DATA ACQUISITION
Hints and Tips

Configuring the NetPort Ethernet to RS232 Adaptor

References
[1]   XPort_DeviceInstaller_UG_900-310.pdf – Device Installer User Guide:-http://www.lantronix.com/pdf/XPort_UG.pdf

Overview
The main aim of this document is to specify the settings required for the NetPort to enable it to connect to your Grant logger via an Ethernet network.

As the installer program knows the Netport device as 'Xport', the term 'Xport' may be used interchangeably in this document.

Prerequisites

Before proceeding with the installation you will require all of the following:-

-    NetPort device (Grant part number SQ20A801 or SQ10A801).
-    Lantronix Windows 'Installer' program version 3.3. Provided on your SquirrelView disk (V2.2 onwards) and installed to your SquirrelView installation directory.
-    Networked PC that is able to access the network on which you intend to install the NetPort device.
-    Network connection at where you wish the NetPort device to reside.
-    For SQ400, 800 and 1000 series loggers, a 9 pin d-type to mini-din serial lead (Grant part no LC68, supplied with the NetPort kit).

Note: In case of any problems connecting to a Logger through a network, please seek assistance from your IT administrator before contacting Grant Instruments or reseller.

For more detailed information relating to the NetPort device the reader should refer to the Lantronix Device Installer User Guide document [1].

Installing the 'Installer' Application

The Lantronix Installer program referred to in the remainder of this document must be installed; this application will allow you to configure the device.

The installation program can be found in the '\Drivers\NetPort' folder in your SquirrelView installation directory (also on the Resource CD).

To install:

1. Go to the following directory:- \Program Files\SquirrelView\Drivers\NetPort

2. Double click on the file XPortInstaller.msi

   Note: if a message appears asking you to install the .NET framework you must do the following first.
   a. Double click on the file dotnetfx.exe**.**
   b. Once installation has completed repeat step 2

3. Follow the instructions in the XPort installer wizard.

4. Upon completion of the installation click **Close** to exit.

Configuring the Device

Connecting the NetPort Device

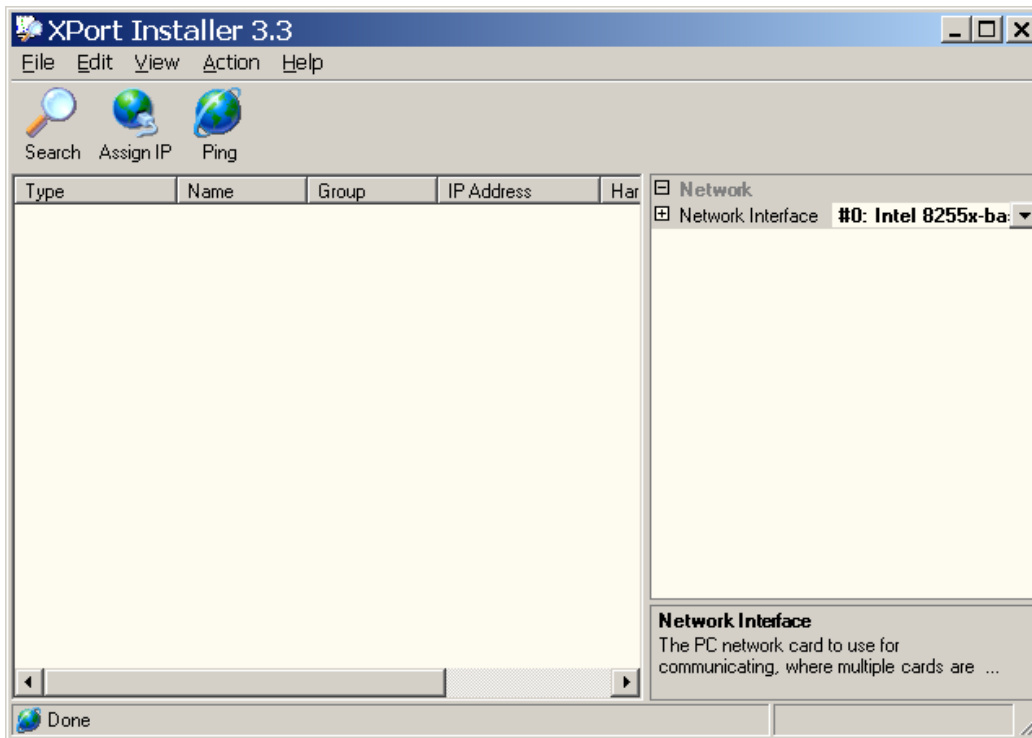Connect the device between your Squirrel and Network as follows:-

