



# Fast Ethernet Overview

The term *Ethernet* is commonly used for all carrier sense multiple access collision detect (CSMA/CD) LANs that generally conform to Ethernet specifications, including Fast Ethernet under IEEE 802.3u.


**Note**

100BASE-TX is intended for Environment A, and 100BASE-FX is intended for Environment B. Both are described in the IEEE 802.3u standard.

IEEE 802.3u is well suited to applications where a local communication medium must carry sporadic, occasionally heavy traffic at peak data rates. Stations on a CSMA/CD LAN can access the network at any time. Before sending data, the station *listens* to the network to see if it is already in use. If it is in use, the station waits until the network is not in use, then transmits. This process is known as *half-duplex operation*. A collision occurs when two stations listen for network traffic, hear none, and transmit almost simultaneously. When simultaneous transmission occurs, both transmissions are damaged and the stations must retransmit. The stations detect the collision and use backoff algorithms to determine when they should retransmit.

Both Ethernet and IEEE 802.3u are broadcast networks, which means that all stations see all transmissions. Each station must examine received frames to determine whether it is the intended destination and, if it is, pass the frame to a higher protocol layer for processing.

IEEE 802.3u specifies the following different physical layers for 100BASE-T:

- 100BASE-TX—100BASE-T, half- and full-duplex over Category 5 UTP, EIA/TIA-568-compliant cable
- 100BASE-FX—100BASE-T, half- and full-duplex over optical fiber

Each physical layer protocol has a name that summarizes its characteristics in the format speed/signaling method/segment length, where speed is the LAN speed in megabits per second (Mbps), signaling method is the signaling method used (either *baseband* or *broadband*), and segment length is the maximum length between stations in hundreds of meters. Therefore, 100BASE-T specifies a 100-Mbps, baseband LAN with maximum network segments.

## IEEE 802.3u 100BASE-T Specifications

This section provides specifications for IEEE 802.3u 100BASE-T. [Table 1-1](#) provides cabling specifications for 100BASE-TX Fast Ethernet transmission over UTP and foil twisted-pair (FTP), and 100BASE-FX Fast Ethernet over fiber-optic cables. It also summarizes IEEE 802.3u 100BASE-TX and 100BASE-FX physical characteristics. (See [Figure 1-3](#).)

**Table 1-1**      **Cabling Specifications**

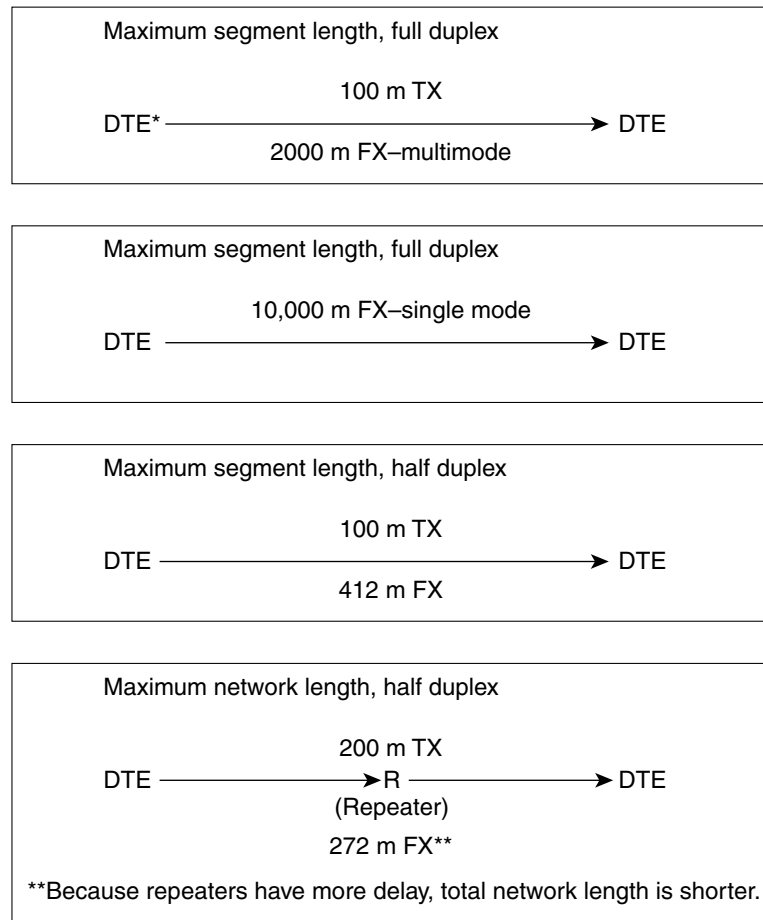
Parameter	100BASE-TX	100BASE-FX (Multimode)
Cable specification	Category 5 <sup>1</sup> UTP <sup>2</sup> , 22 to 24 AWG	62.5/125 multimode optical fiber
Maximum segment length (half-duplex) <sup>3</sup>	100 m	412 m
Maximum segment length (full-duplex) <sup>3</sup>	100 m	2000 m

**Table 1-1 Cabling Specifications (continued)**

Parameter	100BASE-TX	100BASE-FX (Multimode)
Maximum network length (half-duplex, one repeater) <sup>4</sup>	200 m	272 m
Data rate	100 Mbps	100 Mbps
Signaling method	4B/5B <sup>5</sup> block coded, scrambled, with MLT-3 line coding	4B/5B block coded, with NRZI line coding
Connector	RJ-45 (ISO/IEC 60603-7:-1990)	SC-type: dual simplex or single duplex for RX and TX
Topology	Star/hub	Star/hub

1. EIA/TIA-568 or EIA-TIA-568 TSB-36 compliant.
2. Cisco does not supply Category 5 UTP RJ-45 cables. However, they are available commercially.
3. Data Terminal Equipment (DTE to DTE), see [Figure 1-3](#).
4. DTE to Repeater to DTE, see [Figure 1-3](#).
5. 4B/5B encoding or block coding, encodes four data bits into a 5-bit transmission sequence.

