

# SIMREX Corporation

## DataMover™ 170™ Wireless Modem Card

170 Controller  
Wireless / Wired  
Modem Card

# WIRELESS traffic CONTROL



### CARD FEATURES

- Fits Directly into 170 & 179 Controller Modem Slot.
- Compatible with All Existing 170 & 179 Controllers
- No External Power Supply Required
- 4 Wire/2 Wire FSK Interface (170™)
- Full FSK (Model 400, 404, 400NY) Modem Feature Set.
- **Ethernet Interface Option**

### RADIO FEATURES

- Variable RF Output up to Maximum FCC Limit of 1W.
- License Free, Robust, Spread Spectrum Technology
- Forward Error Correction (FEC)
- Up to 25 Miles Range
- Store and Forward Repeater Capability with Self Healing Networks.
- Transparent to asynchronous protocols.
- Network Wide Data/Diagnostics Compatible with SIMREX DataMover SS Radios
- Separate Data and Diagnostics ports.

### Applications

- Broken Copper Line Bridging
- Existing System Wireless / Wired Expansion.

### SIMREX..Global wireless solutions

For almost 3 decades, SIMREX Corporation's wireless products have been providing wireless networking solutions with applications in SCADA, telemetry, telecommunications, mobile data and online transaction markets. SIMREX Corporation provides licensed and unlicensed frequency solutions, installed worldwide.

### Product Overview

SIMREX Corporation has created the DataMover 170™ by integrating its unparalleled DataMover SS spread spectrum wireless modem and a Model 400 compatible FSK modem in a 170 Controller Modem Rack Card. The 170 Card form factor provides the ultimate in system integration flexibility in a high-speed, compact license-free wireless solution.

### Why Consider a DataMover™ 170™ Solution?

- **Flexibility and rapid installation.** Quick return on investment due to "Plug and Play" installation, and no data or power wiring.
- **Performance under the most adverse conditions.** Robust design provides excellent performance in the face of interference or difficult signal paths.
- **High system performance and data integrity.** Robust construction, digital signal processing (DSP) technology with adaptive equalization, automatic CRC/ARQ and powerful forward error correction (FEC).
- **"Zero" Footprint.** Fits in the place of the existing model 400 modem while providing 400 modem functionality and wireless data link.
- **170 Network Functionality.** SIMREX DataMover 170™ implements HOST or Local 170 network nodes with either MASTER, REMOTE or REPEATER radio configurations. Multiple repeaters can exist, preventing a single radio failure from disabling a network.
- **Full Model 400/404/400NY Modem compatibility** with support of Anti-Streaming, Softkey, 2/4 wire operation and variable delays on RS-232 signaling lines.
- **SIMREX network-wide diagnostic software** reduces the cost of managing the network infrastructure by eliminating trips to the field. Provides a non-intrusive means of maintaining link and network performance.
- **SIMREX DataMover 170™ is a price/performance leader** offering flexibility and reliability for all 170 controller network topologies.

# DataMover™ 170™ Wireless Modem Card Specifications

**Frequency Band** 902-928 MHz ISM band

**Physical and Environmental**

Dimensions Standard 170 Controller Modem Card  
(Approx. 9.65 D x 6.30 W x .85 H inches)  
(Approx. 245 D x 160 W x 22 H cm)

Input Power Powered from 170 Card Cage  
+12V 500 mA, -12V 60mA

**Transmitter**

Power Output 1W (30 dBm) , user selectable lower power levels.

Modulation CPFSK

**Receiver**

Sensitivity -110 dBm (1 x 10<sup>-6</sup> BER) typical

Error Detection CRC16; Resend on Error

Interference Avoidance 64,000 hop patterns selected automatically via network address

FEC, CRC/ARQ and/or Multiple Packet Transmits

Excellent Strong Signal (interference) Characteristics

Band Segmentation for Friendly Coexistence with Other Services such as LMS

**Data**

Interface RS-232 and 170 Controller backplane.

Usable Throughput 115.2 kbps

Port Speeds 1.2 to 115.2 kbps

Ethernet Option

**Connectors** Power (170 backplane), Diagnostics (RJ11), Diagnostic data (DB9), RF(TNC), Ethernet (RJ45-10baseT)

**Operating Modes**

Point-to-Multipoint Master  
Remote  
Repeater Extension (Store and Forward)

- Unlimited repeaters
- self healing networks

**Network Management**

Diagnostics, Spectrum Analyzer

Centralized network control eliminates site visits

Create store-and-forward configurations

Compatible with other SIMREX DataMover products

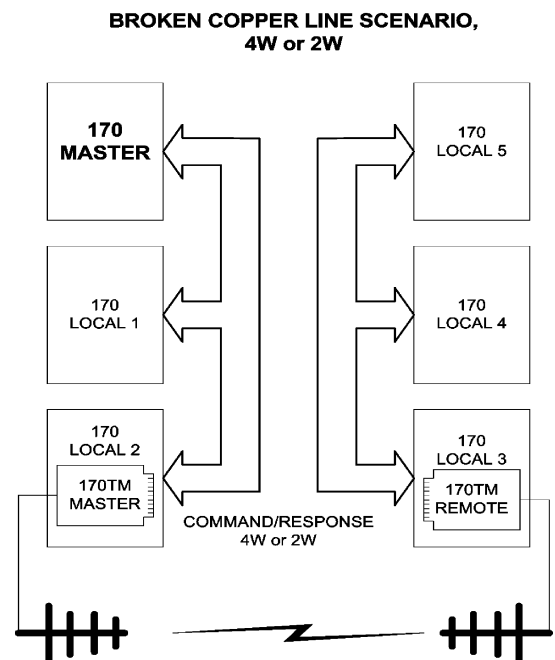
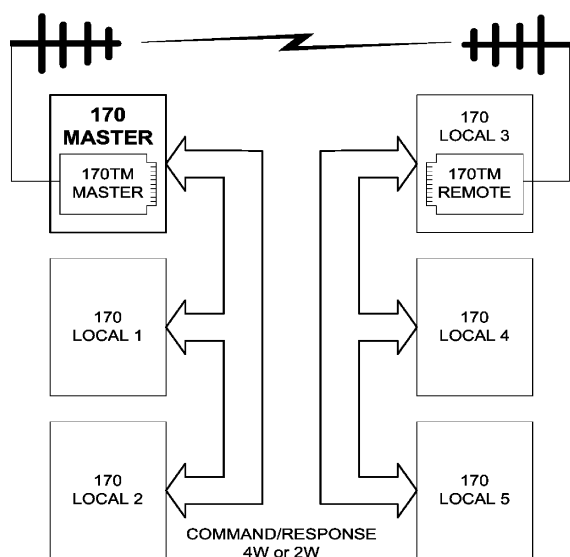
**Agency Approvals**

FCC Part 15 Approved

Industry Canada Approved

**Model 400/404/400NY MODEMS**

Features: Models for 1200, 1800, 2400 FSK operation  
Transformer Isolation  
Anti Streaming, Soft Key  
Variable Handshake delays.



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