

eNet-ZBP113 Quick Start Guide

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Catalogue

- 1 Overview.....3**
- 2 Development Kit s4**
 - 2.1 eDuino UNO Wireless Kit4
 - 2.2 Simple Wireless Kit.....5
- 3 Preparation6**
 - 3.1 CP2102 driver Installation6
 - 3.2 Configuration Software Installation7
 - 3.3 Hardware Installation8
 - 3.3.1 eDuino UNO Wireless Kit8
 - 3.3.2 Simple Wireless Kit.....10
 - 3.3.1 Parameter Configuration12
- 4 Network Establishing 18**
 - 4.1 Coordinator settings.....18
 - 4.2 Router settings19
 - 4.3 Joining Network20
 - 4.4 Network Communication Test.....21
- 5 Contact Us.....22**



1 Overview

This document gives a description on how to get started with the eNet-ZBP113 development kits.

This document provides a step by step guide to the installation procedure of the software and the hardware.

If you buy only the eNet-ZBP113 module, the ***eNet-ZBP113 User Manual*** will be helpful when you get started with the module. *Chapter 5* shows how to configure the module. *Chapter 6* shows how to implement the data transmission between modules. *Chapter 7* shows how to establish a network.

2 Development Kits

There are two available development kits for eNet-ZBP113, eDuino UNO wireless kit and Simple Wireless kit.

2.1 eDuino UNO Wireless Kit

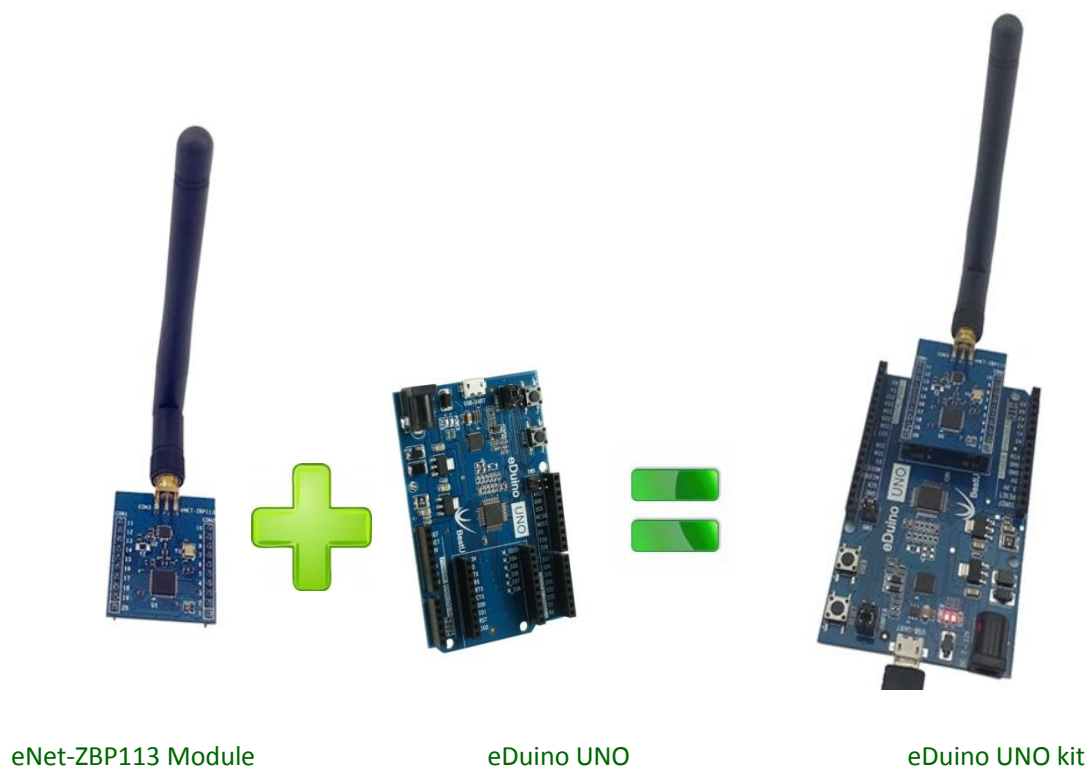


Figure 2-1 eDuino UNO Kit

What's included in the eDuino UNO kit:

Table 2-1 Package List of eDuino UNO Kit

Part Description	Quantity / PCS
eNet-ZBP113	1
2.4GHz Antenna(2.5dBi)	1
eDuino UNO	1
Jumper	2



