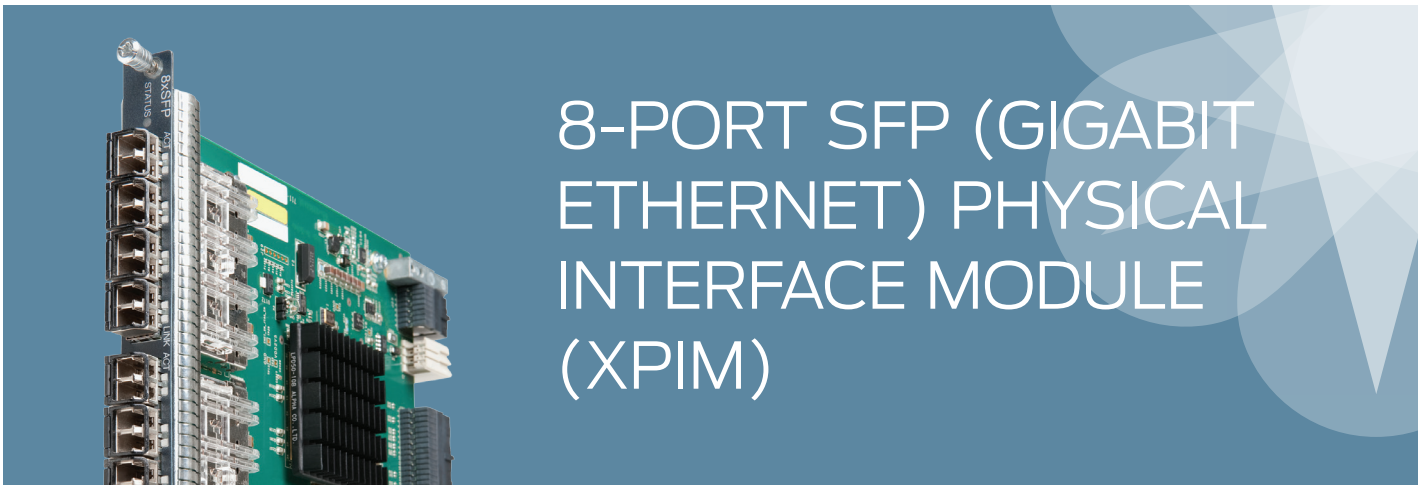

8-PORT SFP (GIGABIT ETHERNET) PHYSICAL INTERFACE MODULE (XPIM)

Product Overview

The Juniper Networks 8-port small form-factor pluggable transceiver (SFP) XPIM provides high-density Gigabit Ethernet connectivity for the Juniper Networks SRX550 and SRX650 Services Gateway products, increasing flexibility and operational ease.

Product Description

The Juniper Networks® SRX550 and SRX650 Services Gateways, in conjunction with the 8-port SFP XPIM, offer customers the flexibility of deploying high-density LAN and WAN services in their branch, data center, and metro Ethernet networks. Juniper's 8-port SFP XPIM for the SRX Series complements the onboard 10/100 and 10/100/1000 Ethernet interfaces with high-density fiber and copper Gigabit Ethernet connectivity choices for Layer 2 and Layer 3 services. It offers support for a variety of transceiver types, including short wavelength for GbE connectivity over multimode fiber, long wavelength for GbE connectivity over multimode and single mode fiber, 100BASE-FX for Fast Ethernet connectivity over multimode and single mode fiber, and 1000BASE-T for GbE connectivity over twisted pair.

Architecture and Key Components

The 8-port SFP XPIM provides highly flexible interfaces that give the network designer the tools to solve a wide variety of networking problems.

Network Segmentation

The XPIMs can be used to subnet or segment network traffic by configuring each Ethernet port as a separate routed network or subnet. This localizes broadcast and multicast traffic to a local segment and allows different security policies to be applied to each subnet. Alternatively, XPIM ports can be assigned to VLANs in Layer 2 switching mode to provide delineation and segmentation of the L2 broadcast domain.

Security Zones

Many organizations need to improve internal security and keep critical information private within departments. At the same time, they need to provide guest access and protect local resources. The XPIMs give the network designer the extra Ethernet ports necessary to implement security zones for departmental access.

Local Workgroups

The network designer can use the Ethernet switching capability of the XPIMs to create local workgroups. Integrating L2 switching in the SRX650 and SRX550 gateways saves space and simplifies management by using a single user interface to configure the switch and the SRX Series devices.

Features and Benefits

Table 1: XPIM Features and Benefits

Feature	Feature Description	Benefit
8-port GbE SFP module	• Provides GbE connectivity • Deployment flexibility for various applications, including multiport copper or fiber applications • Combined L2 or L3 services	• Provides current or new infrastructure in the local site and ports for future expansion • Module capable of being used in copper and optical environments, providing maximum flexibility in a mix of copper and fiber environments • Provides investment protection and flexibility when upgrading from copper infrastructure to fiber • Offers flexibility of deploying the same module for both LAN and WAN services
SRX650: XPIM connected in the 20GbE slots (slots 6 and 2) SRX550: XPIM connected in the 20GbE slot (slot 6) and 10GbE slot (slot 3)	• Provides up to 20GbE connectivity	• Provides up to 20 Gbps L2 switching between XPIM modules and high-performance backplane connection to the system for maximum L3-L7 security and routing throughput
Line-rate GbE local switching	• Provides GbE line-rate switching across ports within the same XPIM and across XPIMs	• Integrates switching into high-performance branch office and midrange secure routing platforms to reduce operational costs and consolidate the number of networking devices in the branch office or regional site

