MONNIT®

Smart Monitoring Systems for Restaurants and Foodservice

Smart Monitoring Systems for Restaurants and Food Services

How restaurants, cafeterias and other food services can implement reliable, low-cost, monitoring solutions for smarter, safer, and more efficient operations.

Introduction

As chef and restaurant manager, Anthony is routinely the first one to arrive in the morning and the last one to leave after closing. He spends part of his days on the line in the kitchen, assisting other cooks, and making sure that each plating is perfect. Anthony also spends quite a bit of time in the front of the house and his office, running through paperwork and communications.

Wherever Anthony is, whether at work or on vacation, he has access to important information about his restaurant. From his smartphone, he can know how many guests are in the restaurant, how the HVAC system is performing along with temperatures for both the kitchen and dining areas, temperatures of food coolers and freezers, and even which appliances are running and for how long. After a successful day, Anthony checks on the daily performance and numbers for the day. He also makes sure his staff remembered to turn off all the appliances, then makes sure that everything is shut down properly, and all lights are off. He can do all of this with one quick glance at his phone as he locks the door and heads home to his family.

Foodservice and the Internet of Things

With the foodservice industry growing rapidly many restaurants are struggling to optimize. The restaurant business is challenging, as studies show that 60 percent of restaurants fail within the first three years. As a restaurant owner, if you want to stay ahead of the competition, you need to maximize your resources. Implementing new, low-cost, connected technologies can play a major part in improving efficiency and success.

There is a lot of talk around the Internet of Things (IoT). The basic idea of the IoT is to connect everyday objects to the internet and each other, allowing these objects to communicate in new ways. One of the industries realizing the biggest impact from IoT implementation is the foodservice industry. Many companies within the foodservice industry have started implementing an IoT strategy to meet food safety regulations more easily and cost effectively.

Here are a few of the struggles, concerns, and responsibilities a foodservice professional can overcome with Monnit and the IoT:

- Reduce Waste and Spoilage
- Save Time and Resources
- Protect Your Investment
- Increase food safety
- Extend food shelf life
- Conform with regulatory compliance
- Become aware of food storage problems
- Improve guest experience and comfort
- Protect your reputation
- Monitor from anywhere

RETAIL FOOD LOSS AND WASTE

According to the United States Department of Agriculture, over 10% of all food waste in the U.S. comes from the retail sector. This equates to over 43 billion pounds of food wasted, costing over $46.7 billion annually. A large portion of retail level food loss and waste comes from; excessive or insufficient heat, inadequate storage, and storage technical malfunction.

10%
Of all food waste is at retail level

43B
Pounds of retail food is wasted every year

$46.7B
Dollars worth of retail food is wasted every year

Source: United States Department of Agriculture - Economic Research Service

Regulations

Food safety regulations pertain to any operation where food is stored, displayed, prepared, or cooked. These rules ensure restaurants store, prepare and serve food safely so that patrons do not become sick from pathogens like bacteria. Most Health Inspectors warrant temperature logs to monitor the consistency of temperatures in food storage areas.

In recent years, there have been many concerns in regards to food safety. As a result, the government has made food safety a top priority by implementing the Food Safety Modernization ACT (FSMA). The leading causes of foodborne illnesses when it comes to restaurants are due to inadequate sanitation procedures and poor temperature control when storing raw and cooked products.

Restaurant owners, managers, and franchisees are requiring restaurants to be more proactive by consistently recording the temperatures of ovens, freezers, and refrigerators to monitor the safety of food. Not only is it important to meet regulations, but your business reputation depends on your customers trusting your establishment to serve quality food. If word gets out that your deli meats, pastries, sushi, or tuna salad caused food poisoning, you will not only lose customers but may lose your food permit as well. Monnit will help you follow food safety regulations to make sure that you are serving safe, quality food.

Out with the Clipboard, In with Monnit

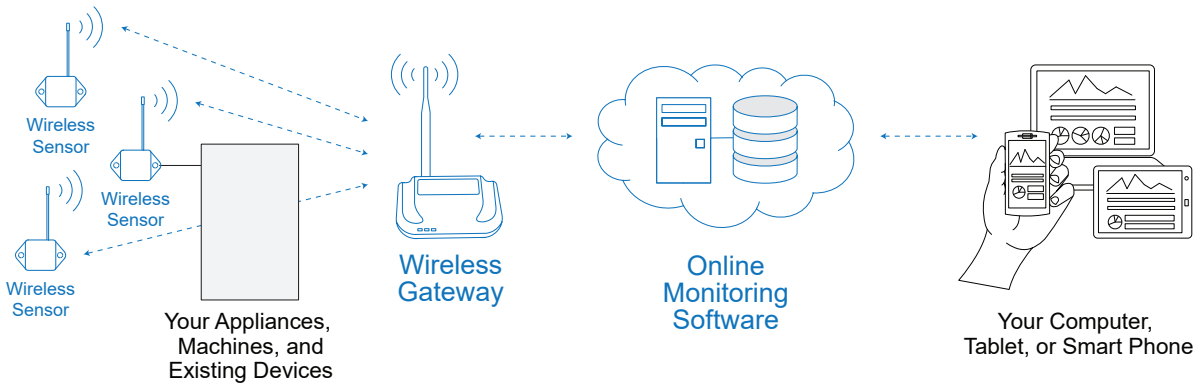
Whether a part of a franchise or an independent restaurant, automated monitoring solutions can help you and your staff maintain a successful and profitable business. Monnit's Wireless Sensors are used in thousands of restaurants to help businesses monitor the status and performance of the restaurant and comply with health department regulations.

