Product : MK002-xx-EU

Doc : Quick start Guide

Reference : MK002-quick_starter

History : V1.0

NEMEUS
Long Range wireless solution

1 References

[1] MM002-xx-EU Datasheet

[3] NEMEUS AT-Command lists => appropriate version corresponding to the Downloaded SW

2 Kit contents – MK002-xx-EU

Quantity	Description
N	MK002-xx-EU USB stick
N	RF Antenna for 868Mhz band

3 Overview

NEMEUS Evaluation kit provides companies access to LoRa communication capabilities. This kit is composed of USB sticks with MM002 embedded.
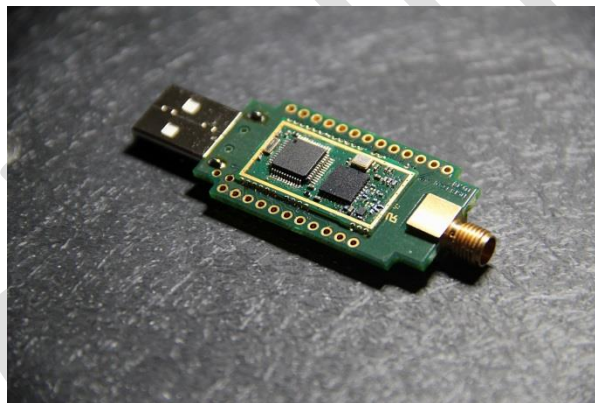

Figure 1 : Nemeus MK001 (MM002 USB key)
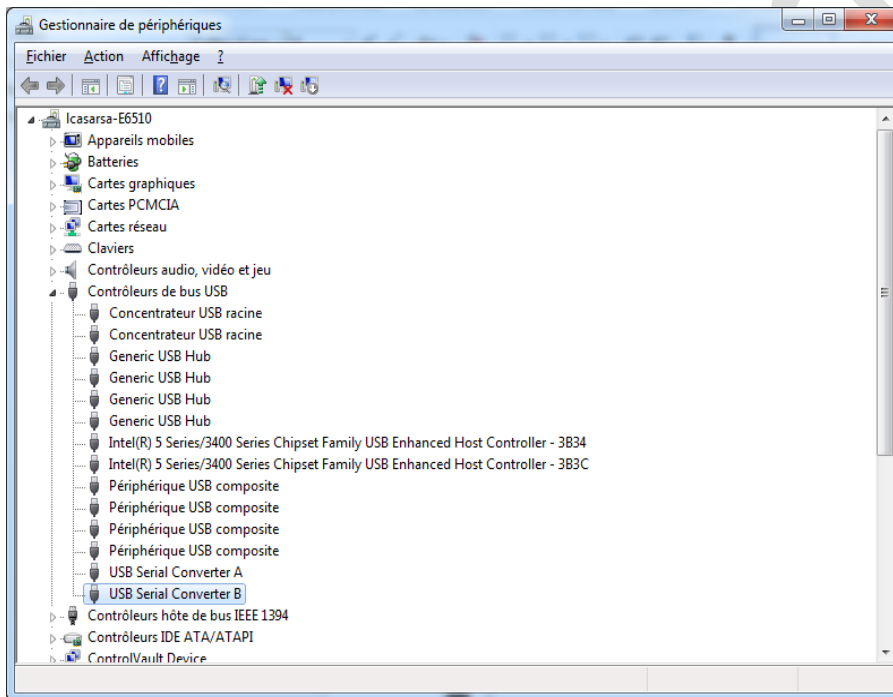
3.1 Running the Evaluation Kit

NEMEUS MK002 (MM002 USB stick) can be connected directly through USB connector. It uses a standard FTDI chip. Drivers are commonly installed on Windows computer. If needed, drivers can be found on http://www.ftdichip.com/FTDrivers.htm

The UART configuration for Modem connection can be found in AT-command specification. It should likely be:

- Baud Rate : 38400
- Data : 8 bits
- Parity : None
- Stop : 1 bit
- Flow control : None
- End line character : LF

