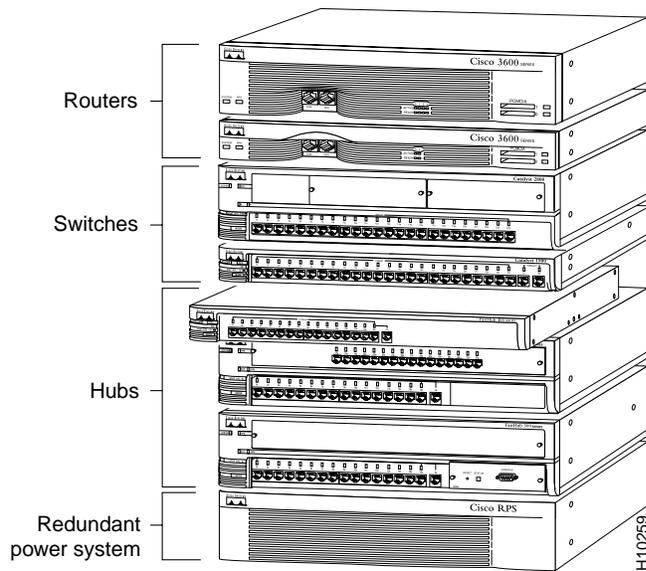


Overview

The FastHub 116T is an unmanaged 16-port 100BaseT Class II repeater for workgroups and server farms. It is a member of an extended network system of stackable, modular LAN and WAN products that increase LAN performance, connect remote offices and users, and provide secure access. Figure 1-1 shows the network system units.

Figure 1-1 FastHub 116T in an Extended Network System of Stackable LAN and WAN Products



Feature Summary

Feature Summary

The FastHub has 16 fixed 100BaseTX ports (with an alternative uplink port for connecting to other 100BaseTX hubs). Table 1-1 summarizes the FastHub features.

Feature	Description
Compatibility	<ul style="list-style-type: none">• IEEE 802.3u Class II repeater compliant.• Compatible with the 100BaseT standard for interoperability with other 100BaseT products.
Performance	100-Mbps peak and aggregate throughput.
Redundancy	Supports connection to the optional Cisco redundant power system (RPS).

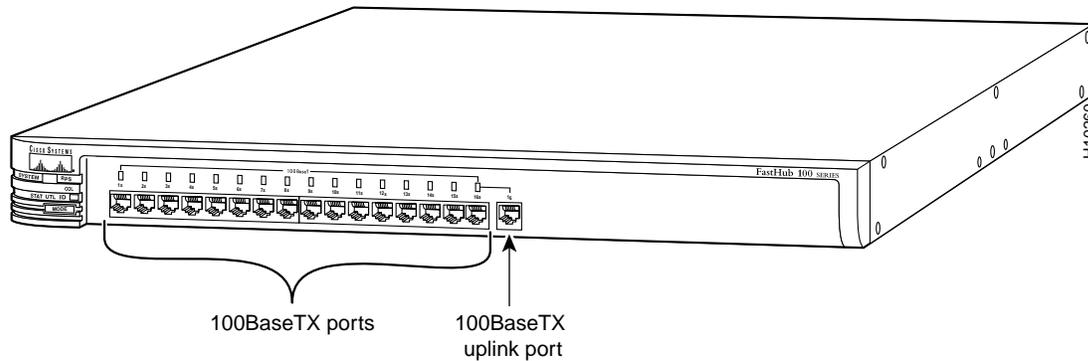
Front Panel Description

The front panel of the FastHub provides 16 100BaseTX ports, a 100BaseTX uplink port, a set of LEDs, and a Mode button.

Ports

The ports on the front panel of the FastHub are all 100BaseTX ports with fixed RJ-45 connectors (see Figure 1-2). All ports are compatible with the 100BaseTX IEEE-802.3u specification and can connect to any 100BaseTX device through standard Category 5 unshielded twisted-pair (UTP) cable.

Figure 1-2 Front Panel Port Connectors



Ports 1x through 16x have their transmit (TD) and receive (RD) pairs internally crossed. Standard Category 5 UTP *crossover* cable is required when connecting these ports to another hub, switch, or router (unless you are connecting to the uplink port on another FastHub or 100BaseT hub).

