**BANNER** ®
more sensors, more solutions

## Customer

A flour mill supplying a global food producer

## Customer Requirements

Temperature monitoring in challenging areas

## Banner Solution

SureCross® wireless network

## Why Banner?

**Reliable Communication** – Robust 900 MHz network provides superior range performance and penetrates obstructions

**Temperature Resilience** – System components operate up to 80° C / 176° F

## Customer Benefits

**Centralized Data Collection** – Gateway consolidates data from throughout the mill and enables data access via an HMI

**Simplicity** – Wireless connectivity eliminates the need for time consuming cable runs

*SureCross® DX80 FlexPower® Node, DX80 Gateway & DX81 FlexPower® battery supply*
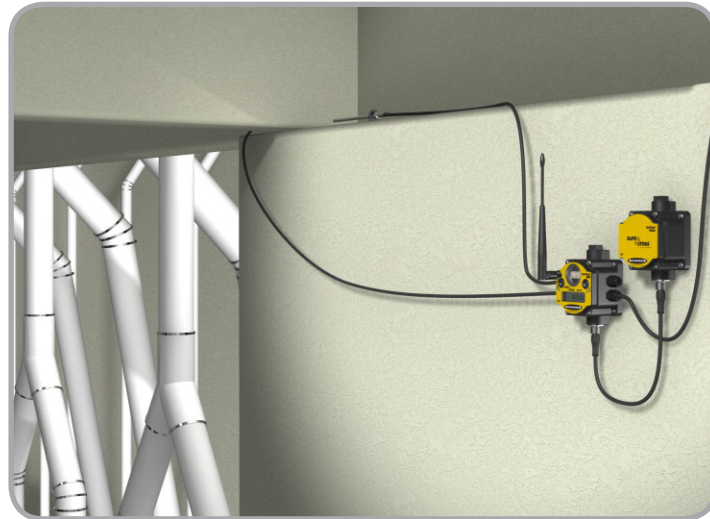
## SureCross DX80 Features

- Expandable network enables one Gateway to support up to 47 Nodes
- Wireless industrial I/O device with up to four configurable RTD inputs
- Two-way communication between devices with fully acknowledged data transmission

## Learn More

Visit *www.bannerengineering.com* for product information and to locate a distributor

- SureCross DX80 Gateway
- SureCross DX80 *Flex*Power Nodes
- SureCross DX81 *Flex*Power Battery Supply

# SureCross Wireless Enables Flour Mill to Access Temperature Data during Thermal Remediation



*SureCross® DX80 FlexPower® Nodes with attached RTDs take measurements throughout a seven-story flour mill and transmit temperature data back to a remote SureCross® DX80 Gateway*

## Background

The EPA has placed restrictions on the use of many fumigants citing a correlation between their use and ozone depletion. As an alternative, a large-scale flour mill performs three to four thermal remediations per year to eradicate flour beetles.

The temperature inside the mill is brought up to 122° F (50° C). This is done gradually to minimize equipment and building strain caused by heat expansion. Once this temperature is reached it must be sustained throughout the entire mill for 24 - 36 hours to allow the heat to penetrate any crevices that might shelter the beetles. Failure to sustain a minimum of 122° F will undermine the effectiveness of this process and could necessitate more frequent remediations.

## Challenge

Resistance Temperature Detectors (RTDs) were installed throughout the seven-story mill. Prior to each remediation, cabling was run to the RTDs to allow remote monitoring of temperatures. Some points were easy to access. Other points were more remote and connecting the devices was difficult. Additionally, repeatedly connecting and removing the cables was time consuming and labor intensive.

## Solution

By deploying a SureCross® *Flex*Power® wireless network the mill was able to access temperature information from throughout the facility without running cables to the RTDs. Fifteen SureCross DX80 *Flex*Power Nodes were deployed and wired to the RTDs. The RTDs take continuous temperature readings which are communicated to the attached Nodes. The Nodes transmit this data back to a remote SureCross® DX80 Gateway, centralizing the temperature information and allowing remote access to the data using a Human-Machine Interface (HMI). Each Node is powered by a DX81 *Flex*Power® battery supply, ideal for providing reliable, long-term wireless operation in low-power, low-maintenance networks like this.