PortDirector

User guide

Part number: 5500028-17
Date: 11 June 2004

Navigating around this manual

Using this on-line manual. See page 4.

Fast Contents. See page 6.

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Quick reference. See page 79.

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About this manual

Purpose of this manual

This manual tells you how to install, configure and use the PortDirector software.

> Note
>
> For details of the operating system and hardware needed to run the PortDirector software, see **System requirements** on page **20**.
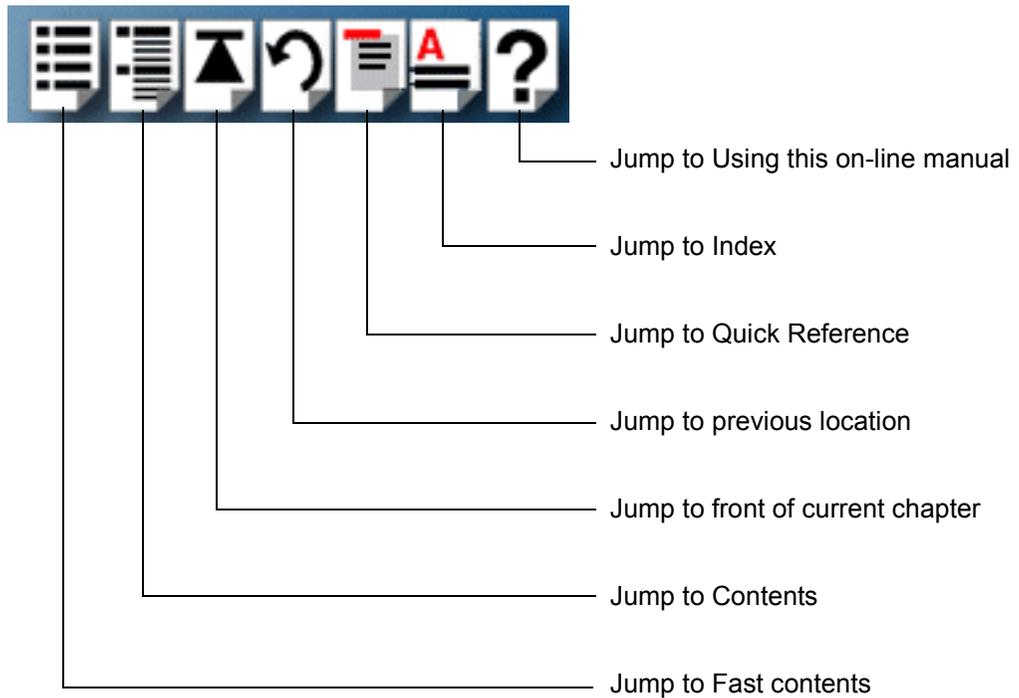
Who this manual is for

This manual is aimed at PC users who want to display or configure com ports on their systems (provided by Perle connectivity products). This manual requires a working knowledge of using personal computers and associated operating systems.

Using this on-line manual

The following is a brief guide to using this manual on-line.

Document navigation

This manual features document navigation hypertext buttons in the header area as shown in the next picture;

Jump to Using this on-line manual

Jump to Index

Jump to Quick Reference

Jump to previous location

Jump to front of current chapter

Jump to Contents

Jump to Fast contents

Hypertext jumps

You can also navigate around this manual by clicking on any cross reference or text in blue for example, **Hypertext jumps**.

> Note
>
> The **Fast Contents**, **Contents** and **Index** entries are all hypertext jumps into this manual.

Revision history

Date	Part number	Description
June 1999	5500028-10	First issue of new PortDirector user guide.
September 1999	5500028-11	Update of manual to include SPEED products.
December 1999	5500028-12	Update of manual to include device mapping functionality and Windows 2000.
April 2000	5500028-13	Minor update to include configuration of FIFO buffers on SPEED cards.
July 2000	5500028-14	Minor update to include details of FAST product parameters.
November 2001	5500028-15	Update of manual to use Perle house style.
June 2003	5500028-16	Added UltraPort series products.
May 2004	5500028-17	Added UltraPort SI series products.

Fast Contents

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Chapter 1 Introduction

You need to read this chapter if you want to...

You need to read this chapter if you want an introduction to the PortDirector software.

This chapter provides an introduction to the PortDirector software (**page 16**) information on how to use the product (**page 17**) and lists related hardware documentation (**page 18**).

This chapter includes the following sections;

- **About the PortDirector software** on page **16**

- **How to use the PortDirector software** on page **17**

- **Related hardware documentation** on page **18**.

About the PortDirector software

The PortDirector is a software tool which allows you to display and configure the parameters of serial ports connected to your PC system. In addition, you can use PortDirector to configure host cards and device concentrators attached to your system and to perform various basic diagnostic functions on the connected devices.

Host cards

Configure and display

PortDirector

PC system

Device concentrators with Serial ports
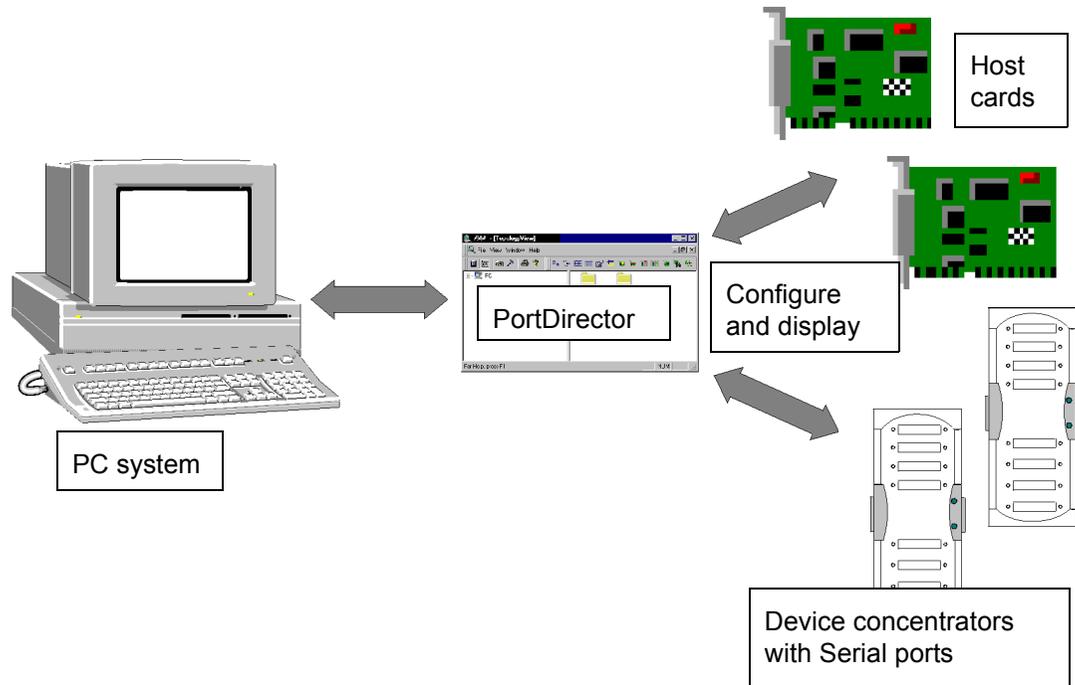
You use the PortDirector software because you want an application which is not device specific or you are working with a system which includes Perle connectivity products.

The PortDirector software allows you display a topological view of the PC ports and peripherals connected to the system and allows you to control the ports and devices for the Perle SX, I/O8+, FAST, SPEED, PCI-RAS, RIO, UltraPort and Ultraport SI products.

PortDirector supports the above Perle products as well as third party products which it treats as generic com ports.

The Windows 2000 version of PortDirector includes device mapping facilities which allow you to display a visual map of the actual connections between the hardware devices in a system. Using the Device Map facility you can manage networks components in remote locations and perform a variety of network management tasks. See **Displaying a map of system connections** on page **39**. This facility is especially useful in managing network components spread over a wide area.

How to use the PortDirector software

The general procedure for using the PortDirector software is as follows;

1. Install the PortDirector software onto your PC system. See **General installation procedure** on page **21**.

> Note
>
> For details of the operating system and hardware needed to run the PortDirector software, see **System requirements** on page **20**.

2. Start the PortDirector software on your system. See **Starting PortDirector** on page **30**.

3. If required, display the device drivers, host cards, device concentrators and com ports present in your system. See **Displaying the system hierarchy** on page **33** and **Displaying details of system components** on page **37**.

> Hint
>
> For Windows 2000 installations you can also use Device map to view and manage your system. See **Displaying a map of system connections** on page **39**.

4. If required, add or delete any host cards from your system as needed. See **Adding host cards** on page **51** and **Deleting host cards** on page **55**.

5. If required, re-scan your system for any devices which are present but not active. See **Re-scanning the system** on page **57**.

6. If required, configure the com ports on your system. See **Working with com ports** on page **59**

7. Exit from the PortDirector software on your system. See **Exiting PortDirector** on page **31**.

8. If required, remove the PortDirector software from your system. See **Removing PortDirector from your system** on page **27**.

Related hardware documentation

For information about the hardware products used with this software, see the following product manuals;

- SX Quick start guide

- SX Installation Guide

- SX Configuration Guide

- SX release notes

- I/O8+ user guide

- SPEED user guide.

- Ultraport Serial Adapters User Guide

Chapter 2 Installing and removing PortDirector

You need to read this chapter if you want to...

You need to read this chapter if you want to install the PortDirector application onto your system.

This chapter tells you how to install PortDirector on your system. You can do this either from CDROM (**page 24**) or by down loading from the Perle web site (**page 25**). Also included are the system requirements to run PortDirector (**page 20**) and the procedure for removing the PortDirector software from your system (**page 27**).

This chapter includes the following sections;

- **System requirements** on page **20**

- **General installation procedure** on page **21**

- **Installing PortDirector from CDROM** on page **24**

- **Down loading PortDirector from the Perle web site** on page **25**

- **Updating an existing device driver** on page **26**

- **Removing PortDirector from your system** on page **27**.

System requirements

In order to run the PortDirector software you need a system which conforms to the following requirements:.

Item	Description
Platform	PC
Operating system	Windows NT 4, or Windows 2000.
Memory	32 Mb RAM
Disk space to store	5Mb minimum

In the event of any problems, please contact your system administrator for assistance.

General installation procedure

The general procedure for installing the PortDirector software under either the Windows NT or Windows 2000 operating systems is as follows;

> **Note**
>
> PortDirector is available in separate versions for **Windows NT** and **Windows 2000**. The installation procedure for the different versions is virtually identical. Any differences are highlighted in the procedure.
>
> **The Windows 2000 version does not include device drivers. You need to install device drivers independently of this application.**

> ⚠️ **Caution**
>
> **Do not install version 1.04 or earlier of PortDirector under Windows 2000 as this may cause problems with your existing device driver installation.**

Loading the software

1. Load the PortDirector software onto your system either from CDROM or by down loading from the Perle web site using the procedures described in one of the following:

   - **Installing PortDirector from CDROM** on page **24**
   - **Down loading PortDirector from the Perle web site** on page **25**.

> **Note**
>
> If you try to install the Windows NT version of PortDirector on a Windows 2000 system, a message is now displayed informing you that you are installing the wrong version and no further installation will be permitted by the software.
>
>
>
> **Severe**
>
> This installation of PortDirector cannot be run on Windows 2000.
>
> Please obtain the Windows 2000 specific installation.
>
> OK
>
> If this happens repeat step **1.** of this procedure using the correct version of PortDirector.

Choosing the destination folder

The **Choose Destination Location** window and a popup message window are now displayed as shown in the next pictures.

2. In the pop-up message window, click on the **OK** button to close the window.

3. If required, in the **Choose Destination Location** window, click the **Browse** button to change the destination folder.

   A file browser is now displayed.

4. In the browser, choose the new location you want and close the browser.

   The destination folder is now updated accordingly.

5. In the **Choose Destination Location** window, click on the **Next** button.

   The Select Program Folder window is now displayed showing the default folder as shown in the next picture.
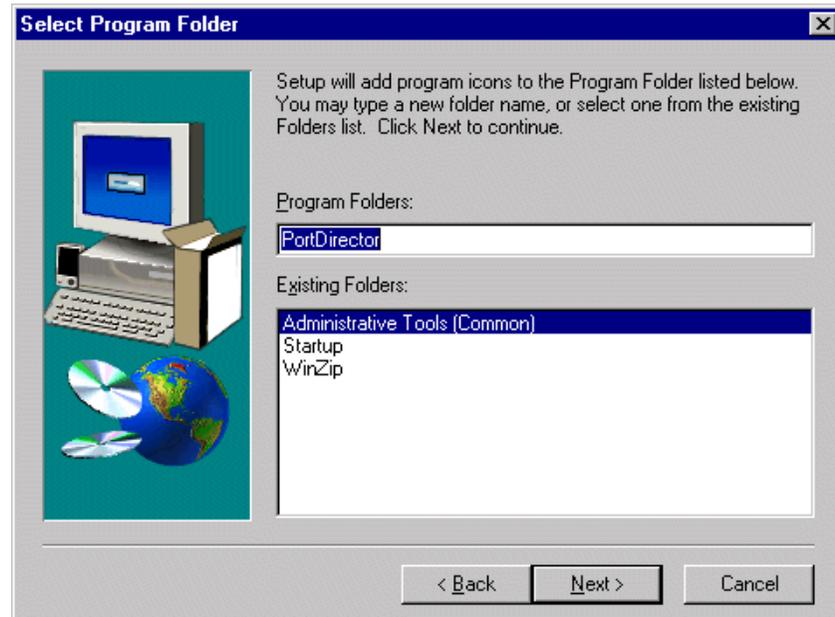
6. If required, in the **Select Program Folder** window, select a new folder by entering the file and path names into the **Program Folders** field. Alternatively, in the same window, click on an entry in the **Existing Folders** field.

7. In the **Select Program Folder** window, click on the **Next** button.

   The PortDirector application is now copied onto your system thereby completing the installation process.

