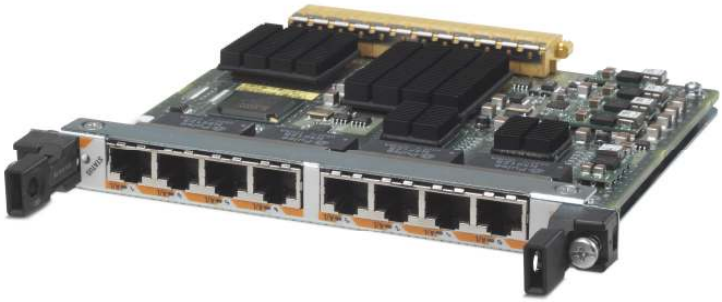
Data Sheet

Cisco 8-Port 100BASE-TX Fast Ethernet Shared Port Adapter

The Cisco® Interface Flexibility (I-Flex) design combines shared port adapters (SPAs) and SPA interface processors (SIPs), taking advantage of an extensible design that helps enable service prioritization for voice, video, and data services. Enterprise and service provider customers can take advantage of improved slot economics resulting from modular port adapters that are interchangeable across Cisco Systems® 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 8-port Fast Ethernet SPA (refer to Figure 1).

Figure 1
Cisco 8-Port 100BASE-TX Fast Ethernet (FE) SPA



Product Overview

The Cisco 8-port FE SPA is available on high-end Cisco routing platforms offering the benefits of network scalability with lower initial costs and ease of 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 for interconnecting routers or other devices within a central office or data center or in a metropolitan-area network (MAN). With 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 multiple applications, including:

- Inter- and intrapoint of presence (POP) aggregation
- Metro Ethernet
- Internet peering

Key Features and Benefits

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

- Industry's most modular, flexible, intelligent interface processors
  - Unmatched flexibility, providing mix-and-match capability of interface types on the same interface processor for consistent services, independent of access technology.
  - Pioneering programmable interface processors that provide flexibility for the service diversity required in next-generation networks.
  - Innovative design that provides intelligent delivery of services without compromising on performance.
- Increased speed-to-service revenue
  - The future proof programmable Cisco architecture extended to 10 Gbps dramatically improves customer density, increasing potential revenue per platform.
  - Interface breadth (copper, channelized, POS, ATM, and Ethernet) on a modular interface processor allows service providers to more quickly roll out new services, helping ensure that all customers, large and small, receive consistent, secure, and guaranteed services.
  - 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 financials of your routing purchase
  - Improved slot economics and increased density reduce capital expenditures (CapEx).
  - The ability to easily add new interfaces as they are needed helps enable a "pay-as-you-grow" business model while still offering a high-density solution.
  - SPAs are shared across multiple platforms, and can be easily moved from one to another, providing consistent feature support, accelerated product delivery, and a significant reduction in operating expenses (OpEx) through common sparing as service needs change.

Product Specifications

Table 1 provides specifications of the Cisco Fast Ethernet SPA.

Table 1. Product Specifications

Features	Descriptions
Product compatibility	• Cisco 12000 Series Router • Cisco XR 12000 Series Router
Port density per SPA	8 ports of Fast Ethernet
Physical interfaces	RJ-45 with support up to 100 meters Cat-5 UTP or STP cable
LED indicators	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 In addition to the status LED, the SPAs also have a bicolor, surface-mount, right-angle LED dedicated to each port to indicate port status. The green and amber LEDs encode the port status as follows: • LED off – Port is not enabled by software • LED – Port is enabled by software, but there is a problem with the Ethernet link • LED amber – Port is powered on and initializing • LED green – Port is enabled by software, and there is a valid Ethernet link

Features	Descriptions
Features and functions	• Autonegotiation • Full-duplex operation • 802.1Q VLAN termination • Jumbo frames support (9188 bytes) • Support for command-line interface (CLI)-controlled online insertion and removal (OIR) • 802.3x flow control • Up to 4000 VLANs per SPA • 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 Other software features supported: • Ethernet over Multiprotocol Label Switching (EoMPLS) • QoS • Hot Standby Router Protocol (HSRP) • Virtual Router Redundancy Protocol (VRRP)
Network management	Network management using: • Host-system CLI • Simple Network Management Protocol (SNMP) Inventory- and asset management-related MIBs: • Entity-MIB (RFC 2737) • Cisco-entity-asset-MIB Fault management: • Cisco-entity-field-replaceable unit (FRU)-control-MIB • Cisco-entity-alarm-MIB • Cisco-entity-sensor-MIB Physical interface management: • IF-MIB • Etherlike-MIB (RFC 2665) Other MIBs: • 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

Features	Descriptions
Physical specifications	• 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	20W (max power consumption)
Environmental specifications	• Storage temperature: –38 to 150°F (–40 to 70°C) • Operating temperature, nominal: 32 to 104°F (0 to 4 0°C) • Operating temperature, short term: 32 to 131°F (0 t o 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	Safety • 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 EMC • 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)

Features	Descriptions
	• IEC/EN61000-4-11 Voltage Dips, Short Interruptions, and Voltage Variations Telecom • IEEE 802.3 Industry Standards The Cisco Fast Ethernet SPAs are designed to meet the following requirements (some qualifications are currently in progress): • 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 8-Port 100BASE-TX Fast Ethernet Shared Port Adapter	SPA-8XFE-TX
Cisco 8-Port 100BASE-TX Fast Ethernet Shared Port Adapter, spare	SPA-8XFE-TX=

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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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