Wireless Sensor and Systems Catalog Supplement

ACI has wireless sensors that offer great performance, easy installation, and other cost saving features over the competition. The following pages highlight the simplicity of putting a system together that will meet your needs. You can choose from the wireless sensors listed on the next page or from additional analog, or relay based products when used in conjunction with one of the RT2600 Series Input Modules. Either scenario can be paired with a RM2400 Series Wireless Receiver and it is wired to your Building Automation Controller, or other end devices. ACI offers receivers that are BACnet, LonWorks, and Modbus compatible.

These wireless devices are designed with the latest in 900Mhz, Spread Spectrum Mesh technology. The diagram below demonstrates some of the advantages this technology has over other technologies such as 400Mhz, for instance. 900Mhz travels farther, using less devices and, in turn, saves money on the enitre system. In addition, these wireless devices have built in signal indication, saving installation time and further expense on diagnostic devices.

900 Mhz Spread Spectrum Mesh Technology application diagram

WT2630 Wireless Wall Temp Sensor
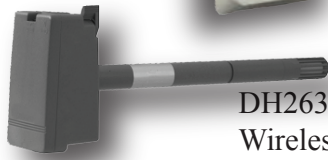
DH2630 Wireless Duct RH/Temp Sensor

WT2630 Wireless wall Temp Sensor

RR2552 Spread Spectrum Repeater (not always required)

RM2432 Wireless Receiver
Four digital outputs and Four analog output channels with low battery and alarm indications

Signal Verifiers or Installer Tools are not needed.   Signal Indication is built into each sensor.

Important Details:

- 900 MHz Spread Spectrum product typically travels 200 to 500 ft versus 50 to 100 ft for 400 MHz where additional repeaters are required. (Inside a typical commercial building)

- The RM2432 receives AND outputs also saving equipment, installation, and maintenance costs.

- BACnet, LonWorks, and TCP/IP/ Modbus receivers are also available.

When hard wiring certain devices is not physically possible, or economically feasible, ACI's wireless devices are a great option!

Please visit www.workaci.com for additional product information

Wireless Sensors or Input Modules → Repeaters → Receivers → Control System or End Device → Wireless Outputs (Optional)
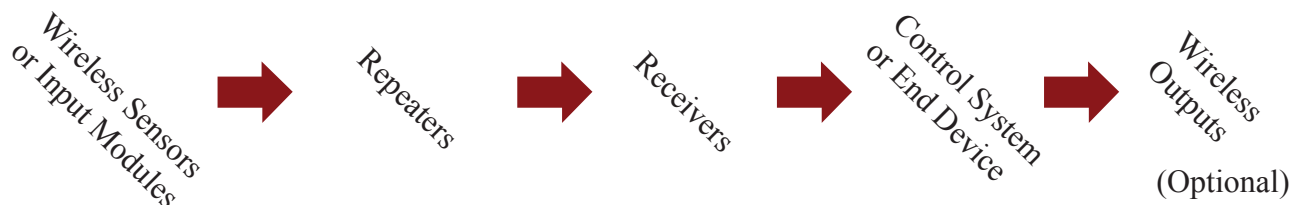
WIRELESS DEVICE

SENSORS

900 MHz, Spread Spectrum Mesh Technology

WT2630

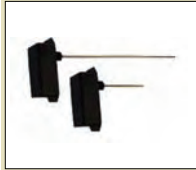Battery operated spread spectrum wireless wall temperature sensor or thermostat. The override button (B & C models only) can be assigned to a digital output in the 2000 Series 2000 family of receivers for occupancy override or similar applications. The setpoint adjustment (B Model only) can be assigned to an analog output in the Series 2000 receiver. Sensing Range (Accuracy): Temperature: 32 to 104 deg F (+/- 1 degree F)

DT2630

Battery operated spread spectrum wireless duct temperature sensor. The sensor is encapsulated in a 0.25" O.D. 304 stainless steel probe with various probe length (4", 6", 8" 12" & 18") for single point duct temperature monitoring. Sensing Ranges (Accuracy): -40 to 160 or 25 to 150 deg F (+/- 1 deg F, 12 Bit Resolution)

DT2650

Battery operated spread spectrum wireless flexible averaging temperature sensor. The DT2650 incorporates four (4) temperature sensors encapsulated at equal distance across the length of the probe for average duct temperature monitoring. Sensing Range (Accuracy): 0 to 150 deg F (+/- 1 F,12 Bit Resolution)

FT2630

Battery operated spread spectrum wireless immersion temperature sensor for fluid temperature applications. The sensor is encapsulated in a 0.25" O.D. 304 stainless steel probe. The sensor assembly has a 1/2" NPT fitting to be mounted into the thermowell.   Thermowells with brass or 304 stainless steel materials are available for different fluid applications. Sensing Range (Accuracy): 0 to 200 deg F (+/- 1 F, 12 Bit Resolution)

