Configuring the JLCooper Ethernet Controllers

The JLCooper Ethernet Controllers uses TCP/IP to communicate with a host device such as a computer. This document applies to the MCS-Ethernet Interface 2, the ES-450J Ethernet, the KeyShot with the Ethernet Interface and the RackShot with the Ethernet Interface. It does not apply to the original MCS-Ethernet Interface, the MCS-ClipShot with the Ethernet Interface, the MCS-Spectrum with the Ethernet Interface, the MCS-QuickShot with the Ethernet Interface or, the eBox. Those products are covered in other documents.

> *Note: Do not use this driver concurrently with the USB Virtual COM Port or any other device that uses a virtual COM port.*

There are two basic steps to setup the controller to communicate with the host:

- Configuring the controller.
  This involves setting the IP address and, optionally, TCP port.
- Installing and configuring the host driver.
  This involves setting the Windows driver to associate a COM port with the IP address and TCP port of your controller. This is not necessary for applications that directly communicate (without using a COM port) with the controller. Please check the documentation that came with your system or software.
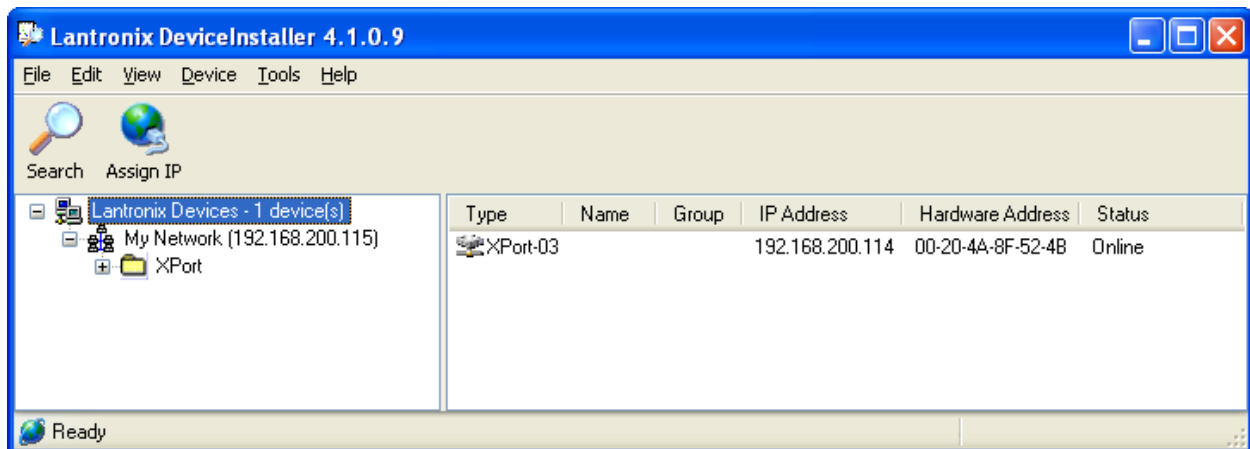
> *Note: Before configuring your JLCooper Ethernet based controller, you will need a unique IP address for each controller you wish to use. Your network administrator can supply this to you.*

Configuring the JLCooper Ethernet Controllers

Using Device Installer 4.x to configure the Ethernet Interface

1. Install the Lantronix Device Installer v4.x.x.x and Redirector
   This is located on the Install CD that came with the product. Alternately, it can be downloaded from the JLCooper Support Site at: http://jlcooper.com/pages/downloads.html.

2. Launch Device Installer.
   Press Search. The Device Installer application will look for all the Lantronix products on your network. The factory default of the Ethernet Interface is 192.168.200.114. If you do not see this, you will need to change the IP address of your computer to 192.168.200.nnn (for example, 192.168.200.1) and subnet to 255.255.255.0 so the computer can communicate with the controller.

   Also, if there is more than one Ethernet Interface on the network, there will be an IP address conflict that will need to be resolved before using the units.
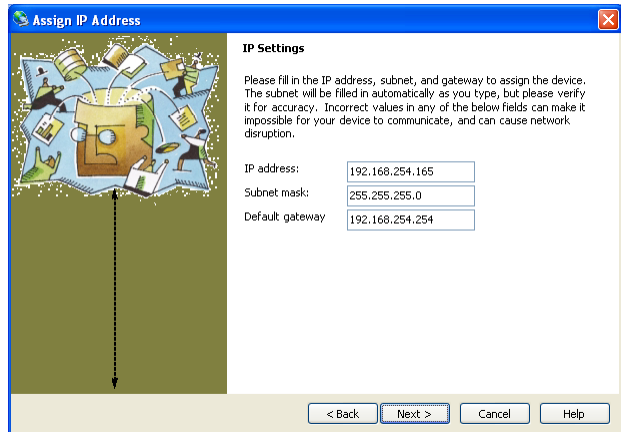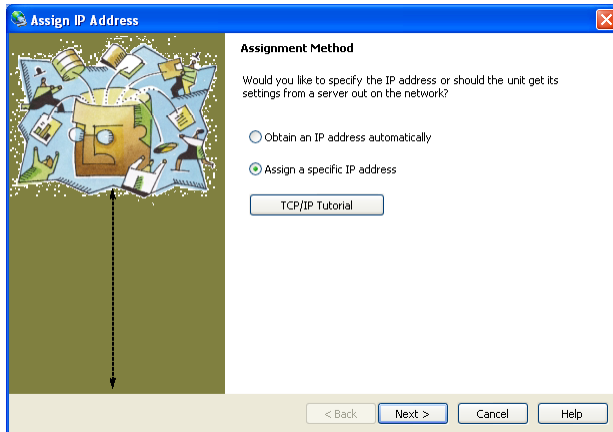
Configuring the JLCooper Ethernet Controllers

3. Assign an IP Address to the Controller.
    The Ethernet interface in your JLCooper Controller is capable of automatically obtaining an IP address from a DHCP server. If you have a DHCP server on your network, you will see a DHCP assigned IP address. Because it is possible for DHCP assigned IP addresses to expire and get assigned to other devices, it is strongly recommended that you manually assign a fixed IP address to the controller.

    In the Device Installer window, highlight the item that matches the Hardware (MAC) Address of your controller.
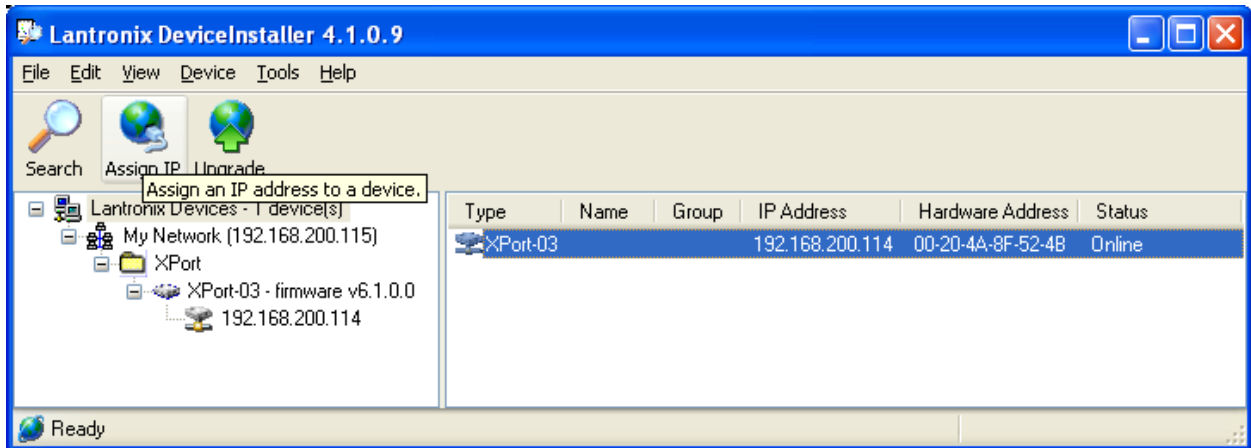
Click on Assign IP and follow the directions in the following windows. Enter your IP address, Subnet Mask and Default Gateway in the text boxes. You can assign any valid IP address to the Ethernet interface. In the example below, the IP address is set to 192.168.254.165, the Subnet Mask is 255.255.255.0 and the Default Gateway is 192.168.254.254.