Monnit is making a big impact with many companies across the globe in maintaining a safe food supply and meeting FSMA regulations. The FSMA requires detailed monitoring, record-keeping, and reporting for all food services. For most restaurants and food service providers, food storage monitoring traditionally involved manually checking the conditions of food storage areas. These routine inspections required the recording of the temperature and humidity of these areas and occurred every three hours every day. This responsibility is often carried out by employees who are inadequately trained in food hygienics or by inexperienced managers, which leads to corners being cut. It is also common for sous chefs, or line cooks to take over an hour to perform a manual quality check of their area to complete the necessary paper-based reports. This data is then analyzed at a later date.

Monnit offers an alternative to time-consuming, paper-based FSMA processes. Automated sensor systems can track and monitor areas of your business that were previously done manually. This frees up manpower and time, allowing employees to focus on more important job responsibilities, while eliminating human errors such as; misreadings, recording errors and missed times for readings.

The Monnit Remote Monitoring System is an intuitive, reliable, and cost-effective solution for your company. Monnit provides an enormous opportunity to monitor your appliances, attract customers, increase profits, and scale your business. Monnit will dramatically improve the opportunities for automatic monitoring and real-time control for food businesses of all sizes.

How the Monnit Solution Works



The Monnit Solution

The Monnit solution consists of wireless sensors, gateways and monitoring software, to offer a complete remote monitoring solution. Wireless sensors can be used to monitor various environmental aspects of your business as well as integrate with your existing equipment (such as coolers and appliances) to give you real time data. Wireless gateways act as a communication bridge between your wireless sensors and the iMonnit Online Monitoring Software which allows you to view sensor information from anywhere, anytime through a computer, tablet or smart-phone. The iMonnit software can also alert you immediately by email and/or text message, and can even call your phone if conditions that you set are met or exceeded.

Monnit's wireless sensor network (WSN) can be expandable from a single local area to a multi-site network with sensors anywhere in the world, as long as the sensors are connected to a Monnit gateway. The gateway will then transmit the data to Monnit's cloud-based software which allows you to configure, monitor, and manage all of your locations from one network.

Monnit has over 50 different wireless sensors types, and all have unique characteristics depending on their application to provide the solution you need. Monnit also delivers a variety of gateway communication options, such as cellular, Ethernet, USB and serial MODBUS to connect your devices to Monnit's cloud software. Cellular, Ethernet and USB gateways are capable of connecting with up to 100 wireless sensors per gateway and serial MODBUS gateways can connect with up to 50 wireless sensors.

Features and Benefits

- Easy to setup and use
- Reliable, proven technology
- Low cost
- Low power/long life
- Exceptional wireless range
- 50+ sensor types
- Scalable / Expandable (100 sensors per gateway)
- Global RF frequencies
- Cloud-based monitoring software
- Provides alerts by text message, email, or phone call
- Accessible 24/7 from anywhere
- Custom sensors available upon request

Benefits For Your Business

Food Storage and Preparation Temperatures

Monnit Wireless Sensors can be stationed in refrigerators and other food preparation and storage areas to provide real-time, 24/7 monitoring and recording of temperature, humidity and door statuses. These recordings are accessible anywhere with a network connection or recorded to reference at a later time. This not only eliminates the potential for human error but will also save you time, money, and give you the visibility you need to ensure your stock is safe, even after hours.

If the temperature where your food is stored becomes too hot or too cold, an alert will be generated and can be sent to multiple computers, mobile devices, or to a local warning system to notify any employees nearby. Over time these trends will become more efficiently monitored, so if the temperature begins increasing it will be more easily detected, and action can be considered before there is any risk to the food stored within. Over a period of a few weeks, managers can see if faults re-occur and ensure that maintenance is performed where needed.

Cost Savings - Food Storage Incident

Anyone who has owned or managed a restaurant knows how big of a factor food loss is to the ultimate success of the restaurant. Most owners would even go as far to say that controlling food spoilage is the most important part of running a profitable restaurant. Depending on the restaurant, food and beverage costs can vary from 25-40% of the restaurant's total cost.

