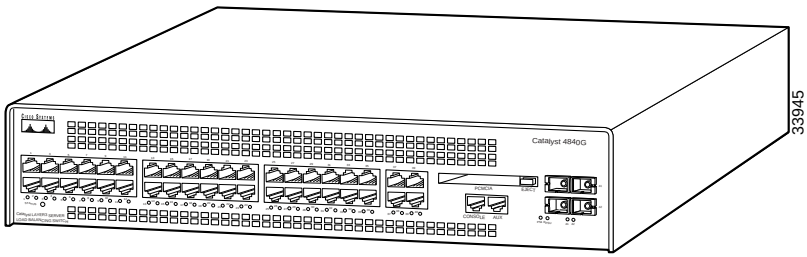
CHAPTER 1

Product Overview

This chapter provides an overview of the Catalyst 4840G switch. The Catalyst 4840G is a server load balancing (SLB), Layer 3 Ethernet switch. The chassis has 40 10/100 Fast Ethernet ports, 2 Gigabit Ethernet ports, 2 management ports, and a Flash PC card slot. The SLB switch components are described in the following sections:

Figure 1-1 shows the front panel of the Catalyst 4840G SLB switch.

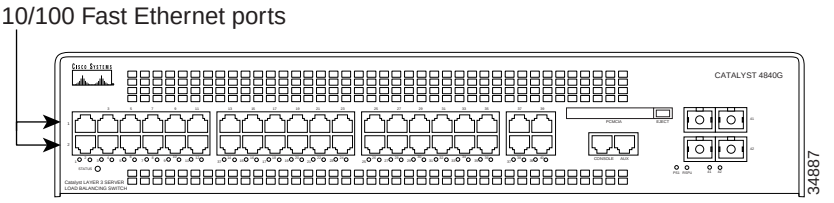
Figure 1-1 Catalyst 4840G SLB Switch



Fast Ethernet Ports

The 40, high-density 10/100 BASE-T Fast Ethernet, autoconfiguring, fixed ports enable cost-effective deployment to the desktop. Autonegotiation of link speed on each 10/100 port allows migration to 100BASE-T from a 10BASE-T-installed base. Each port uses an RJ-45 connector and has an LED to verify connectivity. (See Figure 1-2.)

Figure 1-2 10/100 Fast Ethernet Ports

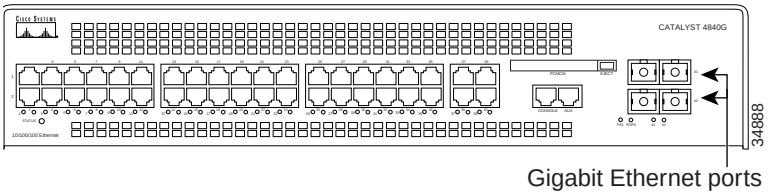


Gigabit Ethernet Ports

The two 802.3z Gigabit Ethernet ports (see Figure 1-3) support the following modular Gigabit Interface Converters (GBICs):

- 1000BASE-SX (short wavelength)
- 1000BASE-LX/LH (long wavelength/long haul)
- 1000BASE-ZX (extended distance)

Figure 1-3 Gigabit Ethernet Ports



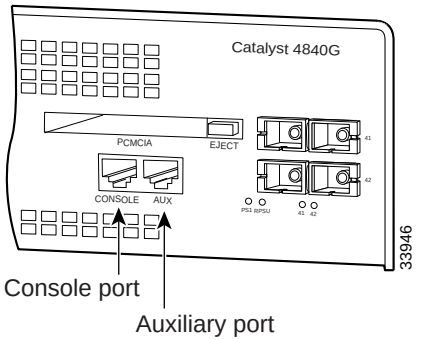
Management Ports

A console port and an auxiliary port provide local system and network management.

The console port provides local system management using standard console equipment. (See Figure 1-4.) See Table B-3 on page B-5 for a list of console port pinouts.

The auxiliary port supports remote console interfaces using a modem. (See Figure 1-4.) This port is for network management only and is not a switching port. There is no connectivity between this port and the Gigabit Ethernet ports. See Table B-4 on page B-6 for a list of auxiliary port pinouts.

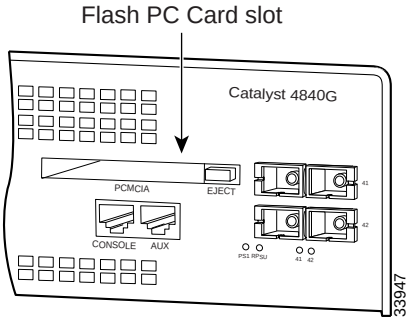
Figure 1-4 Console Port and Auxiliary Port



Flash PC Card Slot

The Flash PC card (Figure 1-5.) stores the system's configuration information and software and microcode images for other systems. You can also configure the system to boot from a software image stored on the Flash PC card. For installation instructions, see "Installing and Removing Flash PC Cards" on page 2-10.

