Asset Manager:
Environmental Monitoring

RF Code™
Software

Asset Manager's real-time monitoring and alerting about the environmental conditions surrounding critical assets and spaces provide proactive approaches to dealing with physical threats in centralized locations and distributed environments.

Features & Benefits

- *Enterprise Ready Platform*
- *Scalable Sensor Monitoring*
- *Policy Based Thresholds*
- *Sophisticated Alert Engine*
- *Real-time Dashboards & Maps*
- *Robust Communications Architecture*
- *Integration Ready*
- *Intuitive Web Interface*
- *Mobile App Support*

Asset Manager works in concert with RF Code's wire-free environmental sensor tags to provide real-time monitoring and alerting about the environmental conditions surrounding critical assets and spaces. Asset Manager collects information from all types of RF Code wire-free sensor tags. It then organizes all sensor information according to sensor type as well as sensor location. All information collected by Sensor Manager can be viewed interactively via an easy to use web browser based console. All information can be accessed via customized table views as well as graphically via map views and dashboards. All historical data can be easily organized into reports and graphs using the integrated reporting and graphing capability. Asset Manager's sophisticated alert system enables policy-based thresholding per sensor type and sensor location. Alert notifications can be communicated via email, SNMP, and HTTP Post allowing for easy integration into other enterprise applications such as workflows and trouble tickets.

Scalability and Flexibility

The combination of RF Code's wire-free sensors and infrastructure with Asset Manager results in an incredibly scalable sensor solution that is simple to deploy and easy to maintain. Asset Manager supports all RF Code wire-free sensors:
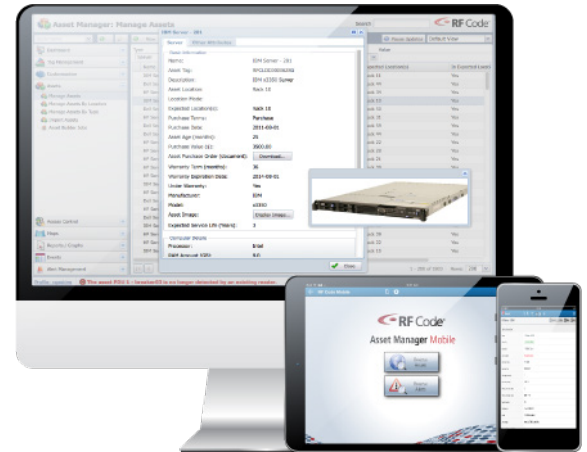
- R120 Door Sensor
- R130 Dry Contact Sensor
- R135 Fluid Sensor
- R150 Temperature Sensor
- R151 Tethered Temperature Sensor
- R155 Humidity & Temperature Sensor
- R160 Air Pressure Sensor
- R170 PDU Sensor

Asset Manager can easily handle tens of thousands of sensors in high-density centralized deployments. Asset Manager stores all sensor information into an SQL

Ready for

IBM® | Tivoli®

software

database for fast and efficient retrieval and data mining.

The data schema for holding sensor information is customizable. This allows administrators to add additional classification attributes to any sensor definition enabling more meaningful reports, views and dashboards.

Advanced Threshold and Alerting Engine

While viewing real-time sensor information is interesting, a more proactive approach is required especially for large-scale deployments. Asset Manager's advanced threshold and alert engine enables the system to do all the work of "watching" for issues and only produces notifications when there is an issue that requires human intervention. The key to this approach is Asset Manager's policy based threshold feature. In Asset

Manager filters are created that produce dynamic sets of sensors to which the threshold is applied. A filter for a threshold might include all temperature sensors in Data Center X on the intake side of an IT rack that gets above 90 degrees F. Asset Manager uses that filter definition to find the population of sensors that meet the criteria and applies the threshold. As more sensors are added that meet that criteria, they automatically inherit the threshold. Creating and applying thresholds could not be any easier. Once threshold conditions are met, the alert subsystem can produce a wide variety of notifications such as email, text messages, SNMP traps, and HTTP Posts. The alerts produced can be assigned one of five different severities that map to defacto industry standard alert schemas such as SNMP.

Data Visualization: Graphs, Dashboards and Maps

Asset Manager can easily visualize critical sensor values in a variety of ways such as graphs, dashboards and maps. Asset Manager includes a powerful graphing engine that allows any attribute's values to be graphed. The graphing engine produces interactive graphs that allow users to hide and show specific sensors as well as zoom in and zoom out. The graphing engine also supports "hover help" that quickly
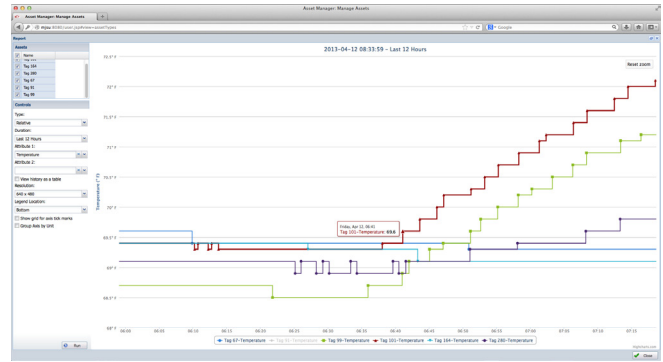
displays the details about an individual data point on a graph.

Asset Manager's flexible dashboards provide a powerful format for visualizing key sensor information. Dashboards can be fully customized and populated with a variety of widgets that best fit the data being displayed.

The Map View provided by Asset Manager can overlay key sensor information on physical map layouts bringing additional location context to the data. The Maps are also fully customizable and can display any attribute defined in the system.

Robust Communications Architecture

Asset Manager features enhanced data gathering functionality, including UpConnect support for RF Code M250 readers. With UpConnect, M250 readers in remote locations can initiate the TCP/IP connection with Asset Manager, enabling RF Code infrastructure in remote locations to easily traverse firewalls.

Asset Manager also supports remote data store-and-forward capabilities when deployed in a multisite configuration with a single Asset Manager server being serviced by multiple remote Zone Manager systems. The remote data store-and-forward feature enables all historical data to be stored locally by the Zone Manager system until a connection with Asset Manager is successful. This ensures the integrity of all tag location changes and environmental monitoring data, even during a network outage.

Integration Ready

Asset Manager is designed to be an open or "integration friendly" platform. A complete set of open API's is available that can enable almost any application to integrate with Asset Manager. The API's are web REST based allowing data exchanges in either XML or JSON. The Asset Manager API not only allows information to be extracted from but also allows information to be inserted enabling tight integrated with other enterprise systems.

RF Code and RF Code partners have created off-the-shelf integration modules to allow data sharing between standard applications. Some of these integration modules utilize industry standard data exchange protocols such as JMX, OPC, Modbus, and BACnet. Other modules are specifically designed for 3rd party applications. Refer to the RF Code website for more details on integration modules and RF Code partners.