1. Connect an Ethernet cable to the NetPort port labelled '10/100Mbit/s Ethernet'
2. Connect the NetPort 9-pin D-Type serial connector to the logger's serial port. A LC68 will also be required if using a SQ400, 800 or 1000 series (see Prerequisites).
3. Plug in the supplied power supply to either of the 'DC Power' connectors on the NetPort.

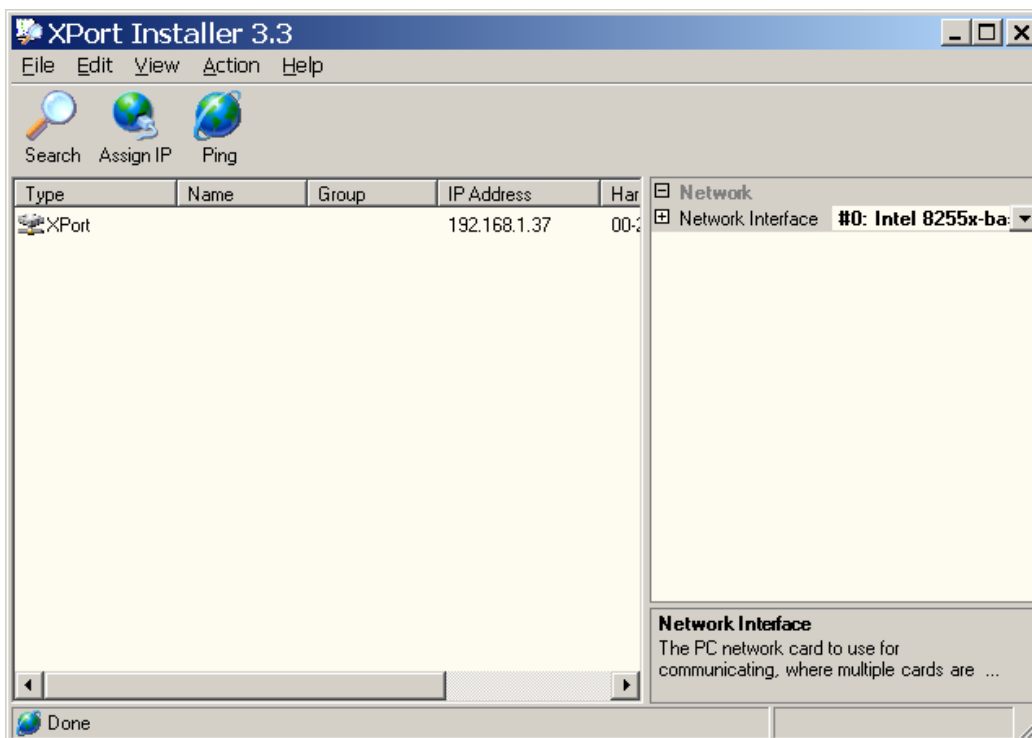### Running the Installer Application

To start the installer program. Click the **Start** button on the task bar. Then click **Programs** (**All Programs** in Windows XP). One of the folders listed should be named **Lantronix**, click on this folder followed by **XPort Installer**. In the list displayed click on **Installer.**

