

> **Wireless**

## Viatran Networking System

## MODEL VNS

The Viatran Networking System (VNS) enables wireless centralized monitoring of sensors placed throughout a gas or oil field, or around any facility where measurements are critical. VNS is based on Viatran Remote Devices (VRDs) and a Viatran Hub (VHub), and supports a variety of sensors.

### FEATURES

- Point-to-point or point-to-multi-point networking with one mile range of the terminal
- 3 analog and 2 digital inputs per VRD
  - Scheduled sampling
  - Event driven
- 10 VRDs per VHub
- Easy field setup
- Very low power consumption
- Compatible with solar and battery-only applications
- Works with a wide variety of sensors
- Ideally suited for use with the Viatran 780

### TYPICAL APPLICATIONS

- Natural Gas Wellheads
- Pipelines
- Plunger Lift Monitoring
- Casing and Tubing Pressures



### The Viatran Networking System

Maximizing the productivity of resources and applying labor optimally is critical to profitable business. The condition of well-heads, pipelines and other facilities is often unknown until the facilities are routinely inspected. Loss of production is a real possibility! On the other hand, monitoring critical parameters will allow you to maximize production.

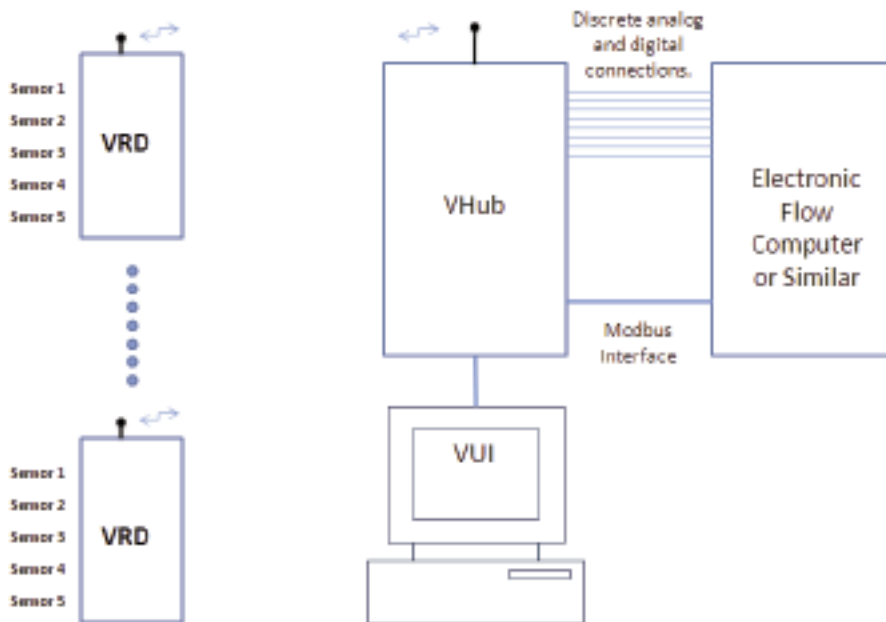
Viatran Remote Devices (VRDs) gather information from the sensors in the field and relay the information, wirelessly, to a Viatran Hub (VHub). The standard VHub serves as the communication gateway for up to 10 VRDs.

### Customer Value

- Keeps site managers current on the condition of production resources
- Maximizes employee productivity by reducing or eliminating unproductive, time-consuming visits to remote locations
- Enables alerts to problems, minimizing lost production
- Eliminates the expense, time, and costs associated with wire-line installations
- Provides data from wells or pipelines



## WIRELESS ENVIRONMENT



## Key Features of VRD

- Ideally suited to work with Viatran's 780 pressure sensors
- Low power configurations will support sensors requiring 10V or 15V supply and sensors which provide a variety of outputs
- Digital inputs can be used to sense plunger arrival or another binary input
- Alternate configurations can support voltage and 4-20 mA devices
- Internal electronics temperature automatically reported
- Automatically monitors and reports battery condition
- In a typical configuration, battery life will exceed 1 year
- Use in Class I, II, III Groups C-G hazardous Locations
- Temperature Code T4 with an ambient temperature range of -40°F to 365°F (-40°C to +85°C)

## Viatran Remote Device

VRDs can be process or pole mounted and are typically powered by an internal non-rechargeable Lithium ion battery or an external power supply. The devices will support 3 analog and 2 digital inputs and will wirelessly pass the information to the VHub at a distance of up to one mile.



