

## Introduction

This Quick Start Guide covers the key points of the installation of the device driver software and host card for your SPEED product. To obtain the latest driver software please refer to the driver matrix page under technical support in Perle web site.

### Note

See SPEED Serial adaptors user guide, part number 5500034 for more detailed information.

## Accessing the CDROM

### Windows

The CDROM will be automatically mounted a short time after placing it in the CDROM drive. View with Windows Explorer.

### SCO OpenServer

1. Login to your system as super user, then load the CDROM into your system CD drive.
2. At the command prompt, type **mkdir /cdrom**.
3. At the command prompt, type:  
**mount -f ISO9660 -r/dev/cd0 /cdrom**

You can now browse the CDROM content using the File Manager tool in the SCO OpenServer desktop.

### SCO UnixWare

1. Login to your system as super user, then load the CDROM into your system CD drive.
2. At the command prompt, type **mkdir /cdrom**.
3. At the command prompt, type:  
**mount -r -F cdfs -o nmconv=c /dev/cdrom/c1b0t010 /cdrom**

You can now browse the CDROM content using the File Manager tool in the SCO UnixWare desktop.

### Linux

1. Login to your system as super user then load the CDROM into your system CD drive.
2. At the command prompt, type **mount /mnt/cdrom**.

You can now browse the CDROM content using any one of the file browsers available for Linux.

## Installation overview

1. Install the SPEED card(s) and connect the peripherals.
2. Install the software.
3. Set-up log-ins and ports, using the SPEED configuration utility.

## Installing driver software

### Windows 95 and 98

To install the SPEED device drivers and utilities for the Windows 95 or 98 operating systems proceed as follows;

1. Turn on your PC and if required, log in.
2. Load the CDROM into your PC.
3. From the `\drivers\speed\win9x` directory on the CDROM, run the **setup.exe** file.
4. In the Welcome window now displayed, click on the **Next >** button.
5. In the Setup Complete window now displayed, click select the **Yes, I want to restart my computer now** option, then click on **Finish** button to confirm your selection.
6. Shutdown your PC then install any PCI host cards you require into your system
7. Start Windows your PC.

Windows will then detect and install drivers and ports for your PCI cards automatically.

### Hint

After the machine restarts, if windows cannot find a file whilst trying to install a device a pop-up window is displayed asking you for the location of missing file. To remedy this;

- In the popup window, select the windows system directory for example,  
**c:\windows\system**.

Device installation should then be able to continue.

### Windows NT 3.51 and 4

A device driver is installed with the PortDirector software, supplied on the CDROM. To install PortDirector:

1. Load the CDROM.

2. Access the `\drivers\portdirector` directory in Windows Explorer and double-click on **Setup.exe**.
3. Follow the instructions on screen to install PortDirector.

### Note

Any installed speed cards will be automatically detected and assigned from PortDirector.

### Windows 2000

To install under Windows 2000 proceed as follows;

1. Install the SPEED cards you require and allow the operating system to boot.

A pop-up message is now displayed in your computer screen saying new hardware has been detected prompting you for a destination directory.

2. Load the CDROM.
3. In the popup window select the `\drivers\speed\w2k` directory and click on **OK**.

You can now install PortDirector if required for management of your serial ports. Alternatively, you can use the Windows 2000 Device Manager for configuration.

The device drivers and software are now installed automatically into the selected destination.

### SCO OpenServer

To install under SCO OpenServer proceed as follows;

1. Install any SPEED PCI host cards into your system.
2. Login to your system as super user, then load the CDROM into your system CD drive.
3. Mount the CDROM using the instructions for **SCO OpenServer** in **Accessing the CDROM**.
4. In the SCO OpenServer desktop, double click on the System Administration folder.
5. In the System Administration window, double click on the software manager icon.
6. In the Software Manager menu, click on **Software > Install New**.
7. In the Begin Installation window, click on the **From localhostname** button and then click on **Continue**.
8. In the Select Media window, select the **Media Images** option then click on **Continue**.