2.2 Simple Wireless Kit

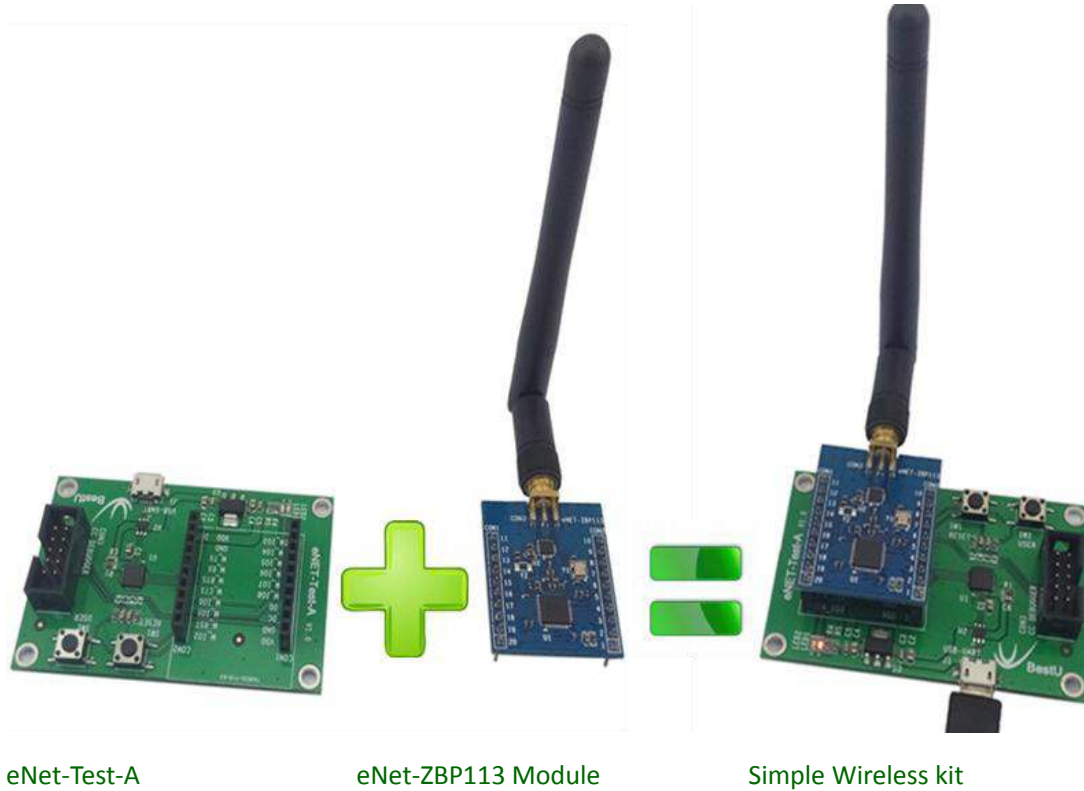


Figure 2-2 Simple Wireless Kit

What's included in the Simple Wireless kit:

Table 2-2 Package List of Simple Wireless Kit

Part Description	Quantity / PCS
eNet-ZBP113	1
2.4GHz Antenna(2.5dBi)	1
eNet-Test-A	1



3 Preparation

3.1 CP2102 driver Installation

The first time you connect the development kits to PC, the CP2102 driver need to be installed.

Please download the driver from

http://www.silabs.com/Support%20Documents/Software/CP210x_VCP_Windows.zip



3.2 Configuration Software Installation

Before you install the configuration software for eNet-ZBP113, you first need to install the Microsoft .Net Framework if your PC has never installed one. The version, v4.0.30319 or later version is OK. Microsoft .Net Framework 4.5 can be downloaded from

<http://www.microsoft.com/en-us/download/details.aspx?id=30653>

Please download the configuration software from

<http://bestni.com/uploads/soft/Document/ZigBee%20Module%20Config%20Tool.rar>



3.3 Hardware Installation

3.3.1 eDuino UNO Wireless Kit

- 1) Install the antenna.



Figure 3-1 eNet-ZBP113 Module

- 2) Connect the eNet-ZBP113 module.

Caution: Please take care to connect the module in the right way! See the next picture for more information.

- 3) In order to make the USB-UART connect to eNet-ZBP113 module, jumpers should be fitted as follow figure shown.



Figure 3-2 eDuino UNO Kit

- 4) Plug Micro USB cable into PC and power the board.
- 5) Check the available interface (COM) in **Device Manager Window**.

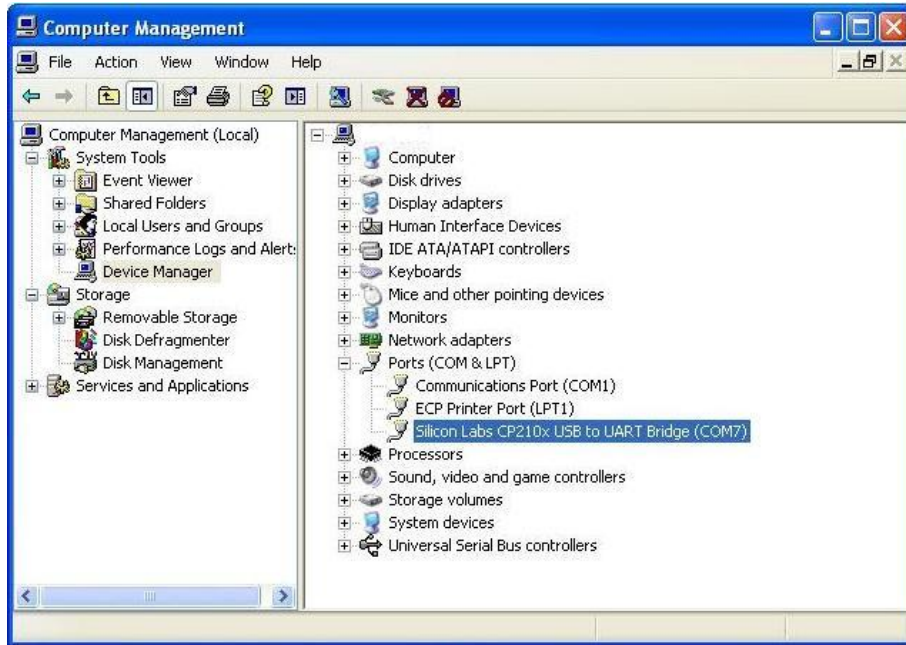


Figure 3-3 Available Interface (COM)

- 6) The kits start to work.

