



SEM2410 Series
SEM2410X
SEM2410D
SEM2410DX

High Speed
Spread Spectrum
Ethernet Radio
Modem Family

Features:

- **High Speed: Up to 400Kbps throughput**
- **Network Ethernet devices (sensors, PLCs, computers) wirelessly**
- **Long Range: 1.5 miles using a 4" unity-gain dipole antenna. Easily extended using gain antennas**
- **Proven frequency hopping technology**

Benefits:

- **Excellent immunity to jamming and multi-path fading**
- **No user site license required anywhere in the world**
- **Allows for deployment in hazardous locations**
- **Standard Ethernet 10/100BaseT interface**
- **Full bandwidth repeaters available**
- **Packaged for rugged industrial use**

The SEM2410 family of products are high speed/long range wireless networking products from RFM. Operating in the globally license-free 2.4GHz bands, 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.



SEM2410D

Rail Mount

The SEM2410D/DX offers a DIN-rail mount version, making connection to PLCs or other automation devices a snap. The entire SEM2410 product family is Class I Division 2 certified, allowing deployment in hazardous locations.



SEM2410X/DX

NEMA 4X Remote Assembly

The SEM2410X/DX 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.



SEM2410 HL

Hazardous Location, Class I Div I

SEM2410 HL (hazardous location) products are ready to be deployed in hazardous locations. These Class I Div I rated solutions are ideal for oil and gas applications. The only access hole that comes on the box is the antenna connection on top. The customer then chooses where to drill for power, data and/or control conduit access to maximize installation flexibility.

The SEM 2410 HL products can function as high speed bridge between two 10/100BaseT Ethernet networks or provide wireless connectivity between an Ethernet master bridge and multiple Ethernet remote bridges.

SEM products ensure errorless data via CRC error checking and ARQ (automatic retransmission of errored packets).

SEM2410 products use the RFM third generation proprietary frequency hopping technology. Major industrial powerhouses such as Group Schneider, Siemens, and GE have learned they can depend on RFM products for their customers. SEM products offer extraordinary data throughput combined with outstanding range, coverage, and link reliability. The SEM series can operate easily in extended range applications - the FCC allows up to 400W EIRP for 2.4 GHz point-to-point radio links.

The SEM2410 series can function as a high speed bridge between two 10/100BaseT Ethernet networks (see figure 1 below). SEM2410 products can also provide wireless connectivity between an Ethernet base station and multiple Ethernet remote modems (see figure 2). Highly complex networks can be achieved using repeaters to extend range and coverage. The SEM2410 products offer 400 Kbps throughput, either point-to-point or multi-point. SEM2410 products ensure errorless data via CRC error checking and ARQ (automatic retransmission of errored packets).