9. In the Enter Image Directory window, type;  
`/cdrom/drivers/speed/openserver` and then click on **OK**
10. In the Install Selection window, click on the **Install** button.
11. If you are installing other drivers, turn off the **Re-link Kernel** option to prevent an unwanted kernel link. A successful installation pop-up message is now appears.

12. In the pop-up window click on **OK** to close the window.

The software manager window is now updated to include the SPEED driver in the list of installed software.

### SCO UnixWare

To install the SPEED device drivers and utilities for the SCO UnixWare operating system proceed as follows;

1. Install any SPEED PCI host cards into your system.
2. Login to your system as super user, then load the CDROM into your system CD drive.
3. Mount the CDROM using the instructions for **SCO UnixWare** in **Accessing the CDROM**.
4. At the command prompt, type **pkgadd -d /cdrom/drivers/speed/unixware/speed.pkg spd** and press the **Enter** key.

The system now displays a series of messages ending with a successful installation message.

### Linux

To install the device drivers proceed as follows:

### Note

When installing SPEED drivers under Linux **versions 2.2.x**, you will need to apply a patch file to the kernel before enabling the drivers (step **4**, of this procedure). See the CDROM (in the `drivers/speed/linux` directory) or our website <http://www.perle.com>.

As of Linux **version 2.4.x**, you do not need to apply a patch on this or later kernels, you can proceed straight to enabling the driver using step **4**, of this procedure.

1. Make sure you have an up to date Linux kernel source directory installed. See <ftp://ftp.linux.org> or other major Linux web sites.
2. Copy the driver patch file onto your system in a temporary directory. For example, `/tmp`.

The patch file will be named **speed.patch-<driver vers>-<kernel vers>.gz**  
For example, **speed.patch-6-2.2.13.gz**

3. At the command prompt, enter the following commands;  
**gunzip /tmp speed.patch-6-2.2.13.gz**  
**cd /usr/src/linux**  
**patch -p1 </tmp/speed.patch-6-2.2.13.gz**
4. If the patch is successful, you will need to enable the driver using the **make config** or **make xconfig kernel** utility. The SPEED driver appears in the **Character devices** section and is labelled **Specialix SPEED system support**. Set this to **m** for modules.
5. Within either the **make config** or the **make xconfig kernel** utility, set the **Support more than 4 serial ports** and **Support special multiport boards options** to **Y** and enable **Support for sharing serial interrupts**.
6. Now rebuild and install the kernel and modules. See your Linux distribution documentation.

## Installing the SPEED card(s)

### Warning

Dangerous voltages exist inside computer systems. Before installing host cards in your system, turn off the power supply and disconnect the mains lead.

### Caution

**Full anti-static precautions should be taken when handling host cards.**

1. Switch your system off and remove the cover.
2. Insert each card into a vacant PCI slot.

Replace the cover of your computer and restart your machine. The SPEED card(s) should be detected automatically.

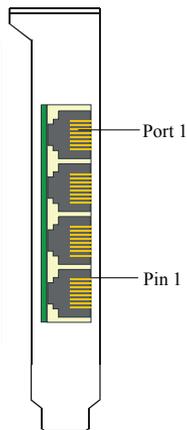
## RJ45 socket pinouts

### SPEED4 and SPEED4+ cards

The connector pinout for each RJ45 socket fitted to the SPEED4 and SPEED4+ PCI host cards are as follows;

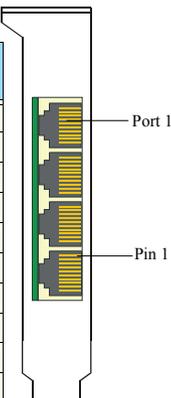
## SPEED4 card

RJ45 pin	Signal	Direction
1	DCD	In
2	DTR	Out
3	DSR	In
4	GND	
5	TXD	Out
6	RXD	In
7	RTS	Out
8	CTS	In



## SPEED4+ card

RJ45 pin	Signal	Direction
1	RI	In
2	DCD	In
3	DTR	Out
4	DSR	In
5	GND	
6	TXD	Out
7	RXD	In
8	RTS	Out
9	CTS	In
10	N/C	-



## Configuring the ports

### SCO OpenServer

The Port Configuration utility allows you to configure the SPEED serial ports you have added to your system. To do this proceed as follows

#### Note

To see if the terminal type you are using is supported for transparent printing, refer to the SPEED Serial adaptors user guide, part number 5500034.

