

English

# **RFID Reader Module**

## **User Manual**

### **LCR-001 Master**

**OHSUNG ELECTRONICS CO., LTD.**

# Table of Contents

## 1. Overview and specification

### (1) Overview

### (2) Specification

## 2. Customer Support

## 1. Overview and Specifications for the Remote Control

### (1) Overview

- This product is an RFID module that operates in the HF(13.56 MHz) band and is responsible for recognizing target information.

### (2) Specifications

Items	Details
Model No.	LCR-001
Operating Frequency	13.56MHz
Input voltage	DC 5V ± 0.5V
Operating Current	250mA ↓
Size	60mm x 33mm x 9.3mm (Tolerance ±0.5mm)

- Integrated PCB antenna

TX FREQUENCY	POWER	Extreme Condition	Ant. Gain
13.56 MHz	-3.96 dB $\mu$ A/m@10m	-3.00 dB $\mu$ A/m @10m	N/A

## 2. Customer Support

Refer to the contact number for services provided in the Set Manual.

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

**[Certification Mark / Certification Number]**

**FCC ID : OZ5-LCR001**

**IC : 21703-LCR001**

**CE, UKCA : Marking (min. 5mm)**



**Company: OHSUNG ELECTRONICS CO., LTD.**

**Manufacturer: OHSUNG ELECTRONICS CO., LTD.**

**RF Exposure**

The antenna (or antennas) must be installed so as to maintain at all times a distance minimum of at least 20 cm between the radiation source (antenna) and any individual. This device may not be installed or used in conjunction with any other antenna or transmitter. The host manufacturer has the responsibility that the host device should be in compliance with all essential requirement of RED.

**Manufacturer : OHSUNG ELECTRONICS CO., LTD.**

**The postal address(EU/UK): 335-4, Sanho-daero, Gumi-si,  
Gyeongsangbuk-do, Republic of Korea**

## FCC Statement

FCC Part 15.19 Statements:	<p>This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:</p> <p>(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.</p>
FCC Part 15.105 statement(Class B)	<p>This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.</p> <p>These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:</p> <ul style="list-style-type: none"> <li>- Reorient or relocate the receiving antenna.</li> <li>- Increase the separation between the equipment and receiver.</li> <li>- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.</li> <li>- Consult the dealer or an experienced radio/TV technician for help.</li> </ul>
FCC Part 15.21 statement	<p>Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device must not be co-located or operating in conjunction with any other antenna or transmitter.</p>
Responsible Party Information	<p style="text-align: center;">Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information</p> <p style="text-align: center;">Unique Identifier: (e.g., Trade Name, Model Number) Responsible Party – U.S. Contact Information ABC Corporation Street Address City, State Zip Code Telephone number or internet contact information</p>
Modular Approval Statement	<p>Regulatory notice to host manufacturer according to KDB 996369 D03 OEM Manual</p> <p>This module has been granted modular approval as below listed FCC rule parts.</p> <p>-FCC Rule parts 15C(15.247)</p> <p>Summarize the specific operational use conditions</p> <p>-The OEM integrator should use equivalent antennas which is the same type and equal or less gain then an antenna listed below this instruction manual.</p> <p>Limited module procedures</p> <p>- The module is a single module.</p> <p>Trace antenna designs</p> <p>-The module with trace antenna designs, and the Antenna Specification document includes the layout of trace design and measurement data.</p> <p>RF exposure considerations</p> <p>-The module has been certified for integration into products only by OEM integrators under the following condition:</p> <p>-The antenna(s) must be installed such that a minimum separation distance of at least <b>20 cm</b> is maintained between the radiator (antenna) and all persons at all times.</p> <p>-The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.</p> <p>-Mobile use</p> <p>As long as the three conditions above are met, further transmitter testing will not be required.</p> <p>OEM integrators should provide the minimum separation distance to end users in their end-product manuals.</p>

**Antennas list**

This module is certified with the following integrated antenna.

- Max. Antenna gain: N/A, Ant. Type: PCB Trace Antenna

Any new antenna type, higher gain than listed antenna should be met the requirements of FCC rule 15.203 and 2.1043 as permissive change procedure.

**End Product Labeling**

The module is labeled with its own FCC ID and IC Certification Number. If the FCC ID and IC Certification Number are not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. In that case, the final end product must be labeled in a visible area with the following:

“Contains FCC ID: OZ5-LCR001

“Contains IC: 21703-LCR001

**Information on test modes and additional testing requirements**

-OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, additional transmitter in the host, etc.).

**Additional testing, Part 15 Subpart B disclaimer**

-The final host product also requires Part 15 subpart B compliance testing with the modular transmitter installed to be properly authorized for operation as a Part 15 digital device.

-The final host product also requires Part 15 subpart B compliance testing with the modular transmitter installed to be properly authorized for operation as a Part 15 digital device.

## ISED Statement

<b>Licensed-exempt Statement</b>	<p><i>This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:</i></p> <ol style="list-style-type: none"><li><i>1. This device may not cause interference.</i></li><li><i>2. This device must accept any interference, including interference that may cause undesired operation of the device.</i></li></ol> <p><i>Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :</i></p> <p><i>(1) l'appareil ne doit pas produire de brouillage, et</i></p> <p><i>(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.</i></p>
<b>RF Exposure Statement (MPE)</b>	<p><i>The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times.</i></p> <p><i>l'exposition aux RF L'antenne (ou les antennes) doit être installée de façon à maintenir à tout instant une distance minimum de au moins 20 cm entre la source de radiation (l'antenne) et toute personne physique.</i></p>
<b>End Product Labeling</b>	<p><i>End Product Labeling (IC)</i></p> <p><i>The module is labeled with its own FCC ID and IC Certification Number. If the FCC ID and IC Certification Number are not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. In that case, the final end product must be labeled in a visible area with the following:</i></p> <p><i>Contains IC: <b>21703-LCR001</b></i></p> <p><i>Étiquetage du produit final (IC)</i></p> <p><i>Le module est étiqueté avec sa propre identification FCC et son propre numéro de certification IC. Si l'identification FCC et le numéro de certification IC ne sont pas visibles lorsque le module est installé à l'intérieur d'un autre dispositif, la partie externe du dispositif dans lequel le module est installé devra également présenter une étiquette faisant référence au module inclus. Dans ce cas, le produit final devra être étiqueté sur une zone visible avec les informations suivantes :</i></p> <p><i>Contient IC : <b>21703-LCR001</b></i></p>