Introduction

This Quick Start Guide covers the key points of the installation of the device driver software and host card for your FAST product.To obtain the latest driver software, please refer to the download section of the Perle web site.

> **Note**
> For more detailed information, see the user documentation on the CDROM supplied with this product.

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/c1b0t0l0 /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.

Installing driver software

Windows 95 and 98

To install the FAST 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. Now load the CDROM into your PC.

2. From the **\drivers\fast\win9x\x.y.z** directory on the CDROM, run the **setup.exe** file.

3. In the Welcome window now displayed, click **Next >**.

4. 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.

5. Shutdown your PC then install any FAST cards you require into your system

6. Start Windows your PC.

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\x.y.z** directory in Windows Explorer and double-click on **Setup.exe**.

3. Follow the instructions on screen to install PortDirector.

> **Note**
> Any installed FAST cards will be automatically detected and assigned from PortDirector.

Windows 2000/XP/Server 2003/Vista

To install under Windows 2000/XP/Server 2003/Vista proceed as follows;

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

   A new hardware popup message is now displayed prompting you for a destination directory.

2. Load the CDROM.

3. In the popup window, select the **\drivers\speed\w2k\x.y.z** directory on the CDROM and click **OK**.

4. Select the installation executable for your operating system and install the FAST driver.

SCO OpenServer

To install under SCO OpenServer proceed as follows;

1. Install any FAST 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 **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/fast/openserver/x.y.z 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.

SCO UnixWare

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

1. Install any FAST 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.

4. At the command prompt, enter the following;
   pkgadd -d /cdrom/drivers/fast/unixware/x.y.z/fast.pkg spd

Linux

To install the device drivers proceed as follows:

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
patch-<kernel vers>.serial
For example, **patch-2.2.19.serial**

3. At the command prompt, enter the following commands;
   cd /usr/src/linux
   patch -p1 </tmp/ patch-2.2.19.serial

4. If the patch is successful, you will need to enable the driver using the **make config** or **make xconfig kernel** utility. The FAST driver appears in the **Character devices** section and is labelled **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.

Configuring AT-FAST cards

Before you install an AT-FAST card in your system you need to physically set the I/O address, IRQ level and operating mode using jumpers provided on the card. On the 16 port cards, you can set an IRQ delay time and choose between DTR and RTS..

> **Caution**
> Take full anti-static precautions when handling host cards.

4 and 8 port AT-FAST cards
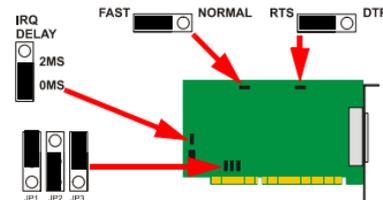
JP4 sets operating mode, set to **Fast**.
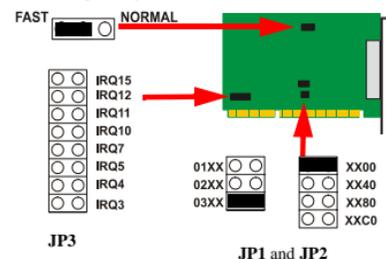
1. On the host card, set the jumper **JP4** to the **FAST** setting.

2. Using jumper **JP3** on the host card, set the IRQ level you want from the values listed on the card;

3. Using jumpers **JP1** and **JP2** on the host card, set the high order and low order I/O address you want in hexidecimal using the one of the settings shown in the next table;

Address	JP2 setting	JP1 setting
0100	01XX	XX00
0140		XX40
0180		XX80
01c0		XXc0
0200	02XX	XX00
0240		XX40
0280		XX80
02c0		XXc0
0300	03XX	XX00
0340		XX40
0380		XX80
03c0		XXc0

16 port AT-FAST cards

1. On the host card, set the jumper **JP6** to the **FAST** setting.

2. Using jumper **JP7** on the host card, set the IRQ level you want from the values listed on the card;

3. Using jumpers **JP1**, **JP2** and **JP3** on the host card, set the I/O address you want in hexidecimal.

4. If you are using larger systems with between 12 and 16 ports simultaneously at a baud rate greater than or equal to 9600bps, you can improve system performance by setting jumper **JP4** to **2MS** setting.

5. Using jumper **JP5** select the flow control type to **RTS** or **DTR** as required.

Installing AT&PCI-FAST cards

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

> **Note**
> Configure jumper settings as required on AT-FAST cards prior to installation as detailed in this guide.

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

1. Turn off the power to your system and disconnect the mains supply.

2. Remove the system cover to expose the inside of the connector panel for host cards.

3. Insert the FAST card you want to install into a vacant host card slot (ISA or PCI) and secure in place.

4. Repeat steps **1.** to **3.** until you have installed all the AT cards you want.

5. Replace and secure the system cover.

6. Plug in the mains and turn on the power.

> **Note**
> Do not turn on the power to your system until you have connected the distribution cable or box you are using with this host card.

RJ45 socket pinouts

The connector pinout for each RJ45 socket fitted to the AT-FAST and PCI-FAST four port cards is as follows;

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

Configuring the ports

SCO OpenServer

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

1. In the SCO OpenServer desktop, double click on the **System Administration** Folder.

2. In the System Administration window now displayed, double click on the **Fast** folder, then in the Fast window now displayed, double click the **Port Configuration** icon.

3. In the Port Configuration window now displayed, select the ports you want you want to configure and select the getty definition and terminal type you want.

4. 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).

5. Click on either the **Enable** or **Disable** buttons as required to enable or disable login sessions on the selected ports.

6. In the Port Configuration menu, click **Ports > Save & Exit**.

SCO UnixWare

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

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

2. 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**
> FAST ports are normally configured during installation.

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/XP/Server 2003/Vista

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

Linux

After installing the new kernel & hardware, and rebooting the machine, you need to create devices for the added ports.

1. At the command prompt, type **grep ttyS /var/log/messages** and press the **Enter** key to determine how many on board devices are present.

2. At the command prompt, type **ls -l /dev/ttyS[0-9]*** and press the **Enter** key to display the major and minor node numbers.

3. At the command prompt, enter the following commands 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

4. If you require callout devices as well as tty devices, at the command prompt type the following:
   mknod /dev/cua2 c 5 66
   mknod /dev/cua3 c 5 67
   mknod /dev/cua4 c 5 68
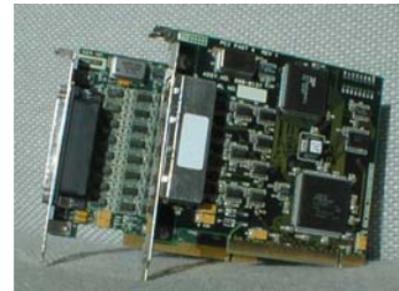   **mknod /dev/cua5 c 5 69**

AT&PCI-FAST

High speed serial adaptors

Quick Start Guide

- Ease of installation and configuration
- 4, 8 or 16 ports
- Available in both ISA and PCI formats