**Figure 1-3 Maximum Segment and Network Lengths—100BASE-FX and 100BASE-TX**



\*DTE = Data Terminal Equipment

\*\*Because repeaters have more delay, total network length is shorter.

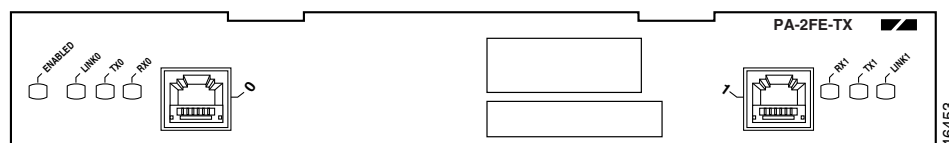
**Note**

PA-2FE-FX uses 62.5/125-micron multimode fiber with an SC connector.

## LEDs

The PA-2FE has seven LEDs; an ENABLED LED, and LINK, TRANSMIT, and RECEIVE LEDs for each port. The LEDs are shown in [Figure 1-4](#).

**Figure 1-4 PA-2FE LEDs—Faceplate View of PA-2FE-TX**



After system initialization, the ENABLED LED goes on to indicate that the PA-2FE is ready for operation. The following conditions must be met before the ENABLED LED goes on:

- The PA-2FE is correctly connected and receiving power.
- A PA-2FE-equipped card or chassis contains a valid microcode version that has been successfully downloaded.
- The bus recognizes the PA-2FE.

If any of these conditions are not met, or if the initialization fails for other reasons, the ENABLED LED does not go on. [Table 1-2](#) lists LED colors and indicator functions.

**Table 1-2 PA-2FE LEDs**

LED Label	Color	State	Function
ENABLED	Green	On	Port adapter is enabled for operation.
LINK0	Green	On	Port 0 is receiving a carrier signal from the network. <sup>1</sup>
TX0	Green	On	Port 0 is transmitting data.
RX0	Green	On	Port 0 is receiving data.
RX1	Green	On	Port 1 is receiving data.
TX1	Green	On	Port 1 is transmitting data.
LINK1	Green	On	Port 1 is receiving a carrier signal from the network. <sup>1</sup>

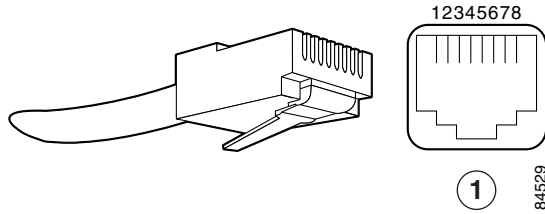
1. When an RJ-45 or SC port is active.

## Receptacles, Cables, and Pinouts

The two interface receptacles on the PA-2FE are a single RJ-45 connection (on the PA-2FE-TX) or an SC-type optical-fiber connection (on the PA-2FE-FX). Each connection supports IEEE 802.3u interfaces compliant with the 100BASE-X and 10/100BASE-T standards. The RJ-45 connection does not require an external transceiver.

Figure 1-5 shows the RJ-45 cable connectors. Cisco does not supply Category 5 UTP RJ-45 cables; they are available from a commercial supplier. Table 1-3 lists the pinouts and signals for the PA-2FE-TX RJ-45 connectors.

**Figure 1-5 RJ-45 Port and Connector**



1	RJ-45 connector and port	
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**Table 1-3 RJ-45 Port Pinout Information**

Pin	Description
1	TxD+ <sup>1</sup>
2	TxD-
3	RxD+ <sup>2</sup>
6	RxD-

1. TxD = Transmit data
2. RxD = Receive data

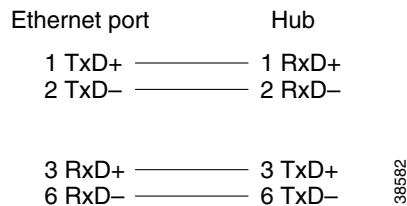


**Note**

Referring to the RJ-45 pinout in Table 1-3, proper common-mode line terminations should be used for the unused Category 5, UTP cable pairs 4/5 and 7/8. Common-mode line termination reduces the contributions to electromagnetic interference (EMI) and susceptibility to common-mode sources. Wire pairs 4/5 and 7/8 are passively terminated in the RJ-45 100BASE-TX port circuitry in the PA-2FE-TX.

Depending on your RJ-45 interface cabling requirements, use the pinouts in Figure 1-6 and Figure 1-7.

**Figure 1-6 Straight-Through Cable Pinout—PA-2FE-TX RJ-45 Connection to a Hub or Repeater**



**Figure 1-7 Crossover Cable Pinout—PA-2FE-TX RJ-45 Connections Between Hubs and Repeaters**

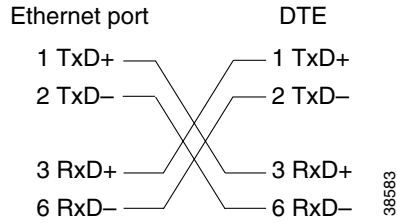
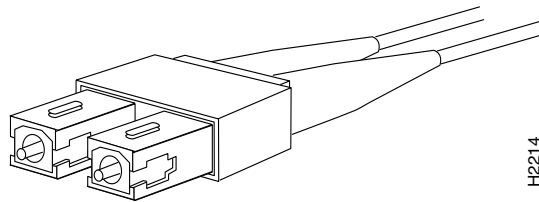
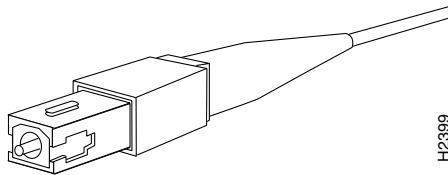


Figure 1-8 shows the duplex SC connector (one required for both transmit and receive), and Figure 1-9 shows the simplex SC connector (two required, one each for transmit and receive) used for PA-2FE-FX optical-fiber connections. Cisco does not supply these multimode optical-fiber cables; they are available from a commercial supplier.

