

WIRELESS

systems

Measure, Monitor & Control




Wireless
Instrumentation by

Accutech
Smart Process Instrumentation

Temperature Measurement

Combine our *Wireless Instrumentation* Temperature Field Unit with your control system, PLC or PC for a fully functional temperature monitor or switching application.



Pressure Measurement

With an overall accuracy to $\pm 0.1\%$, the *Wireless Instrumentation* Pressure Field Unit alerts you of any pressure triggered event requiring attention.



Relief Valve Monitoring

Process gas is expensive, and may pose an environmental concern. Identify leaks cost-effectively and without process interruptions by bolting the *Wireless Instrumentation* Acoustic Field Unit to the valve. The monitor listens for leaks and immediately alerts you, so repairs can be scheduled.



Steam Trap Monitoring

It's a fact of life—steam traps plug and stick. Manual inspections are an expensive way to catch the problem. To reduce your inspection costs, just bolt on the *Wireless Instrumentation* Acoustic Field Unit and immediately catch leaks or other failed conditions. Focus your maintenance effort where it's needed, and save energy.



Multi-input Measurement

Use the *Wireless Instrumentation* Multi-input Field Unit for monitoring and transmitting electrical signals from any sensory electrical output or switch closure. Monitor all types of sensors without running wires.



the new industrial revolution

You've encountered this challenge, over and over—the time and the expense of running wires makes it difficult to measure parameters that have an economic impact on your plant operation. If only you could gather process information quickly and easily, you know the savings you could achieve!

The solution? *Wireless Instrumentation*

Developed by Accutech, a division of Adaptive Instruments, LLC, these robust products are truly wireless. And, right out of the box, they perform in harsh—even hazardous—industrial environments.

- For long term monitoring of variables in remote locations
- For short term data gathering on process conditions
- For new installations, to test a project's economic viability

The implementation

No wires. No permits. No licenses. Configure, start-up and test in the shop. Install in the field.

Wireless Data Network

Your field units communicate in a secure, digital protocol over a band of frequencies from 902 MHz to 928 MHz. This data communication technique has been the backbone of the military's secure communications protocols for many years. It requires no FCC site license. The multiple frequency transmissions, send-receive acknowledgements and built-in data redundancy have proven to be extremely robust.



Update Speed

Update speed is user-settable to match the needs of the application. The "Smart-Update" capability immediately initiates a message when a fault is detected. Otherwise a "Healthy Heartbeat" communication is initiated with the base radio on a regular interval to pass status and any new configuration information.

Range

Range up to 3,000 feet with omni-directional antenna. Other options are available to increase range.

Battery Life

Generally 5 years with factory default update speed and communication parameters.

INDUSTRIAL WIRELESS NETWORK

When you're ready to really go wireless, you want to get going right away. And you want a turnkey approach that lets you get started, right out of the box. Everything you need, from one source, ready to go—that's what Accutech offers you. Because our wireless solution is not just an instrument—we offer you a complete system, the wireless products as well as the support that is key to the success of your monitoring.

Field Unit



Temperature, Pressure, Acoustic and Multi-input field units are available. They offer versatility and flexibility in monitoring various applications, providing immediate confirmation on the process condition.

Wireless Instrumentation field units consist of integrated sensor, RF and power modules plus an integrated display showing the process variable data, history and network diagnostics such as signal strength, battery life and communications errors. Configuration parameters can be modified using the display membrane switches (password protection available).

Base Radio



The base radio communicates with up to 250 field units, and provides various output options including RS-485, RS-232, 4-20 mA analog or discrete open/close I/O. Other options include Modbus, Hart®, Ethernet and USB.

Each wireless field unit is assigned a unique identification code, and communicates with a base radio. For added reliability, all communications are acknowledged by the base radio. Operating data is accessible to support user applications through ActiveX plug-in's. You can create your own applications to provide the monitoring software tailored to your needs, you can use Accutech's data management solution.

Wireless Instrumentation Manager



Software runs on your server to manage your wireless network. The client provides you with a management console for real-time monitoring, configuration management and reporting.

Technical Support

Accutech maintains a fully qualified, independently owned service network, factory trained and fitted with the latest field service equipment. Available services include:

- Field Survey
- Network Topology
- Installation and Maintenance
- Savings Reports

Factory support is available to provide assistance.

Call us, toll free, at 1-877-NO-WIRES (1-877-669-4737) or visit our website at www.savewithaccutech.com

Accutech
Smart Process Instrumentation

Secure, Robust, Reliable.

Naturally, when you are dealing with wireless communications, reliability and security are important concerns. The robust, reliable Accutech Wireless Instrumentation network is designed to provide peace-of-mind in industrial environments.

Transceiver Communications

All devices are both transmitters and receivers, i.e. transceivers. Each message is sent and verified. If communications are not properly acknowledged, they are re-sent.

Digital Communications

All messages require multiple information bit-matching on frequency synchronization, device identification and location before communication is initiated. Random noise will not be misinterpreted as a message.

Frequency Hopping Spread Spectrum

The communications spectrum is spread over different frequencies. Both the transmitter and the receiver are synchronized to hop to different frequencies as the communications continue. This technique has been the backbone of the military's communications security techniques, because it adds security and ensures that noise interference at any one frequency does not block the communications.

Data Rate Communication Optimization

The data transmission rates used in the Wireless Instrumentation network are optimized to allow much more transmission energy per bit of data.

Heartbeat Communications

All devices communicate on a regular basis to establish a healthy heartbeat. Any status changes detected are reported to the base station.

Network Diagnostics

Full network diagnostics accompany every transmission. The base station continuously monitors and reports signal strength, bit error rates, battery life and other indicators of network health.

Communications Error Correcting

All messages contain error-checking bits to ensure error-free transmission. Messages received with errors are re-sent at different frequencies as necessary to complete the communication.

Field Survey

Service providers are available for field survey work.



ABOUT US

Accutech is the sales division of Adaptive Instruments, LLC, a leading edge, technology-driven developer, manufacturer and supplier of embedded microprocessor-based electronics. Based in Hudson, Massachusetts, Adaptive Instruments is one of the most successful independent producers of "Smart Transmitters" in the world.

Accutech offers an innovative, cost-effective, and rugged instrumentation that provides efficient solutions to our customers' processing challenges. Accutech customers include large national companies in the biotechnology, pharmaceutical, food and beverage, chemicals, primary materials processing, and energy industries. Besides the Wireless product line, Accutech also offers the SAVER line of temperature, pressure and differential pressure instrumentation.

Our experience, our resources and our commitment to customers are second to none. Our products are characterized by reliability, robustness, and common sense. We solve your problems, not help to add to your concerns. Whether you're using Wireless Instrumentation or the SAVER line of products, therefore you'll always be able to count on Accutech for ease of use, versatility and peace of mind.

Visit us at www.savewithaccutech.com

**Or call us toll-free at 1-877-NO-WIRES
(1-877-669-4737).**

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