AT-9800 Series Switch
Quick Install Guide

AT-9812T
AT-9812TF
AT-9816GB
AT-9816GF

Allied Telesyn

AT-9800 Series Quick Install Guide
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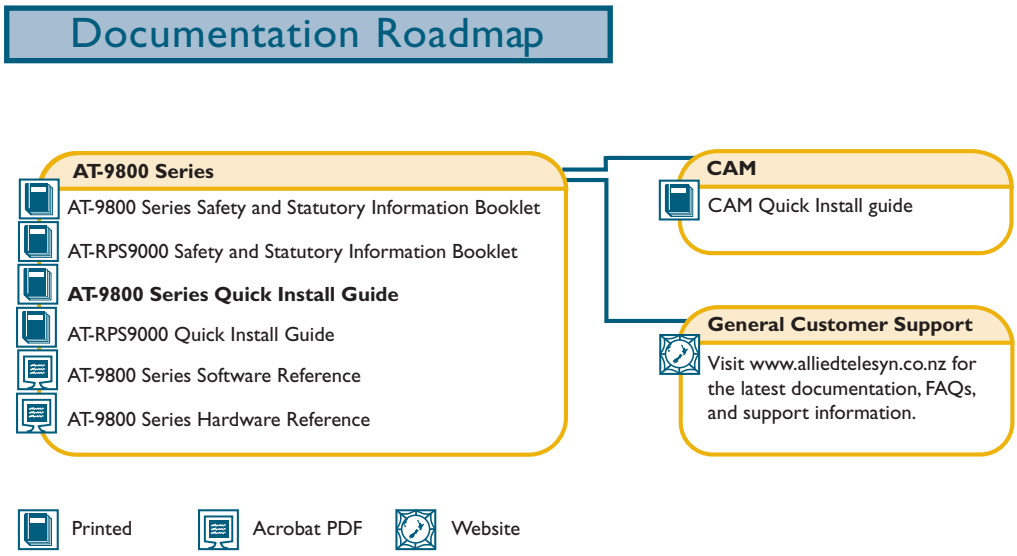


Models Covered By This Guide

This Quick Install Guide includes information on the following models:

- AT-9812T
- AT-9812TF
- AT-9816GB
- AT-9816GF

Quick Install Guide updates can be downloaded from www.alliedtelesyn.co.nz/support/at9800/

Package Contents

The following items are included with each AT-9800 Series switch. Contact your sales representative if any items are damaged or missing.

- One AT-9800 Series switch
- One AC power cord (for AC models)
- One serial cable for connecting the switch to a terminal or PC
- One 19 inch rack-mount kit
- One AT-9800 Series Quick Install Guide
- One Safety and Statutory Information booklet
- One AT-9800 Series Documentation and Tools CD-ROM (which includes the complete AT-9800 Series Document Set and utilities)
- One warranty card

Selecting a Site

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

- Allows adequate airflow around the switch and its vents
- Is free of dust and moisture
- Will maintain an ambient temperature range of 0 - 40º C (32 - 104º F) and a humidity range of 5 - 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 switch's power and cable connections
- Will allow all related network devices to be connected to the switch without exceeding maximum cable length limitations. See the *AT-9800 Series Hardware Reference* for cable length specifications

Installing the Switch

This equipment must be earthed.

Follow these steps to install the switch:

1. **Read the safety information**

   For safety information, see the *Safety and Statutory Information booklet*. A copy of this booklet is supplied with each switch, and can also be found on the Documentation and Tools CD-ROM or at www.alliedtelesyn.co.nz/support/at9800/.

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

   If installing a DC version of the switch, you will need a DC power source, DC supply cable, and ring connectors (see step 8).

   If the switch is to be connected to a redundant power supply, you will need a redundant power supply unit and cable (see step 10).

3. **Choose a suitable site for the switch**

   Either a flat surface or 19 inch rack.

4. **Unpack the switch**

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

5. Install CAM (Optional)

If you purchased a Content Addressable Memory (CAM) module, install it now by following the instructions in the *CAM Quick Install Guide*.

The *CAM Quick Install Guide* can be found on the AT-9800 Series Documentation and Tools CD-ROM, or can be downloaded from www.alliedtelesyn.co.nz/support/at9800/.

6. Place the switch in its operating location

If installing the switch in a rack:

