# Quick Start Guide

## XTend-PKG-R™
## RS-232/422/485 RF Modem

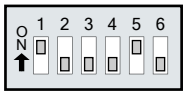
Create a Long Range Wireless Link In Minutes.

# Connect Hardware

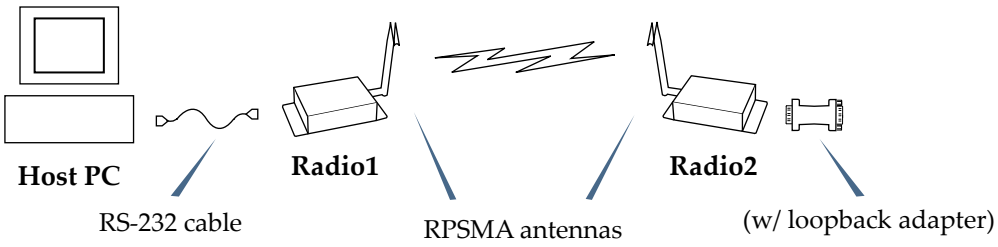
To install the modem and test its range, you need:

- 2 XTend RF Modems. The two XTend RF Modems are referred to as "Radio1" and "Radio2".
- Accessories (Loopback adapter, RS-232 cable, 2 RPSMA antennas, 2 power supplies)
- 1 Windows PC loaded with X-CTU Software

Hardware Setup




1. Set both Radio DIP Switches to RS-232, point-to-point modes. [Switches 1 and 5 are ON (up), and the remaining 4 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 & Radio2 through their respective power connectors.

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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 2' (0.6 m) between RF modems.

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# Install Software

Go to the X-CTU Software page at www.digi.com/xctu and launch the latest X-CTU installer. Follow the prompts on the installation screens.

- **PC Settings:** Set up PC serial com ports to interface with the RF modem
- **Range Test:** Test RF modem's range under varying conditions
- **Terminal:** Read/Set RF modem parameters and monitor data communications
- **Modem Configuration:** Read/Set RF modem parameters

# Configure Serial Port-Modem Communications

Configure a serial port to communicate with the modem:

1. Launch the X-CTU Software: **Start > Programs > Digi > X-CTU**
2. On the **PC Settings** tab, from the dropdown list, select the PC serial Com port that will be used to connect to Radio 1.
3. Select the baud rate that matches the I/O interface rate (serial data rate) of Radio1. Use default values for remaining fields.

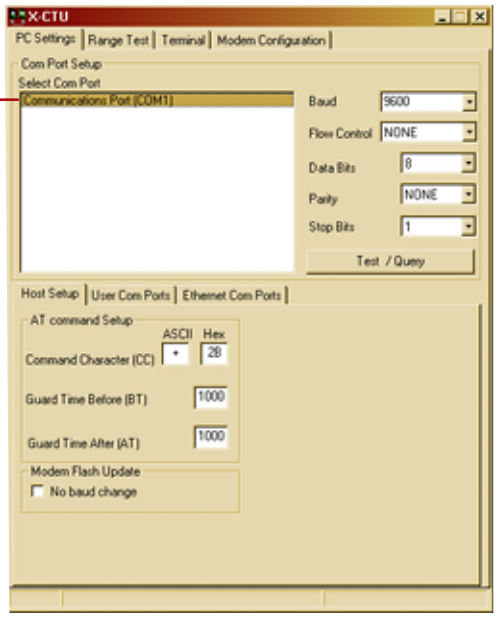
PC Settings tab

② **PC Com Port**

③ **Default Values**
**Default RF data rate is 9600 baud**

**Other Default Values:**

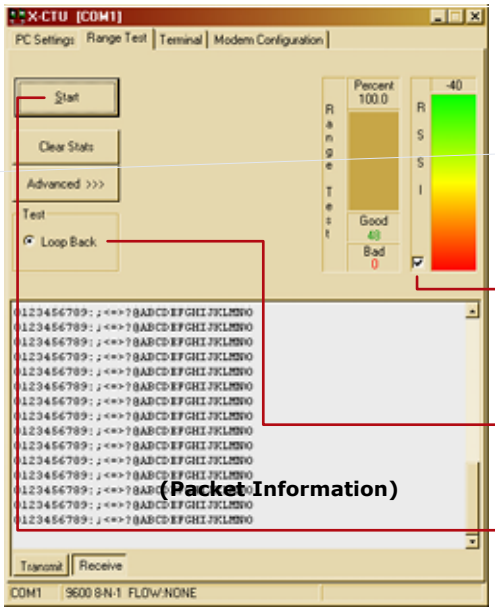
| | | |
|---|---|---|
| Flow Control | = | None |
| Data Bits | = | 8 |
| Parity | = | None |
| Stop Bits | = | 1 |




# Determine the RF Modem's Range

1. Click the **Range Test** tab.
2. (Optional) Check the box in the RSSI section to enable display of signal strength.
3. The **Loopback** option is automatically selected.
4. Click the **Start** button to begin the range test.
5. Move Radio2 (with loopback adapter) away from Radio1 to determine the maximum range of the wireless link.

Range Test tab




② **RSSI** check box
**RSSI** stands for "Received Signal Strength Indicator".

③ **Loopback** option

**(Packet Information)**

④ **Start/(Stop)** button

# Additional Configuration Options

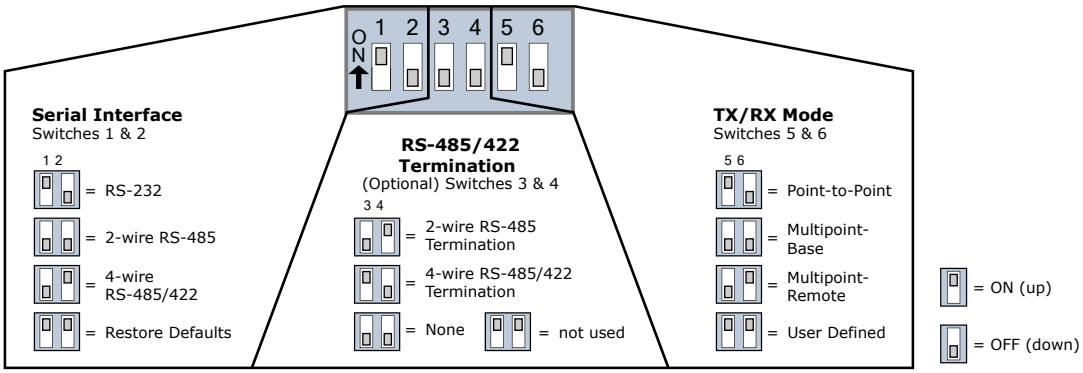
Out-of-box, the XTend-PKG-R RF Modem is configured to provide immediate wireless links between devices. The modem's default configuration supports a wide range of RF communications.

If the RF Modem must be configured to support specific needs of a data system, several programming options are available.

## Using the Digi RF Modem DIP Switch

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

DIP Switch Settings (applied only when powering on)




## Restoring 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 & 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

## Other Configuration Options

Using the DIP Switch to configure the modem is one of several ways to configure modem parameters. Other options include using the X-CTU Software **Terminal** and **Modem Configuration** tabs, and binary programming. See the *XTend-PKG-R RF Modem User's Guide* for more information about these options.

## Contact Digi

(Office hours are 8am – 5pm U.S. mountain standard time)

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