C H A P T E R 1

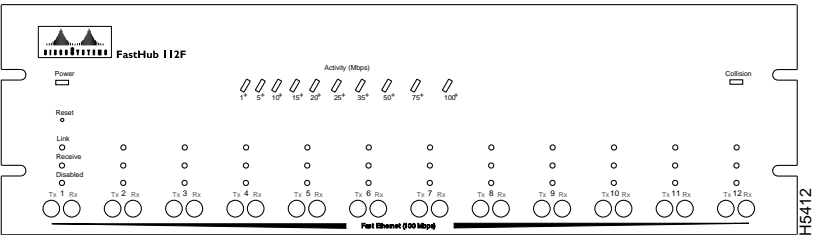# Introduction

The FastHub 112F is a 100Base-T compatible, standalone, 12-port, unmanaged Class II repeater supporting the 100Base-FX physical layer.

Figure 1-1   FastHub 112F Repeater

The FastHub 112F can be used to facilitate high density switch aggregation, interconnect centrally located servers, or create power workgroups.

The FastHub 112F operates in a manner similar to that of a standard 10Base-T repeater. A packet received on any one of the 12 Fast Ethernet ports is transmitted, or repeated, out the other 11 ports. Visual indicators provide a measure of Activity in Mbps (Megabits per second), the overall FastHub 112F collision rate, and per-port link, receive and disabled status.

Key Features

The FastHub 112F provides the following key features:

- Compatible with 100Base-T draft standard for interoperability with other 100Base-T products

- 100-Mbps peak and aggregate throughput for high-performance data transfers

- Low port-port latency (.45 microseconds) minimizes delay during data transfers

- 100Base-FX media interface for direct connections to fiber optic cabling

- 12 ports meets node number requirements for centralized servers and aggregation of switches as well as small power workgroups

- Three light emitting diodes (LEDs) per port for Link Integrity Test, Receive Activity and Port Disabled, and an overall Collision Indicator provide a comprehensive and convenient visual management system

- Logarithmic Activity Meter LEDs show average throughput in Mbps for quickly gauging network loading and performance

- No software to load or configure ensures simple and trouble-free installation and operation

- Recessed reset button prevents accidental system reset while allowing easy access from the front of the unit

FastHub 112F Front Panel

The FastHub 112F front panel contains all of the network connectors and LEDs for easy access and viewing.

Figure 1-2   FastHub 112F Front Panel

These FastHub 112F features are described in more detail in the following sections.

Fast Ethernet Ports

The twelve 100Base-FX ports provide 100 Mbps of bandwidth for connection to a server or workstation, Cisco Catalyst 2800, or other 100Base-FX device. 100Base-FX ports are shown in Figure 1-3.

Figure 1-3   The FastHub 112F Fast Ethernet Ports
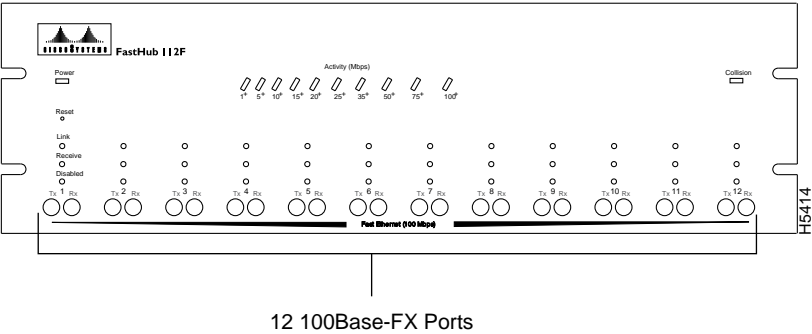

12 100Base-FX Ports

These ports support direct connection to any 100Base-FX compatible hub, switch, or adapter using fiber optic cabling.

FastHub 112F LEDs

FastHub 112F has a comprehensive set of LEDs that allow easy and fast troubleshooting. The FastHub 112F has a Power LED, Activity Meter LEDs, and Status LEDs. These LEDs are shown in Figure 1-4 and described in the following section.

