SINGLE-PORT SYNCHRONOUS SERIAL MINI-PHYSICAL INTERFACE MODULE (MINI-PIM)

Product Overview

Providing the physical connection to serial network media types, Juniper's single-port synchronous serial Mini-PIM is used for the Juniper Networks SRX200 line consisting of the SRX210 Services Gateway, SRX220 Services Gateway, and SRX240 Services Gateway products.

Product Description

The Juniper Networks® single-port synchronous serial Mini-PIM provides the physical connection to serial network media types, receiving incoming packets from the network and transmitting outgoing packets to the network. The single-port synchronous serial Mini-PIM forwards packets for processing while performing framing and line-speed signaling.

Features and Benefits

The Juniper Networks single-port synchronous serial Mini-PIM provides increased bandwidth capabilities while making effective use of the SRX200 line interface slots. Features include:

- 60-pin synchronous serial (female) connector type
- Support for the following standards: TIA/EIA 530, V.35, X.21, RS-232, RS-449
- Up to 8 Mbps per physical port
- 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

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

- Data interface Point-to-Point Protocol (PPP)
- Frame Relay
- High-Level Data Link Control (HDLC) features
  - 56 K/64 K mode
  - Cyclic redundancy check (CRC)16/32
  - Shared flag
  - Idle flag/fill
  - Counters: Runts, giants, fcs error, abort error, align error

Table 1: Interface Connector

PRODUCT NUMBER	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	S449 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 (W x H x D)
- 3.75 x 0.8 x 5.9 in (9.5 x 2.0 x 14.5 cm)
- 0.19 lb

Environmental
- Operating temperature: 0º to 40º C
- Storage temperature: -40º to 70º 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
Mini-PIM LEDs indicate port status with the following LED states:
- Green on means that the port is online with no alarms or failures
- Red light on means that the port is active with a local alarm (router has detected a failure)

Management Capabilities
- Telnet/console/Juniper Networks J-Web Software: Remote and local configuration, monitoring, and troubleshooting

Standards and Compliance
Safety
- CAN/CSA-C22.2 No. 60950-1
- UL 60950-1
- EN 60950-1
- IEC 60950-1

EMC (Emissions)
- AS/NZS CISPR22 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

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Ordering Information

PART NUMBER	DESCRIPTION
SRX-MP-1SERIAL	Single-port Sync Serial Mini-PIM

Software

The single-port synchronous serial Mini-PIM is supported on the SRX200 line running Juniper Networks Junos® operating system 9.5 and higher releases.

About Juniper Networks

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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