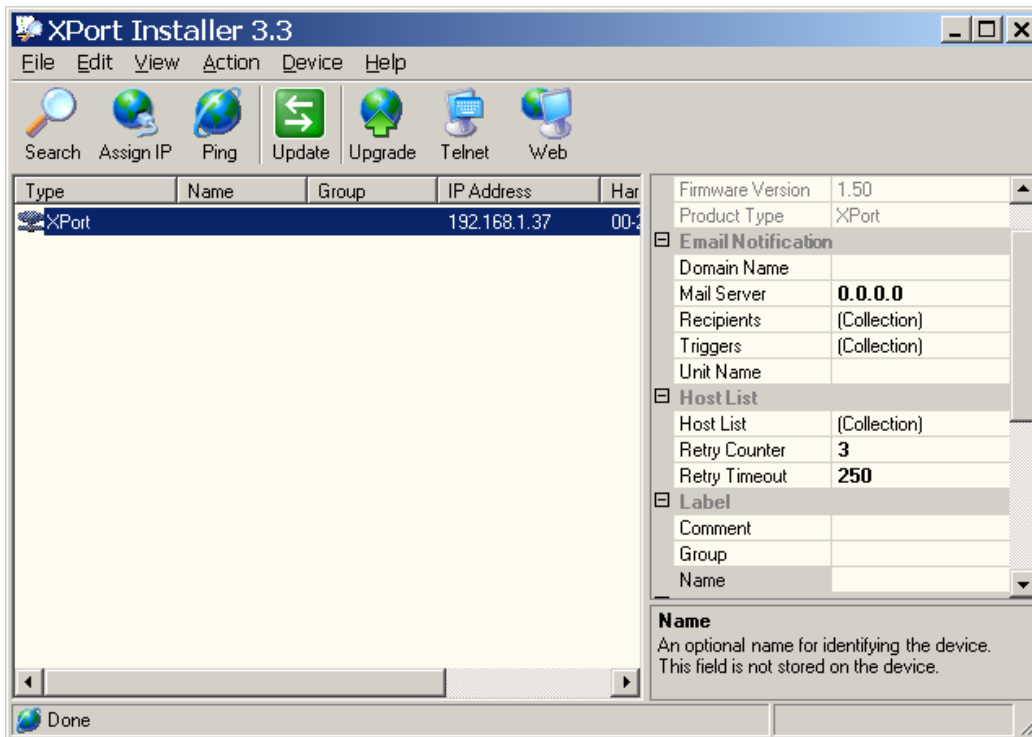- Ensure that the 'Network Interface', selectable at the top of the right hand Window, is set to the Ethernet controller of your PC.

- Press the Search button. This will search your local network for any XPort devices. When found the devices will be listed in the left hand window
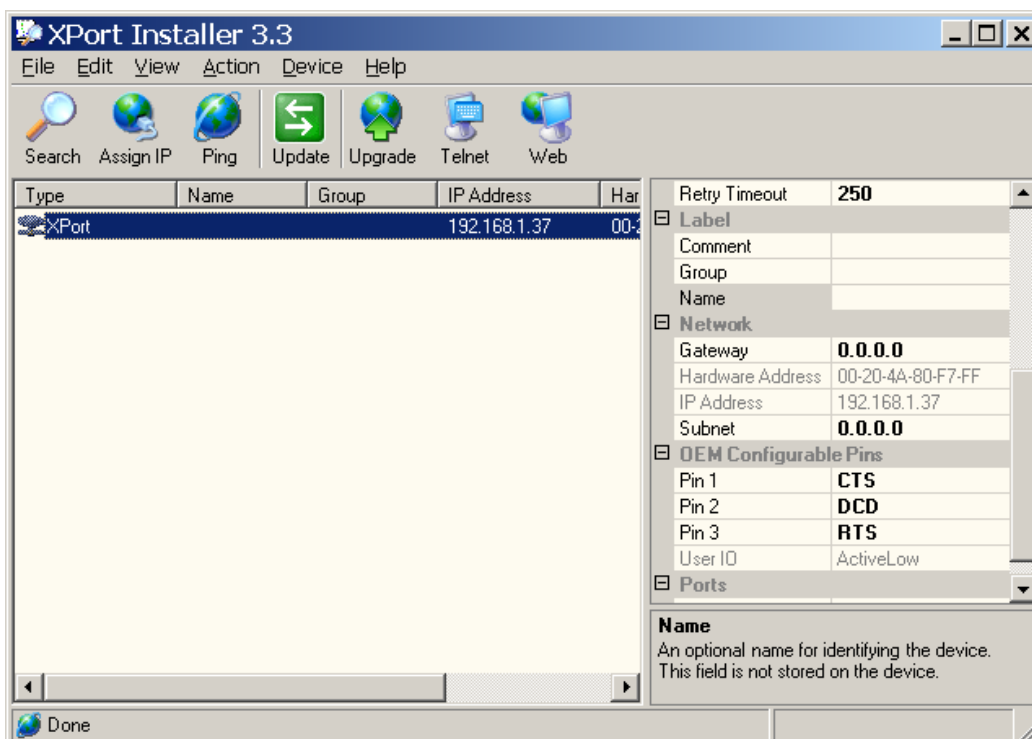
- Select the device you wish to configure from the list.

