BANNER®

SureCross™ Wireless Solutions

Worldwide service and support. *Banner is a global leader in process and factory automation, helping customers increase efficiency, reduce costs, ensure quality, monitor and control processes, and safeguard employees.*

wireless innovat**I/O**n.

- Analog, Discrete, Temperature and Serial I/O
- Transceiver pairs to replace a single signal cable
- Scalable networks collect thousands of signals
- *Flex*Power™ options include battery, solar and DC
- Integrated Site Survey for wireless link status
- 900 MHz and 2.4 GHz license-free radio
- Multi-layer security protocol
- IP67, Intrinsically Safe and Class I Div 2 models

bannerengineering.com

Hazardous Area Process Control

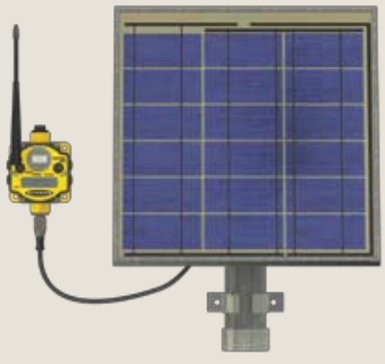
Data Rad
Communicatio
Range E

Point to Multip
Network Co

Class I Div 1 *Flex*Power Nodes
for Temperature, Flow,
Pressure and Level

Class I Div 1
*Flex*Power Node
with
Temperature
Sensor

1 Watt
Data Radio



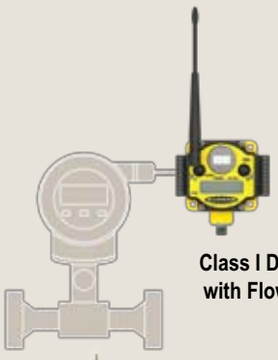
Solar-driven
*Flex*Power Node

Flare Stack Ignition Verification

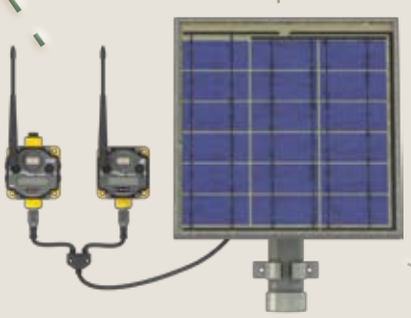
Landfill Gas Flow Control

dio Serial
on for Network
xtension

oint Wireless I/O
mmunication



Class I Div 2 Node
with Flow Sensor



Solar-driven *Flex*Power Gateway
and Data Radio

IP67
Gateway

Long-life Battery Pack
Powers *Flex*Power Node
and Ultrasonic Sensor

Class 1 Div 2
Node

Tank Level Analysis with Pressure and Ultrasonic Sensors

BANNER
more sensors, more solutions

sure cross™ wireless network

sensing unplugged.™

Greenhouse Temperature and Humidity Monitoring

To ensure optimum performance and plant growth, a greenhouse environment must be maintained at specific temperature and humidity levels. A SureCross *Flex*Power Node with internal battery directly connected to a temperature and relative humidity sensor can provide these measurements without costly conduit or cabling.

Tank Level Analysis

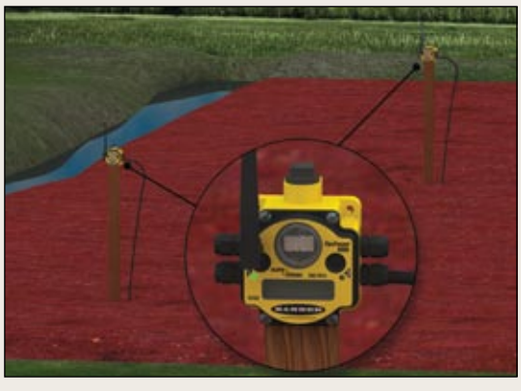
With a SureCross Wireless Network, *Flex*Power Nodes are deployed at each tank without the need to run cables for power or I/O data. Banner's unique power management capability enables a Node equipped with a T30UF ultrasonic analog level sensor to operate for years on a single DX81 battery power supply. Remotely located tank sensor readings can be forwarded to a host system for data tracking or to trigger events, such as refilling the tank.

