

DIGI[®] XTend PKG-R RF Modem | Quick Start Guide

Requirements

To install the modem and test its range, you need:

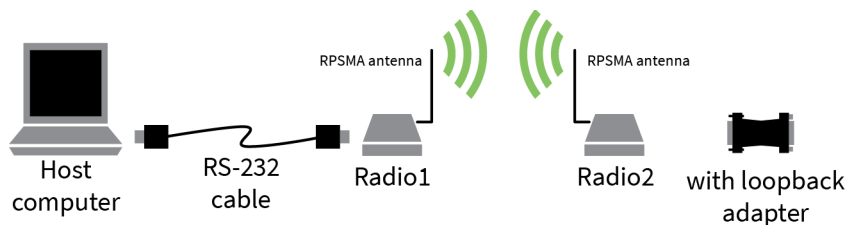
- Two XTend RF Modems. The two XTend RF Modems are referred to as Radio1 and Radio2
- Accessories: loopback adapter, RS-232 cable, two RPSMA antennas, two power supplies
- One computer with XCTU

Connect the hardware

1. Set both Radio DIP Switches to RS-232, point-to-point modes. Switches 1 and 5 are ON (up), and the remaining four switches are OFF (down).



2. Connect the included RS-232 cable to the female DB-9 connector of Radio1 and the male DB-9 connector of the PC.
3. Attach the serial loopback adapter to the female DB-9 connector of Radio2. The serial loopback adapter configures Radio2 to function as a repeater by looping data back into the module for retransmission, as shown.
4. Attach RPSMA antennas to each RF modem.
5. Power Radio1 and Radio2 through their respective power connectors.



WARNING! When operating with 1 Watt power output, transmitting in close proximity of other RF modems can damage modem front-ends. Observe a minimum separation distance of 0.6 m (2 in) between the RF modems.

Install software

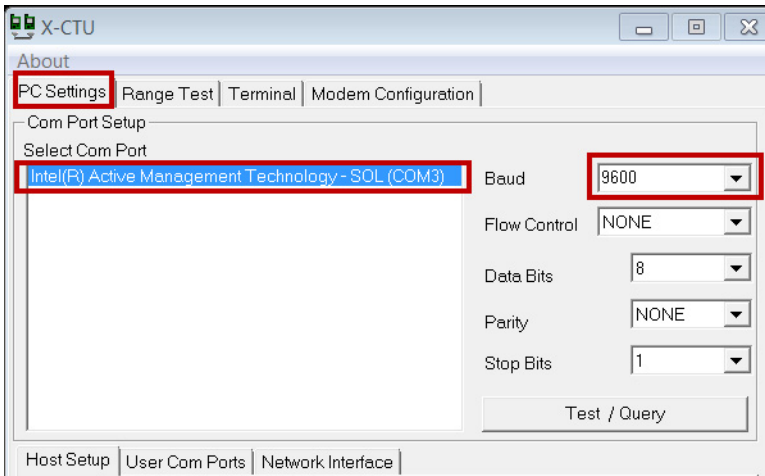
Download the Legacy XCTU version 5.2.8.6 installer: http://ftp1.digi.com/support/utilities/40003002_C.exe

When the download is complete, run the executable file and follow the steps in the XCTU Setup Wizard. Go to <https://www.digi.com/products/xbee-rf-solutions/xctu-software/xctu#productsupport> and under **General Drivers** select the appropriate operating system to download drivers.