- In the right hand window move the slider down and until you see the 'Network' settings

- Before proceeding you must speak to your network administrator to get the following information regarding the network you will be connecting the XPort device to:
  - o The network gateway
  - o The network subnet
  - o An available IP address.
    - This should ideally be a static IP address.
    - The second best would be an assigned IP address.
    - The least favorable would be a leased IP address with a significant timeout.
    - One of the above must be found. Failure to do so could result in problems communicating with the logger in the event of a reset of the XPort device caused by a power failure.

- When you have an IP address from your network administrator as detailed above note it down here __.__.__.__. This will be required when setting up communications from within SquirrelView.

- If the IP address given to you by your network administrator is different from the one in the column titled 'IP Address' above you must perform the following additional step:

  - o Click the Assign IP address button.
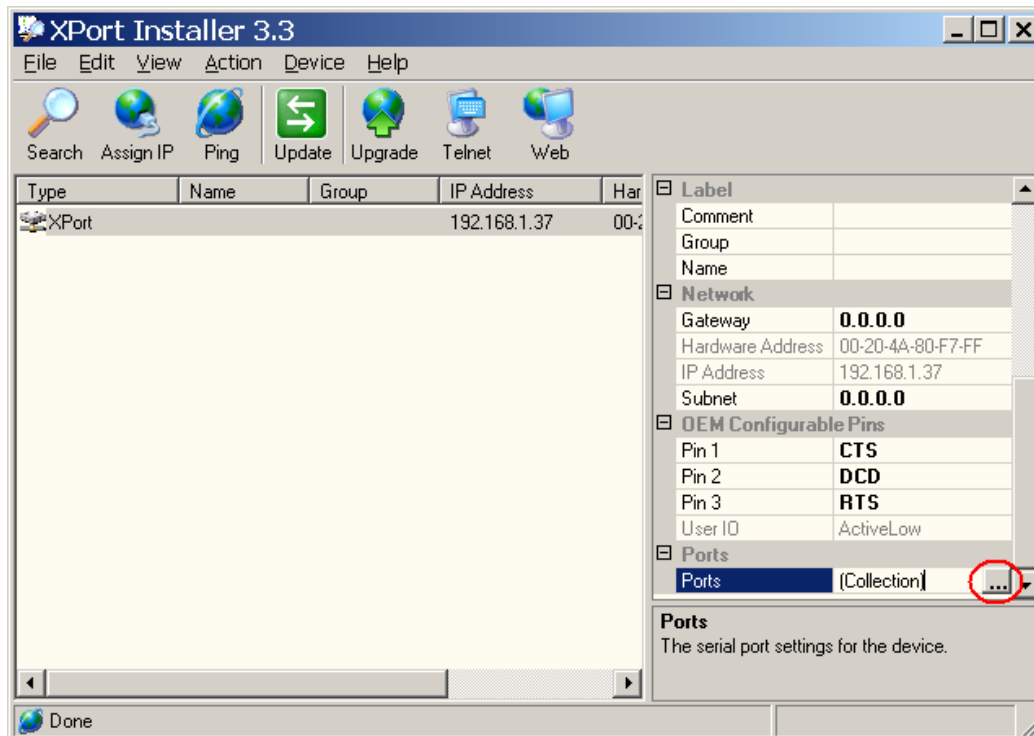 - o In the displayed dialog type in the IP address given to you by the network administrator. Then click on the OK button

- Next type in the network gateway and subnet values from the network administrator in the Network section shown in the diagram above.

