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Introduction

The Ringdale IP Router X4 is a device containing 4 local two port Ethernet IP routers which enable IP packets to be routed from one Network/Subnet to another on your Local or Wide Area Network, and even across the Internet if required.

The IP Router X4 is simple to install and can be configured and remotely managed using the PeripheralVision® software provided.

Important: each router within the device will be identified separately by PeripheralVision®, thus each of the 4 routers will need to be configured separately.

Use PeripheralVision® to create a routing table for each of the 4 routers, which directs the IP packets straight to the required IP Address, giving greater control over the operation of the network and aiding the speedy transmission of data.

Follow the instructions in this guide for quick installation and operation of your Ringdale IP Router X4.

The Ringdale IP Router X4 uses the AB-180-20, currently the fastest 8-bit microprocessor available.

Features

Remote management through Ringdale's PeripheralVision® software

Supports multiple IP Addresses on the same network

Broadcast Forwarding

Integral all voltage power supply with extremely low power consumption (3 watts)

Flash Upgradable

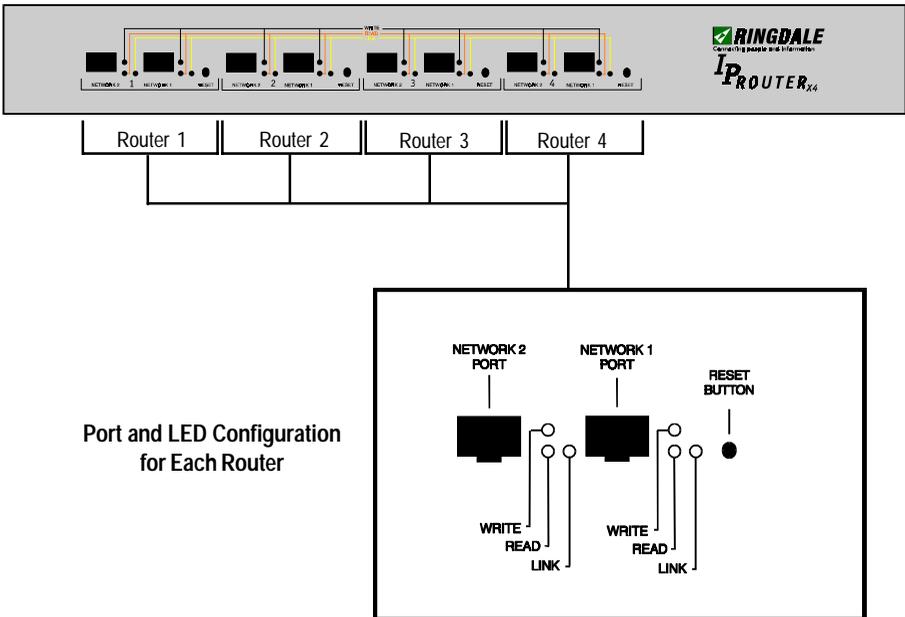
Installation

Connect the power cord to the **Power Input** socket at the back of the device, plug into power supply.

The LEDs will flash to indicate that the device has powered up.

The illustrations below show the front panel of the IP Router X4 with the configuration of the ports and the diagnostic LEDs. Each router has two ports.

Front Panel of IP Router X4



Port and LED Configuration for Each Router

Important: Because each of the routers are set with the same factory default IP address, only one router should be connected and configured to the network at a time.

The two ports for each router are itemized as follows:

Network 1 Port

Connect to this port the RJ45 cable from the hub of the first network/Subnet Mask you wish to route to.

Network 2 Port

Connect to this port the RJ45 cable from the hub of the second network/ Subnet Mask you wish to route to.

The LEDs for each router are itemized as follows:

Link (Yellow) LED

The Link LED indicates that the port is functionally connected to an external port. It lights up when the connected hub is turned on. If the LED does not light up, there may be a problem with the cabling or the hub.

Write (Red) LED

The write LED blinks when a data packet is being *sent* from that particular port.

Read (Green) LED

The Read LED blinks when a data packet is received, regardless of the status of the port, even if the port is disabled.

These last two LEDs enable monitoring of the traffic passing through the device.

Reset Button

Each of the 4 routers has its own reset button. When this is pressed the router will clear the routing table of the surplus information it is holding, but will retain the IP address settings last entered with PeripheralVision® (for details on PeripheralVision® and how it is used to configure the IP router, see the following section).

Pressing Reset will not reconfigure the IP addresses you have set.

