DATA-LINC GROUP

SRM6100
SERIAL RADIO MODEM FOR THE 2.4 GHz BAND

INDUSTRIAL WIRELESS SERIAL 2.4 GHz BAND

Data-Linc Group's wireless, license-free SRM6100 Serial Modem offers superior reliability, versatility and performance for wireless serial transmission. The SRM6100 is factory pre-configured for easy, hassle-free installation. It offers an unsurpassed rated range of up to 15 miles (24 km) with line-of-sight and omni directional antennas, farther with Repeaters and/or high gain antennas.

The SRM6100 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 to reliably deliver critical information.

RF site surveys are usually unnecessary and an FCC site license is not required. The SRM6100 wireless technology eliminates the need for hard wire or fiber cable, which is often expensive and difficult to install.

The SRM6100 supports a number of configurations, including point-to-point , point-to-multipoint as well as multiple Repeaters if required. Multipoint operation permits an unlimited number of Remotes. The SRM6100 can also function as a Repeater/Remote to extend range or communicate around obstructions. Back-to-back radio modems are not required for Repeater function.

SRM6100 FEATURES

· **License-free wireless—operates in the 2.4-2.4835 GHz ISM (industrial/scientific/medical) band**

· **Rated range of up to 15 miles (24 km) in optimal conditions with line of sight—farther with Repeaters and/or high gain antennas**

· **Employs Smart Spectrum™ frequency hopping technology for exceptional data integrity—including high noise environments**

· **Factory or field configured for your application—ensuring trouble-free installation**

· **User configurable for Master, Remote, Repeater or Remote/Repeater mode**

· **Frequency key options allow for different systems to operate simultaneously in close proximity**

· **PLC slot mount models and European Union versions also available**

APPLICATIONS

· **PLCs located on moving platforms, overhead cranes and turntables or other revolving equipment**
· **Remote PLC programming**
· **SCADA systems, such as water/wastewater, utilities and oil/gas systems**
· **Underground or off-shore communications**
· **High RFI environments (e.g., steel, manufacturing)**
· **Industrial automation machine control on plant floors**

SRM6100 Specifications

Operating Frequency
License-free, 2.4-2.4835 GHz

Transmitter
Rated Range. 15 miles (24 km), line of sight distance, farther with Repeaters and/or high gain antenna
Output Power. 500 mW maximum (10 programmable steps up to 500 mW) (+27 dBm)
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 @ fc +-230 KHz; 60 dB @ fc +-460 KHz
System Gain. 135 dB

RF Data Transmission
Error Detection. 32 Bit CRC
Data Encryption. Substitution Dynamic Key
RF Data Rate. 144 Kbps - 188 Kbps

Interface
RS232. Asynchronous, 10 or 11 bit words
Optional RS422 and AE485 host interface
Data Throughput (uncompressed).
1200 Baud - 115.2 Kbaud (115.2 Kbaud throughput measured assuming 75% frequency availability)
Connector. RS232, DB9 female

Antenna
Standard thread SMA female
Supplied bench test antenna
Optional external omni directional or yagi antenna available

Power
Supply Voltage. 10.5 - 18 VDC; 12 VDC exterior wall mounted transformer. Optional 24 VDC
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
Serial Data Port. Stored signal strength, noise and disconnect information
Optional. LincView™ Diagnostics for real-time RF network monitoring

Operating Environment
Temperature. -40° to 167°F (-40° to 75°C)
Humidity. 0 to 95% non-condensing humidity

Enclosure
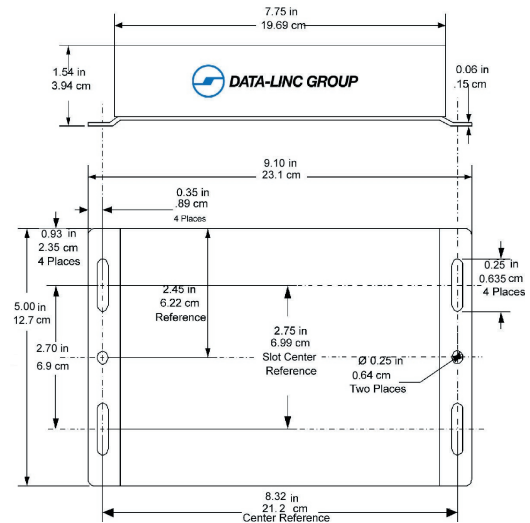**Standard.** NEMA 1; 18-gauge steel with mounting flanges
Chassis Mount. Available for Allen-Bradley, GE Fanuc, Schneider

Weight. 2 lbs (.91k)

SRM6100 Dimensions

LincView™ OPC
Diagnostics Software

Data-Linc Group's *LincView*™ 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

DATA-LINC GROUP

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