**Figure 1-8 PA-2FE-FX Duplex SC Connector**



**Figure 1-9 PA-2FE-FX Simplex SC Connector**



## Network Management

The PA-2FE supports the following:

- SNMP agent v1 (RFC 1155–1157)
- Ethernet MIB (RFC 1398)
- IEEE 802.3 LAN specification for CSMA/CD
- MIB for Network Management of TCP/IP-Based Internets: MIB-II (RFC 1213)
- Definition of Managed Objects for Bridges (RFC 1493)
- Evolution of Interfaces Group of MIB-II (RFC 1573)

# Port Adapter Slot Locations on the Supported Platforms

This section discusses port adapter slot locations on the supported platforms. The illustrations that follow summarize slot location conventions on each platform:

- [Cisco 7100 Series Routers Slot Numbering, page 1-7](#)
- [Cisco 7200 Series Routers and Cisco 7200 VXR Routers Slot Numbering, page 1-8](#)
- [Cisco uBR7200 Series Router Slot Numbering, page 1-9](#)
- [Cisco 7201 Router Slot Numbering, page 1-10](#)
- [Cisco 7301 Router Slot Numbering, page 1-10](#)
- [Cisco 7304 PCI Port Adapter Carrier Card Slot Numbering, page 1-11](#)
- [Cisco 7401ASR Router Slot Numbering, page 1-12](#)
- [Cisco 7500 Series Routers with VIP Slot Numbering, page 1-12](#)



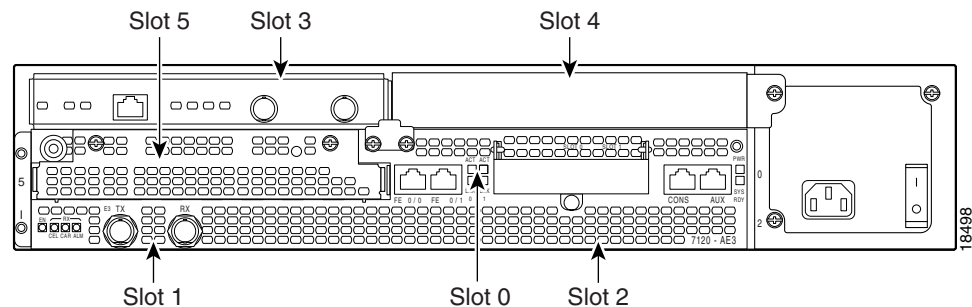
## Note

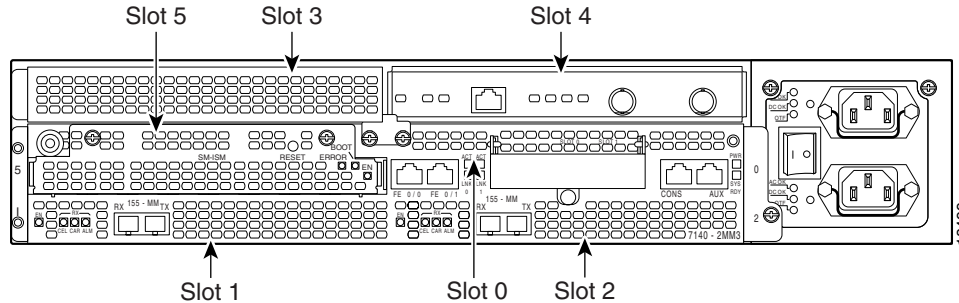
The port adapters shown in the slot identification illustrations may not be the same port adapter that is documented in this guide.

## Cisco 7100 Series Routers Slot Numbering

The PA-2FE can be installed in port adapter slot 3 in Cisco 7120 series routers, and in port adapter slot 4 in Cisco 7140 series routers. [Figure 1-10](#) shows the slot numbering on a Cisco 7120 series router. [Figure 1-11](#) shows the slot numbering on a Cisco 7140 series router.

**Figure 1-10** Port Adapter Slots in the Cisco 7120 Series Router



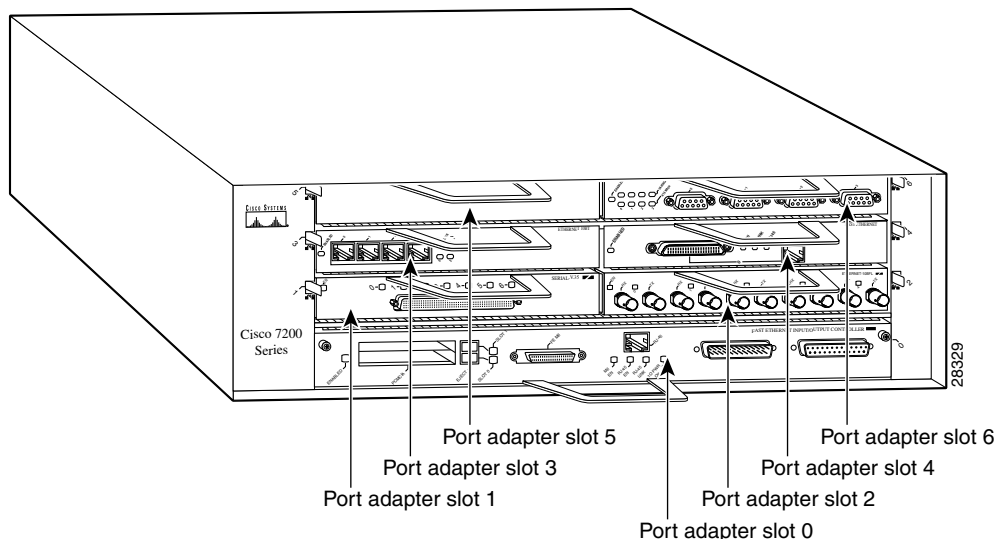
**Figure 1-11** Port Adapter Slots in the Cisco 7140 Series Router

## Cisco 7200 Series Routers and Cisco 7200 VXR Routers Slot Numbering

Cisco 7202 routers have two port adapter slots. The slots are numbered from left to right. You can place the port adapters in either of the slots (slot 1 or slot 2). The Cisco 7202 router is not shown.

