



Juniper Networks Dual-port Synchronous Serial Physical Interface Module (PIM) is for use with the J2320, J2350, J4300, J4350, J6300, and J6350 Services Routers as well as the Secure Services Gateway 140 (SSG 140), SSG 300 Series, and SSG 500 Series security appliances.

Juniper Networks Dual-port Synchronous Serial Physical Interface Module (PIM)

Product Description

The Juniper Networks 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. Juniper 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 synchronous serial PIM is installed in a ScreenOS-based SSG Family security appliance, the dedicated network processor will forward traffic to the SSG CPU where traffic decisions are made based upon security policies.

The Juniper Dual-port Synchronous Serial PIM provides the following benefits:

- Dual-port form factor allows for increased bandwidth capabilities while making effective use of the J-series and SSG modular interface slots.

Features:

- Single Serial Interface supports RS232, V.35, X.21, RS449, & EIA530
- Up to 8 Mbps per physical port
- Onboard Network Processor
- Clock Rate configurable
- Crypto Re-synch support
- Juniper Proprietary DTE and DCE cables available for each protocol (10 in all) with Auto-detection for DTE/DCE modes

Specifications

Product Number	Description
JX-2Serial-S	Dual-port Synchronous Serial PIM

JUNOS Software Release

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

ScreenOS Software Release

The Dual-port Synchronous Serial PIM is supported in ScreenOS 5.1 and greater releases on the SSG 500 Series, ScreenOS 6.0/r2 and greater releases on the SSG 300 Series and ScreenOS 5.4 and greater releases on the SSG 140.

Network 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

HDLC Features

- 56 K / 64 K mode
- CRC16/32
- Shared Flag
- Idle flag/fill
- Counters: runts, giants, fcs error, abort error, align error

Interface Connector

Product Number	Cable 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 in. x 5.45 in. x 6.5 in.

- 1.6 cm. x 13.8 cm. x 16.5 cm.

Environmental

Operating temperature: 0 to 40°C

Storage temperature: -40 to 70°

Relative humidity: 5% to 90% non-condensing

Diagnostics

Loopbacks

Local, DCE-Local

Network alarms

- Rx Clock Absent

- Tx Clock Absent

- DCD absent

- CTS absent

- 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 Framing Seconds (LOFS)

- UAS Unavailable Seconds (UAS)

LEDs

PIM LED's 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

Agency/Regulatory 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

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

About Juniper

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.



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