

## Wireless Temperature Monitoring Cuts Cost of Loading Refrigerated Trailer Trucks

### **Situation:** Need for Lower cost and Higher efficiency

Vaughan Foods, Inc. operates as an integrated processor and distributor of refrigerated foods in the United States. Its products consist of fresh-cut vegetables, fresh-cut fruits, salad kits, prepared salads, dips, spreads, soups, sauces, and side dishes. The company offers custom vegetable mixes and custom sized produce cuts. Vaughan Foods, Inc. markets and sells its products to food service distributors, regional and national restaurant chains, and retail grocers.

Freshness has a major emphasis at Vaughan Foods. Their Grower Direct Program provides for the harvesting of produce and transport to their processing facility with maximum control



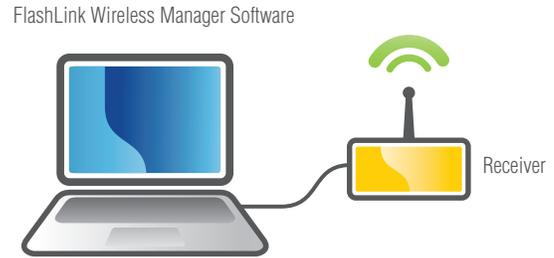
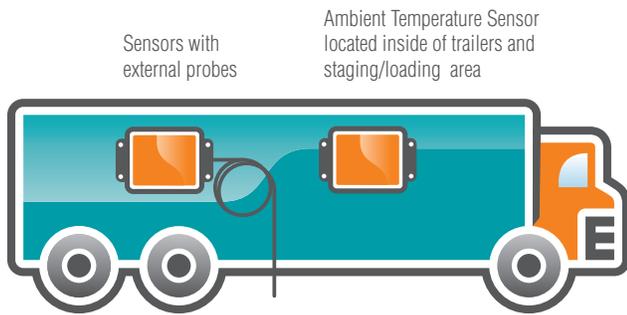
and freshness. In all of their operations, the utilization of fresh, safe, quality ingredients are emphasized. The process of loading products into their fleet of refrigerated trucks requires that the trailers are pre-cooled to 37 °F (2.8°C). The penalty of loading foods into a warm truck means spoiled foods and shorter shelf life, and worse yet, customer rejection. Speed is essential in this operation.

### **Solution:** FlashLink Wireless Temperature Monitoring System

Vaughan's full array of products are processed and packaged in refrigerated production facilities. Finished products are packed in sizes that fit customers' needs, and boxed to insure that delicate items arrive at the customer's door in good condition.



Most items are made to order daily for maximum freshness, shelf-life and quality. Orders are pulled and palletized in a finished goods cooler, with each pallet tagged by customer and contents to assure delivery to the proper destination. In order to ensure freshness of product, they maintain a fleet of 29 trucks and 42 fifty-three foot refrigerated trailers, running 84 outbound routes per week. Trucks are pre-cooled before being loaded from their refrigerated loading dock. Vaughan used a dedicated person running back and forth to each trailer monitoring temperature using a retail circular thermometer. This dedicated employee cost the company an average 30 hours a week. The FlashLink Wireless Temperature monitoring system changed all that and the process is now automated.



**Results: Improved efficiency, lower cost, improved auditing and documentation**

Vaughan installed the FlashLink Wireless Temperature Monitoring system with real-time environmental monitoring using a single network receiver connected to a PC and sensors with external probe mounted inside the trailers. With the FlashLink Wireless system installed, an alarm sounds to the PC notifying the operator of the selected temperature.

"I decided on the wireless system because we need to check trucks on-time and we wanted to reduce our costs", says Martha Siegel, Director of Quality at Vaughan. "Last year I had one full time person assigned to the job; this year we have more trucks and we would have needed more people if we made no changes to our systems."

**Previous Method Was Inefficient**

Vaughan used to have a dedicated person running back and forth to each trailer monitoring temperature using a retail circular thermometer. This dedicated employee cost the company an average 30 hours a week. With the FLW system installed, instead of a dedicated employee running to each trailer to audit temperature, an alarm now sounds to the PC and provides temperature information. This simple automated process eliminates the need for manual auditing, and allows fast reaction by the dispatcher coordinating the loading process.

**Vaughan's Requirements**

Facing significant pressures of increasing costs and competition, Vaughan Foods is taking aggressive action to increase productivity. After processing, fresh foods are delivered to their customers multiple times per week utilizing their own refrigerated delivery fleets. This frequent delivery system differentiates Vaughan from its competitors and

further assures that products are fresh, safe and of the highest quality when delivered to the ultimate consumers. They require a simple automated process to react quickly to customer requirements.

**Recommendation**

DeltaTRAK's FlashLink Wireless temperature monitor system utilizes radio frequency (RF) technology permitting long range communications that are impossible or impractical to implement with the use of wired systems. The RF technology provides excellent signal strength at long distances. Each temperature sensor (with or without an external probe) is battery operated and is easily located within the vehicle. A key feature of the FlashLink Manager Software provides real-time temperature reporting completely removing the need for a person to spot check temperature. Additionally, the software provides clear alarming of selected temperatures and creates the needed documentation. The system meets or exceeds HACCP, QA and regulatory guidelines for recordkeeping.



Dispatcher monitors the refrigerated trailers to assure they are pre-cooled and maintain the required temperature



Vaughan Foods maintains a fleet of 29 trucks, 42 refrigerated trailers and operates 84 routes each week

## Improvements

Due to the real-time ability of the FlashLink Wireless system, the company gains from faster loading time. According to QA Engineer Darren Huffer, "The time improvement gained from using this system is tremendous and one quality assurance worker's time is freed up, saving at least 30 hours of labor a

week." The FlashLink Wireless system is designed to be user installed and with the support provide by DeltaTRAK, the installation was successfully completed with minimal cost. The return on investment was realized within a very short period by saving the 30 man hours per week no longer required to spot check the refrigerated trailers.

## DTI Solution

FlashLink Wireless, real-time temperature/humidity monitoring system.

- FlashLink Manager Software
- 900 MHz Receiver
- Sensors (multiple)
  - Ambient (-30°C)
  - External Probe Sensors (-40°C)

## Results

The FlashLink Wireless system is providing Vaughan Foods with the cost effective solution they want and it is saving money through the efficient use of manpower resources.

Vaughan Foods installed the system with support from DeltaTRAK and it has proven to be easy to use and reliable.



With Headquarters in Moore, Oklahoma, Vaughan Foods, Inc. was organized in 1989 as a successor to a family business that commenced operations in 1961. In 2007 Allison's Gourmet Kitchens, with locations in Fort Worth, Texas was acquired and merged into the company in connection with the successful completion of a public offering in July 2007. Vaughan Foods, Inc. prepares refrigerated chicken, tuna, bean, and pasta salads, as well as fresh-cut produce (salid and salad mixes). It distributes its products to clients across 12 states in the Midwest, Southeast and Southwest. Among its customers are restaurants, grocery store delis and food service businesses. The company makes 70 different salad products and processes 1-2 million pounds of salad each week.

DeltaTrak® is a leading innovator of cold chain management, environment monitoring and food safety solutions for the food, pharmaceutical, life sciences and chemical industries. Contact DeltaTrak by phone at 1-800-962-6776 or by email at [marketing@deltatrak.com](mailto:marketing@deltatrak.com). Additional information can be found at [www.deltatrak.com](http://www.deltatrak.com).

