

RRTechnologies

RF Modem

User manual

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1. Hardware – v.1.01



Picture 1 - View of connectors

- RS232 not active yet
- RS485 not active yet
- USB PC connection (HID)
- 7-24V DC supply power (not needed when connected by USB)



Picture 2 – Top view - LED status

LED status:

- Green Normal operation (power ON)
- Blue Transmiting frame
- Yellow Receiving frame



2. Software - v. 1.0

2.1. Main window



Picture 3 - Software main window

- 1. Select communication port
- 2. Modem settings
- 3. Firmware update
- 4. Actual modem frequency
- 5. TX counters (no. of bytes)
- 6. TX buffer
- 7. Send buffer to modem and transmit it
- 8. Clear TX buffer
- 9. Convert TX buffer between hex value and text value.
- 10. RX buffer
- 11. RX buffer length
- 12. Convert RX buffer between hex and text value
- 13. Clear RX buffer
- 14. Read RSSI value from last received frame
- 15. Read RX buffer from modem
- 16. Firmware version of connected modem
- 17. Expand to view logs window
- 18. Software version



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ul. Barbórki 49A, 43-200 Pszczyna, POLAND Email: office@rrtechnologies.pl



Picture 4 - Software main window in expanded mode



2.2. Hardware configuration

Bardware config				
USB Device:	RRTechnologies RRT RF Modem SN: RFv2.01_201(2 062 VID: 0483 PID: 5750	~ ⊖ 1		
RS 232				
RS 485				
	Close	3 Save		

Picture 5 - Hardware configuration window

- 1. Refresh devices
- 2. Select device
- 3. Save settings



2.3. Modem settings.

So Modem settings X						
Modulation						
Frequency						
16900000						
Min: 168 000 000 Max: 170 000 000						
TX Power RSSI						
Power: 2 dBm V RSSI offset: 0	✓ RSSI=RSSI-(Offset)					
☑ CrcOn						
Bitrate: 4800 min: 1200 max: 300000						
Deviation: 5000 min: 600 max: 200000						
Gaussian filter Preamble detect Synchronize						
Preamble detector on SyncOn	SyncSize: 4 🗸					
O BT=1.0 Preamble detector size: 2 byte ∨ SyncValue1: 01						
BT=0.5 Preamble detector tol: 10 max: 31 SyncValue2: 01						
O BT=0.3 Preamble size: 3 max: 65535 SyncValue3: 01						
Preamble polarity: 0xAA V SyncValue4: 01						
Restore the default settings	Cancel Save					

Picture 6 - Modem settings window



2.4. Firmware update.



Picture 7 - Firmware update window

- 1. Select firmware file
- 2. Upload new firmware to the RF Modem
- 3. Erase firmware from RF Modem
- 4. Progress bar



Picture 8 - Firmware update window

Note: When this window is to be close, please wait abaout 10s to refresh modem.

2.5. First run

First run of the RFModemProj.exe application will create in its directory the following files:

- config.cfg
- English.RFModemProj.lng



3. Revision history

REV	Description	Date	Author
1.00	First release	2019.07.01	Rafał Płatkowski