

## Introduction

This Quick Start Guide covers the key points of the installation of the RIO device driver software and hardware. It is intended for systems administrators familiar with the operating systems listed in this guide. To obtain the latest driver software please refer to the driver matrix page under technical support in Perle web site ([www.perle.com](http://www.perle.com)).

See the RIO User Guide, part number 5500036 on the CDROM for more detailed information.

## Accessing the CDROM

### Solaris

1. Login to your system as super user then load the CDROM into your system CD drive.

Solaris will automatically mount the CDROM when inserted, and start the file manager application.

You can now browse the CDROM content using the File Management tools within Solaris.

### 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:  
**mount -f ISO9660 -r /dev/cd0 /mnt** and press the **Enter** Key.

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:  
**mount -r -Fcdfs -o nmconv=c /dev/cdrom/cdrom1 /mnt** and press the **Enter** key.

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

### Windows NT

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

### Windows 2000

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

### 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

### Solaris

1. Install any RIO PCI host cards into your system.
2. Login as super user, then load the CDROM into your system CD drive.
3. At the command prompt, type: **pkgadd -d /cdrom/drivers/rio/solaris/riosol.pkg** and press the **Enter** key (where x is version number).
4. At the prompt displayed, select **RIO driver** and press **Enter**.
5. At the prompt now displayed, type y and press **Enter**.

### SCO OpenServer

1. Install any RIO PCI host cards into your system.
2. Login to your system as super user, then mount the CDROM as described in [Accessing the CDROM](#).
3. In the SCO OpenServer desktop, double click on the System Administration folder.
4. In the System Administration window, double click on the Software Manager icon.
5. In the Software Manager menu, click on **Software > Install New**.
6. In the Begin Installation window, click on the **From localhostname** button and then click on **Continue**.
7. In the Select Media window, select the **Media Images** option then click on **Continue**.
8. In the Enter Image Directory window, type; **/mnt/drivers/rio/openserver** and then click on **OK**
9. In the Install Selection window, click on the **Install** button.

### SCO UnixWare

1. Install any RIO PCI host cards into your system.
2. Login to your system as super user, then mount the CDROM as described in [Accessing the CDROM](#).
3. At the command prompt, type the following commands (pressing the **Enter** key after each one):  
**pkgadd -d /mnt/drivers/rio/unixware/rio.pkg rio shutdown -y -i6** (to shutdown and re-boot the system).

### Linux

1. Ensure your Linux kernel supports the RIO product (version 2.4.x or later). Upgrade if necessary (see your Linux documentation for details on upgrading the kernel).
2. Using either the **make config** or **make xconfig** kernel utility, enable the RIO driver.

#### Hint

The RIO driver appears in the **Character devices** section, labelled **RIO system support**.

3. In the utility, enable **Non-standard serial port support**. Then, in the Character devices section of the utility set the RIO driver to **m** for modules.
4. Now rebuild and install the kernel and modules. See your Linux distribution documentation for details.
5. Once the driver has been enabled, install the RIO utilities from the CDROM using rpm. You can find these in **/mnt/cdrom/drivers/rio/linux**.

### Windows NT

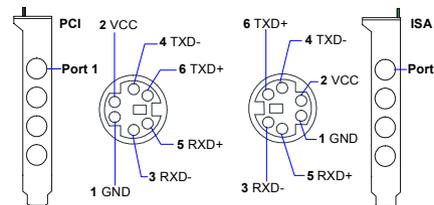
1. Install any RIO PCI cards onto your system.
2. Login as super user then load the CDROM into your system CD drive.
3. Using Windows Explorer, access the **\drivers\rio\winnt** directory, and double-click on **setup.exe**.
4. In the Welcome window now displayed, click on the **Next >** button to display the Choose Destination Location window (use the default).
5. In the Choose Destination Location window, click on the **Next >** button.
6. In the Select Program Folder window now displayed, click in the **Program Folders** field and enter the program folder you require (if different from the suggested default).

