

SIMREX Corporation

DataMover™ Master Station Series

DataMover TM-4 Master Station
Transceiver 330-512 MHz

DataMover TM-9 Master Station
Transceiver 800-960 MHz

DataMover RM Redundant
Station DSP Radio Chassis

TRANSPARENT w i r e l e s s MASTER



DATAMOVER TM-4/TM-9 FEATURES

- Digital Signal Processing (DSP) Engine
- Software Configurable Modems
- Modular Design with Swappable Power Supply
- Duplexer (Internal, External, None)
- Redundant/Non-Redundant Options



DATAMOVER RM FEATURES

- Increased Reliability
- Uses Two standard DataMover TR Transceivers
- Automatic Switchover to Redundant Transceiver
- Indicator Shows Active Transceiver
- Internal Back-up for AC-Powered Models

APPLICATIONS

- SCADA Telemetry Systems
- Multiple Address Communications
- Gas/Oil Production and Distribution
- Water, Gas and Electric Utilities
- Lotteries
- Traffic Control
- Industrial Process Control
- Railroad Communication Systems

SIMREX..Global wireless solutions. Transparent 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.

DataMover Master Station Series Product Overview

The SIMREX DataMover Redundant, Full-Duplex Master Station Series offers the ultimate in reliability and simplicity for ease of configuration and operation.

The DataMover Master Station Series is the price/performance leader in licensed microwave radio in the 330-512 MHz and 800-960 MHz frequency range. It gives increased throughput, longer-range alternatives for our customers' Multiple Address Systems needs. Transparent and direct asynchronous communication offer real-time communication. No extra software or programming is needed to implement communications from standard asynchronous protocols.

The DataMover Master Station Series may operate as a full duplex, half-duplex or simplex radio and is configurable as a redundant master station or remote radio. When operating as a master station it controls all network parameters of the remotes. The DataMover TM-4 and TR-4 or the DataMover TM-9 and DataMover TR-9 remote transceivers together offer a new level of ease of integration, reliability and performance for our customers' data network systems

DataMover RM Product Overview

The DataMover RM incorporates two DataMover transceivers and power supplies with automatic or manual switch-over capability. On detection of a failure, the DataMover RM switches immediately to the standby transceiver. The switch-over occurs for selectable transceiver alarm conditions. Switch-over also occurs when no valid packets are received in a programmable time-frame of 1 to 30 minutes, or upon loss of power to the operating radio. An internal back-up battery is provided in AC-powered models for continued operation during a loss of primary power.

The DataMover RM Redundant Station is easily maintained with Standard DataMover transceivers that are field-replaceable. The DataMover RM is packaged in a low-profile (2U) metal case that may be placed on a tabletop or rack mounted.

Why Consider a DataMover Master Station Series Solution?

High system performance and data integrity! Through robust construction and digital signal processing technology (DSP) we offer up to 19.2 kbps data throughput.

Reliability! For mission critical needs, system back-up capability is built-in.

Rapid Installation! Quick return on investment due to ease of wireless installation. This licensed radio offers the ability to communicate with any asynchronous protocol without extra software or extra programming.

Performance under the most adverse conditions! Exceptional design provides excellent performance in the face of interference or difficult signal paths. Will accept external bypass high performance duplexers or receive filters.

Network Wide Diagnostics! DataMover Network Management software simplifies tasks and reduces the cost of managing the network infrastructure. Provides a non-intrusive means of maintenance and link monitoring.

DataMover™ Master Station and DataMover RM Specifications

General

Frequency Range:	DataMover TM-4: 330 to 512 MHz DataMover TM-9: 800 to 960 MHz
Tx / Rx Split:	DataMover TM-4: Simplex to 132 MHz DataMover TM-9: Simplex to 160 MHz
Data Interface:	RS-232, DB-25 Female Connector Supports: TXD, RXD, RTS, CTS, DCD, RUS, AUX POWER, DSR, and GND
Frequency Programmability:	6.25 kHz increments to any MAS channel pair
Operational Modes	Async. - Simplex, half-duplex, full- duplex (synchronous available in DataMover TM-4B and DataMover TM-9B)