Cisco 7204 routers and Cisco 7204VXR routers have four slots for port adapters, and one slot for an input/output (I/O) controller. The slots are numbered from the lower left to the upper right, beginning with slot 1 and continuing through slot 4. You can place the port adapters in any of the slots (slot 1 through slot 4). Slot 0 is always reserved for the I/O controller. The Cisco 7204 router and Cisco 7204VXR are not shown.

Cisco 7206 routers and Cisco 7206VXR routers have six slots for port adapters, and one slot for an input/output (I/O) controller. The slots are numbered from the lower left to the upper right, beginning with slot 1 and continuing through slot 6. You can place the port adapters in any of the six slots (slot 1 through slot 6). Slot 0 is always reserved for the I/O controller. [Figure 1-12](#) shows the slot numbering on a Cisco 7206 router. The Cisco 7206VXR router is not shown.

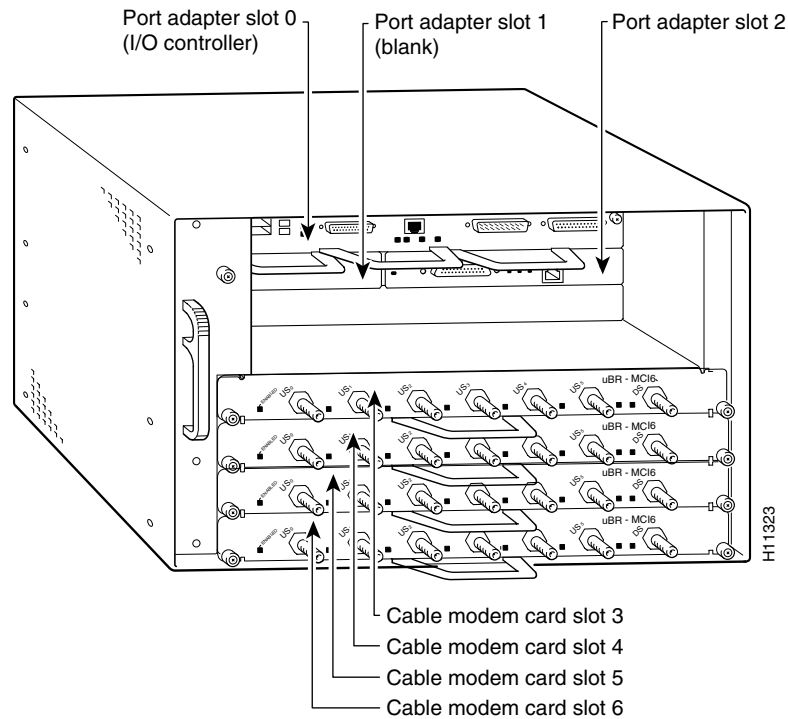
**Figure 1-12** Port Adapter Slots in the Cisco 7206 Router

## Cisco uBR7200 Series Router Slot Numbering

The Cisco uBR7223 router has one port adapter slot (slot 1). Slot 0 is always reserved for the I/O controller—if present. The Cisco uBR7223 router is not shown.

The Cisco uBR7246 router and Cisco uBR7246VXR router have two port adapter slots (slot 1 and slot 2). Slot 0 is always reserved for the I/O controller—if present. [Figure 1-13](#) shows the slot numbering of port adapters on a Cisco uBR7246VXR router. The Cisco uBR7246 router is not shown.

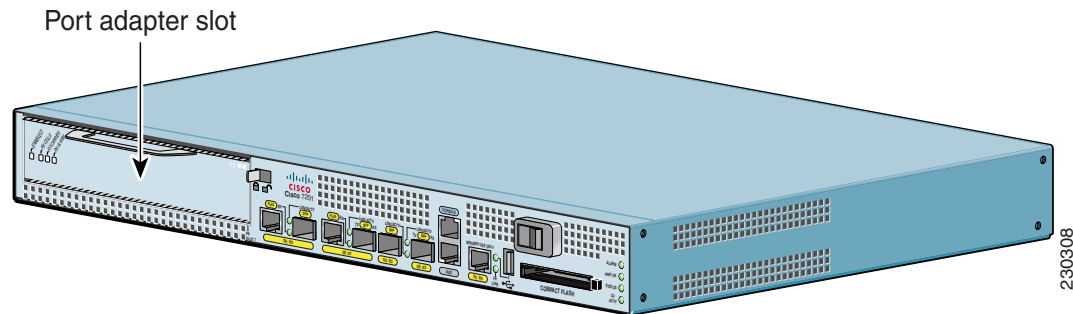
**Figure 1-13** Port Adapter Slots in the Cisco uBR7246VXR Router



## Cisco 7201 Router Slot Numbering

Figure 1-14 shows the front view of a Cisco 7201 router with a port adapter installed. There is only one port adapter slot (slot 1) in a Cisco 7201 router.

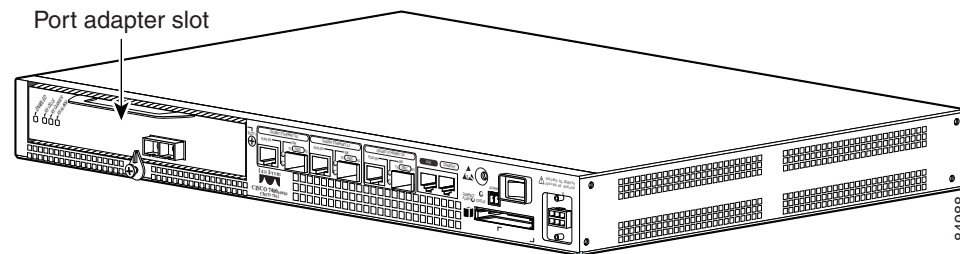
**Figure 1-14** Port Adapter Slot in the Cisco 7201 Router



## Cisco 7301 Router Slot Numbering

Figure 1-15 shows the front view of a Cisco 7301 router with a port adapter installed. There is only one port adapter slot (slot 1) in a Cisco 7301 router.