Configuring the JLCooper Ethernet Controllers

Click Assign then Finish.
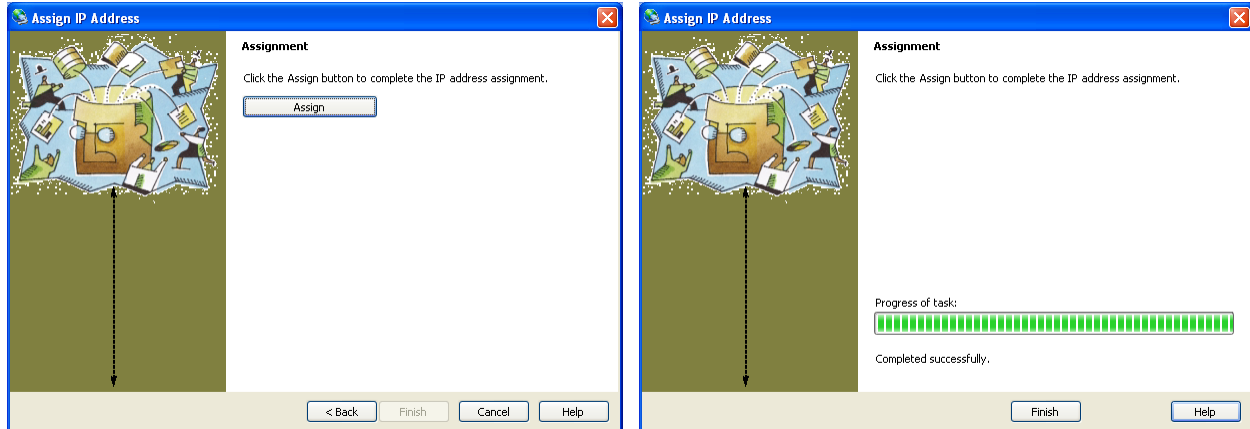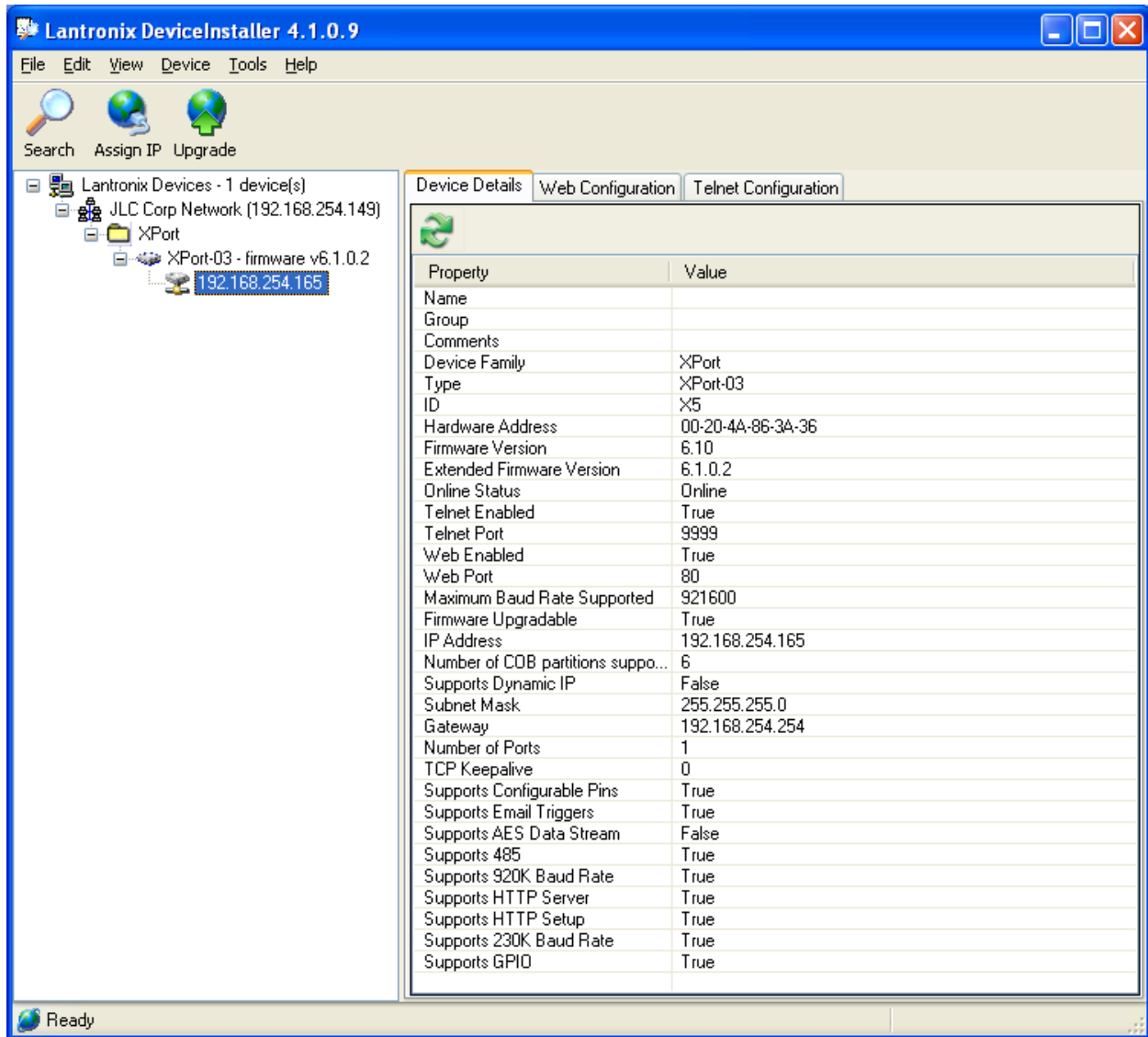
Note: If you change the IP address to an address that is not in your subnet, you will not be able to connect to the Ethernet Interface until you change the IP address of your computer to an address that is in the subnet range of the Ethernet Interface.

4. Configure device settings.
    In the Device Installer window, highlight the item that matches the Hardware (MAC) Address of your controller.
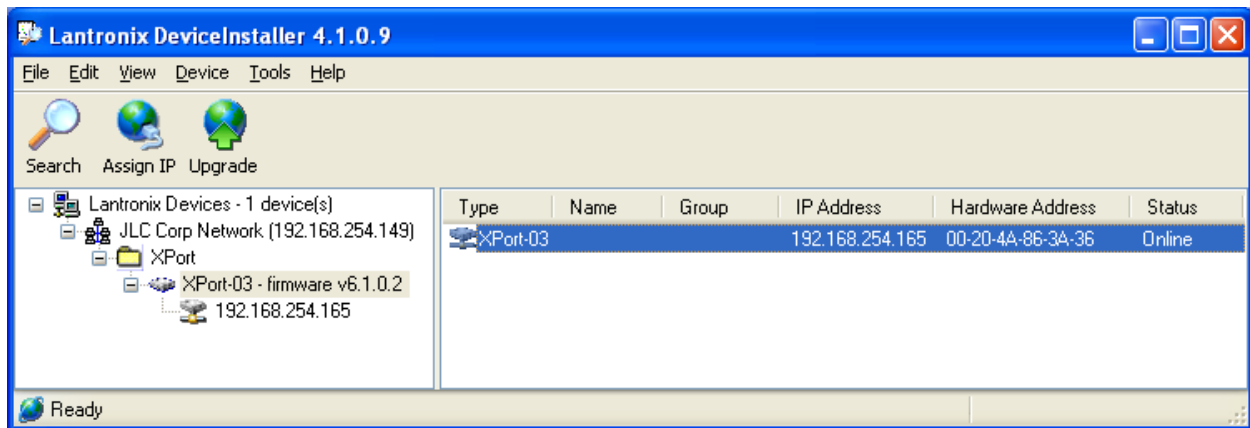
Configuring the JLCooper Ethernet Controllers

Double click the item and the Device Details window will open as shown below. Click on the Web Configuration tab.