Figure 1

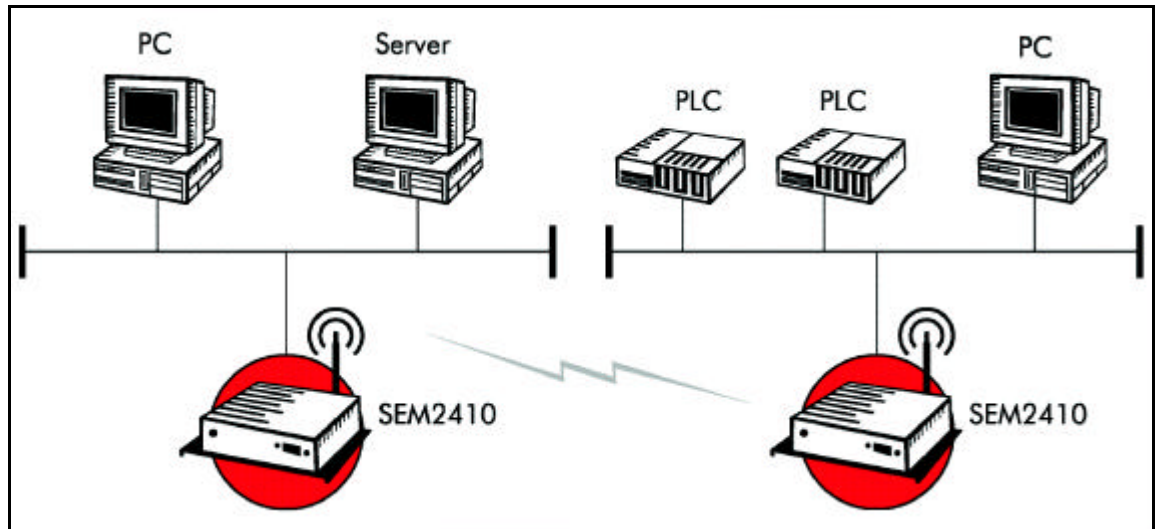
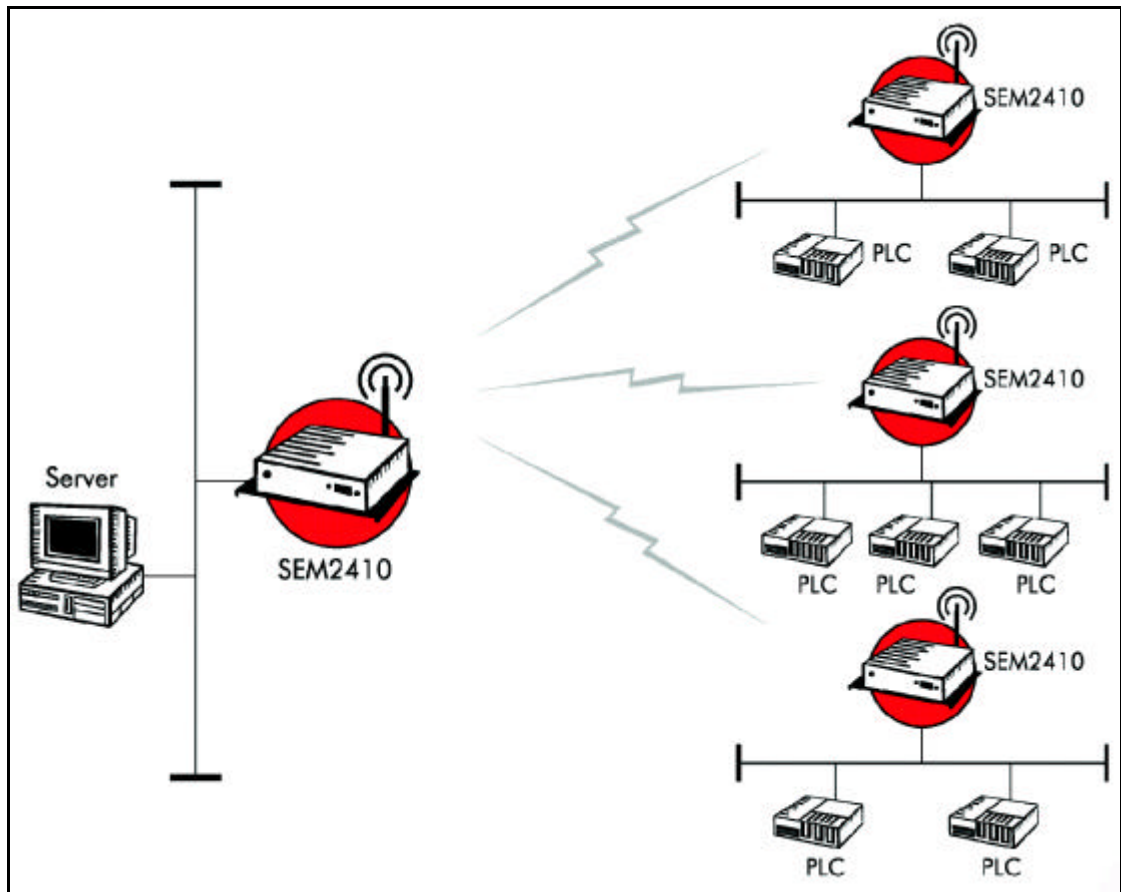


Figure 2



Specifications

	SEM2410	SEM2410X	SEM2410D	SEM2410D
Data Throughput	200 Kbps Full Duplex			
Total Available Over-the-air Bandwidth	460.8 Kbps			
Interface	10BaseT	10BaseT	10/100BaseT	10/100BaseT
Network Topologies	Point-to-Point and Multipoint			
Repeater	Use HN-2010 (see Figure 3)			
Frequency Range (Multiple 803.11b-friendly hopsets available)	2401MHz - 2471MHz US & ETSI 2409MHz - 2435MHz 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	0°C to +70°C	0°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
Ethernet Transmit
Ethernet Receive
Link Status
Collision
RF Link