Transmitter

Frequency Stability:	+/- 0.00015% (1.5 ppm)
Carrier Power:	0.1 to 5 Watts Programmable
Carrier Power Accuracy:	Normal +/- 1.5 dB
Duty Cycle:	Continuous
Output Impedance:	50 Ohms

Receiver

Type:	Double Conversion Superheterodyne
Frequency Stability:	+/- 0.00015% (1.5 ppm)
Adjacent Channel (EIA):	60 dB nominal

Power Supplies

Primary Power:	100-240 Vac (50/60 Hz) 24/48 Vdc (21 to 60 Vdc) 125 Vdc external 12 Vdc external
Power Required:	< 60 Watts nominal

Mode / Diagnostics

Modulation:	Digital / CPFSK
Latency (Rx-Tx-Rx):	10 ms including RTS/CTS delay
CTS Delay:	0-255 msec programmable in 1 msec increments
PTT Delay:	0-255 msec programmable in 1 msec increments
Data Rate (rf):	DataMover TM-4E: 4800 bps DataMover TM-9E: 4800 bps DataMover TM-4A: 9600 bps DataMover TM-9A: 9600 bps DataMover TM-4C: 19,200 bps
Data Rate (data):	110 bps - 38.4 kbps
Bit Error Rate Sensitivity:	DataMover TM-4E: 4800 bps: BER 1x10 ⁻⁶ @-114 dBm typical DataMover TM-9E: 4800 bps: BER 1x10 ⁻⁶ @-113 dBm typical DataMover TM-4A: 9600 bps: BER 1x10 ⁻⁶ @-110 dBm typical DataMover TM-9A: 9600 bps: BER 1x10 ⁻⁶ @-110 dBm typical DataMover TM-4C: 19.2 kbps BER 1x10 ⁻⁶ @-105 dBm typical
Local Diagnostics:	Included in all models
Network-wide Diagnostics:	Optional InSite™ Radio System Management software

Physical

Dimensions:	8.8 cm (3.5 in)(2U) high 43.7 cm (14.3 in) wide 36.3 cm (14.3 in) deep
Weight:	9 kg (19.8 lbs)
Front Panel:	Detachable for convenient location of Keypad/LCD panel
Rack Mount:	Flush or 5 inch offset

Environmental

Temperature Range:	-30°C to +60°C (-22°F to +140°F) at 95% humidity (non-condensing)
--------------------	--

Agency Approvals

DataMover TM-4A:	FCC Part 90 Industry Canada & ENTELA (safety)
DataMover TM-4E:	ETSI: ETS 300 113 EMC: EN 300 279 CE Mark & ENTELA (safety)
DataMover TM-9A:	FCC Part 101 Industry Canada & ENTELA (safety)

DataMover RM Specifications

Physical

Case:	Steel (rack mountable 2U)
Dimensions:	8.9 cm (3.5") high 48.3 cm (19.0") wide 35.6 cm (14.0") deep
Weight:	5.74 kg (12.65 lbs) w/o transceivers 1 kg (2.2 lbs) additional for each DataMover DSP transceiver

Environmental

Temperature Range:	with DC input -30° to + 60°C (-22° to 140°F) with AC input 0° to + 60°C (32° to 140°F)
Humidity:	95% at 40°C (104°F), Non-Condensing

Power Supplies

115/230 Vac with battery backup
12 Vdc (10.5 - 15 Oper. Range)
24 Vdc (18 - 36 Oper. Range)
48 Vdc (36 - 72 Oper. Range)

General

Frequency Range:	Dependent on DataMover DSP transceivers utilized (ordering info shown below).
Data Interface:	RS-232, DB-25 Female Connector Supports: TXD, RXD, RTS, CTS, DCD, RUS, AUX POWER, DSR, Remote switch-over and GND
Alarm Output:	Terminals – dry contacts for AC fail or transceiver switch-over

Transceiver Ordering Options

XCVR Complement:	1, 2 or no DataMover TR transceivers mounted in the chassis
------------------	--

SIMREX CORPORATION

SALES & ENGINEERING
2120 E. NANTUCKETT DRIVE
GILBERT, ARIZONA 85234 USA
PHONE (480) 926-6069
FAX (305) 675-7794

MANUFACTURING & SERVICE
5490 BROADWAY ST.
LANCASTER, NEW YORK 14086 USA
PHONE (716) 206-0174
FAX (716) 204-0476