DATA-LINC GROUP

SRM6310E

Ethernet Radio Modem– 2.4 GHz Band

Industrial Wireless Ethernet– 2.4 GHz Band

Data-Linc Group's SRM6310E Wireless Ethernet Modem offers superior reliability, versatility and performance. The SRM6310E is factory pre-configured for easy, hassle-free installation. It offers an unsurpassed rated range of up to 10 miles (16 km) with line-of-sight and an omni directional antenna, farther with Repeaters and/or a high gain antennas. Based upon proven technology, the SRM6310E adds flexibility to system design by providing a highly reliable wireless alternative in a compact package for a broad array of applications, even those where hazardous environments require Class 1 Div 2.

The SRM6310E 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 SRM6310E to reliably deliver critical information.

RF site surveys are usually unnecessary and an FCC site license is not required. The SRM6310E wireless technology eliminates the need for hard wire or fiber cable, which are often expensive and difficult to install.

The SRM6310E offers easy to read LEDs and affords maximum installation flexibility, including optional DIN rail mounting. The SRM6310E can bridge two Ethernet segments or connect multiple Ethernet nodes to a master PLC. The SRM6310E offers a 10BaseT (UTP) interface to the Ethernet device, uses MAC layer filtering and fully supports most Ethernet protocols for true protocol transparency.

Features

- **Class 1 Div 2 Certification**
- **License-free wireless—operates in the 2.4-2.4835 GHz ISM (industrial/scientific/medical) band**
- **Compact, flexible design with universal mounting—back panel or on optional DIN rail clip**
- **Rated range of up to 10 miles (16 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**
- **Wirelessly connects Ethernet PLCs and workstations**
- **Factory configured for your application—ensuring trouble-free installation**
- **User configurable for Master, Remote, Repeater or Repeater/Remote mode**
- **Front panel LEDs. Power, RF Link, RF In, RF Out, LAN In, LAN Out, LAN Link, LAN Collision, Overrun Error**
- **Superior noise immunity, higher power output and better receiver sensitivity compared to other 2.4 GHz wireless systems**
- **PLC slot mount models and European Union versions also available**

The SRM6310E 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 SRM6310E can also function as a Repeater/Remote to extend range or work around obstructions. Back-to-back radio modems are not required for repeater function but can be used to maximize data throughput.

Specifications

Operating Frequency
License-free, 2.4-2.4835 GHz

Transmitter

Range. Up to 10 miles (16 km) line of site, farther with repeaters and/or high gain antenna
Output Power. Up to 500 mw maximum (selectable)
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 Correction. 32 Bit CRC
Data Encryption. Substitution Dynamic Key
RF Data Rate. 144 Kbps- 188 Kbps

Interface

10BaseT (UTP); One straight, one cross-pinned (only one connector can be used at a time)
Data Throughput. 108 Kbps maximum in point-to-point mode; throughput measured assuming 75% frequency availability
Connectors. 10BaseT, DB9 (configuration)

Certification

Class 1 Div 2

Antenna

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

Power

Input Voltage Requirements. 10 to 28 VDC; 115 VAC to 12 VDC wall mounted transformer provided
Connector. Latching screw terminal
RF Output Power. 500 mW (selectable in ten step increments)
Transmit Current (Peak). 700 mA @ 12 VDC
Receive Current. 100 mA @12 VDC

Operating Modes

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

Configuration.

Serial Port 19.2 Kbaud terminal based

Diagnostics

Front Panel LEDs. Power, RF Link, RF In, RF Out, LAN In, LAN Out, LAN Link, LAN Collision, Overrun Error
Serial Data Port. Stored signal strength, noise and disconnect information.
Optional. *LincView*™ OPC Diagnositcs for real-time RF network monitoring

Operating Environment

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

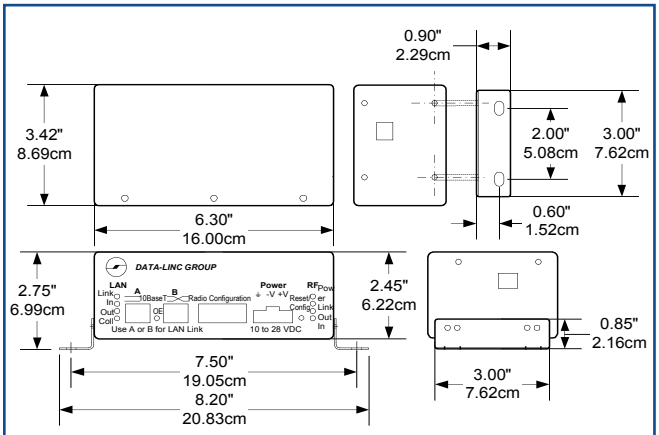
Enclosure

Standard. NEMA 1; 18-gauge steel; 2.45 x 3.42 x 6.3 in (6.22 x 8.69 x 16 cm)
Mounting. Two "L" brackets on either side, rear, top or bottom for panel mounting. Optional DIN rail clip

Weight. 1.94 lb (.88 kg)

Specifications subject to change without notice.

Dimensions



LincView™ OPC Diagnostic Software

Data-Linc Group's *LincView*™ Diagnostic Software provides an optional RF network diagnostics management tool for any of the wireless stand-alone modems in the SRM Family. *LincView* 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* even provides visual trend analysis of packet errors, supply voltage levels and radio

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P/N 155-09963-005B 02/08