# Quick Start Guide

## XStream-PKG-E™ Ethernet RF Modem



Create a long range wireless link in minutes!

www.digi.com



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## Introduction

This Quick Start Guide provides OEMs and integrators with an introduction to some of the RF modem's most important features. This guide provides step-by-step instruction on how to setup a wireless link and test the modem's ability to transport data over varying ranges and conditions.

### Requirements for Range Test

1 PKG-E (Ethernet) RF Modem
1 PKG-R (RS-232) RF Modem
1 Windows PC loaded with the following software:
    X-CTU
    Com Port Redirector
Accessories (Loopback adapter, CAT5 cable, 2 RPSMA antennas, 2 power supplies)

#### Software Installation #1: X-CTU

Go to the X-CTU Software page at www.digi.com/xctu and launch the X-CTU version 5.1.0.0 installer. This version is required for the XStream Ethernet modem. Follow the prompts on the installation screens.

The X-CTU software interface is divided into the four following tabs:

- PC Settings - Setup PC 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

#### Software Installation #2: Device Installer and Com Port Redirector

Go to the Knowledge Base page at www.digi.com/support/kbase. In the 'Keyword' box type '2033' and press 'Search'. Click the link to the Knowledge Base article for detailed instructions on how to install the Device Installer and Com Port Redirector.

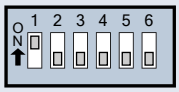
# Range Test

Once the Ethernet RF Modem has been setup for com port communications, a wireless link between devices can be created for the transportation of data.

### Hardware Setup

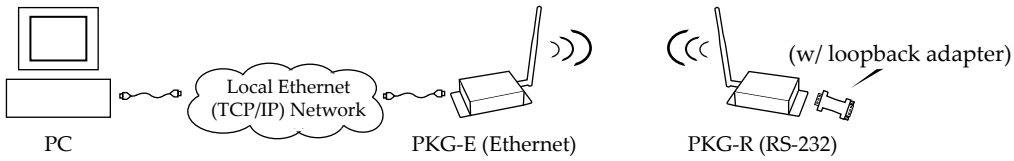
Using the components listed on page one of this quick start guide, assemble the hardware needed for the range test.

1. Connect a PKG-E (Ethernet) RF Modem and a PC to active Ethernet ports of the same local network using standard CAT5 cables [Figure 1].
2. Attach serial loopback adapter to the DB-9 serial connector of the PKG-R (RS-232) RF Modem. The adapter configures the PKG-R RF Modem to function as a repeater by looping serial data back into the modem for retransmission.
3. Configure the PKG-R RF Modem for RS-232 operation using the built-in DIP Switch. Dip Switch 1 should be ON (up) and the remaining switches should be OFF (down).




4. Attach RPSMA antennas to both RF Modems.
5. Power both RF Modems with power supplies (included w/ accessory packages).

**Figure 1. Hardware Setup for Range Test**

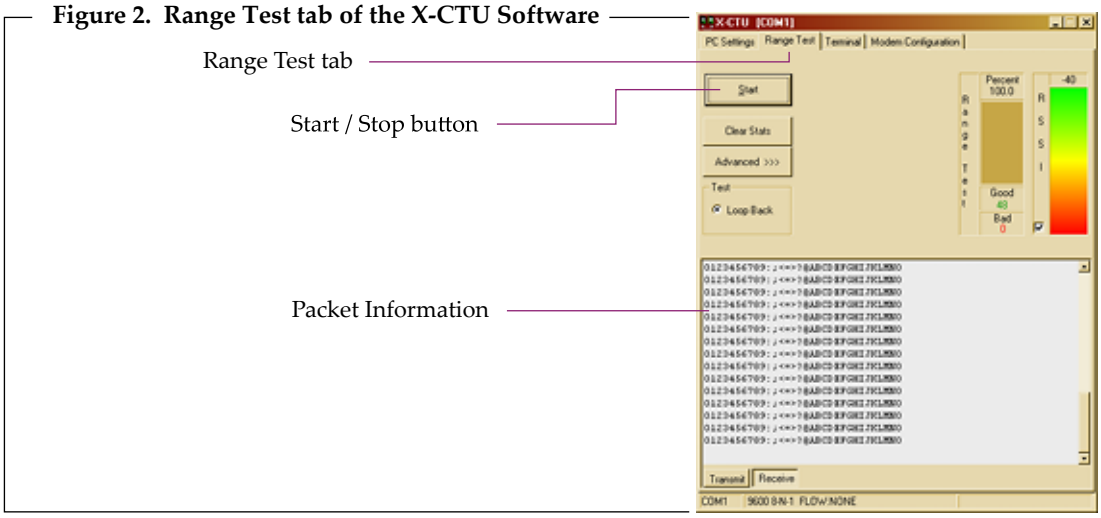



### Run Range Test

1. Highlight the appropriate PC com port

   Select the PC com port baud rate from the 'Baud' dropdown list that matches the throughout data rate of the RF modems.
2. Select the "Range Test" tab [Figure 2].
3. Select the 'Advanced' button and change the Data receive timeout to '2000' msec.
4. Select the 'Start' button to begin range test.
5. Move the remote PKG-R (RS-232) away from the PKG-E (Ethernet) and observe packet information to determine the range of the wireless link.

**Figure 2. Range Test tab of the X-CTU Software**



## Optional Configurations

Out-of-box, the XStream-PKG-E Ethernet RF Modems comes configured to provide immediate wireless links between devices. The default configuration of the modem supports a wide range of RF communications.

If the modem must support additional functions, modem parameters can be customized using standard AT and binary commands. Digi recommends using the X-CTU Software when configuring the PKG-E Ethernet RF Modem. Alternatively, a program such as "PuTTY" can be used, although modem IP addresses must already be known in order to establish communications.

### Restore RF Modem Defaults

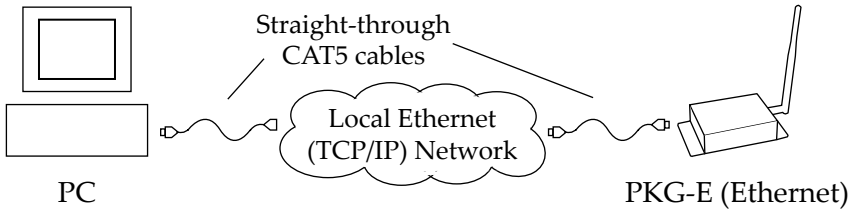
If the RF Modem is not responding or cannot enter into "AT Command Mode", restore RF Modem parameters to their original factory settings.

**Restore RF Modem Default Parameters** (Local Network Method)**:**

After following the steps outlined in the Configuration Setup section [previous page], the RF modem is ready to be programmed. The following steps utilize the "Modem Configuration" tab of the X-CTU Software to restore default parameters.

1. Highlight the Com Port from the 'Select Com Port' list that is mapped to the Ethernet Modem.
2. Select the "Modem Configuration" tab.
3. Select the 'Read' button. (Currently stored parameter values are displayed.)
4. Select the 'Restore' button. (Original default parameter values are restored and written to the RF modem's non-volatile memory.)
5. Select the 'Baud Rate' Command (Listed under the 'Serial Interfacing' folder).
6. Change the BD parameter to '7 – 115200'. This maintains communication between the on-board RF module and Ethernet port.
7. Select the 'Write' button.

**Figure 3. Setup for RF Modem Configuration (Local Network Method)**




### Ethernet RF Modem Configuration

The X-CTU Software features "Terminal" and "Modem Configuration" tabs that provide easy-to-use interfaces for configuring RF Modems. Refer to the product manual for information regarding configuration methods.

## Contact Digi International

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