Configuring the JLCooper Ethernet Controllers

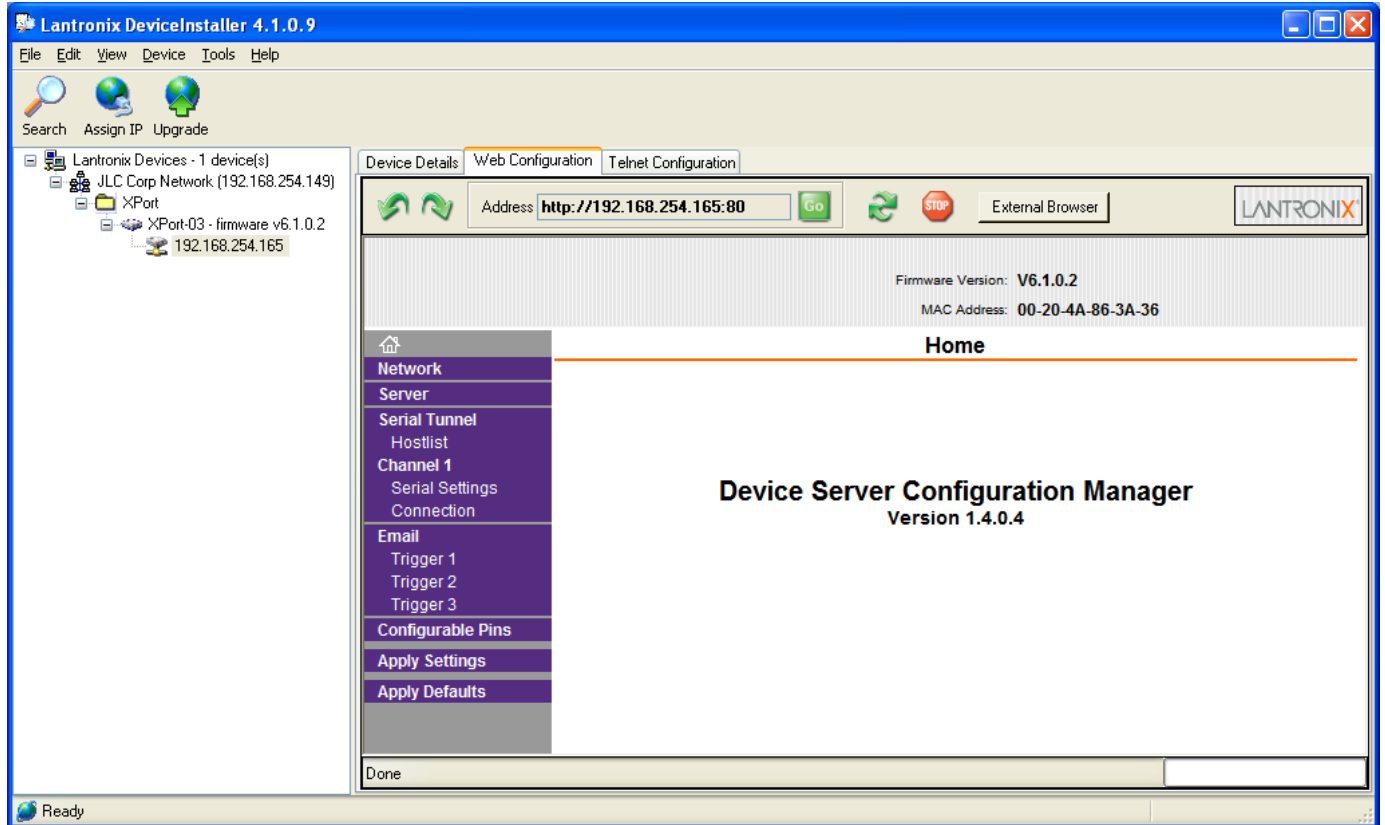A small web browser window will appear. Click the Go button.
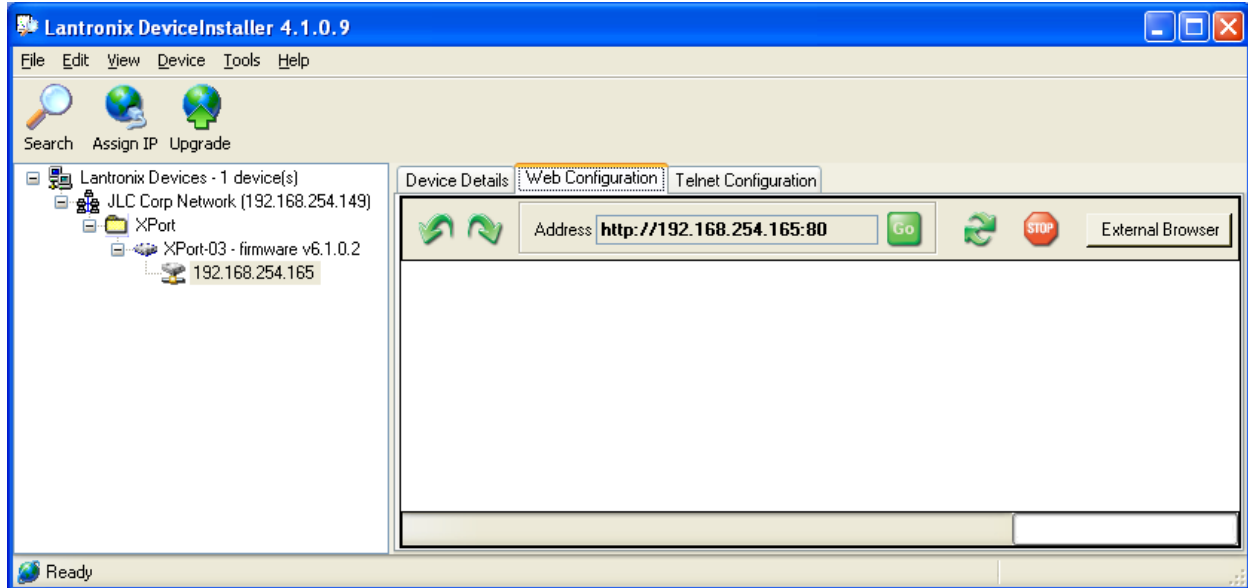
A password dialog box will appear. Click OK with a blank User name and password.
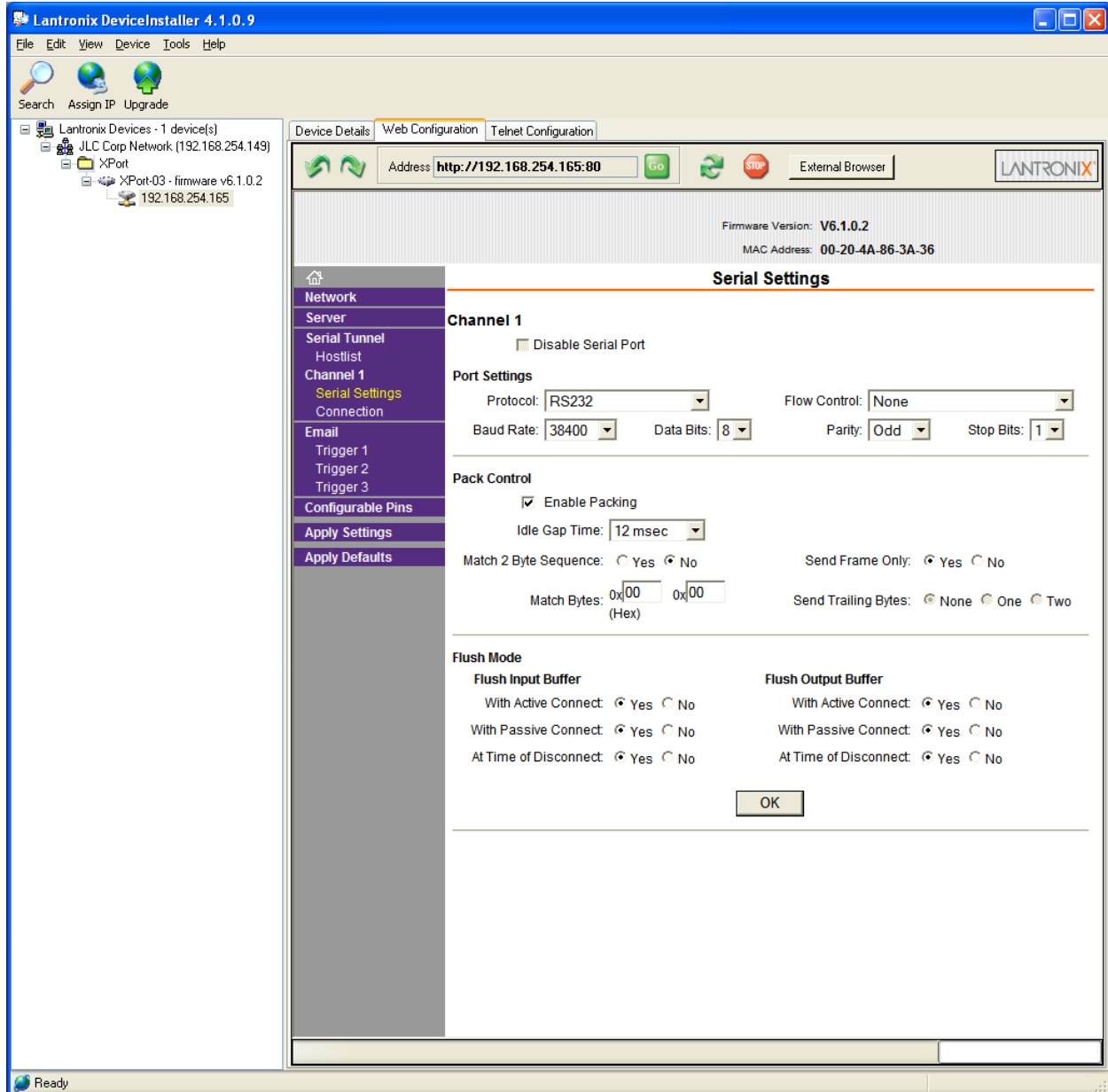
Configuring the JLCooper Ethernet Controllers

The web based configuration page will appear. Click on the Channel 1 Serial Settings link.

