

SIMREX Corporation

DataMover™ Speedlink Series

TRANSPARENT wireless DATA

SLX400SN 330-512 MHz
SLX900SN 800-960 MHz
SLX1400SN 1350-1535 MHz
SLX Protected
SLX Fractional T1/E1
Interface



FEATURES

- Frequency Range: 330 MHz to 512 MHz, 800 MHz to 960 MHz, or 1350 MHz to 1535 MHz
- Data Rates: Scalable from 64 kbps to 768 kbps
- Spectrally Efficient: Selectable 64 QAM*, 32 QAM, 16 QAM or QPSK
- Excellent Sensitivity: Better than -102 dBm @ 10-6 BER at 64 kbps
- Advanced Modem Features: FEC, Interleaver and Adaptive Equalizer
- Front Panel Displays for Easy Maintenance and Link Monitoring
- Built-in NMS Element Manager
- SNMP Network Management for Fault, Configuration, Performance and Security Management
- Integrated HTML web server allows network wide management via the Internet
- Built-in 9600 bps Data Service Channel
- Local Loopback and Remote Loopback
- 8 Relay Alarm Contacts per Radio
- DTMF Compatible Orderwire
- Optional interfaces for direct connection to Fractional T1/E1 circuits
- Optional 1+1 hot standby protected configuration
- Optional space diversity configuration
- Optional Integrated voice/data multiplexer

SIMREX..Global wireless solutions. Transparent Wireless Data

For almost 2 decades, SIMREX Corporation's wireless products have been providing wireless networking solutions with applications in SCADA, telemetry, telecommunications, mobile data and online transaction markets. SIMREX Corporation provides licensed and unlicensed solutions, installed worldwide.

Applications

- Point-to-point transmission applications
- Cost effective thin route applications
- Long haul telecommunication links
- Cellular backhaul
- Last mile links
- Trunked radio
- SCADA

Why Consider a Datamover Speedlink Solution?

The new Speedlink microwave radio family provides full duplex, scalable bandwidth and capacity from 64 kbps to 768 kbps in a 200 kHz channel. These radios are designed

to operate in a point-to-point environment with a wide range of applications. They are

especially effective for telecommunications access and transport links, wireless backbones for SCADA systems, and for use as backhauls to extend existing telecommunication channels. The Speedlink microwave radio is designed to connect to any industry

standard EIA-530, V.35, fractional T1 or E1 source.

DataMover™ Speedlink Specifications

General Specifications

Frequency Ranges	SLX400SN SLX900SN SLX1400SN	330-512 MHz 800-960 MHz 1350-1535 MHz	Modulation Type	64 QAM*, 32 QAM, 16 QAM, QPSK
RF Occupied Bandwidth	25, 50, 100, and 200 kHz		FEC	Reed Solomon
User Data Rates	64 kbps, 128 kbps, 256 kbps, 384 kbps, 512 kbps, 768 kbps		Temperature Range	-10° to 50° C
			Humidity	<95% non-condensing
			Voltage Range	±12 Vdc (w/external power supply) (±20%) ±24 Vdc, or ±48 Vdc (±20%)
			Power Consumption	Non-Protected: < 60 W, Protected: < 135 W
			Size	4.5cm (1U) x 48cm x 30cm 1.75in x 19in x 12

Channel Spacing		25 kHz	50 kHz	100 kHz	200 kHz
Capacity*	incl. overhead	72 kbps	152 kbps	360 kbps	800 kbps
	w/o overhead	64 kbps	128 kbps	256 kbps	768 kbps
Receiver Sensitivity (10 ⁻⁶ BER) ¹ (16 QAM)		-102 dBm	-100 dBm	-97 dBm	-92 dBm
System Gain (10 ⁻⁶ BER) (16 QAM)		133 dB	131 dB	128 dB	123 dB

Modulation Type	Threshold Differential	System Gain Differential	Normalized Bandwidth for Fixed Rate	Normalized Rate for Fixed Bandwidth
QPSK	-3 dB	-3 dB	2.0	0.5
16 QAM	0 dB	0 dB	1.0	1.0
32 QAM	+1.5 dB	+2.5 dB	0.80	1.25
64 QAM*	+4 dB	+6 dB	0.67	1.50

1. Receiver sensitivity specs. for 10⁻³ BER are typically 3 dB better.

Transmitter

Power Output at antenna port	+31 dBm (16 QAM) +30 dBm (32 QAM) +29 dBm (64 QAM)
Output Control Range	10 steps of up to 10 dB
Frequency Stability	1.5 ppm
Spurious Outputs	<-60 dBc

Receiver

Residual BER	<1 x 10 ⁻¹⁰
Dynamic Range	>65 dB
Data	EIA-530 / G.703 (option available)
Orderwire	DTMF capable
Data Service Channel	RS-232, 300-9600 bps
Ethernet NMS	10 Base-T
Console Port	RS-232, 300 bps to 115.2 kbps
Alarms	4 programmable outputs, 4 programmable inputs
Antenna	50 Ohms Impedance

Options

Space Diversity	
Hot-standby Protected	
Bandwidth Upgrade Kits (consult factory for details)	
Bandpass Duplexers	
Integrated Multiplexers (see separate specifications sheet)	

Network Management

Local LED Indicators	Front Panel LED status indicate: Power, Active, General Alarm, Rx Alarm, Tx Alarm, I/O Alarm.
Front Panel	LCD Display & keypad for management of local & remote radio.
Element Management	Full management of Speedlink network via command line interface.
SNMP Management	Full IP-based management of Speedlink network and SNMP-enabled peripherals via custom enterprise MIB
HTML Webserver	Full IP-based management of Speedlink network and web-enabled peripherals via any web browser (e.g. Netscape™ or Internet Explorer™)

SIMREX CORPORATION

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Accessories

110/240 Vac, 50/60 Hz Power Supply
Orderwire Handset
G.703 120 Ohms to 75 Ohms balun

Protected

Configuration	2 x Speedlink radios, connected via protected switch box
Total Size	2 x 1 RU high + 1 x 2 RU high
Transmit Branching Loss	2 dB
Receive Branching Loss	5 dB
Receive Switching	Hittless

Agency Approvals

SLX400SN Transmission:	FCC Part 90, IC RSS-119 EMC: ETS 300 385, FCC Part 15
SLX900SN Transmission:	FCC Part 101, IC RSS-119 EMC: FCC Part 15
SLX1400SN Transmission:	ETS 300 630, MPT 1717, Class 3 Environmental: ETS 300 019, Class 3.2 EMC: ETS 300 385 Safety: CE Mark

SLX Fractional T1/E1 Inter face Card

General Specifications

Line rate	T1 (1.544 Mbps); E1 (2.048 Mbps)
Channel Size	200 kHz
Data Rate	768 kbps (12 x 64 kbps)
Framing	SF, ESF (T1); FAS, CAS, CRC (E1)
Signaling	RBS (T1); Time Slot 16 CAS (E1)
Line Codes	AMI, B8ZS, B7ZS (T1); AMI, HDB3 (E1)
Interface	RJ48C Balanced Interface 100 Ohms (T1), 120 Ohms (E1)

Physical

Size	15.24 cm x 12.7 cm (6 in x 5 in)
Configuration	Option card, fitted internal to LEDR chassis
Availability	Fractional T1: SLX400SN, SLX900SN, SLX1400SN Fractional E1: SLX400SN, SLX900SN, SLX1400SN

SIMREX DataMover products are manufactured under a quality system certified to ISO 9001. Simrex reserves the right to make changes to specifications of products described in this data sheet at any time without notice and without obligation to notify any person of such changes.
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