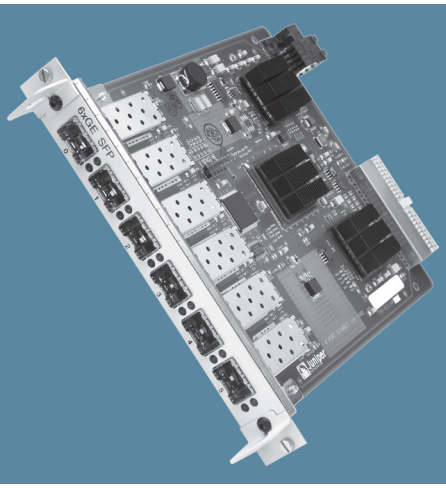


ETHERNET UNIVERSAL PHYSICAL INTERFACE MODULES

Product Overview

The Ethernet Universal Physical Interface Modules offer high densities of 10/100/1000 copper Ethernet or fiber Gigabit Ethernet ports. These ports offer the rich set of Layer 2–7 services available via Juniper Networks ScreenOS software on the Juniper Networks SSG Series Secure Services Gateways, or Junos operating system on the Juniper Networks J Series Services Routers.

Product Description

Juniper Networks® Ethernet Universal Physical Interface Modules (UPIMs) are a set of interface modules shared between the Juniper Networks SSG Series Secure Services Gateways including the SSG140, SSG320M, SSG350M, SSG520, SSG550M, and the Juniper Networks J Series Services Routers including the J2320, J2350, J4350, and J6350. These modules implement the full set of Layer 3–7 services offered in ScreenOS and Juniper Networks Junos® operating system, and alternatively implement Layer 2 Ethernet switching for connecting local servers and PCs to the network.

Four UPIM models are available:

- 1-port 100/1000 Ethernet with a small form-factor pluggable transceiver (SFP) slot. You choose from a variety of SFPs to implement 100 Mbps or 1 Gbps Ethernet.
- 6-port Gigabit Ethernet with SFP slots. You choose from a wide variety of SFPs to implement different types of fiber optic or copper interfaces. The SFPs are sold separately from the module.
- 8-port 10/100/1000 copper Ethernet.
- 16-port 10/100/1000 copper Ethernet. This module is double the height of the standard PIM, so it requires two vertically adjacent PIM slots in the chassis.

Architecture and Key Components

The Ethernet UPIMs are highly flexible interfaces that give the network designer the tools to solve a wide variety of networking problems.

Metro Ethernet WAN Links

The 1-port 100/1000 Ethernet SFP interface is ideal for connecting to a Metro Ethernet service with a variety of fiber-optic SFPs. This interface allows you to deploy 100 Mbps service today and upgrade to 1 Gbps simply by replacing the SFP.

