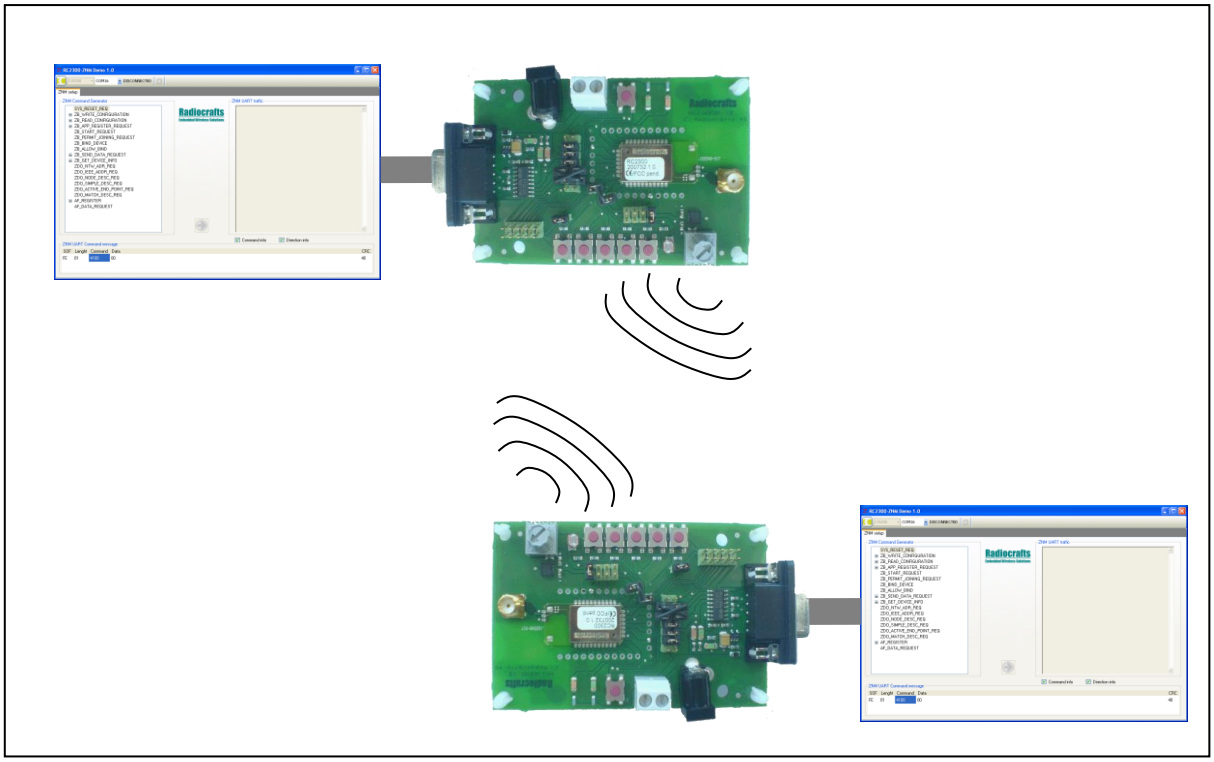
RC2300DK-ZNM Demonstration Kit Quick Start



Introduction

The RC2300DK-ZNM Demonstration Kit includes two demonstration boards with RC2300-ZNM modules. This document is a quick start guide for setting up the kit, forming a network and sending data from one device to the other.

For more detailed information on using the kit, please see the User Manual.

Quick Start Guide

1. Connect the antenna and power supply (battery eliminator) to each board

2. Connect the RS232 port of each board to a PC using a 1:1 serial cable for each board (can also be an emulated RS232 over USB).

3. Install and start the PC program ZNM-Configuration and Communication Tool (ZNM-CCT) on the PC. (The program can be downloaded from www.radiocrafts.com)