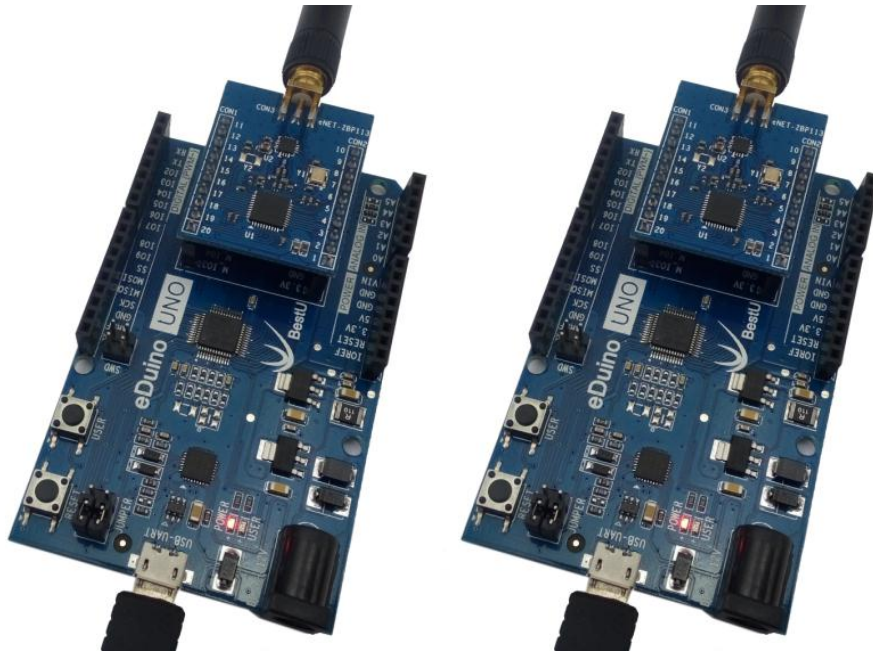


Figure 3-4 eDuino UNO Kit

3.3.2 Simple Wireless Kit

- 1) Install the antenna.



Figure 3-5 eNet-ZBP113 Module

- 2) Connect the eNet-ZBP113 module.

Caution: Please take care to connect the module in the right way! See the next picture for more information.



Figure 3-6 Simple Wireless Kit

- 3) Connect the kit to PC with Micro USB cable and power the board.
- 4) Check the available interface (COM) in **Device Manager window**.

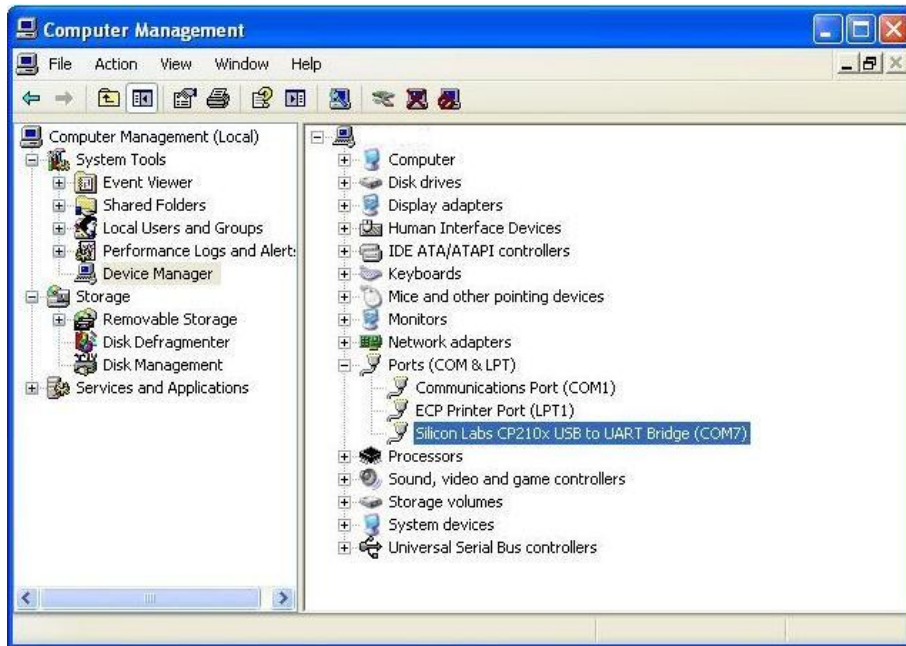


Figure 3-7 Available Interface (COM)

7) The kits start to work.



Figure 3-8 Simple Wireless Kit

3.3.1 Parameter Configuration

This section shows how to quickly configure module parameters with ZigBee Config Tool, a convenience, easy-to-use PC Software.

- 1) Connect the module to PC through USB-UART.

