WHITE PAPER

WIRELESS MONITORING FOR SUPERMARKET APPLICATIONS

Introduction

To ensure top product quality, grocery stores and supermarkets are required to comply with food safety standards.

It has become increasingly harder to monitor temperature in supermarkets manually. Historically that possessed high risks of product spoilage and recall. As a result, wireless monitoring solutions and centralized data collection are becoming the new standard in the food safety industry.

To gain overview into an otherwise disconnected supermarket a comprehensive food safety system needs to be implemented.

Wireless monitoring systems have the potential to improve store efficiency by eliminating the need for manual data logging and excluding the possibility of human error.

Temperature monitoring requirement for supermarkets

A wide variety of equipment is used to store goods in supermarkets, such as display cases, walk-in refrigerators and freezers. They all need to meet FSMA/ HACCP guidelines and regulations.

Such regulations request temperature to be monitored, controlled and recorded throughout the food distribution process, including while it's stored.

Freezers and ridges

Keeping up an optimal temperature in coolers and freezers is essential to providing fresh food for customers. If the temperature rises above or falls beneath the optimal range food spoilage may happen and it can result in a violation of food safety standards. To reduce the risk of bacterial contamination, many foods must be stored in the refrigerator and thus kept below 5ºC /41ºF.

Industrial ovens

As the grocery and retail food industry expands to offer more cooked or processed foods, the demand for high-temperature monitoring continues to grow. Oven temperature monitoring as well as cooking and cooling verifications are essential to producing safe products and meeting regulatory compliance.

Food storage & preparation

The obligation to monitor can extend to areas that are used for food preparation. An example of this is an area used for preparing meat and fish, where products must be weighted, sliced and packed at temperatures of around 7°C/44.6ºF. It is also required to monitor and record ambient conditions where the produce is stored.

If the authorities discover any noncompliance with the regulations, they can issue a recall that itself can have a devastating effect on the company's reputation and balance sheet, but it can also result in fines and penalties. In extreme cases, operations may be shut down until expectations for food storage standards are met.

Wireless monitoring for supermarkets

The Internet of Things (IoT) is helping manufacturers and supermarkets reduce the impact of a recall and meet FSMA/HACCP requirements by providing detailed temperature monitoring and record keeping. Wireless monitoring solutions provide a variety of benefits for supermarket applications.

Reduce product spoilage

With constant wireless temperature monitoring supermarkets can greatly reduce food spoilage risks that can result in huge losses, fines, and penalties.

Brand image

Protect the company's reputation and reduce the risk of negative publicity from a food safety incidents.

24/7 monitoring

Automated wireless monitoring solution can properly track and record temperatures 24/7, immediately notifying staff via e-mail alerts of any detected issues.

Save resources

Centralized data gathering saves time previously spent on manual data collection. The installation process is simple, quick and cost-effective, no extensive planning or preparation needed.

Comply with regulation

Demonstrate consistent regulatory compliance with associated temperature records of all storage areas. Avoid time-consuming physical document retrieval process. Access and export necessary data instantly.

Aranet wireless monitoring solution

Aranet solution consists of wireless temperature, relative humidity, CO_2 sensors, base station and easy-to-use software for data analysis. Most important, our wireless monitoring solutions send email alerts, if any predetermined temperature thresholds are exceeded.

With the help of wireless supermarket monitoring and historical data logging personnel can analyse temperature tendencies and fluctuations over time, make adjustments when necessary as well as demonstrate consistent compliance with storage condition standards.

Aranet software provides accurate data logs of temperature within cold storage, warehouses, walk-in coolers, commercial freezers and ovens for use in documentation, reports, and product safety audits.

Value proposition

- Wireless monitoring and better local supervision of critical parameters of the supermarket in real time;
- Preventive e-mail alerts resulting in timely action;
- Historical data collection for better analysis and reporting;
- Easy to install and manage;
- Highly scalable system 1-100 sensors per base station;
- Energy efficient – 10-year sensor battery life;
- 24/7 automated monitoring & data accessibility;

MONITOR ➡ **COLLECT** ➡ **ANALYZE**
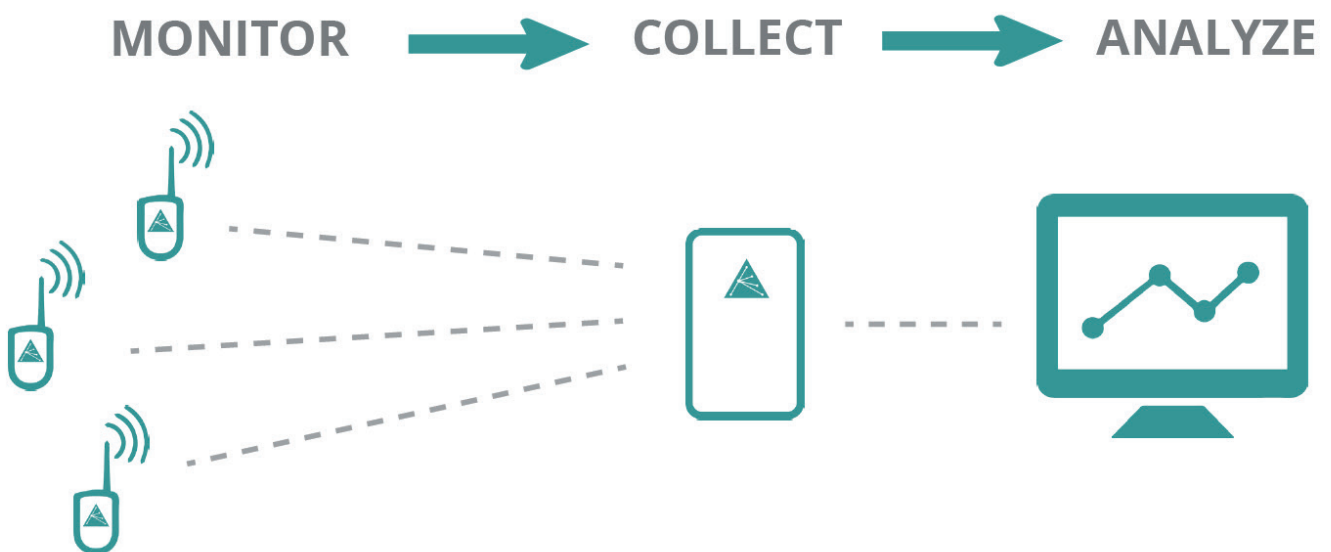
Things to remember

- A number of regulations and processes are mandatory during food storage and distribution to ensure the safety of perishable goods.
- Manual documentation processes are time-consuming, resource intensive and prone to human error.
- Supermarket and grocery store segment can significantly optimize costs by reducing waste, spoilage and recalls, freeing up employee time by automating manual documentation processes, and wirelessly tracking the temperature in coolers and freezers, ovens and display cases.
- Aranet automated wireless monitoring solution can properly track and record temperatures 24/7, immediately alerting staff of any detected issues.
- Aranet is a full wireless monitoring solution that is easy to implement and manage;
- It has never been easier and more cost-effective to implement industrial IoT solutions!

About us

Aranet offers industrial IoT environmental monitoring solutions for a variety of businesses, making it easy to collect and analyze real-time data.
Discover all the ways Aranet can help your company take wireless monitoring to the next level!

To learn more about Aranet products and solutions, please visit our website **www.aranet.com** or contact us **info@aranet.com**