Network Segmentation

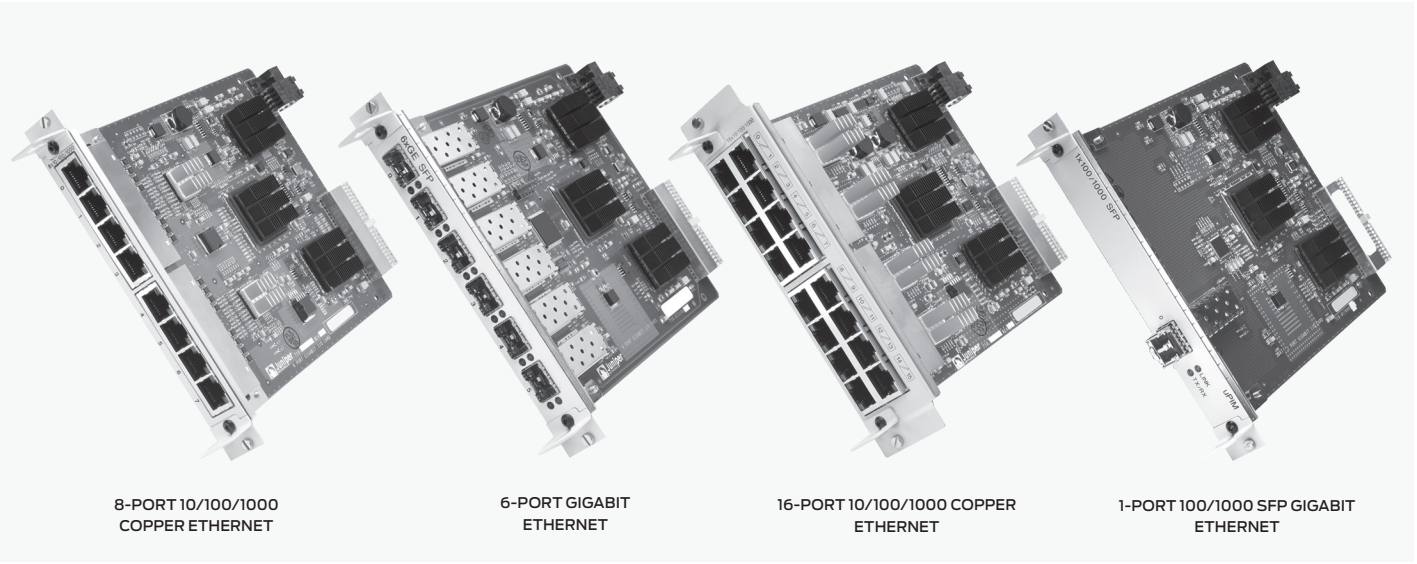
The Ethernet UPIMs can be used to subnet or segment network traffic by configuring each Ethernet port as a separate routed network or subnet. This localizes broadcast and multicast traffic to a local segment and allows different security policies to be applied to each subnet.

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 Ethernet UPIMs 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 Ethernet UPIMs to create local workgroups. Integrating Layer 2 switching into the SSG Series or J Series saves space and simplifies management by using a single user interface to configure the switch and the SSG Series or J Series router.



8-PORT 10/100/1000 COPPER ETHERNET

6-PORT GIGABIT ETHERNET

16-PORT 10/100/1000 COPPER ETHERNET

1-PORT 100/1000 SFP GIGABIT ETHERNET

Features and Benefits

Table 1: Ethernet UPIM Features and Benefits

FEATURE	FEATURE DESCRIPTION	BENEFIT
8- or 16-port copper Ethernet and 1- or 6-port SFP gigabit ethernet modules	Provides Gigabit Ethernet connectivity Flexible for various applications, including multiport copper or fiber applications	Provides current or new infrastructure in the local site and ports for future expansion
Fits in PIM or enhanced PIM slots	UPIMs for use in regular PIM or enhanced PIM high-speed slots	Increases performance in the enhanced PIM slots in the SSG500 line and J4350/J6350, while also providing connectivity and functionality in all PIM slots in all supported platforms
High-density Ethernet connectivity	Provides additional Ethernet ports in security/routing devices	Increases deployment flexibility and cost effectiveness for branch and midrange routing and/or security platforms
Local switching	Provides switching and broadcast across ports in the card (software release and configuration dependent)	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

Product Options

The list of available SFP modules for the Gigabit Ethernet with SFP slots is shown in the “Ordering Information” section.