3.2 Windows prerequisite

When FTDI drivers are correctly installed, plugging the equipment on PC should make appears two serial port COM. If not visible, it may need the following configuration (depending on windows OS version). In peripheral Manager, select USB serial converter B (as depicted below)
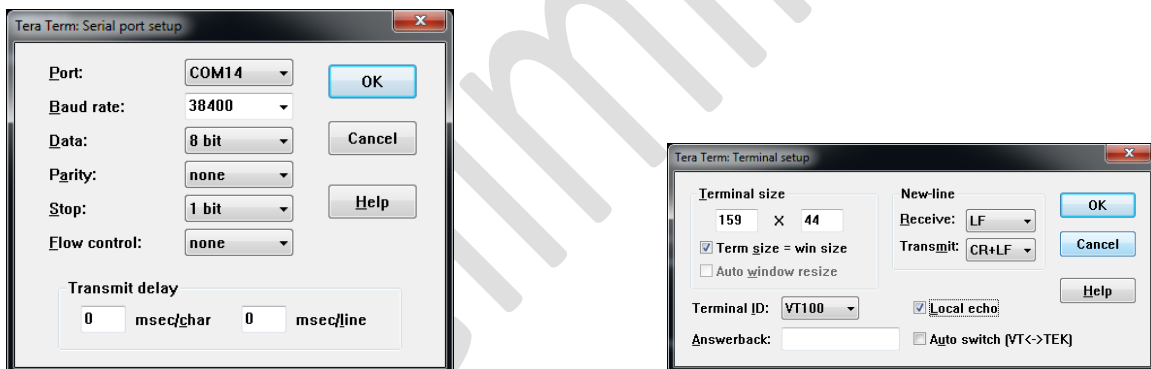
Then select 'use virtual COM port'
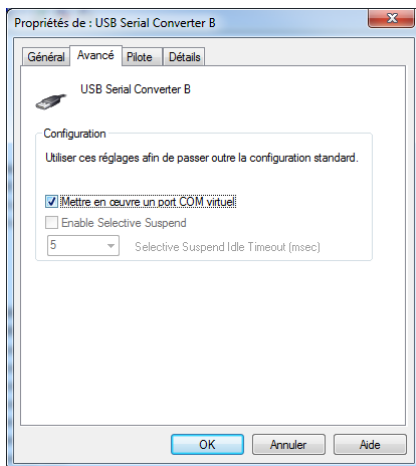
3.3   Example: Running Evaluation Kit on Windows with TERATERM

You can launch TeraTerm and setup the following configuration:
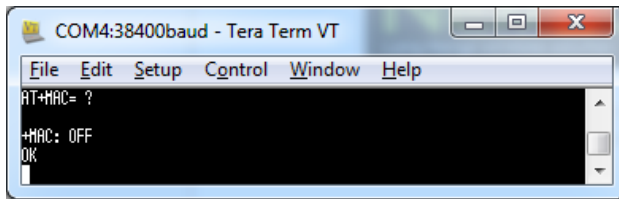

To communicate whit MD002 board or USB stick you should connect to the correct COM port. Note that COM port may appears available after some delay.
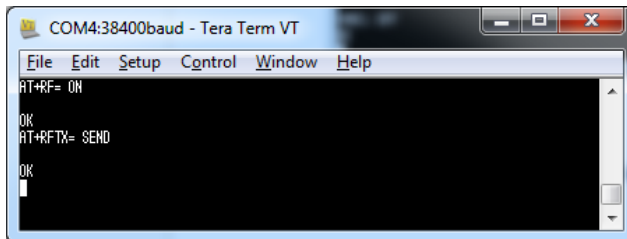
When Connection is done you can send the following command to confirm the correct communication between the PC and the equipment.
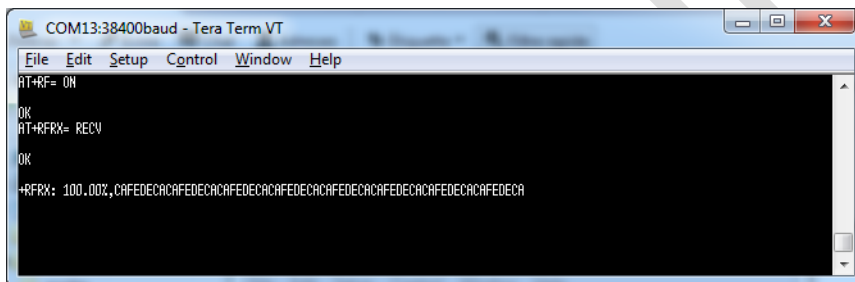
AT+MAC= ?

