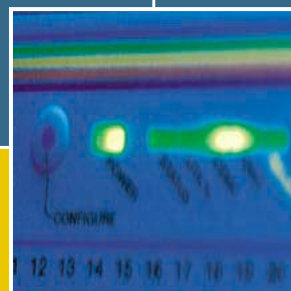
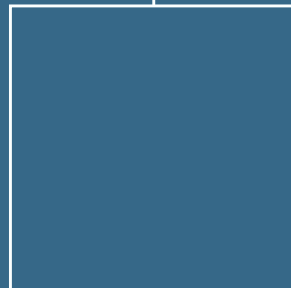


AR400 SERIES ROUTER

QUICK INSTALL GUIDE



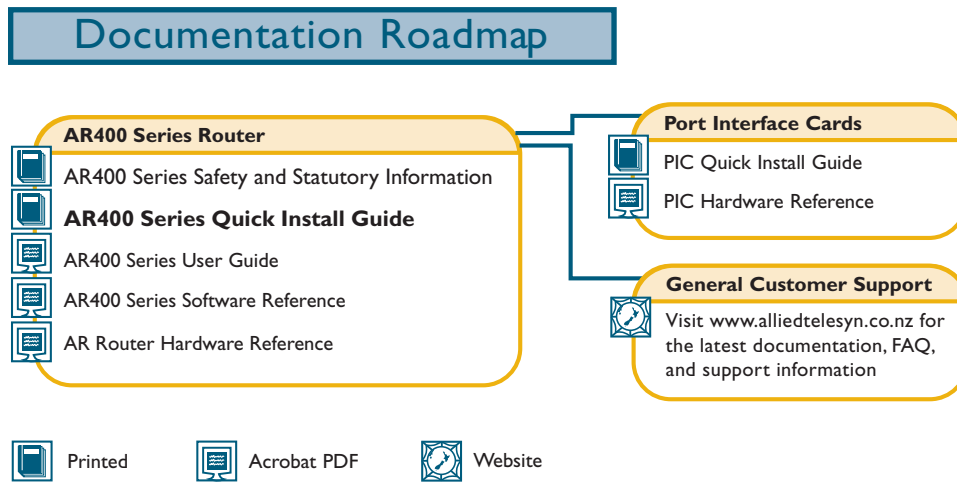
AR400 Series Router Quick Install Guide
Document Number C613-04032-01 REV E.

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Models Covered By This Guide

This Quick Install Guide includes information on the following models:

- AR410
- AR410S
- AR450S

Quick Install Guide updates can be found at www.alliedtelesyn.co.nz/support/ar400/

Package Contents

The following items are included with each AR400 Series router. Contact your sales representative if any items are damaged or missing.

- One AR400 Series router.
- One AC power cord.
- One power cord retaining clip.
- One terminal cable for connecting the router to a terminal or PC.
- Two UTP network cables.
- One rack-mount kit with brackets and screws.
- One *AR400 Series Router Quick Install Guide*.
- One *Safety and Statutory Information* booklet.
- One AR400 Series Router Documentation and Tools CD-ROM (which includes the complete AR400 Series Document Set and utilities).
- One warranty card.

Selecting a Site

The router can be installed in a standard 19-inch rack, or on a level surface such as a desktop or bench. When installing the router, choose a site that:

- Allows adequate airflow around the router and its vents.
- Is free of dust and moisture.
- Will maintain an ambient temperature range of 0 to 40° C (32 to 104° F) and a humidity range of 5 to 95% non-condensing.
- Has a reliable and earthed (grounded) power supply circuit, preferably dedicated and filtered.
- Does not expose cabling to sources of electrical noise, such as radio transmitters, broadband amplifiers, power lines, electric motors, and fluorescent fixtures.
- Allows easy access to the router's power and cable connections.

Installing the Router



This equipment must be earthed.

Follow these steps to install the router:

1. Read the safety information.

For safety information, see the *Safety and Statutory Information booklet*. A copy of this booklet is supplied with each router, and can also be found on the Documentation and Tools CD-ROM or at www.alliedtelesyn.co.nz/support/ar400/

2. Gather additional items you will need.

To install the router in a rack you will need a Phillips #1 screwdriver. You will also need screws and cage nuts to attach the brackets to your rack.