> **Note**
>
> **Following installation of PortDirector under either Windows NT and Windows 2000 we recommend re-application of the current service pack. See your Windows user documentation for and on-line help further details.**

You can now use the PortDirector application to set up your system. See **page 15** for further details.

Installing PortDirector from CDROM

To load PortDirector from CDROM proceed as follows:

1. Load the CDROM into your PC.

2. In the Windows desktop on your PC, click on the **Start** button then select **Programs> Windows Explorer**.

   The Explorer window is now displayed.

3. In the left hand view of the Explorer window, select the CD icon.

   The right hand view of the Explorer window is now updated to show the contents of the CD.

4. In the right hand view of the Explorer window, select the \Drivers\PortDirector directory and click on the **Set up** application icon.

   The PortDirector **Setup Application** and **Choose Destination Location** windows now appear.

5. Now follow the steps described in **Choosing the destination folder** in the **General installation procedure** on page **21** to complete the installation process.

Down loading PortDirector from the Perle web site

You can install the PortDirector software from the Perle web site. To do this proceed as follows;

1. On your PC, start the Internet browser you want to use (for example, Netscape).

2. Within your Internet browser window, select the software directory using the following URL;

    http://www.perle.com/downloads/index.html

Note
In the event of any problems contact your System Administrator or Internet Service provider for assistance.

3. Change to the directory for the operating system you want as shown in the next table.

Operating system	Directory
Windows NT	**winnt**
Windows 2000	**w2k**

    The software directory is now displayed.

4. Download the files in this directory to a suitable location on your PC for example, c:**temp**.

5. In the Windows desktop on your PC, click on the **Start** button then select **Programs > Windows Explorer**.

    The Explorer window is now displayed.

6. In the Explorer window, display the location of the PortDirector zip file you have downloaded.

7. Using the software tool of your choice, (for example, Win Zip) unzip the file.

    The PortDirector software directory is now displayed.

8. In the right hand view of the Explorer window, select the PortDirector directory and click on the **Set up** application icon.

    The PortDirector **Setup Application** and **Choose Destination Location** windows now appear.

9. Now follow the steps described in **Choosing the destination folder** of the **General installation procedure** on page **21** to complete the installation process.

Updating an existing device driver

Normally you would not need to update an existing driver. PortDirector is usually distributed as a complete package. This procedure is only used in special circumstances.

The PortDirector software allows you to update an existing device driver. For example, a Perle IO8+ Serial device driver. You update device drivers when you want to use a new version of an existing device driver (for example, new release containing product enhancements). The files you update have the.sys extension for example, for IO8 it would be IO8**.sys** and so on.

To update a device driver proceed as follows;

> Note
>
> You can only update an existing device driver if that device and all its ports are inactive.

1. In the PortDirector window, click on the icon for the device driver you want.

2. In the PortDirector window, click on the right mouse button and select the Update device menu option (available in both left and right hand view). Alternatively, in the PortDirector window click on the Update device button.

    A popup window now appears asking you to confirm the update.

3. In the pop-up, click on **Yes** to confirm your selection.

    A browser is now displayed.

4. In the browser, locate and select the new version of the device driver you are updating and click on **Open**.

The new device driver is now installed.

Removing PortDirector from your system

To remove (uninstall) PortDirector from your system proceed as follows;

1. In the Windows desktop on your PC, click on the **Start** button and select the **Settings > Control Panel** menu option.

   The Control Panel window is now displayed.
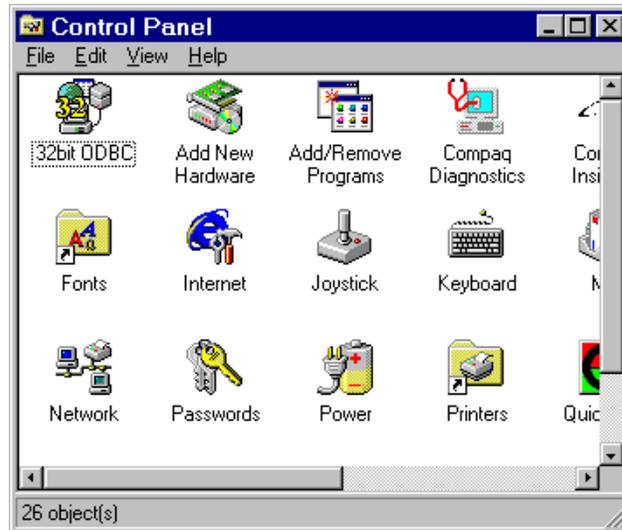
2. In the Control Panel window, double click on the **Add/Remove Programs** icon.

   The **Add/Remove Programs Properties** window is now displayed.

3. In the **Add/Remove Programs Properties** window, click on the tab to display the **Install/ Uninstall** page (shown in the next picture).
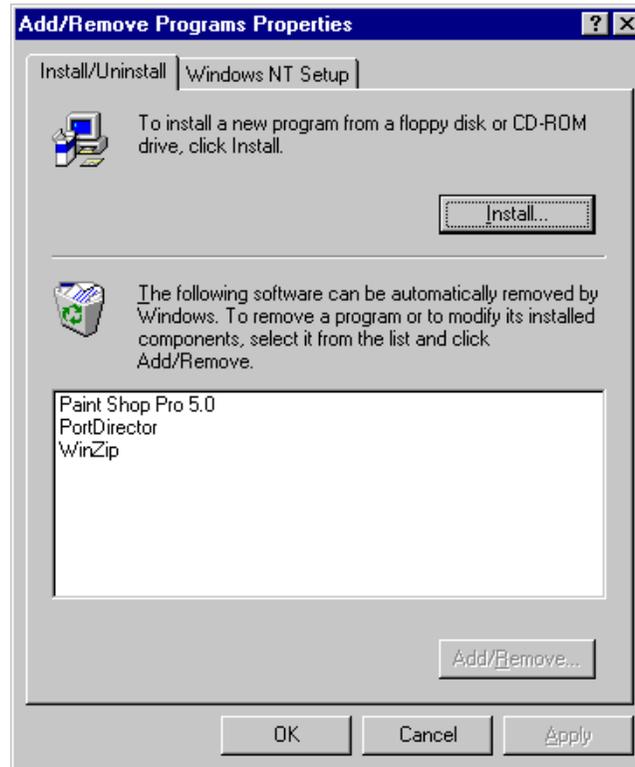
4. In the **Install/Uninstall** page, select PortDirector as the application you want to remove and then click on the **Add/Remove** button.

   A pop-up appears asking you to confirm the deletion

5. In the pop-up, click on **Yes** to confirm the removal of the PortDirector software from your system.

   A message is now displayed while the software is removed.

The PortDirector is now removed from your system with no further prompts.

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Removing PortDirector from your system
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Chapter 3 Starting and exiting PortDirector

You need to read this chapter if you want to...

You need to read this chapter if you want to start or exit the PortDirector software.

This chapter tells you the procedure for starting the PortDirector software from the Windows desktop and also how to exit from PortDirector from within the software.

This chapter includes the following sections;

Starting PortDirector

To start the PortDirector software from the Windows start menu, proceed as follows;

1. In the Windows desktop on your PC, click on the **Start** button then select **Programs >** PortDirector.

> Hint
>
> You can also start PortDirector using a windows shortcut as follows:
>
> 1. In the Windows Desktop double click on the PortDirector
>
>   shortcut icon (See Windows user documentation).

The PortDirector window is now displayed and you can start using the software (Windows NT opening screen shown).
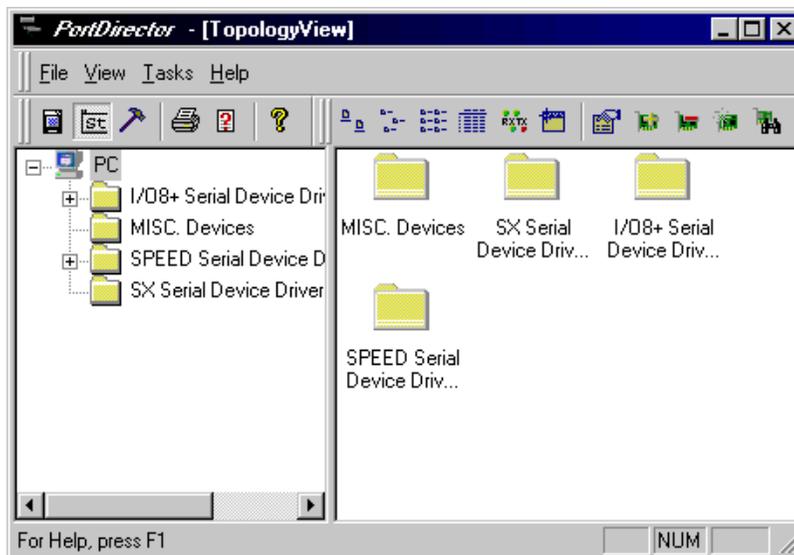
Exiting PortDirector

To exit from the PortDirector software proceed as follows;

1. In the PortDirector menu, click on **File > Exit**.

The PortDirector software now closes.

Chapter 4 Displaying your system

You need to read this chapter if you want to...

You need to read this chapter if you want to display a map of the cards and devices on your system.

This chapter tells you how to use PortDirector to display a map of the device drivers, host cards, device concentrators and com ports present in your system. Also included are the options for displaying details of system components in the right hand view of the PortDirector window.

This chapter includes the following sections;

- **Displaying the system hierarchy** on page **33**

- **Printing a copy of the system hierarchy** on page **36**

- **Displaying details of system components** on page **37**

- **Displaying a map of system connections** on page **39**

Displaying the system hierarchy

PortDirector allows you to display a map showing full details of Perle products such as device drivers, host cards, device concentrators and com ports present in your system. In addition, you can also display the com ports of third party products.

You display a system hierarchy because you want to see a map of your entire system and identify individual items such as com ports or host cards. This makes its easier to decide which devices to configure and where they are in the system. This is especially useful when you have a large number of com ports.

For example, some host cards like the Perle I/O8+ or SPEED have connections for serial devices direct to the back of the host card where as other cards like the Perle SX and RIO have serial connections made to the device concentrators connected to the host card.

You display the components of your system by clicking on an Explorer style hierarchy tree in the left hand view of the PortDirector window, or by double clicking on an item in the right hand view of the same window.

To display the components of your system proceed as follows;

Note
If you try and display a component which is not physically present in your PC then it will appear greyed out as shown in the next picture.

SX PCI   SX ISA

A typical example, is when an ISA card is no longer present in the system or does not have any Device concentrators attached.

1. Start the PortDirector software using the procedures given on **page 29**.

   The PortDirector window is now displayed in Topology view as shown in the next picture.
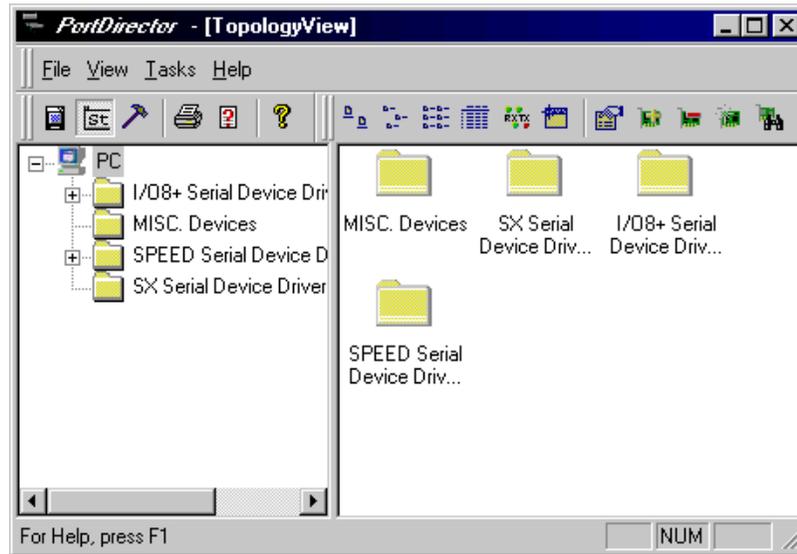
You can now display system components in the right hand view of the PortDirector window by clicking on icons in the explorer style hierarchy tree in the left hand view as shown in the next picture.
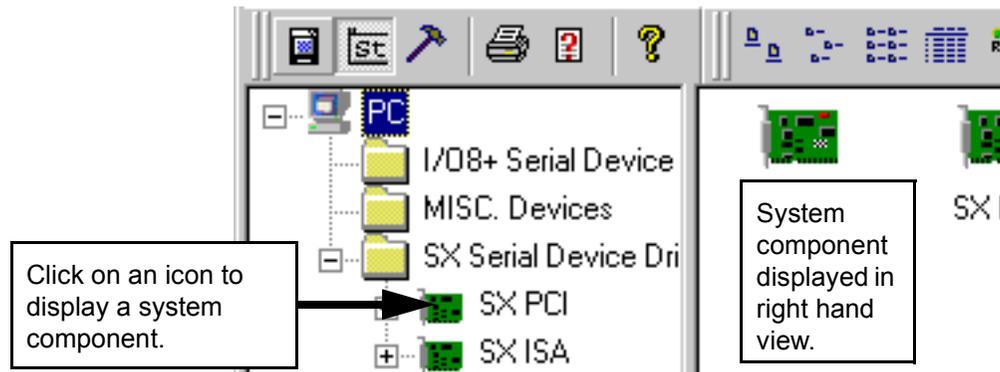
Click on an icon to display a system component.

System component displayed in right hand view.

2. In the PortDirector window, display the system component you want by clicking on an icon in the Explorer style hierarchy tree in the left hand view. Alternatively, click on an icon you want in the right hand view.

> **Note**
>
> The order in which com ports are displayed is the order in which they are physically present on the parent device.

The icons and their corresponding devices are shown in the next table:

To display...	Click icon	Example display
Device drivers		
Host cards		
Device concentrators		
Com ports Displayed in the order in which they are physically present on the parent device.		

