

# SIMREX Corporation

## DataMover™ Transaction LR Series

On-Line Transaction  
Processing Network  
Remote Radio

# INTELLIGENT wireless DATA



### TRANSACTIONAL DATA APPLICATIONS

- Lottery Networks
- Automated Teller Machines (ATM)
- Branch Banking
- Water Management
- Back-up Systems
- Gas and Oil SCADA
- Points of Sale (POS)
- Electric Distribution Automation

### System Overview

A SIMREX DataMover Transaction system offers intelligent wireless networking products and network management software to support real time applications such as lottery terminals, ATM machines, POS terminals, water, gas and oil SCADA, etc. The Transaction On-Line Transaction Processing (OLTP) system is a highly efficient wireless implementation that employs intelligent radios at each end of the wireless network. A Transaction point-to-multi-point system is organized in cells. Each cell consists of one LM master station and multiple LR remote radios managed by DataMover NMS (Network Management System) software. Multiple master stations are typically connected through a WAN to one or multiple processing centers.

Transaction integrates into existing customer networks allowing the wireless network to seamlessly coexist with a wired network infrastructure. It provides intelligent network support for real time applications with a data transfer rate of up to 19.2 Kbps.

Intelligent / Wireless / Data

### SIMREX..Global wireless solutions. Transaction Wireless Data

For almost 2 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 solutions, installed worldwide.

### Product Overview

The DataMover Transaction LR family of radios utilizes DSP technology to offer a highly efficient radio network with extended range capability to support bursty data applications.

DataMover Transaction LR is based on our reliable family of licensed narrowband radios (200 MHz to 960 MHz) and unlicensed spread spectrum radios (900 MHz) that have made SIMREX a leader in the wireless industry.

The DataMover Transaction LR is a wireless remote transceiver that supports most standard networking protocols.

The Transaction LR single port can be remotely configured via software to run one of many synchronous or asynchronous serial protocols as well as IP over Ethernet<sup>1</sup>.

The proprietary CADP (Collision Avoidance Data Protocol) radio protocol runs simultaneously and independently from the user data port protocol. The CADP radio protocol ensures fair and immediate network access to all remotes sharing the wireless media. It also has the functionality required to provide a reliable data delivery service in a potentially noisy radio environment.

With its collision avoidance mechanism CADP virtually eliminates unnecessary retries and maximizes user data throughput. This protocol greatly enhances data capacity in comparison to standard CSMA solutions.

When a polled protocol is configured on the user data port, a spoofing mechanism prevents propagation of empty polls across the radio network thus saving transmission resources for actual data traffic. The form of spoofing also enhances overall system capacity in comparison to typical over-the-air solutions.

### Why Consider a DataMover Transaction Solution?

- Carrier-rated reliability that supports mission critical revenue producing applications. The DataMover Transaction Series is manufactured under ISO 9001 certification.
- DataMover Transaction LM's architecture offers a redundancy option at the master station for increased availability
- DataMover NMS monitors every point on the network. With a Windows based GUI it offers complete control and updated information to manage the network: alarms, statistics, diagnostic tools and remote control functionality
- Ease of integration – DataMover Transaction is compatible with standard WAN transport protocols. Its multiprotocol capability encompasses the most comprehensive suite of protocols
- Efficiency – DataMover Transaction operates on a single radio frequency allowing you to double the number of networks running on existing frequency pairs or to cut in half the expense to acquire new frequency pairs. Its multiprotocol capability reduces the need to support parallel networks for different services
- Rapid deployment – reduces time to revenue
- Flexibility to incorporate both licensed and license-free (spread spectrum) radios in the same system

# DataMover™ Transaction LR Remote Radio Specifications

## Physical Interface

Serial RS-232/V.24 (DB-25F, DCE)  
Ethernet<sup>1</sup> 10 BaseT (RJ-45, DTE)