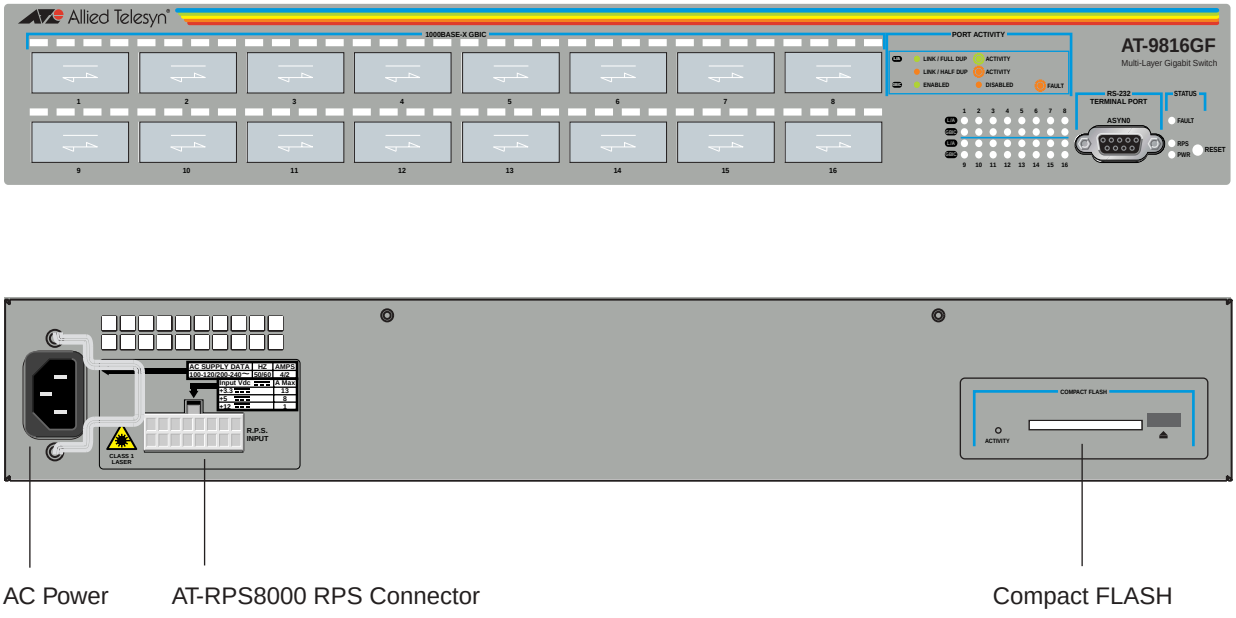
- Remove the rubber feet
- Attach the rack-mounting brackets
- Mount the switch in the rack

7. Apply AC power to the switch (for AC models)

Plug the power cord into the AC power connector on the switch's rear panel. The Fault LED should flash for approximately 10 seconds as the switch runs internal tests.

If the LED continues to flash or remains lit, refer to the *AT-9800 Series Hardware Reference* for troubleshooting information.

Figure 1: AT-9816GF front panel and rear panel with AC power inlet.



8. Apply DC power to the switch (for DC models)

Read the *Safety and Statutory Information* booklet before connecting a DC power supply. A copy of this booklet is included with each switch. It is also included on the Documentation and Tools CD-ROM, or can be downloaded from www.alliedtelesyn.co.nz/support/at9800/.

Only trained and qualified personnel should connect a DC power supply. Due to exposed terminals, DC powered switches should only be installed in Restricted Access Areas.

DC supply cable specifications (one cable is required for each PSU):

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

DC power supply specifications:

- 48 V DC (40-60 VDC is acceptable)
- Either positive grounded or negative grounded

Circuit protection:

- Use a 10 Amp circuit breaker

Ensure the supply cable is not live.

a) Strip the supply cable wires to expose 8mm (0.31in) of bare conductor

b) At the switch, connect the ground wire to the ground terminal. (The terminals can be identified by the diagram on the switch's rear panel.) Tighten the terminal to between 0.6 and 0.8 Nm (0.041 to 0.055 pound force per foot).

c) At the switch, connect the positive feed to the + (positive) terminal and the negative feed to the - (negative) terminal. Tighten the terminal to between 0.6 and 0.8 Nm (0.041 to 0.055 pound force per foot).

d) Ensure that there are no exposed conductor strands.

e) Secure the supply cable (to the rack framework or similar object) so that the connections are isolated from any forces applied to the cable.

f) Ensure that the circuit breaker is in the OFF position.

g) Connect the supply cable wires to the circuit breaker.

h) Energise the circuit breaker.

The Fault LED should flash for approximately 10 seconds as the switch runs internal tests. If the LED continues to flash or remains lit, refer to the AT-9800 Series Hardware Reference for troubleshooting information.

9. Check that the Power LED on the switch's front panel lights green

If the LED fails to light, refer to the *AT-9800 Series Hardware Reference* for troubleshooting information.

10. Connect the Redundant Power Supply (Optional)

AC models of AT-9800 Series switches have a Redundant Power Supply (RPS) connector on their rear panel.

AT-9812TF and AT-9816GF AC models can be used with AT-RPS8000 RPS systems, while AT-9812T and AT-9816GB AC models can be used with AT-RPS9000 systems.

RPS systems can be purchased separately, contact your authorised Allied Telesyn distributor or reseller for more information.

11. Install GBICs

Any combination of copper and fibre GBICs can be installed in the following AT-9800 Series switches:

- AT-9812T
- AT-9812TF
- AT-9816GB

For the AT-9816GF, up to fourteen 1000BASE-T GBICs can be installed. The actual number depends on the number of fibre GBICs also installed. Table 1 on page -7 lists the number of 1000BASE-T GBICs that can be installed in the AT-9816GF for various copper/fibre combinations.