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Displaying the system hierarchy
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Printing a copy of the system hierarchy

PortDirector allows you to print a copy of the complete system hierarchy. You can also preview the system hierarchy before printing. To print the system hierarchy proceed as follows;

> **Note**
>
> PortDirector allows you to print the **complete** system hierarchy only.

1. In the PortDirector menu, click on **File > Print Preview**. Alternatively in the toolbar, click on the print preview icon.

   A preview of the system hierarchy you are printing is now displayed as shown in the next picture.
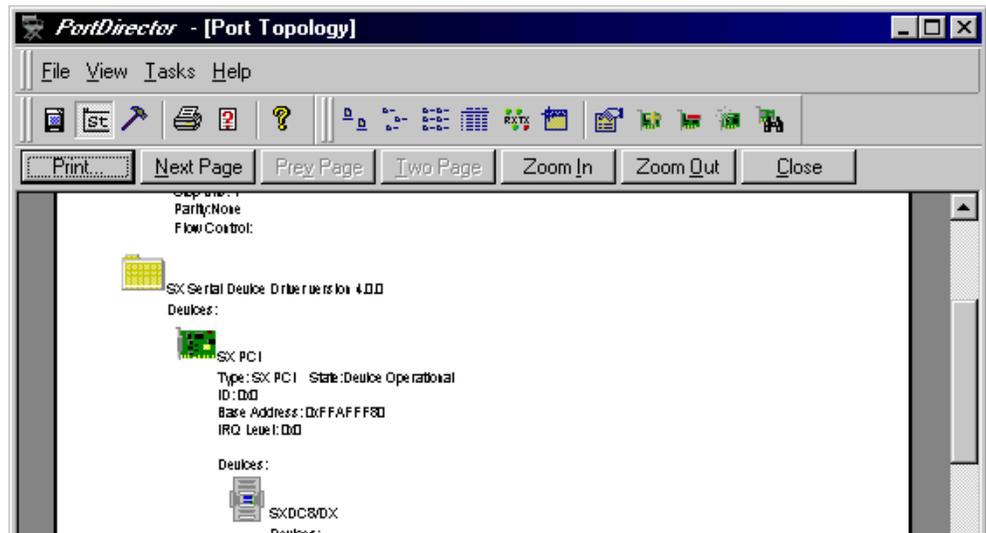
2. If required, in the print preview display, click on the Print button to print the current hierarchy. Alternatively, in the PortDirector menu, click on **File > Print**.

   The standard Windows print window is now displayed.

3. In the **Print** window, set the print parameters you want then press **OK** to confirm and print your selection.

> **Hint**
>
> To setup the printer, in the In the PortDirector menu, click on **File > Print Setup** and use the resulting window to adjust printer settings. For further details, see the Windows user documentation.

4. If required, in the Preview display click on the **Close** button to close print preview.

Displaying details of system components

PortDirector allows you to display system components in the right hand view of the PortDirector window in a variety of ways. You do this by clicking on certain buttons in the tool bar area of the PortDirector window as shown in the next picture.

Click here to display connector pinouts.

Click here to change right hand view display
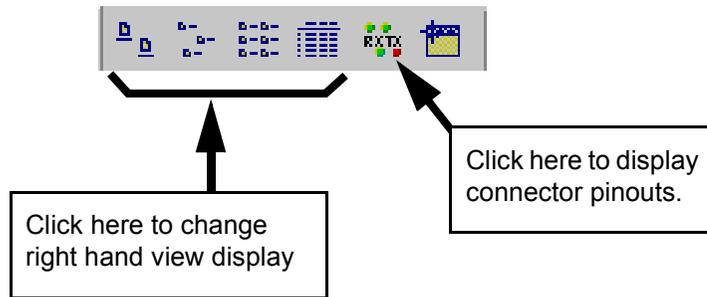
You can display items as large or small icons, display basic or detailed lists and show connector pinouts. To do this proceed as follows;

1. In the PortDirector window, display the system component you want by clicking on an icon in the Explorer style hierarchy tree in the left hand view. Alternatively, click on an icon you want in the right hand view (see also **page 33**).

2. In the PortDirector window, click on one of the tool bar icons or menu options shown in the next table to display the system component using the method you want.

To display...	Menu option	Tool bar	Example display
Large icons	**View > Large Icons**		Serial Device MISC. Devices Driver versi...
Small icons	**View > Small Icons**		COM2 COM3 COM4 COM5
List of icons	**View > List View**		COM2 COM3 COM4
List including details	**View > Details View**		Port Name / Baud Rate / Data Bits COM2 2400 7 COM3 9600 8 COM4 9600 8
Connector pinouts	**View > Pinouts**		1 P/Gnd 2 RXD 3 TXD 4 RTS 5 CTS 6 DSR 7 S/GND 8 DCD 20 DTR 22 RI
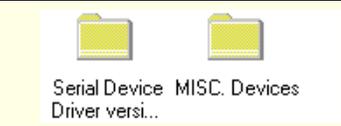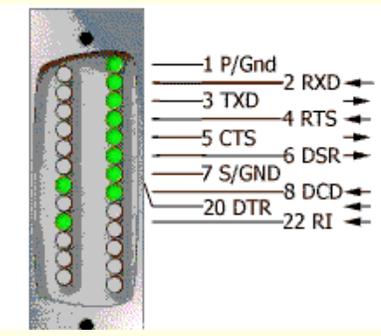
Displaying a map of system connections

> **Note**
>
> The facilities described in this section are only available when using PortDirector under Windows 2000.

This section includes the following;

- **Introduction to Device Map** on page **40**

- **General procedure for displaying a device map** on page **41**

- **Displaying a device map** on page **42**

- **Displaying the identity of system components** on page **44**

- **Adopting ports** on page **45**

- **Rebooting an RTA** on page **47**

- **Disconnecting system components** on page **48**

- **Deleting system components and associated ports** on page **49**

Introduction to Device Map

PortDirector includes device mapping facilities which allow you to display a visual map of the actual connections between the hardware devices in a system. For example in a RIO system it can display which sockets on a given RTA are connected to which sockets on a given host card. The next picture shows a typical example.

For colour key see **page 43**.
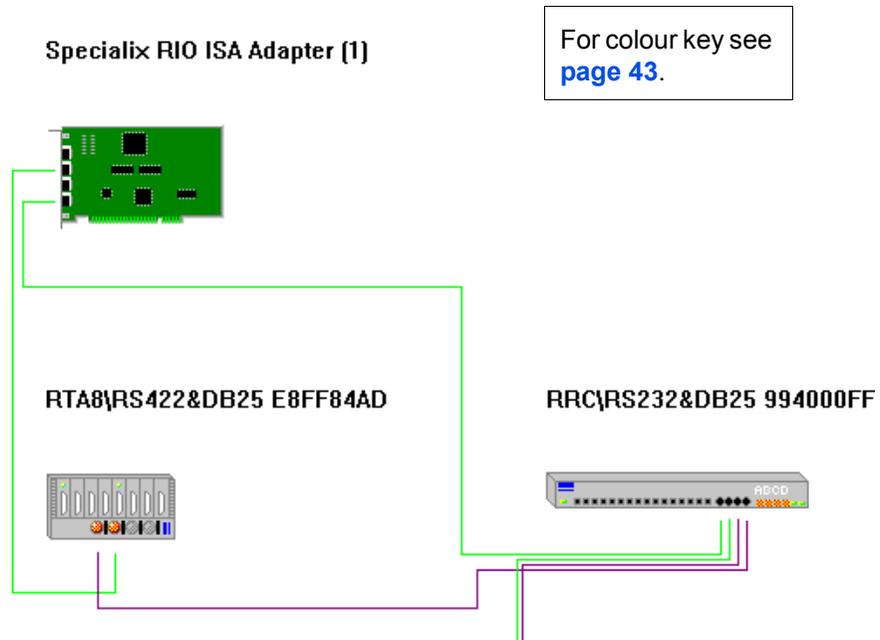
Using the Device Map facility, you can manage network components in remote locations and perform a variety of network management tasks. See **General procedure for displaying a device map** on page **41**. This facility is especially useful in managing network components spread over a wide area.

General procedure for displaying a device map

The general procedure for displaying a map of your system connections is as follows;

> Note
>
> The facilities described in this section are only available when using PortDirector under Windows 2000.

1. Install your system components and then display the current system in port director. See **Displaying a device map** on page **42**.

2. Within PortDirector perform the management task you want with the system using one of the facilities listed in the next table

Task	Toolbar	Menu option	To find further details ...
Displaying the identity of system components		**Tasks > Device Map Tools > Identify**	See **page 44**.
Adopting ports		**Tasks > Device Map Tools > Adopt**	See **page 45**.
Re-booting RTAs		**Tasks > Device Map Tools > Reboot**	See **page 47**.
Disconnecting system components		**Tasks > Device Map Tools > Zombie**	See **page 48**.
Deleting system components and associated ports.		**Tasks > Device Map Tools > Delete**	See **page 49**.

3. Make any physical changes to your system hardware. See your system user documentation for details.

Displaying a device map

To display a device map in PortDirector proceed as follows;

1. In the PortDirector window, click on the **Device Map** icon in the **View** toolbar as shown in the next picture.

Click here to display a Device Map.

PortDirector now displays a device map of the current system (colour key on).

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Displaying a map of system connections
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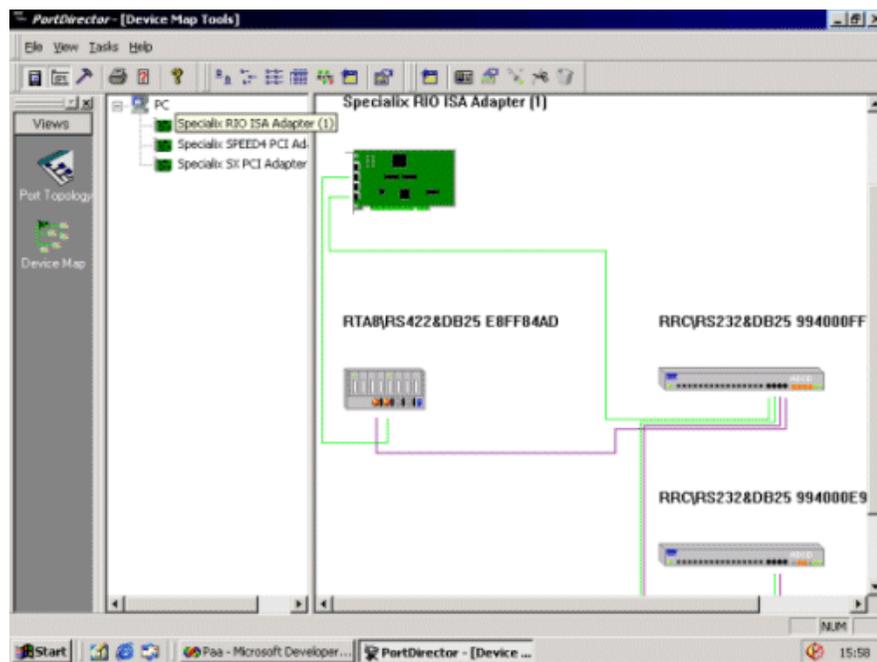
Key to device map colours

The colours used on the device map view in port drector are as shown in the next table;

Link type	Colour
Standard link	Lime green
Fibre optic (FOLK) link	Blue
Long distance module (LDM) link	Dark Cyan
Interlink	Dark purple

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Displaying the identity of system components

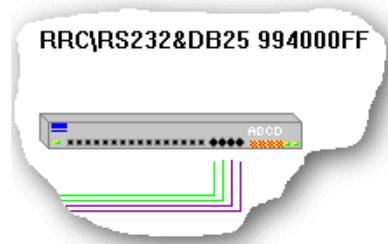To display the identitiy of a device on a device map, proceed as follows;

1. In the PortDirector window, click on the **Device Map** icon in the **View** toolbar.

    The device map is now displayed for the current system (see also **Displaying a device map** on page **42**).

2. In the Device map, click on the device you want to identify to highlight it.

3. In the PortDirector menu, click on **Tasks > Device Map Tools > Identify**. Alternatively, in the toolbar click on the ▦ icon.

> Hint
>
> To hide the identity of the devices displayed, proceed as follows;
>
> •   In the Device map, click on a blank area of the display.
>   The identities of all displayed devices is now hidden.

The selected device identity is now displayed on the Device map along side the Device Icon.

RRC\RS232&DB25 994000FF

Adopting ports

When you are installing a new RTA, PortDirector allows you to adopt the port names of RTAs no longer connected to the system (known as orphaned). To adopt port names in this way proceed as follows;

> **Note**
>
> You cannot adopt ports from an 8 port device onto a 16 port device.

1. In the PortDirector window, click on the **Device Map** icon in the **View** toolbar.

    The device map is now displayed for the current system (see also **Displaying a device map** on page **42**).

> **Note**
>
> If you adopt ports from a 16 port device onto an 8 port device, the first 8 ports are adopted and the remaining 8 ports discarded.

2. Connect the new RTA to your system. See your user manual for details.

3. In the Device map, click on the device you want to adopt to highlight it.
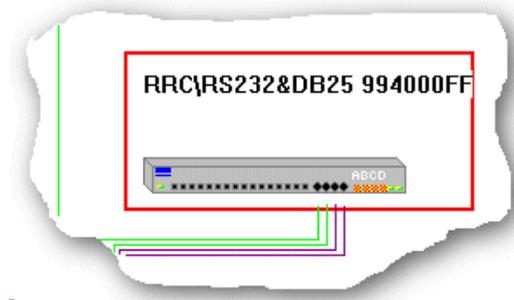
4. In the PortDirector menu, click on **Tasks > Device Map Tools > Adopt**. Alternatively, in the toolbar click on the icon.

    The Port Adoption window is now displayed as shown in the next picture.

5. In the Port Adoption window, click on the device whose ports you want to adopt to highlight it and then click on the **Adopt Ports** button.