Specifications

Platforms supported

- SRX650 and SRX550 Services Gateways

Slots

- SRX650: Slot 2 (20GbE backplane connectivity)
  Slot 6 (20GbE backplane connectivity
- SRX550: Slot 3 (10GbE backplane connectivity
  Slot 6 (20GbE backplane connectivity)

Connector

- Eight SFP transceiver connectors per XPIM (transceivers sold separately)

Hot swap

- Hot swap of XPIMs supported in SRX550 and SRX650 (requires Gigabit-Backplane Physical Interface Module in offline mode)
- Hot swap of SFP transceivers supported in SRX550 and SRX650

SFP optics

- Wide range of SFP transceivers that include LX, SX, FX, and 1000Base-T copper (complete list in Ordering Section below)

Medium-dependent interface (MDI/MDI-X)

- Auto-correcting MDI/MDI-X

Speeds

- Full and half duplex 10/100/1000 Mbps, autosensing; auto negotiation or manual setting

Switching

- Line-rate switching within and across XPIMS

IEEE 802.1Q VLANS

- 3,966 maximum VLANs, IEEE 802.1 QinQ

MAC addresses

Maximum media access control (MAC) addresses per module:

- Static MAC entries: 8,000
- MAC addresses per module in hardware (static+dynamic): 32,000

Jumbo frames

- 9,192 bytes supported

Link aggregation group (LAG)

- IEEE 802.3ad Link Aggregation Control Protocol (LACP)

Protocols

- Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), Internet Group Management Protocol (IGMP), Link Layer Discovery Protocol (LLDP)

Management

- Telnet/console/Web
- Remote and local configuration, monitoring, and troubleshooting

Dimensions and weight (W x H x D)

- 6.72 x 0.78 x 8.1 in (17.1 x 1.98 x 20.57 cm)
- 1.1 lb

Environmental

- Operating temperature: 32º to 104º F (0º to 40º C)
- Storage temperature: -40º to 158º F (-40º to 70º C)
- Relative humidity: 5% to 90% non-condensing

LEDs

Status:

- Green light to show that the XPIM is online and functioning normally
- Amber light to show that the XPIM is starting up, running diagnostics, or shutting down
- Red light to show that the XPIM has failed

Link/Act

- Green light to show that the port is online
- Light off to show that the port is offline
- Light blinking to show that the port is receiving or sending data

Specifications (continued)

Safety

- CAN/CSA-C22.2 No. 60950-1 Information Technology Equipment
- UL 60950-1 Information Technology Equipment
- EN 60950-1 Information Technology Equipment
- IEC 60950-1 Information Technology Equipment

EMC

- FCC Part 15 Class A
- EN 55022 Class A
- AS/NZS 3548 Class A
- VCCI Class A

Immunity

- EN-61000-4-2 Electrostatic Discharge (ESD)
- EN-61000-4-3 Radiated Immunity
- EN-61000-4-4 EFT
- EN-61000-4-5 Surge
- EN-61000-4-6 Low Frequency Common Immunity

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit **www.juniper.net/us/en/products-services**.

Ordering Information

Model Number	Description
XPIM	
SRX-GP-8SFP	8-port GbE copper, fiber SFP XPIM for SRX550 and SRX650 gateways
SFP	
SRX-SFP-1GE-LH EX-SFP-1GE-LH	SFP 1000BASE-LH GbE optical transceiver.
SRX-SFP-1GE-LX EX-SFP-1GE-LX	SFP 1000BASE-LX GbE optical transceiver.
SRX-SFP-1GE-SX EX-SFP-1GE-SX	SFP 1000BASE-SX GbE optical transceiver.
SRX-SFP-1GE-T EX-SFP-1GE-T	SFP 1000BASE-T GbE copper transceiver (uses Cat 5 cable).
SRX-SFP-FE-FX EX-SFP-1FE-FX	SFP 100BASE-FX Fast Ethernet optical transceiver, LC connector.
EX-SFP-GE10KT13R14	SFP module supporting 1000BASE-BX10 uplink at 10 km (TX1310 nm/RX1490 nm). A single fiber is used for both transmit and receive. Uplink SFP must be matched with downlink SFP.
EX-SFP-GE10KT13R15	SFP module supporting 1000BASE-BX10 uplink at 10 km (TX1310 nm/RX1550 nm). A single fiber is used for both transmit and receive. Uplink SFP must be matched with downlink SFP
EX-SFP-GE10KT14R13	SFP module supporting 1000BASE-BX10, downlink at 10 km (TX1490 nm/RX1310 nm). A single fiber is used for both transmit and receive. Uplink SFP must be matched with downlink SFP.
EX-SFP-GE10KT15R13	SFP module supporting 1000BASE-BX10 downlink at 10 km (TX1550 nm/RX1310 nm). A single fiber is used for both transmit and receive. Uplink SFP must be matched with downlink SFP.
EX-SFP-GE40KT13R15	SFP module supporting 1000BASE-BX uplink at 40 km (TX1310 nm/RX1550 nm). A single fiber is used for both transmit and receive. Uplink SFP must be matched with downlink SFP.
EX-SFP-GE40KT15R13	SFP module supporting 1000BASE-BX downlink at 40 km (TX1550 nm/RX1310 nm). A single fiber is used for both transmit and receive. Uplink SFP must be matched with downlink SFP.
EX-SFP-FE20KT13R15	SFP 100Base-BX Fast Ethernet optics, TX1310 nm/RX1550 nm for 20 km transmission.
EX-SFP-FE20KT15R13	SFP 100Base-BX Fast Ethernet optics, TX1550 nm/RX1310 nm for 20 km transmission.
Operating System Versions	
SRX-GP-8SFP	Juniper Networks Junos® operating system 12.1X44-D10

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at **www.juniper.net**.

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