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

### Windows 2000

1. Turn on your PC and if required, log in.
2. In the Found New Hardware wizard now displayed, click on the **Next >** button to display the Install Hardware Device Drivers page.
3. In the **Install Hardware Device Drivers** page, select the **Search for a suitable device driver for my device** option and click on the **Next >** button.
4. In the Locate Driver Files page, select the **Specify a location** option and then click on the **Next >** button.
5. In the pop-up window **Copy manufacturer's files from** field now displayed, select **\drivers\rio\w2k** as the location and click on **OK**.
6. In the **Driver Files Search Results** page now displayed, click on the **Next >** button to use the suggested driver.
7. Click on the **Finish** button to close the wizard.

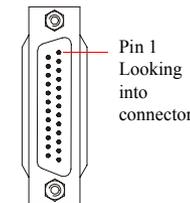
## Host card mini DIN pinouts



## Device concentrator pinouts

### MX type Remote Terminal Adaptors

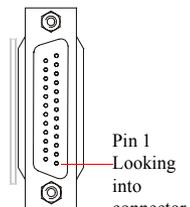
All MX type RIO Remote Terminal Adaptors are fitted with DB25 male connectors as shown in the next table.



Pin	Signal	Direction
1	Chassis	
2	TXD	Out
3	RXD	In
4	RTS	Out
5	CTS	In
6	DSR	In
7	GND	
8	DCD	In
20	DTR	Out
22	RI	In

### DX type Remote Terminal Adaptors

All DX type RIO Remote Terminal Adaptors are fitted with DB25 female connectors as shown in the next table.



Pin	Signal	Direction
1	Chassis	
2	TXD	Out
3	RXD	In
4	RTS	Out
5	CTS	In
6	DSR	In
7	GND	
8	DCD	In
20	DTR	Out
22	RI	In

## RJX type Remote Terminal Adaptors

All RJX type RIO Remote Terminal Adaptors are fitted with RJ45 female connectors as shown in the next table.

Pin 1  
(looking into connector)



Pin	Signal	Direction
1	DCD	In
2	DTR	Out
3	DSR	In
4	S/GND	
5	TXD	Out
6	RXD	In
7	RTS	Out
8	CTS	In
Shield		

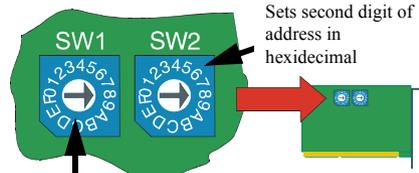
## Installing host cards

**Warning**  
Dangerous voltages exist inside computer systems. Before installing host cards in your system, turn off the power supply and disconnect the mains lead.  
Take full anti-static precautions when handling host cards.

### PCI host cards

1. Turn off the power to your system and remove the cover.
2. Insert each card into a vacant PCI slot.
3. Replace and secure the cover of your computer and restart your machine. The RIO card(s) should now be detected.

## ISA host card



1. Set the address on each ISA host card using the rotary switches **SW1**, **SW2** (sets first two digits of the address.).

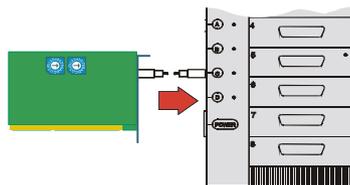
Example address	SW1	SW2
0D0000 (factory setting)	0	C
F00000	F	0

2. Turn off the power to your system and disconnect the mains supply.
3. Remove the system cover to expose the inside of the connector panel for host cards.
4. Insert the ISA card you want to install into a vacant host card slot and secure in place.
5. Repeat step 2. until you have installed all the ISA cards you want.
6. Replace and secure the system cover, then plug in the mains lead and turn on the power.

## Installing Remote Terminal Adaptors

To install RIO Remote Terminal Adaptors (RTAs) on your system proceed as follows;

1. Mount the RTA unit as required, then connect link cables from the host card or other RTA into the link socket of your choice on the unit.



2. Connect a power lead or PSU to the RTA (depending on type) then connect the other end of the lead or PSU to the mains and turn on the power.

**Warning**  
When using Multiple RTA power supplies do not stack the units as this may cause overheating.

The RTA will now boot up and commence normal operation. LEDs will display different colours depending the state of the unit.

3. Attach the peripherals you want to the Remote Terminal Adaptors using suitable cables.



# RIO

Remote I/O system

Quick start guide



- ISA and PCI bus types
- Ease of installation and configuration
- Up to 512 high speed serial ports to servers
- Fibre or leased lines for long distance support

### 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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