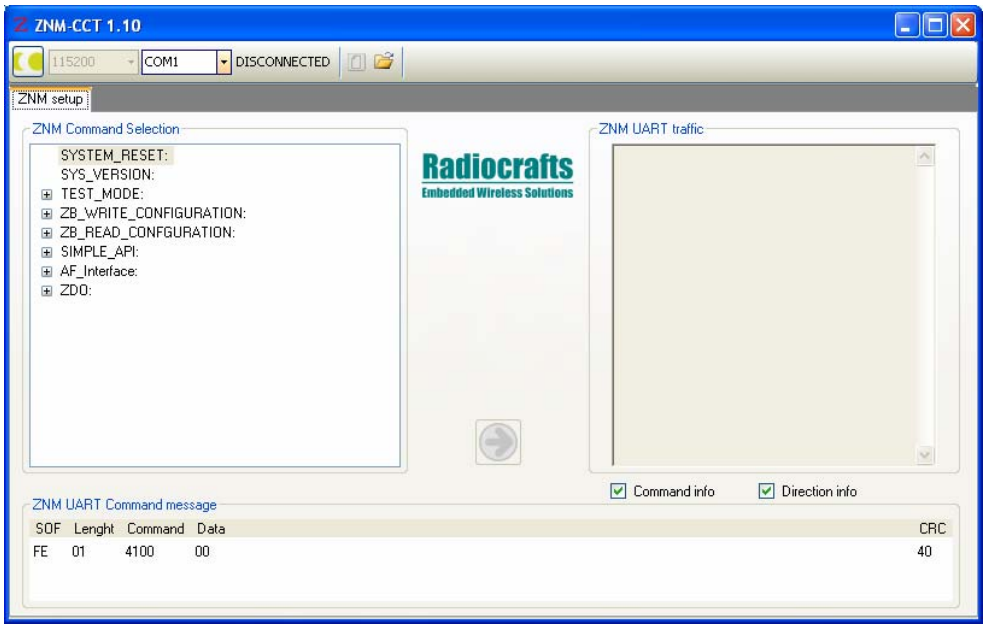
ZNM-CCT (Configuration and Communication Tool) User Manual)



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Installation Guide

ZNM-CCT (Configuration and Communication Tool) is a PC suite tailored for use with Radiocrafts RC24xx-ZNM RF Modules.
For full installation procedure please read the RCTools Installation Guide available at www.radiocrafts.com.

The ZNM-CCT requires access to the modules UART via an available COM-port. Typically UART-access is obtained via an UART-to-RS232 or UART-to-USB converter. The Demo Boards (DB) from Radiocrafts contains an on-board level shifter for direct plug-in to a PC and further access to the related COM-port.

This version of the User Manual applies to version 1.10 of ZNM-CCT.

Screen Settings

It is recommended to run the application with screen size at least 1024x768 and font resolution 96dpi.

Introduction

The ZNM-CCT helps you to work with the Radiocrafts RC24xx-ZNM ZigBee Network Module series. The program enables you to easily configure the module and send or receive in the ZigBee network.