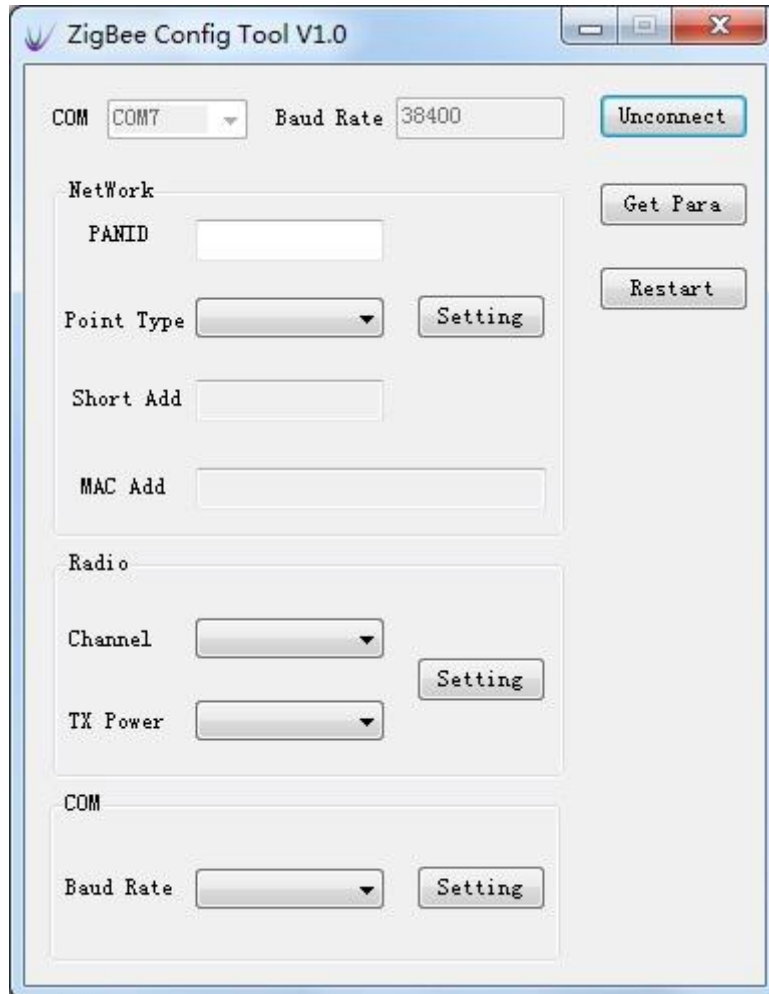


Figure 3-9 Connect the Module

2) Get the parameters from the Module.

Click on the **Get Para** to get the current parameters of the module.

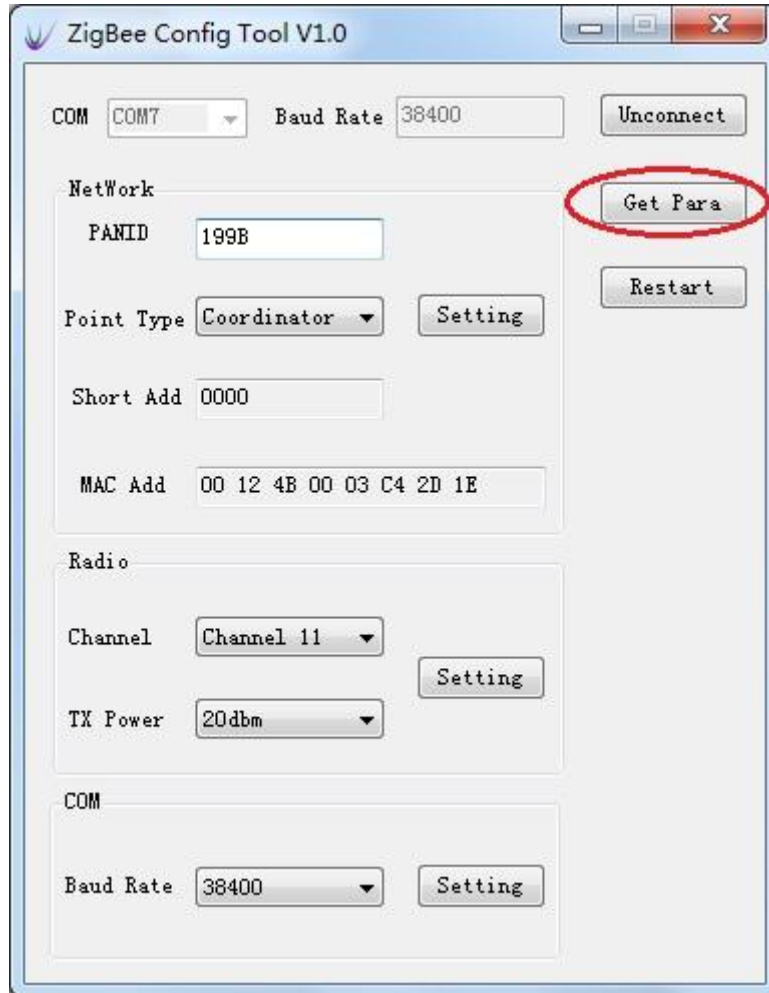


Figure 3-10 Get the parameters

- 3) Set the network parameters.

Set the PANID or change the *Point type*. Click on **Setting** button to finish the setting.

