

SiteTRAK[™] Remote Site Manager

The plant floor interface for real-time database systems

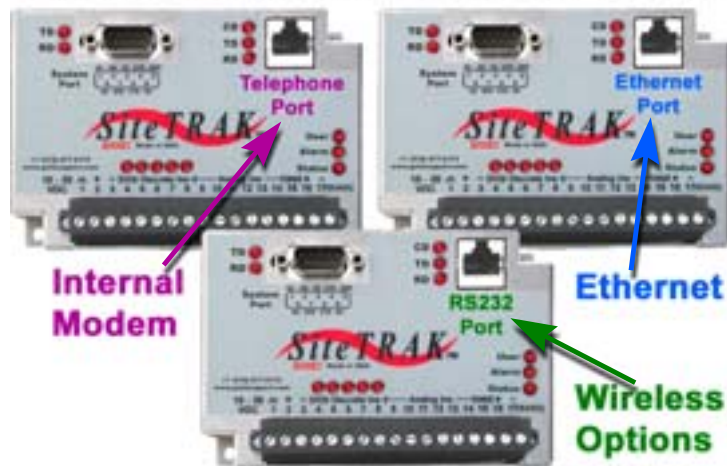


- **Real-time Internet Databases**
(E-business distributed data systems)
- **Vendor Managed Inventory**
(Detect shortages and track usage)
- **Remote Process Monitoring**
(Alarm reporting and datalogging)
- **HVAC and Energy Management**
(Demand factor and usage analysis)
- **Environmental Monitoring**
(Data collection and reporting)
- **Low cost OEM applications**
(Data enable industrial products)

[See page 4 for details](#)

Three SiteTRAK models give you a flexible choice of communications. See page 3.

Three models to choose from!



SiteTRAK puts an end to manual data recording and costly site visits.

A Powerful Solution for Remote Site Management

SiteTRAK™ completes your new strategy to better utilize information...

...to make fast, cost-effective decisions that give you a competitive edge. SiteTRAK is the plant floor “front-end” that brings real-time data from distributed industrial locations into your central information server. SiteTRAK is an innovative combination of RTU (Remote Terminal Unit), datalogger, real-time database client, and telemetry interface in a compact installation-ready package.

SiteTRAK is a Powerful RTU

SIXNET has been a major Remote Terminal Unit supplier for the past twenty years. All of this experience is designed into our 21st century RTU.

Flexible communications, rugged industrial I/O interfaces, alarm reporting, and numerous other field-proven features are packed into this powerful Remote Site Manager.

SiteTRAK is a Datalogger

SiteTRAK is configurable with optional SIXNET Sixlog software to gather time-stamped historical data into protected Flash memory and upload it into your central database in universal ASCII format.

Data can be pre-scaled into engineering units and identified with meaningful tag names to simplify your data management and save you valuable time.

SiteTRAK is Internet and Intranet Ready

Poll each SiteTRAK using its IP address or phone number; it can also be a client to your central server or database.

SiteTRAK contains an internal firewall for secure operation as a low-cost Internet client.

SiteTRAK can “Report on Exception” to reduce polling traffic and report transactions and events in real-time.

SiteTRAK Open Communication Options

Some locations are Ethernet / Internet wired, some are not.

Sometimes phone lines are available and sometimes a wireless link is the only answer.

SiteTRAK provides the open choice of communications that is necessary for a successful distributed data management strategy.

SiteTRAK is Plug-and-Play Profitable

Quickly configured with an easy-to-use Windows wizard, SiteTRAK can be installed in minutes. No programming is required and field training requirements are greatly reduced. SiteTRAK turns time savings into cost savings. The “cookie cutter” installation capabilities of SiteTRAK will delight your operations planners.

● **Dial Out Upon Alarm**

High or low level or discrete state
Send user-defined ASCII messages
Use an internal or external modem

● **Time-Stamped Datalog Files**

1 Megabyte of Flash memory
Battery-backed real-time clock
Simple ASCII data file format

● **Report Real-time I/O Status**

6 analog inputs (4-20 mA, 10 bit)
4 discrete inputs (10-30 VDC)
1 battery-backed discrete output
Expandable with one RemoteTRAK I/O
Modbus or other protocol

● **Internal Telephone Modem**

Full featured SIXNET VT-MODEM-1WW
PC and Windows compatible
Certified for worldwide use

● **Ethernet TCP/IP**

Internet / Intranet ready
Ideal for broadband systems
Windows and SCADA ready

● **Firewall Protected Client**

Let the Internet carry your data
Easiest way to access your server
Internal firewall for full protection

