

24/7 Monitoring and Alarming All Critical Parameters in Healthcare

Accsense Online Monitoring System Complies with Joint Commission



For comprehensive environmental monitoring in hospitals and healthcare clinics Accsense Online Monitoring system can record and scale 3rd party sensors, built to industry standards, with outputs like 4-20mA, 0-5 or 0-10VDC, resistance and digital. Fully compliant with Joint Commission guidelines, Accsense is the choice of many of the best healthcare centers in the United States

including Stanford Hospital, Boston Children's Hospital, and the Cleveland Clinic Foundation, among many others. These Accsense users have been awarded the Joint Commission's Gold Seal of Approval™. The Joint Commission is the largest hospital and health care-related accreditation body in the United States.

In this application note CAS Data Loggers shows how an Accsense system can handle continual monitoring, alarming, and data storage. Hospitals, pharmacies, blood and tissue banks, laboratories and medical storage facilities can all put their trust in Accsense.

Multiple Parameter Monitoring

An Accsense Online Monitoring system can continually monitor any healthcare environment from refrigerated medication storage, incubators, cleanroom differential pressure and patient care areas. Accsense Online Monitoring can monitor and alarm for practically any value you need.

- Temperature in Celsius or Fahrenheit
- Relative Humidity (RH)
- Pressure and Differential Pressure
- Liquid Levels
- Oxygen Deficiency, and more

Accsense Online Monitoring Overview

Our Accsense Online Monitoring system consists of 2 distinct options: The A1 series is a wireless 2.4GHz system that requires a B1-06 Gateway for data collection from the up

to 16 data logger pods like the A1-13 3-channel RTD temperature pod. The 2nd option is my A2-05 3-channel stand-alone temperature data logging pod that has 2 RTD inputs and one type-T thermocouple input. The A2-05 connects directly to an Ethernet port or via Wi-Fi depending on model chosen.

The Accsense B1-06 Wireless Data Logger Gateway with built-in 10/100BaseT Ethernet transmits the data collected by an A1 pod over the Internet to the Accsense server. The wireless data logger automatically sends all its data to the gateway at the programmed time set by the end-user during configuration procedures. The B1-06 wireless gateway supports as many as 16 pods can use DHCP or have a static IP address assigned to satisfy every IT department request.

Both the pods and gateway range out to 250' line of site or about 90' indoors, but the pods are able to behave as repeaters to boost the wireless range.

Automatic Alarm Notification

Users can set upper and lower alarm thresholds to generate alerts and send them out via email, cell phone, pager or landline to as many as 20 individual recipients. In case of a power or internet outage, Accsense will alarm the staff while it keeps logging on its 250-sample data buffer.

Clinic staff can download the data for offline analysis, view it in reports, charts and graphs, and administrators can modify the Accsense configuration from anywhere they're connected to the Internet.

Medical Refrigerators and Freezers

The Accsense A2-05 Ethernet Temperature Data Logger is designed to monitor one or more medical refrigerators or freezers to prevent loss of expensive medical inventory, re-vaccinations of children, and priceless tissue samples. In the event of a power or network outage the data logger has an internal 256 data point memory that will record for up to 64 hours at a 15 minute sample rate.

If you need an all-in-one solution, the A2-05 Vaccine Temperature Monitoring Kit bundles the A2-05 data logger, an AC Power adapter, an RTD probe, a glycol bottle, and a 1-Year Accsense Monitoring Plan for less than \$1,000. The kit comes in a Wi-Fi version for an additional fee.

Cleanroom Systems

For effective cleanroom monitoring, Accsense can also connect to a commercial differential pressure sensor and continually monitor the sealed environment to ensure no contaminants invade or escape the room. For example if a negative pressure pump fails Accsense will immediately send out alarms so that staff can take corrective actions. By mounting an Accsense data logger by the room you cover each of your pressure monitoring points. In addition to alarming the data stored on the servers can be used to prove compliance in the event of an audit. Many cleanrooms also require

monitoring of ambient temperature and humidity for patient safety and to avoid microbial growth.

Incubator Monitoring

If you need to monitor the temperature in medical incubators to protect your products and to meet regulatory needs, our Accsense A1-08 wireless temperature data logger has 6 thermistor inputs to cover up to 6 monitoring points. We can also provide your hospital or clinic with our E1-20 thermistor Probes made of stainless steel with 10' cabling and a temperature range of -20°C to 150°C, each of which can monitor an incubator.

For example, a common incubator setup in IVF clinics is a room containing 3 rows of 2 incubators stacked atop each other. With an Accsense installation, each of these incubators has a thermistor probe monitoring its interior temperature. All 6 of the incubators can be covered by a single A1-08 data logger pod helping to reduce initial cost of the system.

The A1-08 wireless data logger also has two digital inputs which enable you to alarm the open/close state of up to two incubators (or medical storage units etc.). Users can set the logger's alarm delay so that an alert is generated only after 3 samples in a row show the door is open. Additional parameters such as carbon dioxide and oxygen levels can be monitored with a 3rd party sensor and one of the pods designed to record 4-20mA, 0-5VDC, 0-10VDC, or digital signals.

Surgery Rooms

If humidity gets too high in an operating room condensation can drip from the ceiling causing non-sterile particles to potentially contaminate a patient lying on an operating table. Medical staff find it difficult to work in a humid environment because the temperature feels higher potentially causing a hazardous work environment.

In this setup an Accsense A1-05 Wireless Temperature and Humidity data logger can monitor several environmental values:

- Ambient Temperature
- Humidity
- Differential Pressure

The data logger measures Temperature and Humidity using its internal sensors, while it monitors differential pressure using its external 4-20mA input to record a differential pressure transducer. It's easy to mount an Accsense data logger to the wall using the supplied bracket.

Online Account

With Accsense all your data is sent via Internet connection to the cloud right away where users can download measurement data for analysis, access real-time data, generate reports, print graphs, and administrators can modify the system configuration online from an Internet-enabled device. Data online can easily be downloaded as a CSV file and loaded into most spreadsheet applications like Excel.

The customizable interface and measurement dashboard shows the most recent data from the data logger, and users can display historical data.

The Accsense Advantage

Accsense Online Monitoring systems are the choice for many healthcare facilities holding the Joint Commission Gold Seal of Approval. Accsense also delivers additional benefits that users enjoy like:

- Accsense alarm systems automatically send Email, SMS text message, Pager or Phone alerts
- Accsense also sends power or Internet outage notifications
- Continually monitor and log your data and view real-time data
- Gain remote access to your data with online graphing, reporting and configuration features
- Complies with FDA, JCAHO, AABB and other industry standards

Read about Accsense customers achieving Joint Commission Gold Seal accreditation here:

http://www.dataloggerinc.com/content/news/general_news/635/accsense_customers_achieve_joint_commission_accreditation/.