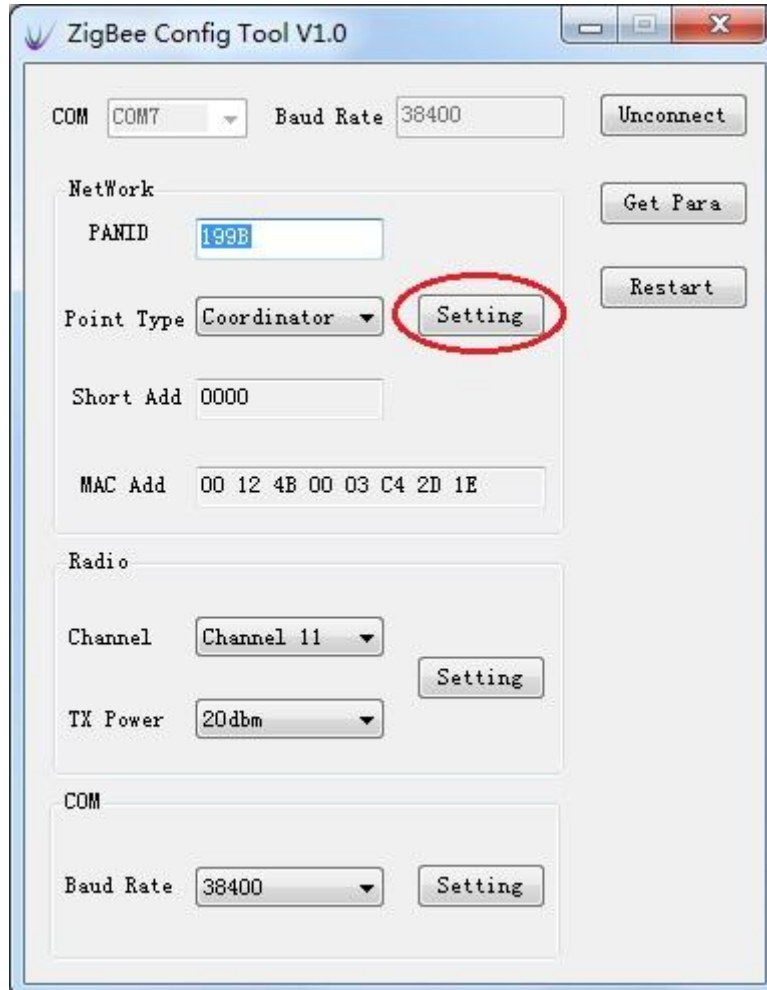


Figure 3-11 Set the network parameters

- 4) Set the Radio parameters.

Set the channel or TX Power and click on **Setting** to finish the setting.

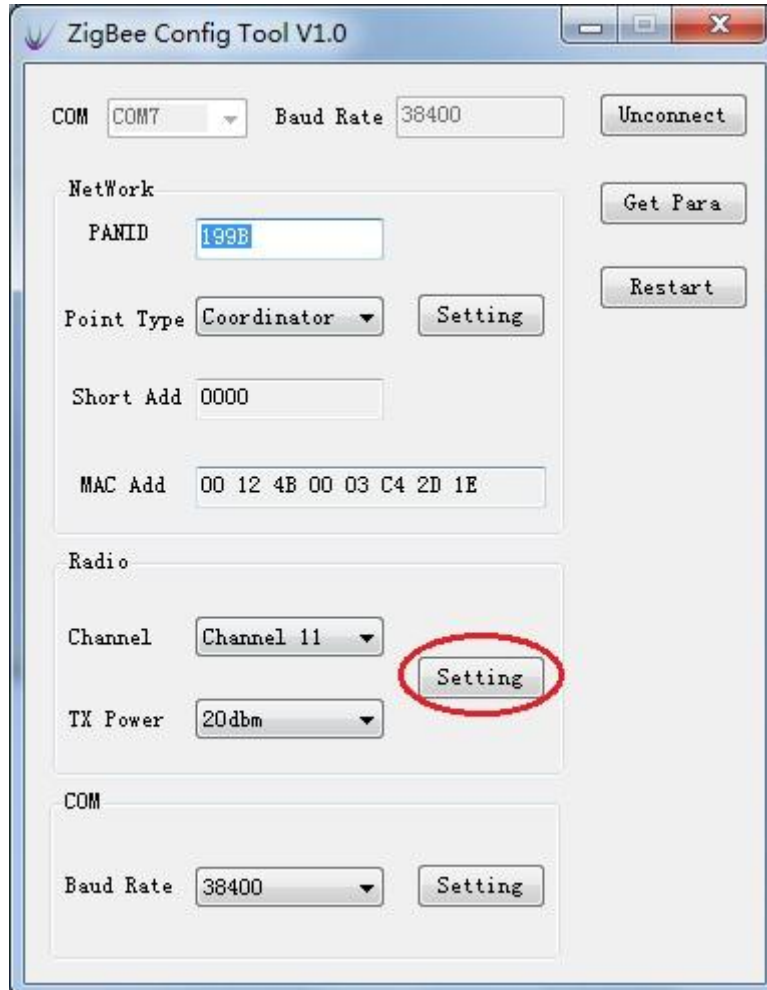


Figure 3-12 Set the Radio parameters

- 5) Set the UART parameters.

Set the Baud Rate and click the **Setting** to finish the Setting.

