



## Wireless Serial Modems

RS-232/FSK

900 MHz/2.4 GHz

Models 5100, 5170/71, 5200, 5270

Experience the ENCOM difference!





## The most powerful, most flexible wireless modems

ENCOM's 5000 Series of wireless serial modems blend robust, intelligent performance with affordability and ease-of-use.

Designed for serial data communication, ENCOM's wireless serial modems allow for easy and economical expansion within your existing communications infrastructure. Plug-and-play capabilities save time during installation while reliable performance mitigates maintenance costs and time.

ENCOM's serial modems use license-free, frequency-hopping spread spectrum technology at 900 MHz and 2.4GHz and come with built-in setup and diagnostics capabilities. Offering serial to wireless, FSK to wireless and Ethernet to serial wireless, these versatile radios can each operate as a master, repeater or remote in any point-to-point, point-to-multipoint, or multipoint-to-multipoint configuration. All units communicate seamlessly with each other for maximum flexibility.

Simple to set up and install, ENCOM's industry-leading radios also feature ranges of up to 60 miles (with line of sight) with 115 kpbs available data rates. Enhanced interference avoidance methods allow for error-free, reliable operation in versatile environments. End-to-end delay is less than 8 milliseconds (network dependent) and with one watt output power, the 5000 Series products act as high-performance receivers at -110 dBm. These units have full duplex capability and can store and forward information when used as a repeater.

Each unit is built and supported by over 25 years of industry experience, includes a five year warranty and comes with powerful, user-friendly ControlPAK software. This program includes highly visual, straightforward tools for remote maintenance and configuration while precise diagnostics minimize issues and downtime. Also included is a spectrum analyzer for determining accurate noise levels and optimal operating frequencies.

### Key Features:

- License free, frequency-hopping, spread-spectrum technology (900 MHz and 2.4 GHz)
- Each radio can perform as master, remote or repeater
- Operational in point-to-point, point-to-multipoint and multipoint-to-multipoint configurations
- Data rates of up to 115 Kpbs
- High-performance receiving capability at -110 dBm
- One watt maximum variable output power
- Includes ControlPAK software
- 5 year warranty

### Key Benefits:

- Over 25 years of broad industry experience
- Proactive and adaptable solutions for a diverse range of applications
- Unmatched software management tools
- Scalable and future proof technology platforms
- Personalized customer support programs and corporate culture
- Unequalled warranty and support programs
- Defined and measurable ROI

**Available in seven configurations  
operating at either 900 MHz or 2.4 GHz:**



**Series 5100 FSK  
to Serial Wireless  
Transceiver**

(shelf or rack-mount unit)  
1200 baud FSK (Bell 202)  
1200 baud to 115 kbps RS-232



**Series 5170/71 Serial  
Data Transceivers**

170 Internal pluggable radio card  
**5170:** 1200 bps to 115Kbps RS-232  
**5171:** 1200 baud FSK (Bell 202)  
**5171:** 1200 bps to 115Kbps RS-232



**Series 5200 Serial  
Wireless Transceiver**

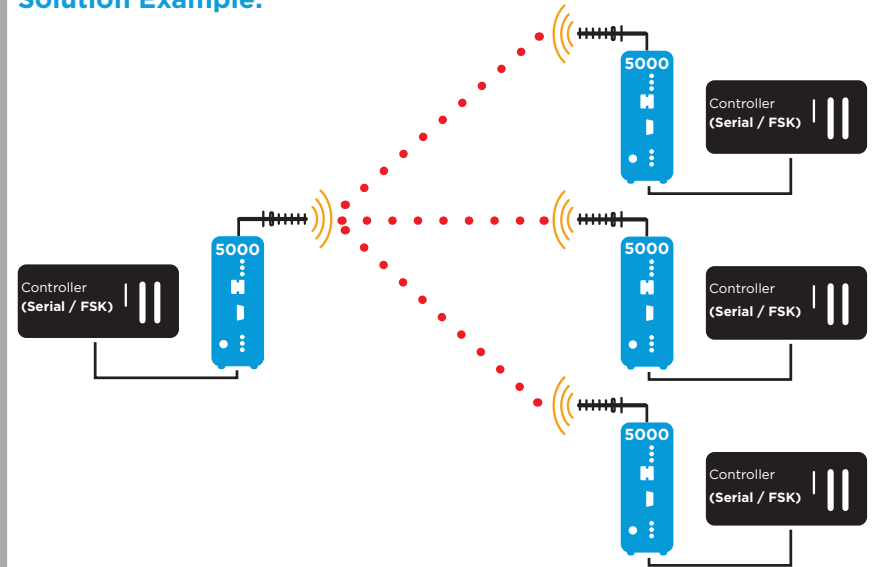
(shelf or rack-mount unit)  
1200 baud to 115 kbps RS-232  
RS-485 hardware option



**Series 5270 Serial Data  
Transceiver**

2070 Internal pluggable radio card  
1200 bps to 115Kbps RS-232

**Solution Example:**



**Solution Portfolio:**

**Intelligent Transportation Systems**

- Wireless Controller Interconnect
- Vehicle Detection Systems
- Variable Message Signs

