Summary

This document explains how each of the various Digi products running ZNet 2.5 can be upgraded to the ZB protocol which supports the latest ZigBee standard, the ZigBee PRO Feature Set. XBee products and ConnectPort X gateways running the ZNet 2.5 protocol do not support over-the-air firmware upgrades, so please follow the instructions below.

For assistance, please contact Digi RF Support:

- 866-765-9885 (U.S. and Canada) or
- +1-801-765-9885
- www.digi.com/support

XBee OEM Modules Section

These instructions pertain to any part number beginning "XB24-B…" or "XBP24-B…"

To upgrade your XBee ZNet 2.5 module to ZB, please do the following:

1. Ensure you have the latest version of X-CTU installed (www.digi.com/xctu).
2. Ensure you have the latest available versions of ZB firmware by doing the following:
   a) Open X-CTU software to the "Modem Configuration" tab.
   b) Click "Download new versions…" button and select 'Web.'
   c) Click "Done" when the action is finished.
3. Open X-CTU software to the "PC Settings" tab.
4. Select the appropriate COM port and port settings (9600, 8, None, 1 are default), and choose Flow Control: Hardware.
5. If upgrading firmware on a module running API firmware, place a check in the "Enable API" checkbox.

6. Go to the "Modem Configuration" tab and select either "XB24-ZB" or "XBP24-ZB" from the "Modem:" pull-down menu, depending on whether you have an XBee or XBee-PRO module, respectively.

7. Select the desired firmware type from the "Function Set" pull-down menu (Coordinator API or AT, Router API or AT, or End Device API or AT).

8. Select the desired firmware version from the "Version" pull-down menu (the version at the bottom of the list is the latest).

9. Place a check in the "Always update firmware" checkbox.

10. Click the "Write" button.

XBee Adapters and XBee Sensors

These instructions pertain to any part number beginning "XA-B14…" or "XS-B14…"

To upgrade your XBee ZNet 2.5 Adapter to ZB, please do the following:

1. Ensure you have the latest version of X-CTU installed (www.digi.com/xctu).

2. For USB connect the Adapter to the PC that has the X-CTU software installed, then proceed to step 3.

3. For 232, 485, AIO and DIO Adapters

   a. Carefully open the Adapter case by inserting a flat screw driver blade into slots on each side of the enclosure and twisting.

   b. Remove the blue XBee module from the Adapter board.

   c. Place the XBee module on the RS-232 interface board that is connected to your PC.

   d. Leave power disconnected.
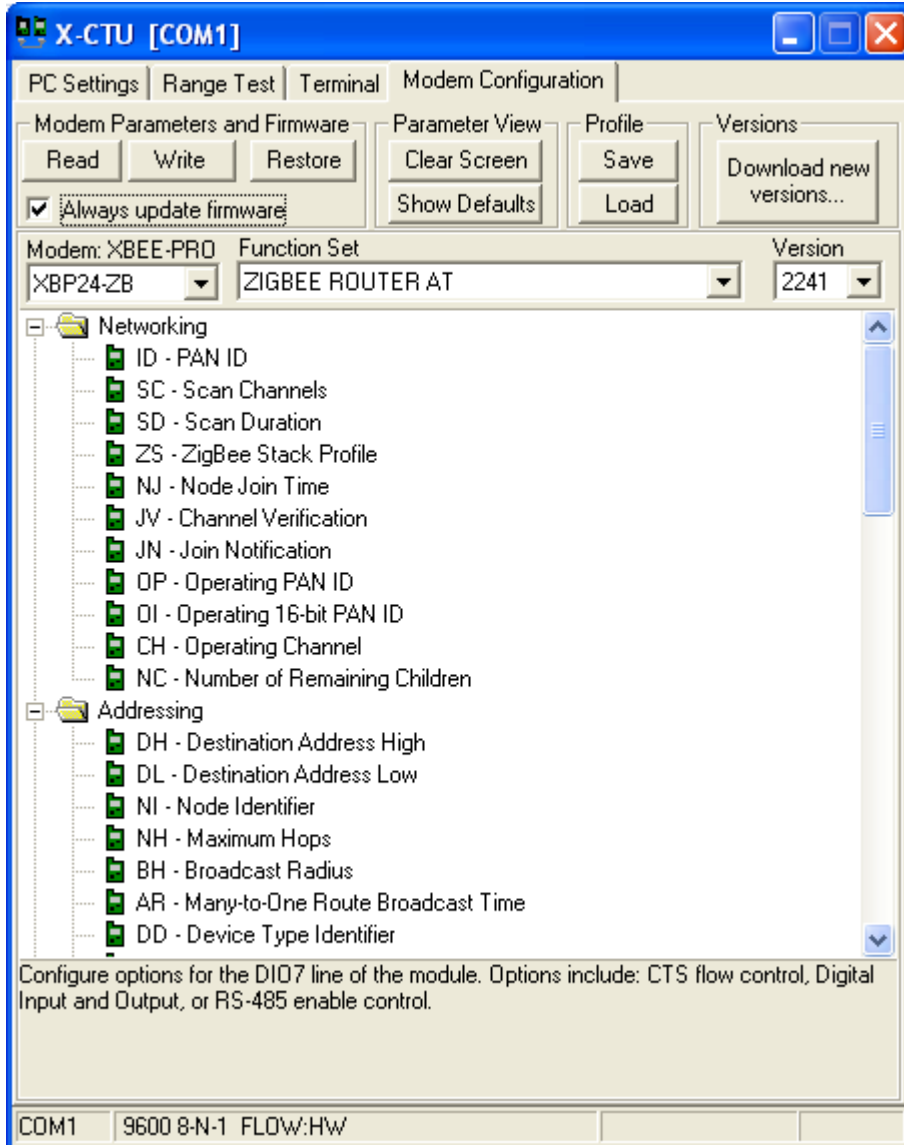
4. Launch X-CTU.