Getting started with ZNM-CCT

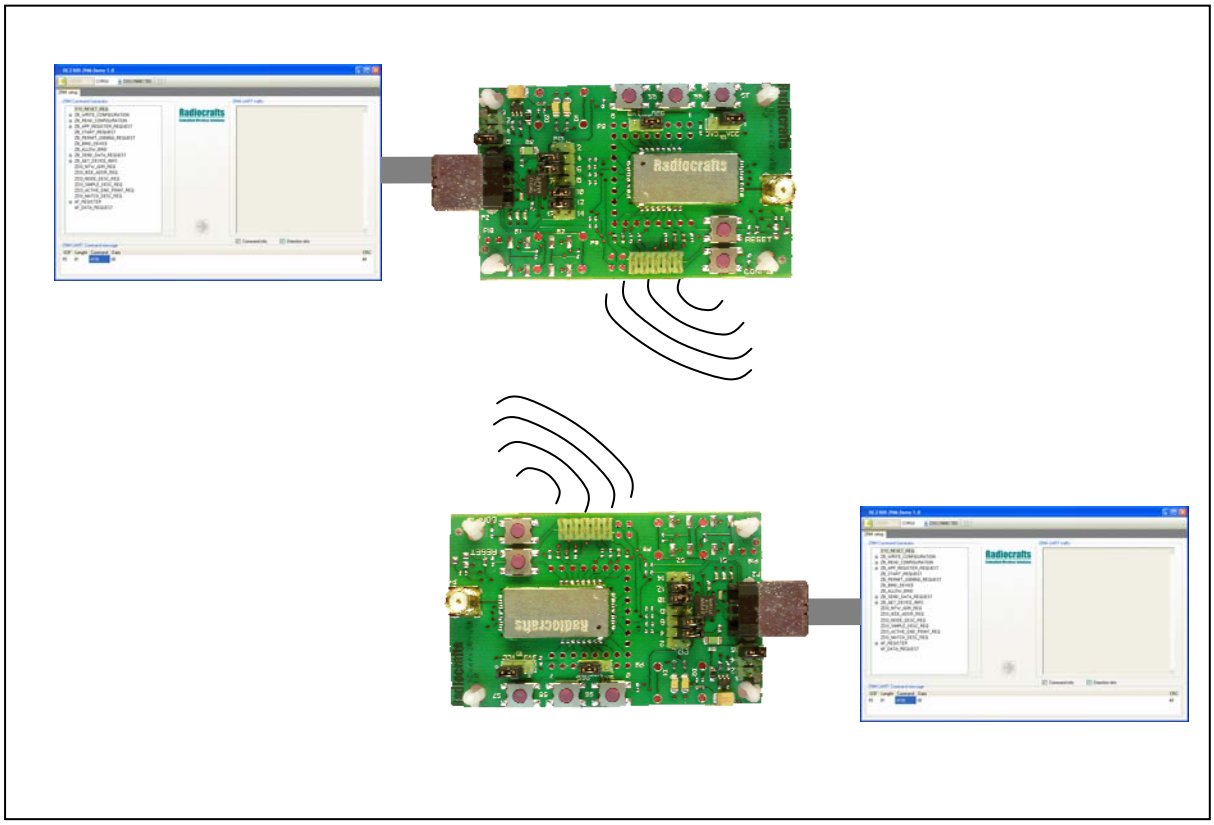


Figure 1 RC24xx-ZNM demo board with ZNM-CCT window

Connect the DB, or your own hardware with the Radiocrafts module, to the COM-port. Start the ZNM-CCT application and the main window should look similar to what is shown in Figure 1.

The first setup in the ZNM-CCT is to select the connected module com port. See Figure 2