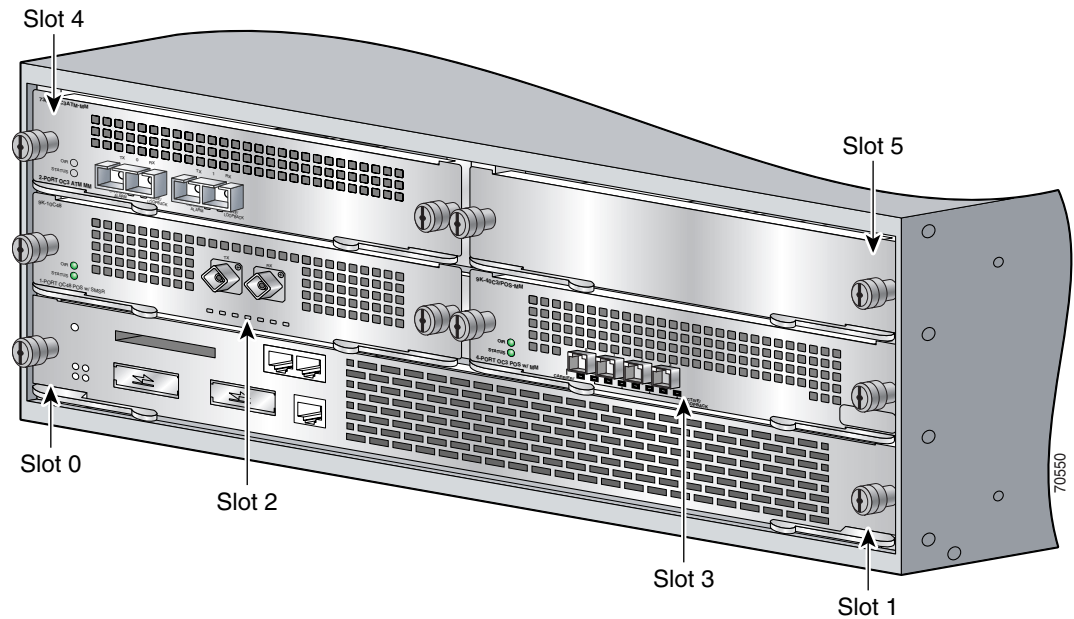
**Figure 1-15** Port Adapter Slot in the Cisco 7301 Router



## Cisco 7304 PCI Port Adapter Carrier Card Slot Numbering

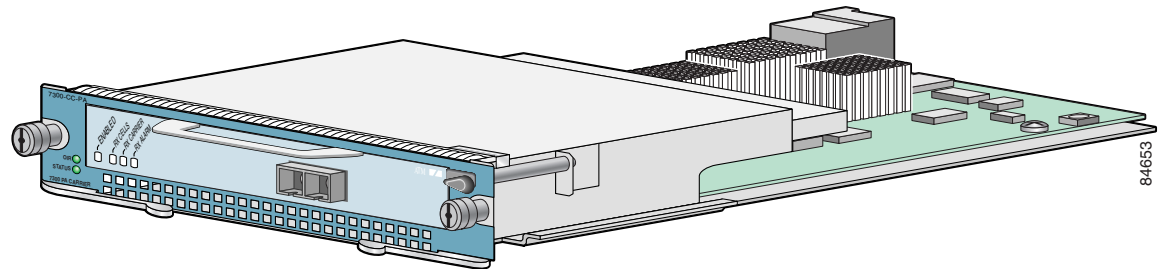
The Cisco 7304 PCI port adapter carrier card installs into Cisco 7304 router module slots 2 through 5. [Figure 1-16](#) shows the module slot numbering on a Cisco 7304 router. The port adapter slot number is the same as the module slot number. Slot 0 and slot 1 are reserved for the NPE module or NSE module.

**Figure 1-16** Module Slots on the Cisco 7304 Router



The Cisco 7304 PCI port adapter carrier card accepts one single-width port adapter. [Figure 1-17](#) shows a Cisco 7304 PCI port adapter carrier card with a port adapter installed.

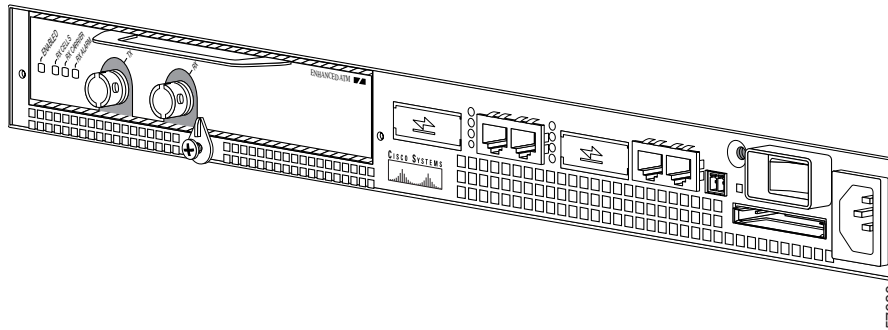
**Figure 1-17** Cisco 7304 PCI Port Adapter Carrier Card—Port Adapter Installed



## Cisco 7401ASR Router Slot Numbering

Figure 1-18 shows the front view of a Cisco 7401ASR router with a port adapter installed. There is only one port adapter slot (slot 1) in a Cisco 7401ASR router.