If also installing an optional Port Interface Card (PIC), you will need a *PIC Quick Install Guide* (AR410 and AR410S routers only).

3. Unpack the router.

Verify the package contents. If any items are damaged or missing, contact your sales representative.

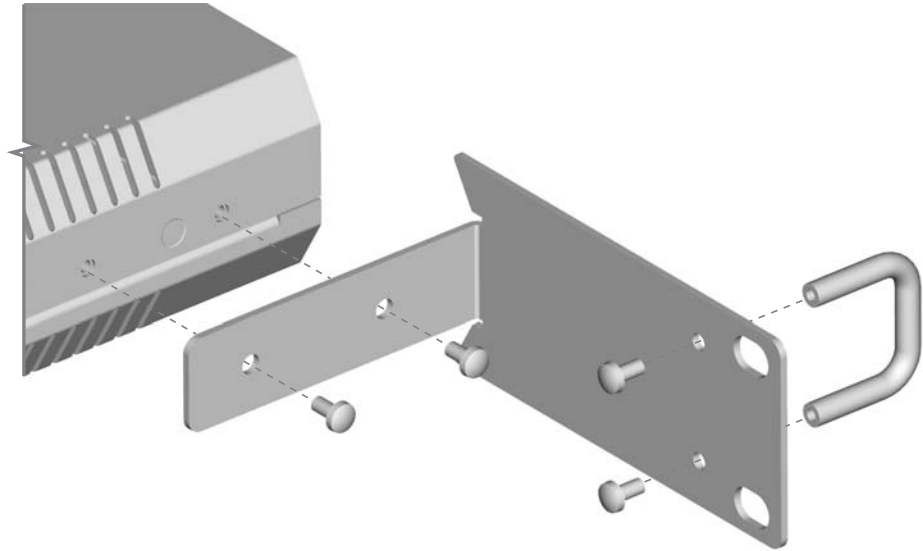
4. Place the router in its operating location.

See the previous "Selecting a Site" section for guidelines on choosing a suitable location. To install the router in a rack:

- Ensure the rack has sufficient space for the router and its associated cables. The router is 1U high
- Unscrew the feet

- Screw the handles to the wider side of each bracket, using the supplied M3 screws (see Figure 1)
- Screw the brackets to the sides of the router, using the supplied M3 screws (see Figure 1). The router can be front or rear mounted

Figure 1: Connecting the rack mount bracket to the router.



- Mount the router in the rack using appropriate rack mounting screws (not supplied)

5. Install expansion options (AR410 and AR410S routers).

If you purchased an optional PIC, install it now by following the *PIC Quick Install Guide*. That guide can be found on the Documentation and Tools CD-ROM or can be downloaded from www.alliedtelesyn.co.nz/support/ar400/.

6. Check the supply voltage and the router's rated voltage.

AR400 Series routers are fitted with a universal mains power supply that will function over the range 100-240 VAC and 50-60Hz.



The specific power supply requirements for a particular model are clearly displayed on the rear or underside of the router. If the supply is outside the accepted range for the router, the router may not operate or damage to the router may result.

7. Apply power to the router.

Fit the power cord retaining clip to the AC power inlet on the router's rear panel.

Connect the provided power cord to the AC power inlet and clip it in place. Switch the router's power switch to the ON position. The Power LED will light continuously and the System LED will flash briefly. The Port LEDs may also light briefly.

If the LEDs fail to light, the most likely cause is that the router is not receiving power. Check that

- The power supply outlet's switch (if any), and the router's power switch, are in the ON position

- The power cable is securely plugged in
- The power supply is operational

If the LEDs light incorrectly, refer to the *AR Router Hardware Reference* for troubleshooting information.

Figure 2: Front and rear panels of an AR450S, showing the AC power inlet, power switch, console ports and Ethernet ports, and their associated LEDs.