Table 1: GBIC configurations for the AT-9816GF.

Number of fibre GBICs installed	Maximum number of 1000BASE-T GBICs that can be installed
0	14
1	13
2	12
3	11
4 or 5	10
6	9
7	8
8	7
10 or 11	5
12	4
13	3
14	2
15	1
16	0

Slide the GBICs into the GBIC slots. Press each GBIC firmly into place.

A range of GBICs have been tested and approved for use with AT-9800 Series switches, contact your authorised Allied Telesyn distributor or reseller for more information, or visit www.alliedtelesyn.co.nz/support/at9800.

RX and TX terminal locations on SC fibre GBIC ports are the reverse of RX and TX terminal locations on fixed SC fibre ports. When looking at an SC fibre GBIC from the front, the RX terminal is on the left and the TX terminal is on the right.

12. Connect the data cables

Make sure each cable connection is secure. The switch will now perform basic Layer 2 switching functions.

Configuring the Switch

Some configuration is necessary if you wish to enable the switch's advanced switching capabilities. The switch can be configured via the Command Line Interface (CLI) or Graphical User Interface (GUI).

Using the CLI to configure a switch

1. Connect a terminal or PC to RS-232 (ASYN0)

Using the supplied RS-232 DB9 straight-through cable, connect your terminal or PC to the RS-232 Terminal Port on the switch's front panel.

2. Set the communication parameters

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

3. Check the power supply

Ensure that the On/Off switch (AC models) or Run/Standby switch (DC models) is in the On or Run position and that the switch is receiving power (Power LED lights green).

4. Log in

After the switch has booted, the log in prompt appears. If the log in prompt doesn't appear, press [Enter] two or three times.

When the switch 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 switch's command prompt appears and you can now configure the switch 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 *AT-9800 Series Software Reference* for more information on configuring the switch.

Using the GUI to configure a switch

This section describes how to establish a connection to the switch through the GUI, so you can configure the switch before installing it in your LAN.

1. **Select a PC to browse to the switch from**

   You can browse to the switch 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 switch**

   Use an Ethernet cable to connect an Ethernet card on the PC to any one of the switch ports.

You can browse to the router through any VLAN, as long as you give that VLAN an IP address (see below). These instructions assume you will use vlan1. The switch ports all belong to vlan1 by default.

3. **Access the switch's command line interface**

   Access the CLI from the PC, as described in the previous "Using the CLI to configure a switch" section.

4. **Enable IP**

   ```
   enable ip
   ```

5. **Assign the vlan1 interface an IP address in the same subnet as the PC**

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

6. **Save the configuration and set the switch 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 vlan1's IP address**

9. At the login prompt, enter the user name and password

The default username is manager:

```
User Name: manager
Password: friend
```

The System Status page is displayed. Select options from the sidebar menu to configure and manage the switch.

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

System LEDs

Table 2: System LEDs for AT-9800 Series switches.

LED	State	Function
PWR (Power)	Green	The switch is receiving power
Fault	Red	The switch or management software is malfunctioning
	1 Flash	A switch fan has failed or is operating below the recommended speed
	2 Flashes	If RPS monitoring is enabled, an RPS fan has failed or is operating below the recommended speed
	3 Flashes	If an RPS is connected, the switch's PSU (Power Supply Unit) has failed
	4 Flashes	If RPS monitoring is enabled, the RPS PSU has failed
	5 Flashes	If RPS monitoring is enabled, an RPS is not connected or is not operational
	6 Flashes	The switch's temperature has exceeded the recommended threshold
RPS (Redundant Power Supply)	Green	An RPS is connected to the switch and is receiving power
CompactFlash Activity (Rear panel)	Green	The compact flash memory is active. Do not eject the flash memory module

The *AT-9800 Series Hardware Reference* has further troubleshooting information, including information on Switch Port LEDs.

Documentation and Tools CD-ROM

The Documentation and Tools CD-ROM bundled with each switch contains the complete Documentation Set for AT-9800 Series switches and their expansion options, as well as tools for managing the Switch. This includes:

- The *AT-9800 Series Statutory and Safety Information* booklet, which provides safety and statutory information for the Switch and its expansion options.
- The *AT-RPS9000 Series Statutory and Safety Information* booklet, which includes important safety information and statutory declarations for the AT-RPS9000 chassis and AT-PWR9000 power unit.
- The *AT-9800 Series Hardware Reference*, which provides detailed information on the hardware features of AT-9800 Series switches.
- This Quick Install Guide.
- The *AT-RPS9000 Quick Install Guide*, which outlines the procedure for installing AT-RPS9000 chassis and AT-PWR9000 power units.
- The *AT-9800 Series Software Reference*, which provides detailed information on configuring the Switch and its software.
- The *CAM Quick Install Guide,* which outlines the procedure for installing Content Addressable Memory.
- AT-TFTP Server for Windows, for downloading software releases.
- Adobe Acrobat Reader, for viewing online documentation.
- Microsoft Internet Explorer.