Configuring the JLCooper Ethernet Controllers

The Serial Settings page will appear. Configure the page as shown below.

Note: for the RackShot and KeyShot, use Odd Parity. For the ES-450JE, ES-450SPE and MCS-3000XL use No Parity.

Click OK.

Configuring the JLCooper Ethernet Controllers

If the TCP port or any other TCP/IP settings need to be configured for your specific environment, click the Channel 1 Connections link.
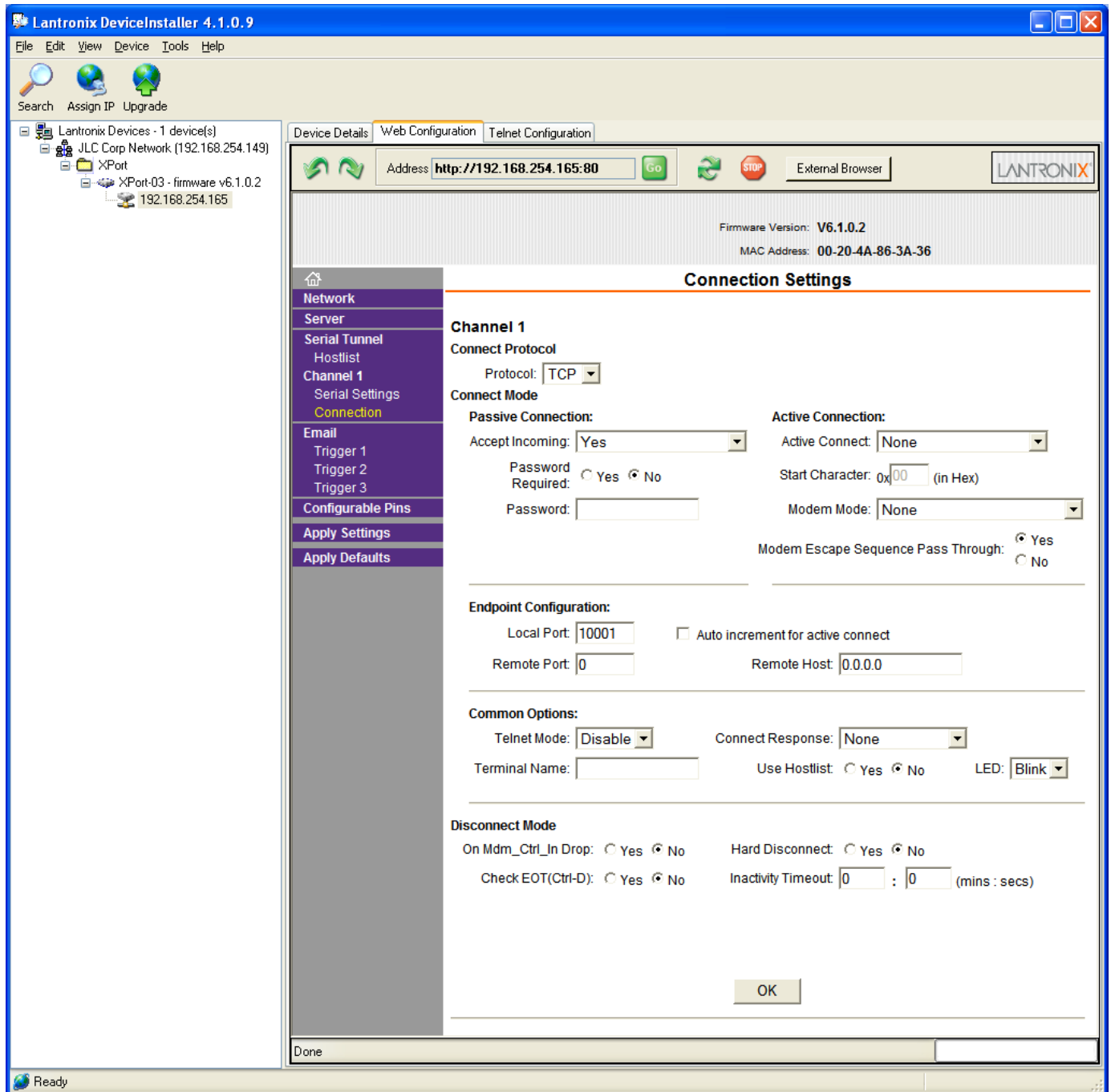
Click OK.

Configuring the JLCooper Ethernet Controllers
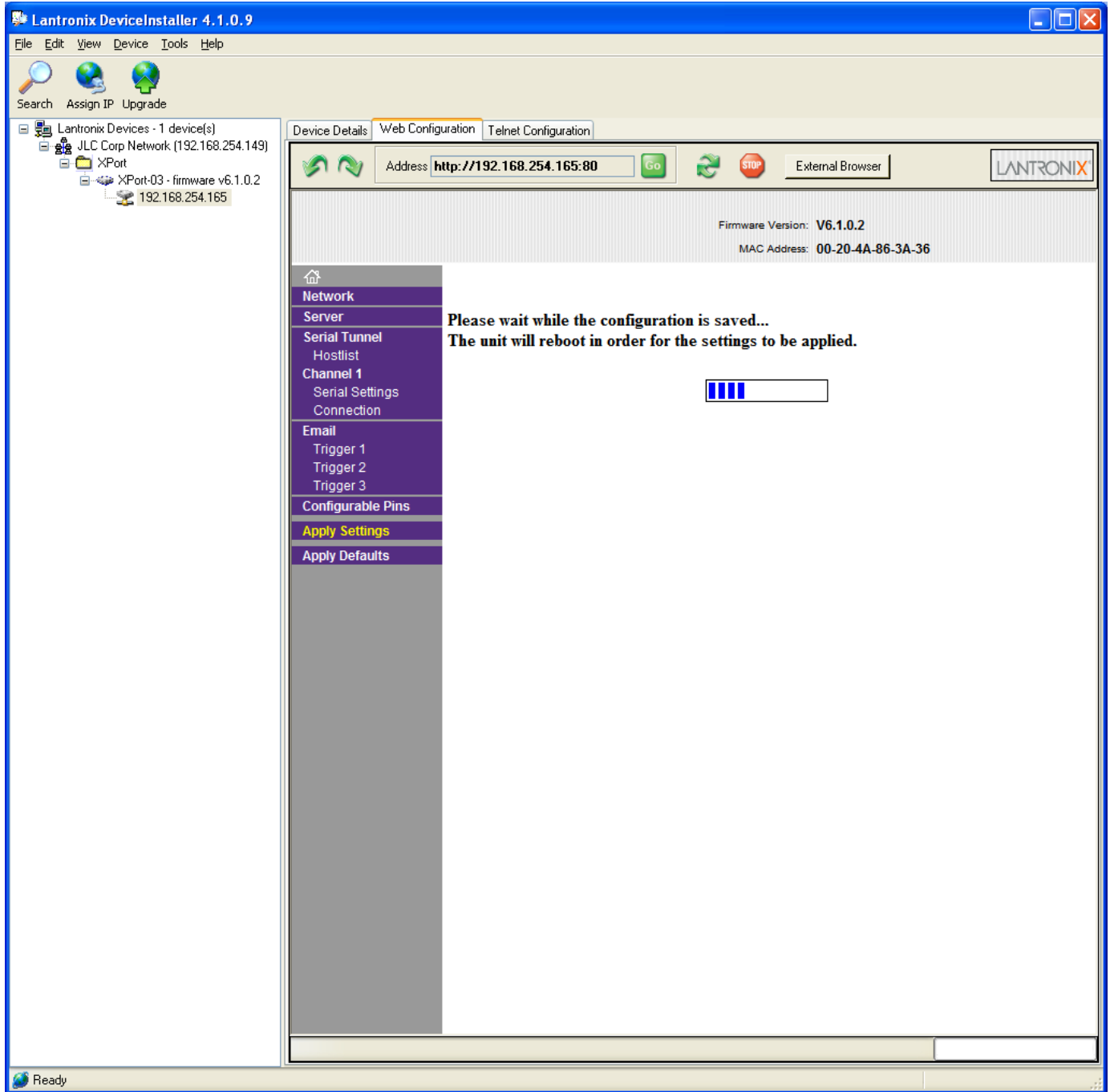
After configuring the Ethernet Interface, click on the Apply Settings link.

Configuring the JLCooper Ethernet Controllers

The Ethernet Interface will store the settings in nonvolatile memory and restart.