5. Go to "PC Settings" tab and set

a. Baud = 9600

b. Flow Control = HARDWARE

c. Data Bits = 8

d. Parity = NONE

e. Stop Bits = 1
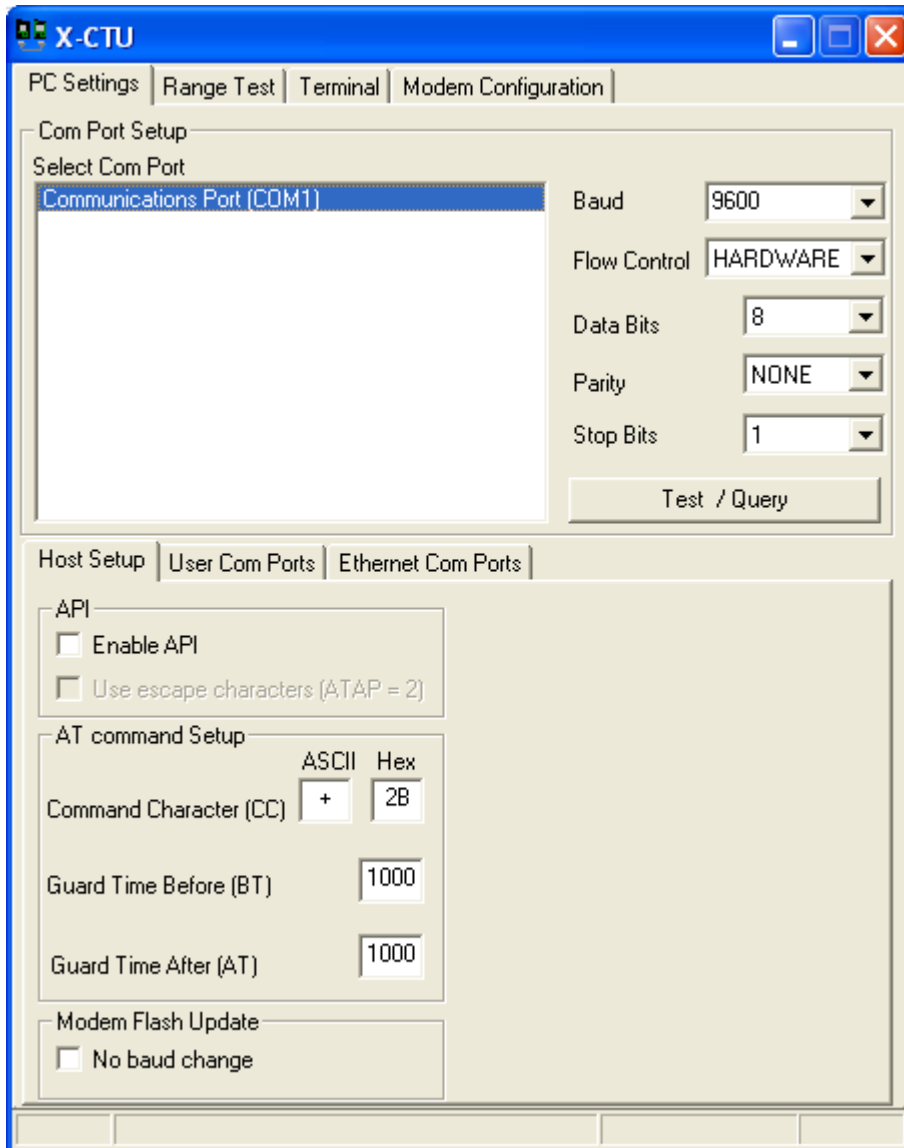
6. Go to "Modem Configuration" tab.