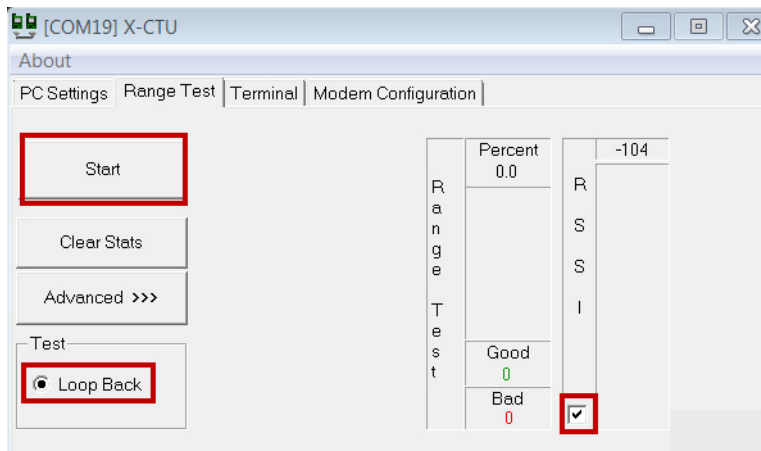
Perform a range test

A range test is a simple point to point wireless demonstration that tests the devices' ability to transmit to and receive from each other. Configure a serial port to communicate with the modem:

1. Launch XCTU: **Start > All Programs > Digi > X-CTU.**
2. On the **PC Settings** tab, select the PC serial com that you will use to connect to Radio1 from the list.
3. Select the baud rate that matches the Radio1 I/O interface rate (serial data rate). Use the default values for the remaining fields.



4. Click the **Range Test** tab.
5. (Optional) Check the box in the **RSSI** section to enable display of signal strength. The **Loop Back** option is automatically selected.
6. Click **Start** to begin the range test.



7. Move Radio2 (with the loopback adapter) away from Radio1 to determine the maximum range of the wireless link.

Additional configuration options

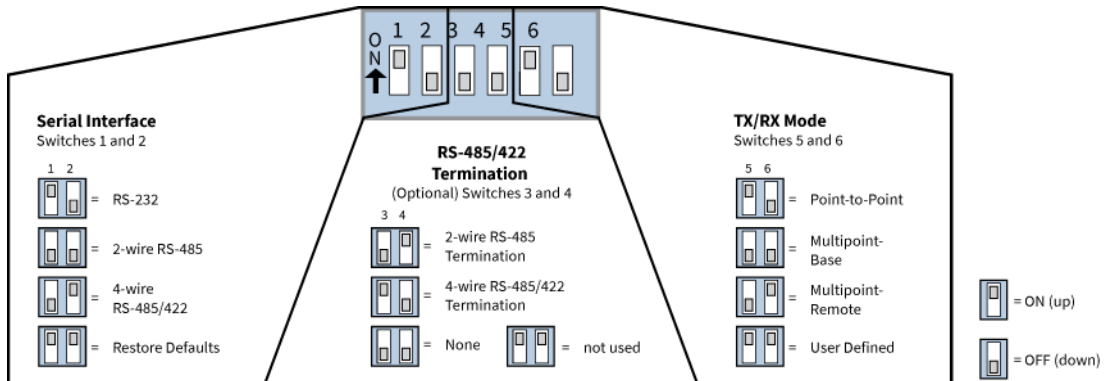
Out-of-box, the XTend-PKG-R RF Modem is configured to provide immediate wireless links between devices. The modem's default configuration supports a wide range of RF communications. If the RF Modem must be configured to support specific needs of a data system, several programming options are available.

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Use the DIP switch

The DIP switch allows you to configure the following RF modem settings.

DIP Switch Settings (applied only when powering on):



Restore modem defaults (DIP switch method)

If the XTend modem is not responding or cannot enter into Command mode, try restoring the modem to its original default parameter values.

1. Set switches 1 and 2 of the DIP Switch to their ON (up) positions, and the remaining four switches to their OFF (down) positions.

2. Turn off the power supplying the RF modem, then on again.

Using the DIP switch to configure the modem is one of several ways to configure modem parameters. Other options include using the XCTU **Software Terminal** and **Modem Configuration** tabs, and binary programming. See the user's guide for more information about these options.

User guide

For more information, see the user guide: <https://www.digi.com/resources/documentation/digidocs/PDFs/90000813.pdf>

