SIMREX Corporation
DataMover™ 170TM 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 (170TM)
- 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, tele-communications, mobile data and online transaction markets. SIMREX Corporation provides licensed and unlicensed frequency solutions, installed worldwide.

Product Overview

SIMREX Corporation has created the DataMover 170TM 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™ 170TM 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 170TM 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 an non-intrusive means of maintaining link and network performance.

- **SIMREX DataMover 170TM is a price/performance leader** offering flexibility and reliability for all 170 controller network topologies.

DataMover™ 170TM 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^{-6} 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)
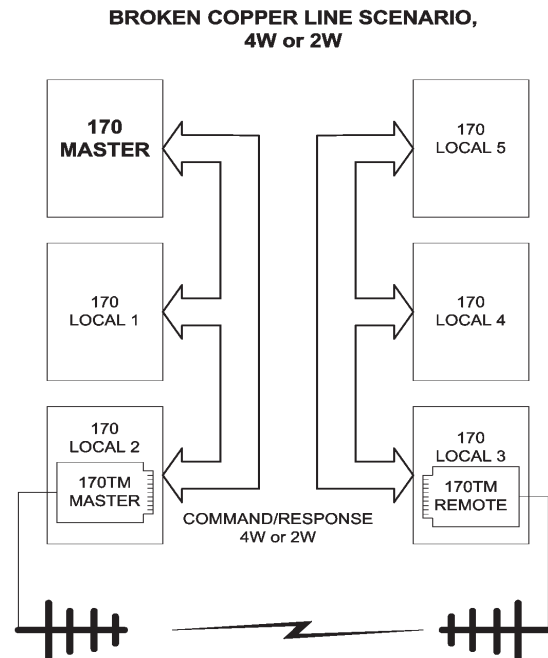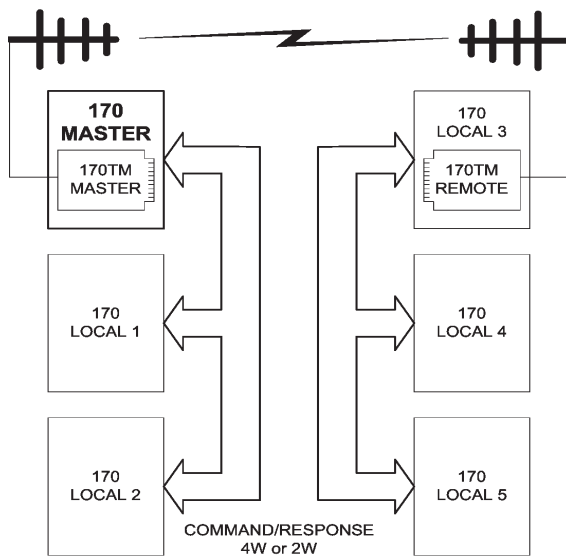
Operating Modes

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.

BROKEN COPPER LINE SCENARIO,
4W or 2W

2131015