Port 16, which is to the right of port 16x, is the 100BaseTX uplink port. This uplink port is not internally crossed. Standard Category 5 UTP *straight-through* cable is required when connecting this port to another FastHub 100BaseTX port or to the 100BaseTX port on another hub, switch, or router.



Caution You will disable *both* ports if you connect to both the uplink port (port 16) and port 16x.

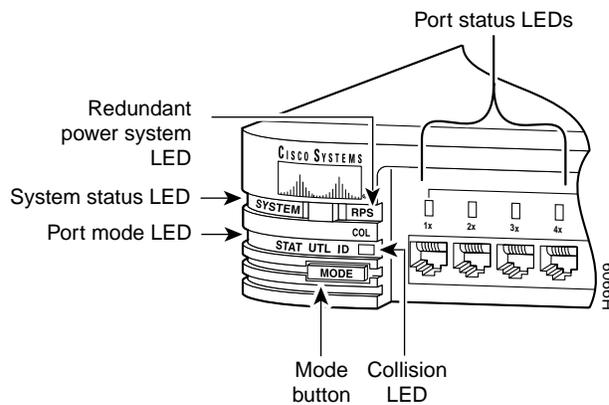
For more information on connecting to these ports, see the “Connecting from the 100BaseTX Ports on the FastHub” section in the “Installing the FastHub” chapter.

Front Panel Description

LEDs

You can use the FastHub LEDs to monitor network activity and performance. Figure 1-3 shows the location of the LEDs and the Mode button.

Figure 1-3 LEDs and Mode Button



RPS LED

The redundant power system LED shows the status of the RPS (see Table 1-2).

Table 1-2 RPS LED Description

Color	RPS Status
Off	Power OK (no RPS or RPS not powered up).
Solid green	Power OK (RPS powered up and OK).
Solid amber	Internal power supply not powered up, RPS connected but not OK.
Flashing green	RPS and FastHub internal power supply are <i>both</i> powered up. Only one power source can be supplying power to the FastHub.

If you are using the RPS, the FastHub power cord must not be plugged in. If you are using the internal power supply, the RPS can be connected but must be powered down.

SYSTEM LED

The system status LED shows whether the FastHub is powered up and provides an indication of any problem with the main system board of the FastHub (see Table 1-3).

Note The system status LED and RPS LED are used together to isolate internal power supply or RPS problems. See the “Verifying and Troubleshooting Your Installation” section in the “Installing the FastHub” chapter for detailed information.

Table 1-3 **SYSTEM LED Description**

Color	System Status
Off	FastHub powered down.
Solid green	FastHub powered up and operational; no power problems.
Solid amber	FastHub powered up but not operational; problem related to the main system board of the FastHub (not internal power supply or RPS).

COL LED

The group collision LED shows the frequency of collisions for all ports on the FastHub (see Table 1-4). The LED flashes amber if one or more ports on the FastHub are involved in a collision.

Note The flash rate of the group collision LED increases with an increase in collisions; a high number of collisions causes the LED to appear solid amber.

Table 1-4 **COL LED Description**

Color	System Status
Off	No collisions
Flashing amber	Collision
Solid amber	High number of collisions

Front Panel Description

Port Mode LED

The port mode LED indicates the STAT (port status), UTL (bandwidth utilization), and ID (unit identification) modes.

Note Port 16 (the uplink port) uses the port 16x LED.

STAT Mode

In port status mode, port LEDs show individual port status (see Table 1-5).

Table 1-5 Port Status LED Description

Color	Port Status
Off	No link (link down).
Green	Link operational (with no activity).
Flashing green	Link operational (with activity).
Rapidly alternating green/amber	Faulty link ¹ .
Alternating green/amber	FastHub reset in progress.

1. This indication remains until the link fault is corrected. Possible causes are autopartition, jabber, and isolated (carrier integrity error). Note that this state should not be confused with the “no link status” (link down) indication where the link is not operational.

UTL Mode

In utilization mode, bandwidth usage is shown for the FastHub. The port LEDs show the current bandwidth and the peak bandwidth usage that occurred since the last reset.

