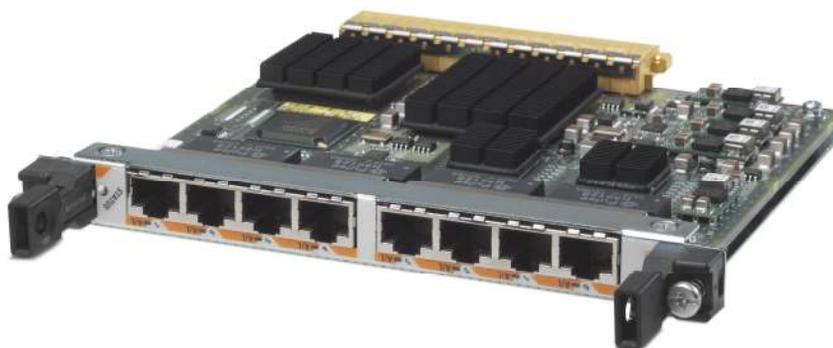


Cisco 4-Port and 8-Port 10BASE-T/100BASE-TX Fast Ethernet Shared Port Adapter, V2

The Cisco® I-Flex approach combines shared port adapters (SPAs) and SPA interface processors (SIPs), providing an extensible design that enables service prioritization for data, voice, and video services. Enterprise and service provider customers can take advantage of improved slot economics resulting from modular port adapters that are interchangeable across Cisco routing platforms. The Cisco I-Flex design maximizes connectivity options and offers superior service intelligence through programmable interface processors that deliver line-rate performance. Cisco I-Flex enhances speed-to-service revenue and provides a rich set of quality-of-service (QoS) features for premium service delivery while effectively reducing the overall cost of ownership. This data sheet contains the specifications for the Cisco 4-Port and 8-Port 10BASE-T/100BASE-TX Fast Ethernet Shared Port Adapters, Version 2 (Cisco Fast Ethernet SPAs; refer to Figure 1).

Figure 1. Cisco 8-Port 10BASE-T/100BASE-TX Fast Ethernet SPA



Product Overview

The Cisco Fast Ethernet SPAs are available on high-end Cisco routing platforms, offering the benefits of network scalability with lower initial costs and easy upgrades. The Cisco SPA/SIP portfolio continues the company's focus on investment protection along with consistent feature support, broad interface availability, and the latest technology. The Cisco SPA/SIP portfolio allows deployment of different interfaces (packet over SONET/SDH [POS], ATM, Ethernet, etc.) on the same interface processor.

Fast Ethernet interfaces are commonly used to interconnect routers or other devices within a central office or data center or in a metropolitan-area network (MAN). With Cisco Fast Ethernet SPAs, users can mix and match SPA ports with other types of interfaces in the same slot. Each SPA provides standards-based Fast Ethernet implementation for compatibility and interoperability.

Applications

The Cisco Fast Ethernet SPAs can be used in any combination of the following applications:

- Residential triple-play services
- Metro Ethernet services
- Converged residential and business services
- Internet peering
- Inter- and intra-point of presence (POP) aggregation

Key Features and Benefits

The Cisco SPA/SIP portfolio offers many advantages, including the following:

- Modular, flexible, intelligent interface processors
 - Flexible design allows mixing and matching of interface types on the same interface processor for consistent services, independent of access technology.
 - Programmable interface processors provide flexibility for the service diversity required in next-generation networks.
 - Innovative design provides intelligent delivery of services without compromising performance.
- Increased speed-to-service revenue
 - The programmable Cisco architecture extended to 10 Gbps dramatically improves customer density, increasing potential revenue per platform and facilitating compatibility with future versions.
 - Interface breadth (copper, channelized, POS, ATM, and Ethernet) on a modular interface processor allows service providers to quickly roll out new services, facilitating consistent, secure services for all customers, large and small.
 - High-density Small Form-Factor Pluggable (SFP) interfaces are featured for high-port-count applications with reach flexibility. Future optical technology improvements can be adopted using existing SPAs.
- Dramatically improved return on your routing purchase
 - Improved slot economics and increased density reduce capital expenditures (CapEx).
 - The ability to easily add new interfaces as they are needed facilitates a "pay-as-you-grow" business model.
 - SPAs are shared across multiple platforms, and can be easily moved from one to another, providing consistent feature support, accelerated product delivery, and significant reduction in operating expenses (OpEx) through common sparing as service needs change.

