



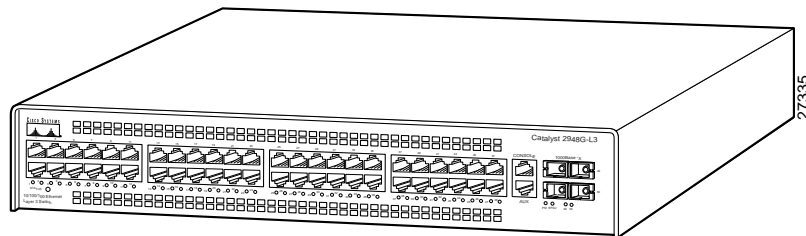
Product Overview

This chapter provides an overview of the features and components of the Catalyst 2948G-L3 switch router and contains the following sections:

- Switch Router Ports, page 1-2
- LEDs and Port Locations, page 1-3
- Fan Assembly, page 1-5
- Power Supplies, page 1-6

The Catalyst 2948G-L3 switch router (Figure 1-1) is a standalone, fixed configuration, multiprotocol 10/100/1000 Ethernet switch. The Catalyst 2948G-L3 switch router is designed for high-performance, high-density wiring-closet applications, such as CiscoWorks for Switched Internetworks (CWSI).

Figure 1-1 Catalyst 2948G-L3 Switch Router



The Catalyst 2948G-L3 switch router has interfaces that provide connections to networking equipment at three different Ethernet speeds:

- The Ethernet (10BASE-T) interface, which connects to workstations and repeaters.
- The Fast Ethernet (100BASE-T) interface, which connects to workstations, servers, switches, and routers.
- The Gigabit Ethernet (1000BASE-X) interface, which is used primarily for backbone interconnection of high-performance switches and routers.

Switch Router Ports

The following sections describe the switch router ports:

- Switching Ports, page 1-2
- Gigabit Ethernet Ports, page 1-2
- Management Ports, page 1-3

Switching Ports

The 48 high-density 10/100BASE-T Fast Ethernet, autoconfiguring, fixed ports enable cost-effective deployment of the network to the desktop. Each 10/100 port, which provides autonegotiation of link speed, allows migration to 100BASE-T from a 10BASE-T installed base.

Gigabit Ethernet Ports

Two 802.3z Gigabit Ethernet ports with modular GBIC interfaces can be independently configured with the following GBIC modules:

- 1000BASE-SX (Short wavelength)
- 1000BASE-LX/LH (Long wavelength/long haul)
- 1000BASE-ZX (Extended distance)

Management Ports

The switch router has two management ports: a console serial port and an auxiliary port.

A console serial port (RJ-45) provides system management using standard console equipment. See Table A-1 on page A-4 for a list of console port pinouts.

The auxiliary port supports remote console interfaces. This port is for network management only, and is not a switching port. There is no connectivity between this port and the 10/100BASE-T switching ports. See Table A-3 on page A-4 for a list of auxiliary port pinouts.

LEDs and Port Locations

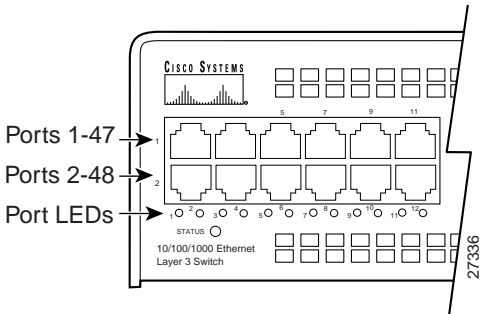
The LEDs on the front panel of the Catalyst 2948G-L3 switch router perform the following functions:

- STATUS LEDs indicate the operating state of the Catalyst 2948G-L3 switch router.
- Link status LEDs indicate the switching port status.
- PS1 LED indicates the internal power supply status.
- RPS LED indicates the optional external redundant power supply unit status.

The 10/100BASE-T switching ports are configured in vertical pairs. The top ports are odd-numbered ports (1 through 47) and the bottom ports are even-numbered ports (2 through 48). (See Figure 1-2.)

Each vertical pair of 10/100BASE-T ports has two link status LEDs below it. The LED on the left is for the top port and the LED on the right is for the bottom port. For example, LED 1 is for port 1 and LED 2 is for port 2.

