B00(Multiple Model): Omni Antenna
Antenna Gain	MC85A00(Basic Model): 2.55 dBi
	MC85B00(Multiple Model): -0.04 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	32.768 kHz, 24 MHz

### 2.2 Alternative type(s)/model(s); also covered by this test report.

-. The following lists consist of the added model and their differences.

Model Name	Differences	Tested
MC85A00	Basic Model (PCB Pattern Antenna)	<input type="checkbox"/>
MC85B00	These models are identical to the basic model except for the antenna. (Omni Antenna)	<input checked="" type="checkbox"/>

Note: 1. Applicant consigns only basic model to test. Therefore this test report just guarantees the units, which have been tested.

2. The Applicant/manufacture is responsible for the compliance of all variants.

## 3. EUT MODIFICATIONS

-. None

## 4. RADIO FREQUENCY EXPOSURE

### 4.1 RF Exposure Limit

According to the FCC rule §1.1310, the limit for General Population/Uncontrolled exposure is 1 mW/cm<sup>2</sup> for the device operating 1 500 ~ 100 000 MHz.

### 4.2 EUT Description

Kind of EUT	Zigbee Module
Device Category	<input type="checkbox"/> Portable (< 20 cm separation) <input type="checkbox"/> Mobile (> 20 cm separation) <input checked="" type="checkbox"/> Others
Exposure Evaluation Applied	<input checked="" type="checkbox"/> MPE <input type="checkbox"/> SAR <input type="checkbox"/> N/A

### 4.3 Test Result for MC85A00 (Basic Model)

According to above equation, the following result was obtained.

Operating Mode	Target Power W/tolerance	Max tune up power		Antenna Gain		Safe Distance (cm)	Power Density (mW/cm <sup>2</sup> ) @ 20 cm Separation	Limit (mW/cm <sup>2</sup> )
	(dBm)	(dBm)	(mW)	Log	Linear			
Zigbee	0.00 ± 0.50	0.50	1.12	2.55	1.80	0.40	0.000 4	1.00

### 4.4 Test data for MC85B00 (Multiple Model)

According to above equation, the following result was obtained.

Operating Mode	Target Power W/tolerance	Max tune up power		Antenna Gain		Safe Distance (cm)	Power Density (mW/cm <sup>2</sup> ) @ 20 cm Separation	Limit (mW/cm <sup>2</sup> )
	(dBm)	(dBm)	(mW)	Log	Linear			
Zigbee	0.00 ± 0.50	0.50	1.12	-0.04	0.99	0.30	0.000 2	1.00



**Tested by: Hyung-Kwon, Oh / Assistant Manager**