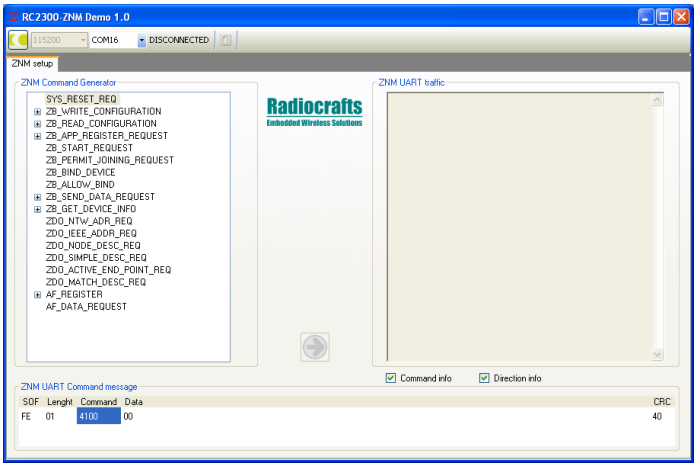


Figure 1. ZNM-CCT main window

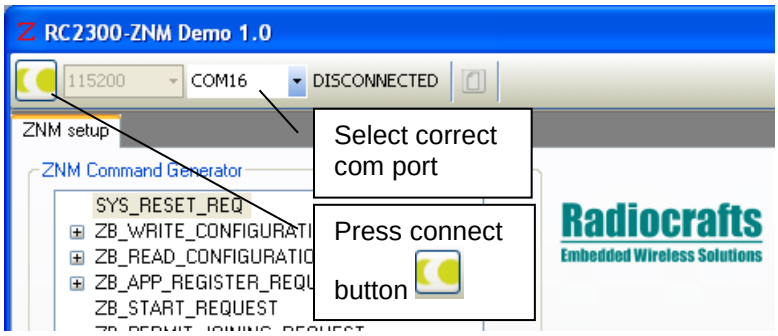


Figure 2. Connecting to the module

4. Configuring boards

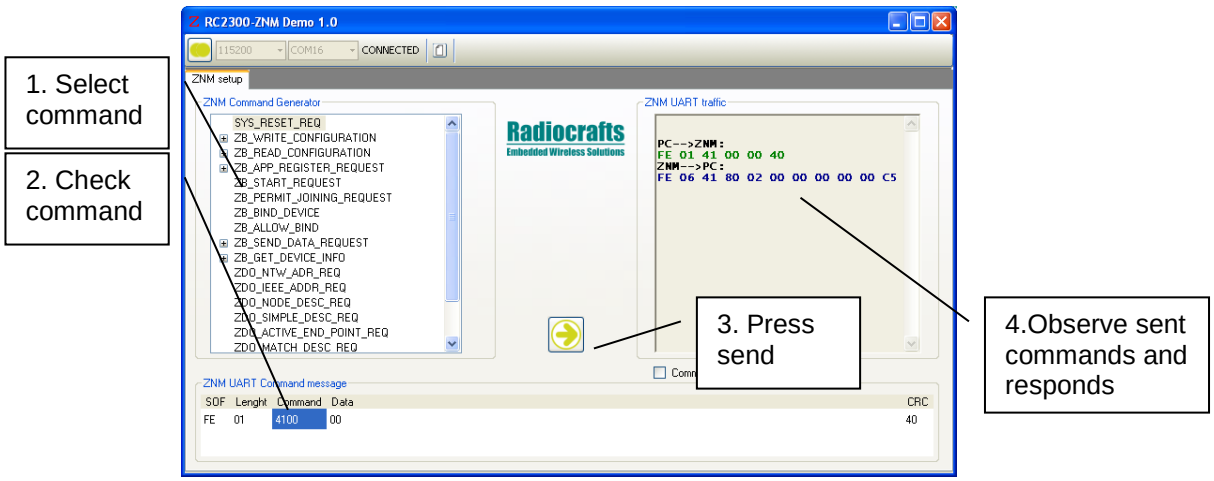


Figure 3. The boards are configured via a 4 step procedure using the ZNM-CCT tool

For the first board (Coordinator), send the following commands to the module
(In the order they appear):