The selected ports are now adopted. The original device from which you have adopted the ports is removed from the system.

Rebooting an RTA

PortDirector allows you to re-boot any RTA displayed on the Device map without having to touch the actual unit. To re-boot an RTA in this way proceed as follows;

1. In the PortDirector window, click on the **Device Map** icon in the **View** toolbar.

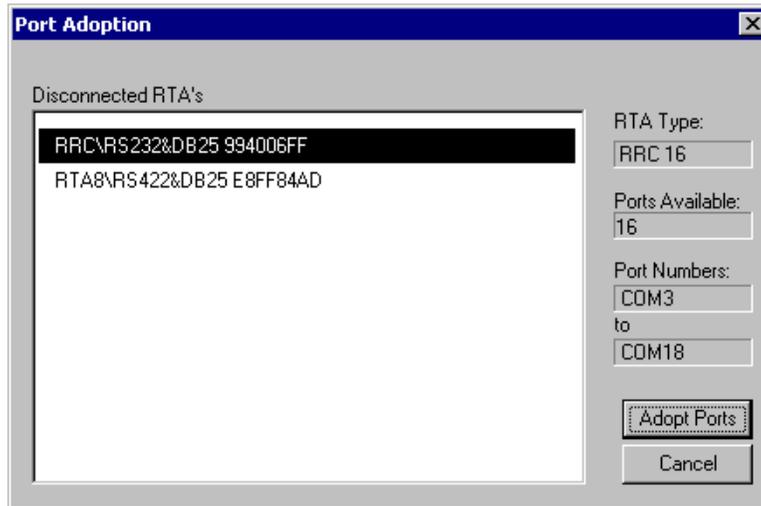   The device map is now displayed for the current system (see also **Displaying a device map** on page **42**).

2. In the Device map, click on the device you want to re-boot to highlight it.

3. In the PortDirector menu, click on **Tasks > Device Map Tools > Reboot**. Alternatively, in the toolbar click on the ⟨icon⟩ icon.
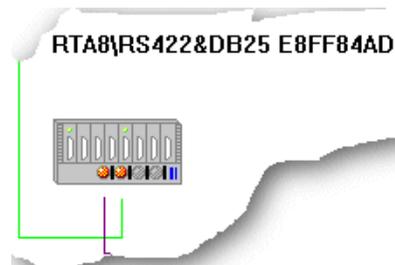
   The selected device is now re-booted.

Disconnecting system components

PortDirector allows you to disconnect an RTA from the system without physically unplugging it. This process is known as zombieing. To disconnect an RTA in this way proceed as follows;

1. In the PortDirector window, click on the **Device Map** icon in the **View** toolbar.

    The device map is now displayed for the current system (see also **Displaying a device map** on page **42**). An example of a connected device is shown in the next picture.

2. In the Device map, click on the device you want to disconnect to highlight it.

3. In the PortDirector menu, click on **Tasks > Device Map Tools > Zombie**. Alternatively, in the toolbar click on the ✂ icon.

    The selected device is now disconnected and the appropriate LEDs on the device map display and on the real device are flashed. The links are now removed on the displayed device as shown in the next picture.

Deleting system components and associated ports

PortDirector allows you to permanently delete an RTA and its associated ports from the system without physically unplugging it. To delete an RTA and its ports proceed as follows;
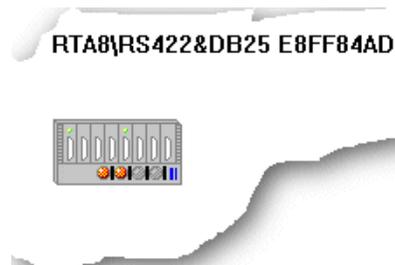
1. In the PortDirector window, click on the **Device Map** icon in the **View** toolbar.

    The device map is now displayed for the current system (see also **Displaying a device map** on page **42**).

2. In the Device map, click on the device you want to delete to highlight it.

3. In the PortDirector menu, click on **Tasks > Device Map Tools > Delete**. Alternatively, in the toolbar click on the   icon.

    The selected device and its associated ports are now deleted and the icon representing the device disappears from the Device Map display.

Chapter 5 Adding and deleting host cards

You need to read this chapter if you want to...

You need to read this chapter if you want to use PortDirector to add or delete host cards from your system.

> **Note**
>
> **This facility is only available with the Windows NT version of PortDirector. It is not available under Windows 2000.**

This chapter tells you how to add or delete host cards from your system using the PortDirector software. Also included is the procedure for re-scanning the system for any devices which are present but not active.

This chapter includes the following sections;

- **Adding host cards** on page **51**

- **Deleting host cards** on page **55**

- **Re-scanning the system** on page **57**

> Note
>
> For information on how to physically install host cards into your PC system, see the manuals provided with the host card or other peripheral.

Adding host cards

The PortDirector software allows you to add host cards to the system using a method dependent upon the type of host card. For PCI host cards, no user action is required as they are automatically loaded by the PortDirector software on start-up. To add an ISA host card, see **Adding an ISA host card** on page **51**.

> **Note**
>
> This facility is only available with the Windows NT version of PortDirector. It is not available under Windows 2000.

Adding a PCI host card

> **Note**
>
> Any PCI host cards present in the system are automatically added on starting the PortDirector software.

Adding an ISA host card

To add an ISA host card to the system proceed as follows;

> **Note**
>
> Before you add an ISA card to your system you must reserve ISA memory and interrupt level resources in the BIOS setup. See the manuals for your ISA cards for details.

1. In either the left or right hand view of the PortDirector window, click on the icon for the parent object (for example an SX device driver).

   The associated host cards are now displayed.
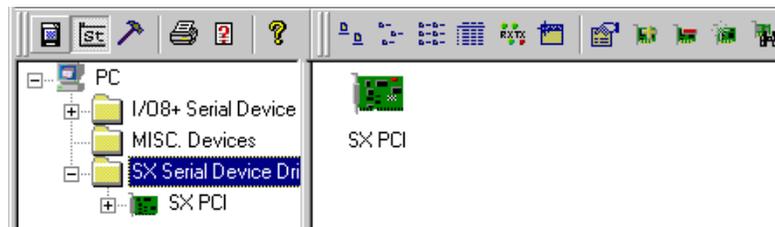
2. In the left hand view of the PortDirector window, click on the parent device icon.

3. In the PortDirector window, either click on the **Add ISA device** tool bar button or click the right mouse button and select the **Add Device** menu option. Alternatively, in the PortDirector menu click on **Tasks > Topology View > Add Device** .
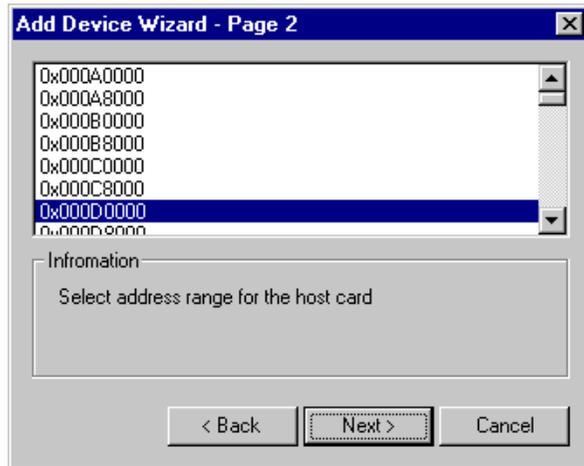
The **Add Device Wizard - Page 1** is now displayed as shown in the next picture.

> **Hint**
>
> The difference between **SI/IXO** and **SX ISA** host cards is shown below;
>
> | Rotary address switches | DIL address switch |
> | --- | --- |
>
>
>
> | SI/XIO host card | SX ISA Host card |
> | --- | --- |
>
> **SI/IXO** host cards have rotary address switches whilst **SX ISA** host cards have Dual in line (DIL) address switches.
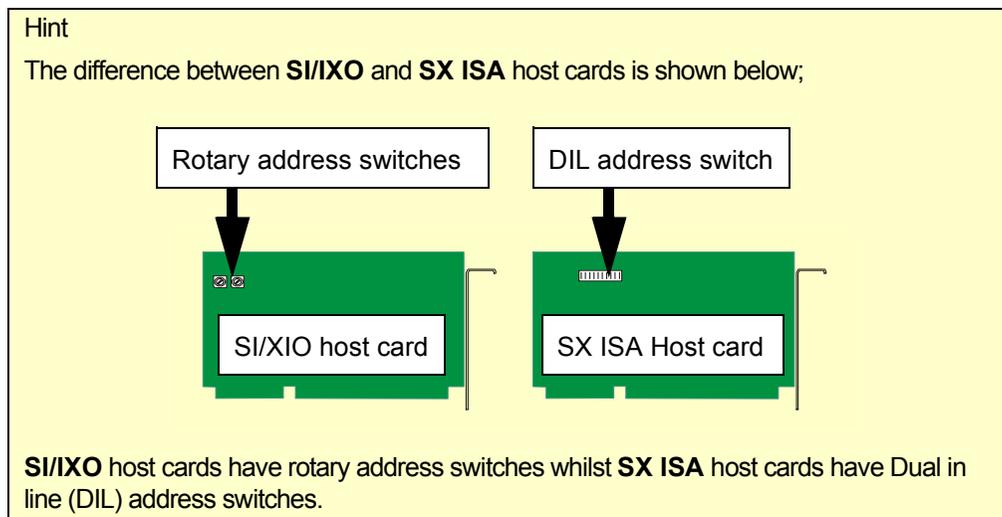
Selecting the address range

4. In the **Add Device Wizard - Page 1**, select the ISA host card you want and click on the **Next >** button.

   The **Add Device Wizard - Page 2** is now displayed showing a list of valid addresses that the operating system will allow you to use. The default host card address range is selected by default as shown in the next picture.

5. If required, in the **Add Device Wizard - Page 2**, select the host card address you want (if you don't want the default value).

6. In the **Add Device Wizard - Page 2**, click on the **Next >** button.

   The **Add Device Wizard - Page 3** is now displayed.
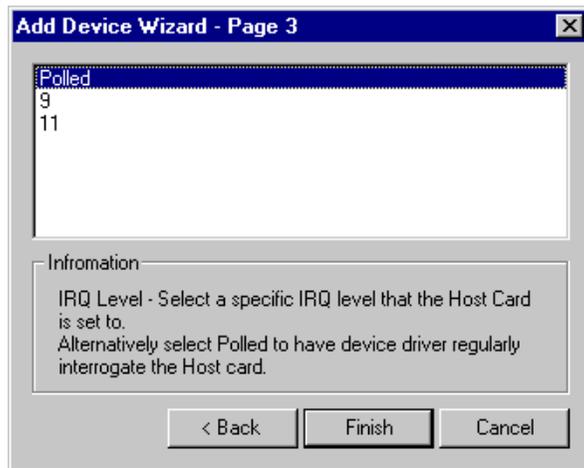

Selecting the operating mode

7. In the **Add Device Wizard - Page 3** select the operating mode you want as shown in the next table (for example, Polled) then click on the **Finish** button.

.

Operating mode	To Select this mode, choose	Description
Polled	**Polled**	In **polled mode** the driver checks the host card periodically for events. This mode is useful where the range of available IRQ levels is restricted.
Interrupt	An IRQ level for example, **11**	In **interrupt mode** the host card signals the driver when an event has occurred. For example, data received by serial port.You enable this mode by selecting an **I**nterrupt **Re**quest Level (**IRQ** Level).

The ISA host card you have selected is now added to the system as shown in the next picture.

> Note
>
> If you choose incorrect host cards settings, for example an incorrect I/O address range, the new host card is displayed by the PortDirector software but not used by your system.
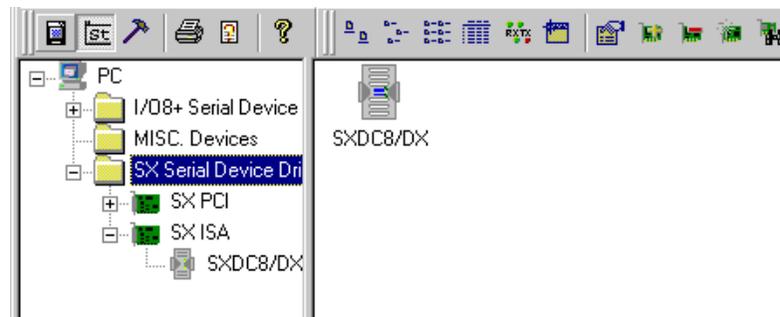
You have now completed the procedure for adding an ISA host card.

Deleting host cards

The PortDirector software allows you to delete host cards from the system using the same procedure for all host card types. That is, both PCI and ISA cards. To delete a host card from the system proceed as follows;

> **Note**
>
> This facility is only available with the Windows NT version of PortDirector. It is not available under Windows 2000.

> **Note**
>
> You cannot delete devices currently in use by the system.
>
> For example, if you try and remove an active host card, PortDirector continues to display that card and its parent devices. You can only remove the card by making it inactive.

1. Ensure that the host card you want to delete is not in use by the system.

2. In the left hand view of the PortDirector window, click on the icon for the host card that you want to remove (for example, an SX PCI card).
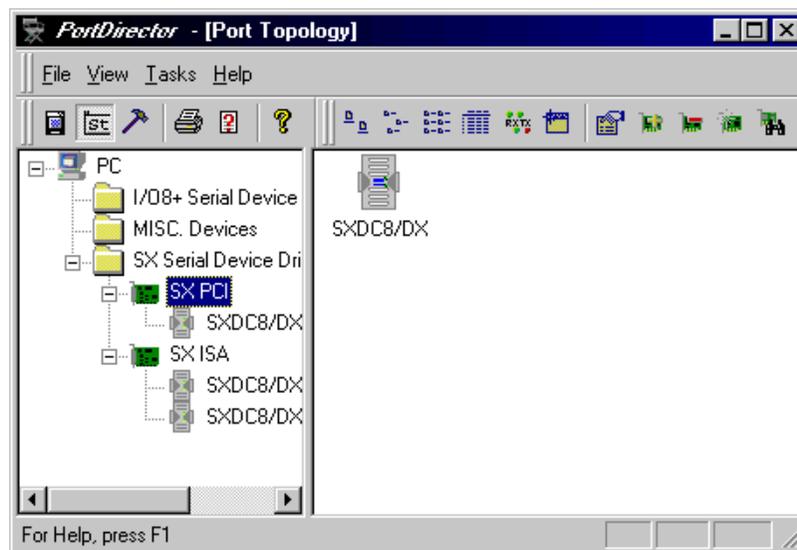
3. In the PortDirector window, either click on the **Remove Device** tool bar button, or click the right mouse button and select the **Remove Device** menu option. Alternatively, in the PortDirector menu click on **Tasks > Topology View > Remove Device** .