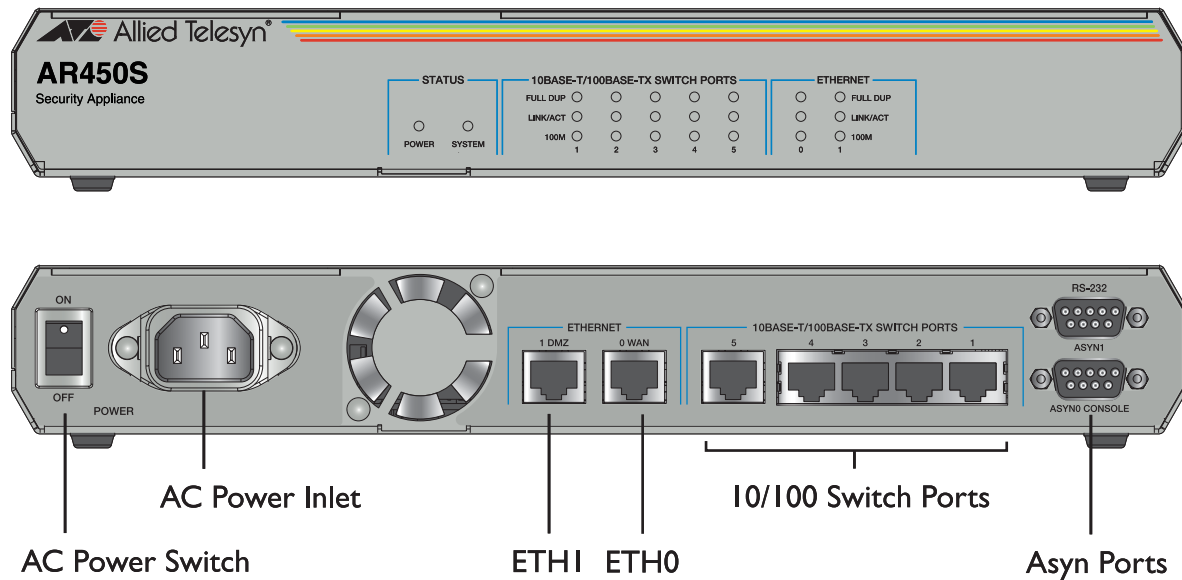
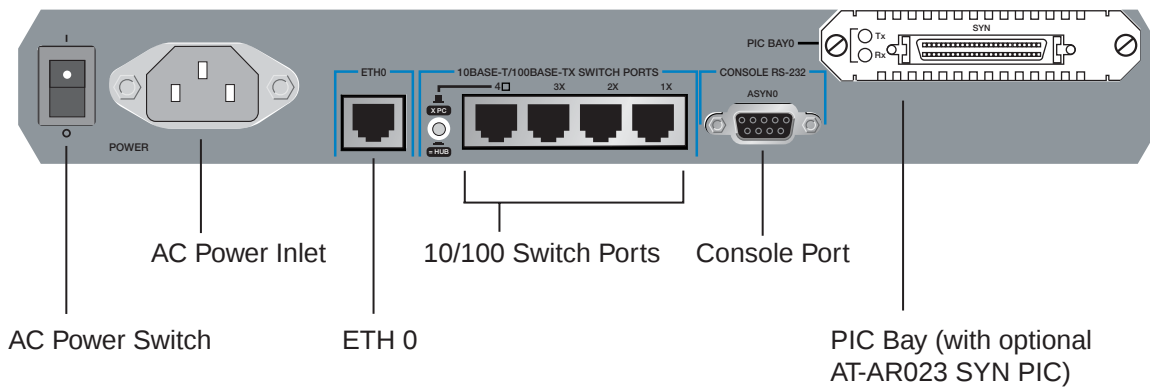


Figure 3: Rear panel of an AR410, showing the AC power inlet, power switch, console port, Ethernet ports, and an optional PIC card.



Configuring the Router

AR400 Series routers can be configured via the Command Line Interface (CLI) or Graphical User Interface (GUI).

Using the CLI to configure a router:

1. Initiate router start-up.

Using the terminal cable supplied, connect a VT100-compatible terminal, or the COM port of a PC running a terminal emulation program such as Windows Terminal, to the Console RS-232 (ASYN0) port on the router's rear panel.