a. Select Modem = XB24-ZB

b. Select Function Set = ZigBee Router AT

  c. Select Version = 2241

  d. Enable "always update firmware"

 7. Click write.

 8. When action required comes up:

  a. Hold reset button.

  b. Apply power.

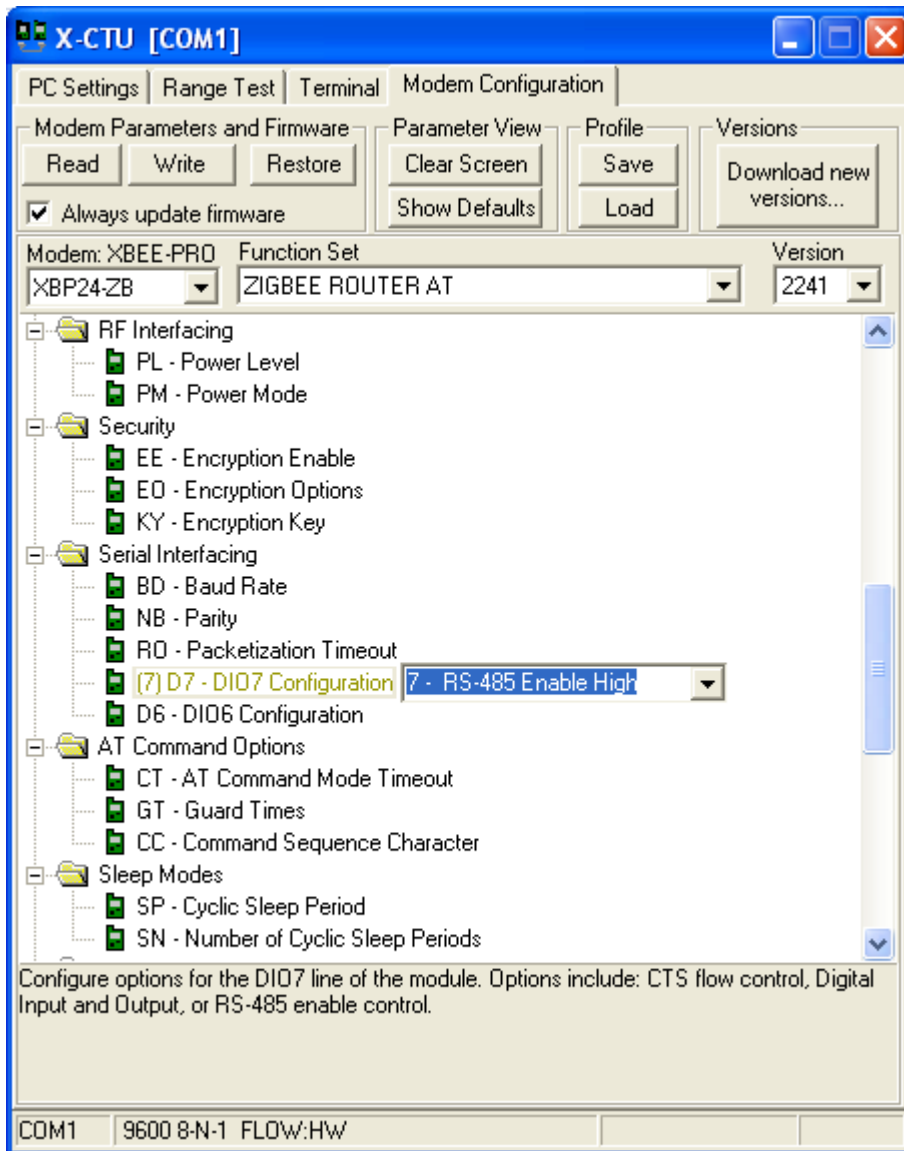 c. Release reset.