Configuring the JLCooper Ethernet Controllers

After the Ethernet Interface restarts, the device will return to the Home Page. The Ethernet Interface is now ready to use.
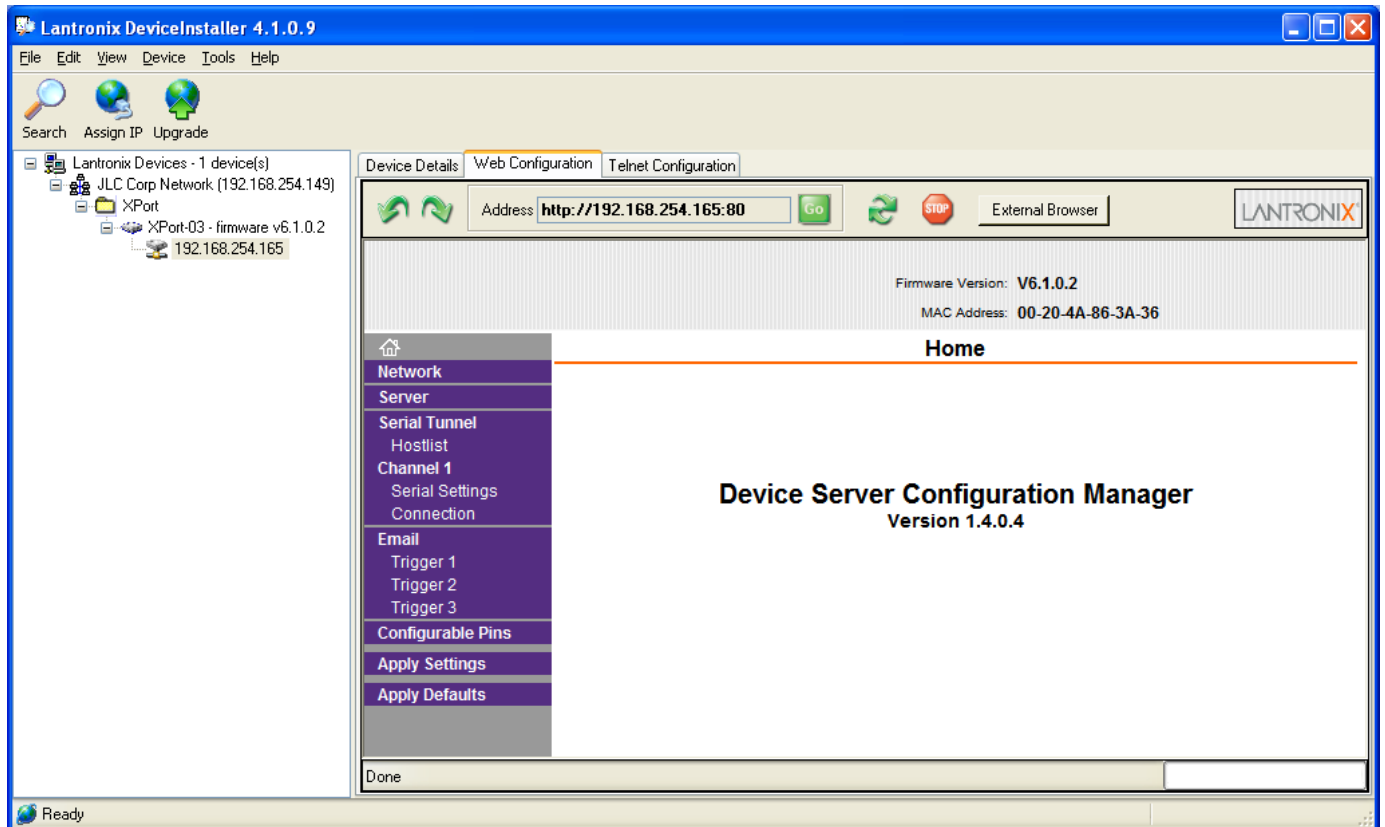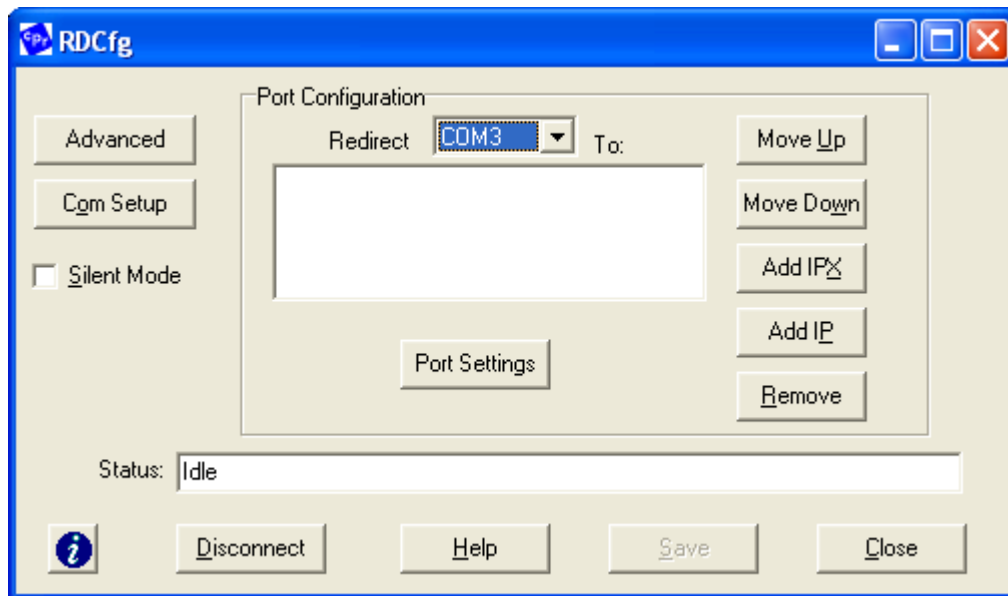
Configuring the JLCooper Ethernet Controllers

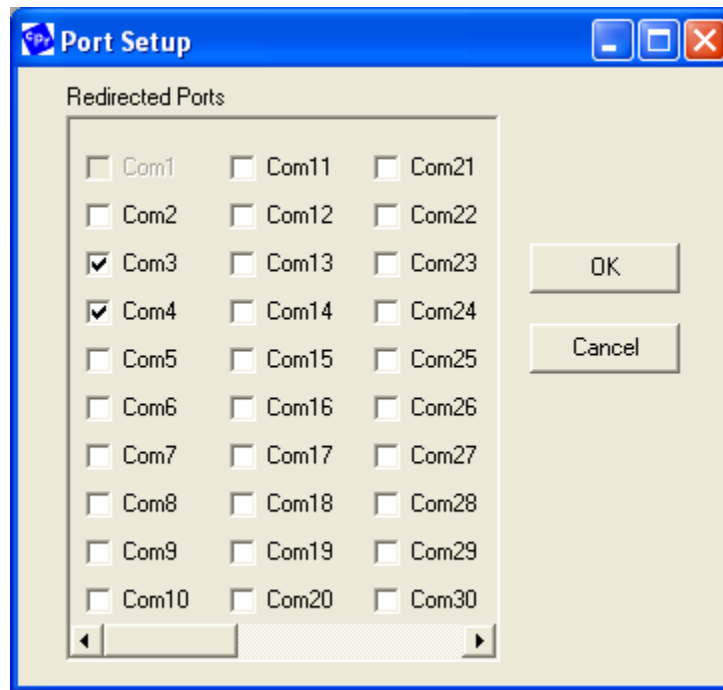## Configuring the COM port Redirector

The following section details setting the Windows driver to associate a COM port with the IP address and TCP port of your controller. This is not necessary for applications that directly communicate (without using a COM port) with the controller. Please check the documentation that came with your system or software.

