

LoRa end-devices | setup guide

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Use CP2102 based USB-Serial converters but without powering device from it.



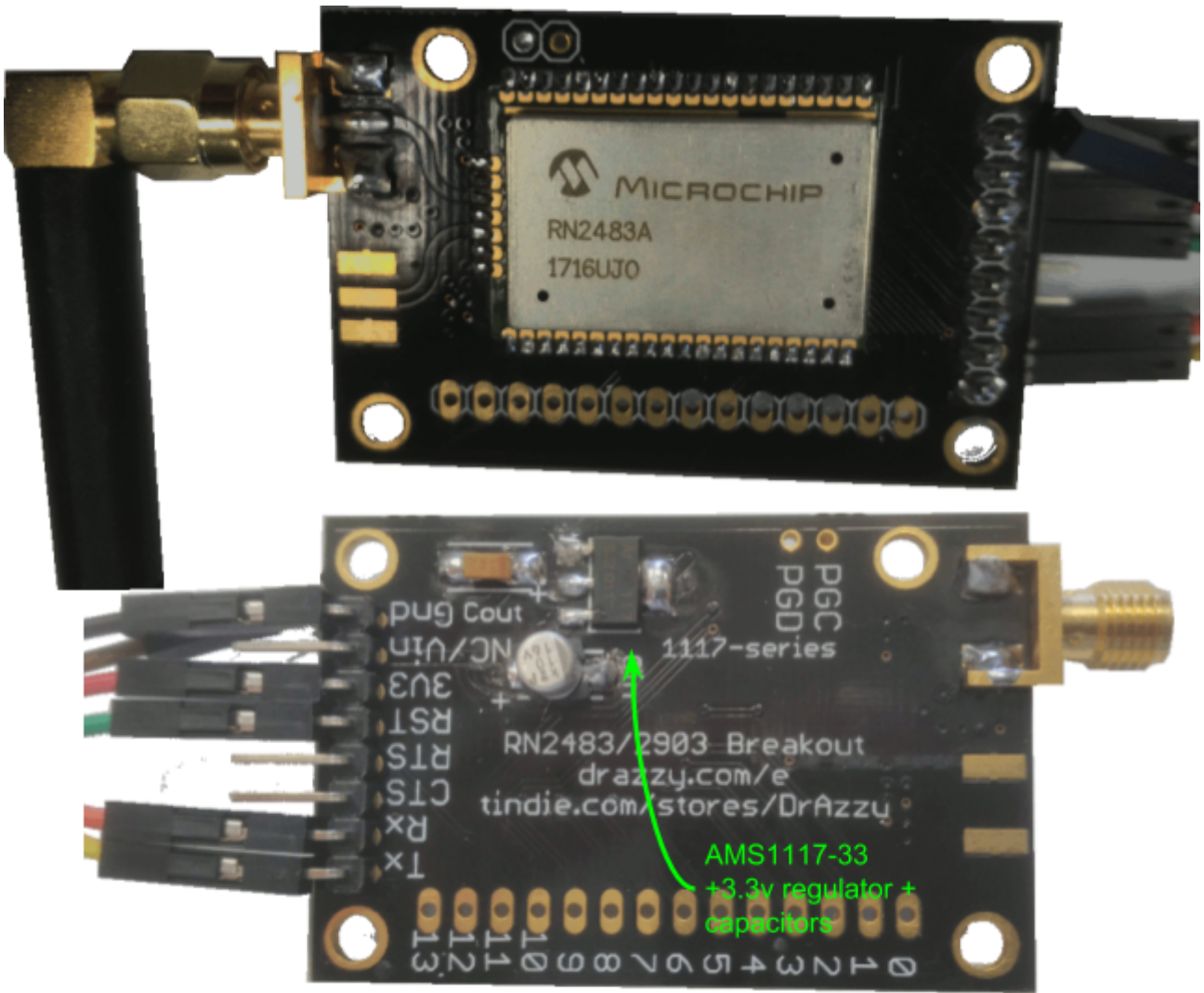
Some USB-Serial converters feature a **+5v Tx** even when provided power is 3.3v !!! (CP2102 are ok)

RN2483A + USB-serial converter

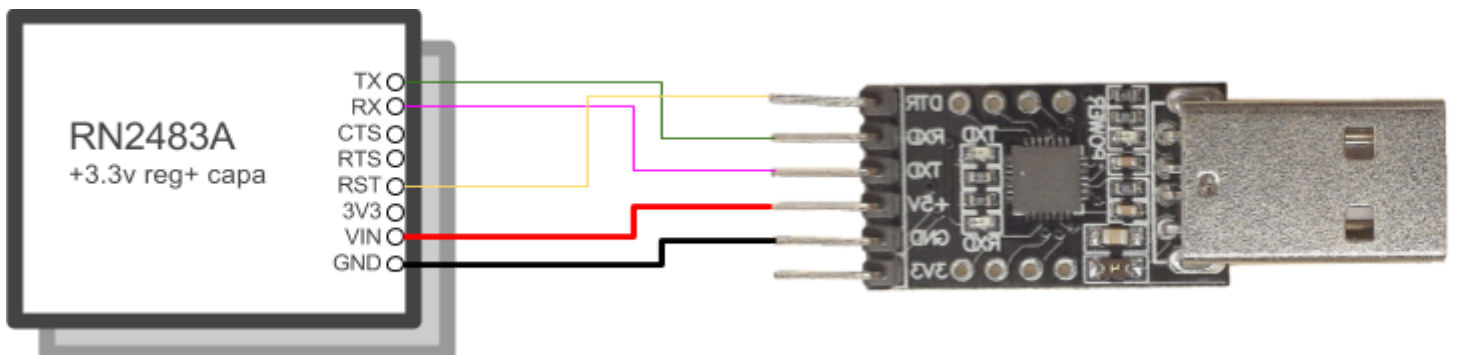
Microchip RN2483 is a LoRaWAN single chip solution that takes care of all of the LoRaWAN issues. Host microcontroller uses a **3.3v** serial link to communicate with.

In this scenario, we first start to setup a CP2102 based USB to serial converter along with a RN2483A on a dedicated breakout board.

In order to avoid power issues, we added a +3.3v regulator along with capacitors on the RN2483A breakout board.



For proper operation, it is best to reset RN2483A on serial link start. To do so, we'll make use of the CP2102's DTR line ... but this line is normally +VCC and then switch to GND once serial link is open ... thus we'll invert DTR polarity from software :)



Miniterm install

```
pip3 install pyserial
```

Launch terminal (in a tmux session ---better)

```
francois@smart[~] miniterm.py --dtr 0 /dev/ttyUSB0 57600
--- forcing DTR inactive
--- Miniterm on /dev/ttyUSB0 57600,8,N,1 ---
--- Quit: Ctrl+] | Menu: Ctrl+T | Help: Ctrl+T followed by Ctrl+H ---
RN2483 1.0.3 Mar 22 2017 06:00:42
```

chip answer with its version number, here LoRaWAN stack revision 1.0.3 (i.e RN2483A)