The far-right solid green LED denotes the peak bandwidth that was recorded since the last reset. All LEDs to the left of the solid green LED operate in a scalable pattern, flashing green from left to right, to show the current bandwidth utilization. Table 1-6 lists the port LEDs and the bandwidth associated with each LED.

Table 1-6 Utilization LED Scale

LED	Mbps Activity
Port 1	0 to 6.25
Port 2	12.5
Port 3	18.75
Port 4	25
Port 5	31.25
Port 6	37.5
Port 7	43.75
Port 8	50
Port 9	56.25
Port 10	62.50
Port 11	58.75
Port 12	75
Port 13	81.25
Port 14	87.5
Port 15	93.75
Port 16	100

ID Mode

In unit identification mode, the LED for port 1 is solid green, indicating that the unit ID number for the FastHub is 1. For the FastHub 116T, the unit ID number is always 1.

Rear Panel Description

Mode Button

To change the mode being displayed by a port LED, press the Mode button to highlight in sequence each of the modes: STAT, UTL, and ID. The Mode button is independent of the Collision LED. When the desired mode is selected, release the button to make the change. As long as you hold the Mode button down, the mode does not change. The selected mode remains on for 30 seconds before returning to the default mode of STAT (port status).

Rear Panel Description

The rear panel of the FastHub provides an AC power receptacle and a redundant DC power system (RPS) receptacle (see Figure 1-4). Only one power source can be supplying power to the FastHub. Disconnecting power to the FastHub resets the FastHub itself.

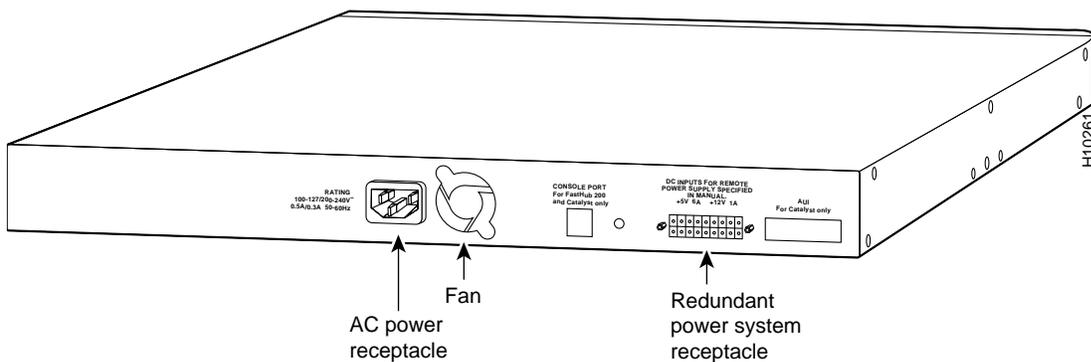
If you want to use the internal power supply, which is an autoranging unit supporting input voltages of 90 to 127/200 to 250 VAC, use the supplied AC power cord to connect the AC power receptacle to an AC power outlet.

If you are using the RPS, the supplied AC power cord must not be plugged in. See the Cisco RPS documentation for detailed information on connecting to the RPS.



Warning Use the Cisco RPS (model NFS0600-9632PE) only to power the external device.

