

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



The Juniper Dual-port Synchronous Serial Physical Interface Module (PIM) is for use with the J4300, J4350, J6300, and J6350 Services Routers as well as the Secure Services Gateway 500 Series Firewall appliance. This PIM includes two physical Serial ports and a license for two physical interface ports.

The Juniper 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 Serial PIM is installed in the ScreenOS-based Secure Services Gateway 500 Series firewall/VPN appliance, the dedicated network processor will forward traffic to the SSG 500 Series CPU where traffic decisions are made based upon the security policy. The Serial PIM does not require port licenses when deployed in the SSG 500 Series.

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

- Dual-port form factor allows for increased bandwidth capabilities while making most effective use of the J-series router modular interface slots.
- Physical port licensing capability creates a cost effective means for quickly activating and turning up additional capacity.

Features

- Single Serial Interface supports RS232, V.35, X.21, RS449, & EIA530
- Up to 8Mbps 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 including two physical interface port licenses
JX-1Serial-LTU	One physical interface port license for use with the J-series Dual-port Synchronous Serial PIM

JUNOS Software Release

The Dual-port Synchronous Serial PIM is supported in JUNOS 7.0 or greater on the J-series Services Routers.

ScreenOS Software Release

The Dual-port Synchronous Serial PIM is supported in ScreenOS 5.1 on the SSG 500 Series.

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

- 56K/64K 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: 0-40C
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



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