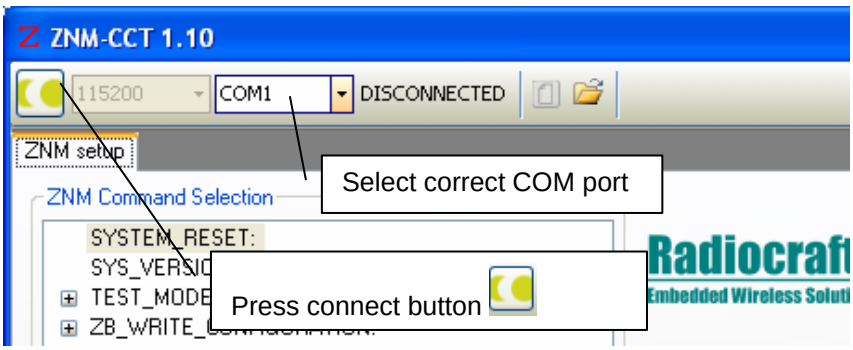


Figure 2. Connecting to the module

Main window, GUI

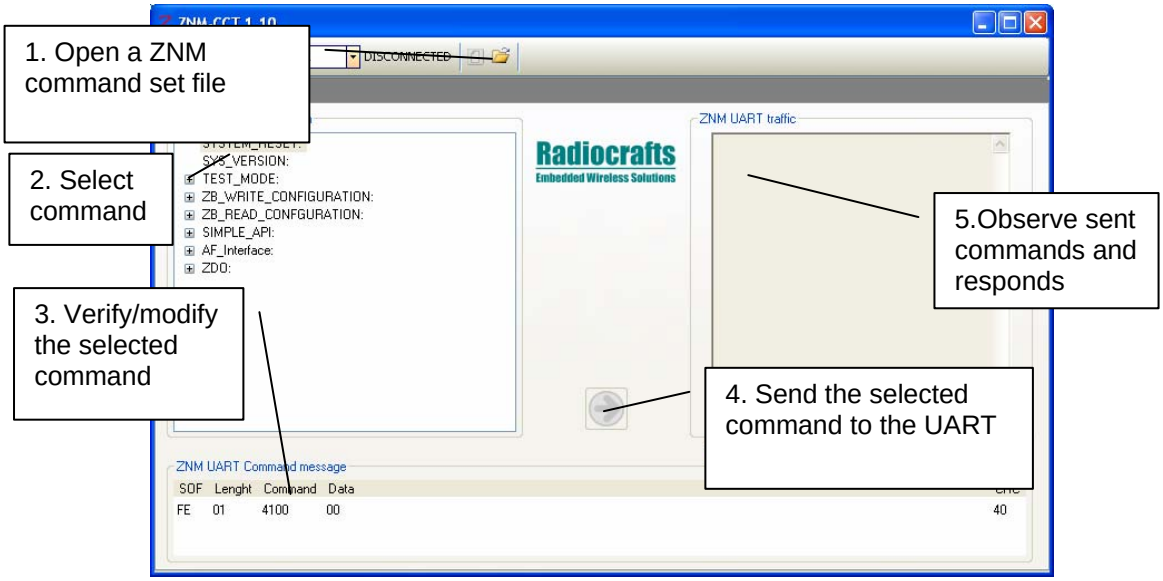


Figure 3. The boards are configured via a 4 step procedure using the ZNM-CCT tool

The use of the main window GUI consists of 5 easy steps:

1. **Select command file**
   ZNM Command files are a set of pre-stored commands that can be sent to the module. Several ZNM command files are included with the installation, but the user can also modify or make his own ZNM command file that may be more suitable for his application. See chapter *ZNM Command File* for more details on making/modifying command files.
2. **Select the command** in the command hierarchy menu on left side.
3. **Modify the command**(if needed) in lower part of screen

4. **Press send** arrow (in center of screen) to send the command to the connected Module UART interface
5. **Observe sent and received commands** on right side of screen.

ZNM Command File

The ZNM command filename must start with 'ZNM_Command' to be recognised by ZNM-CCT. The ZNM command file is a text file (*.txt) with the following format each line:

Each line is coded as :

<**Hierarchy sign**> <**NAME**>: <**Command in hex**>; (<**info to user**>)

Hierarchy sign can be

*	New main entry (Level 0 in command menu)
+	Level 1 entry, sorted under last level 0 entry
++	Level 2 entry, sorted under last level 1 entry
+++	Level 3 entry, sorted under last level 2 entry

NAME is a description of the command and used by the command selection menu to represent the command name.

Command in hex is ascii representation of the hex code to be sent via UART.