Table 2: Supported Platforms

PART NUMBER	SSG140, SSG320M, SSG350M, SSG520M, SSG550M	J2320, J2350, J4350, J6350
JXU-1SFP-S	Yes	Yes
JXU-6GE-SFP-S	Yes	Yes
JXU-8GE-TX-S	Yes	Yes
JXU-16GE-TX-S	Yes	Yes

Specifications

Table 3: Specifications

	1-PORT ETHERNET UPIM (JXU-1SFP-S)	6-PORT ETHERNET UPIM (JXU-6GE-SFP-S)	8-PORT ETHERNET UPIM (JXU-8GE-TX-S)	16-PORT ETHERNET UPIM (JXU-16GE-TX-S)
Connector	1 SFP cage (SFP sold separately)	6 SFP cages (SFPs sold separately)	8 RJ-45	16 RJ-45
Medium-dependent interface (MDI/MDI-X)	N/A	N/A	Auto-correcting MDI/MDI-X	Auto-correcting MDI/MDI-X
Ethernet speeds	100 Mbps or 1 Gbps	1 Gbps	10/100/1000 Mbps, autosensing	10/100/1000 Mbps, autosensing
Duplex	Auto-negotiation or manual setting for duplex	Auto-negotiation or manual setting for duplex	Auto-negotiation or manual setting for duplex	Auto-negotiation or manual setting for duplex
PIM slots required*	One PIM or enhanced PIM slot	One PIM or enhanced PIM slot	One PIM or enhanced PIM slot	Double-height PIM requires two vertically adjacent PIM or enhanced PIM slots
LEDs	Link and activity	Link and activity	Link and activity	Link and activity
Dimensions (W x H x D)	5.45 x 0.63 x 6.5 in (13.8 x 1.6 x 16.5 cm)	5.45 x 0.63 x 6.5 in (13.8 x 1.6 x 16.5 cm)	5.45 x 0.63 x 6.5 in (13.8 x 1.6 x 16.5 cm)	6.4 x 1.2 x 7.8 in (16.2 x 3 x 19.7 cm)
Weight	8.6 oz (245 g)	8.2 oz (230 g)	8.6 oz (245 g)	11.6 oz (330 g)

Note: *Enhanced PIM slot is recommended for higher performance.

Environmental

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

Safety

- CAN/CSA-C22.2 No.60950/UL 60950 Third Edition, Safety of Information Technology Equipment
- EN 60950 (2000) Third Edition—Safety of 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 and support, which are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to bring revenue-generating capabilities online faster so you can realize bigger productivity gains and faster rollouts of new business models and ventures. At the same time, Juniper Networks ensures operational excellence by optimizing your network to maintain required levels of performance, reliability, and availability. For more details, please visit **www.juniper.net/us/en/products-services.**

Ordering Information

UPIM Part Numbers

PART NUMBER	DESCRIPTION
JXU-1SFP-S	1-port SFP 100 Mbps or Gigabit Ethernet Universal PIM (SFP sold separately)
JXU-6GE-SFP-S	6-port SFP Gigabit Ethernet Universal PIM (SFPs sold separately)
JXU-8GE-TX-S	8-port Gigabit Ethernet 10/100/1000 Copper Universal PIM
JXU-16GE-TX-S	16-port Gigabit Ethernet 10/100/1000 Copper Universal PIM

SFP Modules for the 1-Port and 6-Port UPIMs

PART NUMBER	DESCRIPTION	SUPPORTED ON JXU-1SFP-S	SUPPORTED ON JXU-6GE-SFP-S
JX-SFP-1GE-LX	SFP 1000BASE-LX Gigabit Optical Transceiver SFP Module	Yes	Yes
JX-SFP-1GE-SX	SFP 1000BASE-SX Gigabit Optical Transceiver SFP Module	Yes	Yes
JX-SFP-1GE-T	SFP 1000BASE-T Gigabit Copper Transceiver SFP Module	Yes	Yes
JX-SFP-1FE-FX	SFP 100BASE-FX Optical Transceiver SFP Module	Yes	No

Operating System Versions

PART NUMBER	SCREENOS VERSION	JUNOS OS VERSION
JXU-1SFP-S	6.0r2	8.4
JXU-6GE-SFP-S JXU-8GE-TX-S JXU-16GE-TX-S	6.0	8.3

Note: These are the minimum operating system versions that support the UPIMs. Some features may require later versions.

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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