

LRM001-915

User Manual

Version: 1.1

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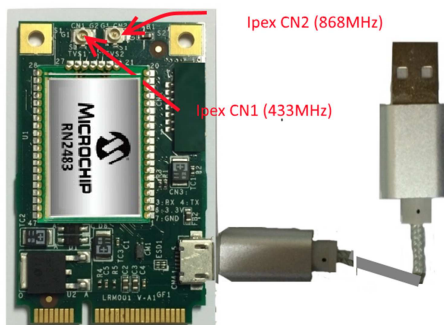


1. Introduction

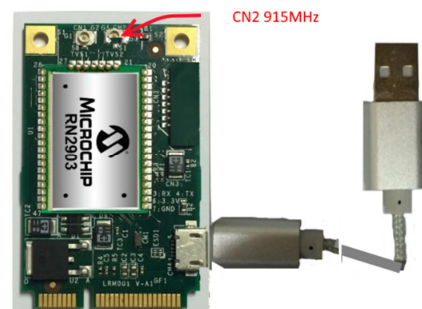
The LRM001 is with Microchip' s RN2483 / RN2903 which is an Low-Power Long Range LoRa Technology Transceiver module. It provides an easy to use, low-power solution for long range wireless data transmission. The advanced command interface offers rapid time to market. The RN2483 module complies with the LoRaWAN Class A protocol specifications. It integrates RF, a baseband controller, command application programming interface (API) processor, making it a complete long range Solution. The RN2483 module is suitable for simple long range sensor applications with external host MCU.

2. Install LRM001

1. Connect Ipex cable to CN2 915MHz
2. Connect antenna to Ipex cable
3. Connect Micro USB to LRM001
4. Connect USB to your Embedded System



LRM001-433 / LRM001-868



LRM001-915

Install Windows driver

- 1) Please install LRM001 driver to work in Windows. [Download link](http://www.liyatech.com/upload/products/20160514170420305.exe). (<http://www.liyatech.com/upload/products/20160514170420305.exe>) . [Driver document link](#).
- 2) Please connect LRM001 with PC through micro USB cable.
- 3) Please install the LoRa antenna to LRM001

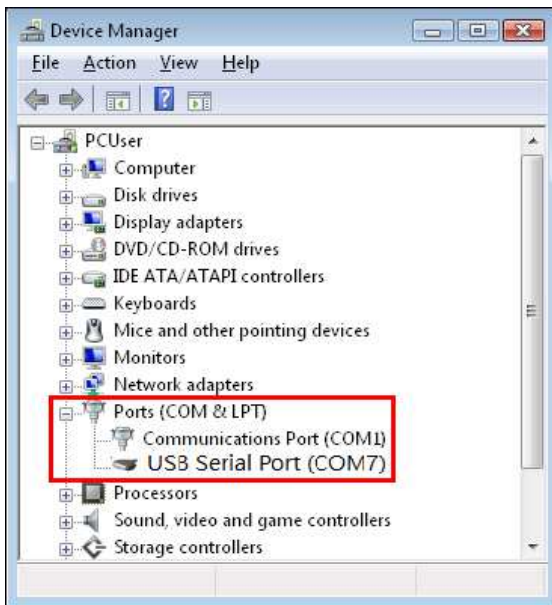
Install Linux Driver

- 1) In x86 system , because Ubuntu and Debian has already built the driver inside the OS. Mac OS and Raspberry Pi has already got the driver built in. There is no need to install the linux driver.
- 2) Please download LRM001 ,[Download link](#), linux driver and install it. ([Installation manual download link](#))
- 3) Please connect LRM001 with PC through micro USB cable.
- 4) Please install the LoRa antenna to LRM001

3. Setup LRM001

3.1 Use device

Open device manager, you will see the COM port, click the COM port, write down COM port number for later use.



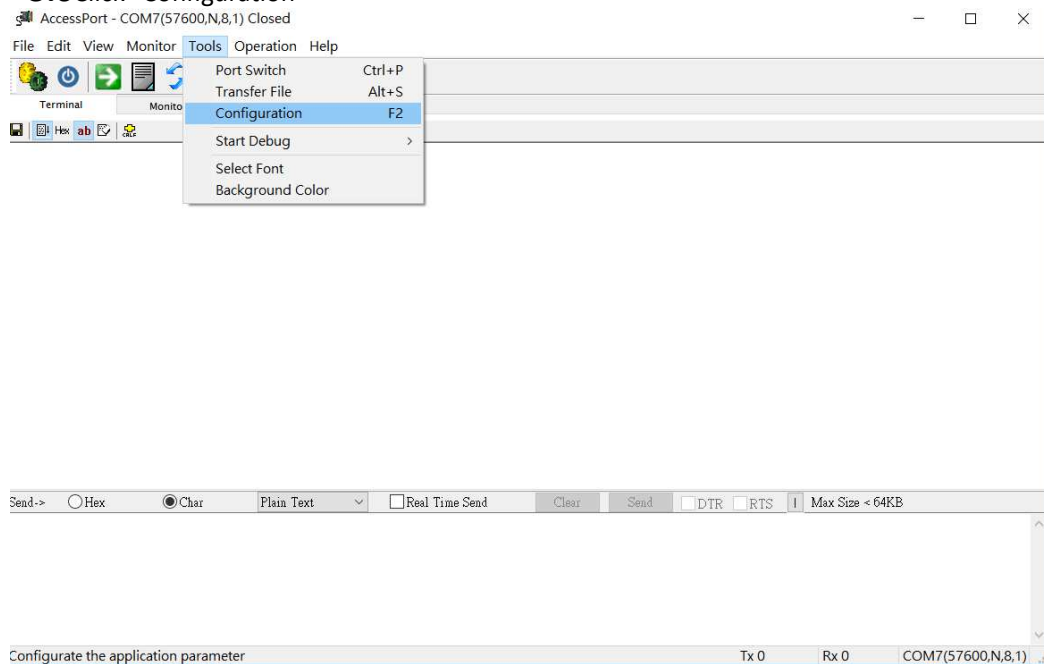
3.2 Download software “Accessport” from <http://www.sudt.com/en/ap/download.htm>

