Environmental Monitoring System (EMS)

Providing reliable information to optimize the data center environment.
Stop Environmental Threats before They Become a Problem

While network threats get most of the attention in data centers, environmental threats such as temperature, humidity, fluid leaks, pressure, airflow, and smoke can be just as harmful to IT equipment.

Environmental monitoring provides facility managers the ability to monitor their entire site to help prevent environmental disasters which can cause costly damages. However, even though the importance of environmental monitoring in critical facilities is high, implementation still remains low, mainly due to time and cost restraints.

Threats may include:
- Fluid Leaks
- Chemical Leaks
- Overheating
- Power Surges
- Air Quality (Pressure, Composition, etc.)
- Excessive Humidity
- Vermin
- Disconnected Equipment
- False Alarms from Faulty Equipment

Energy Savings with Monitoring

In addition to providing preventive protection, monitoring supports optimizing your data center’s cooling. After WireFree sensor technology was deployed at a demonstration facility, substantial energy-savings benefits were realized, including:
- Cooling load reduced by 48%.
- Total power usage reduced by 17%.
- Annual savings of 657 megawatt-hours (MWh).
- Carbon footprint was reduced by 542 metric tons annually.

A New Category of Environmental Monitoring

Upsite’s new Environmental Monitoring System (EMS) provides cost-effective solutions that can be installed across network closets, server rooms, and enterprise data centers. Our EMS solutions offer fully automated, real-time tracking with both wired and WireFree options to help facility managers monitor IT equipment and the environmental threats that surround them. Both systems come with audible, visual, email, and text alarm notifications as well as logging and trending capabilities, which is the most offered on the market today, regardless of the price point. An event log records the 50 most recent alarms and returns to normal events with date and time stamp, extended sensor trending allows you to review and study environmental conditions within your facility. Trending data can also be downloadable as a CSV file. Upsite’s Environmental Monitoring System provides fully scalable monitoring solutions for critical facilities that can be used alone or easily integrated into your existing technology (e.g. BMS, DCIM).

Real-Time Tracking

Upsite’s Environmental Monitoring System offers a user friendly dashboard that tracks real time data to keep facility managers up to date on the current environmental factors of their computer room.
WireFree Monitoring: Introducing the EMS-400

The Environmental Monitoring System 400™ is a WireFree sensor network manager that receives and aggregates signals from up to 400 WireFree transmitters. It then displays this data on its integrated web interface, which provides a centralized view of the sensors and their current readings, as well as direct alarm notification from any smartphone or web browser.

The EMS-400 and WireFree sensors can monitor temperature, humidity, motion, power, pressure, airflow, equipment status, and third-party devices.

Since the EMS-400 can relay the gathered information to facility monitoring systems, it streamlines communications and allows an unlimited variety of WireFree equipment to communicate directly with a BMS or NMS. The EMS-400 also has four hardwired digital inputs and two hardwired relay outputs. This expands the device’s capabilities and allows the EMS-400 to relay signals from traditional wired sensors and equipment.

The EMS-400 can be integrated into larger systems via SNMP or BACnet. Modbus protocols can serve as a network repeater to convey alarm status information to a centralized location.

Communication Protocols
- TCP/IP
- HTML
- TFTP
- SNMP
- Modbus
- Bacnet/IP
- Bacnet/MSTP
- SNMP

Request more information about our EMS products at UpsiteEMS@upsite.com

Benefits of our New WireFree Monitoring Technology

- Easier to Physically Deploy
- Easily Scalable
- No Cables to Manage or Repair
- Cost Effective
- Multiple WireFree Signal Options
- Auto Discovery and Configuration
- Improved Battery Life
- Energy Harvesting
- Extended Range Capability
- Reliability Through Fault Detection
- Enhanced Security
- No Interference
Wired Monitoring with the EMS-200

The Environmental Monitoring System 200™ is a wired sensor network manager that allows for 4 sensor inputs, allowing you to deploy temperature sensors, temperature/humidity sensors or any combination of the two. In addition, the EMS-200 also has 8 digital inputs that can monitor open/closed doors, motion sensors, fire alarms, gas detectors, airflow sensors, and summary alarms from critical equipment including UPSs and generators.

The EMS-200 also has one relay output to control an external device in the event of an alarm condition and 1 zone leak detection that can supervise a spot detector or up to 200 feet of leak detection sensing cable and inline spot detectors.

Once all your monitoring connections are snapped into place, the information is displayed on the EMS-200's integrated web interface which can be accessed from any computer or mobile device.

Communication Protocols
- TCP/IP
- HTML
- SMTP
- SNMP
- Modbus
- NTP

Benefits of our Wired Monitoring Technology

<table>
<thead>
<tr>
<th>Solid Security</th>
<th>Increased Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>Fast</td>
</tr>
<tr>
<td>Cost Effective</td>
<td>No Batteries Required</td>
</tr>
</tbody>
</table>

Contact us to learn more at +1.888.982.7800