



**PROCESS CONTROL**  
**REMOTE MONITORING**  
**HVAC CONTROL**  
**WATER & WASTEWATER**  
**OIL & GAS**

*A reliable field-proven modem for carrying data over multipoint leased telephone lines and UHF/VHF radios that do not have a built-in data capabilities.*



## **RMX-2400**

### **Radio & Multipoint Leased Line Modem**

- **1200 & 2400 baud**
- **Supports 2-wire leased lines**
- **Supports most radios w/PTT**
- **Message collision protection**
- **All software setup - NO POTS**
- **Easy setup: No special program**
- **Audio monitor jack**
- **Wide input power range**
- **3 Year Factory Warranty**

**RMX-2400** modems provide a reliable means of sending data over UHF/VHF radios and leased telephone lines. The modems operate at data rates of up to 2400 baud, twice the speed of a Bell 202 style modem. The modem is field configurable without special software; simply using Windows HyperTerminal sets all configuration parameters. An audio monitor port and LED status indicators simplify and reduce the time to troubleshoot and resolve system communications problems for maximum up time.

#### **Easy Setup**

RMX-2400 modems have a simple built-in short configuration menu stored in nonvolatile EEROM memory. There are no batteries to replace. All configuration parameters including input, output and monitor levels and interface timing and delays are software settable - no trimpots are used.

#### **Flexible**

With RMX-2400s, one modem satisfies both radio and leased line requirements. Nearly any radio with a push-to-talk input can become a data radio. Unlike older dumb modems, RMX-2400 modems have error checking and arbitration for reliable point-to-multipoint and peer-to-peer systems. RMX-2400 modems are fully MODBUS compatible.

#### **Low-power**

RMX-2400 modems are ideal for solar installations. They consume very little power and operate from DC inputs of 8 to 30Vdc.

#### **A tough small package**

RMX-2400 modems come in an extruded aluminum enclosure for long-life in rugged environments. Their footprint is less than half the size of any other modem in their class for tight panels and retrofits. All I/O points and power connections are transient protected and use removable 9-pin 'D' connectors and industry standard terminal blocks. RMX-2400 modems are backed by a unique 3-year factory warranty.



**Industrial Control Links**  
**(800) 888-1893 [www.iclinks.com](http://www.iclinks.com)**

# RMX-2400 Radio & Multipoint Leased Line Modem

## GENERAL SPECIFICATIONS

<b>Radio/Leased-line Data Rate</b>	1200 & 2400 Baud
<b>Host (DCE) Data Rate</b>	2400, 4800 & 9600 baud
<b>Operating Mode</b>	Half or Full Duplex (Half is standard)
<b>Operation</b>	Automatic message packetizing
<b>Character Gap Timing</b>	0 to 2.55 seconds, adjustable in 10mS increments
<b>Recommended Audio Bandwidth</b>	2.0KHz @ 1200baud (-1dB) 3.0KHz @ 1200baud (-1dB)
<b>Bit Error Rates @ 20dB SNR</b>	1.0 x 10 <sup>-8</sup> @ 1200/2400 baud
<b>Bit Error Rates @ 12dB SNR</b>	2.5 x 10 <sup>-4</sup> @ 1200 baud 1.5 x 10 <sup>-3</sup> @ 2400 baud
<b>Message Buffer</b>	232 bytes (max message length)
<b>Test Tone</b>	2400Hz, programmable ON time, 0.1 to 25.4 seconds
<b>Audio Monitor (headphone out)</b>	0 to 250mVrms (>600ohms)
<b>Data Interface (DCE)</b>	RS-232 compatible (TX/RX only) DB-9 female
<b>LED Status Indicators</b>	TXD - Transmit Data RXD - Received Data CD - Carrier Detect TXEN - Transmit Enable (to key radio) ST - Status - power, operating "heartbeat" and configuration mode indicator
<b>Enclosure</b>	Extruded aluminum case, sheet aluminum front & back plates
<b>Power</b>	8 to 30Vdc, 0.3 watts maximum
<b>Power Connector</b>	0.2" (5.08mm) removable terminal block (shared with radio and leased-line I/O and DC power)
<b>Operating Temperature Range</b>	-40°C to +70°C
<b>Dimensions</b>	1.30" x 3.45" x 3.45" 33mm. x 88mm. x 88mm.

## RADIO OPERATION

<b>Interface Signals</b>	Audio Input Audio Output Push-to-talk Carrier Detect (optional)
<b>Audio Input Level</b>	10mVrms to 1.27mVrms adjustable in 10mV steps
<b>Audio Output Level</b>	30mVrms to 1.27Vrms adjustable in 10mV steps
<b>Audio Output Load</b>	1,000 ohms or greater
<b>Push-to-talk Lead Delay</b>	0 to 2.55 seconds adjustable in 10mS increments
<b>Push-to-talk Trail Delay</b>	0 to 2.55 seconds adjustable in 10mS increments
<b>Push-to-Talk Interface</b>	FET transistor switch to ground 100Vdc max., 300mA max
<b>External Carrier Detect</b>	Contact closure to ground 10Kohm pull-up to 5Vdc
<b>Interface Connector</b>	0.2" (5.08mm) removable terminal block (shared with leased-line interface and DC power)

## LEASED-LINE OPERATION

<b>Interface Signals</b>	2-wire, 600 ohms
<b>Audio Input Level</b>	10mVrms to 1.27mVrms adjustable in 10mV steps
<b>Audio Output Level</b>	30mVrms to 1.27Vrms adjustable in 10mV steps
<b>Interface Connector</b>	0.2" (5.08mm) removable terminal block (shared with radio audio input/output and DC power)

## ORDER PART NUMBER:

**94-1024** RMX-2400 1200/2400 baud Radio and Leased-line Modem