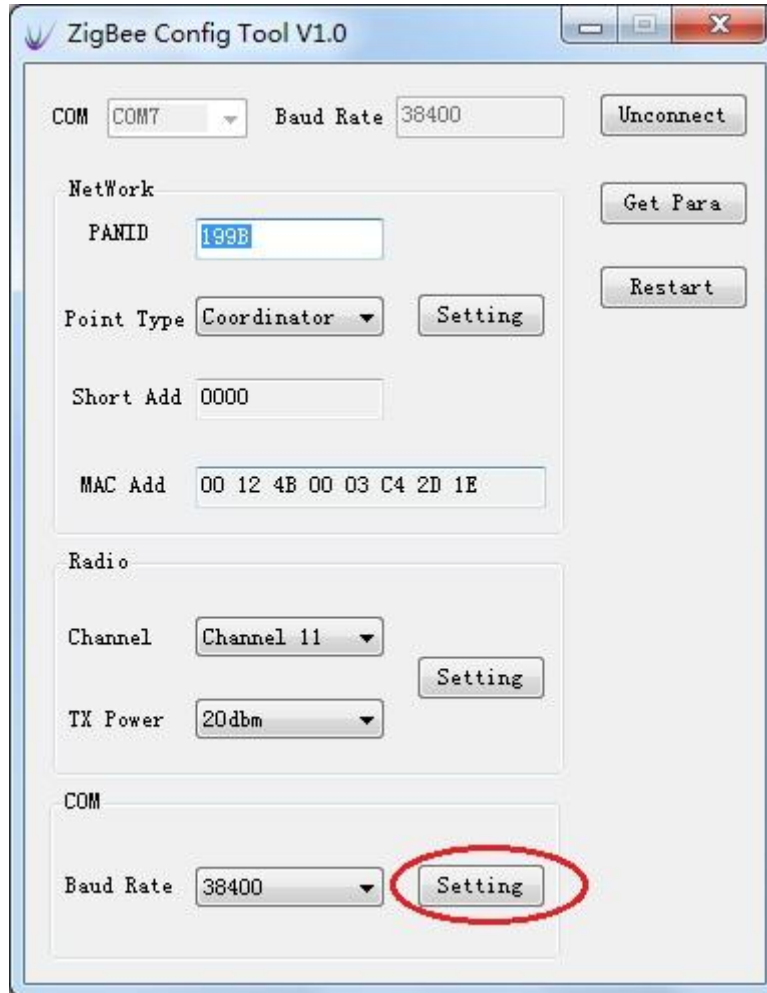


Figure 3-13 Set the UART parameters

- 6) Restart the module.

Click the **Restart** to make the module work with the parameters set by steps before.

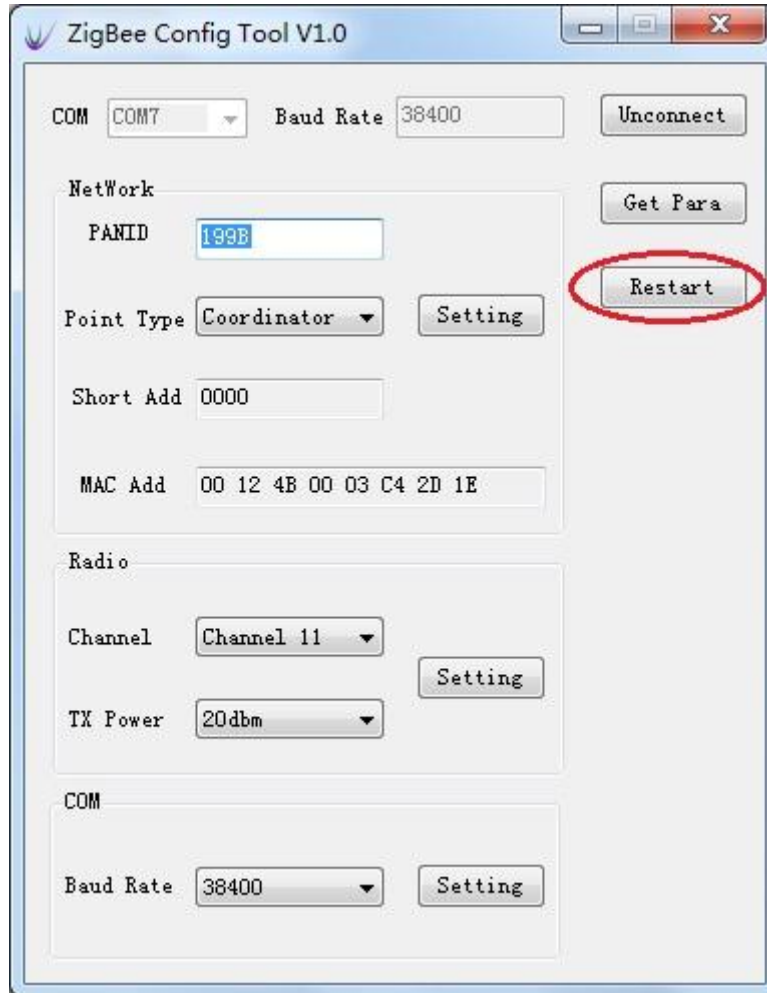


Figure 3-14 Restart module

- 7) Connect the module. The parameters have been set and shown by click **Get Para**.

4 Network Establishing

eNet-ZBP113 can act as Coordinator and Router. A ZigBee Network contain one Coordinator and one or more Router. All the nodes in a same network share the same PANID. The default settings of eNet-ZBP113 shown in **Appendix I Default Settings of eNet-ZBP113 User Manual**.

Please note that more than one eNet-ZBP113 need for establish network.

4.1 Coordinator settings

Here is an example that shows how to configure a module as a Coordinator.

