



# SERVER ROOM MONITORING SYSTEM PROTECTS SERVER ELECTRONICS

## SYSTEM MONITORS TEMP & HUMIDITY, DETECTS EARLY LEAKS

CAS DataLoggers provided the wireless server room monitoring and alarming system for a server storage provider whose customers relied 24/7 on the equipment's reliability. For example, if a single server rack goes down, this can be disastrous to the data center's operations. In line with [ASHRAE](#) standards and guidelines (American Society of Heating, Refrigerating and Air-Conditioning Engineers), staff wanted to monitor the room at different points for both temperature and humidity. Water leaks posed another serious danger, entering through leaking AC systems, water pipes, and even roofs and floors. A failing AC unit soon impacts servers due to thermal stress, overheating CPUs, and application errors, and by the time the failure is discovered, it's usually too late. With all this in mind, server storage personnel needed their server room monitoring system in place and operational for the upcoming rainy season.



## INSTALLATION

CAS DataLoggers provided the business with a [Wireless Data Logger Network Base Station](#) installed on the wall nearest the door and connected it to a 25-ft cable BAPI Water Leak Detector which CAS DataLoggers also provided. The base station featured built-in wireless communication and LAN capabilities, using a 10/100BaseT Ethernet interface. Staff also installed 3 [Wireless Temperature and Humidity Data Loggers](#) around the room using the optional wall brackets, each with an external sensor monitoring the servers as suggested by ASHRAE.



The data loggers have a temperature measuring range of 32°F to 131°F (0°C to 55°C) and simultaneously record humidity from 10% to 95% RH. The loggers measure in both Celsius and Fahrenheit and also feature a clear LCD display. Compact, waterproof construction ensured easy placement and reliability and gave the engineers the ability to relocate the loggers to test in different sections of the server room.

## USAGE

The water detector's transmitter can be set for latching or non-latching alarm, and energized or de-energized operation. Within 5 seconds of contact with water, the sensor's alarm relay changes state and the sensor gives red LED alarm indication. Immediately afterward, the wireless base station automatically downloads the sensor's readings and sends a warning report to designated IT staff by email over the network along with text message alarms to selected smartphones.



Additionally, the wireless base station periodically downloads its recorded data from the remote units and sends it to staff email addresses. Each monitor's wireless range extends to 500 feet (150 meters). Each datalogger has an 8,000 data set memory and a battery life of about 10 months which can be upgraded to 4 years. The base station is able to download a wireless monitor at full logging capacity in under 5 minutes.

The network base station also sends all current readings to the manufacturer's free web-based storage service so staff are able to view and share the data via a web browser. The data loggers also include free software which makes it easy for users to adjust the wireless and network communication settings.



## BENEFITS

Post-installation, the storage provider's business is benefiting from truly comprehensive server room monitoring. Now the server racks are protected with automated monitoring and alarming covering all parameters: temperature, humidity and water leaks. The system also triggers alarms to staffers' mobile devices so they can take action in the event of incoming water in time to save their business-critical equipment. Using the system's wireless communication, staff are able to collect, manage and monitor their equipment's environmental conditions. In the event of a leak or unsafe readings, data and alarms automatically go out to designated mobile devices and emails. If more potential leak locations are found over time, it will be easy to add additional water sensors for larger floor coverage.

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For further information on [Wireless Temperature and Humidity Data Loggers](#), [server room monitoring](#) or to find the ideal solution for your application-specific needs, contact a CAS Data Logger Application Specialist at **(800) 956-4437** or [www.DataLoggerInc.com](http://www.DataLoggerInc.com).