

WHITE PAPER | APPLICATION STORY

Industry: Food & Beverage | Baked Goods - Environmental Monitoring

Product: Wzzard™ Mesh Wireless Sensor Node - for Industrial Applications

+ MONITORING TEMPERATURE AND HUMIDITY FOR FOOD PRODUCTION IN A COMMERCIAL BAKERY

CHALLENGE

A commercial bakery needed help addressing temperature and humidity levels in its workstations and ingredient storage area. Certain processes in the bakery's daily production are extremely sensitive to temperature and humidity levels. Frosting quality is particularly dependent on consistent control during each process step. Without proper monitoring, the environmental changes were causing slumping and running of the frosting.

One option was adding PLC I/O, but the associated wiring is an expensive process—outside electricians would need to be brought in and knowledge of the existing control system is necessary. Instead of this option, a preferred system would be battery-powered, wireless and have the ability to easily add additional measurement zones without having to shut down lines for updates. The bakery was also already utilizing the Ignition SCADA platform through Inductive Automation to bring in data. So, the environmental monitoring solution would ideally be compatible with Ignition in order to be cost effective.



SOLUTION

To solve monitoring of humidity and temperature issues in a cost-effective manner—and avoiding process downtime—the customer selected the Wzzard Mesh Wireless Sensor for industrial applications from B+B SmartWorx. The Wzzard wireless sensor network was a perfect fit for the application, but needed some custom changes to fit in with the bakery's specific needs. B+B Smartworx was able to custom mold a cable with an existing sensor for industrial temperature and humidity monitoring.

Even without an existing off-the-shelf solution, the B+B SmartWorx engineering team was able to quickly provide a customized solution to the commercial bakery. The close collaboration with B+B SmartWorx ecosystem partners provided an Ignition solution out of the box, with no additional software or learning curve. The IP67 rating on the node's industrial enclosure allowed the device to be mounted anywhere in the bakery's dusty environment.

The Wzzard mesh wireless sensor nodes can be installed anywhere within sight of each other without power or data cabling, allowing installation at each step in the production line without interruption. Direct support for Ignition allowed tags to be created automatically, with data showing up within minutes.



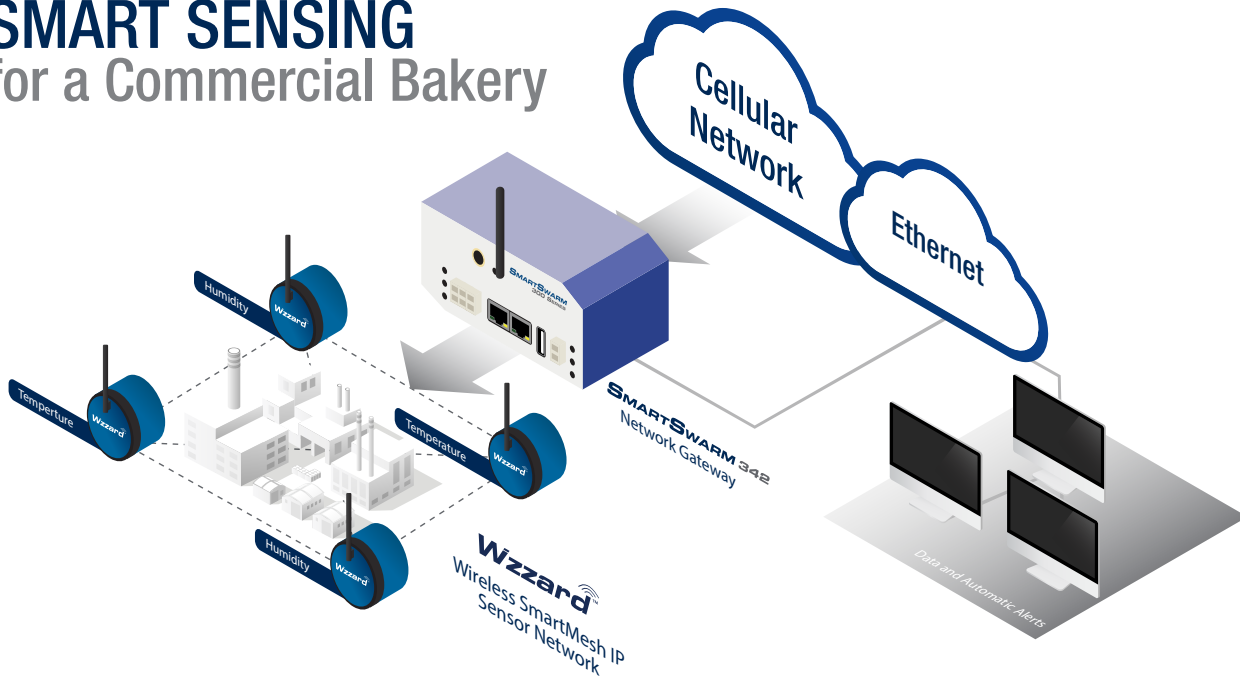
Model WSD2MA2

Wizzard 2 Analog Inputs, 1 Digital Output, External Antenna, M12 connector, Temperature Sensor, Humidity sensor

PRODUCT FEATURES / BENEFITS

- Ultra low power 802.15.4e SmartMesh IP technology
- Communicates with SmartSwarm network gateway via highly scalable and reliable wireless mesh networks
- Connect to industry standard analog or digital sensors
- Wizzard app lets you read or configure the nodes using Android tablets and smart phones
- Rugged, IP67 rated, fiber reinforced polyester PBT enclosure
- MQTT and JSON IoT protocol to application platform
- UL Class1/Division 2 (hazardous locations)

SMART SENSING
for a Commercial Bakery



B+B SMARTWORX

Powered by



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