    A pop-up appears asking you to confirm the deletion.

4. In the pop-up, click on **Yes** to confirm the deletion.

The selected device is now removed from the system and the PortDirector window updated accordingly as shown in the next picture.

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Deleting host cards
Page 56
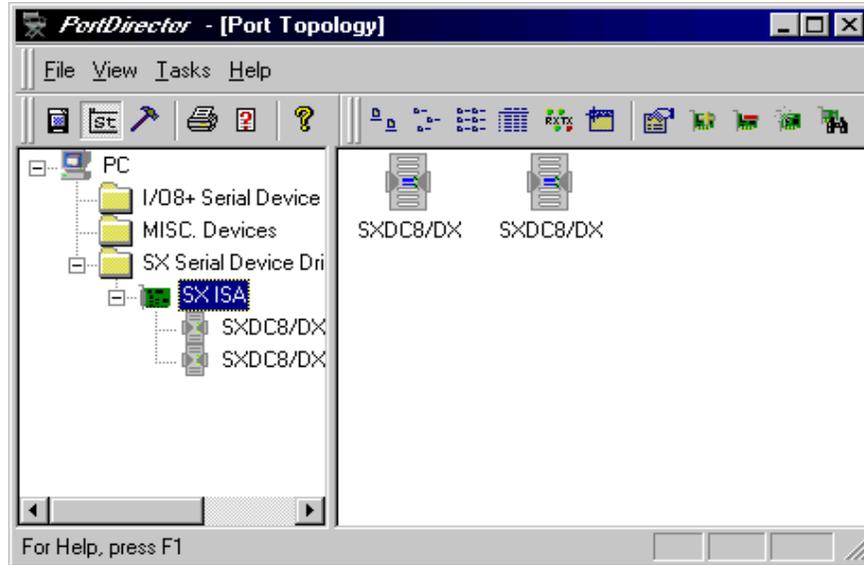
Re-scanning the system

PortDirector device driver software automatically scans for all detectable devices (and specified ISA cards) when the system starts. Once running, you can remove devices from the system. See **Deleting host cards** on page **55**. The Rescan facility repeats the initial device driver scan and allows you to re-detect any devices which may have been removed from the system.

> Note
>
> This facility is only available with the Windows NT version of PortDirector. It is not available under Windows 2000.

> Note
>
> ISA host cards which have been removed from the system are not detectable and must be re-entered. See **Adding an ISA host card** on page **51**.

You use the re-scan facility when you want to restrict the number of ports on a system, or to restart a host card. To re-scan a device proceed as follows;

1. In the PortDirector window, click on the parent object (for example a host card).
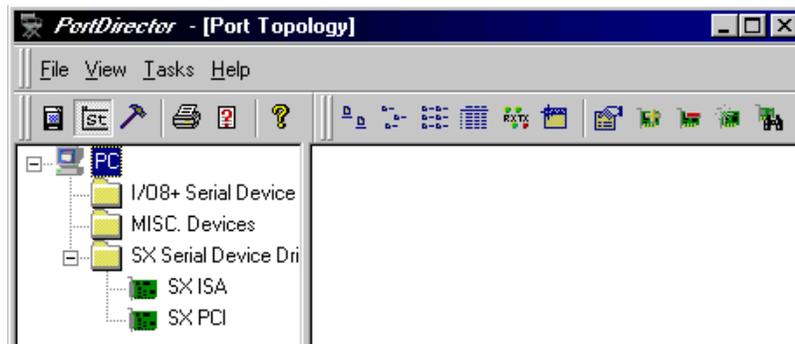
2. In the PortDirector window, either click on the **Re-scan** tool bar button or click the right mouse button and select the **Re-Scan Devices** menu option. Alternatively, in the PortDirector menu click on **Tasks > Topology View > Re-scan All Devices** .

    All devices not currently in use by the selected parent device (for example, host card) are re-scanned into the system and the PortDirector window updated to show them.
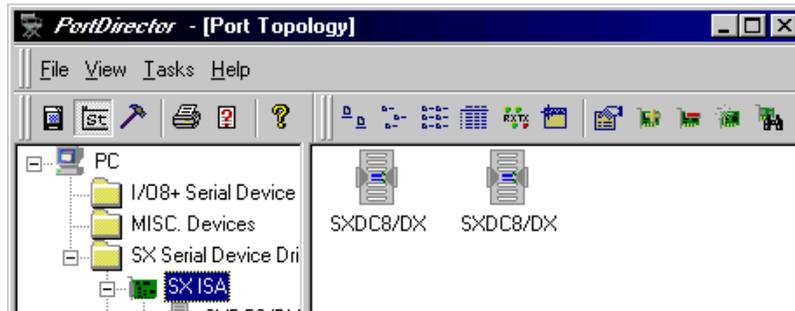
The devices you have re-scanned are now used by the system.

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Re-scanning the system
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Chapter 6 Working with com ports

You need to read this chapter if you want to...

You need to read this chapter if you want to set up the com ports on your system for use with the PortDirector software.

This chapter provides information about working with com ports. It includes how to select and access com ports, set their default parameters as well as how to monitor com port performance.

This chapter includes the following sections;

Setting the default com port parameters

About com port settings in Windows NT

The windows NT operating system allows you to read com port settings from three different sources; **Registry**, **Drivers** and **Applications**. Note that the settings read from these sources may not be consistent.

Registry
The **Registry** com port settings are those stored by the Windows operating system for general use. Note that the physical com port settings may differ from the **Registry** settings.

Drivers
The **Driver** settings are the physical com port settings at a given time regardless of how they were created. If you run an application which uses a com port on your system, it may use settings other than the current driver settings.

FAST, PCI-RAS, UltraPort and Ultraport SI card configuration

> **Note**
>
> Because the UARTs used on the FAST, PCI-RAS, UltraPort card and Ultraport SI cards have 64 byte FIFO's the following limitations apply when configuring these cards;
>
> - **Tx FIFO limit:**
>   You can set the Tx FIFO limit to between **1** and the **64**
>
> - **Tx FIFO trigger level:**
>   You can only set to **8**, **16**, **32**, **56**
>
> - **Rx FIFO trigger level:**
>   You can only set to **8**, **16**, **56**, **60**
>
> - **FIFO flow control threshold:**
>   This appears as a read only parameter, the value of which is set as a result of changing the **Rx trigger level**.
>
> To set or view these parameters see **Configuring SPEED drivers for applications requiring smaller FIFO buffers** on page **67**.

Applications
Any third party application you run on your system may impose its own com port settings on the system which will be different from the driver or registry settings. When the application is shut down the com ports may or may not revert to their previous settings depending on the application.

When you configure a com port using PortDirector it retrieves the registry settings by default. PortDirector also allows you to retrieve the **Driver** settings. See **Restoring to current com port settings** on page **62**. The com port configuration facility in PortDirector makes both the **Driver** and **Registry** settings the same. That is they are synchronised.

Setting up com ports from within the PortDirector software

Windows communications applications specify serial settings when you open a port device (for example, baud rate, parity, data bits and so on). Selected applications will refer to default system settings, selected using the **Ports** applet in the Windows **Control Panel**.

PortDirector allows you to specify the default system settings using the following steps;

> **Note**
>
> For a summary of the factory default com port settings within the PortDirector software, see **Default com port settings summary** on page **72**.

> **Note**
>
> If you are configuring a SPEED card, the option of setting FIFO buffer levels other than the defaults is provided (useful when developing software applications for example). See **Configuring SPEED drivers for applications requiring smaller FIFO buffers** on page **67** for further details.

1. In the PortDirector window, display the com ports you want using the procedures described in **Chapter 4 Displaying your system**.

2. In the right hand view of the PortDirector window, click on the com port you want to select.

    You can now display the default parameters for the selected com port as follows;

3. In the PortDirector window, either click on the **Properties** tool bar button, click the right mouse button and select **Properties**, or double click on the com port icon. Alternatively, in the PortDirector menu, click on **Tasks > Topology View > Device Properties** .

   The PortDirector Port Configuration window is now displayed.
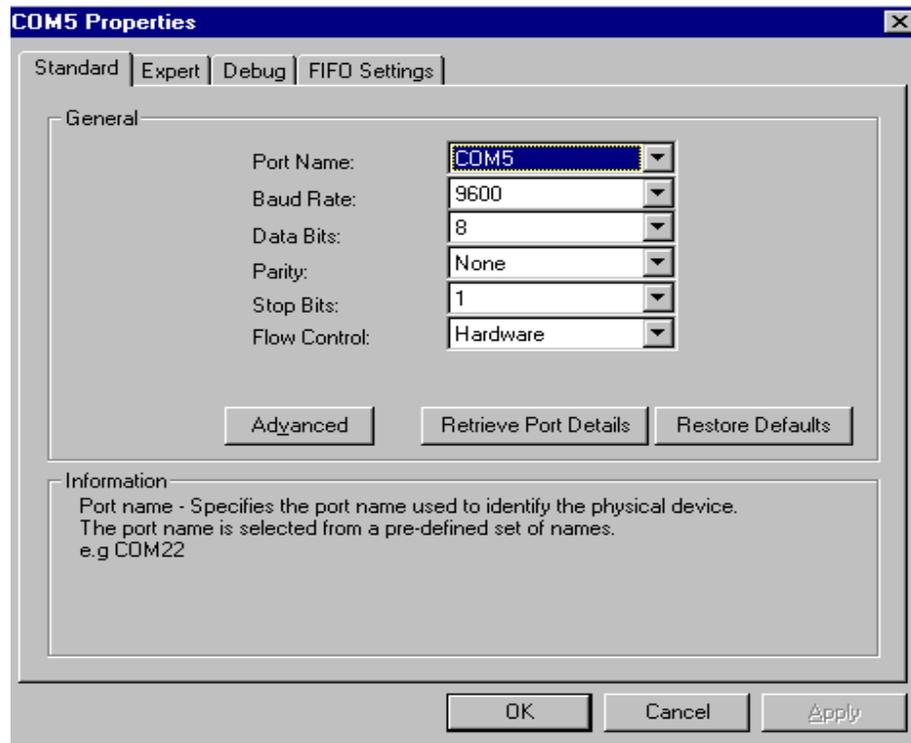
4. In the PortDirector Port Configuration window, select the **Standard** page.

5. If required, in the **Standard** page select the values you want for each of the general parameters (Port name, Baud rate, Data bits and so forth).

6. If the com port belongs to a Ultraport SI card you can click on the **Advanced button** to bring up the **Advanced Protocol Setting** page as displayed on page 63.

Restoring factory defaults

7. If required, in the **Standard** page click on the **Restore Defaults** button to restore the selected com port to its factory default settings.

Restoring to current com port settings

8. If required, in the **Standard** page click on the **Retrieve Port Defaults** button to restore the settings of the currently active port.

> Note
>
> For normal use, it is recommended to use the default settings in the Expert page of the PortDirector Port Configuration window.
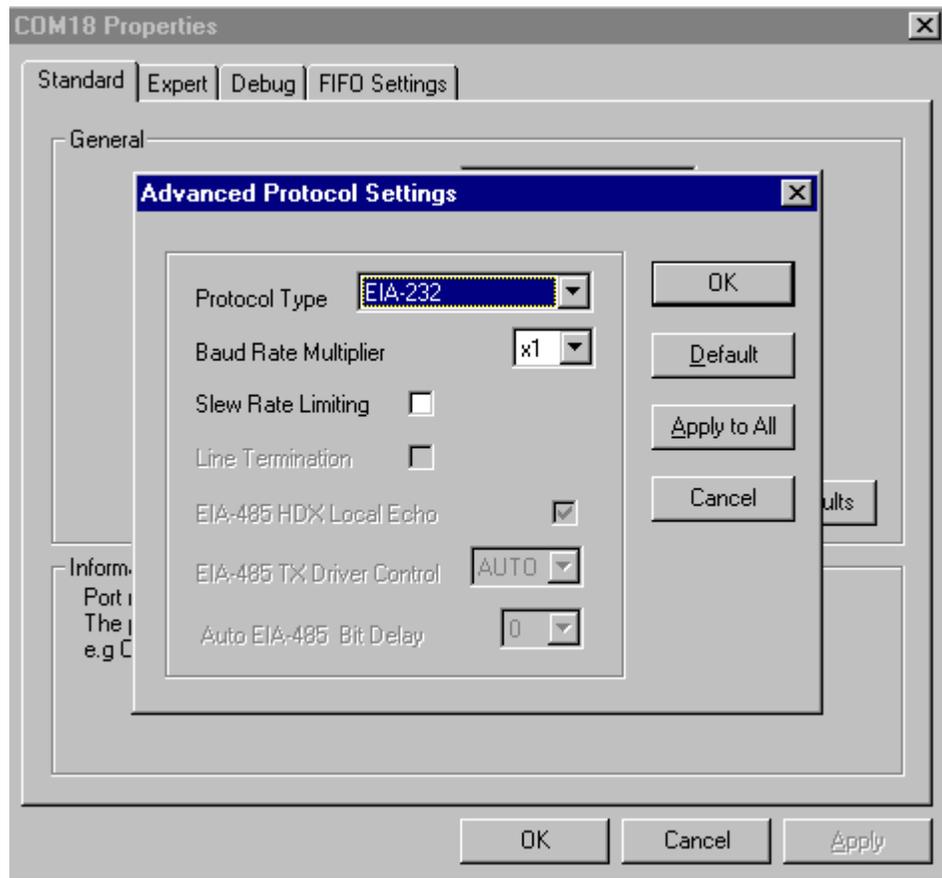
Setting Advanced Protocol Settings

Protocol Type: The valid software switchable protocol types are EIA-232, EIA-422, EIA-485 Full Duplex and EIA-485 Half Duplex. Each port on the Ultraport SI are independent of each other and therefore you may select different protocols per serial port.