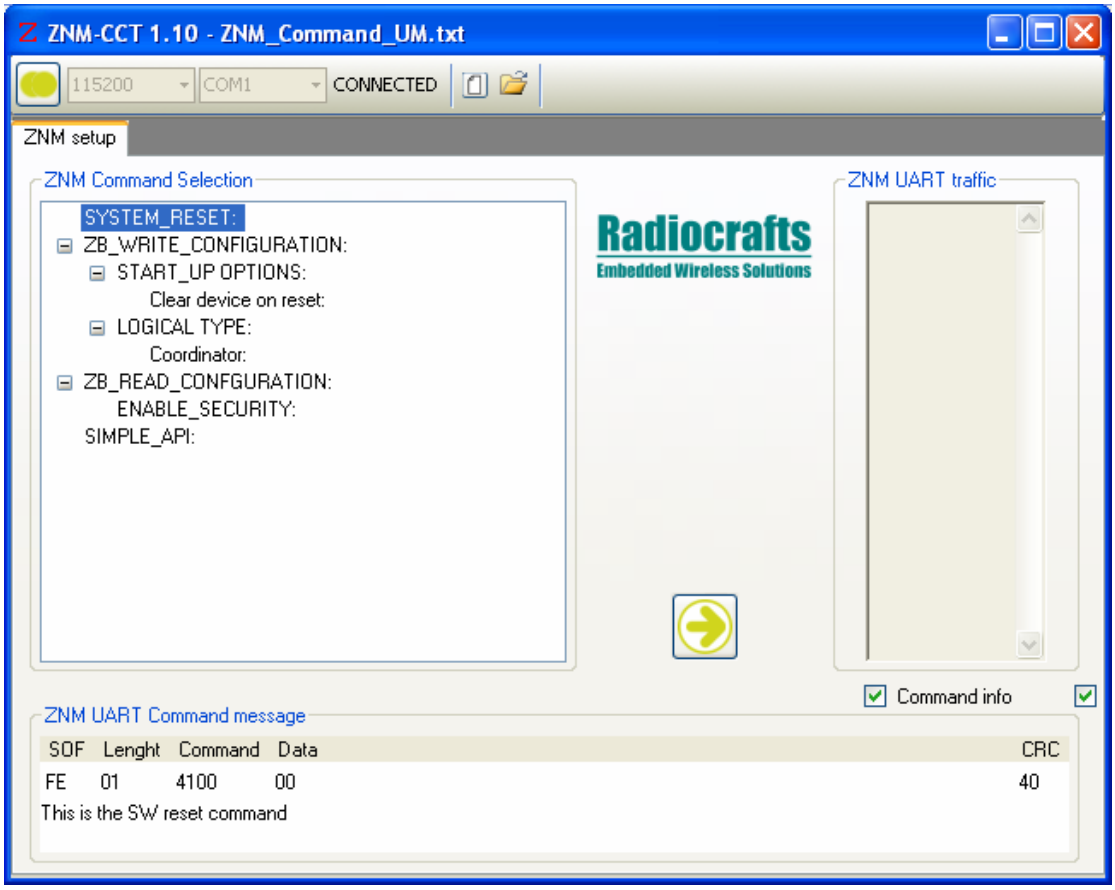
The command must be according to interface specified in RC2400-ZNM User Manual. Note that the hex shall not include length field and CRC. These are calculated automatically by program.

Info to user is help text for the user of ZNM-CCT. When a command is selected in the command selection menu the info is displayed together with hex command in lower part of window. The '(' and ')' signs must be included even if no info to user is written.

Here is en example of a ZNM command file

```
*SYSTEM_RESET:FE410000;(This is the SW reset command)
*ZB_WRITE_CONFIGURATION:FE2605;()
+START_UP OPTIONS:FE260503;()
++Clear device on reset:FE2605030103;()
+LOGICAL TYPE:FE410000;()
++Coordinator:FE2605870100;()
*ZB_READ_CONFGURATION:FE410000;()
+ENABLE_SECURITY:FE260464;()
*SIMPLE_API:FE0000;()
```

And the selection menu in the ZMC-CCT will look like this:


ZNM-CCT 1.10 - ZNM_Command_UM.txt
115200
COM1
CONNECTED
ZNM setup
ZNM Command Selection
SYSTEM_RESET:
ZB_WRITE_CONFIGURATION:
START_UP OPTIONS:
Clear device on reset:
LOGICAL TYPE:
Coordinator:
ZB_READ_CONFGURATION:
ENABLE_SECURITY:
SIMPLE_API:
Radiocrafts
Embedded Wireless Solutions
ZNM UART traffic
Command info
ZNM UART Command message
SOF Lenght Command Data CRC
FE 01 4100 00 40
This is the SW reset command

Document Revision History

Document Revision	Changes
1.0	First release

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