Average inventory cost of a restaurant cooler	$15,000 - $30,000
Average Cost of repair	$300 - $500
Cost of 1 incident	$$$
Cost of a Monnit solution	~ $350

Cost Savings - Operational Efficiency (Employee Man Hours vs Automated Systems)

Number of areas to manually check and document	10 areas
Hourly labor rate	$15 / hour
Hourly labor rate - fully burdened	$18.30 / hour
Time spent to check and document each unit	5 minutes
Number of tests per unit per day	10 readings
Estimated cost per test	$1.53
Estimated daily cost for all tests	$153.00
Monthly labor cost	$4,590
Annual labor cost	$55,080
Cost of Monnit system for monitoring 10 units	~$800

Additional Benefits For Your Business

Energy Consumption

Another significant challenge for restaurants is reducing energy usage. According to the Energy Information Administration, restaurants consume more than three times the energy of the average commercial building. Extended hours of operation, specialized equipment, and high demand make up much of the substantial consumption, but overall the energy consumption by restaurants are costly and often wasteful.

Poorly maintained coolers and freezers can leak cold air, which requires coolers to run more than usual to maintain the proper temperature. Unregulated temperatures are also likely to spoil food. Combining this problem with a Monnit's AC Current Meter, you can significantly decrease the amount of food and energy wasted.

With Monnit's AC Current meter attached to any appliance you can monitor usage and efficiency over time. Tracking each system's data with Monnit's cloud-based software will help with keeping your appliances running at their peak performance and contribute to eliminating other inefficiencies, such as reduced airflow, heating and cooling fluctuations and avoid costly repairs.

HVAC and Guest Comfort

As energy-efficiency remains a top concern for countless restaurant owners, many are increasing their efforts to find savings related to their air-conditioning (HVAC) systems, as HVAC systems are often responsible for more than 40 percent of total energy use. Facilities that monitor their HVAC units and perform maintenance when needed use 15–20 percent less energy. With Monnit's Smart Monitoring System, you can receive actionable information that allows you to know how much energy is being consumed, when preventive maintenance should be performed, and prevent HVAC malfunctions which could shut down your business.

Reducing energy usage and keeping your restaurant consistently comfortable is challenging. Not only do you have your doors opening and closing throughout the day, but you also have kitchen appliances adding heat, and the ventilation system letting out air. It is a complicated problem, but it is never acceptable to have your guests be too hot, cold or humid. You can use Monnit temperature and humidity levels to monitor fluctuating temperatures throughout the day. Using historical sensor data will allow you to adjust temperatures before any discomfort is felt among your patrons or employees.

> "They say you never know when disaster will strike. Well, now we do! Monnit's remote monitoring system is such a valuable tool when it comes to protecting our buildings and everything in them."

– Leroy R., Property Management

Key Takeaways

- A number of regulations and processes are mandatory within restaurant and food service establishments to ensure food safety.
- Proper manual processes and documentation are time consuming, resource intensive and prone to human error.
- Monnit's automated system can properly track and record temperature critical processes such as food storage and preparation temperatures.
- Monnit systems can protect stored food inventories, preventing spoilage due to cooler or freezer failures by immediately alerting staff of any detected issues.
- Food service businesses can realize cost savings in energy use by monitoring power consumption of coolers, freezers, appliances, HVAC systems and more.
- Monnit's reliable remote monitoring solutions give you peace of mind by giving you 24/7 access to your business from anywhere and alerting you immediately of any issues.
- Implementing the Internet of Things in your business is easy and affordable!

As regulations and competition grow, restaurant owners cannot afford to take risks with food safety. Suffering the loss of stock due to spoilage or spreading food-borne bacteria throughout your restaurant is an expense that restaurants may not overcome. Monitoring food temperatures will help restaurants produce less waste and provide safer and better-tasting food.

About Monnit

Monnit bridges the gap between industry and technology through the Internet of Things, empowering businesses with easy-to-use, low-cost remote monitoring solutions. Monnit solutions can be used to remotely monitor a variety of "Things" (i.e. temperature, motion, humidity, energy use, etc.), alerting you by text, email, and/or phone call when user-defined conditions are met. Our goal is to save you as much time, money, and stress as possible, by preventing issues with inventory, infrastructure, and more.

As a Global Top 50 innovation leader in The Internet of Things (IoT), Monnit's technology has significantly expanded the frontier of both what and how "things" can be connected, monitored and controlled. It is almost impossible to identify an asset, process or solution, from SMB to Enterprise, indoors or outside, commercial to industrial, that cannot be uplifted by one of Monnit's 50+ reliable, affordable, tiny, powerful, wireless monitoring solutions.

MONNIT®

For more information about our products or to place an order, please contact our sales department at 801-561-5555.

Visit us on the web at www.monnit.com.

Monnit Corporation
4403 South 500 West
Murray, UT 84123
801-561-5555
www.monnit.com

MWP-001-1A (08/16)