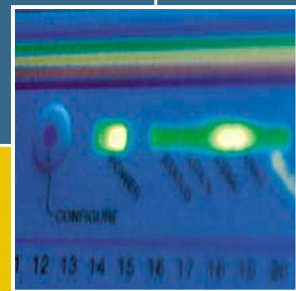
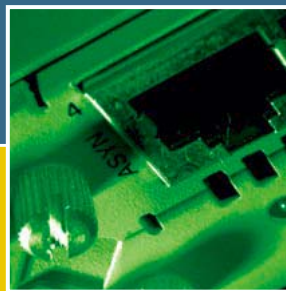
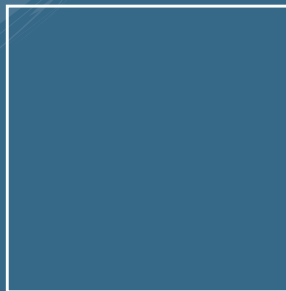


# AR700 SERIES ROUTER

## QUICK INSTALL GUIDE



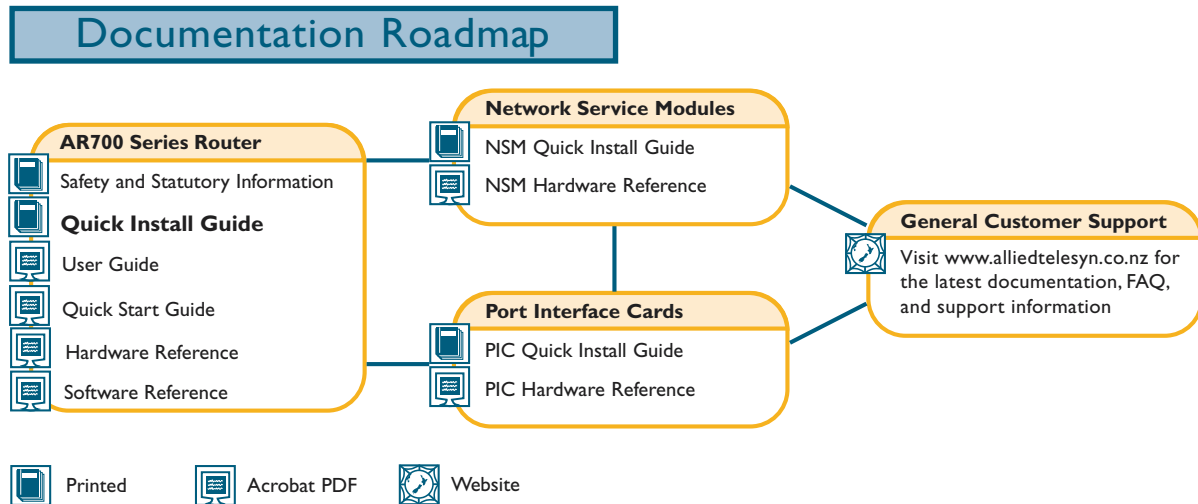
AR700 Series Router Quick Install Guide  
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## Models Covered By This Guide

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This Quick Install Guide includes information on the following models:

- AR720
- AR725
- AR740
- AR745

Quick Install Guide updates can be found at [www.alliedtelesyn.co.nz/documentation/documentation.html](http://www.alliedtelesyn.co.nz/documentation/documentation.html).

## Package Contents

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The following items are included with each AR700 Series router. Contact your sales representative if any items are damaged or missing.

- One AR700 Series router.
- One AC power cord (AC models only).
- One power cord retaining clip (AR725 and AR745 models only).
- One 19 inch rack-mount kit.
- One terminal cable for connecting the router to a terminal or PC.
- Two CAT 5 Ethernet cables for connecting the router to an Ethernet LAN (the AR720 package includes one CAT 5 cable).
- One AR700 Series Router Quick Install Guide.
- One Safety and Statutory Information booklet.
- One AR700 Series Router Documentation and Tools CD-ROM (which includes the complete AR700 Series Document Set and utilities).
- One warranty card.

## Selecting a Site

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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

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*All AC and DC versions of this equipment must be earthed.*

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**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/documentation/documentation.html](http://www.alliedtelesyn/documentation/documentation.html).

**2. Gather the tools and equipment you will need**

If installing a DC version of the router, you will need a DC power source, DC supply cable, and wire strippers (see step 9).

If the router is to be connected to a redundant power supply, you will need a redundant power supply unit and cable (see step 8).

