Data Sheet

Cisco 12000 Series
8-Port Fast Ethernet Line Card

The Cisco® 12000 Series 8-port Fast Ethernet Line Card (Figure 1) offers high-density and low-cost intra-point of presence (POP) connectivity between the Cisco 12000 Series and other lower-end switches and routers (such as the Cisco Catalyst® 5000, Catalyst 6000, and Catalyst 7500 routers). Service providers benefit from this high-density Fast Ethernet line card by eliminating or reducing the need to implement and operate an intermediate layer of networking equipment between the Cisco 12000 Series and other switches and routers—and the results are significant cost savings, simplified network management, improved network availability, and increased savings in rack space.

Figure 1. Cisco 12000 Series 8-Port Fast Ethernet Line Card

PRODUCT FEATURES

Table 1 describes the basic features on the Cisco 12000 Series Fast Ethernet line cards.

Table 1. Product Features

Feature	Description
Packet Layer	• Multiple virtual output queues, eliminating head-of-line blocking • 512-KB burst buffers, which smooth out the arriving packet bursts • 128-MB packet buffer on the transmit and receive directions • A forwarding table that can accommodate up to one million forwarding entries • Application-specific integrated circuit (ASIC)-based queuing • Quality-of-service (QoS) support • Configurable with up to 256 MB of code and route table memory
Ethernet Upper Layer	• MAC with full-duplex (default) or half-duplex operation • 8B/10B encoding and decoding • 100BASE-TX copper interface, compliant with IEEE 802.3u specifications • Optional 100BASE-FX multimode interface, compliant with IEEE 802.3u specifications

Feature	Description
Software Features	• Autonegotiation • Precedence setting and mapping • Access control list (ACL) and extended ACL • Cisco Group Management Protocol (GMP) • Hot-Standby Router Protocol (HSRP) • Multiprotocol Label Switching (MPLS) and Tag Switching • Committed access rate (CAR) on receive (Rx) side • NetFlow data export • VLAN trunking (802.1q) • Per-port address filtering (512 addresses per port)

PRODUCT SPECIFICATIONS

Table 2 provides specifications for the Cisco 12000 Series Fast Ethernet line cards.

Table 2. Product Specifications

Line-Card	Forwarding Engine	Cisco IOS® Software Release	Chassis Supported	Per-Chassis Port Densities
8FE-FX-SC-B	Engine 1	12.0(10)S or higher	• Cisco 12404 • Cisco 12006 • Cisco 12406 • Cisco 12010 • Cisco 12410 • Cisco 12810 • Cisco 12016 • Cisco 12416 • Cisco 12816	• Cisco 12404: 24 ports • Cisco 12006 and 12406: 40 ports • Cisco 12010, 12410, and 12810: 72 ports • Cisco 12016, 12416, and 12816: 120 ports
8FE-TX-RJ45-B	Engine 1	12.0(10)S or higher	• Cisco 12404 • Cisco 12006 • Cisco 12406 • Cisco 12010 • Cisco 12410 • Cisco 12810 • Cisco 12016 • Cisco 12416 • Cisco 12816	• Cisco 12404: 24 ports • Cisco 12006 and 12406: 40 ports • Cisco 12010, 12410, and 12810: 72 ports • Cisco 12016, 12416, and 12816: 120 ports

PHYSICAL AND ELECTRICAL SPECIFICATIONS

Table 3 provides details about the physical and electrical specifications of the Cisco 12000 Series Fast Ethernet line cards.

Table 3. Physical and Electrical Specifications

Line-Card Part Number	Dimensions	Weight	Power	Connector	Route Memory	LEDs
8FE-FX-SC-B	• Height: 14.5 in. (36.8 cm) • Depth: 18.5 in. (46.9 cm)	6 lb (2.7 kg)	77 watts maximum	SC connector (1300-nm transceiver using multimode fiber)	• Default: 128 MB • Maximum: 256 MB	• Link status per port on front panel • Power level • Fabric clock • Rx activity • Tx activity
8FE-TX-RJ45-B	• Height: 14.5 in. (36.8 cm) • Depth: 18.5 in. (46.9 cm)	6 lb (2.7 kg)	77 watts maximum	RJ-45 connector (UTP Category 5)	• Default: 128 MB • Maximum: 256 MB	• Link status per port on front panel • Power level • Fabric clock • Rx activity • Tx activity

ENVIRONMENTAL, APPROVALS AND COMPLIANCE

Table 4 gives standards-compliance information for the Cisco 12000 Series Fast Ethernet line cards.

Table 4. Compliance and Agency Approvals

Feature	Description
Environmental	• Operating temperature: 41 to 104°F (5 to 40°C) • Operating temperature (short-term): 23 to 131°F (–5 to 55°C) • Storage temperature: –4 to 149°F (–20 to 65°C) • Relative humidity: – 5 to 85%, noncondensing, operating conditions – 5 to 90%, noncondensing, operating conditions (short-term) – Up to 95%, noncondensing, nonoperating conditions • Operating altitude: –60 to 4000m
Safety	• UL 1950 • CSA 22.2-No. 950 • EN60950 • IEC 60950 CB Scheme • ACA TS001 • AS/NZS 3260

Feature	Description
EMI	• FCC CFR 47-Part 15 1998 Class A • ICES 003 Class A • AS/NRZ 3548 Class A • EN55022 Class B • VCCI Class A • CISPR 22 Class B • BSMI/CNS 13438: 1997 Class A • IEC-1000-3-2 Power line harmonics • IEC 61000-3-3 Voltage fluctuations and flicker
Immunity (basic standards)	• IEC-1000-4-2 ESD (8-kV contact, 15-kV air) • IEC-1000-4-3 Radiated immunity (10 V/m) • IEC-1000-4-4 EFT (2-kV power port, 1-kV signal port) • IEC-1000-4-5 Surge AC port (4-kV CM, 2-kV DM) • IEC-1000-4-5 Surge Signal port (2-kV CM, 1-kV DM) • IEC-1000-4-5 Surge DC port (0.5-kV CM, 0.5-kV DM) • IEC-1000-4-6 Low Frequency Conductive Immunity, (10V) • IEC-1000-4-11 Voltage dips and sags • EN55024\CISPR24 ITE Immunity
ETSI and EN	EN300 386
Network Equipment Building Standards (NEBS)	This product is designed to meet the following requirements (some qualifications in progress): • SR-3580—NEBS criteria levels (Level 3-compliant) • GR-1089-Core—NEBS EMC and safety • GR-63-Core—NEBS Physical protection

ORDERING INFORMATION

To place an order, contact your local Cisco representative or visit the ordering page on the Cisco Website. Use the ordering information in Table 5.

Table 5. Ordering Information

Product Part Number	Product Name
8FE-FX-SC-B	8-port Fast Ethernet 100BASE-TX interface, SC connectors, with error correcting code (ECC) memory
8FE-TX-RJ45-B	8-port Fast Ethernet 100BASE-TX interface, RJ-45 connectors, with ECC memory
MEM-GRP/LC-128 or MEM-GRP/LC-256	Code and route table memory options for the 8-port Fast Ethernet line card

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FOR MORE INFORMATION

For more information about the Cisco 12000 Series Fast Ethernet line cards, contact your local Cisco representative or visit http://www.cisco.com/go/12000.

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