



Quick Start Guide

use RFXCOM with

xPL-Perl

www.rfxcom.com

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1 Introduction.

The purpose of this document is to let you have the RFXCOM devices fast up and running. If a question arises, first check if the detailed documentation for the device will give the answer. If you can't find the answer in the detailed documentation you can send your question to support@rfxcom.com or if the problem is more related to xPL-Perl please post your question at the xPL-Perl forum.

It is very well appreciated if you send any comments or additions on this document to support@rfxcom.com

We hope you enjoy the RFXCOM products.

2 Receiver with USB interface.

2.1 Install USB driver.

1. Do NOT connect the USB plug before installing the USB drivers!
2. Install the latest USB drivers from the FTDI site.
<http://www.ftdichip.com/Drivers/VCP.htm>
3. Connect the RFXCOM USB receiver and install the drivers just downloaded.

2.2 Use the USB receiver in xPL-Perl.

The native RFXCOM Variable Length mode is not yet supported by xPL-Perl. Use the RFXCOM USB receiver therefore in 32 bit mode (W800RF32 compatible).

2.3 Use the USB receiver as a W800RF32 receiver.

If the Home Automation software doesn't support the native RFXCOM receiver mode but the W800RF32 is supported then use the RFXCOM receiver as a W800RF32 receiver. The RFXCOM receiver must be set into the 32 bits mode to operate in a W800RF32 compatible mode. In this mode the RFXCOM receiver acts exactly as a W800RF32 receiver and it doesn't have all the capabilities it has in Variable Length mode.

The limitations are:

- Digimax packets are truncated at 32 bits,
- RFXPower and RFXMeter packets are truncated at 32 bits,
- X10 and Visonic security packets are truncated at 32 bits, (works well in 32bits)
- ATI packets are not received,

Use the RFreceiver program to set the receiver in 32 bit mode. Configure the receiver as a W800RF32 receiver.

3 Receiver with Ethernet interface.

3.1 Install the RFXCOM Ethernet receiver.

1. Connect the RFXCOM Ethernet receiver to the LAN with a DHCP server present in the network.
Note: the WLAN+LAN RFXCOM interface are delivered with the LAN interface enabled and the WLAN is disabled.
2. If a WLAN only device is used, set the WLAN Access Point with SSID = LTRX_IBSS and use an Infrastructure network.

For a detailed description see the RFXCOM Ethernet document
http://www.rfxcom.com/documents/RFXCOM_Ethernet_Interface.pdf

3.2 Configure the Ethernet controller.

The 71000 RFXCOM Ethernet interface must be configured using Telnet.
The other RFXCOM Ethernet interfaces can be configured using a web browser or Telnet.
All RFXCOM Ethernet interfaces can also be configured using a terminal emulator and the optional RFXCOM RS232 Serial Interface module.

3.3 Test the Ethernet interface connection.

To be completed.

3.4 Use the Ethernet receiver in xPL-Perl.

Not yet supported.

4 Transmitter with USB interface.

4.1 Install the USB transmitter and driver.

1. Do NOT connect the USB plug before installing the USB drivers!
2. Install the latest USB drivers from the FTDI site.
<http://www.ftdichip.com/Drivers/VCP.htm>
3. Connect the RFXCOM USB transmitter and install the drivers just downloaded.
4. Insert the handshake cable.
If you have an RFXCOM receiver, connect the other end of the handshake cable to the receiver. The RFXCOM receiver must be operational.
If you don't have an RFXCOM receiver connect the top and the middle pin of the jack connector together.

4.2 Test the USB interface connection.

To be completed.

4.3 Use the USB transmitter in xPL-Perl.

To be completed.

5 Transmitter with Ethernet interface.

5.1 Install the RFXCOM Ethernet transmitter.

3. Connect the RFXCOM Ethernet transmitter to the LAN with a DHCP server present in the network.
Note: the WLAN+LAN RFXCOM interface are delivered with the LAN interface enabled and the WLAN is disabled.
4. If a WLAN only device is used, set the WLAN Access Point with SSID = LTRX_IBSS and use an Infrastructure network.

For a detailed description see the RFXCOM Ethernet document
http://www.rfxcom.com/documents/RFXCOM_Ethernet_Interface.pdf

5.2 Configure the Ethernet controller.

The 71000 RFXCOM Ethernet interface must be configured using Telnet.
The other RFXCOM Ethernet interfaces can be configured using a web browser or Telnet.
All RFXCOM Ethernet interfaces can also be configured using a terminal emulator and the optional RFXCOM RS232 Serial Interface module.

5.3 Test the Ethernet interface connection.

To be completed.

5.4 Use the Ethernet transmitter in xPL-Perl.

Not yet supported.

6 RFXMeter.

6.1 Install the RFXPwr hardware.

If the RFXMeter has also RFXPulse module(s) installed then place the RFXPwr at the location Module 0. The RFXMeter is then powered by the RFXPwr and the RFXMeter doesn't need a dedicated power supply then.

Put the power supply of the RFXPwr in a wall outlet that is connected to the same power phase as the one you are measuring with the CT (Current Transformer).