 9. Action required will close.

10. Install will complete.

11. If Adapter is a 485 Adapter, perform these steps, otherwise continue to next step.

    a. In Modem Configuration Tab

    b. Under Serial Interfacing: DZ = 7- RS-485 Enable High

    c. Under Addressing: DD = 20006
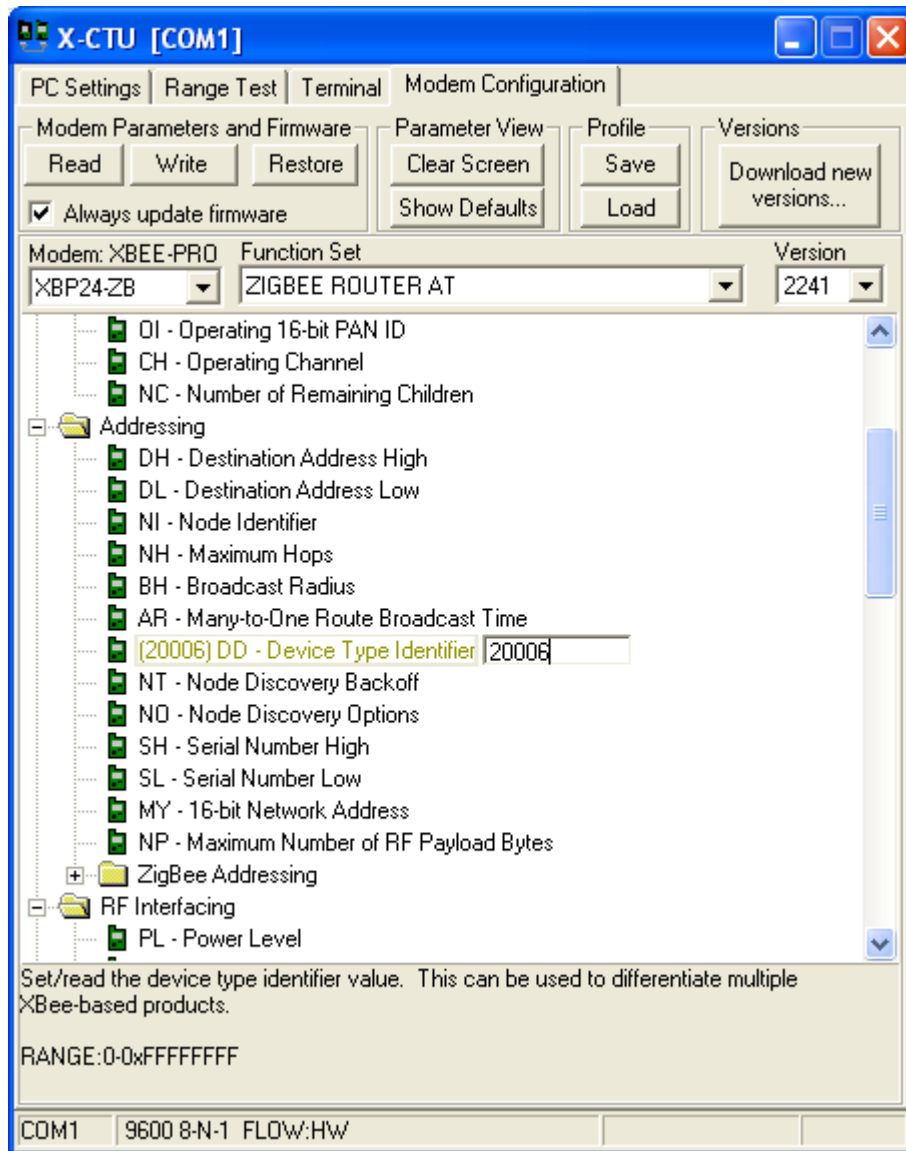
    d. Click Write.

12. Replace module in Adapter board and reassemble the case.

XBee Wall Routers

These instructions pertain to any part number beginning "XR-B14…"

All XBee Wall Routers are sealed as part of their UL certification, and are therefore not field upgradeable. To accommodate this, Digi has instituted a no-cost Return Merchandise Authorization (RMA) procedure for customers wishing to upgrade from ZNet 2.5 to ZB Wall Routers. This program will remain in effect until 1 July, 2009. This will require customers to return their old ZNet 2.5 Wall Router(s) before replacement product will be shipped.

Shipping: Digi will pay for domestic ground shipping for all Wall Router ZNet 2.5 returns. Customers requiring international or expedited means of shipping will need to pay the added expense involved.