● **One or Two RS232 Ports**

Supports external modem or radio
I/O slave port for a SCADA system
Laptop PC port for field service

● **Easy Installation and Setup**

Runs on 10–30 VDC power or batteries
DIN rail or flat panel mounting
Removable terminals for easy service

● **Rugged Environmental Specifications**

Full -30° to +70°C operation
Zone 2 (Cl. 1 Div. II) hazardous locations
Marine and offshore certified by DNV
UL, CSA, CE – 100% global-ready

**Need a low power RTU or remote datalogger?
See page 3.**

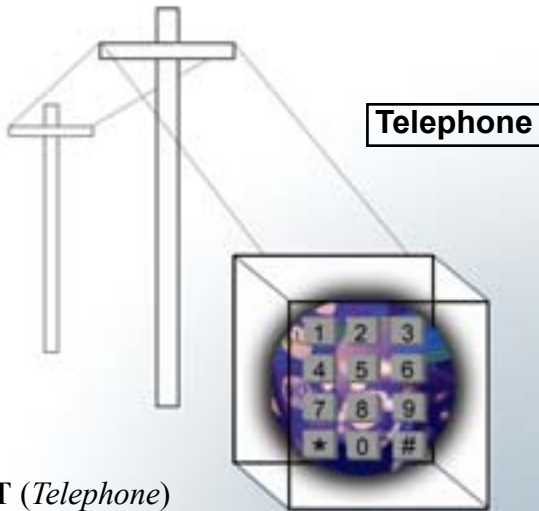
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SiteTRAK Communications For Every Application

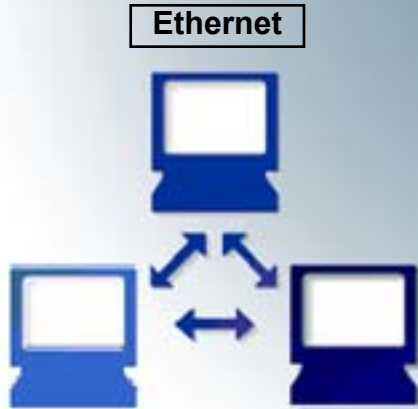
Some locations are Ethernet/Internet-wired, some are not. Sometimes phone lines are available and sometimes a wireless link is the only answer. In all likelihood, your system will contain a combination of communication links suited to the conditions at each client site. SiteTRAK offers a flexible choice of communications; simply select the right options for each location.



The **-T (Telephone)** version has an internal (self-contained) SIXNET world-wide Industrial Modem. Both dial-in ("Auto-answer") and dial-out ("Report on Exception") modes are fully supported.



The **-S (Serial)** version provides a wireless-ready serial port that plugs into the external modem of your choice. Wireless GSM, cellular, spread-spectrum, and most other wireless communication standards are supported.



The **-E (Ethernet)** version directly connects to your on-site Ethernet network. SiteTRAK can be a master or slave node on any Ethernet SCADA network; or it can report to the central network server as a client.



Low Power Option

Ideal for



Battery powered

or



Solar panel powered

The **-SL** version provides SiteTRAK functionality while consuming less than 200 milliwatts of power. This low power RTU is ideal for battery or solar powered monitoring sites. Connect to your choice of external modem.

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SiteTRAK Applications

SiteTRAK Reports Electric Power Demand

The electric power industry is adopting SiteTRAK as the ideal way to monitor power demand at remote customer sites. Such monitoring is frequently used as a means to offer incentives designed to reduce the burden on the power grid during periods of peak usage. This low cost RTU counts pulses generated by the existing power meters and logs the accumulated power usage in time-stamped data records which are reported in real-time or "near real-time" to the utilities' central data server.

Utilities using SiteTRAK embrace the unique SIXNET concept of reporting data over the Internet. This low-cost interface eliminates the monetary and logistics problems of connecting to a large number of remote client sites. Each SiteTRAK, acting as an Internet client, reports transactions to the central server as simple Internet (TCP/IP) data packets. The utilities no longer need to maintain "modem farms", and the responsibility of maintaining an inexpensive Internet connection is readily accepted by customers who are eager to benefit from energy conservation programs.

Of course it is also possible to poll the SiteTRAK stations or have them report on exception through any number of classical means (telephone, wireless, etc.) as either a master or slave on a distributed SCADA network. In addition to counting meter pulses, some utilities offer value-added data services to their customers using the analog inputs that are standard on every SiteTRAK. As a fully-featured datalogger, SiteTRAK can be configured to store weeks of data in permanent Flash memory.