## Key Features of VHub

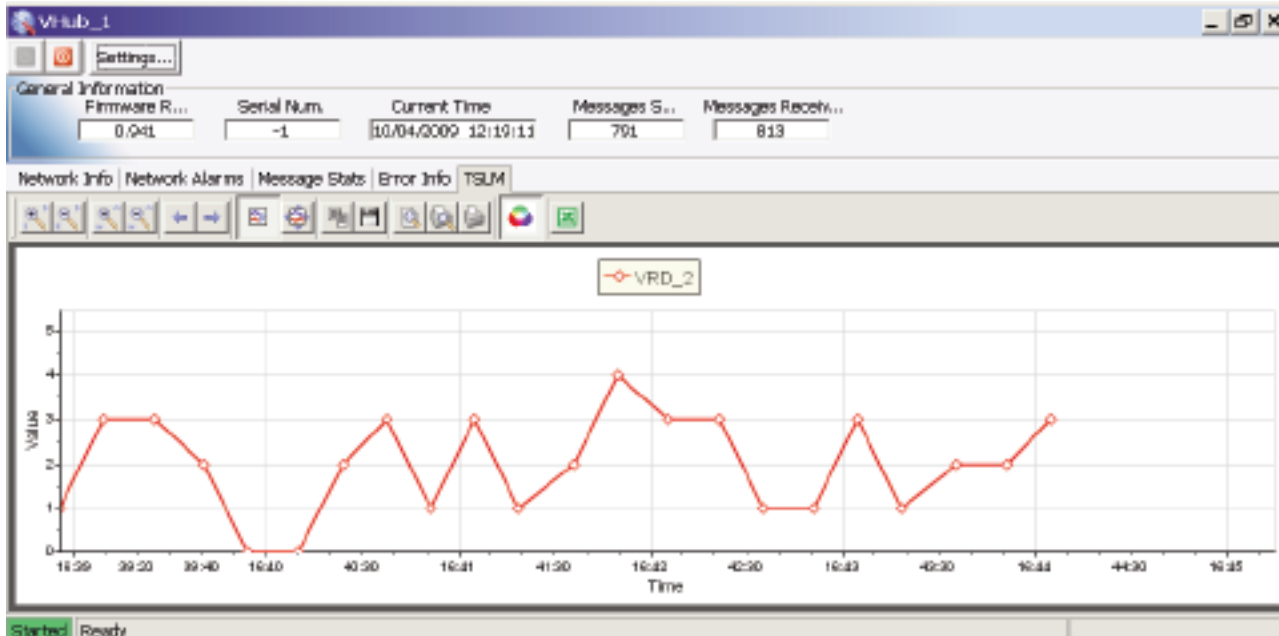
- Modbus register mapping
- Easy mapping of data to SCADA systems
- Discrete outputs to a local flow computer, RTU, or PLC
  - Two analog outputs include: 4-20 mA, 0-5V, 0.5-4.5V, 1-5V or others
  - Two digital outputs
- Powered by 7 to 34V
- Standard VHub supports 10 VRDs
- Small size and convenient package will fit into existing flow computer enclosures

## Viatran Hub

The VHub receives messages from all of the VRDs with which it is associated and maps the data received into the assigned Modbus registers. The VHub can then pass the information to an attached flow computer, SCADA system, or Distributed Control System. A standard VHub will support up to 10 VRDs.

## Viatran User Interface (VUI)

The VUI runs on a PC with Microsoft's XP operating system and provides easy to use set up, data monitoring and diagnostics pages.



## Key Features of VUI

- Intuitive configuration tool
- Set-up display:
  - VRD serial number
  - Editable field for naming the project
  - Editable field to name each site
  - Editable field to label each VRD
  - Select from data collection modes
    - Data sampled at intervals specified by operator
    - Event driven
    - Configure levels or changes which trigger sampling and transmission
  - Enables mapping of data from any given sensor to a designated Modbus register
  - Enables mapping data to SCADA systems
  - Enables the user to reduce the transmission frequency to maximize battery life
- Monitoring display:
  - Provides a view of the system as a hierarchy with the capability to look at the network, VRDs and the sensors
  - Enables diagnostics
- Closing the application will trigger an automatic save of all settings and termination of the application
- VUI is provided on a CD packaged with each VHub

### Certificates

VHUB: ETL 4000039 - Certified to ISA 12.12.01 and CSA C22.2 No. 213

CE 0359

ATEX II 3 G Ex nA II T4 - Class 1, Division 2, Groups A,B,C,D

VRD: ETL 4000039 Class I, II, III Division 1, Groups C - G

Pending: CE 0359 and ATEX II 2 GD Ex d tD IIB T4 21 ITS09ATEXxxxx,

IP68 T4 Ambient Temperature Range -40°F to 185°F (-40°C to 85°C)

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