Grant
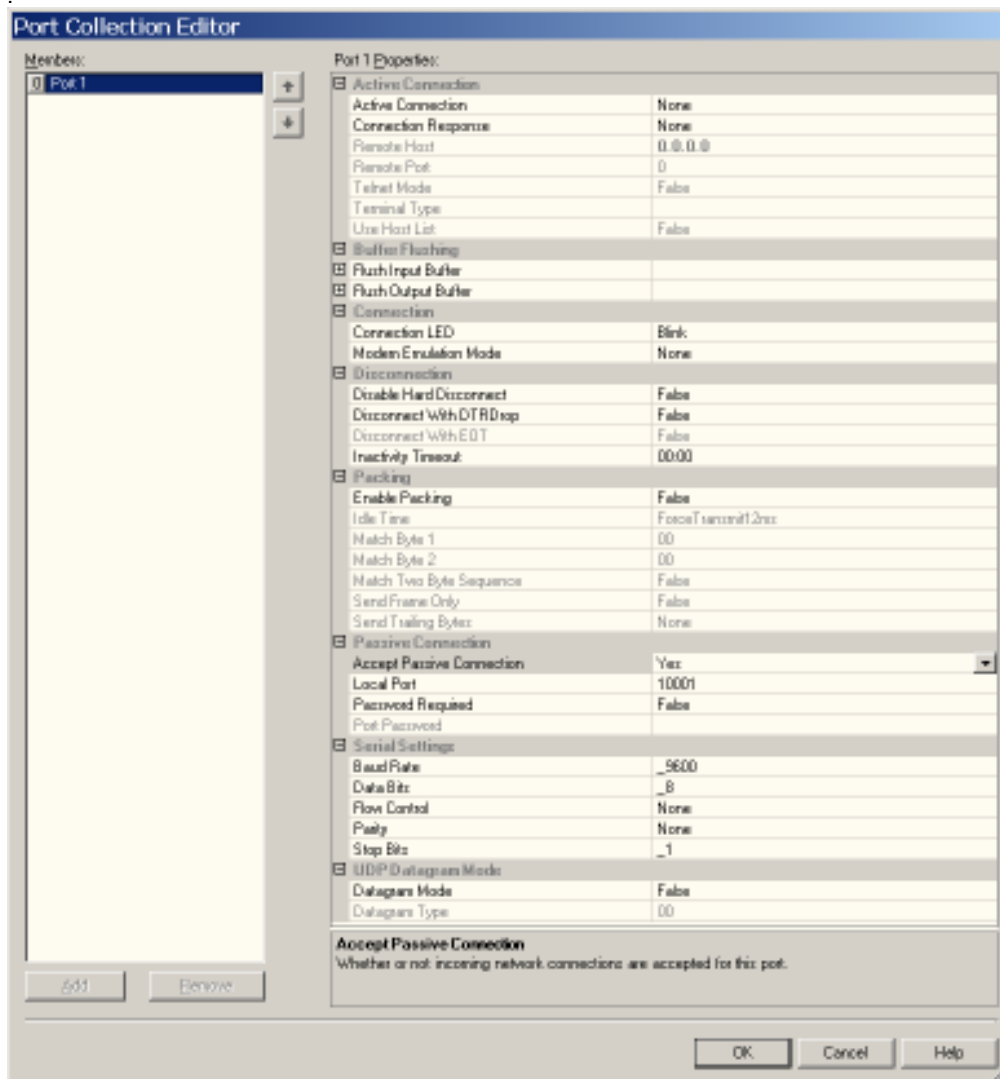DATA ACQUISITION

Configuring the NetPort serial port.

- In the right hand window move the slider down and click the mouse pointer in the 'Ports' field.

- Click on the ... button circled below.

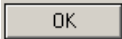- The 'Port Collection Editor' window will be displayed.

- In the Port Collection Editor window set <u>only</u> the following parameters by clicking on the field and typing in the values or selecting them from the pull down list if present.

  o Under 'UDP Datagram Mode'
    - Datagram Mode'
      - 'True'

    - 'Datagram Type'
      - '01'

  o Under 'Active Connection'
    - 'Remote Host'
      - Leaving the default setting of '0.0.0.0' will allow any user with SquirrelView on their PC to talk to the logger.
      - If you wish to restrict access to the logger to only one PC running SquirrelView enter the IP address of that PC here.

    - 'Remote Port'
      - Set this to '4096' <u>only</u> if you have set an IP address for the 'Remote Host'

  o Under 'Passive Connection'
    - 'Accept Passive Connection'
      - 'Yes'
    - 'Local Port'
      - '4096'

  o Under 'Serial Settings'
    - 'Baud Rate'
      - '115200' for SQ2020/SQ2040 or '9600' for SQ400, 800 or 1000 series

    - 'Data Bits'
      - '8'

    - 'Flow Control'
      - 'None'

    - 'Parity'
      - 'None'

    - 'Stop Bits'
      - '1'

- Click the OK button at the bottom of the screen.

