

1 Introduction

This document describes the AT programming commands for the RM radio modem series.

2 AT Commands

2.1 Entering Command Mode

The radio modem must be switched to command mode in order for it to interpret the incoming data as programming commands and not as data.

To enter the command mode the following sequence must be obeyed:

- No characters sent for one second
- Input three plus characters (“+++”) within one second
- No characters sent for one second

2.2 AT Command description

2.2.1 Exit Command mode

Exit command mode

ATCN<CR>

2.2.2 Save Settings

Write parameter values to non-volatile memory so that parameter modifications persist through subsequent power-up or reset.

Note: Once WR is issued, no additional characters should be sent to the module until after the response "OK<CR>" is received.

ATWR<CR>

2.2.3 Hardware Version

Read the hardware version of the radio modem.

ATHW<CR>

2.2.4 Firmware Version

Read the firmware version of the radio modem.

ATVR<CR>

2.2.5 Serial Number Low

Read the low 32 bits of the radio modems unique IEEE 64-bit address.

ATSL<CR>

2.2.6 Serial Number High

Read the high 32 bits of the radio modems unique IEEE 64-bit address.

ATSH<CR>

2.2.7 Channel Number (only RM24100X)

Read/write the channel number used for transmitting and receiving data between the radio modems (uses 802.15.4 protocol channel numbers).

Range:
0x0C - 0x17

ATCH<CR>
ATCH=

2.2.8 PAN ID (only RM24100X)

Read/write the PAN (Personal Area Network) ID. Use 0xFFFF to broadcast messages to all PANs.

Range:
0-0xFFFF

ATID<CR>
ATID=

2.2.9 Destination Address Low

Read/write the lower 32 bits of the 64-bit destination address. When combined with DH, DL defines the destination address used for transmission.

Range:
0-0xFFFFFFFF

ATDL<CR>
ATDL=

2.2.10 Read Destination Address High

Read/write the upper 32 bits of the 64-bit destination address. When combined with DL, it defines the destination address used for transmission.

Range:
0-0xFFFFFFFF

ATDH<CR>
ATDH=

2.2.11 Source Address (only RM24100X)

Read/write the radio modems 16-bit source address.

Range:
0-0xFFFF

ATMY<CR>
ATMY=

2.2.12 Network ID (only RM868500X)

Read/write the user network identifier. Nodes must have the same network identifier to communicate.

Range:
0-0x7FFF

ATID<CR>
ATID=

2.2.13 Power Level

Read/write the power level at which the radio modem transmits conducted power.

RM24100X Radio Modems:

0= 10 dBm
1= 12 dBm
2= 14 dBm
3= 16 dBm
4= 18 dBm

RM868500X Radio modems:

0= 0 dBm (1mW)
1= 13.7 dBm (23mW)
2= 20 dBm (100mW)
3= 22 dBm (158mW)
4= 25 dBm (316mW)

ATPL<CR>
ATPL=

2.2.14 Baud Rate

Read/write the radio modems baud rate

Range:
0=1200
1=2400
2=4800
3=9600
4=19200
5=38400
6=57600
7=115200

ATBD<CR>
ATBD=

2.2.15 Parity

Read/write the radio modems parity setting.

Range:

0=8-bit no parity

1=8-bit even

2=8-bit odd

3=8-bit mark

4=8-bit space

ATNB<CR>

ATNB=