SIMREX Corporation
DataMover™ SS Traffic

902-928 MHz
2.406 - 2.482
GHzFrequency
Hopping
Spread Spectrum

WIRELESS
traffic
CONTROL

EPAC 300

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.
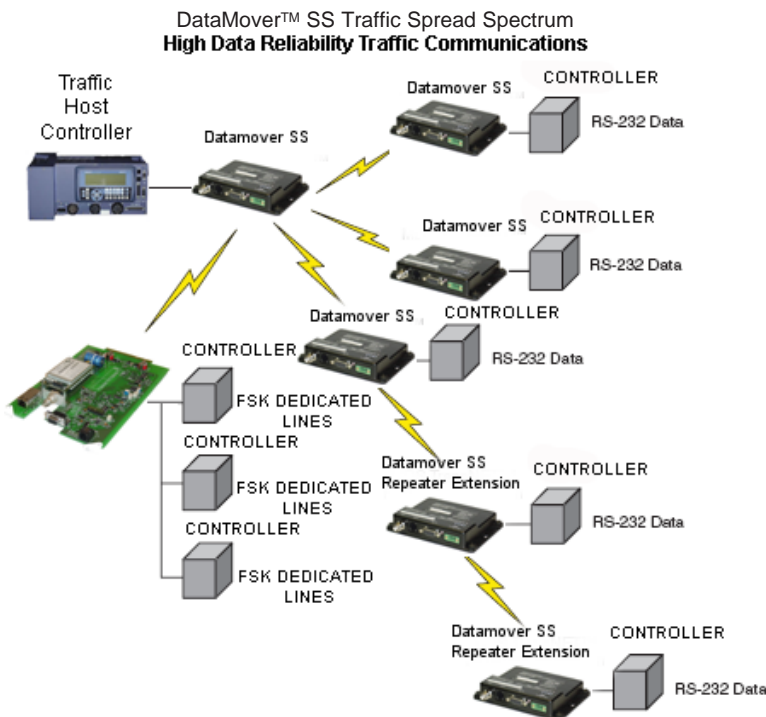
Why Consider a DataMover SS Traffic Solution?

- **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

Frequency Band 902-928 MHz ISM band
2.406-2.482 GHz ISM band

Physical and Environmental

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	Mode	30Vdc	13,8Vdc	6Vdc
	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 SS-900: .1 to 1 watt
(user selectable) (20dBm - 30dBm)
SS-2.4: .1 to .5 watt
(20dBm to 27dBm)

Modulation CPFSK

Receiver

Sensitivity -108 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-232/422/485 (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

Network Management

Diagnostics

Centralized network control eliminates site visits

Create store-and-forward configurations

Compatible with other Simrex products

Agency Approvals

FCC Part 15 Approved

IC Approved

DataMover™ SS Traffic Spread Spectrum
High Data Reliability Traffic Communications