1. Launch the Lantronix Redirector Configuration.

2. Assign a COM port to the Ethernet Controller.
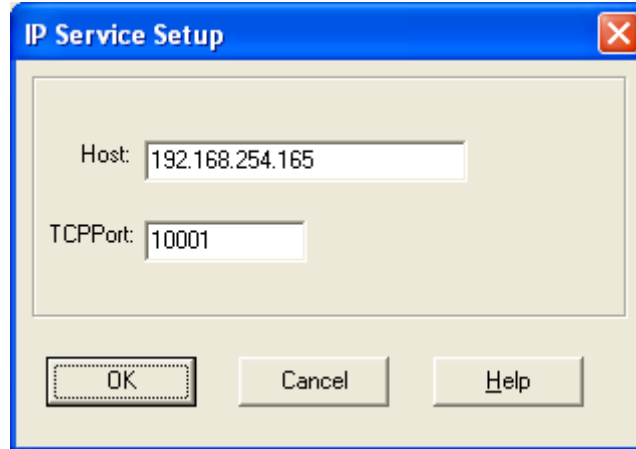   Click on the Com Setup button.
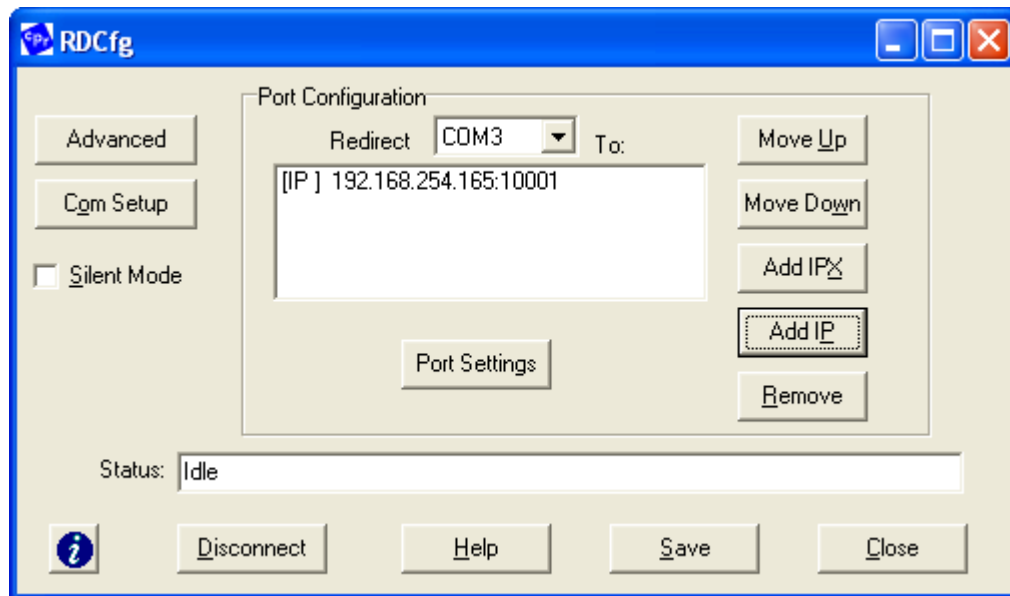
Configuring the JLCooper Ethernet Controllers

Select the COM port you want your Ethernet controller to appear as. Ports that are already used by other devices are grayed out. Click OK.

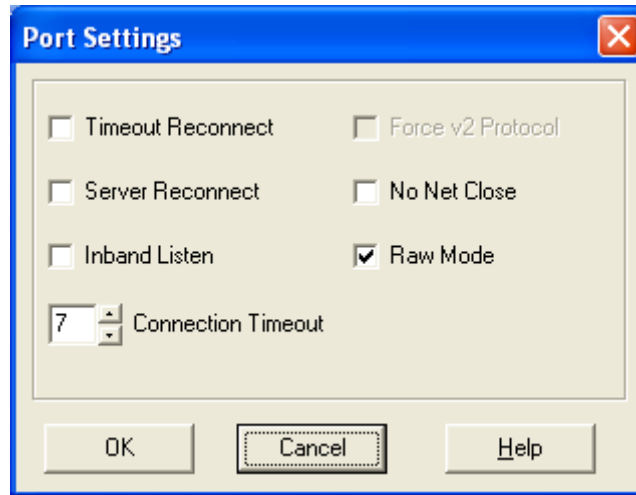# Configuring the JLCooper Ethernet Controllers

3. Click Add IP.

Enter the IP address and TCP port of your Ethernet controller. This is the Local Port you entered in the XPort Installer or Device Installer. If you configured a different port number in the XPort Installer or Device Installer application, enter that number in the TCPPort box. Click OK.


This main window will now have an entry in the Port Configuration window.

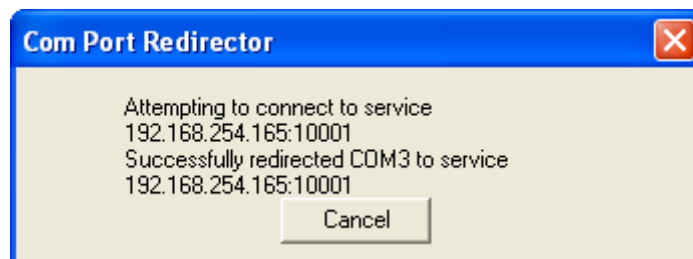# Configuring the JLCooper Ethernet Controllers

4. Click on Port Settings. Check the Raw Mode box. Click OK. Click Save in the main window.

5. Your Ethernet controller is now configured to appear as a COM port. You can verify this by selecting the COM port associated with your Ethernet Controller. A dialog box will appear to let you know that the driver is attempting to establish a connection with the Ethernet Controller.
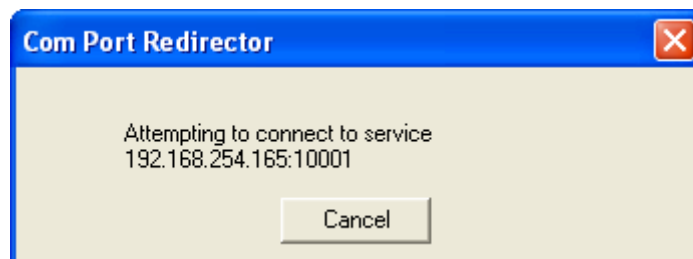
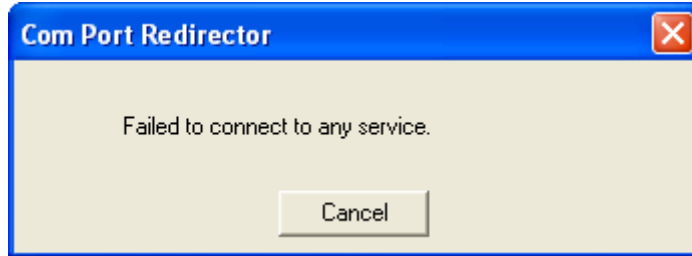If a connection can be made, the following dialog box will appear.

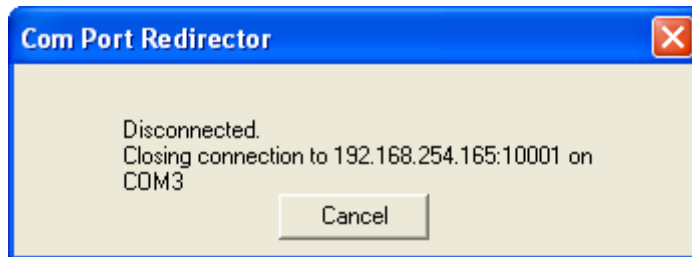Additionally, the status box in the Redirector window look like this:
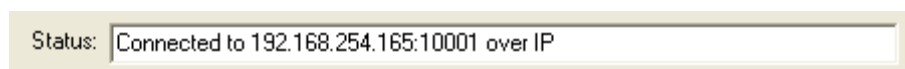
Configuring the JLCooper Ethernet Controllers

If the attempt was not successful, the following dialog box will appear:

Lastly, the following dialog box will appear when the COM port is closed:

Note: These dialog boxes can be disabled by placing a check in the Silent Mode box in the Redirector main window.

Configuring the JLCooper Ethernet Controllers

## Using Device Installer 3.x to configure the Ethernet Interface

1. Install the Lantronix Device Installer and Redirector
    This is located on the Install CD that came with the product. Alternately, it can be downloaded from the JLCooper Support Site at: http://jlcooper.com/pages/downloads.html.

2. Launch Device Installer.
    Press Search. The Device Installer application will look for all the Lantronix products on your network. If you do not see this, you will need to change the IP address of your computer to 192.168.254.nnn so the computer can communicate with the controller.
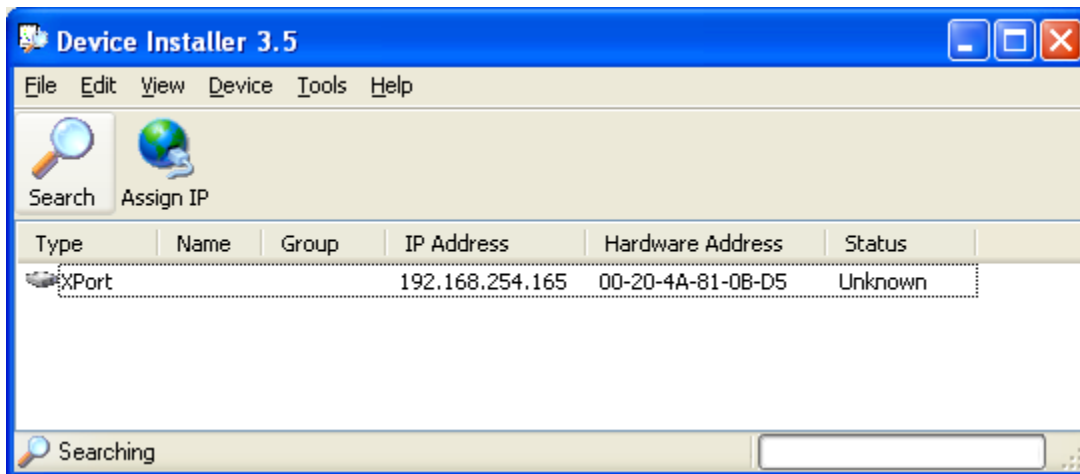
3. Assign an IP Address to the Controller.
    The Ethernet interface in your JLCooper Controller is capable of automatically obtaining an IP address from a DHCP server. If you have a DHCP server on your network, you will see a DHCP assigned IP address. Because it is possible for DHCP assigned IP addresses to expire and get assigned to other devices, it is strongly recommended that you manually assign a fixed IP address to the controller.