- SYS_RESET_REQ
- ZB_WRITE_CONFIGURATION -> Start-up options -> Clear device on reset
- SYS_RESET_REQ
- ZB_WRITE_CONFIGURATION -> Logical_type -> Coordinator
- ZB_ APP_REGISTER_REQUEST-> Home Automation -> Lighting On/Off
- ZB_START_REQUEST
- ZB_PERMIT_JOINING_REQUEST

```
FE 03 26 05 03 01 03 21
ZNM-->PC:
FE 01 66 05 00 62

PC-->ZNM:
(SYS_RESET_REQ)
FE 01 41 00 00 40
ZNM-->PC:
FE 06 41 80 02 00 00 00 00 00 C5

PC-->ZNM:
(ZB_WRITE_CONFIGURATION->Logical type->Coordinator)
FE 03 26 05 87 01 00 A6
ZNM-->PC:
FE 01 66 05 00 62

PC-->ZNM:
(ZB_APP_REGISTER_REQUEST->Home Automation->Lighting On/Off)
FE 0D 26 0A 01 04 01 00 01 01 00 01 01 00 01 01 00 25
ZNM-->PC:
FE 01 66 0A 00 6D

PC-->ZNM:
(ZB_START_REQUEST)
FE 00 26 00 26
ZNM-->PC:
FE 00 66 00 66 FE 01 46 80 00 C7

PC-->ZNM:
(ZB_PERMIT_JOINING_REQUEST)
FE 03 26 08 FC FF FF D1
ZNM-->PC:
FE 01 66 08 00 6F
```

Figure 4 Traffic for first board (coordinator)

For the second board (Router), send the following commands (In the order they appear):

- SYS_RESET_REQ
- ZB_WRITE_CONFIGURATION -> Start-up options -> Clear device on reset
- SYS_RESET_REQ
- ZB_WRITE_CONFIGURATION -> Logical_type -> Router
- ZB_ APP_REGISTER_REQUEST-> Home Automation -> Lighting On/Off switch
- ZB_START_REQUEST

```
PC-->ZNM:
(SYS_RESET_REQ)
FE 01 41 00 00 40
ZNM-->PC:
FE 06 41 80 02 00 00 00 00 00 C5

PC-->ZNM:
(ZB_WRITE_CONFIGURATION->Start-up
options->Clear device on reset)
FE 03 26 05 03 01 03 21
ZNM-->PC:
FE 01 66 05 00 62

PC-->ZNM:
(SYS_RESET_REQ)
FE 01 41 00 00 40
ZNM-->PC:
FE 06 41 80 02 00 00 00 00 00 C5

PC-->ZNM:
(ZB_WRITE_CONFIGURATION->Logical
type->Router)
FE 03 26 05 87 01 01 A7
ZNM-->PC:
FE 01 66 05 00 62

PC-->ZNM:
(ZB_APP_REGISTER_REQUEST->Home
Automation->Lighting On/Off switch)
FE 0D 26 0A 01 04 01 03 01 01 00 01
00 01 01 00 00 27
ZNM-->PC:
FE 01 66 0A 00 6D

PC-->ZNM:
(ZB_START_REQUEST)
FE 00 26 00 26
ZNM-->PC:
FE 00 66 00 66 FE 01 46 80 00 C7
```

Figure 5. Traffic for second board

You have now created a ZNM network with two devices!!

5. Sending and receiving data.

   The devices can send data to each other with the command:
   ZB_SEND_DATA_REQUEST-> all routers and coordinator

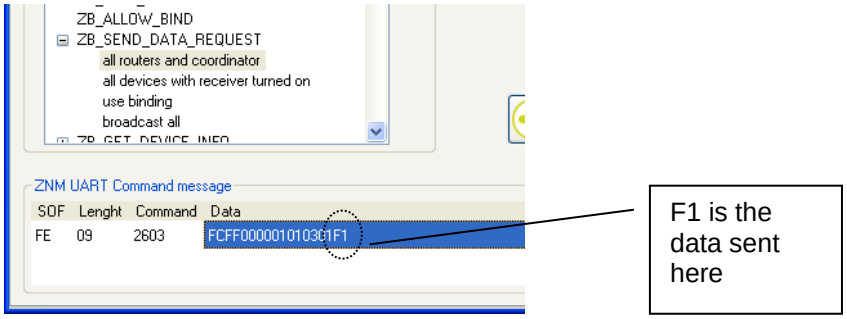
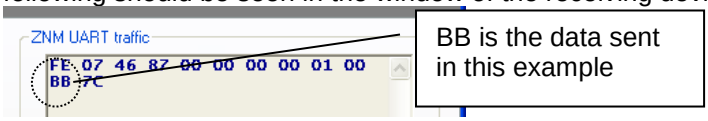


Figure 6. Sending data

The 0xF1 byte, highlighted in Figure 6, is the data sent. Try changing this to a different hex value, e.g. 0xBB.

Press the send button, and you shuld see that the BB is received at the other device. The following should be seen in the window of the receiving device.



Congratulations! You have now sent data via a ZNM network!!

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