

# SIMREX Corporation

## DataMover™ SS Traffic

902-928 MHz  
2.406 - 2.482  
GHz Frequency  
Hopping  
Spread Spectrum

# WIRELESS traffic CONTROL



### FEATURES

- High Speed. 1200 bps-115.2 Kbps
- Unparalleled Robustness
  - Forward error correction
  - CRC/ARQ, multiple re-sends
- Industrial Grade - Extended -40 to +70 degrees C temperature range for trouble free operation in extreme environments
- Store and forward - with self healing networks
- Network wide diagnostics - Central network control without the need to visit sites

### Traffic Control

- Transparent to all controller protocols.
- Wide input voltage range 10-25VDC
- Spectrum Analyzer software included.
- Windows based setup software included.
- Remote Diagnostics capability included.
- Interoperable with DataMover 170 and other SIMREX Traffic Controller specific radio modem boards.



Wireless / Traffic / Control

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

For more than 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.

### Application Overview

Today's Traffic Control systems require the reliable transport of data at ever-increasing speeds. Additionally, the need for greater packaging flexibility has redefined the "ideal" wireless platform in many applications. SIMREX is pleased to introduce DataMover SS Traffic, a flexible, high speed, compact licensed-free wireless solution for Traffic applications that require a standalone data link radio or repeater..

### Product Overview

The SIMREX Corporation DataMover SS Traffic utilizes FHSS (Frequency Hopping Spread Spectrum) in the ISM Band of 902-928 MHz or 2.4016-2.4778 GHz to provide reliable long range data transportation at up to 115.2 Kbps. The DataMover SS Traffic provides low latency transparent data communications for traffic controllers and protocols.

Any DataMover SS Traffic can be configured as a MASTER, SLAVE or REPEATER. This allows store and forward data operation to extend the operation range of the network. Multiple repeaters can exist at any level of the network preventing a single radio failure from disabling the entire network. There is no limit to the number of repeaters that can be used.

### Why Consider a DataMover SS Traffic Solution?

- **Controller independant solution.**
- **Interoperable with DataMover 170** and other SIMREX Traffic Controller board level products.
- **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 self-equalization, automatic CRC/ARQ and powerful forward error correction.
- **Flexibility and rapid installation.** Quick return on investment due to plug-and-play installation. License-free radio design with the ability to communicate with any asynchronous data protocol without extra software or additional programming.
- **Performance under the most adverse conditions.** Robust design provides excellent performance in the face of interference or difficult signal paths.
- **Exceptionally small size allows installation inside most enclosures.**
- **SIMREX network-wide diagnostics software** simplifies tasks and reduces the cost of managing the network infrastructure by eliminating trips to the field. Provides a non-intrusive means of maintaining link and radio network performance while you network is operating.
- **Flexible interfaces.** All DataMover SS Traffic radios come equipped with RS-232 for direct connection to most Controllers. RS-485 is available for specialty applications.
- **SIMREX DataMover SS Traffic is a price/performance leader** offering flexibility and reliability for both point-to-point and point-to-multipoint requirements.

# DataMover™ SS Traffic Radio Specifications

<b>Frequency Band</b>	902-928 MHz ISM band 2.406-2.482 GHz ISM band
<b>Physical and Environmental</b>	
Dimensions	(Approx. 3.6 D x 5.1 W x 1.0 H inches) (Approx. 9.1 D x 12.9 W x 2.5 H cm)
Input Power	6 to 30 Vdc
Current Drain	<u>Mode</u> <u>30Vdc</u> <u>13.8Vdc</u> <u>6Vdc</u> Transmit    236 mA   510mA   1.18A Receive    51 mA   100mA   155mA
Sleep Mode	~3mA typical
Temperature Range	-40 to +70 degrees C
Humidity	< 95% RH (Non-condensing)

## Transmitter

Power Output (user selectable)	SS-900: .1 to 1 watt (20dBm - 30dBm) SS-2.4: .1 to .5 watt (20dBm to 27dBm)
Modulation	CPFSK
<b>Receiver</b>	
Sensitivity	-108 dBm (1 x 10 <sup>-6</sup> BER) 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-232/422/485 (User Selectable)
Usable Throughput	115.2 kbps
Port Speeds	300, 600, 1200, 1800, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps asynchronous

## Connectors

Power, User, NMS	2-Pin Phoenix, DB-9 female, RJ11
RF	TNC

## Operating Modes

Point-to-Multipoint	Master Remote Repeater Extension (Store and Forward) - Unlimited repeaters - self healing networks
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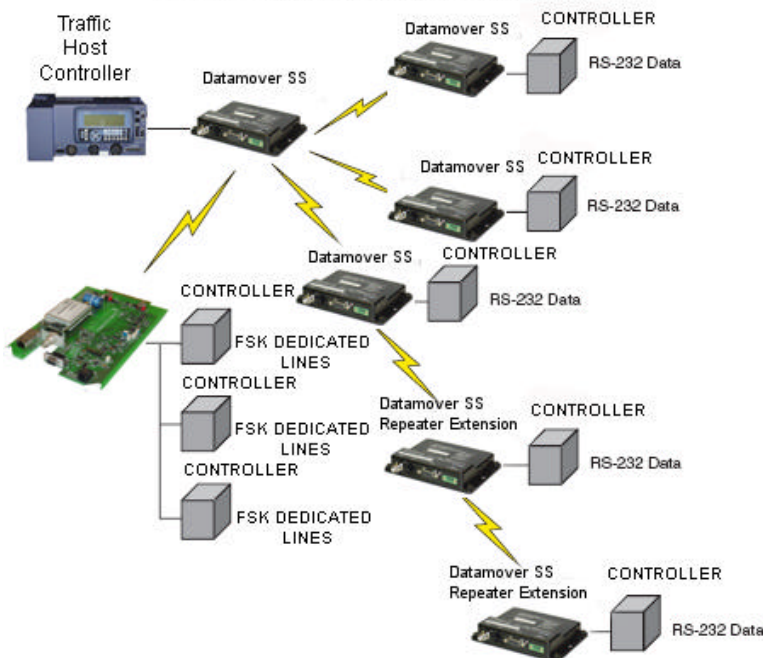
## Network Management

	Diagnostics Centralized network control eliminates site visits Create store-and-forward configurations Compatible with other Simrex products
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## Agency Approvals

FCC	Part 15 Approved
UL/CSA	Class 1, Div. 2 approved* (UL 508, UL 1604)
IC	Approved

DataMover™ SS Traffic Spread Spectrum  
High Data Reliability Traffic Communications



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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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