

SRM6300E-SLC

CHASSIS MOUNT ETHERNET RADIO 2.4 GHz ISM BAND

INDUSTRIAL WIRELESS ETHERNET CHASSIS MOUNT 2.4GHz



Data-Linc Group's SRM6300E-SLC Wireless Ethernet Modem has been designed to mount in an Allen-Bradley SLC Rack. The SRM6300E-SLC 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, farther with Repeaters and/or a high gain antenna. Based upon proven SRM6310E technology, the SRM6300E-SLC adds new flexibility to system design by providing a highly reliable wireless alternative in a compact package.

The SRM6300E-SLC 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 SRM6300E-SLC to reliably deliver critical information.

RF site surveys are usually unnecessary and an FCC site license is not required. The SRM6300E-SLC wireless technology eliminates the need for hard wire or fiber cable, which is often expensive and difficult to install.

The SRM6300E-SLC can bridge two Ethernet segments or connect multiple Ethernet nodes to a Master PLC. The SRM6300E-SLC offers 10BaseT (UTP) interface to the Ethernet devices, uses MAC layer filtering and

SRM6300E-SLC FEATURES

- License-free wireless—operates in the 2.4-2.4835 GHz ISM (industrial/scientific/medical) band
- Designed to mount in an Allen-Bradley SLC rack
- Rated range of up to 10 miles (16 km) in optimal conditions with line-of-sight and an omni directional antenna—farther with Repeaters or higher gain antenna
- Employs Smart Spectrum™ frequency hopping technology for exceptional data integrity—even in 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

supports most Ethernet protocols for true protocol transparency.

The SRM6300E-SLC supports a number of configurations, including point-to-point, point-to-multipoint and multiple Repeaters if required. Multipoint operation permits an unlimited number of Remotes. SRM6300E-SLC 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.

SRM6300E-SLC SPECIFICATIONS

Operating Frequency

License-free, 2.4-2.4835 GHz

Transmitter

Range. Up to 10 miles (16 km), line-of-sight distance, 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 Detection. 32 Bit CRC

Data Encryption. Substitution Dynamic Key

RF Data Rate. 144 Kbps - 188 Kbps

Interface

10BaseT (UTP)

Data Throughput. 108 Kbps maximum; throughput measured assuming 75% frequency availability

Antenna

Standard thread SMA female

Supplied bench test antenna

Optional external omni directional or yagi antenna

Power

Input Voltage Requirements. 12 VDC; 115 VAC to 12 VDC wall mounted transformer provided—24 VDC and/or backplane power available

Connector. Barrel jack standard—latching screw terminal supplied with 24 volt option

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 (6 pin mini DIN connection)

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*TM OPC Diagnostics for real-time RF network monitoring

Operating Environment

Standard Temperature. 32° to 140° F (0° to 60° C)

Humidity. 0 to 95% non-condensing humidity

Enclosure

Single 1746 rack slot

Weight. 0.7 lb (0.34 kg)

Specifications subject to change without notice.

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SRM6300E-SLC OPTIONS

SRM6300E-SLC

SLC rack mount Ethernet Radio Modem with 12 VDC/115 VAC wall mount transformer

SRM6300E-SLC/24 V

SLC rack mount Ethernet Radio Modem with 24VDC option having two-position locking terminal connector and 24 VDC/115 VAC wall mount transformer for bench testing

SRM6300E-SLC/BP

SLC rack mount Ethernet Radio Modem with backplane power option and supplied with 12 VDC/115 VAC wall mount transformer for bench testing

LINCVIEWTM OPC DIAGNOSTIC 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



Corporate Headquarters

3535 Factoria Blvd. SE, Suite 100
Bellevue, WA 98006 USA
info@data-linc.com

Tel: (425) 882-2206
Fax: (425) 867-0865
www.data-linc.com