You should see an answer with the following format:

3.3.1 Send a default message

3.3.2 Receive a default message

3.4 Example: Running Evaluation Kit with Nemeus Java application

First, the JAVA Runtime Evaluation should be install on the computer(s) to be used. This can be found on http://www.oracle.com/technetwork/java/javase/downloads/java-se-jre-7-download-432155.html).

The following procedure could be done either on a single computer or on two different computers. In case of two equipment on same computer, the application should be started twice. Equipment could be either an USB stick or an evaluation board with module.

Execute the following actions for each equipment (do subcase [a] for the first one and subcase [b] for the second one):

1. Connect the equipment and note the port that are newly available (two for each equipment)
2. Start application on computer for the new equipment

3. Choose the serial port and click on "Connect". You should see "Connected!!!" displayed on shell panel and response to some AT commands. If not, try the other serial port.
4. Once connected, some buttons of the RF Command panel are enabled. Switch ON the RF if needed by clicking on "RF ON" button. If you only see "RF OFF", that means the equipment has already the Radio ON.
5. The "RX ON" & "TX ON" buttons are now available.
   a. Click "RX ON" to configure the equipment on continuous RX mode.
   b. click "TX ON" in order to send a periodic frame (every 5 seconds).

On TX module, you must see frame being sent.

On RX module, you should see reception of frames. +RFRX: …<data frame>

The frame sent contains a counter on 2 bytes as data payload. You can check the frame on reception thanks to this number.
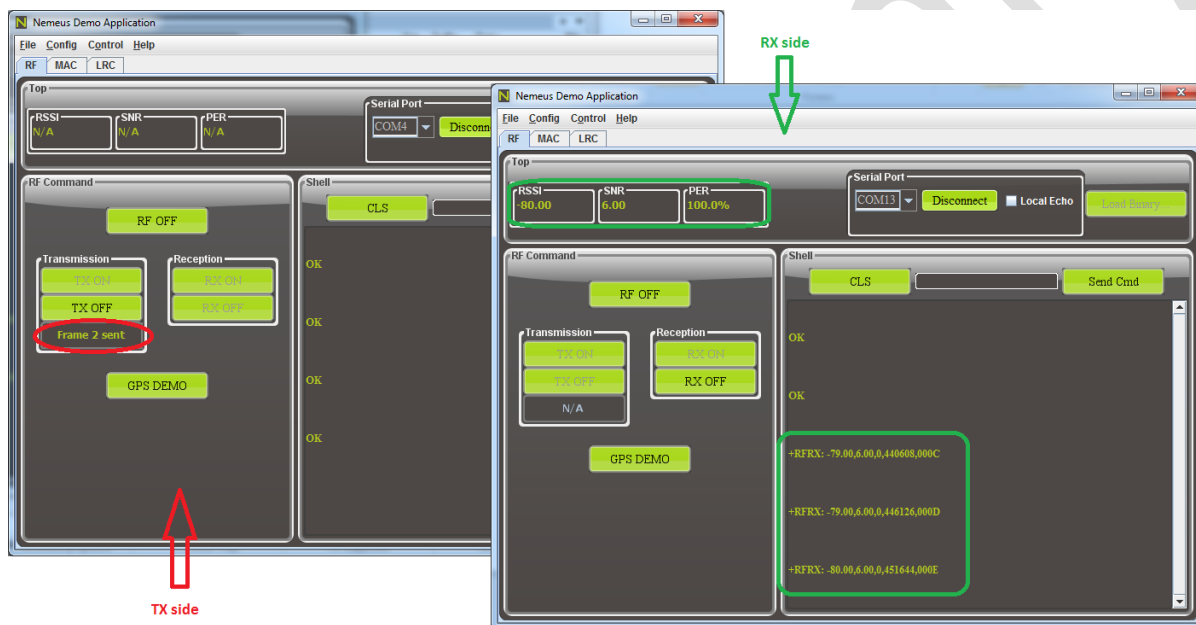
4 Technical Support and Contacts

Technical support is available by email at

support@nemeus.fr.

Nemeus Sales offices, including Representatives and Distributors can be found on www.nemeus.fr