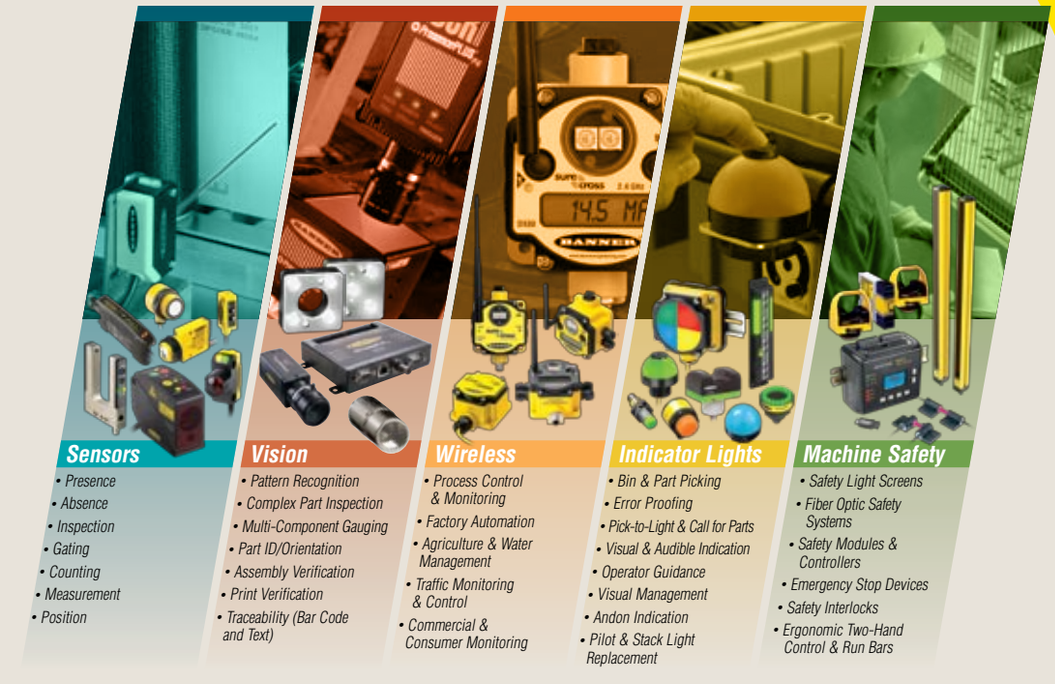
Compost Temperature Measurement

To efficiently compost waste, regular temperature readings are required from the compost pile or windrow. Eliminate time consuming manual data collection using a SureCross Node equipped with a thermocouple to automatically monitor the temperature of compost deposits. Temperature sensor readings are wirelessly transmitted back to the Gateway or host system for data collection, analysis and logging.

Frost protection and Soil Moisture Control in Cranberry Bogs

A *Flex*Power Node with analog inputs and SDI-12 interface for a soil moisture probe is mounted on a stake driven into the ground near cranberry bushes. A thermistor connected to the analog input on the *Flex*Power Node monitors soil or ambient temperatures. Moisture content and temperature data is wirelessly transmitted back to a Gateway, which is connected to a motor controller using Modbus RTU. When established environmental conditions are satisfied, the motor automatically starts to maintain optimum soil moisture levels and temperatures. Additional nodes may be added to actuate irrigation valves if needed.





Sensors
- Presence
- Absence
- Inspection
- Gating
- Counting
- Measurement
- Position

Vision
- Pattern Recognition
- Complex Part Inspection
- Multi-Component Gauging
- Part ID/Orientation
- Assembly Verification
- Print Verification
- Traceability (Bar Code and Text)

Wireless
- Process Control & Monitoring
- Factory Automation
- Agriculture & Water Management
- Traffic Monitoring & Control
- Commercial & Consumer Monitoring

Indicator Lights
- Bin & Part Picking
- Error Proofing
- Pick-to-Light & Call for Parts
- Visual & Audible Indication
- Operator Guidance
- Visual Management
- Andon Indication
- Pilot & Stack Light Replacement

Machine Safety
- Safety Light Screens
- Fiber Optic Safety Systems
- Safety Modules & Controllers
- Emergency Stop Devices
- Safety Interlocks
- Ergonomic Two-Hand Control & Run Bars

SureCross Industrial Wireless I/O Network Brochure (P/N 131620)

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Helpful application information, new product updates, answers to frequently asked questions and other valuable information.

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