OST2630

Battery operated compact wireless outside air temperature sensor. The sensor is housed in a NEMA4 enclosure and can be mounted anywhere in the shaded area outside of a building. Sensing Range (Accuracy): -40 to 160 deg F (+/- 1 deg F, 12 Bit Resolution)

OA2630

Battery operated spread spectrum wireless outdoor air temperature and humidity sensor with a naturally ventilated 8-Plate Solar Radiation Shield to protect the sensor from precipitation and solar radiation. Sensing Ranges (Accuracy): Temperature: –40 to 160 deg F (+/- 1 degree F) Humidity: 0 to 100% RH: (+/- 3% RH from 10 to 90% RH)

DH2630

Battery operated spread spectrum wireless duct mounted humidity (and temperature) sensor. The sensor is encapsulated in a 9.7" long plastic probe and is available with humidity only (DH2630A & D) models and humidity and temperature (DH2630B & C) models. Sensing Ranges (Accuracy): Temperture: 25 to 125 or –40 to 160 deg F (+/- 1 degree F), Humidity: 0 to 100% RH Models A, B, C: (+/- 3% from 10 to 90% RH) Models D, E, F: (+/- 2% from 20 to 80% RH)

WH2630

Battery operated spread spectrum wireless wall humidity and temperature sensor. Sensing Ranges (Accuracy): Temperature: 32 to 104 deg F (+/- 1 degree F), Humidity: 0 to 100% RH Models A & B: (+/- 3% from 10 to 90% RH) Models C & D: (+/- 2% from 30 to 80% RH) Models A & C are RH only and B & D are RH / Temperature combinations.

SSH2636

Battery operated spread spectrum wireless humidity and temperature sensor housed in a rugged enclosure. Sensing Ranges (Accuracy): Temperature: 32 to 104 deg F (+/- 1 degree F), Humidity: 0 to 100% RH Models A & B: (+/- 3% from 10 to 90% RH) Models C & D: (+/- 2% from 30 to 80% RH) Models A & C are RH only and B & D are RH / Temperature combinations.

ACI's 2600 Series wireless sensors utilize reliable Spread Spectrum Mesh Network Radio technology. They can be installed easily in minutes eliminating hundreds of feet of wire and saving installation cost while reducing installation labor risks. Each sensor utilizes a Data-Link LED to confirm the data transmission was received by the receiver for fast and reliable positioning of the sensor during installation. There is no need for special wireless installation equipment or tool. Together with 2000 Series Receivers and Controllers , these wireless sensors can be used with any LON, BacNet, MODbus, DDC control system or panel.

TEMPERATURE

RELATIVE HUMIDITY

PRESSURE

CURRENT

GAS SENSORS

ACCESSORIES

INTERFACE DEVICES

WIRELESS DEVICE

INPUT MODULE   900 MHz, Spread Spectrum Mesh Technology

Makes hardwired devices wireless!

RT2602

Battery operated wireless remote Digital Sensor Input Concentrator accepts a variety of digital sensor/control inputs and transmits wirelessly to the receiver. It can be used for remote alarm/status indications and wireless on/off control (wireless relay) applications. Digital Inputs (2): Contact Closure

RT2620

Same as above with 4 Digital Inputs

RT2630

Same as above with 4 Digital and 4 Analog (0 to 10 or 4 to 20mA) Inputs

Input Modules (Concentrators) will accept either hardwired analog or digital inputs from devices such as temperature, relative humidity, or current sensors and switches. (see ACI Catalog for full section of devices).   These signals are converted into wireless outputs for the RM2400 Series Receivers (see below for details) to convert back into analog or digital outputs.

REPEATERS
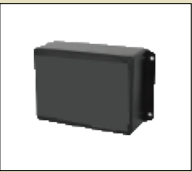
RR2552

The mesh network Series 2000 RR2552 signal repeater utilizes reliable Spread Spectrum Radio technology. It can be installed easily in minutes to increase the transmission distance between wireless sensors and the receivers. The maximum radio transmission distance is dependent on building type. Operate on 24 VAC 60 Hz supply power.

Multiple repeaters can be used to extend the transmission distance to thousands of feet inside any commercial and industrial buildings. The Series 2000 sensor Data & Link LED confirms the data transmission was received by the receiver for fast and reliable positioning of the repeaters during installation. There is no need for special wireless installation equipment. The 2000 Series wireless system can be used with any LON, BacNet, MODbus, DDC control system or panel.

