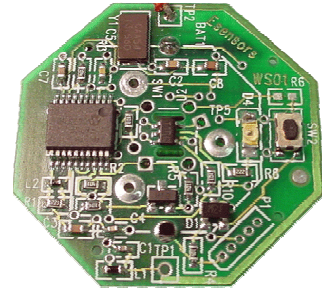# WS01 Wireless Sensor System

A Complete Remote Sensing and Data Acquisition Solution

Key Features

- Complete wireless sensor system includes sensors, hardware and software
- Ready to deploy with no setup required
- Extended node battery life (up to 5 years)
- Many sensor types and options available
- Suitable for indoor and outdoor environments
- Flexible firmware and protocol to adapt to various applications

Overview

The WS01 Wireless Sensor System provides the user with a means to collect data from various sensors located remotely via a wireless link. The sensor nodes join an existing network automatically without any prior configuration.

In the basic transmit-only version (Model WS01A), minimal hardware components keep costs down while a built-in microprocessor allows flexibility in attaching different sensors and configuring transmission protocols.

A more versatile transceiver (Model WS03), allows 2-way communication from user to sensor node and vice versa. Monitoring parameters can be changed on-the-fly depending on situation and application.

At the end-point of the Wireless System is a powerful gateway (Model WG03) that receives sensor data over the air and feeds it to a computer, server or data logger. The gateway automatically configures itself to receive packets and checks if any data is corrupted or missing.

Sample Application Areas

- Intrusion detection
- Container/package tracking
- Agriculture and horticulture
- Industrial floor monitoring
- Security
- Environmental monitoring
- Building management
- Machine automation

WS01 Wireless Sensor System

A Complete Remote Sensing and Data Acquisition Solution

Wireless Node Options

- WS01A Basic transmit-only
- Zigbee 2.4 GHz (maturing)

- WS03 Transceiver, point-to-point

Available Sensor Types

- Temperature
- Light (photo or illumination)
- Vibration (accelerometer)
- Motion (Infrared)
- Electric field

- Magnetic change (vehicle detection)
- Soil moisture
- Water / rain / flood
- Humidity
- Switch (Pushbutton, toggle, etc)

Specifications

	WS01A	WS03	WG03
Type	Basic transmit-only	Transceiver	Gateway
Dimensions	1.3" x 1.3" x 0.6"	3.3" x 3.0" x 0.9"	3.3" x 3.0" x 0.9"
Weight	0.5 oz	7.8 oz	7.8 oz
Frequency	433 MHz	433 MHz	433 MHz

Power Consumption
  Sleep
  Full
	1 mA
	19 mA
		5 mA
		30 mA
			N/A
			50 mA

Power Source	3V Battery	3V Battery	9-12V DC Supply
Supported Protocol	SNAP, Proprietary	IEEE 1451, SNAP, Proprietary	IEEE 1451, SNAP, Proprietary
Power Saving Modes (Sleep Cycles)	10sec, 1 min., 15min., 60 min.	Variable	None
Supported Sensor Types	Digital only	Digital & Analog	Digital & Analog
Interface	None	None	RS232, USB, RS485