- In the SCO OpenServer desktop, double click on the **System Administration** Folder.  
The System Administration window is now displayed
- In the System Administration window, double click on the **Specialix Speed** folder.  
The Specialix Speed window is now displayed.
- In the Specialix Speed window, double click on the **Speed Port Configuration** icon.  
The Speed Port Configuration window is now displayed.
- In the Speed Port Configuration window, select the ports you want you want to configure.
- Select the getty definition and terminal type you want.
- If required, click on the **ixon** button to enable flow control for Transparent printing (to enable sending of data on receipt of the next character, click on the **ixany** button).
- Click on either the **Enable** or **Disable** buttons as required to enable or disable login sessions on the selected ports.
- In the Port Configuration menu, click on **Ports > Save & Exit**.

The changes you have made are now implemented

### SCO UnixWare

The SPEED utilities for the SCO UnixWare operating system includes a utility called **Serial Manager** which allows you to configure the extra SPEED serial ports you have added to your system. To invoke **Serial Manager**:

- At the command prompt, type **scoadmin** to display the System Administration window.

- In the System Administration tool window, click on the **Hardware** folder and then select **Serial Manager**.

Alternatively, you can use the **spxadmport** command to set up logins on ports.

### Windows 95 and 98

#### Note

SPEED ports are normally configured as part of the installation process.

### Windows NT

PortDirector will automatically recognise the installed card and its ports. The ports will have the default settings, although this can be changed using PortDirector.

### Windows 2000

Use the Device Manager to change the default settings that are applied by the operating system.

### Linux

After you have installed the new kernel & hardware, and have rebooted the machine, you need to create devices for the added ports. To do this proceed as follows;

- At the command prompt, type **grep ttyS /var/log/messages** and press the **Enter** key to determine how many on board devices are present.
- At the command prompt, type **ls -l /dev/ttyS[0-9]\*** and press the **Enter** key to display the major and minor node numbers.
- At the command prompt, enter the following commands (pressing the **Enter** key after each one) to create the next 4 nodes.  

```

mknod /dev/ttyS2 c 4 66
mknod /dev/ttyS3 c 4 67
mknod /dev/ttyS4 c 4 68
mknod /dev/ttyS5 c 4 69

```

- If you require callout devices as well as tty devices, at the command prompt type the following (pressing the **Enter** key after each one):

```

mknod /dev/cua2 c 5 66
mknod /dev/cua3 c 5 67
mknod /dev/cua4 c 5 68
mknod /dev/cua5 c 5 69

```



# SPEED

Multi-port serial adaptors

Quick start guide



- 4 ports per card, expandable up to 16 ports
- High performance cards
- Simple RJ45 connectors
- PCI Bus architecture

### Contacting Perle Technical Support

*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](http://www.perle.com/support). Here you will find:*

- latest drivers and firmware updates for download
- technical tips
- frequently asked questions
- documentation
- configuration support
- cabling information
- maintenance contract information
- and much more...

*If you are unable to find the information you require, please feel free to contact our technical support teams by email at:*

#### USA

[Email: ptac@perle.com](mailto:ptac@perle.com)

#### Europe

[Email: ptacemea@perle.com](mailto:ptacemea@perle.com)

#### Asia

[Email: ptacasia@perle.com](mailto:ptacasia@perle.com)

#### Internet

[www.perle.com/support](http://www.perle.com/support)

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