## Protocols

CADP (Collision Avoidance Data Protocol) over-the-air protocol with collision avoidance.  
IP over Ethernet<sup>1</sup> (IEEE 802.3, IPv4, ICMP, ARP)  
SLIP  
X.25  
X.28 Async PAD (X.3/X.28/X.29)  
SDLC  
HDLC  
Modbus  
DNP.3  
CCA (Clear Channel Async)  
Other protocols available on request (BSC, Poll Select, Tinet, Visa1, Visa 2)

## Transceiver Options

OPTION	FREQ. RANGE	RATE (kbps)
LR-2	220-240 MHz	3.2 - 19.2
LR-4	330-512 MHz	4.8 - 19.2
LR-9	800-960 MHz	9.6
SR-9	902-928 MHz	19.2 (FHSS)

(Consult transceiver specifications for details)

## Mechanical

Case: Rugged die cast aluminum  
Dimensions: 5.08 x 14.29 x 18.4 cm (2.0 x 5.625 x 7.25 inches) (H x W x D)  
Weight: 1.27 kg (2.8 lbs)

## Environmental

Temperature -30°C to +60°C (-22°F to +140°F)  
Humidity 95% at 40°C (104°F) non-condensing  
Input Power 13.6 Vdc nominal  
Current Tx: 2.1 A at 5 Watts  
Rx: <205 mA (add 0.2 A when using Ethernet)

**Network Management** Windows 95, 98 or Windows NT™ compatible system provides configuration, fault and performance management over a TCP/IP or X.25 connection to master stations, and over-the-air access to the remote stations.

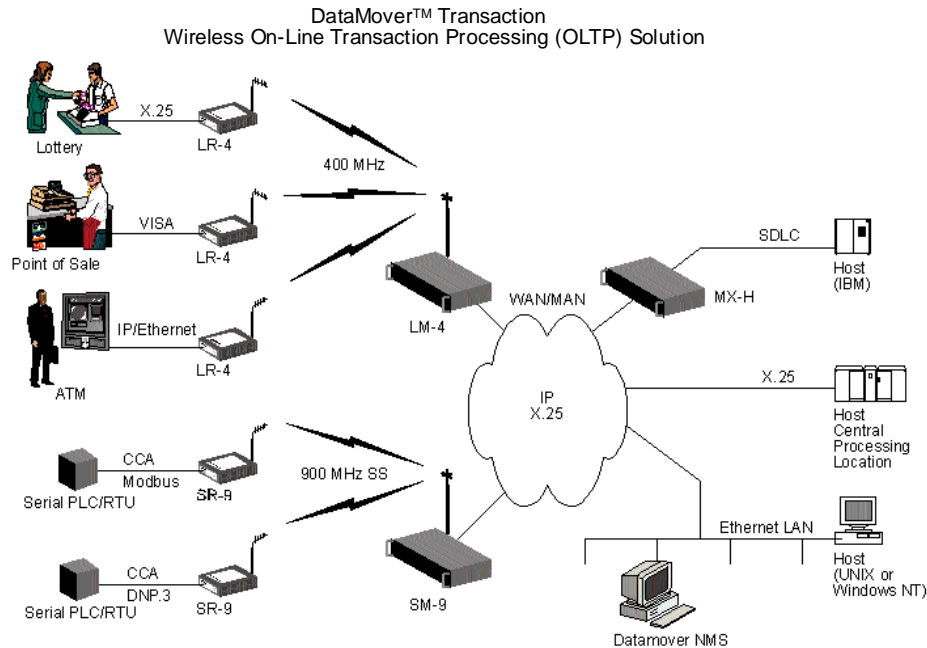
## Agency Approvals

FCC part 101 (licensed)  
FCC part 15 (spread spectrum)  
IC/UL  
ETSI<sup>2</sup>  
CE Mark  
MPT 1411<sup>3</sup>

<sup>1</sup> Serial or Ethernet. Can not be converted.

<sup>2</sup> LR-4 with "E" transceiver @ 4.8 Kbps

<sup>3</sup> LR-4 with "M" transceiver @ 4.8 Kbps



## DataMover Transaction...Intelligent Wireless Data Networking

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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.

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