

SIMREX Corporation

DataMover™ DR(M) Wireless Modem Card

Detector Rack
Wireless / Wired
Modem Card



WIRELESS traffic CONTROL

CARD FEATURES

- Fits Directly into Loop Detector Rack Card Slot.
- No External Power Supply Required
- 4 Wire/2 Wire FSK Interface (DRM)
- Full FSK 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.

Other Packaging Options

- Pole Mount - NEMA 4X Fiberglass Enclosure - 12" D x 12" W x 6" H
- Shelf Mount - Standalone
Approx. 8.5" D x 5.0" W x 2.0" H

Wireless / Traffic / Control

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 DR(M) by integrating the unparalleled DataMover SS spread spectrum wireless modem and a full featured FSK modem in a Loop Detector Rack form factor card. The DR(M) Card form factor provides the ultimate in system integration flexibility in a high-speed, compact license-free wireless solution.

Why Consider a DataMover™ DR(M) 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.
- **Traffic Network Functionality.** SIMREX DataMover DR(M) implements HOST or Local network nodes with the radio configurable as MASTER, REMOTE or REPEATER. Multiple repeaters can exist, preventing a single radio failure from disabling a network. Multi-hop repeater configuration is possible.
- **Full Featured FSK Modem compatibility** with support of Anti-Streaming, Softkey, 2/4 wire operation and variable delays on RS-232 handshake lines.
- **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 DR(M) is a price/performance leader** offering flexibility and reliability for all traffic controller network topologies.

DataMover™ DR(M) Wireless Modem Card Specifications

| | |
|-----------------------------------|--|
| Frequency Band | 902-928 MHz ISM band |
| Physical and Environmental | |
| Dimensions | Standard Loop Detector Card (Approx. 7.32 D x 4.50 W x .85 H inches) (Approx. 186 D x 114 W x 22 H cm) |
| Input Power | Powered by Detector RackCard Cage +24V 260 mA |

Transmitter

| | |
|--------------|---|
| Power Output | 1W (30 dBm) , user selectable lower power levels. |
| Modulation | CPFSK |

Receiver

| | |
|--|--|
| Sensitivity | -110 dBm typical |
| Error Detection | CRC16; Resend on Error |
| Interference Avoidance via network address | 64,000 hop patterns selected automatically |
| | 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/or FSK 2-wire/4-wire. |
| Port Speeds | 1200 to 115.2 kbps |

Connectors

Power (DR 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 |
|---------------------|--|

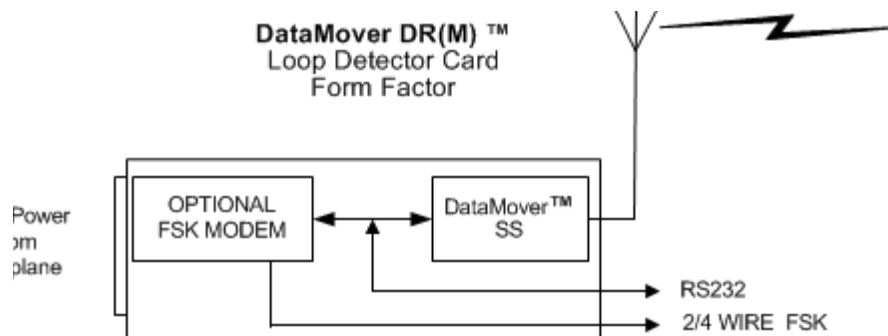
Network Management

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 |

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



SIMREX CORPORATION

SALES & ENGINEERING

PHONE (480) 926-6069

WWW.SIMREX.COM

MANUFACTURING & SERVICE
1223 WILLIAM ST.
BUFFALO, NEW YORK 14206 USA
PHONE (716) 206-0174
FAX (716) 852-1223

SIMREX DataMover products are manufactured under a quality system certified to ISO 9001. SIMREX reserves the right to make changes to specifications of products described in this data sheet at any time without notice and without obligation to notify any person of such changes.
© 2004 SIMREX Corporation

2131015