

vMBusX-STK

Wireless Tank Level Sensor

**Remote
Monitoring
Telemetry
Oil & Gas
Utility
Waste Water
& Water**



vMBusX-STK – is a solution to meet the demands of the oil and gas industry; for a reliable and cost effective means to remotely monitor their applications. The vMBusX-STK incorporates our powerful vM-Micro RTU with our proven wireless battery operated tank level sensor to produce a small, low power, explosion proof RTU-Sensor system that can be mounted directly to the process line (e.g. wellheads, pipelines, gas heads, etc.). Combined with a Gateway, the vMBusX-STK, installed at the remote site, can acquire real-time data for analysis and detect alarms. Easily customizable for many different applications.

Some of the Benefits and Features

- ❖ Remote Configuration
- ❖ Selectable Wake-up interval from 1 second to 18 hours
- ❖ Report by exception
- ❖ Battery Level Indicator
- ❖ Built-in 128 bit encryption
- ❖ Selectable data reporting (Raw, Engineering Units, SQRT, Linear and SQRT accumulation)
- ❖ Network Time Synchronization
- ❖ Data History
- ❖ Min/Max and Percent Change Alarms
- ❖ Diagnostic data (response time, message count and signal strength)

General Specifications

Inputs
2 A/D channels -16 bit resolution (0-5 VDC or 0-20 mA)
1 Opto-Isolated Digital Input channels (3-24 V AC or DC)
1 Digital channel monitors the status of a digital switch; used for tank monitoring & detecting alarms
Independent A/D channel used for battery voltage level
Independent A/D channel used for temperature
Independent A/D channel used for radio diagnostics
Processor and Memory
8052 Micro-Controller running at 12.58MHz with 64KB Flash Memory
Radio
Plug-in radio modem operating at a frequency of 900 MHz . 2.4 GHz or Zigbee
Serial Ports
1 Serial Interface port-baud rate up to 115,200 bps
Relays
1 Solid State Relays that can support up to 350 mA continuous current
On-Chip filtering
Power
Input Range 3.3 to 13.2 VDC
Low Power Operating Mode with <30 μ A in sleep mode with wake up timer running
Terminal blocks for providing regulated 6.67 V & 10 V to power sensors (providing up to 200 mA to power sensors or devices)
Power consumption <10 mA without radio
Operation Modes
Continuous
Stand-alone
Timer/Clock
On-board
Wake up timer adjustable from 1 sec. to 255 hours
Operating Temperature
-40°C to +85°C (-40 °F to + 185°F)
Humidity Range 5-90% non-condensing
Dimensions
6.0 cm x 6.0 cm
Support
vMBus Communications Protocol
MODBUS Protocol Support
Firmware
Data Totalizer , Pulse Counter/Accumulator, Square Root Extraction, Engineering Units, Conversion/Scaling

For more information on our products and services or to place an order, please check out our website at www.vMonitor.com or contact us at +1.866.514.4935 to speak to one of our engineers. Let us help you make the virtual oilfield a reality.

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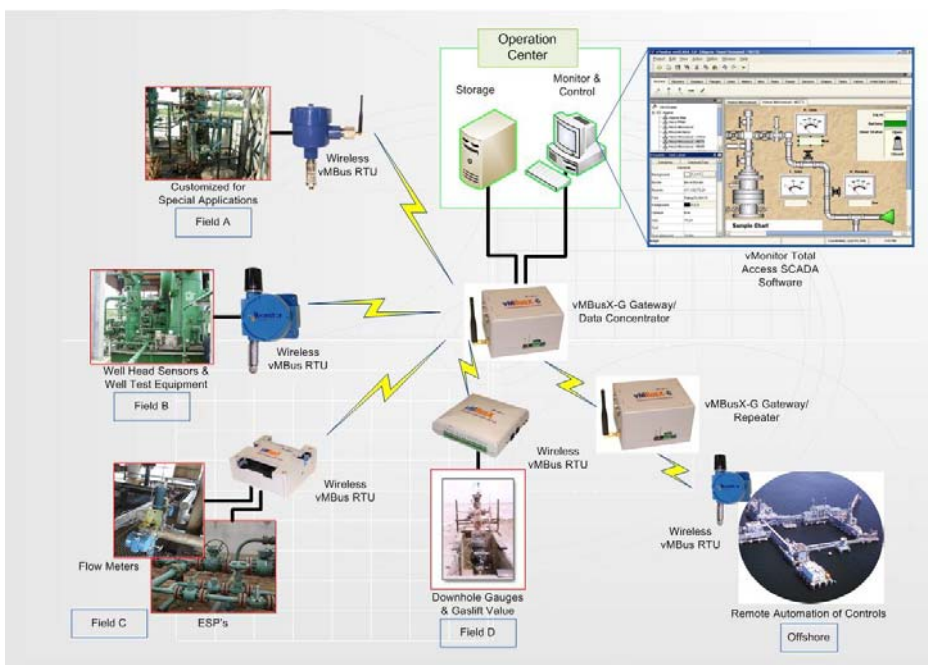
Radio Specifications for vMbusX-STK (Range and Transmit Power may vary due to various factors, such as type and elevation of antenna, line of sight, the environment, and power output. A vMonitor Engineer can assist you with determining range, frequency, transmit power and other factors to develop a solution to meet your requirements.)

Compatible Radios	Range	Transmit Power
2.4 GHz	Up to 16 km (10 miles)	50 mW-100 mW
2.4 GHz ZigBee	Up to 0.12 km (400 ft)	125 mW
900 MHz	Up to 32 km (20 miles)	5 mW- 1000 mW variable

Wireless Sensor Specifications

Approval	FM approved
	Type 4 explosion-proof: Class I, Div 1 Grp A,B,C,D Class II, Div 1 Grp E,F,G Class III ATEX approved sensor (optional)
Accuracy	±0.25%
Operational Range	0 to 50" in H ₂ O
Power Input	9-30 VDC
Humidity	0% - 95% Non-condensing
Output	4-20 mA

Typical vMonitor Network Setup



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