Product Specifications

Table 1 provides specifications of the Cisco Fast Ethernet SPAs, Version 2.

Table 1. Product Specifications

Features	Descriptions
Product Compatibility	<ul style="list-style-type: none"> • Cisco Catalyst 6500 Series Switches • Cisco 7600 Series Router • Cisco 12000 Series Router (8-port only) • Cisco XR 12000 Series Router (8-port only)
Port density per SPA	Four or eight Fast Ethernet ports

Physical interfaces	RJ-45 with support up to 100 meters Category 5 unshielded twisted pair (UTP) or shielded twisted pair (STP) cable
LED indicators	<ul style="list-style-type: none"> • SPA status – Bicolor green and amber LEDs encode the SPA status as follows: • LED off: SPA is powered off • LED amber: SPA is powered on and initializing • LED green: SPA is powered on and operational <p>In addition to the status LED, the SPAs also have a bicolor LED dedicated to each port to indicate port status. The green and amber LEDs encode the port status as follows:</p> <ul style="list-style-type: none"> • LED off: Port is not activated by software • LED amber: Port is activated by software, but there is a problem with the Ethernet link • LED green: Port is activated by software, and there is a valid Ethernet link
Features and functions	<ul style="list-style-type: none"> • Autonegotiation with autosensing of 10/100 Mbps modes • Both full and half duplex operations • 802.1Q VLAN termination • 802.1ad QinQ termination (stacked VLAN processing) • Jumbo frames support (9188 bytes) • Support for command-line interface (CLI)-controlled online insertion and removal (OIR) • 802.3x flow control • Bridge protocol data unit (BPDU), Cisco Discovery Protocol and VLAN Trunking Protocol (VTP) filtering • Layer 2 Protocol (BPDU, Cisco Discovery Protocol, and VTP) Tunneling • Layer 2 Access List (MAC address-based filtering) • Up to 8000 VLANs per SPA and subject to a limit of 4000 VLANs per port for 802.1q • Up to 5000 MAC accounting entries per SPA (source MAC accounting on the ingress, and destination MAC accounting on the egress) • Up to 2000 MAC address entries for destination MAC address filtering per SPA, and up to 1000 MAC address filtering entries per port • Per-port byte and packet counters for policy drops; oversubscription drops; cyclic-redundancy-check (CRC) error drops; packet sizes; and unicast, multicast, and broadcast packets • Per-VLAN byte and packet counters for policy drops; oversubscription drops; and unicast, multicast, and broadcast packets • Per-port byte counters for good bytes and dropped bytes <p>Other software features supported:</p> <ul style="list-style-type: none"> • Ethernet over Multiprotocol Label Switching (EoMPLS) • QoS • Hot Standby Router Protocol (HSRP) • Virtual Router Redundancy Protocol (VRRP)
Network management	<p>Network management:</p> <ul style="list-style-type: none"> • Host-system CLI • Simple Network Management Protocol (SNMP) <p>Inventory and asset management-related MIBs:</p> <ul style="list-style-type: none"> • Entity-MIB (RFC 2737) • Cisco-entity-asset-MIB <p>Fault management:</p> <ul style="list-style-type: none"> • Cisco-entity-field-replaceable unit (FRU)-control-MIB • Cisco-entity-alarm-MIB • Cisco-entity-sensor-MIB <p>Physical interface management:</p> <ul style="list-style-type: none"> • IF-MIB • Etherlike-MIB (RFC 2665) <p>Other MIBs:</p> <ul style="list-style-type: none"> • Remote Monitoring (RMON)-MIB (RFC 1757) • Cisco-class-based-QoS-MIB • MPLS-related MIBs • Ethernet MIB/RMON
Reliability and availability	OIR of the SPA within the SIP
Physical specifications	<ul style="list-style-type: none"> • Weight: 0.75 lb (0.34 kg) • Height: 0.8 in. (2.03 cm) (single height) • Width: 6.75 in. (17.15 cm) • Depth: 7.28 in. (18.49 cm)

