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Wi-Fi Temperature Sensor

Features

- **Auto Sensing Analog port:** External 100 ohms RTD temperature probe with 2 wire, 3 wire and 4 wire configuration capable of extended temperature range 200°C to + 850°C (accuracy \pm 1 degree C)
- ABS plastic enclosure 4" x 2.5" X 3/4"
- External Contact closure: External 4-20 mA current loop General Purpose voltage sensor
- **Optimized for Ultra low power:** Greater than 2 year battery life (waking every 5 minutes)
- **Digital Port:**
 - SPI/Serial/ 1 wire sensors
 - Serial/USB for configuration
- Capable of powering external sensors (3.3VDC at 150mA)
- Push button for remote/auto configuration and wakeup
- Powers from any 2 AA Alkaline or NiMH recharge batteries
- **Audible alarm for:**
 - Incorrect probe configuration
 - Out of range alerts
 - Low battery
- Real Time clock for time-stamping.
- Built in TCP client and server and HTML client (php/aspx) for posting sensor data to remote web server
- Secure Wi-Fi authentication using WPA-PSK and WPA2-AES encryption. Backwards compatible with WEP-128
- Wi-Fi Alliance Certified 802.11 b/g radio
- FCC/ CE/ ICS certified

Options

- Onboard Ambient temperature and humidity (sensiron SHT-11)
- Digital port can recharge NiMH batteries (5VDC adapter/USB cable option)



Applications

- Remote sensors
- Telemetry
- Security
- Industrial sensors and controls
- Home Automation

Description

The Wi-Fi temperature sensor network is built upon a standard 802.11 b/g Wi-Fi infrastructure. The system contains three main components: The device's wireless sensors, access points and the Host server application that collects and presents sensor data from any location which has access to the internet.

The remote sensors are deployed in the field and wirelessly transmit data from internal and external sensors such as temperature, pressure and humidity. Data is cached on the sensor and routinely sent to the Host application server listening at a particular port number at a known URL or IP address. Each sensor functions independently within the system, sending data to the Host server via access points that are connected to the network. This allows the sensor to be placed anywhere within the coverage of the wireless access points. Each sensor sends the following information:

- Data - temperature, humidity, etc
- Health - battery, uptime, firmware version