Baud Rate Multiplier: The baud rate multiplier allows the user to multiply the configured baud rate by 1, 2, 4, 8,16 or 32, hence achieving greater speeds on the Ultraport SI serial interfaces. This is applicable for each protocol type selected. Baud rates for EIA-232 are upto 921.6 Kbps per serial port. Baud rates for EIA-422/EIA/485 are upto 3.686 Mbps per serial port.

Slew Rate Limiting: The default setting for slew rate limiting is disabled. This will allow higher baud rate speeds on each EIA interface port. Slew rate limiting enabled, minimizes EMI and reduces reflections caused by improperly terminated cables. Operation in slew rate limited mode reduces the amplitudes of high-frequency harmonics.

Line Termination: The line termination parameter is not changeable by the user in EIA-232 mode. However both EIA-422 and EIA-485 modes are defaulted to disabled but can be enabled by the user if needed.

EIA-485 HDX Local Echo: Local echo by default is on. This parameter applies only to EIA-485 half duplex mode. All characters will be echoed to the user and transmitted across the serial ports. Some EIA-485 applications require local echo to be enabled in order to montior

---

the loopback data to determine that line contention has occurred. If your application can not handle loopback data then local echo should be disabled.

EIA-485 TX Driver Control: The default for this field is AUTO. When AUTO is set the Ultraport SI will automatically detect the beginning and ending of data being transmitted in order to enable and disable the transmit line. When the field is set to RTS it is the host application's responsibilty to enable and disable the transmit line via the RTS handshake line when it wants to send data.

Auto EIA-485 Bit Delay:By Default this field is set to 0 bit delay. This field is only applicable if you have configured EIA-485 HDX TX control to AUTO. Values for this field are 0 through 15 bits.

> Note
>
> The com port must be closed and then opened for the new parameters to take effect.

9. In the PortDirector Port Configuration window, select the **Expert** page.

10. The **Expert** page is now displayed is now showing default settings for each parameter as shown in the next picture.
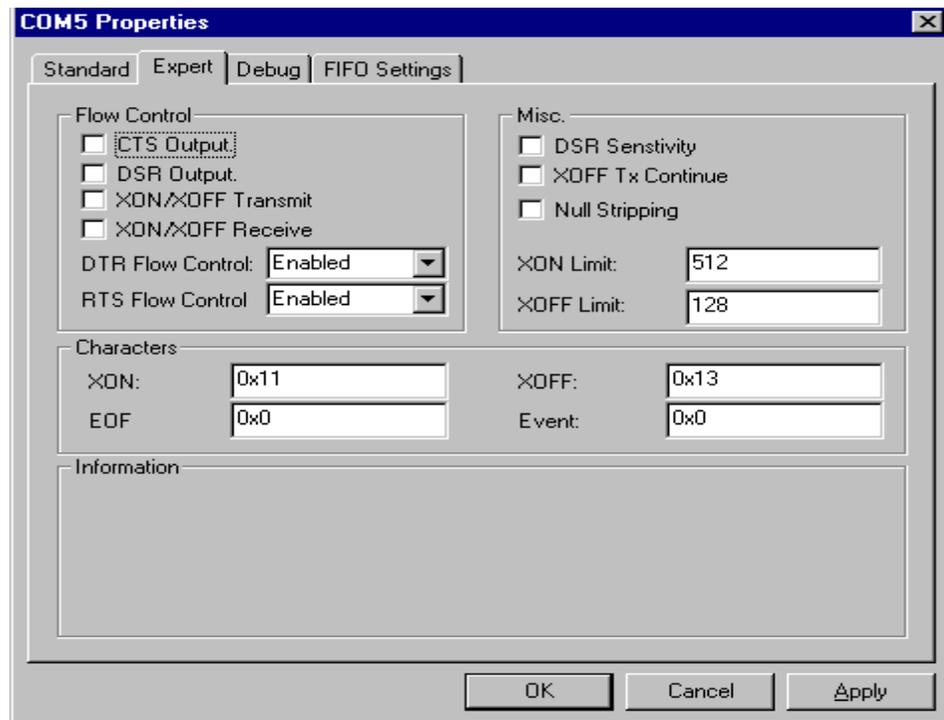

11. If required, in the expert page set the parameters you want for Flow control, Characters and so forth.

---

12. In the PortDirector Port Configuration window, select the **Debug** page.

The **Debug** page is now displayed showing default settings for each parameter (shown in the next picture). This page allows you to declare a defined value as a null value.

> Note
>
> For normal use, it is recommended to use the default settings in the **Debug** page of the PortDirector **Port Configuration** window.
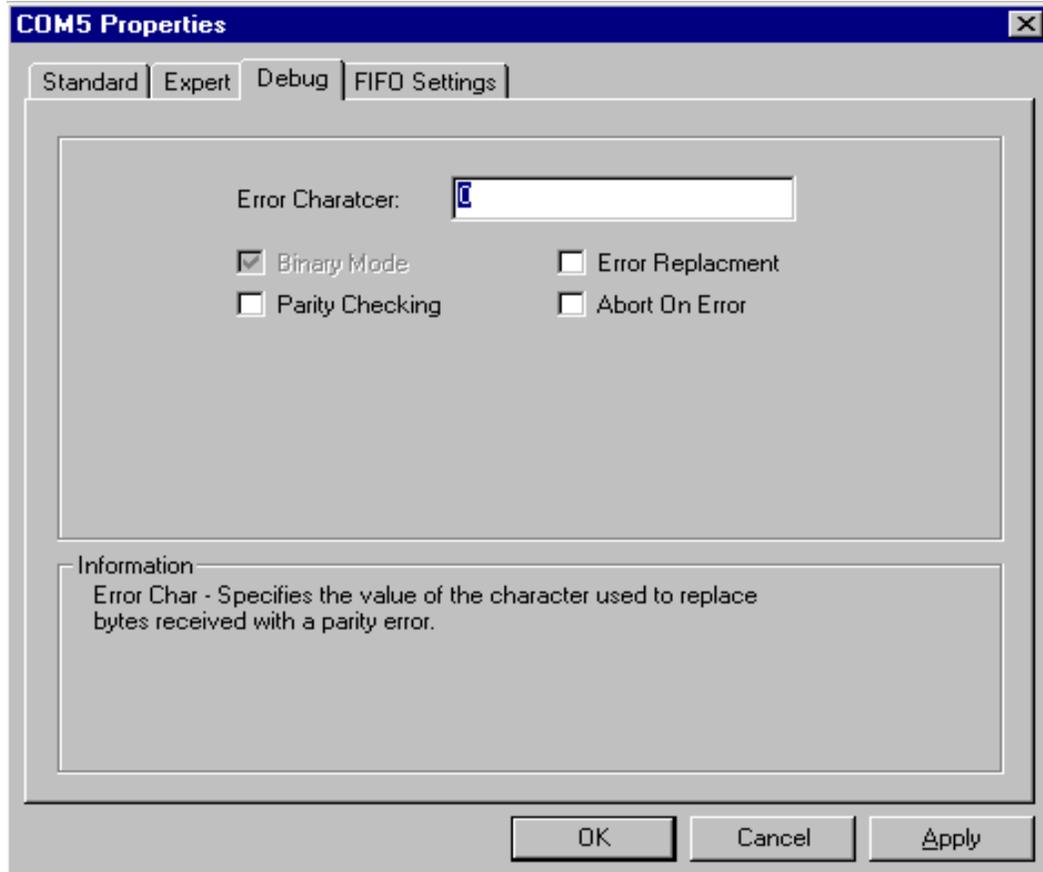
If required, in the **Debug** page, declare the error character as a null value.

Item	Description
Error Character	Specifies the value of the character used to replace bytes received with a parity error.
Binary Mode	Always enabled for Windows NT applications.
Parity Checking	Enables parity checking when checked.

Item	Description
Error Replacement	Inserts the defined error character in the data stream when an error is detected.
Abort On Error	When checked, any read or write operation will abort upon detection of the error character.

Note

If you are configuring a SPEED card, the option of setting FIFO buffer levels other than the defaults is provided (useful when developing software applications for example). See **Configuring SPEED drivers for applications requiring smaller FIFO buffers** on page **67** for further details.

Configuring SPEED drivers for applications requiring smaller FIFO buffers

PortDirector allows you to tune the com port FIFO buffer on SPEED cards to suit the requirements of your software application.

You need to use this facility because the com ports on SPEED cards include a large FIFO (128 bytes). This means that for applications designed for smaller buffer sizes you may need to adjust the FIFO buffer parameters to avoid timing problems.

For example, software designed for a buffer size of 32 bytes might take four times longer to receive data than the original design limit and cause the application to time out.

To solve this problem, PortDirector includes a facility for adjusting the FIFO buffer timing parameters thus allowing you to tune the FIFO buffers to suit your software application for optimum performance.

To do this proceed as follows;*FAST, PCI-RAS, UltraPort and Ultraport SI card configuration*

> **Note**
>
> Because the UARTs used on the FAST, PCI-RAS, UltraPort and Ultraport SI cards have 64 byte FIFO's the following limitations apply when configuring these cards;
>
> - **Tx FIFO limit:**
>   You can set the Tx FIFO limit to between **1** and the **64**
>
> - **Tx FIFO trigger level:**
>   You can only set to **8**, **16**, **32**, **56**
>
> - **Rx FIFO trigger level:**
>   You can only set to **8**, **16**, **56**, **60**
>
> - **FIFO flow control threshold:**
>   This appears as a read only parameter, the value of which is set as a result of changing the **Rx trigger level**.

1. Set up your com ports using the procedures given in **Setting up com ports from within the PortDirector software** on page **61**. and keep the PortDirector Port Configuration window open.

2. In the PortDirector Port Configuration window, click on the **FIFO Settings** tab to display the FIFO Settings page.
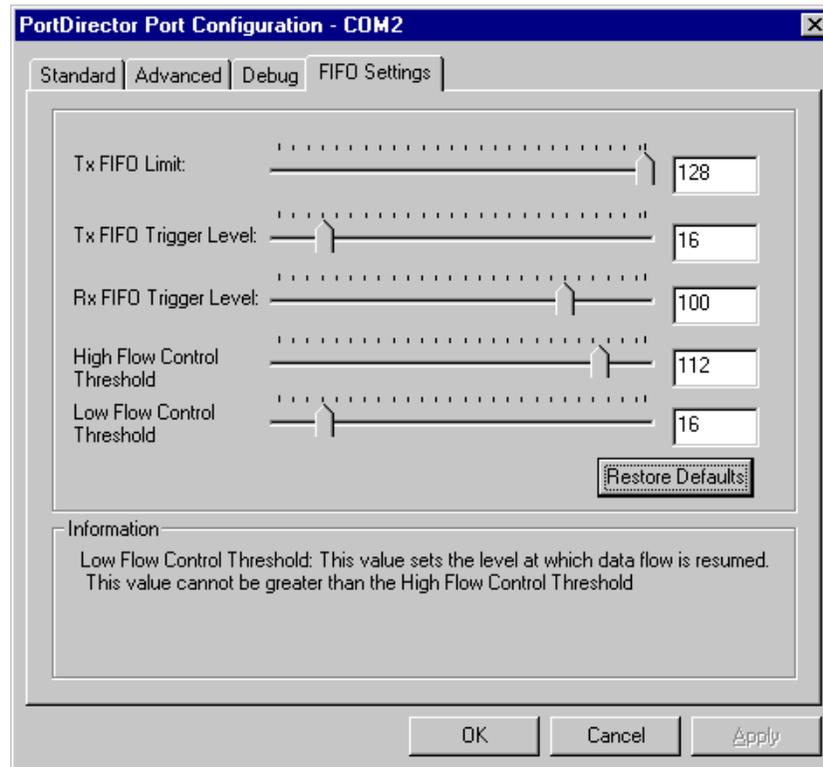
3. In the **FIFO Settings** page, set the FIFO buffer levels using the parameters detailed in the next table.

Hint
To restore the default settings, use the **Restore Defaults** button.

Parameter	Description
Tx FIFO Limit	Sets the overall size of the Transmit FIFO buffer.You use this when you want to restrict the size of the buffer in order to control the data flow. This is useful when your application requires you to send small amounts of data but needs acknowledgement that the data has been sent.
	For example, if your application is designed to receive 4 bytes at a time, a larger value of say 16 would time out.
	Permitted values for a SPEED4+ card are 1 to 128.
	Permitted values for FAST, PCI-RAS , UltraPort and Ultraport SI cards are 1 to 64.
Tx FIFO Trigger Level	Sets the level at which the com port Transmit FIFO buffer is filled with data each time a request for more data is made.
	For example, if set to 16 bytes you get 16 bytes at a time when driver requests data.
	Permitted values for a SPEED4+ card are 0 to 128.
	Permitted values for FAST, PCI-RAS and UltraPort cards are **8**, **16**, **32** and **56**.
Rx FIFO Trigger Level	Sets the level at which the com port Receive FIFO buffer is filled before the data is passed on to an application.
	For example, if set to 16 bytes, 16 bytes of data are accumulated at a time before data is passed on to an application. The FIFO trigger will also time out if the level is not achieved within two character periods of the last byte received.
	Permitted values for a SPEED4+ card are 0 to 128.
	Permitted values for a FAST, PCI-RAS, Ultraport and Ultraport SI card are **8**, **16**, **56** and **60**.
High Flow Control Threshold	Sets the level at which data flow is suspended. If the limit is exceeded, the driver will stop collecting data.
	Permitted values for a SPEED card are 0 to 128.
	For FAST, PCI-RAS and UltraPort cards, value is **read only**, set automatically from FIFO trigger level.
Low Flow Control Threshold	Sets the level at which data flow is resumed.
	If the low flow threshold is exceeded, the driver requests more data.Permitted values for a SPEED4+ card are 0 to 128.
	For FAST, PCI-RAS and UltraPort cards, value is **read only**, set automatically from FIFO trigger level.

