

SEM2411 Product Family High Speed Spread Spectrum Ethernet Radio Modems



The SEM2411 family are very high speed/long range wireless networking products from CIRRONET™, the established leader in spread spectrum wireless products since 1987.

The SEM products are designed to provide high-speed wireless connectivity between Ethernet devices. Typical uses include Ethernet bridging, SCADA networks, PLC networking and other industrial automation or data collection applications.



For example, the SEM can function as a high speed bridge between two 10/100BaseT Ethernet networks (see figure 1). SEM products can also provide wireless connectivity between an Ethernet base station and multiple Ethernet remote modems (see figure 2). Gain antennas can be used to extend range and coverage. The SEM2411 products offer 1 Mbps of data throughput, either point-to-point, or multi-point. SEM2411 products ensure errorless data via CRC error checking and ARQ (automatic retransmission of errored packets).

SEM2411 products utilize CIRRONET's fourth generation proprietary frequency hopping technology. Major industrial power-houses such as Group Schneider, Siemens, and GE have learned they can depend on CIRRONET products for their customers. SEM products offer extraordinary data throughput combined with outstanding range, coverage, and link reliability. The SEM products can operate easily in extended range applications with gain antennas.

The SEM2411/D/X offers a DIN-rail mount version, making connection to PLCs or other automation devices a snap. The entire SEM2411 product family is Class I Division 2 certified allowing deployment in hazardous locations. The SEM2411/D/X puts the radio in a NEMA 4X remote assembly that can be located up to 300 feet from the Ethernet connection. This allows optimal radio placement without the need for long RF cable runs.

Let us be your experts. Put our 15+ years experience with wireless technology to work for you. To find out how to put CIRRONET™ to work for you, visit our website www.cirronet.com or call: +1.678.684.2000

FIGURE 1

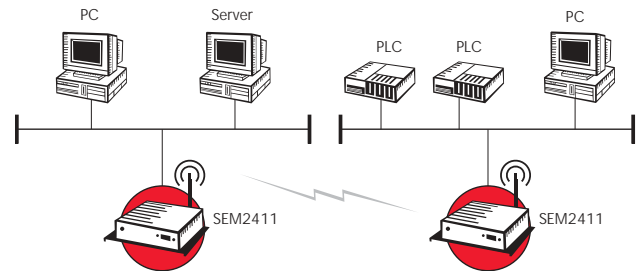
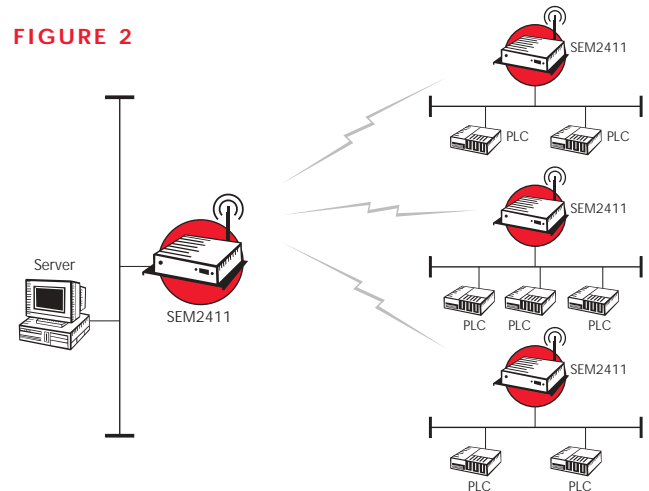


FIGURE 2



For Industrial and Commercial Networking

- High Speed: Up to 1Mbps throughput
- Network Ethernet devices (sensors, PLCs, computers) wirelessly
- Long Range: 1.5 miles using a 4" unity-gain dipole antenna (included). Easily extended using gain antennas (available).
- Proven frequency hopping technology, developed and manufactured by CIRRONET™
- Excellent immunity to jamming and multi-path fading.
- No user site license required anywhere in the world.
- Standard Ethernet 10/100BaseT interface
- Packaged for rugged industrial use
- -30°C to + 70°C operation



CIRRONET

SEM2411/D/X Specifications



Model	SEM2411	SEM2411X	SEM2411D	SEM2411DX
Data Throughput	1 Mbps			
Total Available Over-the-air Bandwidth	1.23 Mbps			
Interface	10/100BaseT			
Network Topologies	Point-to-Point and Multipoint			
Frequency Range (Multiple 802.11b-Friendly Hopsets available)	2401MHz - 2471MHz US & ETSI 2406MHz - 2445MHz France			
RF Modulation	GFSK			
RF Output Power	+8dBm / +18dBm at the RF Connector Software Selectable			
Power	+9Vdc - +30Vdc	+12Vdc - +30Vdc	+9Vdc - +30Vdc	+12Vdc - +30Vdc
Enclosure Material	Aluminum	Aluminum (network interface unit) UV stabilized polycarbonate (remote radio unit)	ABS	ABS (network interface unit) UV stabilized polycarbonate (remote radio unit)
Enclosure Size	201 x 144 x 53	201 x 144 x 53 (network interface unit) 130 x 79 x 35 (remote radio unit)	140 x 118 x 48	140 x 118 x 48 (network interface unit) 130 x 79 x 35 (remote radio unit)
Operating Temperature	-30°C to +70°C	-30°C to +70°C (network interface unit) -40°C to +70°C (remote radio unit)	-30°C to +70°C	-30°C to +70°C (network interface unit) -40°C to +70°C (remote radio unit)
Certifications	FCC, IC, CE Marked, UL Class I Div 2			

Connectors

Power	2-Terminal Connector
Ethernet	RJ-45
Configuration Port	RJ-11
Antenna	Reverse TNC

Indicators

Power	RF Link
Ethernet Transmit	Ethernet Receive
Ethernet Link	XCVR OK