Read power demand in real-time over the internet

SiteTRAK Tracks and Reports Chemical Usage



Automate your Vendor Managed Inventory System

Chemical companies often distinguish their product offerings from the competition by providing value-added services to customers. SiteTRAKs are used to monitor chemical usage and important process variables which help their customers realize more value from the chemicals they buy. The optional datalogging features of SiteTRAK record operating conditions which forms the basis for valuable reports and analysis provided to the customer. Alarm detection in the SiteTRAK signals unfavorable conditions before serious problems occur making it unnecessary to have personnel visit the site on a regular basis.

SiteTRAK also monitors customer tank levels and will automatically reorder chemical inventory when needed. This vendor managed inventory function gives chemical companies yet another way to add value for their customers while again reducing operating expenses by eliminating expensive site visits to check inventory. At the same time lower delivery costs are realized as a result of the improved logistics.

Currently, much attention is being placed on direct Internet connections and wireless interfaces to sites that are difficult to reach using conventional communications means. SIXNET addresses this by offering a diverse range of communications options with the SiteTRAK which simplifies the logistics for the major chemical companies that use SIXNET RTUs.

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SiteTRAK Applications

SiteTRAK Replaces Chart Recorders Functions as a modern low cost remote datalogger

Install SiteTRAK dataloggers on the plant floor to replace your obsolete chart recorders and manual record keeping systems with a reliable and automated system. SiteTRAK logs process variables (analog values), machine states (discrete inputs) and counter values in time stamped records, safely stored in Flash memory. Eliminate the frequent visits to the plant floor to collect the data by connecting the SiteTRAKs to an Ethernet network. Sixlog data server software running on a Windows computer collects the time stamped data records and archives them in files that are organized by location and date. (More details on this easy-to-use software are given below.)

SiteTRAK protects your data by retaining a backup file in its Flash memory. Should you lose your communications link or if the archiving computer goes offline, data can be retrieved later from the SiteTRAK memory. Sixlog data is stored in standard database format which opens a world of possibilities for data sharing to make your processes more effective and save you time.

SiteTRAK also has a built in alarm detection and reporting capability that can alert you to out of tolerance or fault conditions as soon as they occur. In more advanced applications, SiteTRAK can report real-time results to a SCADA system through industry standard Modbus messaging.

Data Server Software Interfaces to Your Database

Gather the plant floor data collected by distributed SiteTRAK stations and archive it in a Windows-based computer or load it directly into your central database. Sixlog data server software receives time stamped data transactions from SiteTRAK and VersaTRAK RTUs through the Internet, an in-plant Ethernet network, or a modem, and passes it to your data storage system. There are two common ways to use this versatile software:

For data archiving systems, log files are automatically created to store the historical data. Organized by location and date, you can easily view the data with Microsoft Excel or any other software that can read a text file. This simple and low cost solution will replace your legacy chart recorders with a modern computer solution.

This server software will also format the received data for upload to your central database. Data is stored until your system, acting as the master, retrieves it. The source code for the server interface is supplied, to give you full control over the interface. If you are using an operating system other than Windows, or if you have special requirements, this open-source interface can be easily ported to meet your requirements. Contact SIXNET for more information.



Put an end to the manual labor of data collection!

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SiteTRAK Automates Remote Building Monitoring

It's important to know that your building automation systems are running smoothly, but it is costly and difficult to have someone on-site all the time. SiteTRAK will monitor key performance indicators for you and report status and alarm conditions to your central monitoring facility. In effect, SiteTRAK is a tireless 24 hour-a-day watchman. SiteTRAK is ideal for watching HVAC systems, monitoring the health of critical equipment, overseeing security, and a multitude of other tasks.



*Let SiteTRAK be
your watchman --24/7*

Broadband networks are bringing Internet-connected Ethernet directly to homes, offices and industrial complexes. Ethernet-enabled SiteTRAKs are connected directly to a building's existing network as Internet clients. These pseudo-web browsers deliver real-time information to the central server with zero marginal communication cost. Because they are acting as clients, SiteTRAKs use local or "borrowed" IP addresses; sparing the expense of attaining static IP addresses for each location. And as clients, SiteTRAK data easily passes through firewall protection hardware.

Building automation applications for SiteTRAK are springing up everywhere. Apartment complex (multi-family residences) buildings, remote wireless telephone repeaters, greenhouses and other agricultural applications, pumping stations, and security systems are just a few of the places that SiteTRAK can save you money and give you real-time information flow.