3.3 Unzip the file **Accessport137.zip**

3.4 Run **accessport137.exe**

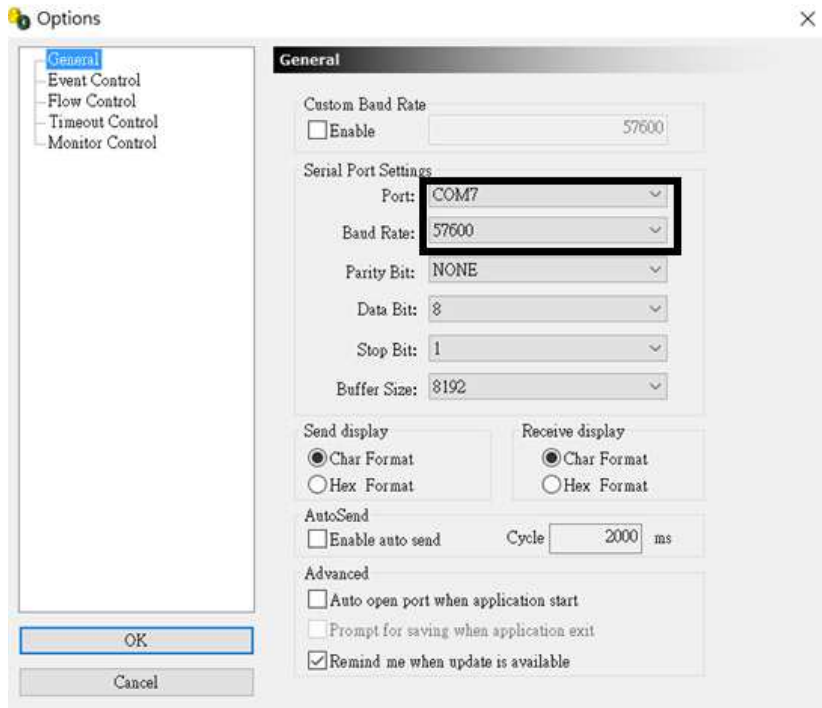
3.5 Click “Tools” in menu bar

3.6 Click “Configuration”

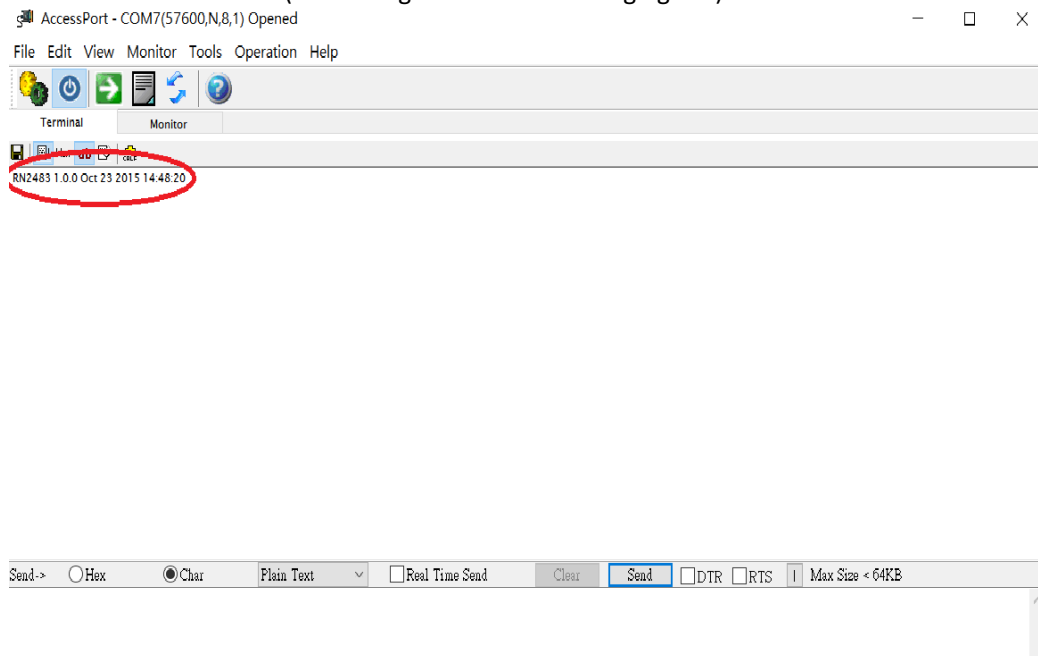


3.8 Key in the Port number “COM 7” which we check in step 1

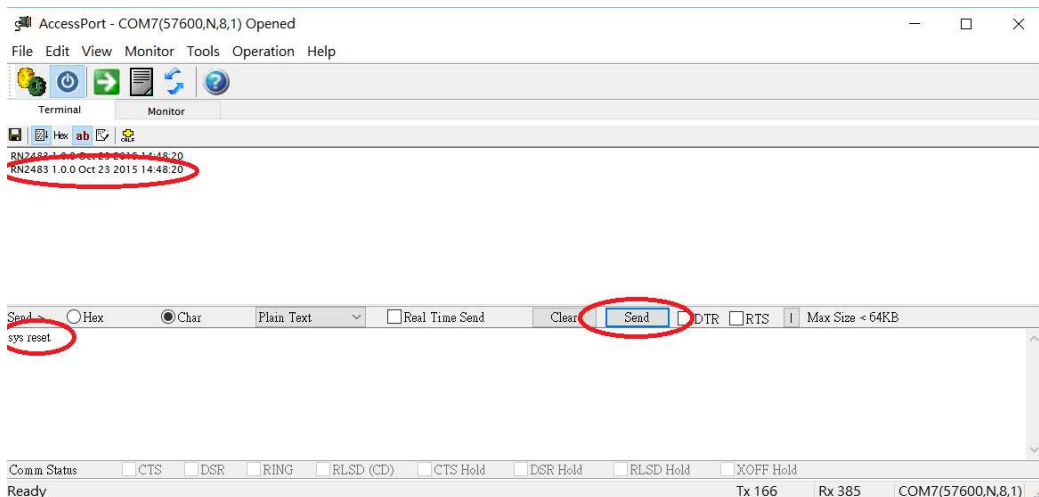
3.9 Key in the baud rate “57600”.



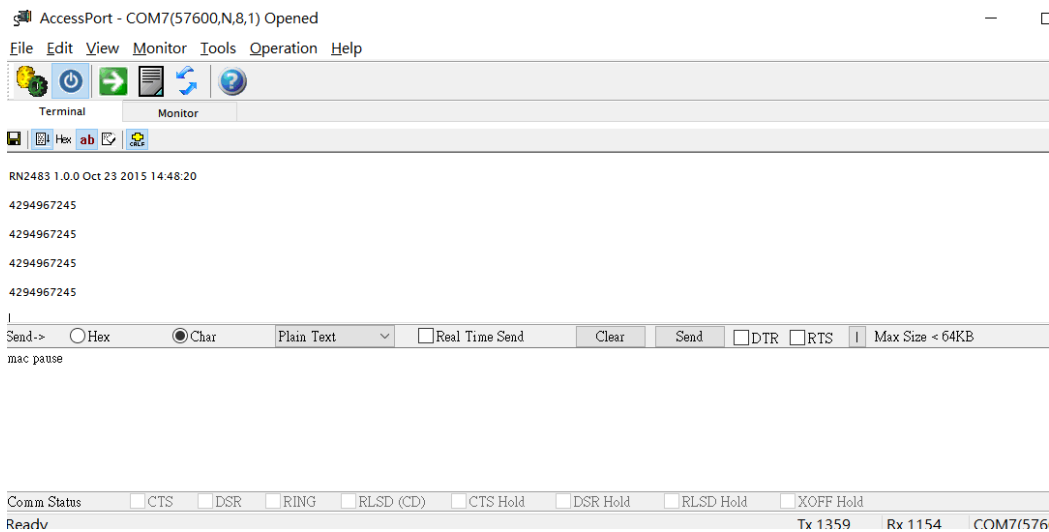
3.10 Click OK. You will see the “RN2483 1.0.0 Oct 23 2015 14:48:20”. It is the model number and firmware version. (See the right circle in following figure.)



- 3.11 In the “comm window” , Key in “sys reset”. Click “return” (in keyboard)
- 3.12 Click “Send”
- 3.13 The “RN2483 1.0.0 Oct 23 2015 14:48:20” will be shown in the 2nd line.



3.14 You may key in other command like “set mac pause”, it will reply “4294967245” The command is in the attached RN2483 manual.



3.15 Please clear the “comm Status”, if there is anything not smooth.

4. AT Command

Please download [RN2483's command manual](#). All of the LRM001's settings and commands are transmitted over UART using the ASCII interface. All commands need to be terminated with <CR><LF> and any replies they generate will also be terminated by the same sequence.

Noted: All AT commands are case sensitive.

Appendix :

FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: 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. 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Label Instructions

The outside of final products that contains this module device must display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2ALXW-LRM001915010" or "Contains FCC ID: 2ALXW-LRM001915010." Any similar wording that expresses the same meaning may be used.

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，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。

第十四條 低功率射頻電機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。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機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。