Set the communication parameters on your terminal or terminal emulation program to:

- Baud rate: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: Hardware

See the *AR Router Hardware Reference* for more information on configuring emulation software.

2. Log in and set the password.

The log in prompt appears on the terminal or PC. If the log in prompt doesn't appear, press [Enter] two or three times.

When the router boots for the first time it automatically creates an account with manager privileges. The account has the log in name "manager" and the password is "friend". Passwords are case sensitive.

At the log in prompt, enter the log in name and password.

Login: **manager**

Password: **friend**

The router's command prompt appears and you can now configure the router using the command line interface.



Change the password as soon as possible. Leaving the manager account with the default password is a serious security risk. Make sure you remember the new password as there is no way to retrieve it if it is lost.

Use the following command to change the account password:

`set password`

To display a list of help topics, enter:

`help`

To display help on a specific topic, enter:

`help topic`

Alternatively, type a question mark (?) at the end of a partially completed command to see a list of valid options.

See the *AR400 Series Router Software Reference* for more information on router start-up and configuration procedures (including a list of message definitions).

Using the GUI to configure a router:

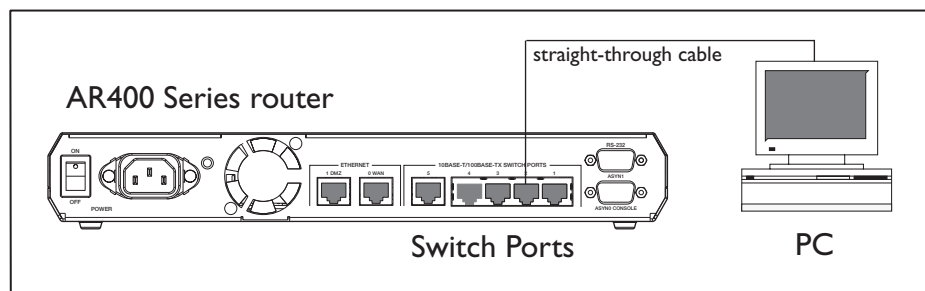
This section describes how to access the GUI via VLAN1, when the PC and the router are in the same subnet, in order to configure the router. The router's switch ports all belong to VLAN1 by default.

The GUI requires a PC and web browser. Supported browsers are Internet Explorer 5.0 and greater, or Netscape 6.2.2 or 6.2.3, with JavaScript enabled. Internet Explorer can be found on the Documentation and Tools CD-ROM that is bundled with your router.

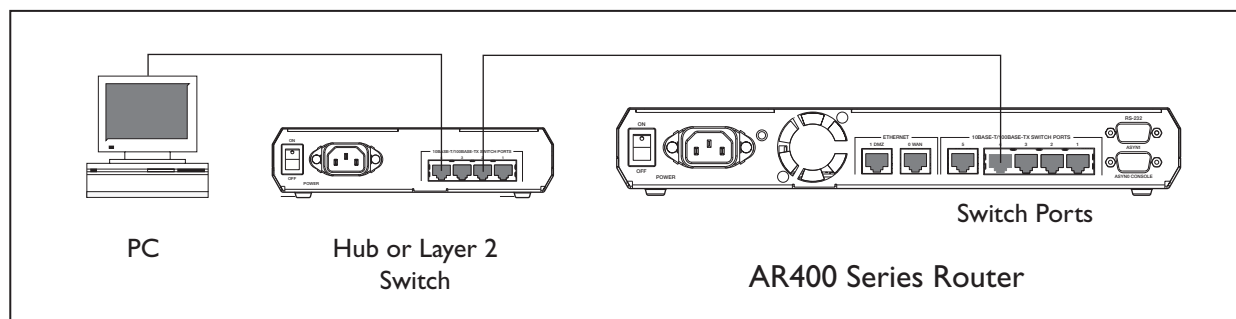
1. Connect the PC to a router switch port.

The PC can be connected directly, or through your LAN.

To connect the PC directly to the router, use a straight-through Ethernet cable to connect an Ethernet card on the PC to any one of the router's switch ports. Note the PC's IP address and mask.



