SINGLE-PORT SERIAL MINI-PHYSICAL INTERFACE MODULE

Product Overview

The Juniper Networks Single-port Serial Mini-PIM for the Juniper Networks SSG20 Secure Services Gateway, provides physical connectivity to a variety of serial network media types to increase flexibility and operational ease.

Product Description

The Juniper Networks® Single-port Serial Mini-PIM for the SSG20 Secure Services Gateway complements the five on-board 10/100 Ethernet interfaces with expanded WAN connectivity. It offers up to 8 Mbps performance with support for a variety of serial network media types, including X.21, V.35, RS-232, RS-449/RS-422, and EIA530/EIA530A. The Single-port Serial Mini-PIM is equipped with a dedicated network processor that forwards traffic to the SSG20 CPU where traffic decisions are made based upon security policies. This allows the SSG20 to be deployed as a security appliance or as a secure router where serial connectivity is required.

Features and Benefits

The Juniper Networks Single-port Serial Mini-PIM provides the following features and benefits:

Table 1: Single-Port Serial Mini-PIM Features and Benefits

FEATURE	FEATURE DESCRIPTION	BENEFIT
Support for multiple serial media types	Multiple serial interface types supported via a DB-60 connector, including: · X.21 · V.35 · RS-232 · RS-449/RS-422 · EIA530/EIA530A	Allows the SSG20 to be deployed in a variety of serial environments without significant upgrades or changes to hardware
Predictable high performance	Maximum synchronous speed of 8.0 Mbps.	Provides line rate performance while running services such as stateful firewall and IPsec
Configurable clock rate and clock modes	Interfaces can be configured with a variety of clock rates between 1.2 KHz and 8 MHz. Interfaces can be configured with data terminal equipment (DTE), internal, and loop clock modes.	Provides flexibility in synchronizing DCE and DTE devices, allowing for performance optimization based on individual network requirements
Encryption resynchronization	In the event of a line error or outage, the Single-port Serial Mini-PIM automatically instructs the SSG20 to send resynchronization signals until resynchronization is achieved.	Reduces downtime and overhead due to network outages

Specifications

SPECIFICATION	DESCRIPTION
Connector	DB-60
Serial speeds	Synchronous maximum speed of 8 Mbps
Transmit rate	8 Mbps per port
Receive rate	8 Mbps per port
Line encoding	NRZ, NRZI
Line protocols	EIA530, X.21, RS449/RS422, RS232, V35
Modes	DTE
Data interface	Point-to-Point Protocol (PPP) Frame Relay HDLC Features: • 56K/64K mode • Cyclic redundancy check (CRC) 16/32 • Shared flag • Idle flag/fill • Counters: runts, giants, frame check sequence (fcs) error, abort error, align error
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 KHz, 64 KHz, 72 KHz, 125 KHz, 148 KHz, 250 KHz, 500 KHz, 800 KHz, 1 MHz, 1.3 MHz, 2 MHz, 4.0 MHz, 8 MHz
Diagnostics	**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 framing seconds (LOFS) • UAS unavailable seconds (UAS)
Module Slots	One Mini-PIM slot required
LEDs	Link and activity
Management	Telnet/Console/Web Remote and local configuration, monitoring, and troubleshooting
Dimensions (W x H x D)	3.75 x .80 x 5.75 in (9.5 x 2.0 x 14.5 cm)

SPECIFICATION	DESCRIPTION
Weight	0.18 lb (81.6 g)
Environmental	Operating temperature: 0 to 40 C Storage temperature: -40 to 70 C Relative humidity: 5 to 90% noncondensing

Safety 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	AS/NZS CISPR 22, Class B EN55022 Class B FCC Part 15 Class B VCCI Class B
Immunity	N-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
ETSI	ETSI EN-300386-2 Telecommunication Network Equipment Electromagnetic Compatibility Standards IEEE 802.3

Product Options

Optional Juniper Networks proprietary DTE cables are available for each protocol with auto-detection for DTE/DCE modes.

Table 2: Single-Port Serial Mini-PIM Product Options

CABLE PART NUMBER	DESCRIPTION
JX-CBL-EIA530-DTE	EIA530 cable (DTE) 10 feet male
JX-CBL-RS232-DTE	RS232 cable (DTE) 10 feet male
JX-CBL-RS449-DTE	RS449 cable (DTE) 10 feet male
JX-CBL-V35-DTE	V.35 cable (DTE) 10 feet male
JX-CBL-X21-DTE	X.21 cable (DTE) 10 feet male

Supported Platforms

As with all Juniper Networks Mini-PIMs, the Single-port Serial Mini-PIM is supported only on the SSG20. A standard form-factor serial PIM is available for the Juniper Networks SSG140 Secure Services Gateway and the SSG500 line.

Juniper Networks Services and Support

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Ordering Information

Juniper Networks Single-port Serial Mini-PIM and Related Part Numbers

PART NUMBER	DESCRIPTION
JXM-1SERIAL-S	Single-port Synchronous Serial PIM – spare
JX-CBL-EIA530-DTE	EIA530 cable (DTE) 10 feet male
JX-CBL-RS232-DTE	RS232 cable (DTE) 10 feet male
JX-CBL-RS449-DTE	RS449 cable (DTE) 10 feet male
JX-CBL-V35-DTE	V.35 cable (DTE) 10 feet male
JX-CBL-X21-DTE	X.21 cable (DTE) 10 feet male

Operating System Version

PART NUMBER	MINIMUM
JXM-1SERIAL-S	ScreenOS 6.0

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**.

To purchase Juniper Networks solutions, please contact your Juniper Networks representative at 1-866-298-6428 or authorized reseller.