Power	<ul style="list-style-type: none"> • 4-port FE SPA: 12.7W • 8-port FE SPA: 16.2 W
Environmental specifications	<ul style="list-style-type: none"> • Storage temperature: -38 to 150°F (-40 to 70°C) • Operating temperature, nominal: 32 to 104°F (0 to 40°C) • Operating temperature, short term: 32 to 131°F (0 to 55°C) • Storage relative humidity: 5 to 95% relative humidity • Operating humidity, nominal: 5 to 85% relative humidity • Operating humidity, short term: 5 to 90% relative humidity • Operating altitude: -60 to 4000 meters
Compliance and agency approvals	<p>Safety</p> <ul style="list-style-type: none"> • UL 60950-1 • CSA C22 No. 60950-1 • EN 60950-1 • IEC 60950-1 • AS/NZS 60950 • EN 60825-1 • EN 60825-2 • 21 CRF 1040 <p>EMC</p> <ul style="list-style-type: none"> • FCC Part 15-Class A • ICES 003-Class A • CISPR 22 Class A • EN 55022 Class A • EN 300386 Class A • AS/NRZ Class A • VCCI-Class A • EN 50082-1/EN 6100-6-1 • EN 55024 • BSMI Class A • IEC/EN61000-3-2 Power Line Harmonics • IEC/EN61000-3-3 Voltage Fluctuations and Flicker • IEC/EN61000-4-2 Electrostatic Discharge Immunity (8-kV contact, 15-kV air) • IEC/EN61000-4-3 Radiated Immunity (10 V/m) • IEC/EN61000-4-4 Electrical Fast Transient Immunity (2-kV power, 1-kV signal) • IEC/EN61000-4-5 Surge AC Port (4-kV CM, 2-kV DM) • IEC/EN61000-4-5 Surge Signal Port (1-kV indoor, 2-kV outdoor) • IEC/EN61000-4-5 Surge DC Port (1 kV) • IEC/EN61000-4-6 Immunity to Conducted Disturbances (10 Vrms) • IEC/EN61000-4-8 Power Frequency Magnetic Field Immunity (30 A/m) • IEC/EN61000-4-11 Voltage Dips, Short Interruptions, and Voltage Variations <p>Telecom</p> <ul style="list-style-type: none"> • IEEE 802.3 <p>Industry Standards</p> <p>The Cisco Fast Ethernet SPAs are designed to meet the following requirements (some qualifications are currently in progress):</p> <ul style="list-style-type: none"> • SR-3580-Network Equipment Building Standards (NEBS): Criteria levels (Level 3 compliant) • GR-63-CORE-NEBS: Physical protection • GR-1089-CORE-NEBS EMC and safety

Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#) or refer to Table 2.

Table 2. Ordering Information

Product Name	Part Number
Cisco 4-Port 10BASE-T/100BASE-TX Fast Ethernet Shared Port Adapter	SPA-4X1FE-TX-V2
Cisco 4-Port 10BASE-T/100BASE-TX Fast Ethernet Shared Port Adapter, spare	SPA-4X1FE-TX-V2=
Cisco 8-Port 10BASE-T/100BASE-TX Fast Ethernet Shared Port Adapter	SPA-8X1FE-TX-V2

Cisco 8-Port 10BASE-T/100BASE-TX Fast Ethernet Shared Port Adapter, spare

SPA-8X1FE-TX-V2=

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For More Information

For more information about the Cisco SPA/SIP portfolio, visit <http://www.cisco.com/go/spa> or contact your local Cisco account representative.



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