ConnectPort X Gateways with ZNet 2.5

These instructions pertain to any part number beginning "X2-B…" "X4-B…" and "X8-B…"

This method requires ConnectPort X gateways to have 2.8.1.x or later EOS firmware. To update the XBee radio firmware:

1. Unzip the ZNet 2.5 to ZB Conversion Kit.zip file and then unzip the xbee_zb.zip file within it. This file can be found at: ftp://ftp1.digi.com/support/images/ZNet%202.5%20to%20ZB%20Conversion%20Kit.zip
2. Access the CP-X's Web UI and navigate to Configuration > XBee Network > Firmware Update.

3. Click the browse button, and find the directory where you unzipped the xbee_zb.zip file, and select either XB24-ZB_2141.ebl for an XBee module, or XBP24-ZB_2141.ebl for an XBee-PRO module, depending on which type of module is in your CP-X gateway.

4. Click the "Update" button and watch the progress indicator.

5. When the update is complete, you'll see status "Firmware update successful" at the top of the screen.
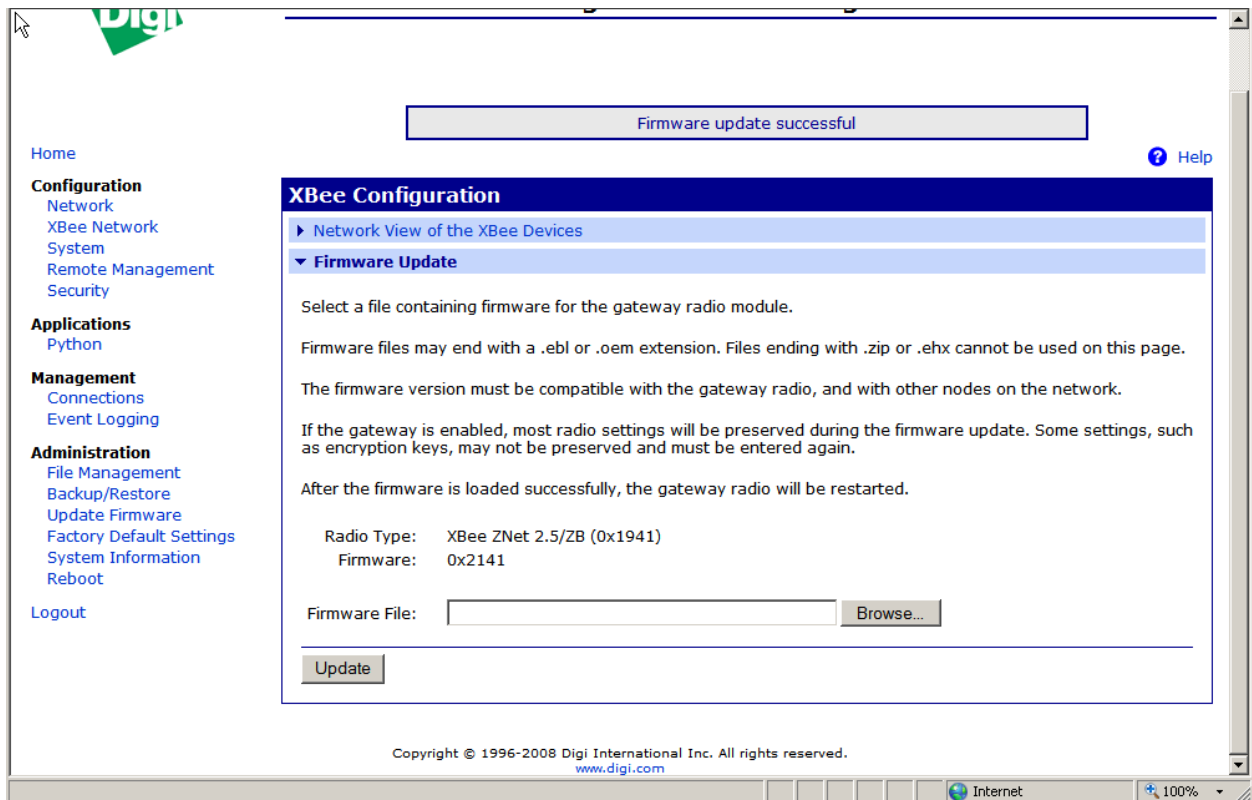
6. Going back to Configuration > XBee Network, you should now see your ZB devices listed, provided the PAN ID and channel of the rf module in the CP-X matches the PAN ID and channel of the modules in your PAN.