**3. Unpack the router**

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

**4. Install expansion options**

If you purchased optional Port Interface Cards (PICs) or a Network Service Module (NSM), install them now by following their individual Quick Install Guides. These guides can be found on the Documentation and Tools CD-ROM or at [www.alliedtelesyn.co.nz/documentation/documentation.html](http://www.alliedtelesyn.co.nz/documentation/documentation.html).

If you purchased an optional PCI or Mini Accelerator Card (PAC or MAC) install it now by following the instructions in the *AR Router Hardware Reference*.

### 5. Place the router in its operating location

See the previous “Selecting a Site” section for guidelines on choosing a suitable location.

### 6. Check the supply voltage and the router’s rated voltage

AC versions of AR700 Series routers are fitted with a universal power supply that will function over the range 100-240 VAC and 50–60Hz.

DC versions of AR700 Series routers require a supply voltage in the range 38-59V DC.



*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 AC power to the router (for AC models)

Fit the power cord retaining clip to the AC power inlet on the router’s rear panel (for AR725 and AR745 models).

Plug the power cord into the AC power inlet and check that the power switch is in the ON position (see Figure 1). The Power LED on the router’s front panel will light, and the System LED (also on the front panel) will light briefly.

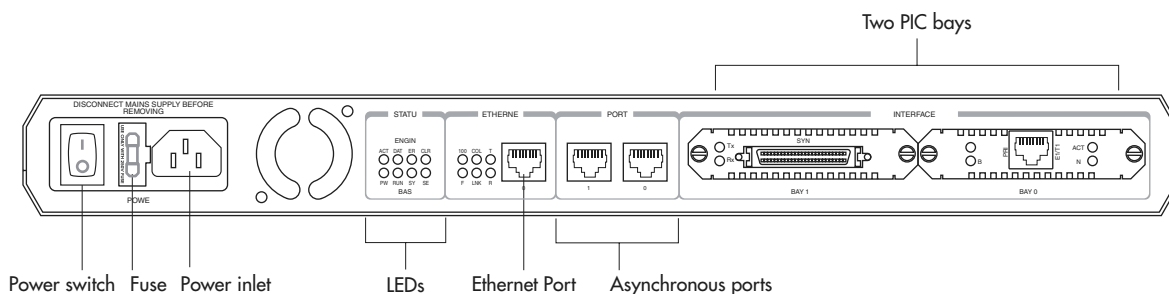
If the power LED fails to light or the System LED lights continuously, refer to the troubleshooting section later in this guide.

### 8. Connect the redundant power supply (optional for AC models of the AR725, AR740, and AR745)

If you purchased an AT-RPS 740 (redundant power supply), install it now by following the instructions in its Quick Install Guide. The guide can be found on your router’s Documentation and Tools CD-ROM, or can be downloaded from [www.alliedtelesyn.co.nz/support/atrps740/index.html](http://www.alliedtelesyn.co.nz/support/atrps740/index.html).

The AT-RPS 740 can be used with all AR700 Series routers *except* the AR720.

**Figure 1: Rear panel of an AR720, showing the AC power inlet, power switch, and asynchronous ports.**



AR720FP

## 9. Apply DC power to the router (for DC models)

Before connecting the DC supply:

Read the *Safety and Statutory Information* booklet. A copy of this booklet is included with each router. It is also included on the Documentation and Tools CD-ROM or can be downloaded from [www.alliedtelesyn.co.nz/documentation/documentation.html](http://www.alliedtelesyn.co.nz/documentation/documentation.html).



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*Only trained and qualified personnel should connect a DC power supply. Due to exposed terminals, DC powered routers should be installed only in restricted access areas.*

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DC supply cable specifications:

- Number of wires (cores): 3
- Minimum size: 2.1mm<sup>2</sup> (14 AWG)
- Minimum cable rating: 600V, 90 degrees Celsius

DC power supply specifications:

- 48V DC (38-59V DC is acceptable)
- Either positive grounded or negative grounded