- In the initial Installer screen click the button to send the port configuration to the XPort device.

- Wait while the status for the device is 'busy' and the settings are sent to the XPort device.

- You may now exit the Installer application.

The device is now configured for use. To use with SquirrelView, use the assistant communications wizard referring to the IP address noted earlier in this document.

The SquirrelNetPort Applet

The SquirrelNetPort applet allows a user to access a SQ2020/SQ2040 logger via an intranet or, with the help of your IT administrator, via the worldwide web.

The applet provides control of the logger similar to that provided by SquirrelView 'Logger Control' window along with real-time metering.

Applet Prerequisites

Before proceeding with the installation you will require all of the following:

- The applet only supports SQ2020/SQ2040 loggers
- You must complete the previous section(s) in this document i.e. the Installer application must be installed and the NetPort / XPort device must be configured.
- The user's web browser must have the latest Java Virtual Machine from Sun Microsystems installed. (See following section)

Checking the Browser JVM Version

Before running the SquirrelNetport Applet, the Java Virtual Machine (JVM) of the browser must use the JVM from Sun Microsystems. To check the JVM on a machine running Microsoft Internet Explorer perform the following steps:
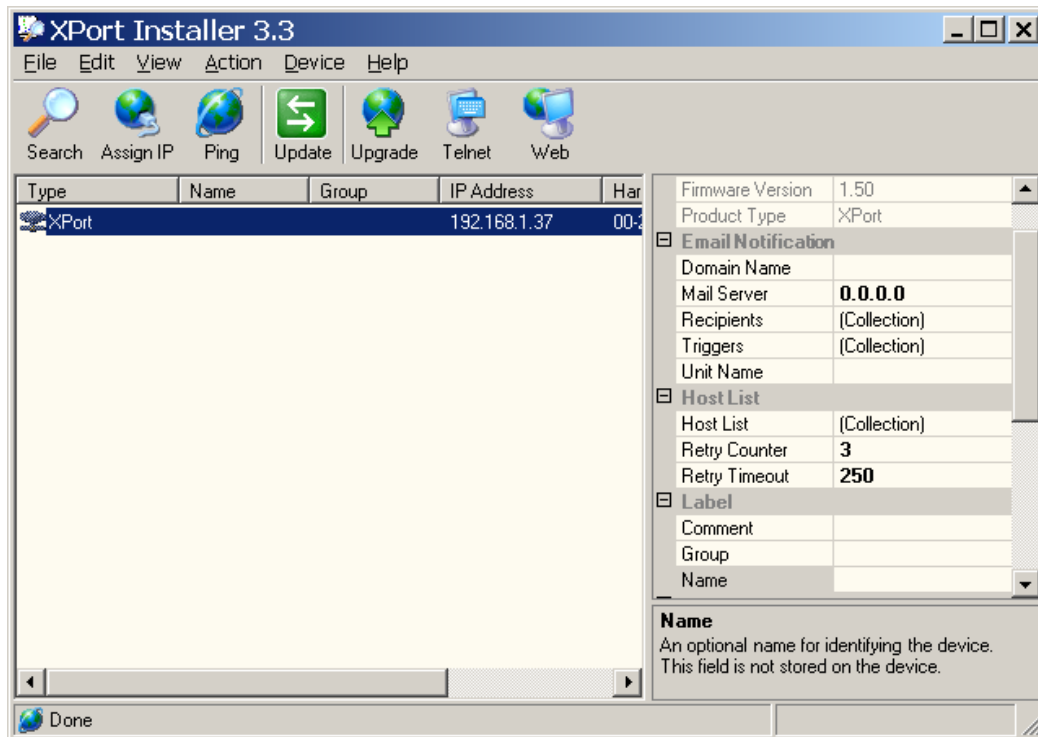
1. Start Microsoft Internet Explorer browser.
2. Select the 'Tools' menus and then the 'Internet Options' menu item.
3. In the next dialog click on the 'Advanced' tab.
4. Scroll through the list of items and check for an entry with the title 'Java (Sun)'. If this does not exist or the version number is less than 'Java 2 v1.4.2_04' then you should carry out the steps in the 'Updating the Java JVM' section.
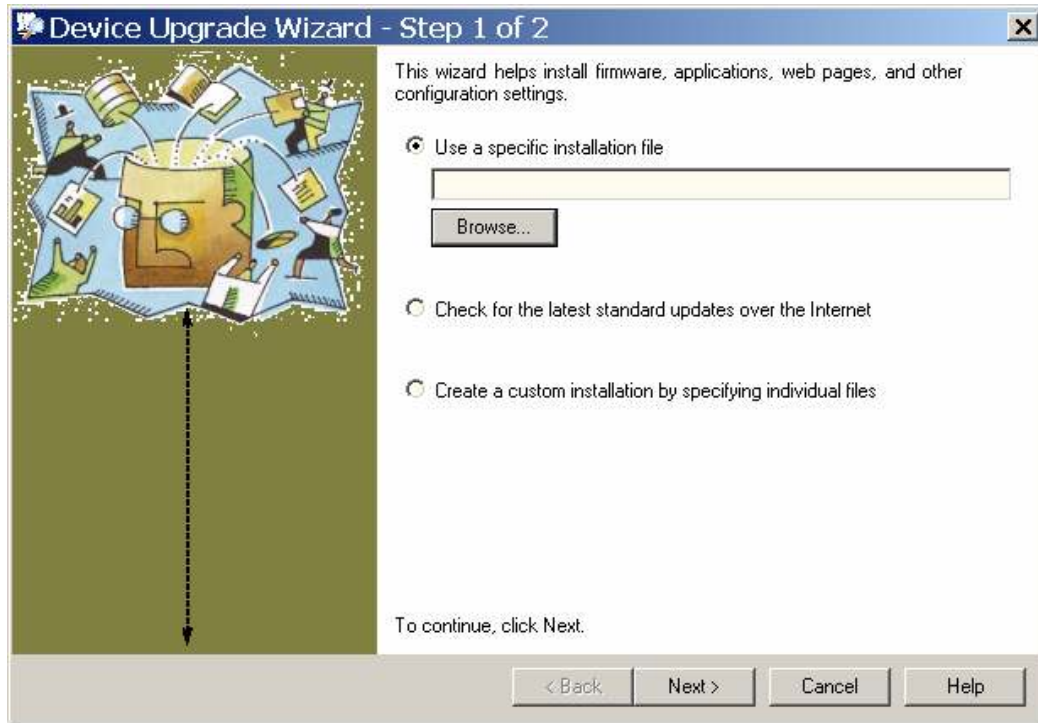
Updating the Java JVM