Setup Procedure

Once a router is installed on the network it is necessary to configure it before installing any of the other routers in the device.

Configuration is accomplished by using the **PeripheralVision®** software supplied with the IP router.

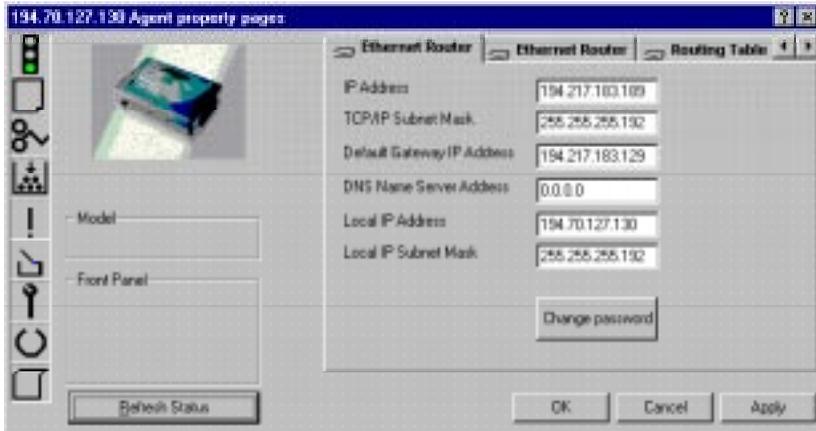
Using PeripheralVision® to Configure the IP Router ____

Full operational procedures for PeripheralVision® are dealt with in the Help file which can be accessed from the program, refer to this if any problems are encountered in the procedure detailed below.

Install PeripheralVision® onto a PC on Network One. Using the **Locate NPMP™** discovery tool in PeripheralVision®, enter the default set **IP address (11.22.33.44)**. The IP router will appear on the network map, it will be an icon similar to the example on the left.



Left click twice on the icon to open up the property Pages of the device. Using the arrows in the top right corner, scroll the pages and click on the first **IP Router** page. This is shown below.



The following information needs to be entered onto this page (this will be supplied by your network administrator).

IP Address

Enter here the router's IP address for Network 1.

TCP/IP Subnet Mask

Enter here the subnet mask for Network 1.

Default Gateway IP Address Enter here the default gateway IP address for Network 1.

DNS Name Server Address This information is not necessary.

Local IP Address Enter here the router's IP address for Network 2.

Local IP Subnet Mask Enter here the subnet mask for Network 2.

Click on **Apply** to register the new information.

Passwords

It is strongly recommended that Passwords are set for access to all router pages in PeripheralVision® because of the sensitive nature of the information that can be configured.

If required, access to set/change the information on the IP Router property page can be restricted using the **Change Password** button. Click on it to bring up the following window.

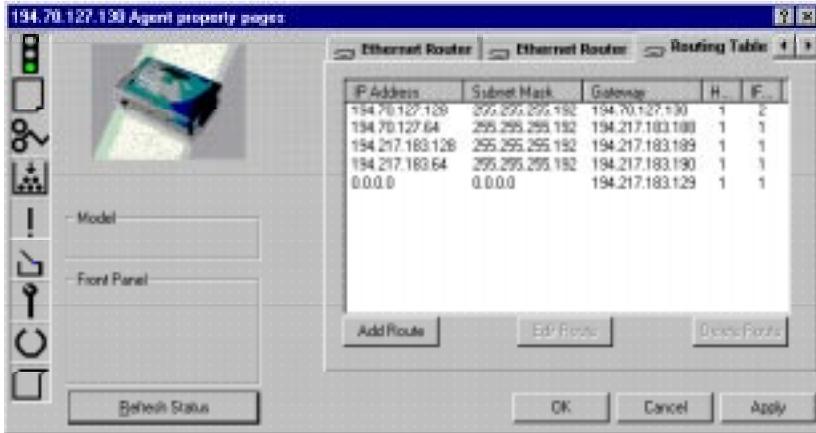


Enter the Password into the box, type in the confirmation and click on **OK**.

Access to change the configuration will now be restricted to those who have the Password.

Routing Table Page

Other property pages display further information. Select the **Routing Table** page, which is shown below.



It is now necessary to tell the IP Router where to route the IP packets to. This is done by creating a Routing Table as above. Configure each route as follows.

IP Address

Enter here the IP Address of the subnet you want to route to.

Subnet Mask

Enter here the Subnet Mask of the above IP Address.

Gateway

Enter here the Gateway address of the above.