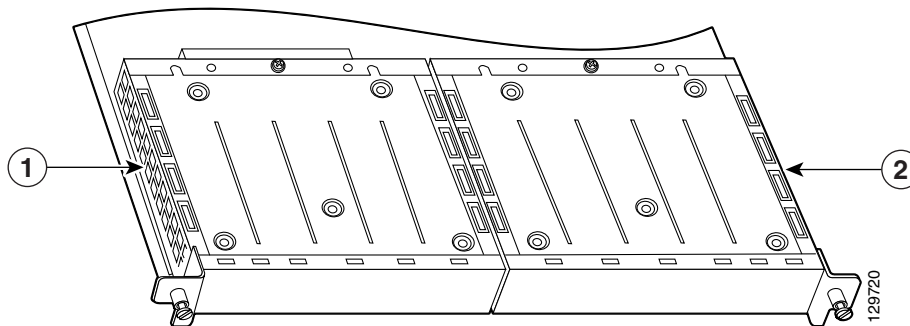
**Figure 1-18** Port Adapter Slot in the Cisco 7401ASR Router



## Cisco 7500 Series Routers with VIP Slot Numbering

The PA-2FE is supported on the VIP2, VIP4, VIP6-80 versatile interface processors used in Cisco 7500 series routers. In the Cisco 7505 router, the VIP motherboard is installed horizontally in the VIP slot. In the Cisco 7507 router and Cisco 7513 router, the VIP motherboard is installed vertically in the VIP slot. The port adapter can be installed in either bay (port adapter slot 0 or 1) on the VIP. The bays are numbered from left to right on the VIP. Figure 1-19 shows the slot numbering on a VIP.

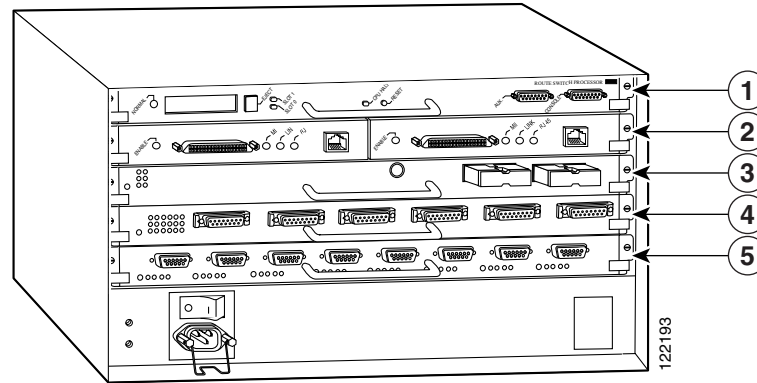
**Figure 1-19** VIP Slot Locations



<b>1</b>	VIP port adapter slot 0	<b>2</b>	VIP port adapter slot 1
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Cisco 7505 routers have four slots for port adapters, and one slot for a Route Switch Processor (RSP). The slots are numbered from bottom to top. You can place the port adapters in any of the VIP interface slots (slot 0 through 3). One slot is always reserved for the RSP. Figure 1-20 shows the slot numbering on a Cisco 7505 router.

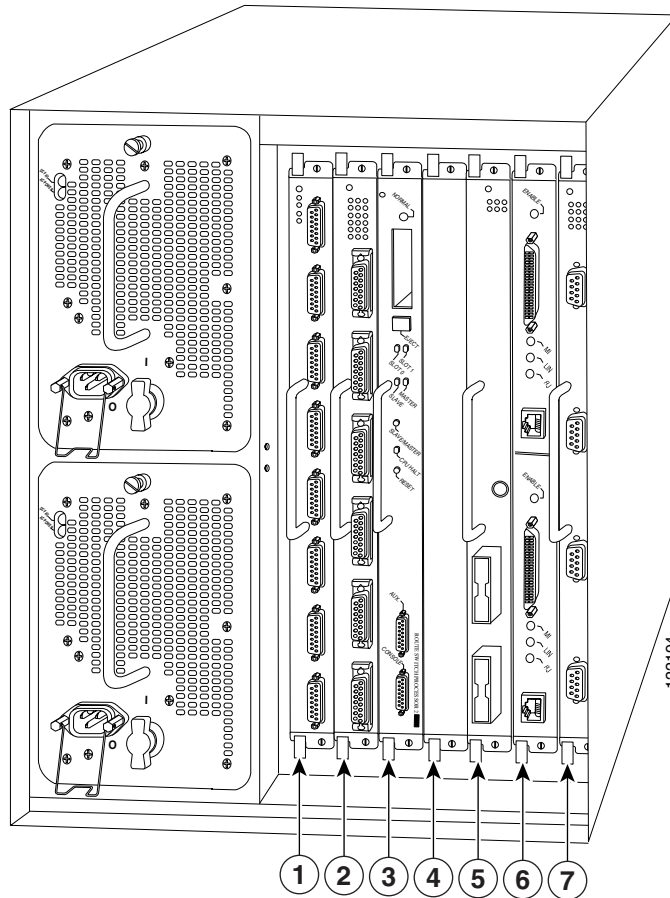
**Figure 1-20** VIP Slots in the Cisco 7505 Router



<b>1</b>	RSP	<b>4</b>	VIP interface—slot 1
<b>2</b>	VIP interface—slot 3	<b>5</b>	VIP interface—slot 0
<b>3</b>	VIP interface—slot 2		

Cisco 7507 routers have five slots for port adapters, and two slots for RSPs. The slots are numbered from left to right. You can place the port adapters in any of the VIP interface slots (slot 0, 1, 4, 5, or 6). Slots 2 and 3 are always reserved for RSPs. [Figure 1-21](#) shows the slot numbering on a Cisco 7507 router.