Figure 1-4   The FastHub 112F LEDs
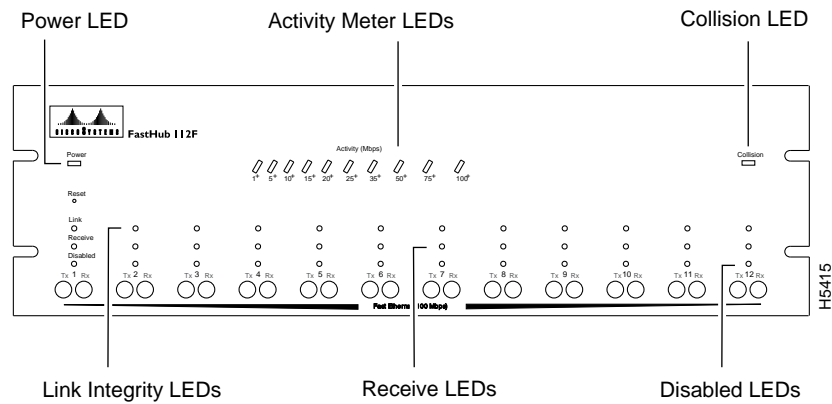
Power LED

The Power LED lights if the FastHub 112F is turned on. If the LED does not light when powered up, refer to the chapter "Troubleshooting."

Link LEDs

The Link LED indicates that the port is properly connected to a powered-on device. The LED is on when the Link Integrity Test passes and off when the Link Integrity Test fails.

Receive LEDs

Receive Activity on each port is indicated by the Receive LEDs. The Receive LEDs blink upon packet receipt regardless of the status of the port—even if the port is disabled. If the traffic level is high, this LED will be on continuously. The LED is off when there is no Receive Activity.

Disabled LEDs

The Disabled LED is off unless a jabber or autopartition error (as defined in the IEEE 802.3 100Base-T specification) is detected, in which case, the LED blinks on. There is one Disabled LED per port.

A jabber condition is sensed when a port continuously receives for more than 660 microseconds. A port is auto-partitioned when it experiences 63 consecutive collisions.

Collision LED

The Collision LED provides a single visual indication of the frequency of collisions for all 12 ports. Packets received simultaneously on two or more ports will result in a collision and light this LED. The LED is off when there are no collisions.

Activity Meter LEDs

The Activity Meter LEDs help you measure the bandwidth utilization of the FastHub 112F at a glance. The meter displays current bandwidth activity.

The LEDs are updated based on the activity as measured in Mbps. The measurement is averaged over a period of 100 milliseconds.

Table 1-1 shows the associated bandwidth for each of the 10 LEDs.

Table 1-1   **Activity Meter LED Information**

| LED	Activity Level (Mbps)
Far Left (1)	1+
2	5+
3	10+
4	15+
5	20+
6	25+
7	35+
8	50+
9	75+
Far Right (10)	100

FastHub 112F Reset Switch

The reset switch restarts the FastHub 112F. The reset switch has the same effect as powering the FastHub 112F off and on and can be activated by pushing a thin implement into the hole.

FastHub Rear Panel

The power switch, power receptacle, and fuse are located on the rear panel as shown in Figure 1-5.

Figure 1-5   The FastHub 112F Rear Panel

Power switch

Fuse   Power receptacle
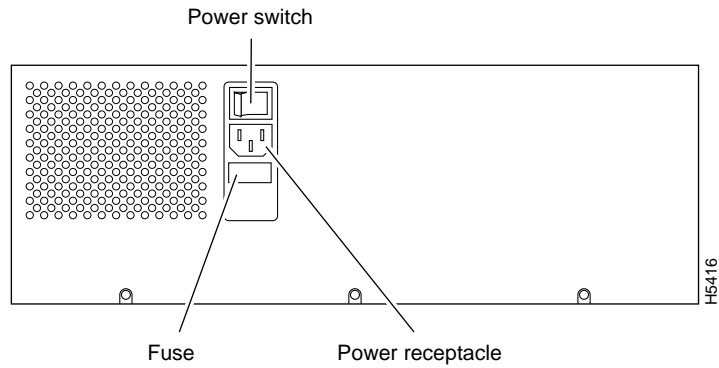
Power Switch

The power switch is depicted in Figure 1-5 and turns the FastHub 112F on and off without removing the power cord.

Power Receptacle

The FastHub 112F power supply is an auto-ranging unit supporting input voltages between 100-220 VAC. The power cord should be plugged into the power receptacle located on the rear panel of the FastHub 112F as shown in Figure 1-5.

Fuse

The fuse is located under the power receptacle. For replacement, use a 3-amp, 250-volt fuse only.