Figure 1-5 Flash PC Card Slot



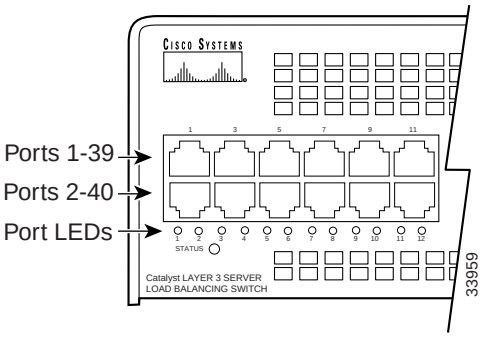
Front Panel LEDs

The following LEDs are located on the front panel:

- Status LED, which indicates the operating state of the SLB switch
- Link status LEDs, which indicate the status of the Fast Ethernet and the Gigabit Ethernet ports
- PS1 LED, which indicates the status of the internal power supply

The status LED is located at the bottom left of the front panel. The Fast Ethernet ports are numbered 1 through 40 and each port is above a link status LED. Figure 1-6 shows the port numbering and the location of the LEDs on the front panel.

Figure 1-6 Chassis Port Numbering and LEDs



The PS1 LED is near the auxiliary and console ports at the far right of the front panel. The two Gigabit Ethernet ports are numbered 41 and 42 and a link status LED for both ports is below port 42. (See Figure 1-7.)

Figure 1-7 Gigabit Ethernet Ports and LEDs

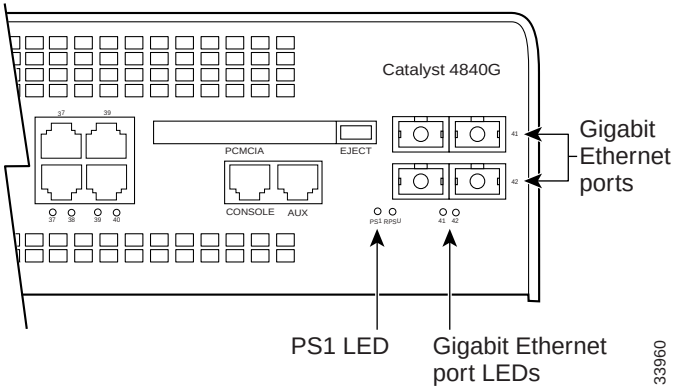


Table 1-1 describes the LEDs.

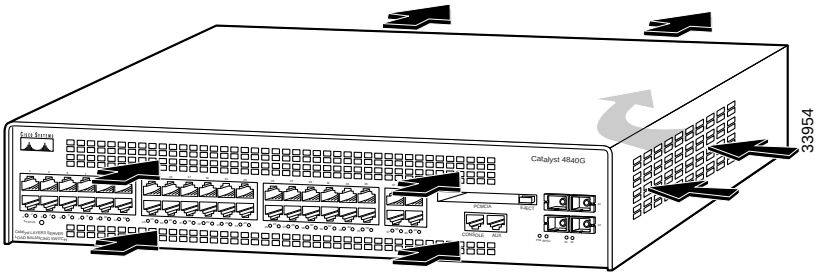
Table 1-1 LED Descriptions

LED	State	Description
Status		The SLB switch performs a series of self-test diagnostics:
	Green	All tests pass.
	Red	A test other than an individual port test fails.
	Orange	SLB switch boot or diagnostic tests in progress.
	Off	SLB switch disabled.
Link status	Green	10/100 MB or Gigabit Ethernet link detected.
	Off	No signal detected, or link configuration failure.
PS1	Green	Operational.
	Yellow	PS1 present but not functional.
RPS	Green	Operational.
	Yellow	RPS present but not functional.
	Off	Not installed or not in use.

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 of the chassis. (See Figure 1-8.)

Figure 1-8 Chassis Internal Airflow



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

Power Supplies

The Catalyst 4840G SLB switch has an internal power supply (PS1) that 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 SLB switch senses the operating condition of the power supply and displays the status on the console.

With the environmental monitoring and reporting functions, you can maintain normal system operation by resolving adverse environmental conditions before loss of operation.

The Catalyst 4840G SLB switch also supports a second, external redundant power supply (RPS II) unit. To order a Cisco RPS II for the Catalyst 4840G SLB switch, consult the *Cisco Product Guide*.

Each power supply has an individual power cord and status LEDs. The Catalyst 4840G SLB switch and the RPS II use power cords to connect to the site power source. There is no power-on switch on the Catalyst 4840G SLB switch or the RPS II. For complete power specifications for the Catalyst 4840 SLB switch, see Appendix A, “SLB Switch Specifications.”

Caution Use only the DC cable (part number 72-2139-01) to connect the switch to the Cisco RPS II.

When the RPS II is installed, the RPS II and the Catalyst 4840G SLB internal power supply share the powering of the Catalyst 4840G SLB. If one power supply fails, the other power supply provides full power. The transition is smooth and there is no need for a system reset. The power supply failure is reported displayed on the console. The RPS II, when fully populated, can power three individual Catalyst 4840G SLB switches.