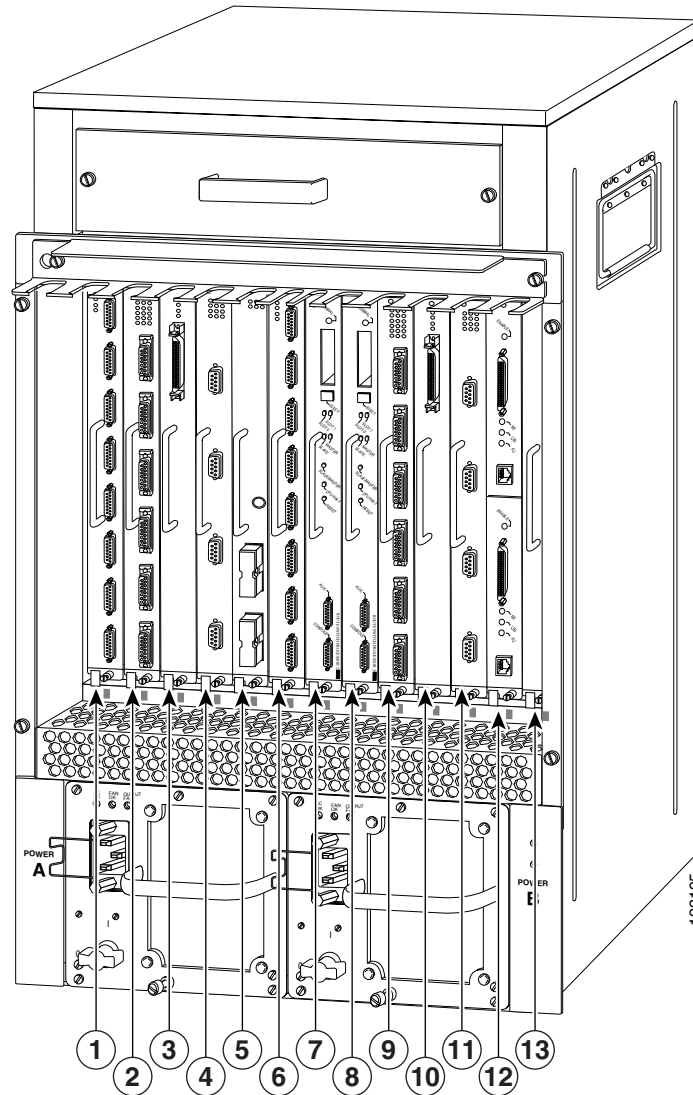
**Figure 1-21** VIP Slots in the Cisco 7507 Router



<b>1</b>	VIP interface—slot 0	<b>5</b>	VIP interface—slot 4
<b>2</b>	VIP interface—slot 1	<b>6</b>	VIP interface—slot 5
<b>3</b>	RSP—slot 2	<b>7</b>	VIP interface—slot 6
<b>4</b>	RSP—slot 3		

Cisco 7513 routers have eleven slots for port adapters, and two slots for RSPs. The slots are numbered from left to right. You can place the port adapters in any of the VIP interface slots (slots 0 through 5, or slots 9 through 12). Slots 6 and 7 are always reserved for RSPs. [Figure 1-22](#) shows the slot numbering on a Cisco 7513 router.

**Figure 1-22** VIP Slots in the Cisco 7513 Router



<b>1</b>	VIP interface—slot 0	<b>8</b>	RSP—slot 7
<b>2</b>	VIP interface—slot 1	<b>9</b>	VIP interface—slot 8
<b>3</b>	VIP interface—slot 2	<b>10</b>	VIP interface—slot 9
<b>4</b>	VIP interface—slot 3	<b>11</b>	VIP interface—slot 10
<b>5</b>	VIP interface—slot 4	<b>12</b>	VIP interface—slot 11
<b>6</b>	VIP interface—slot 5	<b>13</b>	VIP interface—slot 12
<b>7</b>	RSP—slot 6		

# Identifying Interface Addresses

The following sections describe the interface address formats for the PA-2FE in supported platforms. Interface addresses specify the actual physical location of each interface on a router or switch.

Interfaces on a PA-2FE installed in a router maintain the same address regardless of whether other port adapters are installed or removed. However, when you move a port adapter to a different slot, the first number in the interface address changes to reflect the new port adapter slot number.

Interfaces on a PA-2FE installed in a VIP maintain the same address regardless of whether other interface processors are installed or removed. However, when you move a VIP to a different slot, the interface processor slot number changes to reflect the new interface processor slot.


**Note**

Interface ports are numbered from left to right starting with 0.

The following subsections describe the interface address formats for the supported platforms:

- [Cisco 7120 Router and Cisco 7140 Router Interface Addresses, page 1-17](#)
- [Cisco 7200 Series Routers and Cisco 7200 VXR Routers Interface Addresses, page 1-17](#)
- [Cisco uBR7200 Series Routers Interface Addresses, page 1-18](#)
- [Cisco 7201 Router Interface Addresses, page 1-18](#)
- [Cisco 7301 Router Interface Addresses, page 1-18](#)
- [Cisco 7304 PCI Port Adapter Carrier Card Interface Addresses, page 1-18](#)
- [Cisco 7401ASR Router Interface Addresses, page 1-18](#)
- [Cisco 7500 Series Routers VIP Interface Addresses, page 1-19](#)

Table 1-4 summarizes the interface address formats for the supported platforms.

**Table 1-4**      **Identifying Interface Addresses**

Platform	Interface Address Format	Numbers	Syntax
Cisco 7120 series router	Port-adapter-slot-number/interface-port-number	Port adapter slot—always 3 Interface port—0 or 1	3 / 0
Cisco 7140 series routers	Port-adapter-slot-number/interface-port-number	Port adapter slot—always 4 Interface port—0 or 1	4 / 0
Cisco 7200 series routers and Cisco 7200 VXR routers (Cisco 7202, Cisco 7204, Cisco 7204VXR, Cisco 7206, Cisco 7206VXR)	Port-adapter-slot-number/interface-port-number	Port adapter slot—1 through 6 (depends on the number of slots in the router) Interface port—0 or 1	1 / 0
Cisco uBR7200 series routers (Cisco uBR7223)	Port-adapter-slot-number/interface-port-number	Port adapter slot—1 Interface port—0 or 1	1 / 0
Cisco uBR7200 series routers (Cisco uBR7246, Cisco uBR7246VXR)	Port-adapter-slot-number/interface-port-number	Port adapter slot—1 and 2 Interface port—0 or 1	1 / 0

**Table 1-4** Identifying Interface Addresses (continued)

Platform	Interface Address Format	Numbers	Syntax
Cisco 7201 router	Port-adapter-slot-number/interface-port-number	Port adapter slot—always 1 Interface port—0 or 1	1/0
Cisco 7301 router	Port-adapter-slot-number/interface-port-number	Port adapter slot—always 1 Interface port—0 or 1	1/0
Cisco 7304 PCI port adapter carrier card in Cisco 7304 router	Module-slot-number/interface-port-number	Module slot— slot 2 through 5 Interface port—0 or 1	3/0
Cisco 7401ASR router	Port-adapter-slot-number/interface-port-number	Port adapter slot—always 1 Interface port—0 or 1	1/0
VIP in Cisco 7500 series routers	Interface-processor-slot-number/port-adapter-slot-number/interface-port-number	Interface processor slot—0 through 12 (depends on the number of slots in the router) Port adapter slot— 0 or 1 Interface port—0 or 1	3/1/0

**Note**

In Cisco 7200 series routers, Cisco 7200 VXR routers, and Cisco uBR7200 series routers, port adapter slot 0 is reserved for the Fast Ethernet port on the I/O controller, if present.