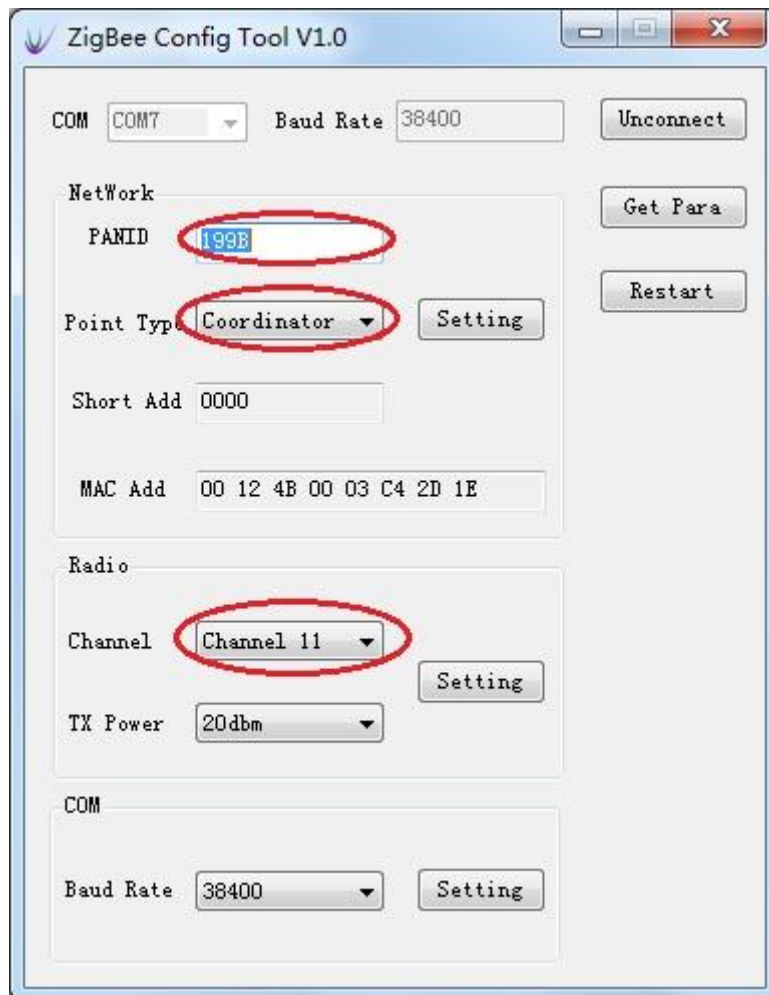


Figure 4-1 Coordinator Settings

4.2 Router settings

Here is an example that shows how to configure a module as a Router.

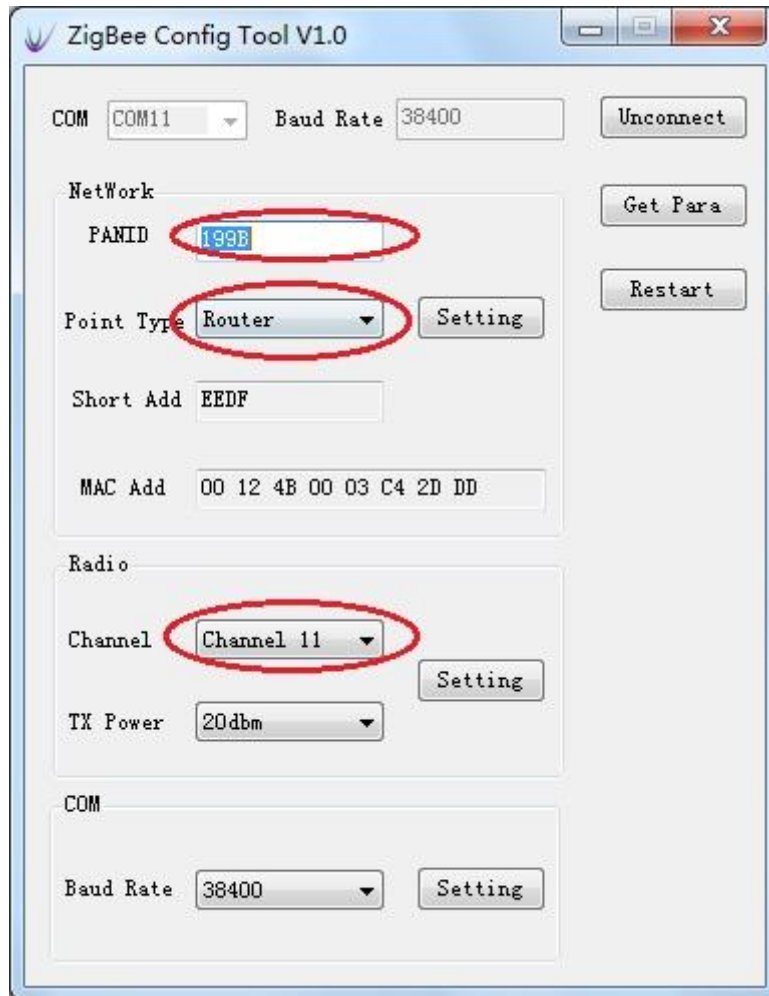


Figure 4-2 Router Settings

4.3 Joining Network

Power the Coordinator before the Router. P0_6 of both modules will output a 1Hz pulse to indicate network establishing complete. Check the Short Add of the Router by click on **Get para** button. If the Short Add isn't 0xFFFE, the Router has joined the network.