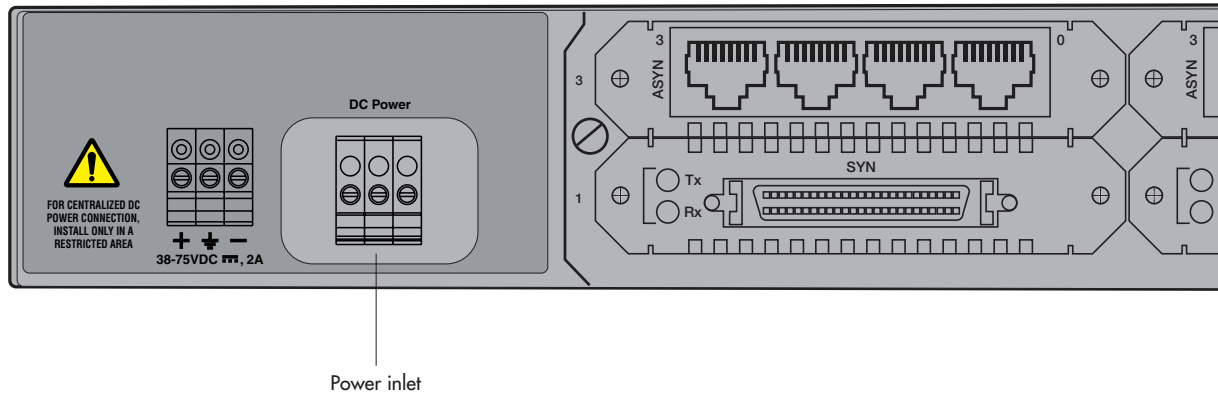
Circuit protection:

- Use a 10 Amp circuit breaker

To connect the DC supply:

- Ensure the supply cable is not live
- Strip the supply cable wires to expose 8mm (0.31 in.) of bare conductor
- At the router, connect the ground wire to the ground terminal. Terminals can be identified by the diagram on the router's rear panel, see Figure 2. Tighten the terminal to between 0.6 and 0.8 Nm (0.041 to 0.055 pound-force per foot)
- At the router, connect the positive feed to the + (positive) terminal and the negative feed to the - (negative) terminal. Tighten the terminals to between 0.6 and 0.8 Nm (0.041 to 0.055 pound-force per foot)
- Ensure there are no exposed conductor strands
- Secure the supply cable (to the rack framework or similar object) so that the connections are isolated from any force applied to the cable
- Ensure the circuit breaker (for the supply circuit) and the power switch (on the router) are in the OFF position
- Connect the supply-cable wires to the circuit breaker
- Energise the circuit breaker
- Switch the power switch to the ON position

Figure 2: DC Power inlet terminals on an AR740.



The System LED should flash for approximately 10 seconds as the router runs internal tests. If the LED continues to flash or remains lit, refer to the *AR Router Hardware Reference* for troubleshooting information.

DC models do not have RPS connectors.

#### 10. Connect the data cables

Make sure each cable connection is secure.

#### 11. 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 port (port 0) 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.

#### 12. Log in and set 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".

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.



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*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
```

Use the following commands to save the configuration with the newly created password, and set the router to use it on bootup:

```
create config=your-name.cfg
```

```
set config=your-name.cfg
```

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 *AR 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 establish a connection to the router through the GUI, so you can configure the router before installing it in your LAN. For more information about the GUI, see the *AR700 Series User Guide*.

#### 1. Select a PC to browse to the router from

You can browse to the router from any PC that is running a supported operating system with a supported browser installed. JavaScript must be enabled.

You need to know the PC's subnet.

#### 2. Connect the PC to the router

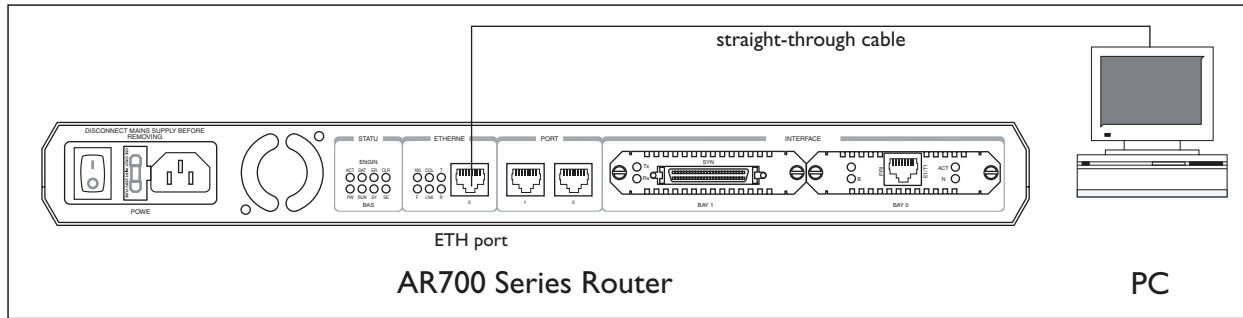
Use an Ethernet cable to connect an Ethernet card on the PC to the eth0 port (see Figure 3).



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*You can browse to the router through any ETH port, as long as you give that interface an IP address (see below). These instructions assume you will use eth0 as the LAN interface.*

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**Figure 3: Connecting a PC directly to the router.****3. Access the router's command line interface**

Access the CLI from the PC, as described in the previous “Using the CLI to configure a router” section.

**4. Enable IP**