## Cisco 7120 Router and Cisco 7140 Router Interface Addresses

In the Cisco 7120 series router, port adapters are installed in port adapter slot 3. See [Figure 1-10](#). In the Cisco 7140 series router, port adapters are installed in port adapter slot 4. See [Figure 1-11](#).

The interface address is composed of a two-part number in the format *port-adapter-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed on a Cisco 7120 router, the interface addresses would be 3/0 and 3/1. If a dual-port PA-2FE is installed on a Cisco 7140 router, the interface addresses would be 4/0 and 4/1.

## Cisco 7200 Series Routers and Cisco 7200 VXR Routers Interface Addresses

In Cisco 7200 series routers and Cisco 7200 VXR routers, port adapter slots are numbered from the lower left to the upper right, beginning with slot 1 and continuing through slot 2 for the Cisco 7202, slot 4 for the Cisco 7204 and Cisco 7204VXR, and slot 6 for the Cisco 7206 and Cisco 7206VXR. Port adapters can be installed in any available port adapter slot from 1 through 6 (depending on the number of slots in the router). (Slot 0 is reserved for the I/O controller.) See [Figure 1-12](#).

The interface address is composed of a two-part number in the format *port-adapter-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed in slot 1 of a Cisco 7200 series router, the interface addresses would be 1/0 and 1/1 (slot 1 and ports 0 and 1). If the dual-port PA-2FE were installed in slot 4, the interface addresses would be 4/0 and 4/1 (slot 4 and ports 0 and 1)

## Cisco uBR7200 Series Routers Interface Addresses

In the Cisco uBR7223 router, only one slot accepts port adapters and it is numbered slot 1.

In the Cisco uBR7246 router and Cisco uBR7246VXR router, port adapters can be installed in two port adapter slots (slot1 and slot 2). Slot 0 is always reserved for the I/O controller—if present. See [Figure 1-13](#).

The interface address is composed of a two-part number in the format *port-adapter-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed in slot 1 of a Cisco uBR7223 series router, the interface addresses would be 1/0 and 1/1 (slot 1 and ports 0 and 1). If the dual-port port adapter were installed in slot 2 of a Cisco uBR7246 or Cisco uBR7248VXR router, the interface addresses would be 2/0 and 2/1 (slot 2 and ports 0 and 1).

## Cisco 7201 Router Interface Addresses

In the Cisco 7201 router, only one slot accepts port adapters and it is numbered slot 1. See [Figure 1-14](#).

The interface address is composed of a two-part number in the format *port-adapter-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed on a Cisco 7201 router, the interface addresses would be 1/0 and 1/1.

## Cisco 7301 Router Interface Addresses

In the Cisco 7301 router, only one slot accepts port adapters and it is numbered slot 1. See [Figure 1-15](#).

The interface address is composed of a two-part number in the format *port-adapter-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed on a Cisco 7301 router, the interface addresses would be 1/0 and 1/1.

## Cisco 7304 PCI Port Adapter Carrier Card Interface Addresses

In the Cisco 7304 router, port adapters are installed in a Cisco 7304 PCI port adapter carrier card, which installs in Cisco 7304 router module slots 2 through 5. The port adapter slot number is the same as the module slot number. See [Figure 1-16](#).

The interface address is composed of a two-part number in the format *module-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed in the Cisco 7304 PCI port adapter carrier card in Cisco 7304 router module slot 3, the interface addresses would be 3/0 and 3/2.

## Cisco 7401ASR Router Interface Addresses

In the Cisco 7401ASR router, only one slot accepts port adapters and it is numbered slot 1. See [Figure 1-18](#).

The interface address is composed of a two-part number in the format *port-adapter-slot-number/interface-port-number*. See [Table 1-4](#). For example, if a dual-port PA-2FE is installed on a Cisco 7401ASR router, the interface addresses would be 1/0 and 1/1.

## Cisco 7500 Series Routers VIP Interface Addresses

In Cisco 7500 series routers, port adapters are installed on a versatile interface processor (VIP), which installs in interface processor slots 0 through 12 (depending on the number of slots in the router). The port adapter can be installed in either bay (port adapter slot 0 or 1) on the VIP. See [Figure 1-19](#), [Figure 1-20](#), [Figure 1-21](#), and [Figure 1-22](#).

The interface address for the VIP is composed of a three-part number in the format *interface-processor-slot-number/port-adapter-slot-number/interface-port-number*. See [Table 1-4](#).

The first number identifies the slot in which the VIP is installed (slot 0 through 12, depending on the number of slots in the router).

The second number identifies the bay (port adapter slot) on the VIP in which the port adapter is installed (0 or 1). The bays are numbered from left to right on the VIP.

The third number identifies the physical port number (interface port number) on the port adapter. The port numbers always begin at 0 and are numbered from left to right. The PA-2FE is a dual-port port adapter, therefore the port can be 0 or 1.

For example, if a dual-port PA-2FE is installed in a VIP in interface processor slot 3, port adapter slot 1, the interface addresses would be 3/1/0 and 3/1/1.

**Note**

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Although the processor slots in the seven-slot Cisco 7507 and the thirteen-slot Cisco 7513 chassis are vertically oriented and those in the five-slot Cisco 7505 are horizontally oriented, all Cisco 7500 series routers use the same method for slot and port numbering.

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