The latest JVM can be downloaded from the web site www.java.com. From this site select the 'Manual Download' link and then download the appropriate file for your operating system. If you are using Microsoft Windows use the 'Windows (Offline Installation)' link and double click on the downloaded file to install the JVM.SquirrelNetPort Applet Installation

To install the applet into the NetPort, perform the following steps:

1. Start the Installer application

2. Press the ⌕ Search button. This will search your local network for any XPort / NetPort devices. When found the devices will be listed in the left hand window

3. Select the device you wish to configure from the list

4. Select the 'Device' menu followed by 'Upgrade'

5. In the wizard make sure the 'Use a specified installation file radio button is selected and then click on the 'Browse' button

6. Go to the following directory \Program Files\SquirrelView\Drivers\NetPort. Select the sqnetport.lxi file and then click 'Open'

7. In the Upgrade Wizard click 'Next'

8. When the installation is complete, close the wizard and installation program

9. You may now run the SquirrelNetPort applet by entering the IP address of the NetPort / Xport device into your web browser (e.g. Internet Explorer). This will connect to your logger and display the Log Control screen

Note: Only one connection can be made to the logger at any one time. If it is possible for more than one PC to connect to a device, be sure to disconnect whenever your session is complete.

Execution over the Worldwide Web

Once the SquirrelNetPort Applet is working over the intranet the user may get access to this from the internet to view the applet from the web. Your IT. administrator should allow access to the devices IP address from an IP address or URL outside of your local network.

In case of problems, your IT administrator should check the following when operating behind a firewall:-

1. TCP port 80 is redirected to the NetPort device
2. UDP port 4096 is redirected to the NetPort device
3. The NetPort device is configured with you're default gateway (If you have used DHCP to obtain the devices IP address please double check this setting on the NetPort)