SiteTRAK Prevents Expensive Compressor or Pump Failures

SiteTRAK makes it possible to avoid expensive compressor or pump failure with effective preventive maintenance. By enabling you to monitor their operation remotely, the expense for frequent on-site inspections is eliminated.

4-20 mA signals representing operating parameters and switch closures (indicating machine status) will directly connect to SiteTRAK. All process variables are logged in time-stamped historical trend files. Critical temperatures are measured by thermocouples, which are connected to a SIXNET RM-8INS-U instrumentation input module. That module is connected to the I/O expansion port on the SiteTRAK.



Predict failures before they occur.

SiteTRAK automatically checks for preset alarm conditions. Additional datalog records are stored for each alarm condition which creates a traceable sequence of events or "first out" trace of the original cause of failure. Any or all of the alarm conditions can trigger a "report by exception" to alert you to the abnormal operating conditions, enabling you to take action before expensive damage and the resulting down-time can occur.

Of course, the full spectrum of SiteTRAK communications options make it possible to monitor all your compressors, no matter where they may be located. Telephone, wireless, and Ethernet connections may be used at each location, as the situation requires. SiteTRAK compressor monitors are cost effective tools for the owners and operators of compressors and large pumps of any kind. They are also an excellent value-added feature that enables equipment OEMs to distinguish their products with a capability that has great value to their customers.

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SiteTRAK - The "Client" Advantage

SiteTRAK can be either a server or a client in your system. The choice is yours. As a client, SiteTRAK becomes a master, initiating communications. This mode, often referred to as "Report on Exception", offers many advantages:

Easing customer security concerns

SiteTRAK contains an internal firewall that blocks ALL outside attempts at access. A client initiates data transfers and thereby eliminates the need for external sources to access data that resides on your customer's network. (Most facilities will not grant network access to third parties.)

Easy path through a firewall

SiteTRAK, acting as an Internet client, can initiate data transactions as if it were a web browser. Data transactions from SiteTRAK clients easily pass through the firewall protecting your customer's network because it is initiated from within by a known source.

Reduced operating cost

By connecting distributed SiteTRAK through the Internet you greatly reduce or completely eliminate the cost per data transaction. No longer will you have to own your own communications infrastructure and bear the high costs of installation and maintenance associated with dedicated communications links.

Quick response to alarms

SiteTRAK clients will report transactions or events as they occur on a real-time or "near real-time" basis. This "report on exception" operation reduces communications traffic and the long latency experienced on traditional polled systems. The larger your system gets, the greater the benefits of distributed client architecture.



SiteTRAK Reports Time Stamped Transactions to Your Database

SiteTRAK can optionally record events (alarm conditions), time interval data (such as power demand intervals), and historical data in its datalog memory. These time stamped records can be easily uploaded to your database as transactions or as data records.

Acting as a database client, SiteTRAK initiates the conversation and sends your database simple messages that contain the time stamped transactions. All that is required at the server is a simple interface to receive the information and save the transactions as records in your database. The format of these transactions is described in the technical documentation on the SIXNET CD and at SIXNETio.com.

This direct client /server connection eliminates the need for otherwise unnecessary middleware. (Yes, your database or server can connect directly to SiteTRAK RTUs without expensive SCADA software in-between!)

If your server is Internet-enabled, transactions from SiteTRAK clients can arrive directly over the Internet. There is no need for you to maintain and pay for a communications infrastructure. Using modem banks as your central facility with all the headaches associated with keeping them running reliably are gone forever!

Ask SIXNET about Sixlog Data Server software to interface to your central database.