H (Hops)

Enter here the number of hops across networks or subnets that are necessary to route the packets to the required IP Address.

IF (Interface)

Enter here the port through which the IP packets will be routed (either Network 1 Port or Network 2 Port).

Click on the **Add Route** button to add a new route.

Click on the **Edit Route** button to change the configuration of an existing route.

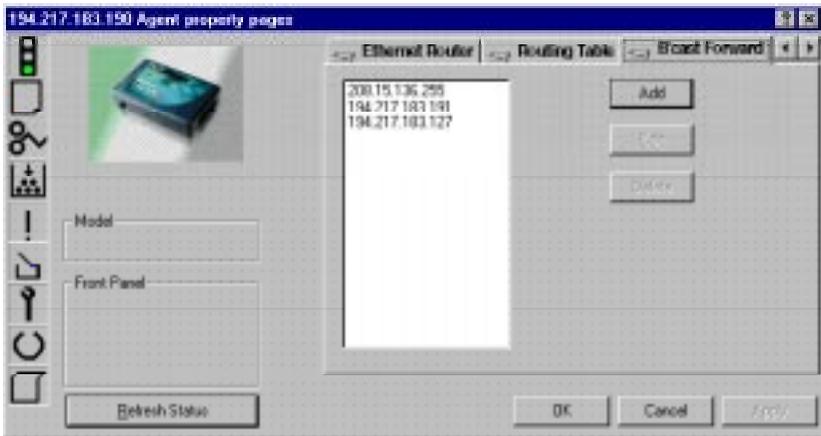
Click on the **Delete Route** button to remove a route.

Once the routes have been set up as required, click on **Apply**.

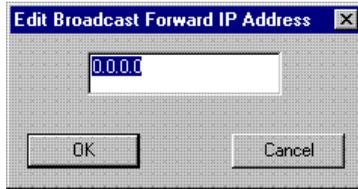
The Ringdale IP Router is now configured and will route your IP packets automatically as specified.

Broadcast Forward Page

The IP router also has the facility to forward broadcasts. Select the **B'cast Forward** page, which is shown below:



To forward a broadcast through the router to the required IP address click on **Add**. This will open the window below:



Enter the IP address and click on **OK**. The IP address will be entered into the list.

To make changes to an IP address already on the list, click on the required address to select it and then click on **Edit**. This will open the above window with the IP address you wish to edit. Make the changes and click on **OK**.

To delete an IP address from the list, click on the required address to select it and then click on **Delete**. The IP address will be removed.

Click on **Apply** to save any changes you make.

PeripheralVision® Licensing

PeripheralVision® software comes licenced for 30 days, after which time a full licence can be purchased to continue access to all the facilities of the program. **This does not affect your ability to use PeripheralVision® to configure the IP router.** This facility remains operational whether the software is licenced or not.

Safety and Location Advice _____

The device is designed to operate in a typical office environment. Choose a site that is:

Well ventilated and away from sources of heat including direct sunlight.

Away from sources of vibration or physical shock.

Isolated from strong electromagnetic fields produced by electrical devices.

Provided with a properly grounded wall outlet.

Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

Ensure that the system is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is to be removed. Do not operate the system with the cover removed.

Troubleshooting and Technical Reference _____

Symptom	Poss. Cause	Action
LEDs do not flash at power-up	Power switched off	Switch on
	Power cord not connected	Plug in Router
	Fuse defect	Replace fuse
Link LED does not light up	No cable inserted	Connect to hub and Router
	Router not powered up	Check power supply for Router
	Wrong cable type	Verify cable selection
	Bad cable	Replace cable

Technical Specification

Mains supply: Input: 90..240 volts AC
 Frequency: 50..60Hz
 Power: 3 watts typical

Network One Connection: Ethernet RJ45
Network Two Connection: Ethernet RJ45

Part No: 00-02-0342-0050

Technical Support

Ringdale Ltd, Ringdale Inc. and Ringdale GmbH all have Technical Support Departments. Their addresses and contact details are found on the back cover of this manual.

Before you call:

Please have the following information ready before calling:

Type of adapters installed in the System.
The adapter settings and interrupt options.

Network Information:
Network operating system type and version,
server configuration.

LAN topology:
Type of cable being used, size of network, number
of PCs and other nodes in network.

Computer Information:
Manufacturer, model number, operating system
used on the computer.

History of the Problem:
The symptoms of the problem.
Did the device work for a period of time or fail
immediately after installation?

Was any PC option changed (hardware or
software) prior to the problem appearing?