```
enable ip
```

**5. Assign the eth0 interface an IP address in the same subnet as the PC**

```
add ip interface=eth0 ip=ipaddress mask=mask
```

**6. Save the configuration and set the router to use it on bootup**

```
create config=your-name.cfg
```

```
set config=your-name.cfg
```

**7. On the PC's web browser, bypass the HTTP proxy server, if necessary****8. Point your web browser at eth0's IP address****9. At the login prompt, enter the user name and password**

The default username is manager:

```
User Name: manager
```

```
Password: friend
```

For context-sensitive online help on AR725 and AR745 routers, click on the Help button at the top of the sidebar menu or on any pop-up page.

## System LEDs and What They Mean

System LEDs indicate the router's operational status.

**Table 1: System LEDs.**

LED		Function
Front panel	Rear panel	
Power	PWR	Lit when power is supplied and the router is switched on.
Run	Run	Lit when the internal processor is executing code. If the processor stops for any reason (a fault condition), then the LED will not be lit.
System	SYS	<p>This LED is not normally lit. It is used to signal various system conditions (e.g., when the processor executes the reboot sequence). Generally it signals a possible fault condition, but is lit during a power-up or operator-initiated reboot, and remains lit until a release has been loaded from flash memory.</p> <p>On the AR725, AR740, and AR745, this LED will flash in specific sequences to indicate fan, PSU, or RPS faults:</p> <ul style="list-style-type: none"> <li>1 Flash: A router fan has failed.</li> <li>2 Flashes: If RPS monitoring is enabled, and an RPS is connected, the RPS fan has failed.</li> <li>3 Flashes: If an RPS is connected, the router's PSU (Power Supply Unit) has failed.</li> <li>4 Flashes: If RPS monitoring is enabled, the RPS PSU has failed.</li> <li>5 Flashes: If RPS monitoring is enabled, an RPS is not connected or is not operational</li> </ul>
Clear	CLR	Lit when a secure router has enabled PPP interfaces or Frame Relay circuits that are configured to send clear text.
Security	SEC	Lit when a user is logged in with SECURITY OFFICER privilege and the router is in SECURITY MODE.
-	ACT	Lit when a Mini Accelerator Card (MAC) or PCI Accelerator Card (PAC) is installed.
-	ERR	Lit when there is an error in data transmission to or from a MAC or PAC.

A full description of all AR700 Series router LEDs can be found in the *AR Router Hardware Reference*. Descriptions of NSM and PIC LEDs can be found in their respective Hardware References.

## Troubleshooting Installation

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If you have problems installing the router, try one or more of the following:

### No LEDs Light

The most likely reason is that the router is not receiving power. Check the following:

1. Check the supply outlet's switch is in the ON position.
2. Test the main power outlet to verify it is working.
3. The router's fuse may have failed. Contact your authorised Allied Telesyn distributor or reseller for assistance.

If the problem persists, please contact your authorised Allied Telesyn distributor or reseller.

### LEDs Light Incorrectly

If the System LED stays on, the router software has encountered a fatal condition. Contact your authorised Allied Telesyn distributor or reseller.

### No Response From the Terminal

1. Is the terminal cable correct for both the terminal and the router? Test the cable operation by connecting Txd and Rxd (pins 2 and 3) together at the router end of the cable. Characters typed on the terminal should be echoed back to the screen.
2. Are the terminal or terminal emulation software communication parameters set correctly? Refer to the *AR Router Hardware Reference* for more information on setting communications parameters.
3. Contact your authorised Allied Telesyn distributor or reseller for assistance.

### Log in Name or Password Fails

1. Passwords are case sensitive. Check your spelling and that you are using the right combination of upper and lowercase characters.
2. Contact your authorised Allied Telesyn distributor or reseller for assistance.

## Documentation and Tools CD-ROM

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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 *Safety Booklet* for your router, which provides safety and statutory information.
- This *AR700 Series Router Quick Install Guide*, which outlines the procedure for installing an AR700 Series router.
- The *AR700 Series Router User Guide*, which provides an introduction to the router and its software.
- The *Quick Start Guide* for your router, which provides introductory information on network connections.
- The *AR Router Hardware Reference*, which provides detailed information on the hardware features of AR routers.
- The *AR700 Series Router Software Reference* for your router, 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 AR Router Support Site at [www.alliedtelesyn.co.nz/documentation/documentation.html](http://www.alliedtelesyn.co.nz/documentation/documentation.html).