4. When you have set the parameters you want in all pages of the PortDirector Port Configuration window, click on **OK** to close the window and save your changes.

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Setting the default com port parameters
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Setting up com ports using the command prompt

As an alternative to using the PortDirector software, you can list the current state of a com port and set the **Driver** parameters using the command prompt (to use the PortDirector software, see).

Note
This section is intended as a brief general guide only. For further information, see the Windows user documentation or your System Administrator.

Listing the current settings for a com port

To list the current state of a com port proceed as follows;

1. In the Windows desktop, Open a **Command Prompt** window.

2. In the Command Prompt window, type **mode comX** (when X is the com port number) and then press the **Enter** key.

    The current settings for the selected com port are now listed as shown in the next picture.

```
Command Prompt

Microsoft(R) Windows NT(TM)
(C) Copyright 1985-1996 Microsoft Corp.

C:\>mode com2

Status for device COM2:
-----------------------
    Baud:             2400
    Parity:           Even
    Data Bits:        7
    Stop Bits:        1
    Timeout:          OFF
    XON/XOFF:         OFF
    CTS handshaking:  OFF
    DSR handshaking:  OFF
    DSR sensitivity:  OFF
    DTR circuit:      ON
    RTS circuit:      ON
```

Setting com port parameters

To set com port parameters using the command prompt proceed as follows;

Note

The mode command sets the **Driver** com port settings. See also .

1. In the Windows desktop, Open a **Command Prompt** window.

2. In the Command Prompt window, type in a command in the form of the next example then press the **Enter** key.

Hint

In the Command Prompt window, type **mode /?** to obtain a list of all the command line arguments supported.

MODE COM2:19200,n,8,1

Com port 2

Baud rate

Parity

Number of stop bits

Number of data bits
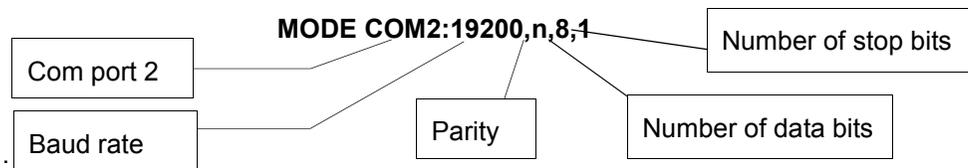
Typical command showing com port 2 with a baud rate of 19200, no parity, 8 data bits and one stop bit.

Default com port settings summary

The default com port settings for the PortDirector Port configuration window are shown in the next table. For further details about the parameters listed see your Windows user documentation;

Page	Parameter	Default setting
Standard		
	Port Name	Depends on the system
	Baud Rate	9600
	Data Bits	8
	Parity	None
	Stop Bits	1
	Flow Control	None
Advanced	Protocol Type	EIA-232
	Baud Rate Multiplier	1x
	Slew Rate Limiting	Disabled
	Line Termination	Disabled
	EIA-HDX Local Echo	Enabled
	EIA-485 HDX TX Control	Auto
	EIA-485 HDX Bit Delay	0
Expert		
Flow control	CTS Output	Disabled
	DSR Output	Disabled
	XON/XOFF Transmit	Disabled
	XON/XOFF Receive	Disabled
	DTR Flow Control	Disabled
	RTS Flow Control	Disabled
Characters	XON	17
	XOFF	19
	EOF	0
	Event	0
Misc	XON	17
	XOFF	19
	EOF	0
	Event	0

Page	Parameter	Default setting
Debug		
	Error Character	0
	Binary Mode	Disabled
	Error Replacement	Disabled
	Parity Checking	Disabled
	Abort On Error	Disabled

Accessing com ports from third-party NT applications

> **Note**
>
> If your application allows you to enter the full device name, you can access com ports higher than COM9 using the following device string;
>
> **\\.\comx**
>
> See the user documentation for your software for further details, or contact your system administrator.

Monitoring com port performance

The PortDirector software allows you to monitor the performance of one or more com ports and display the results in graph form. To monitor com port performance, proceed as follows;

> **Note**
>
> This section is intended as a brief general guide only. For further information, see the Windows user documentation or your System Administrator.

1. In the Windows desktop, click on the **Start** button and select **Programs > Administrative Tools (common) > Performance Monitor**.

   The **Performance Monitor** window is now displayed.
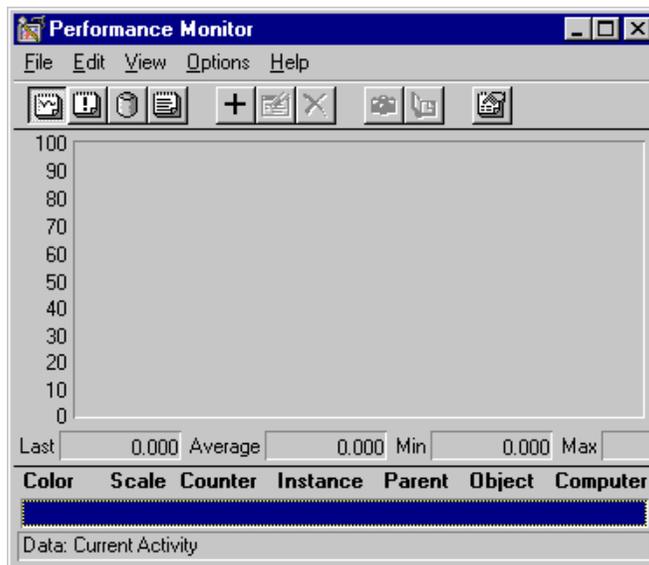
2. In the **Performance Monitor** window, click on the **+** toolbar button. Alternatively, in the **Performance Monitor** menu, click on **Edit > Add** to chart.

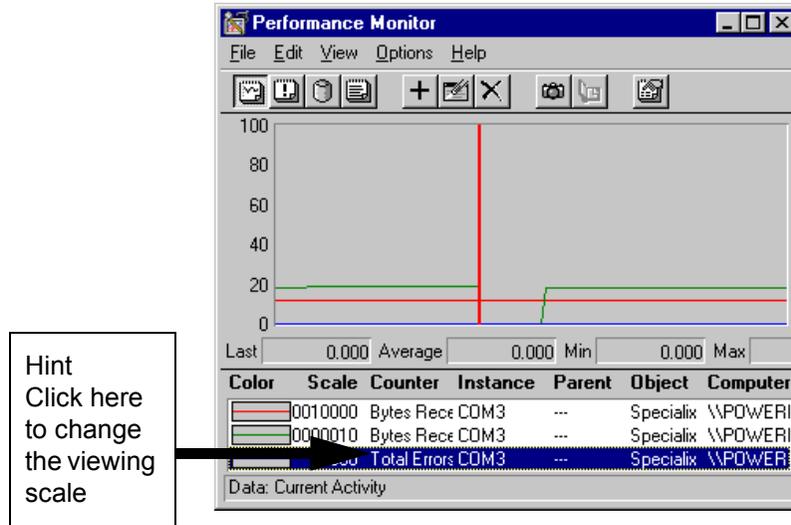The **Add to Chart** window is now displayed (shown in the next picture).
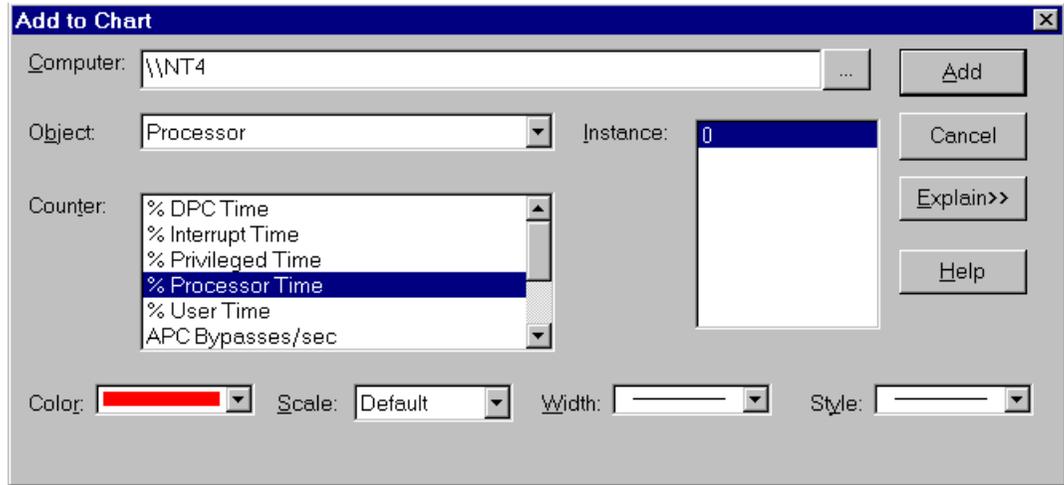
3. In the **Add to Chart** window, select the parameters you want as follows;

Parameter	User action required
Computer	No action required, current system displayed by default.
Object	Select **Perle Serial Ports.**
Counter	Select the counter you want (for example, Bytes Received). If required, click on the explain button to show a definition of the currently selected counter.
Instance	Select the com port you want to monitor. For example, **COM10**.

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4. In the **Add to Chart** window, click on the **Add** button.

The Add to Chart window now closes and the **Performance Monitor** window displays a performance graph for the selected com port as shown in the next picture.

Hint
Click here to change the viewing scale

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Cabling information

For information about cabling for your system, please refer to the appropriate section in the user guide for the specific Perle product.

Chapter 7 Quick reference

You need to read this chapter if you want to...

You need to read this chapter if you want information about the PortDirector main window, toolbars and menus.

This chapter provides a quick reference guide to the PortDirector software menus and tool bars. In addition, cross references are provided for further information about each area.

This chapter includes the following sections;

- **PortDirector main window** on page **80**

- **Tool bar** on page **82**

- **Menu maps** on page **85**

PortDirector main window

> **Note**
>
> The main window for PortDirector depends upon the operating system you are using see the following for details:
>
> • **Main window under Windows NT** on page **80**
>
> • **Main window under Windows 2000** on page **81**

Main window under Windows NT

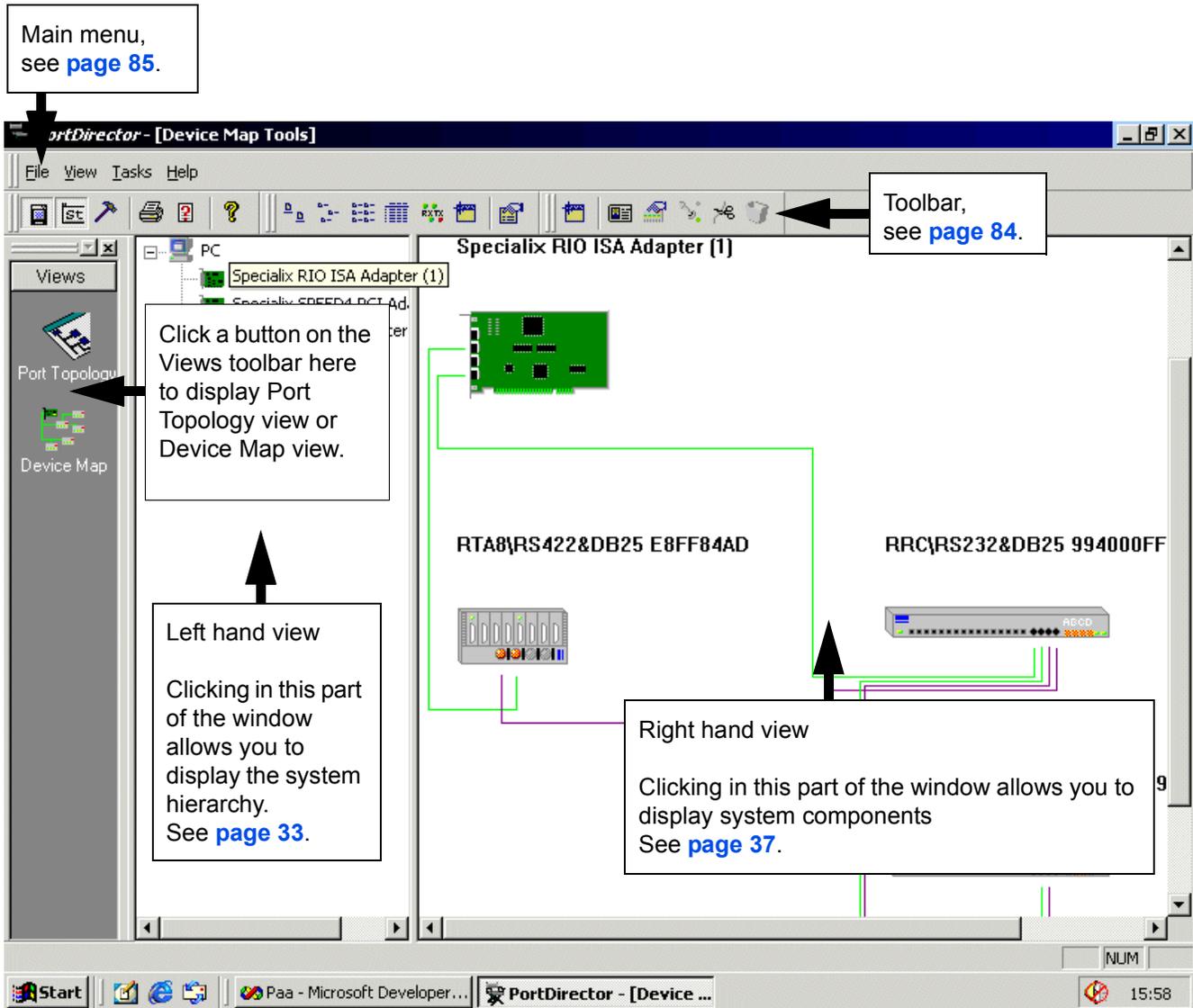The main window for the PortDirector software is shown in the next picture.