To connect via a LAN, use an Ethernet cable to connect the router's switch port(s) to the device(s) on the LAN. Connect AR410 and AR410S routers through port 4 and ensure that the PC/hub switch is pressed in. Select the LAN PC from which you wish to configure the router. The PC should be in the same subnet as the part of the LAN that contains the router (for example, the PC could be connected to a hub or Layer 2 switch that is directly connected to one of the router's switch ports). Note the PC's IP address and mask.



2. Access the CLI on the router.

Follow the instructions in the previous "Using the CLI to configure a router" section.

3. Enable IP.

At the CLI, enter the command:

```
enable ip
```

4. Assign an IP address to VLAN1.

Assign the VLAN1 interface an IP address in the subnet that the PC uses, using the command:

```
add ip interface=vlan1 ip=ipaddress mask=mask
```

5. Browse to the GUI.

If you access the Internet through a proxy server, set your browser to bypass the proxy for the IP address you assigned to the VLAN1 interface.

Point your web browser at the IP address of the VLAN interface.

6. Log in and set the password.

At the log in prompt, enter the log in name and password. Passwords are case sensitive.

User Name: **manager**

Password: **friend**

The system status page appears and you can now use the GUI to configure the router.



To ensure configuration settings are saved correctly, use the GUI menus and buttons to navigate, not your browser's buttons.



As a security precaution, change the password as soon as possible.

To change the password, select Management > Users from the sidebar menu. Select the Manager account and click Modify.

7. To access context-sensitive help in the GUI.

Click on the Help Button [Help]. The Help button is located at the top of the sidebar menu or on any popup page.

Connecting the Data Cables

Connecting the router to your network:

1. Connect to the LAN

If you have not already done so, use straight-through Ethernet patch cables to connect the device(s) on your private network (LAN) to the router's switch port(s). By default, all switch ports are members of VLAN1.

2. Connect to the DMZ (AR450S)

If you have a public server, use an Ethernet patch cable to connect it to the AR450S router's Ethernet DMZ (ETH1) port. Separating public servers from your LAN allows the firewall to provide greater protection for your LAN. If you have multiple public servers, you can connect them to a hub or Layer 2 switch and connect that device to the router's DMZ port.

3. Connect to the WAN.



If you intend to use a firewall, configure it before you activate the WAN link.

Once initial configuration is complete, use an Ethernet patch cable to connect the router's Ethernet WAN (ETH0) port to the Ethernet port of a WAN device (such as a modem). With AR410 and AR410S routers, you can instead use a PIC for your WAN connection.

LEDs and What They Mean

LEDs indicate the router's operational status and port activity.

AR400 Series System LEDs

LED	State	Function
Power	Green	The router is receiving power and the power switch is in the ON position
System	Amber	The router is malfunctioning
	Flashing	The fan has failed (AR450S only)
	Off	Normal operation
Enabled (PIC Bay 0) (AR410 and AR410S only)	Green	A PIC card is correctly installed and has been detected by the router
	Off	No PIC is installed
Full Dup	Green	The corresponding port is operating at full-duplex
	Off	The corresponding port is operating at half-duplex
Link/ACT	Green	A link has been established through the corresponding port
	Flashing	Data is being transmitted through the corresponding port
	Off	No link is present through the corresponding port
100M	Green	The corresponding port is operating at 100Mbps
	Off	The corresponding port is operating at 10Mbps

Documentation and Tools CD-ROM

The Documentation and Tools CD-ROM bundled with each router contains the complete Document Set for your router. The CD-ROM also includes tools for managing your router.

The Document Set includes:

- The *AR400 Series Router Safety and Statutory Information* booklet, which provides safety and statutory information.
- This Quick Install Guide.
- The *AR400 Series User Guide*, which provides an introduction to the router and its operational features and characteristics.
- The *AR Router Hardware Reference*, which provides detailed information on the hardware features of AR routers.
- The *AR400 Series Router Software Reference*, which provides detailed information on configuring the router and its software.
- AT-TFTP Server for Windows, for downloading software releases.
- Adobe Acrobat Reader, for viewing online documentation.
- Microsoft Internet Explorer.

These documents can also be downloaded from the AR400 Series Router Support Site at www.alliedtelesyn.co.nz/support/ar400/.