# LRM001

# User Manual

Version: 1.0

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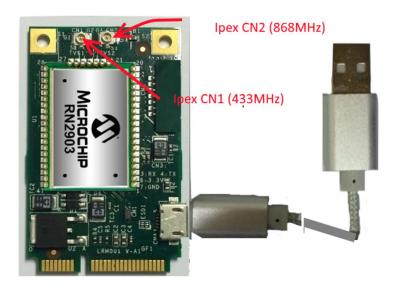


### **1.** Introduction

The LRM001 is with Microchip's RN2483 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 to SMA CN1 (433MHz) CN2 (868MHz or 915MHz)
- 2. Connect antenna to SMA of Ipex to SMA cable
- 3. Connect MicroUSB to LRM001
- 4. Connect USB to your Embedded System



#### **Install Windows driver**

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

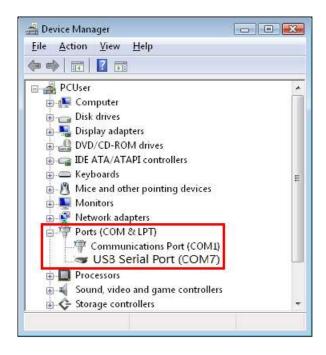
#### **Install Linux Driver**

- 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 ,<u>Download link</u> , linux driver and install it. (<u>Installation manual download link</u>)
- 3) Please connect LRM001 with PC through micro USB cable.
- 4) Please install the LoRa antenna to LRM001

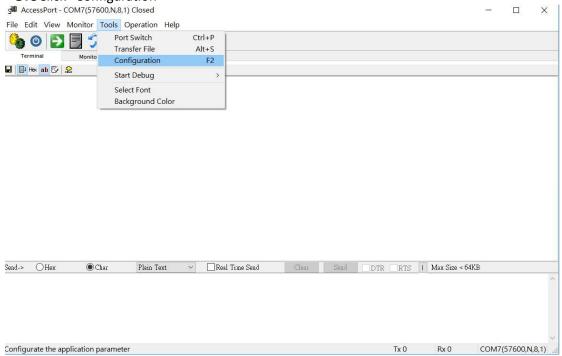
## 3. Setup LRM001

#### 3.1 Use device

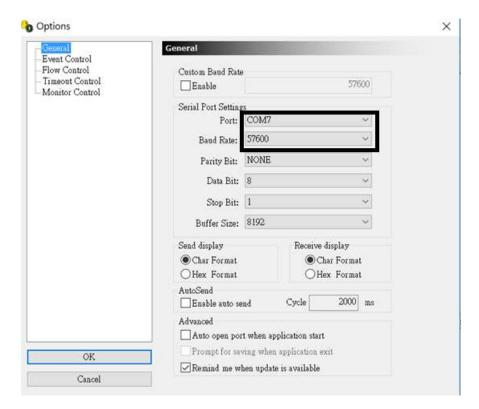
Open device manager, you will see the COM port, click the COM port, write down COM port number for later use.



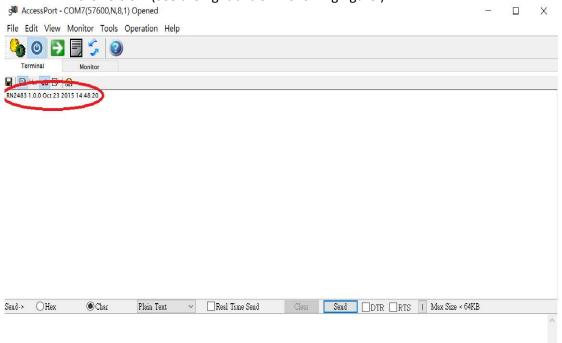
- **3.2** Download software "Accessport" from <a href="http://www.sudt.com/en/ap/download.htm">http://www.sudt.com/en/ap/download.htm</a>
- 3.3 Unzip the file Accessport137.zip
- 3.4 Run accessport137.exe
- **3.5** Click "Tools" in menu bar
- 3.6 Click "Configuration"



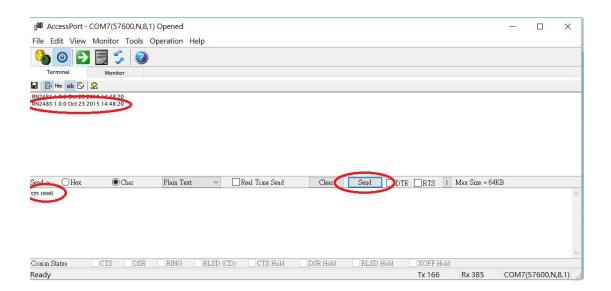
- 3.8 Keyin the Port number "COM 7" which we check in step 1
- 3.9 Keyin the baud rate "57600".



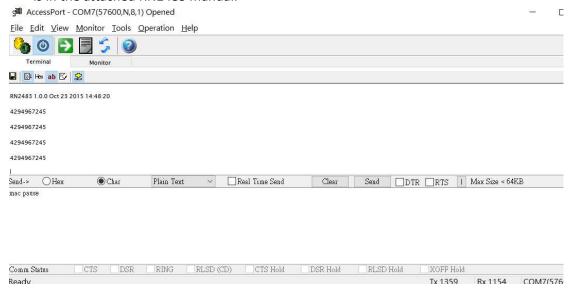
3.10 Click OK. You will see the "RN2483 1.0.0 Oct 23 2015 14:48:20". It is the model number and firmware version. (See the right circle in following figure.)



- 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 2<sup>nd</sup> 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 <u>RN2483's command manual</u>. 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.