**Water/Waste Water Management**

- Pump/Lift Stations
- Reservoir Monitoring
- Remote Valve Controls

**Electrical Utilities**

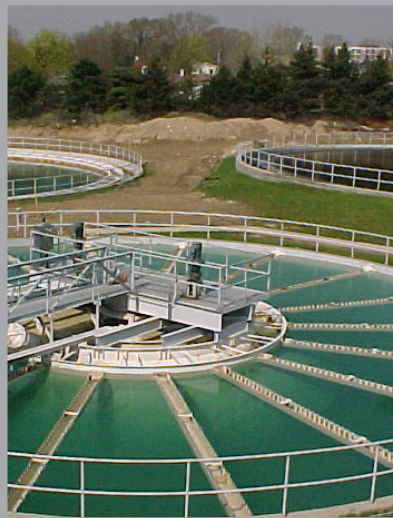
- Automated Meter Reading (AMR)
- Automatic Circuit Reclosures (ACR)
- Smart Grid Support
- Fault Monitoring

**Industrial SCADA Networks**

- Pipelines
- Oil and Gas
- Mining

**Private Networks**

- LAN & WAN Extensions
- Business Continuity Planning
- Disaster Recovery Planning
- Mobile Workforce
- Hotspot Enablement



### About ENCOM:

ENCOM, a Global Wireless Solutions Provider, creates field proven, cost-effective wireless data solutions for municipal and industrial clients, with applications involving:

- Intelligent Transportation Systems
- Public Safety Communications
- Municipal Corporate Security and IT Networks
- Water and Waste Water Management
- Electrical Utilities
- Oil and Gas

### Who relies on ENCOM?

- Municipal Governments
- Corporate IT Departments
- Departments of Homeland Security
- Departments of Transportation
- Emergency First Responders
- Mobile Workforces
- Private Networks

### Customer Testimonials:

- City of Aurora, Colorado
- City of Burnaby, British Columbia
- City of Calgary, Alberta
- City of Greeley, Colorado
- Los Alamos County, New Mexico
- Macomb County, Michigan
- Missouri DOT
- North Carolina DOT
- City of San Jose, CA
- City of Tampa, Florida
- TxDOT



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RADIO SPECIFICATIONS	
Technology	Frequency-hopping spread spectrum technology (FHSS)
Frequency Range	902-928 MHz or 2.400-2.4835 GHz
Output Power	<b>900 MHz:</b> 1mW, 10mW, 100mW, 1000mW <b>2.4 GHz:</b> 10, 50, 100, 250, 500, 750, 1000mW
Software Programmable	Yes
Available Hop Patterns	<b>900 MHz:</b> 62 <b>2.4 GHz:</b> 44
Number of RF Channels	<b>900 MHz:</b> 139 <b>2.4 GHz:</b> 202
RF Channel Spacing	<b>900 MHz:</b> 200KHz <b>2.4 GHz:</b> 400KHz
Error Checking	32 bit CRC, ARQ
Error Correction	Forward error correction
Encryption	32 bit
Receiver Sensitivity / ER	-110 dBm @10-6 BER
System Gain	152 dBm
Antenna Port	<b>5100R, 5170/71 5200R, 5270:</b> RP TNC-F <b>5100S, 5200S:</b> RP SMA-F
Certification	FCC, Industry Canada
Operating Modes	Transceiver
System Configurations	Point to point, point to multipoint, multipoint to multipoint
GENERAL SPECIFICATIONS	
Input Power	<b>Shelf-mount:</b> 6-30 VDC <b>Rack-mount:</b> Powered by detector rack via edge connector
Power Consumption	<b>900 MHz:</b> Typical <100mA standby <b>2.4 GHz:</b> <125mA (100MW TX)
Operating Environment	-40°F to 176°F (-40°C to 80°C)
Humidity	0-95% non-condensing

### Accessories Included

PART NUMBERS	EP-5100R	EP-5100S	EP-5170/71	EP-5200R	EP-5200S	EP-5270
INCLUDES	Data Cable	Power Supply Data Cable	Programming Cable	No Accessories Included	Power Supply	Programming Cable

SOFTWARE SPECIFICATIONS	900 MHz	2.4 GHz
Radio configuration	Yes	Yes
Spectrum analyzer	Yes	Yes
Remote diagnostics and configuration	Yes	Yes
INTERFACE SPECIFICATIONS		
Programming	DB9-F	
Data Interface	RS232 Asynchronous	
Data interface	<b>5100:</b> Dip switch selectable, RS-232 or 4-wire FSK <b>5200:</b> RS-232 asynchronous (standard), RS-485 2 or 4 wire (shelf mount only)	
Data Format	None, odd or even parity, 7 or 8 data bits	
Data Rate	1200 Baud to 115 Kbps (software selectable)	
Data transmission	Key-by-key data or RTS data input framing with programmable RTS/CTS time delay	
INTERFACE SPECIFICATIONS		
TX Data, RX Data, PWR	Yes	
RSSI	Yes	
Data port indicator	Yes	

DIMENSIONS	SHELF-MOUNT	RACK-MOUNT
5100	2.0"W x 5.0"H x 6.5"D	1.125"W x 4.5"H x 6.75"D
5170/71	N/A	6.5"W x 1"H x 9.5"D
5200	3.5"W x 1.5"H x 4.5"D	1.125"W x 4.5"H x 6.75"D
5270	N/A	1.6"W x 6.9"H x 8.3"D
ENCLOSURE TYPE	Milled aluminum black powder coat	2x22 pin edge card with 0.156" CTR <b>**5270:</b> 96 pin din male connector edge card

Please visit [www.encomwireless.com](http://www.encomwireless.com) for customer cases, testimonials and additional information on all ENCOM products and services.

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