

Fast Ethernet Port Adapter Family (PA-2FE) For Cisco 7200, 7300, 7500 and 7600 Series Routers

Cisco Systems offers a family of Fast Ethernet (FE) port adapters optimized for the specific requirements of campus and enterprise backbones and data centers. The Cisco FE port-adapter options provide either one or two ports of 100BaseTX (copper) or 100BaseFX (fiber) Fast Ethernet ports per adapter. Each port can be configured for half- and full-duplex operation.

Fast Ethernet single-wide port adapters are available for the Cisco 7200, 7301, 7304, 7500 and 7600 Series routers.

- Dual-port Fast Ethernet 100BaseTX (PA-2FE-TX)
- Dual-port Fast Ethernet 100BaseFX (PA-2FE-FX)

Cisco Fast Ethernet port adapters may be used in an open port-adapter slot on Cisco 7200 and 7301 Series routers, open bay within Cisco second- and fourth-generation Versatile Interface Processors (VIP2 and VIP4) on Cisco 7500 Series routers or on Cisco 7304 with PA Carrier Card. Portability between these systems simplifies ordering and minimizes overall support and sparing costs.

SINGLE- AND DUAL-PORT FAST ETHERNET PORT ADAPTERS

The dual-port Fast Ethernet port adapters (PA-2FE-TX, and PA-2FE-FX) provide the highest packet throughput available for Cisco 7200, 7300, 7500 and 7600 Series routers. These adapters are the preferred choice for campus/enterprise backbones, data centers, campus-to-WAN connections, and high-performance routing between multiple Ethernet virtual LANs (VLANs).

The PA-2FE-TX port adapter supports either 10- or 100-Mbps configurations with auto-negotiation. This enables auto-selection of the appropriate network speed and duplex mode. The PA-2FE-FX supports 100-Mbps.

FEATURES

Common Features

- 100BaseTX (two pairs Category 5 unshielded twisted pair [UTP]) connectivity through an RJ-45 connector
- 100BaseFX (62.5/125-micron multimode fiber) connectivity through an SC connector
- ISL support for high-performance routing between multiple Ethernet VLANs
- IEEE 802.1d TB-VLAN support for transparently bridging VLANs
- Online insertion and removal (OIR) within Cisco 7200 and 7300 Series routers, enabling users to remove, add, or replace interface processors on line, increasing system availability; OIR for Cisco 7500 is made possible through inserting or removing the VIP2 or VIP4
- Each port configurable for either full- or half-duplex operation
- LEDs to provide quick status checks and problem identification
- CiscoWorks network-management integration, including CiscoView applications, to provide device status and monitoring, simple configuration, and minor troubleshooting
- Simple Network Management Protocol (SNMP) support through standard Management Information Bases (MIBs), enabling visibility and management control on SNMP-supported network-management stations

Dual-Port Fast Ethernet Port Adapter (PA-2FE) Features

- Dual-port Fast Ethernet/ISL 100BaseTX port adapter (copper) with RJ-45 connectors
- Dual-port Fast Ethernet/ISL 100BaseFX port adapter (fiber) with SC connectors (TX and RX) supporting multimode 62.5/125-micron fiber cables
- PA-2FE-TX supports auto-negotiation between 10- and 100-Mbps

SPECIFICATIONS (PA-2FE)

Physical Specifications

- Dimensions (H x W x D): 1.0 x 6.5 x 6.0 in.
- Weight: 1 lb (0.45 kg)

Environmental Specifications

- Operating temperature: 32° to 104°F (0° to 40°C)
- Storage temperature: -4° to 149°F (-20° to 65°C)
- Relative humidity: 10 to 90%, noncondensing

Power Requirements

- Power consumption: 15 watts
- Thermal dissipation: 51 Btu/hr

Maximum Station-to-Station Cabling Distance

- 100BaseTX, Category 5 UTP: 328 ft (100m)
- 100BaseFX, 62.5/125-micron multimode fiber:
- 400-m half duplex, 2-km full duplex
- MII: dependent on customer-supplied transceiver

Network Connectors (per port/interface)

- 100BaseTX: RJ-45 (female), standard 8-wire
- 100BaseFX: SC (female)
- MII per IEC/SC 48B (sec) 276 [22-1]

Optical Power Parameters

- Transmit output power: -20 to -14 dBm
- Receiver sensitivity: -31 to -14 dBm
- Optical source: Class 1 LED
- Maximum span: 2 km
- Wavelength: 1300 nanometers

Safety Certifications

- UL 1950
- IEC 60950
- CSA C22.2 No. 950
- EN60950
- TS001
- AS/NZS 3260
- EN 60825
- IEC 60825
- 21CFR 1040

Electromagnetic Emissions Certifications

- CFR 47, Part 15, Class A
- CISPR-22 Class A
- EN55022A Class B
- VCCI Class B
- CE Marking
- ICES 003 Class A
- AS/NZS3548 Class A
- EN 55024
- EN 50082-1
- ETS 300-386

LEDs (per port adapter/interface)

Table 1. PA-2FE

LED	State	Notes
ENABLED	Green	Port adapter powered and enabled
TX	Green	Transmitting traffic
RX	Green	Receiving traffic
LINK	Green	Ethernet link active; receiving carrier signal from network

Frame Processing

- Transparent Bridging (802.1d)
- IP Fragmentation (RFC 793)
- Translational Bridging (802.1i, 802.1h)

Network Management

- SNMP agent v1 (RFC 1155-1157)
- Ethernet MIB (RFC 1398)
- IEEE 802.3 LAN specification for carrier sense multiple access collision detect (CSMA/CD)
- 802.1d Spanning-Tree MIB
- 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)

Table 2. Fast Ethernet Port-Adapter Feature Chart

Physical Layers			Features				
Interface	No. of FE Ports	Mode	Full and Half Duplex	Auto-Negotiation	Up to Line-Rate Fast Ethernet Performance	Ethernet VLAN	Token Ring VLAN
PA-2FE-TX	2	10/100BaseTX	Yes	Yes	Yes	Yes	No
PA-2FE-FX	2	100BaseFX	Yes	Yes	Yes	Yes	No

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