

SRM6100/EU

WIRELESS SERIAL MODEM - 2.4 GHz BAND



Data-Linc Group's wireless, licence-free SRM6100/EU Serial Modem offers superior reliability, versatility and performance for industrial wireless serial transmission. Designed to meet European CE Mark and ETSI RF regulations, the SRM6100/EU combines advanced frequency hopping technology and a highly sensitive RF receiver to maximize transmission range and industrial performance.

The SRM6100/EU employs Smart Spectrum™ frequency hopping spread spectrum (FHSS) technology in the 2.4 - 2.4835 GHz frequency band for secure, robust communication. Data-Linc Group's FHSS technology, coupled with 32-bit CRC error detection, enables the SRM6100/EU to reliably deliver critical information.

The SRM6100/EU has a rated range of 11.3 km (7 miles), and the built-in Repeater mode may be used to extend range or work around obstructions. For multi-point applications, one Master can communicate to an unlimited number of Remotes when a polled protocol such as DF1, Modbus or DNP is used.

The SRM6100/EU is easily field configurable and includes built-in diagnostics to evaluate RF signal quality during installation and operation. (Data-Linc Group's *LincView*™ Diagnostic Software, an optional RF network diagnostics management tool for stand-alone SRM modems, offers system network monitoring and maintenance from Master locations.) Additionally, Data-Linc can pre-configure the modems and provide correctly pinned serial cables for even easier installation.

The SRM6100/EU is designed for extreme environments. It is rated for extended temperature operation (-40° to +75° C) and may be powered from a 230 VAC adaptor or 10 to 28 VDC voltage sources.

FEATURES

- Licence-free wireless—operates in the 2.4 - 2.4835 GHz ISM (industrial/scientific medical) band
- Industrial proven performance for secure wireless plant networking, material handling and SCADA applications
- Employs Smart Spectrum™ frequency hopping technology for exceptional data integrity—especially in high noise environments
- Excellent receiver sensitivity for superior range performance
- Rated range up to 11.3 km (7 miles) line-of-sight required
- Built-in Repeater mode to extend range and work around obstructions
- Configurable for Master, Remote and Repeater operation
- Factory or field configuration for easy installation
- Built-in diagnostics for quick installation and troubleshooting
- Designed for extreme environments
 - 40° to +75° C operating temperature
- Conforms to European Union safety and emission requirements
- Designed for compliance with European Union CE mark and ETSI certifications

APPLICATIONS

- Cost-effective alternative to factory floor cable installation
- Communications to mobile equipment (automatic guide vehicles, conveyor systems, transfer cars, overhead cranes, warehouse automation, etc.)
- Eliminates trenching to pump stations, storage tanks, pipelines, sub-stations and control rooms for SCADA communications
- Communications over bodies of water, highways and other obstacles

SRM6100/EU SPECIFICATIONS

Operating Frequency

Licence-free, 2.4-2.4835 GHz (Europe)

Included

CD. software

Antenna. Test Antenna

Power supply

User Guide

Transmitter

Rated Range. 11.3 km (7 miles) with unobstructed line of sight; farther with Repeaters

Output Power. Selectable up to 500 mW; 100 mW maximum at antenna

Modulation. Spread Spectrum, GFSK,

Spreading Code. Frequency Hopping

Hop Patterns. 15 (user selectable)

Occupied Bandwidth. 230 KHz

Receiver

Sensitivity. -107 dBm @ 10^{-4} raw BER;

-105 dBm @ 10^{-6} raw BER

Selectivity. 40 dB @ $f_c \pm 230$ KHz;

60 dB @ $f_c \pm 460$ KHz

System Gain. 135 dB

RF Data Transmission

Error Detection. 32 Bit CRC with retransmission

Data Encryption. Substitution Dynamic Key

RF Data Rate. 144 Kbps or 188 Kbps

Interface

RS232, Asynchronous, 10 or 11 bit words, Optional RS422 and AE485 host interface

Data Throughput (uncompressed).

1200 Bps - 115.2 Kbps (115.2 Kbaud throughput measured assuming 75% frequency availability)

Connector. RS232, DB9 female

Antenna

Reverse thread SMA female

Supplied bench test antenna

Optional external omni directional or yagi antenna available

Power

Supply Voltage. 10-28 VDC; 230 VAC/12 VDC exterior wall mounted transformer.

Peak Transmit Current. 650 mA @ 12 VDC

Receive Current. 100 mA @ 12 VDC

Operating Modes

Point-to-point, point-to-multipoint, Store-and-Forward Repeater, Repeater/Remote

Diagnostics

Front Panel LEDs. Power, Carrier, Data In, Data Out

Serial Port Data. Stored signal strength, noise and disconnect information

Optional. *LincView*TM Diagnostics for real-time RF network monitoring

Compliance. CE Mark and ETSI EN 300 328

Operating Environment

Temperature. -40° to 75°C

Humidity. 0 to 95% non-condensing humidity

Enclosure

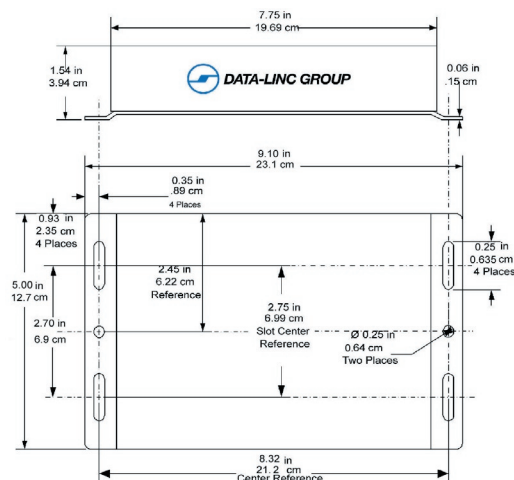
Standard. NEMA 1; 18-gauge steel with mounting flanges. 12.45 x 19.69 x 3.94 cm

Weight. 0.91kg

Specifications subject to change without notice.

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SRM6100/EU DIMENSIONS



LINCVIEWTM OPC DIAGNOSTICS SOFTWARE

Data-Linc Group's *LincView*TM OPC Software provides an optional RF network diagnostics management tool for any of the wireless stand-alone modems in the SRM Family. *LincView* OPC offers OPC offers complete system network monitoring and maintenance from your Master location. Key parameters at a remote location can be monitored or changed with a few simple keystrokes. This allows technicians to track the actual data path to the Master, view every SRM network link in miles or kilometers and monitor key parameters such as signal or noise level, voltage and much more. *LincView* OPC even provides visual trend analysis of packet errors, supply voltage levels and radio temperature.

ALLIANCE PARTNERS



Collaborative Automation by



DATA-LINC GROUP

Corporate Headquarters

3535 Factoria Blvd. SE, Suite 100

Bellevue, WA 98006 USA

info@data-linc.com

Tel: + 1 (425) 882-2206

Fax: + 1 (425) 867-0865

www.data-linc.com

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