If the red LED on the RFXPwr module is on then turn the CT on the power line.

6.2 RFXPwr in the xPL-Perl.

To be completed.

6.3 Install the RFXPulse hardware.

If the RFXMeter has also RFXPwr module(s) installed then place the RFXPwr at the location Module 0. The RFXMeter is then powered by the RFXPwr and the RFXMeter doesn't need a dedicated power supply then.

If no RFXPwr is present in the RFXMeter power the RFXMeter using the delivered 9V AC/AC power adaptor. If a DC power adaptor is used then connect the positive voltage (+) to the outside and the negative voltage (-) to the inside of the power plug.

6.4 RFXPulse in the xPL-Perl.

To be completed.

7 RFXSensor.

7.1 Install the RFXSensor.

1. Stop xPL-Perl to free the RF receiver.
2. Start RFreceiver and select Variable length mode. (if a W800 is used, select 32 bit mode).
3. Insert the battery in the RFXSensor without any additional sensor connected to the jack input. The RFXSensor device address will be displayed in the reset message.
4. If you have more than one RFXSensor you must configure each RFXSensor with a unique address. See <http://www.rfxcom.com/documents/RFXSensor.pdf chapter 5>.

Below you see a trace of an RFXSensor reset using Variable length mode in the receiver. If the receiver is set to 32 bit mode then only 4 bytes data are displayed.

The 5th line contains the internal address of the 1-wire sensor in the RFXSensor.

Remember this address: 7FB57B00000 and note that this is Sensor 0 which has address 00F0 = ACRF-ID 240

```
205246338A RFXSensor Type-3, Slow sampling mode, version:10, bits=32
205246338A RFXSensor Type-3, Slow sampling mode, version:10, bits=32
205246338A RFXSensor Type-3, Slow sampling mode, version:10, bits=32
2853454E0026 Sensor 0 type=DS2438 bits=40
307FB57B000000 noise or a 1-Wire sensor internal address bits=48
2000F01663 RFXSensor addr:00F0 = ACRF-ID:240 Temp:22,375°C | 72,275°F bits=32
2002F23EA1 RFXSensor addr:02F2 = ACRF-ID:754 Supply Voltage:5,01 bits=32
2001F11EA5 RFXSensor addr:01F1 = ACRF-ID:497 RH:52,74% Barometer:649hPa A/D voltage:2,45
```

Note: duplicate RFXSensor address lines are removed.

7.2 Install additional sensors.

Connect one additional sensor.

Press reset on the RFXSensor after connecting the additional sensor.

You will find the additional sensor now in the reset message.

The 7th line displays the address of the 1-Wire sensor in the RFXSensor unit (7FB57B00000)

And note that this sensor has now become Sensor 4 which has address 04F4 = ACRF-ID 1268. The position of the sensor units with there assigned RFXSensor address (00F0, 04F4, 08F8....) depends on the internal address of the 1-Wire sensors. This explains why the RFXSensor addresses are changed for a sensor when adding an additional sensor.

The 5th line indicates the new added additional sensor and the internal address of this 1-Wire sensor is C39985000000. Remember this address and add the next additional sensor and so on.

A maximum of 7 additional sensors can be connected to the RFXSensor.

It is a good practice to write the internal address visible on the RFXSensor and the additional sensors. This makes life easier when adding a sensor or debugging is necessary.

```
205246338A RFXSensor Type-3, Slow sampling mode, version:10, bits=32
205246338A RFXSensor Type-3, Slow sampling mode, version:10, bits=32
205246338A RFXSensor Type-3, Slow sampling mode, version:10, bits=32
2853454E0026 Sensor 0 type=DS2438 bits=40
30C39985000000 noise or a 1-Wire sensor internal address bits=48
2853454E0426 Sensor 4 type=DS2438 bits=40
307FB57B000000 noise or a 1-Wire sensor internal address bits=48
2000F014CF RFXSensor addr:00F0 = ACRF-ID:240 Temp:20,75°C | 69,35°F bits=32
2002F23AC3 RFXSensor addr:02F2 = ACRF-ID:754 Supply Voltage:4,7 bits=32
2001F13128 RFXSensor addr:01F1 = ACRF-ID:497 RH:108% Barometer:1035hPa A/D voltage:3,93
2004F4166B RFXSensor addr:04F4 = ACRF-ID:1268 Temp:22,375°C | 72,275°F bits=32
2006F63ACB RFXSensor addr:06F6 = ACRF-ID:1782 Supply Voltage:4,7 bits=32
2005F51CCD RFXSensor addr:05F5 = ACRF-ID:1525 RH:52,79% Barometer:649hPa A/D voltage:2,3
```

Note: duplicate RFXSensor address lines are removed.

7.3 RFXSensor in the xPL-Perl.

To be completed.

8 Warning:

RF signals are possible disturbed and it has not been justified for this equipment at uses in circumstances where life-threatening or dangerous situations are possible.

9 Copyright notice

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10 Revision history.

Version 0.0 – October 11, 2007
Initial version.