Figure 1-4 Rear Panel Connector



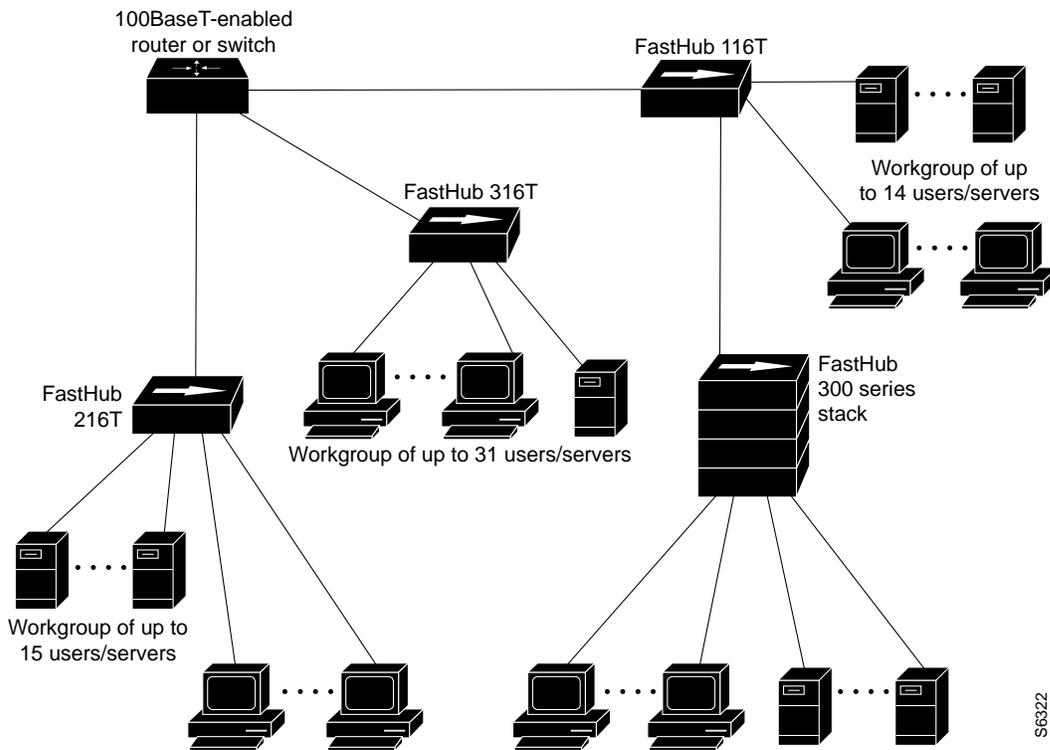
Examples of Using the FastHub

This section describes several possible network configurations using the FastHub.

Workgroups

You can create 100-Mbps workgroups by interconnecting FastHubs (FastHub 116T, FastHub 216T, and FastHub 300 series), as shown in Figure 1-5.