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Performance Specifications

Analog Inputs	6 (4-20 mA) - <i>Expand with RemoteTRAK (*see Note 1)</i>
Input resolution	0.1% (10 bits)
Input protection	Self-resetting fuses
Discrete Inputs	4 (10–30 VDC or switch closure) (*see Note 1)
Counting range	16 or 32 bits (to over 2 billion counts)
Max count rate	50 KHz (input 1 only) 200 Hz (any input)
Discrete Output	1 (closure to ground)
Maximum load	0.25 Amps at 30 VDC
Output functions	Report alarms or user-controlled output
Internal Modem (-T option)	100% PC modem and Windows compatible
Maximum data rate	33.6 kbps (v.34)
Compatibility	V.34, V.32 bis, V.32, V.22, V.22A/B, V.23, V.21, Bell 212A
Data compression	V.42 bis MNP 5
Error correction	V.42 MNP 2-4
Command compatibility	All standard AT and S register commands
Ringer equivalent, line jack	0.3, RJ11 connector
Telecom certifications	FCC part 68, CS03-8 (CSA), CTR21 (98/482/EC), ACA TS 001-1997, ACA TS 002-1997)
Ethernet Port (-E option)	10BaseT (100% IEEE 802.3 compliant)
Protocols	TCP/IP, ARP, UDP, ICNP, DHCP, Modbus
RS232 Serial Port (-S option)	All standard rates up to 57,600 baud
Connections (standard RJ45)	TD, RD, CTS, RTS, CD, DTR, RI, GND
Supported protocols	Modbus ASCII and RTU, SIXNET Universal
Extra Serial Ports (All Models)	For setup or a local computer and expansion
RS232	DB9 female (standard PC connector)
RS485	For one RemoteTRAK module only
Internal Flash Memory	1 Megabyte (consult factory for more)
Datalogging storage	40,000 records (all I/O)
Time of day clock	Run for 30 days without external power
Firmware upgrades	Reloadable to support future features
General Characteristics	DIN rail or flat panel mount
Input power	10-30 VDC
Input current	8 mA (-SL option in power saver mode) 25 mA @24 VDC (-S and -E option) 30 mA @24 VDC (-T with modem in standby) 70 mA @24 VDC (-T with modem active)
Mounting footprint	4.75"(12 cm) x 3.17"(8 cm)
Operating temperature	-30° to 70°C (-40° to 85°C storage)
Humidity	5% to 95% RH (non-condensing)
Flammability	UL 94V-0 materials
Electrical safety	UL 508, CSA C22.2/14; EN61010-1 (IEC1010), IEC 950: 1991, AS/NZS3260-1993 CE
EMI emissions	FCC part 15, ICES-003, Class A; EN55022; AS/NZS3548-1995 CE
EMC immunity	EN50082-1 (IEC801-2, 3, 4) CE
Surge withstand	IEEE-472 (ANSI C37.90)
Vibration	IEC68-2-6
Hazardous locations	UL 1604, CSA C22.2/213-M1987, (Class 1, Div 2, Groups A, B, C, D), Cenelec EN50021 (Ex nA II T4) Zone 2

Note 1: A RS485 port lets you expand SiteTRAK using any one RemoteTRAK or EtherTRAK I/O module to a total of 22 analog or 20 discrete inputs.

SiteTRAK Packaged Systems

Designed, built, tested and ready for installation.



This PAK1210-FG SiteTRAK Packaged System may be ordered as a standard product. As always, they are ready for installation at your distributed sites.

Ordering Information

All SiteTRAK models include four discrete and six 4-20 mA analog inputs, one output, 1 Meg of Flash Memory, a choice of remote communications and an extra serial port for on-site connection.

Part Number	Description
SR-4160-1T-1	Includes Industrial Telephone Modem
SR-4160-1E-1	Includes Industrial 10 Mbps Ethernet Port
SR-4160-1S-1	Includes Serial port for an external modem
SR-4160-1SL-1	Low power SiteTRAK for an external modem
SXTOOLS-3	Level 3 I/O Tool Kit with datalogging utilities
RM-PS-024-01F	24 volt power supply for SiteTRAK
PAK1210-FG	Installation-ready Packaged System
OEM Specials	Consult SIXNET for OEM versions

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SiteTRAK is Expandable



Address up to 22 analog and/or 20 discrete I/O channels by connecting any one RemoteTRAK or EtherTRAK I/O module to the SiteTRAK RS485 I/O expansion port. Select from the wide range of available I/O options including:

- Discrete inputs
- High speed counters
- Isolated 4-20 mA (16 bit)
- 62 mV up to +/- 10 Volts
- J,K,E,R,T,B,C,N, and S thermocouples
- RTD (PT100) temperature sensors



The RS485 port on every EtherTRAK module makes this advanced I/O family an excellent expansion choice for SiteTRAK.

SiteTRAK is an OEM Solution

SIXNET will gladly private label or manufacture special SiteTRAK units to your exact requirements. SiteTRAK is a flexible building block that was designed for the OEM supplier. SIXNET caters to OEMs.



SIXNET Robust Industrial Products for Remote Site Management

SIXNET delivers a broad line of "industrial strength" products to help you manage your remote sites, including:

Industrial Phone Modems



Real-time Ethernet Switches



Ethernet I/O



Contact your SIXNET Applications Engineer today!

For the latest information, check out
www.SIXNETio.com

SiteTRAK Datasheet REV0602

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