Main menu,
see **page 85**.

Toolbar,
see **page 82**.

Left hand view

Clicking in this part of the window allows you to display the system hierarchy.
See **page 33**.

Right hand view

Clicking in this part of the window allows you to display system components
See **page 37**.
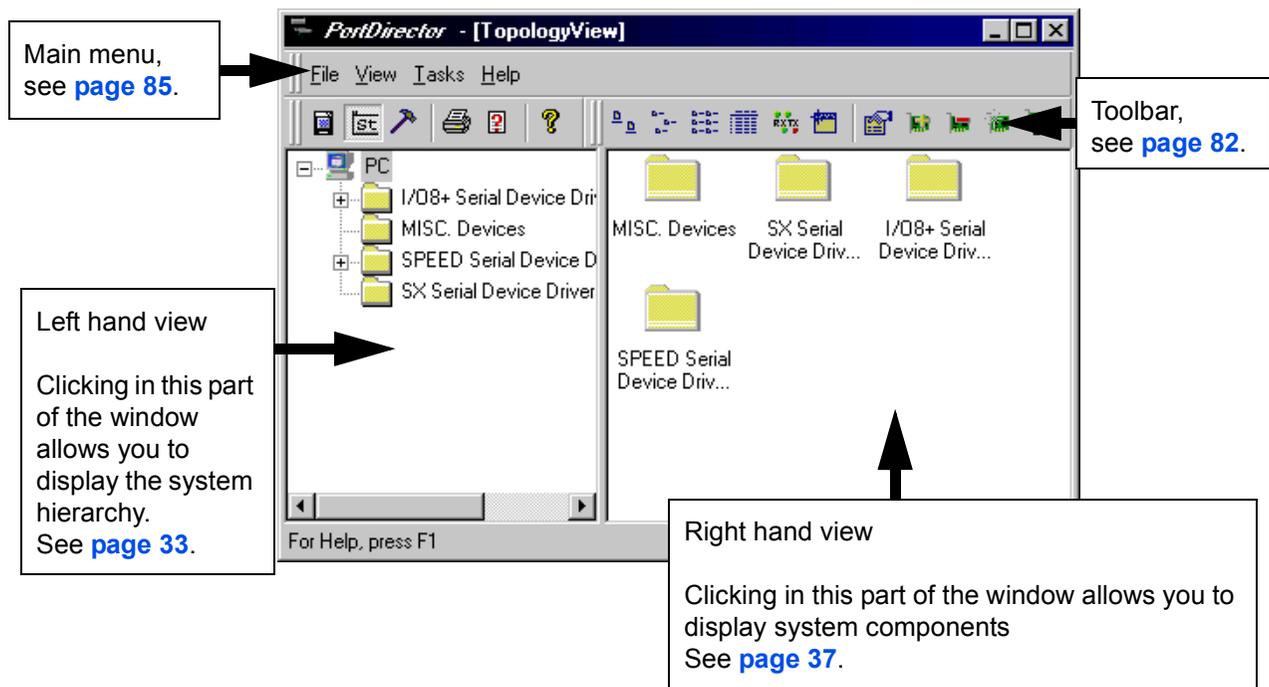
| Tool bar | For details about tool bars see **Tool bar** on page **82**. |
| Menus | For information about menus see **Menu maps** on page **85**. |

Main window under Windows 2000

The main window for the PortDirector software is shown in the next picture.

Main menu,
see **page 85**.

Toolbar,
see **page 84**.

Click a button on the Views toolbar here to display Port Topology view or Device Map view.

Left hand view

Clicking in this part of the window allows you to display the system hierarchy.
See **page 33**.

Right hand view

Clicking in this part of the window allows you to display system components
See **page 37**.

Tool bar   For details about tool bars see **Windows 2000 toolbar** on page **84**.

Menus   For information about menus see **Menu maps** on page **85**.

Tool bar

> **Note**
>
> The toolbar displayed within PortDirector depends upon the operating system you are using see the following for details:
>
> • **Main window under Windows NT** on page **80**
>
> • **Main window under Windows 2000** on page **81**

Windows NT toolbar

The functions provided by the tool bar in the main PortDirector window under Windows NT are summarised in the next picture. For the corresponding menu options, see **Main menu** on page **85**, **Right hand view menu** on page **89** and **Left hand view menu** on page **90**.

Refresh, see **page 89**.

Pinouts, see **page 37**.

Details, see **page 37**.

List, see **page 37**.

Small icons, see **page 37**.

Large icons, see **page 37**.

About this software, see **page 85**.

Print preview, see **page 36**.

Print, see **page 36**.
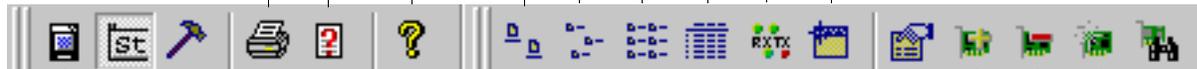
Customise toolbar, see **page 85**.

Toggle status bar, see **page 85**.

Views window, see **page 85**.

Properties, see **page 61**.

Add ISA device, see **page 51**.

Remove device, see **page 55**.

Update device, see **page 26**.

Re-scan, see **page 57**.

Windows 2000 toolbar

The functions provided by the tool bar in the main PortDirector window under Windows 2000 are summarised in the next picture. For the corresponding menu options, see **Main menu** on page **85**, **Right hand view menu** on page **89** and **Left hand view menu** on page **90**

Refresh, see **page 89**.

Pinouts, see **page 37**.

Details, see **page 37**.

List, see **page 37**.

Small icons, see **page 37**.

Large icons, see **page 37**.

About this software, see **page 85**.

Properties, see **page 61**.

Print preview, see **page 36**.

Print, see **page 36**.

Customise toolbar, see **page 85**.

Toggle status bar, see **page 85**.

Views window, see **page 85**.

Refresh, see page 51.

Identity, see **page 44**.

Adopt, see **page 45**.

Reboot, see **page 47**.

Zombie, see **page 48**.

Delete. see **page 49**.

.

Menu maps

This section provides menu maps for all menus available within the PortDirector software. See the following;

- **Main menu** on page **85**

- **Right hand view menu** on page **89**

- **Left hand view menu** on page **90**.

Main menu

The main PortDirector menus are as follows:

- **File menu** on page **85**

- **View menu** on page **86**

- **Tasks menu** on page **87**

- **Help menu** on page **88**

File menu

Menu option		Description
File >	**Print**	Prints the system hierarchy. See **page 36**
	Print Preview	Previews the system hierarchy to be printed. See **page 36**
	Print Setup	Sets up printing parameters. See **page 36**
	Exit	Closes the PortDirector software. See **page 31**.

View menu

Menu option		Description
View >	**Large Icons**	Displays the current system components as large icons in the right hand view of the PortDirector window. See **page 37**.
	Small Icons	Displays the current system components as small icons in the right hand view of the PortDirector window. See **page 37**.
	List View	Displays a list of the current system components as icons in the right hand view of the PortDirector window. See **page 37**.
	Details View	Displays a detailed list of the current system components as icons in the right hand view of the PortDirector window. See **page 37**.
	Pinouts	Displays the connector pinouts of the current system components in the right hand view of the PortDirector window. See **page 37**.
	Refresh	Refreshes the right hand view display.
	Views Window	Displays the **Views** window
	Status Bar	Hides or displays (toggle) the status bar.

Tasks menu

Menu option			Description
Tasks >	**Customise**		Allows generic Windows toolbar customisation. See Windows user documentation.
	Topology View >	**Add Device**	Adds a device to your system. For example, an ISA host card. See **page 51**.
		Remove Device	Deletes a device from your system. For example an ISA host card. See **page 55**.
		Update Device	Updates an existing device driver. See **page 26**.
		Re-scan All Devices	Re-scans the system for any devices not currently in use by the device drivers. See **page 57**.
		Device Properties	Displays the properties of the currently selected com port. See **page 61**.
	DeviceMapTools > **Note that this menu option is only available under Windows 2000.**	**Identify**	Displays the identity of the selected RTA and flashes the LEDs on the actual device. See **page 44**.
		Adopt	Allows you to adopt defined ports from disconnected devices. See **page 45**.
		Reboot	Re-boots the selected RTA. See **page 47**.
		Zombie	Disconnects the selected RTA from the system without physically unplugging it. See **page 48**.
		Delete	Permanently deletes the selected device and its associated ports from the system. See **page 49**.

Help menu

Menu option		Description
Help >	**About**	Displays information on this release of the PortDirector software.

Right hand view menu

You display this menu as follows:

- Place the mouse cursor in the right hand view of the PortDirector window and then click on the right mouse button.

The right hand view menu is now displayed. This menu is described in the next table.

Menu option	Description
Large Icons	Displays the current system components as large icons in the right hand view of the PortDirector window. See **page 37**.
Small Icons	Displays the current system components as small icons in the right hand view of the PortDirector window. See **page 37**.
List	Displays a list of the current system components as icons in the right hand view of the PortDirector window. See **page 37**.
Details	Displays a detailed list of the current system components as icons in the right hand view of the PortDirector window. See **page 37**.
Pinouts	Displays the connector pinouts of the current system components in the right hand view of the PortDirector window. See **page 37**.
Add Device	Adds a device to your system. For example, an ISA host card. See **page 51**.
Remove Device	Deletes a device from your system. For example an ISA host card. See **page 55**.
Update Device	Update an existing device driver. See **page 26**.
Re-scan All Devices	Re-scans the system for any devices not currently in use by the device drivers. See **page 57**.
Refresh	Refreshes the right hand view display.
Properties	Displays the properties of the currently selected com port. See **page 61**.

Left hand view menu

You display this menu as follows:

• Place the mouse cursor in the left hand view of the PortDirector window and then click on the right mouse button.

The left hand view menu is now displayed. This menu is described in the next table.

Menu option	Description
Add Device	Adds a device to your system. For example an ISA host card. See **page 51**.
Remove Device	Deletes a device from your system. For example an ISA host card. See **page 55**.
Update Device	Updates an existing device driver. See **page 26**.
Re-scan Devices	Re-scans the system for any devices not currently in use by the device drivers. See **page 57**.
Refresh	Refreshes the right hand view display.
Properties	Displays the properties of the currently selected com port. See **page 61**.

Appendix A Contacting Perle

You need to read this appendix if you want to...

You need to read this appendix if you want to contact Perle for technical support or any other queries about this product.

This appendix includes the following sections;

- **Making a technical support query** on page **91**
- **Repair procedure** on page **94**
- **Feedback about this manual** on page **95**
- **Perle support centres worldwide** on page **96**

Internet access

Click here to access the our website at the following URL:

http://www.perle.com

Email

Click here to email Perle at the following address;

Email: support@perle.com

Making a technical support query

This section contains the following information about making a query;

- **Who to contact** on page **91**
- **Information needed when making a query** on page **92**
- **Making a support query via the Perle web page** on page **93**

Who to contact

If you bought your product from a registered Perle supplier, you must contact their Technical Support department; they are qualified to deal with your problem.

If you are a registered Perle supplier, and bought your product from Perle, contact Perle Technical Support at the offices listed below.

Information needed when making a query

When you make a technical support enquiry please have the following information ready;

> Hint
> Print out this page and fill in the table provided with the basic
> information you need.

Item	Write details here
Product name and version	
Problem description	
Operating system version	
Driver version	
Details of any other cards installed in your system	
Your name	
Company Name	
Country	
Phone number	
Fax number	
Email address (if available)	

Making a support query via the Perle web page

If you have an internet connection, please send details of your problem to Technical Support using the email links provided on the Perle web site in the 'Support' area.

See also **Perle support centres worldwide** on page **96** for email links and other contact details for the Perle technical support centres.

Click here to access our website at the following URL:

http://www.perle.com

Repair procedure

Before sending a unit for repair, you must contact your Perle supplier. If, however, you bought your product directly from Perle you can contact directly. See **Perle support centres worldwide** on page **96** for contact information.

Customers who are In Europe, Africa or Middle East can submit repair details via a website form shown in the next picture. This form is on the Perle website, **www.perle.com**, in the **Support** area.

> **Click here to access our web site at the following URL:**
>
> **http://www.perle.com/support/rma_form.html**

In the USA and Asia contact the office shown in the Technical Support section.

Website RMA (Return Material Authorisation) Form

Feedback about this manual

If you have any comments or suggestions for improving this manual please email Perle using the following address;

docfeedback@perle.com

Please include the *title*, *part number* and *date* of the manual (you can find these on the title page at the front of this manual).

Perle support centres worldwide

> **Note**
>
> Perle offers free technical support to Perle Authorised Distributors and Registered Perle Resellers.
>
> To access technical support please visit the Perle website at **www.perle.com/support.**
>
> If you are unable to find the information you require, please feel free to contact our technical support teams by email using the addresses shown in the next table.

Country	Address	Email
North America	Perle Systems Ltd. 60 Renfrew Drive Markham Ontario Canada L3R OE1	**Email: ptac@perle.com**
Europe	Perle Systems Europe Ltd. 3 Wintersells Road Byfleet Surrey KT14 7LF UK	**Email: ptac@perle.com**
Asia	Perle Asia Pacific (Pte) Ltd. 190 Middle Road #19-05 Fortune Centre Singapore 188979	**Email: ptac@perle.com**
Worldwide	Perle Systems Ltd. 60 Renfrew Drive Markham Ontario Canada L3R OE1	**Email: ptac@perle.com**

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