

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)

Z RC2300-ZNM Demo 1.0		
COM16 DISCONNECTED		
ZNM setup		
200 Command Generator 872, 98251 PEO 823, VIRITE COMINIDIATION 823, PEAD, CONFIGURATION 823, PEAD, CONFIGURATION 823, PEAD, CONFIGURATION 232, 974, REQUEST 232, 974, REQUEST 232, 974, REQUEST 232, 941, CONFIGURATION 182, SERIO, DATA, PEDUEST 182, 254, CONFIGURATION 182, CONFIGURATION 183, CONFIGUR	Claudadi Wrietens Sakalians	2
ZNM UART Command message	Command info V Direction info	
SOF Lenght Command Data		CRC
FE 01 4100 00		40
l		

Figure 1. ZNM-CCT main window

Z RC2300-ZNM Demo 1.0		
СОМ16 _ СОМ16 _ Г		
ZNM setup ZNM Command Generator	Select correct com port	
SYS_RESET_REQ	Press connect	Radiocrafts Embedded Wireless Solutions
■ ZB_APP_REGISTER_REQU ZB_START_REQUEST	button S	

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



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:
778 WRITE CONFIGURATION-Start-up
ontions_>(lear device on reset)
FE UI 66 US UU 62
DC
PL>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)
FF 03 26 05 87 01 01 A7
ZNM>PC:
FE 01 66 05 00 62
PC>ZNM ·
TTR ADD REGISTER REDUEST-SHORE
Automation_slighting On/Off switch)
EE OD 36 04 01 04 01 07 01 01 00 01
00 01 01 00 00 37
FE UT 66 UA UU 60
DC
PL>ZNM:
(ZR_2IAKI_KEQUE21)
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

ZB_ALLOW_ ZB_SEND_D. all routers all device use bindir broadcast	BIND ATA_REQUEST and coordinator s with receiver turned on log all ance thich	
SOF Lenght Com FE 09 2603	mand Data FCFF000001010301F1	F1 is the data sent here

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.

ZNM UART traffic	BB is the data sent
FE 07 46 82 00 00 00 01 00 BB 7C BB 7C BB C BB C B C	in this example
· · · ·	

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

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