    In the Device Installer window, highlight the item that matches the Hardware (MAC) Address of your controller. Click on Assign IP and follow the directions in the following windows. You can assign any valid IP address to the Ethernet interface.

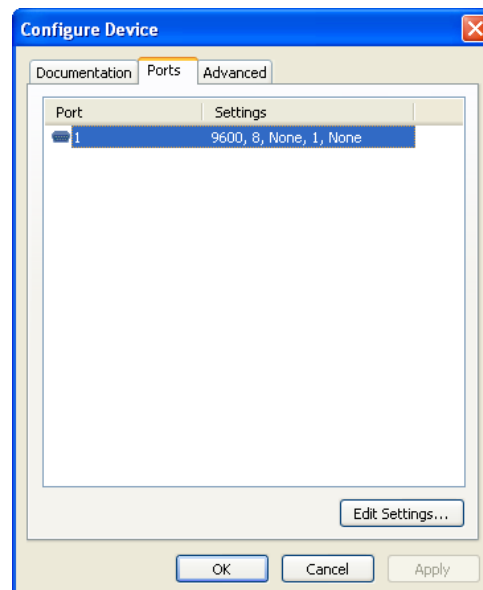# Configuring the JLCooper Ethernet Controllers
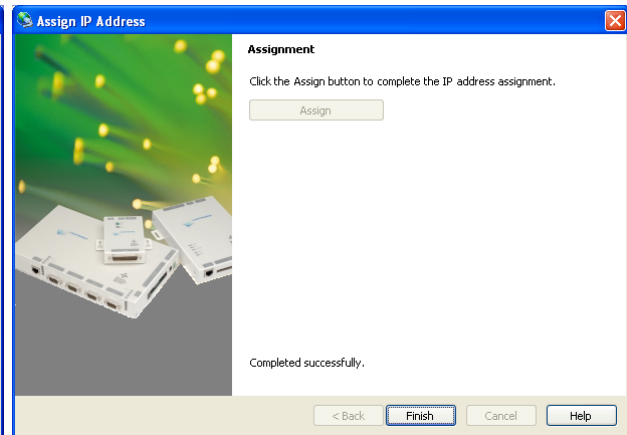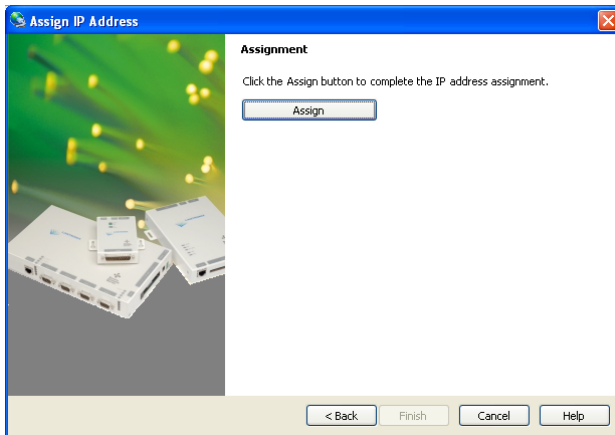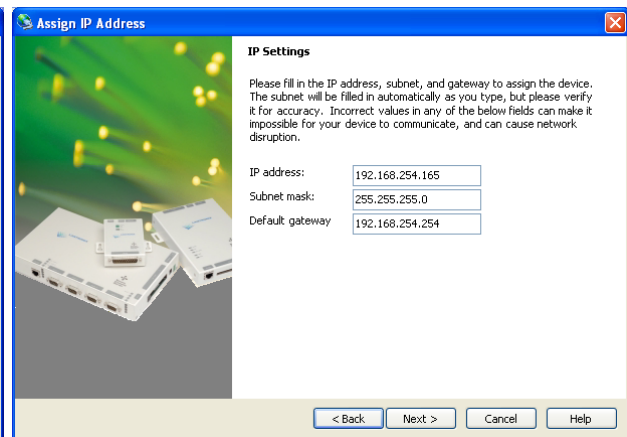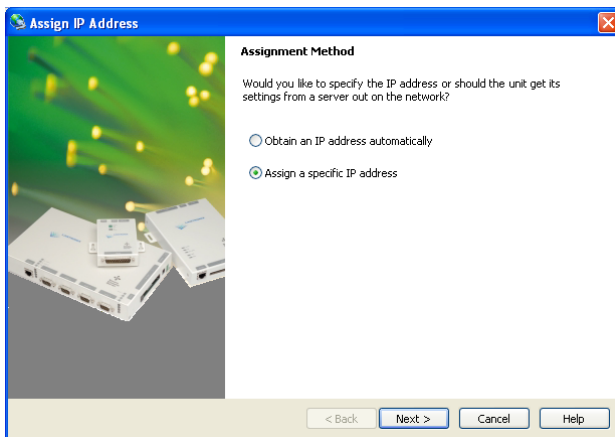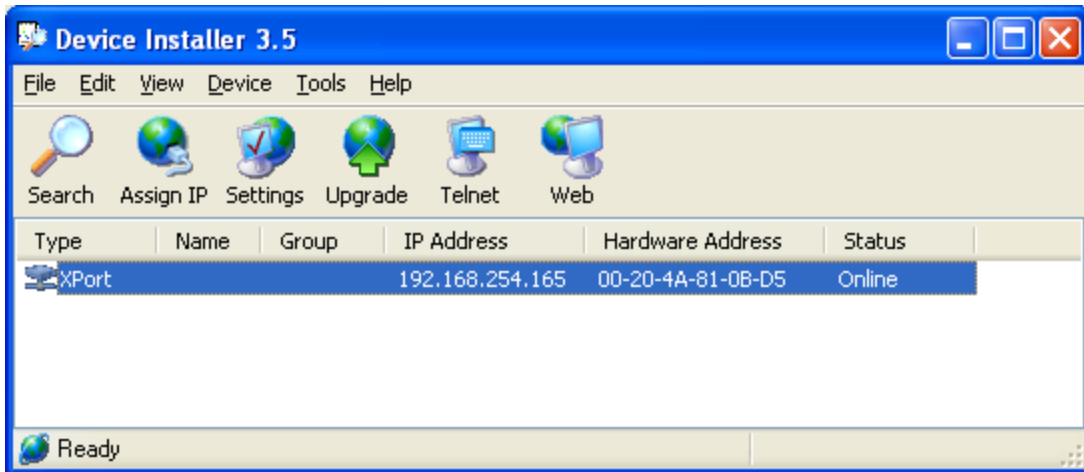
4. Configure device settings.
    In the Device Installer window, highlight the item that matches the Hardware (MAC) Address of your controller. Click on Settings.