Figure 1-2 Catalyst 2948G-L3 Port Locations and LEDs



Two Gigabit Ethernet ports are at the far right of the front panel. (See Figure 1-3.) The two link status LEDs for these ports are below the bottom port (port 50). The LEDs are labeled to the corresponding port number.

Figure 1-3 Catalyst 2948G-L3 Gigabit Ethernet Ports and LEDs

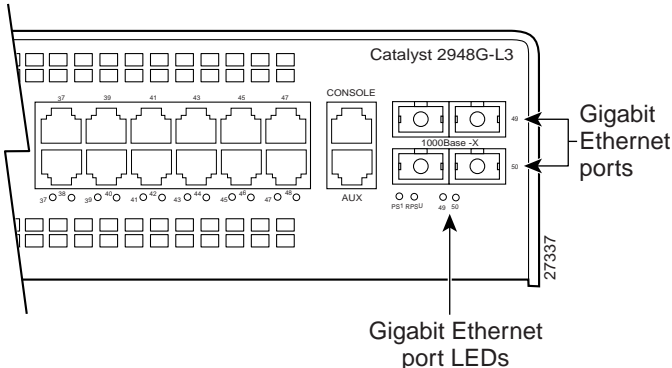


Table 1-1 describes the LEDs.

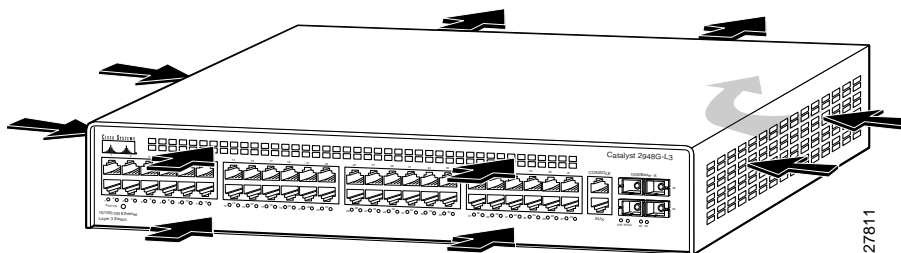
Table 1-1 LED Descriptions

LED	State	Description
STATUS	Green	The switch router performs a series of self-test diagnostics.
	Red	All tests pass.
	Orange	A test other than an individual port test fails.
	Off	Switch boot or diagnostic tests in progress. Switch is disabled.
Link status	Green	The 100BASE-T is in use.
	Orange	The 10BASE-T is in use.
	Flashing orange	Power-on self-test indicates faulty port.
	Off	No signal is detected, or the link configuration failed.
PS1 and RPS	Green	Power supply is operational.
	Red	Power supply has failed.

Fan Assembly

The fan assembly provides cooling air for the internal chassis components. The fans exhaust air from the rear, and fresh air is drawn in from the left, right, and front. (See Figure 1-4.)

Figure 1-4 Catalyst 2948G-L3 Internal Airflow



If an individual fan fails, the other fans continue to run. Sensors monitor the internal air temperatures. If the air temperature exceeds a desired threshold, the environmental monitor displays warning messages.

Power Supplies

The switch router has an internal power supply and also supports a second, external RPS. To order a Cisco RPS for a Catalyst 2948G-L3 switch router, consult the *Cisco Product Catalog*.

Each power supply has an individual power cord and status LEDs (PS1 and RPS). There is no power switch on the Catalyst 2948G-L3 switch router; power is available in the power supply when the power cord is plugged in. See Table A-1 on page A-4 for complete power specifications.

The RPS has two power cords and two power switches. When operating from the RPS, both power switches on the RPS must be on for power supply redundancy.



Caution

Use only the Y-cable to connect the switch to the RPS. The Y-cable ensures use of the load sharing capabilities of the RPS.



Note

When using the internal power supply, the RPS is connected and turned on; however, it remains idle unless it is needed. If the internal power supply fails, the RPS provides power to the switch router. The transition causes a power cycle and an automatic system reset.

Each power supply monitors its own temperature and output voltages. If conditions reach critical thresholds, the power supply might shut down to avoid damage from excessive heat or electrical current. The switch router senses the operating condition of the power supply and reports the status with the LEDs.

You can maintain normal system operation by resolving adverse environmental conditions before the loss of operation by using the environmental monitoring and reporting functions of the power supplies.