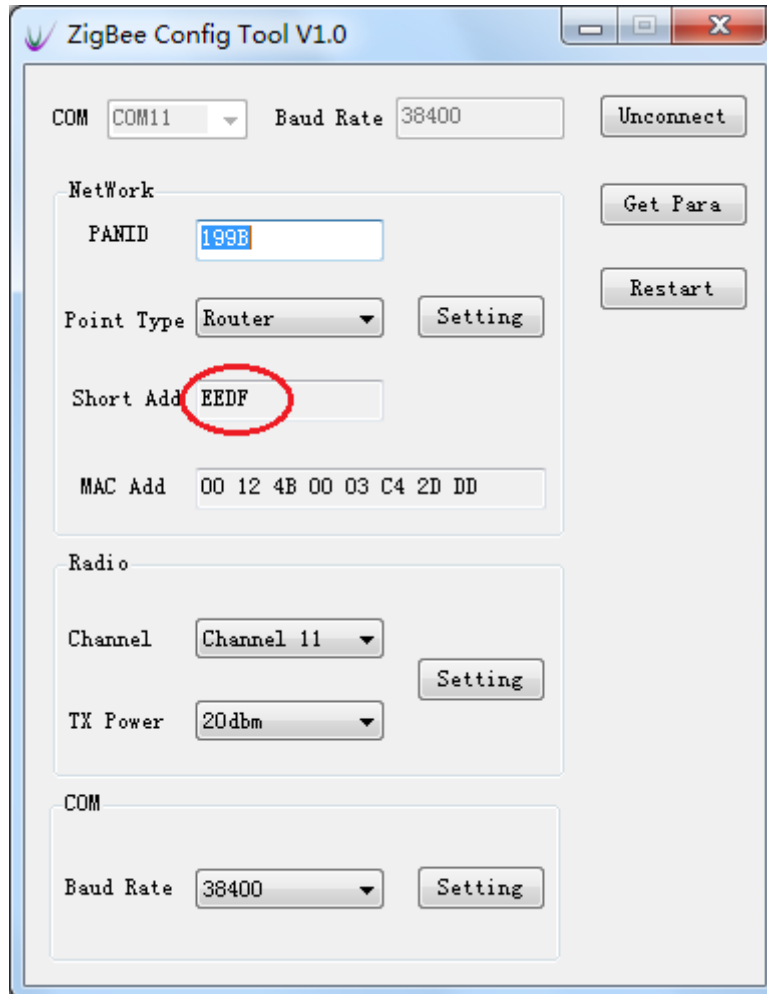


Figure 4-3 Router have joined the network

4.4 Network Communication Test

When the network is available, data can transfer between the Coordinator and Router.

Open HyperTerminal on PC. Send strings “hello Router” from Coordinator and the Router received the strings. Both the Coordinator and Router can send or receive data.

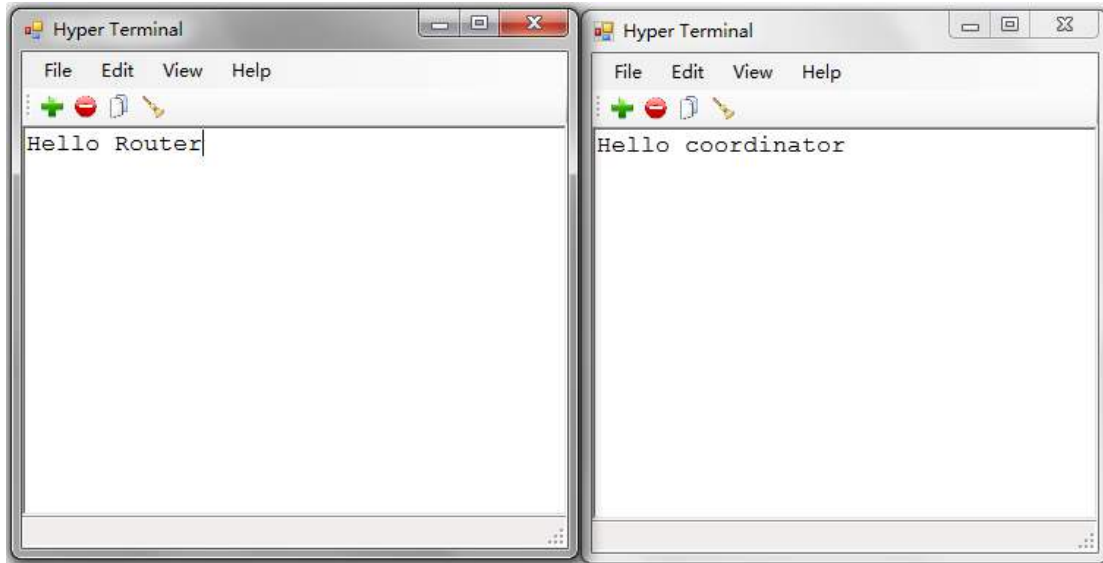


Figure 4-4 Network Communication Test

5 Contact Us

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Our technology focused on IoT and open hardware.

We own the “Brain”, the microcontroller module for Industry Area, like a brain to manipulate the various branches.

We own the “Brick”, providing base IOT modules like WIFI/ZigBee/NFC/BLE etc. to bring down your development threshold, to quickly build your product prototype

We own the “Low Kit”, providing the lowest hardware for you to evaluate and build your product.

Better because of your good, we hope the products and services we have can make you be more excellent!

More info please visit www.bestni.com/en