Figure 1-5 FastHubs in a Workgroup Application

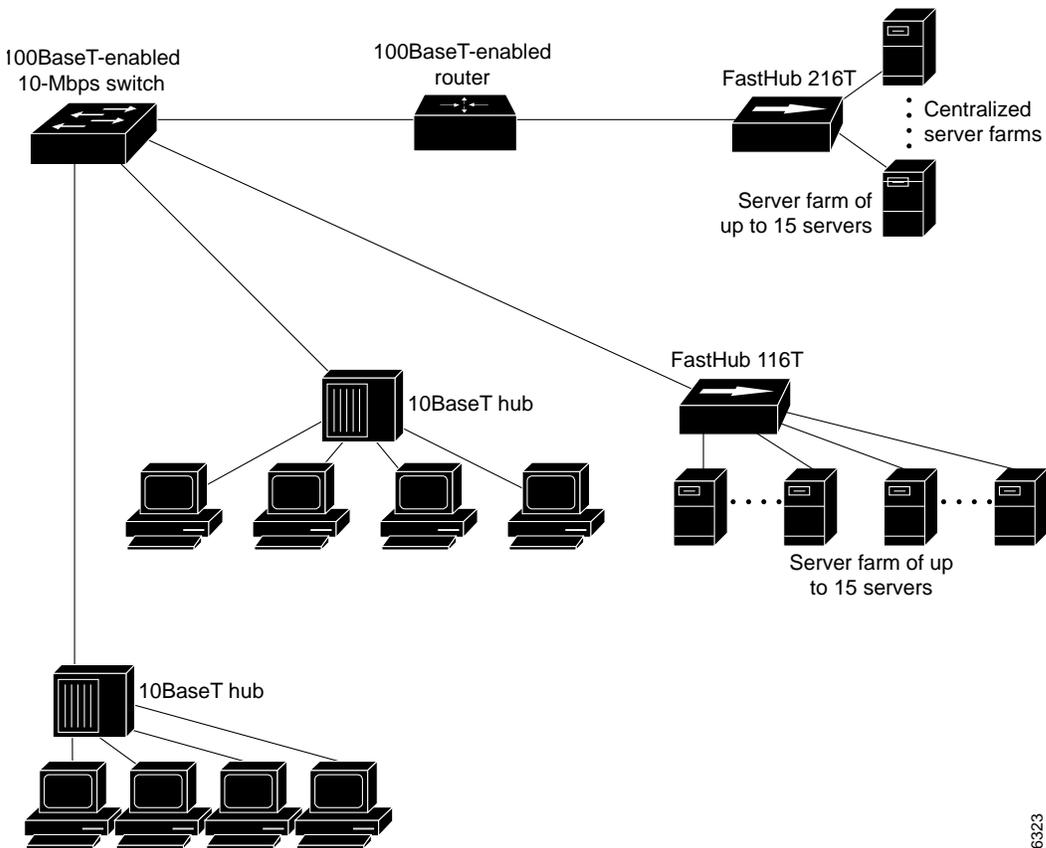


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Server Farms

Using the FastHub, you can create 100-Mbps server farms to increase centralized and decentralized server performance, as shown in Figure 1-6.

Figure 1-6 FastHubs in a Server Farm Application

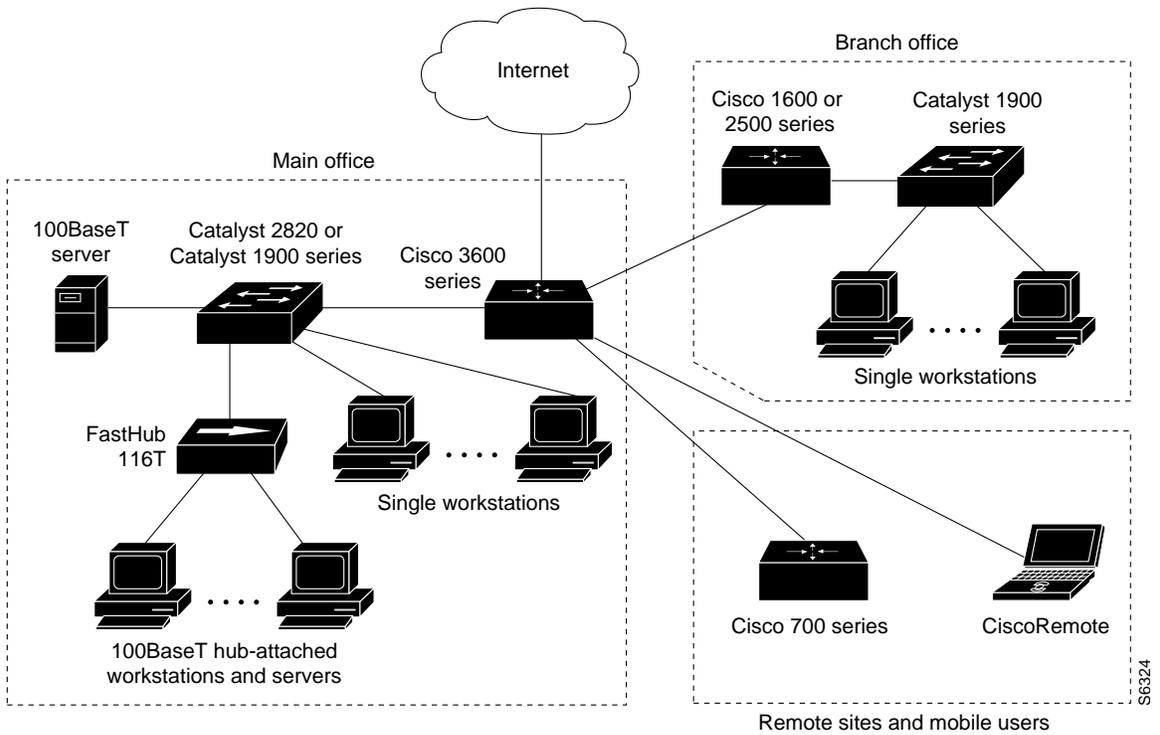


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Extended Network System

A system of routers, switches, and hubs can be combined to create a high-performance network that extends beyond the main office LAN to connect to branch offices, remote sites, mobile users, and the Internet. Figure 1-7 is an application for an extended network system.

Figure 1-7 FastHub in an Extended Network Application



Examples of Using the FastHub
