

SRM6300E-SLC

CHASSIS MOUNT ETHERNET RADIO MODEM-2.4 GHz ISM BAND

WIRELESS ETHERNET CHASSIS MOUNT MODEM-2.4 GHz BAND



FEATURES

- License-free and 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 interference environments
- Wirelessly connects Ethernet PLCs and workstations
- Factory or field 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

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 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

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

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. .7 lb (.34 kg)

Specifications subject to change without notice.

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SRM6300E-SLC PART NUMBERS

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

SMART SPECTRUM™ FREQUENCY HOPPING TECHNOLOGY

Data-Linc Group has optimized wireless communications for maximum reliability with Smart Spectrum frequency hopping technology. Smart Spectrum™ ensures reliable wireless communications without requiring an FCC site license. Smart Spectrum uses a unique combination of advanced frequency hopping, high radio frequency (RF) data rate and sensitive RF receiver.

The Smart Spectrum RF data rate, coupled with robust error detection and correction, ensure data throughput in high interference or reflective environments. Additionally, the outstanding noise immunity when coupled with a sensitive RF receiver allows long range communication with easy-to-install omni directional antennas.

Data-Linc Group's SRM6300E-SLC utilizes Smart Spectrum technology—ideal for critical applications that demand reliable and secure communications.



ALLIANCE PARTNERS



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