

# DUAL-PORT SYNCHRONOUS SERIAL PHYSICAL INTERFACE MODULE



## Product Overview

Dual-port Synchronous Serial Physical Interface Module (PIM) is for use with the Juniper Networks J Series J2320, J2350, J4350, and J6350 Services Routers, as well as the Juniper Networks SSG140, SSG320M, SSG350M, SSG520M and SSG550M Secure Services Gateways.

## Product Description

The Juniper Networks<sup>®</sup> Dual-port Synchronous Serial PIM provides the physical connection to serial network media types, receiving incoming packets from the network and transmitting outgoing packets to the network. The Dual-port Synchronous Serial PIM is equipped with a dedicated network processor that forwards incoming data packets to the Routing Engine, and receives outgoing data packets from the Routing Engine. During this process, the PIM performs framing and line-speed signaling.

When the Dual-port Synchronous Serial PIM is installed in a ScreenOS-based SSG Series security appliance, the dedicated network processor will forward traffic to the SSG Series CPU where traffic decisions are made based upon security policies.

## Features and Benefits

The Juniper Networks Dual-port Synchronous Serial PIM provides increased bandwidth capabilities while making effective use of the J Series and SSG Series modular interface slots. Features include:

- Single serial interface supporting RS232, V.35, X.21, RS449, and EIA530
- Up to 8 Mbps per physical port
- Onboard network processor
- Clock rate configurable
- Crypto resynchronization support
- Juniper's proprietary data terminal equipment (DTE) and data circuit-terminating equipment (DCE) cables available for each protocol (10 in all) with auto-detection for DTE/DCE modes

## Specifications

### Product Specifications

#### Interface Specifications

- Transmit Rate: 8 Mbps per port
- Receive bit rate: 8 Mbps per port
- Line Encoding: NRZ, NRZI
- Line Protocols: EIA530, X.21, RS449/RS422, RS232, V35
- Modes: DTE, DCE

#### Data Interface

#### High-Level Data Link Control (HDLC) Features

- 56K and 64K mode
- CRC 16/32
- Shared flag
- Idle flag/fill
- Counters: runts, giants, frame check sequence (FCS) error, abort error, align error

#### Interface Connector

PRODUCT NUMBER CABLE TYPE	TYPE	LENGTH	CONNECTOR TYPE
JX-CBL-EIA530-DCE	EIA530 cable (DCE)	10 feet	Female
JX-CBL-EIA530-DTE	EIA530 cable (DTE)	10 feet	Male
JX-CBL-RS232-DCE	RS232 cable (DCE)	10 feet	Female
JX-CBL-RS232-DTE	RS232 cable (DTE)	10 feet	Male
JX-CBL-RS449-DCE	RS449 cable (DCE)	10 feet	Female
JX-CBL-RS449-DTE	RS449 cable (DTE)	10 feet	Male
JX-CBL-V35-DCE	V.35 cable (DCE)	10 feet	Female
JX-CBL-V35-DTE	V.35 cable (DTE)	10 feet	Male
JX-CBL-X21-DCE	X.21 cable (DCE)	10 feet	Female
JX-CBL-X21-DTE	X.21 cable (DTE)	10 feet	Male

#### System Timing

- Clocking Modes: DCE, internal, loop
- Clocking Rates: 1.2 KHz, 2.4 KHz, 9.6 KHz, 19.2 KHz, 38.4 KHz, 56.0 KHz, 64.0 KHz, 72.0 KHz, 125.0 KHz, 148.0 KHz, 250.0 KHz, 500.0 KHz, 800.0 KHz, 1.0 MHz, 1.3 MHz, 2.0 MHz, 4.0 MHz, 8.0 MHz

#### Dimensions and Weight (H x W x D)

- 0.63 x 5.45 x 6.5 in (1.6 x 13.8 x 16.5 cm)

#### Environmental

Operating temperature: 0 to 40° C

Storage temperature: -40 to 70° C

Relative humidity: 5 to 90% noncondensing

### Diagnostics

#### Loopbacks

- Local, DCE-local

#### Network Alarms

- Rx clock absent
- Tx clock absent
- Data carrier detect (DCD) absent
- Clear to send (CTS) absent
- Data set ready (DSR) absent

#### Error Counters

- Controlled slipped seconds (CSS or CS)
- Line errored seconds (LES)
- Errored seconds (ES)
- Bursty errored seconds (BES)
- Severely errored seconds (SES)
- Severely errored framing seconds (SEFS)
- Loss of signal seconds (LOS)
- Loss of frame seconds (LOFS)
- Unavailable seconds (UAS)

#### LEDs

PIM LEDs indicate port status with the following LED states:

Color	State	Description
Green	On steadily	Online with no alarms or failures.
Red	On steadily	Active with a local alarm; router has detected a failure.

#### Management Capabilities

Telnet/Console/JWeb: Remote and local configuration, monitoring, and troubleshooting

#### Standards and Compliance

##### Safety

- CAN/CSA-C22.2 No. 60950-1-03 - UL 60950-1 Safety of Information Technology Equipment
- EN 60950-1 Safety of Information Technology Equipment EMC (Emissions)
- AS/NZS 3548 Class B
- EN55022 Class B
- FCC Part 15 Class B
- VCCI Class B

##### Immunity

- EN-61000-4-2 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

##### European Telecommunications Standardization Institute (ETSI)

- ETSI EN-300386-2 Telecommunication Network Equipment Electromagnetic Compatibility

##### Standards

- ITU V.35
- ITU X.21
- EIA/TIA 530
- EIA/TIA 232
- EIA/TIA 422

## Performance-Enabling 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, faster rollouts of new business models and ventures, and greater market reach, while generating higher levels of customer satisfaction. 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/products-services](http://www.juniper.net/products-services).

## Ordering Information

MODEL NUMBER	DESCRIPTION
JX-2Serial-S	Dual-port Synchronous Serial PIM

### Juniper Networks JUNOS® Software Release

The Dual-port Synchronous Serial PIM is supported on J Series routers in JUNOS 7.0 and greater releases.

### Juniper Networks ScreenOS Software Release

The Dual-port Synchronous Serial PIM is supported in ScreenOS 5.1 and higher releases on the SSG500 line, ScreenOS 6.0/r2 and higher releases on the SSG300 line, and ScreenOS 5.4 and higher releases on the SSG140.


## About Juniper Networks

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