RECEIVERS

RM2402D

Together with other ACI wireless sensors and controls, this product can receive remote sensor readings, status/alarm indications and control signals wirelessly.   It receives signals wirelessly and is then hardwired to your controller or end device though two Pilot Duty Relay Contact Closures with a contact rating of 1 A at 24VAC Max. It can be used for remote alarm/status indications and wireless on/off control (wireless relay) applications. 24VAC supply power.

RM2432D

Together with other ACI wireless sensors and controls, this product can receive remote sensor readings, status/alarm indications and control signals wirelessly.   It receives signals wirelessly and is then hardwired to your controller or end device though four Pilot Duty Relay Contact Closures and/or four analog outputs of 0-5/0-10VDC (8 wireless inputs max). It can be used for wireless on/off control (wireless relay), after hours override, or wireless analog applications.

The above wireless receivers utilizes reliable Spread Spectrum Mesh Network Radio technology. They can be used to transmit remote sensor readings, status/alarm indications and control signals wirelessly and are compatible with any control systems or DDC panels that accept 0-5 VDC or 0-10 VDC inputs (RM2432D models). 24VDC supply power and NEMA 4 enclosure options are available. These receivers will accept signals from the wireless sensors on the previous page or from the input modules listed above.

SOFTWARE
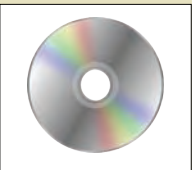
BTM9010

The BTM9010 is a wireless building monitoring system consisting of universal Modbus receivers (MOD9000D or MOD9200D) or repeater (RR1552 or RR2552), interface cable and the SensorView® Monitoring and Logging Software. The BTM9010 can be used with the wireless space, duct, immersion, outside air sensor and signal repeater to create a wireless monitoring application quickly and economically.

The system is a real time monitoring, and logging hardware and software package designed to work with a Window© based PC with an Ethernet/LAN port. The logged file is compatible with Excel© and other applications. The logged information can be retrieved easily for additional energy and performance analysis.

WIRELESS DEVICE

TEMPERATURE
RELATIVE HUMIDITY
PRESSURE
CURRENT
GAS SENSORS
ACCESSORIES
INTERFACE DEVICES

OUTPUT MODULES **900 MHz, Spread Spectrum Mesh Technology**

RD2402D

Together with other wireless transceivers, listed below, the system can be used to transmit remote control signals wirelessly. Has two (2) digital outputs (relay contacts).   Contact Rating: 1 A at 24VAC Max.

RD2432D

Same as above with four (4) analog output (0-5VDC or 0-10VDC selectable) and four (4) digital outputs (relay contacts)

Options include 24VDC supply power and NEMA 4 enclosures.

WEB LOGGER

RM9500

The RM9500 provides the user with Internet/intranet remote monitoring, control and logging capability.   It is a stand-alone internet web server that can communicate with the sensors and input modlues, previously listed, wirelessly. In addition, the RM9500 automatically and continuously logs all wireless sensor data such as temperature, humidity, tank level and alarm information for the last 30 days at 20 minute intervals.

Up to two (2) RC2105 controllers or 50 separate wireless sensors can be used with one RM9500 and up to 100 data points can be monitored and logged with one (1) RM9500 Web logger.

TRANSCEIVERS

MOD9200BNT

Together with other wireless devices listed, this system can be used to transmit remote sensor readings, status/alarm indications, control signals and outputs wirelessly. It is compatible with any control systems or Programmable Logic Controller (PLC) panels that utilize BACnet MSTP (Master Slave Token Passing) communication protocol or interface. Up to 50 separate physical wireless sensor transmitters and/or wireless remote output (analog & digital) modules can be used with one MOD9200BNT Transceiver and up to 100 data points and 100 outputs can be monitored and controlled with it as well.

MOD9200D

Together with other wireless devices listed, this system can be used to transmit remote sensor readings, status/alarm indications, control signals and outputs wirelessly. It is compatible with any control systems or Programmable Logic Controller (PLC) panels that utilize TCP/IP/ MODBUS communication protocol or interface. Up to 50 separate physical wireless sensor transmitters and/or wireless remote output (analog & digital) modules can be used with one MOD9200D Transceiver and up to 100 data points and 100 outputs can be monitored and controlled with it as well.

MOD9200LON

Together with other wireless devices listed, this system can be used to transmit remote sensor readings, status/alarm indications and control signals wirelessly. It is compatible with any control systems or Programmable Logic Controller (PLC) panels that utilize LonWorks® communication protocol or interface. Up to 50 separate physical wireless sensor transmitters and/or wireless remote output (analog & digital) modules can be used with one MOD9200LON Transceiver and up to 100 data points and 100 outputs can be monitored and controlled with it as well.