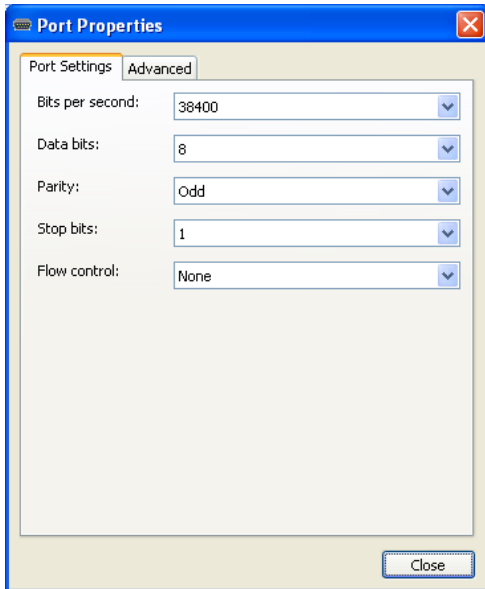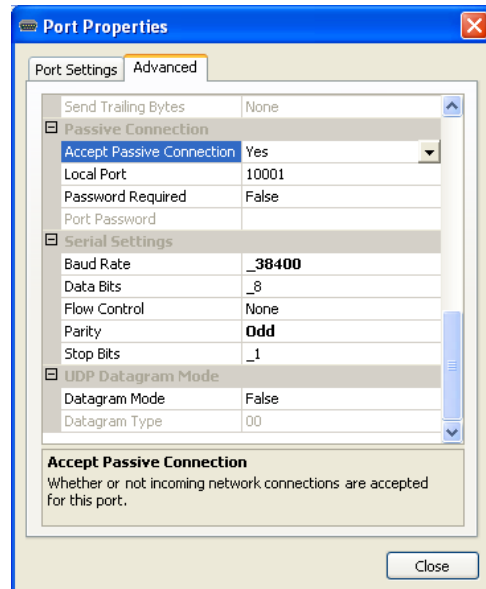# Configuring the JLCooper Ethernet Controllers
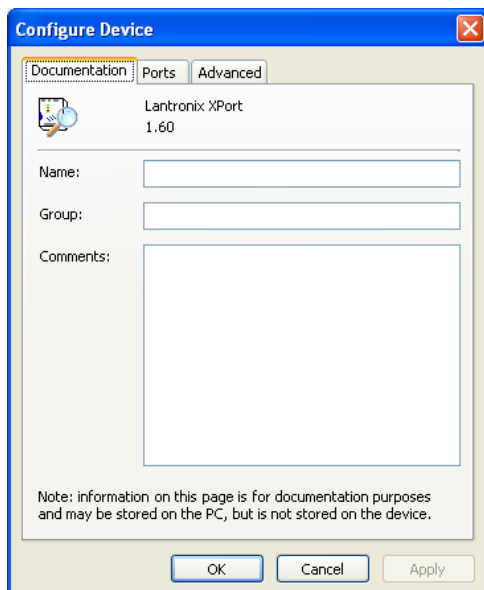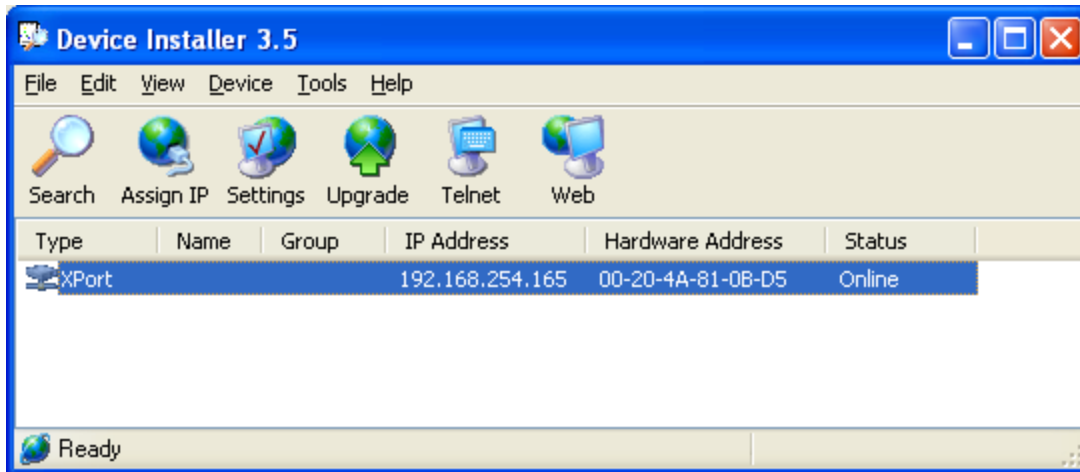
Click the Ports tab.

Highlight Port 1 and click on Edit Settings…

Configuring the JLCooper Ethernet Controllers

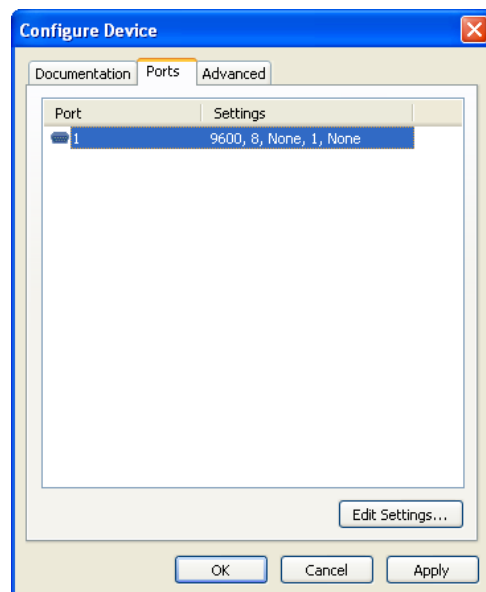Confirm the settings:
Bits per second =38400
(115200 for MCS-Ethernet Interface)
Data bits = 8
Parity = None
Stop bits = 1
Flow control = None

Click on the Advanced tab and
confirm the settings:
Accept Passive Connection = Yes
Local Port = 10001
(You can use any port you wish)
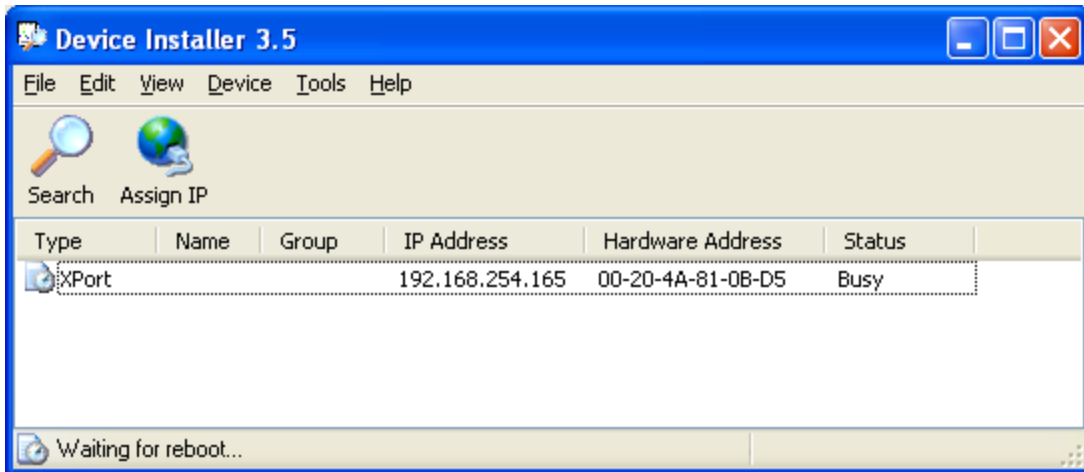Password Required = False
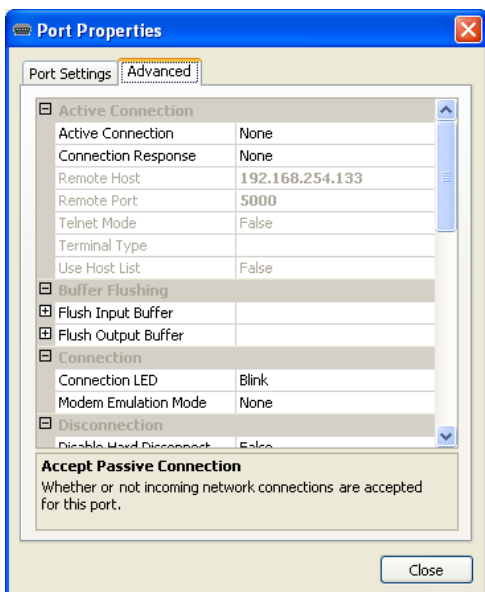
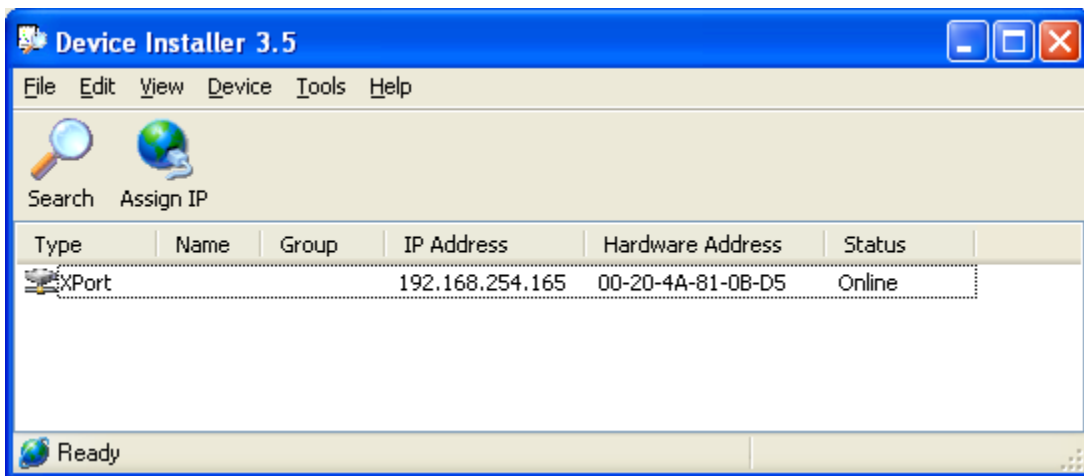Confirm the settings:
Active Connection = None

Click Close

Click OK

Configuring the JLCooper Ethernet Controllers

The Ethernet Interface in the controller will store the settings and reboot.

5. The controller is now configured. The Device Installer application can be closed. You can now communicate directly with the Ethernet Interface if your application supports it. Alternately, you can use the virtual com port driver for Windows called Redirector. Configuring the virtual com port driver is detailed in the next section.