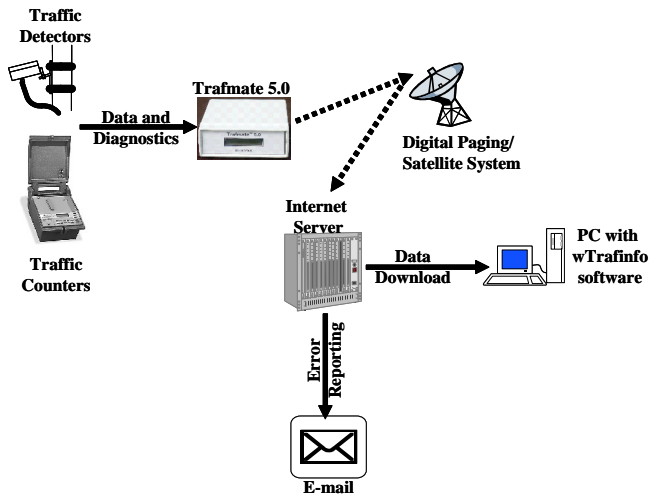


# Trafmate™ 5.0 - SAT

## Wireless Telemetry For Traffic Monitoring

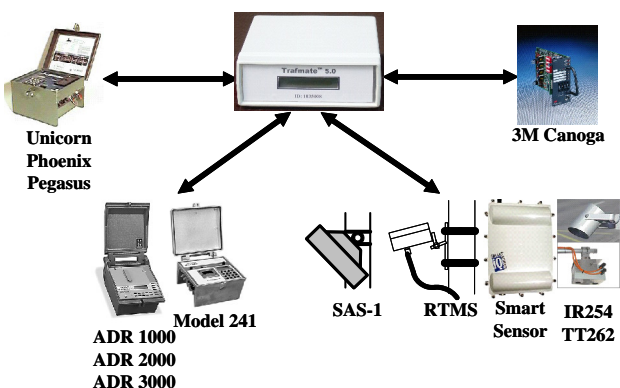
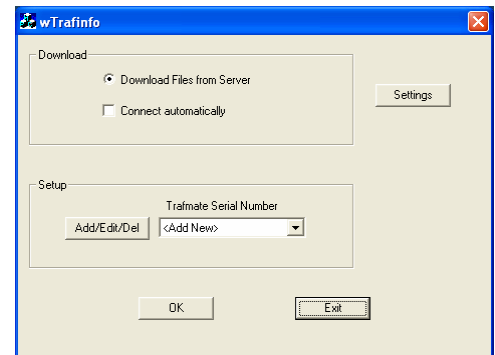


**TraInfo's** wireless telemetry system is a unique blend of wireless communication technology and the Internet. Central to the system is **Trafmate - Transceiver** for monitoring and telemetry.

Trafmate is designed for extremely simple operation. Simply connect the Trafmate to the traffic counter or detector and turn it on. Trafmate downloads daily files from the traffic counter. In case of traffic detectors, it polls every 30 seconds and accumulates the data into a daily file.

This daily file is transmitted wirelessly to a secure Internet server that can be accessed at any time using the wTrafinfo software. The software allows data to be saved either in the Peek's PRN format or in an Excel-compatible CSV format. Binary daily files are transmitted and stored as such.

Trafmate also detects any equipment problems such as counter malfunction or battery problems, and will immediately notify via e-mail. TraInfo's wireless telemetry system allows two-way communication using standard e-mail software. Using a simple Trafmate command set, the status of the counter or detector can be obtained; the battery voltage over the past 7 days can be extracted; and the time clock within the Trafmate as well as the counter can be updated.



Trafmate interfaces with most counters, sensors and a traffic signal loop detector. The Trafmate-SAT works virtually anywhere in the world and utilizes the ORBCOMM system and their constellation of low-earth orbiting (LEO) satellites. For areas outside of or without digital cellular coverage, this satellite-based communication technology provides a cost-effective wireless telemetry system.



TrafInfo Communications, Inc.  
556 Lowell, Lexington, MA 02420  
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# Trafmate™ 5.0 - SAT Specifications

## Power Requirements

Input Voltage: 9-20 VDC (see note below)  
 Current Consumption: 150mA – normal  
 @ 12VDC 30mA – power save mode (between 5PM and 9AM)  
 2.2A – transmit burst

*NOTE: It is important to note that when input voltage goes below 11.5V, the Trafmate firmware places the unit in the power save mode, and remains in this mode until the input voltage rises beyond 12.5V. While in power save mode, communication with the counter/ sensor is halted and the internal satellite transceiver is powered-down.*

## Interface

DB9 (male) RS-232 serial port (with pre-set baud rate based upon counter or sensor interfaced)  
 2.5mm center positive DC plug  
 SMSA (female) connector

## Micro-controller

Processing Speed: 29.4 MHz  
 SRAM: 512K bytes  
 Flash EPROM: 512K bytes

## Satellite Transceiver:

Transit Frequency	148-150 MHz
Receive Frequency	137-138 MHz
Transit databit rate	2400 bps
Receive databit rate	4800 bps
Communication Protocol	ORBCOMM
Antenna	½ wave whip

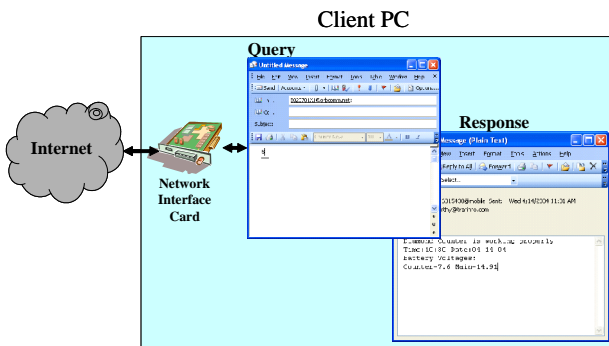
## Environmental

Operating Temp: -40°C to +85°C  
 Humidity: 95% non-condensing

## Mechanical:

Dimensions: 6 inches x 7 inches x 2 inches  
 Weight: 1 lbs.

## Internet-based Two-way Communication



Trafmate 5.0 is capable of two-way communication. It is a Query-Response type communication, where a query is sent to the Trafmate which then sends back a message in response to the query. The query is sent to the Trafmate using standard email client software such as Microsoft® Outlook®. Each Trafmate has a unique email address to which the query is sent to. Trafmate sends back the response to the same email address from where the query was initiated. Each Trafmate query is essentially a character command. For example, to check the status of the counter/sensor, the character 'S' is used. This query character is simply entered in the body of the email and sent to the Trafmate email address. There is no need to enter anything in the subject line.

The following query commands are supported by Trafmate 5.0:

- S – to obtain the status of the counter/sensor that is interfaced to the Trafmate
  - B – to obtain the minimum and maximum voltages of the main power source (such as a battery) over the last 7 days
  - T – to update the Trafmate clock as well as the counter/sensor that the Trafmate is connected to
  - D – to download the daily file for a specific date
- (please refer to the Trafmate user's guide for more details on the above query commands as well as any additional commands supported for specific counters and sensors).



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