

# CASE STUDY

## WIRELESS MESH NETWORKING FOR WATER/WASTEWATER TREATMENT

Industry: Water/Wastewater

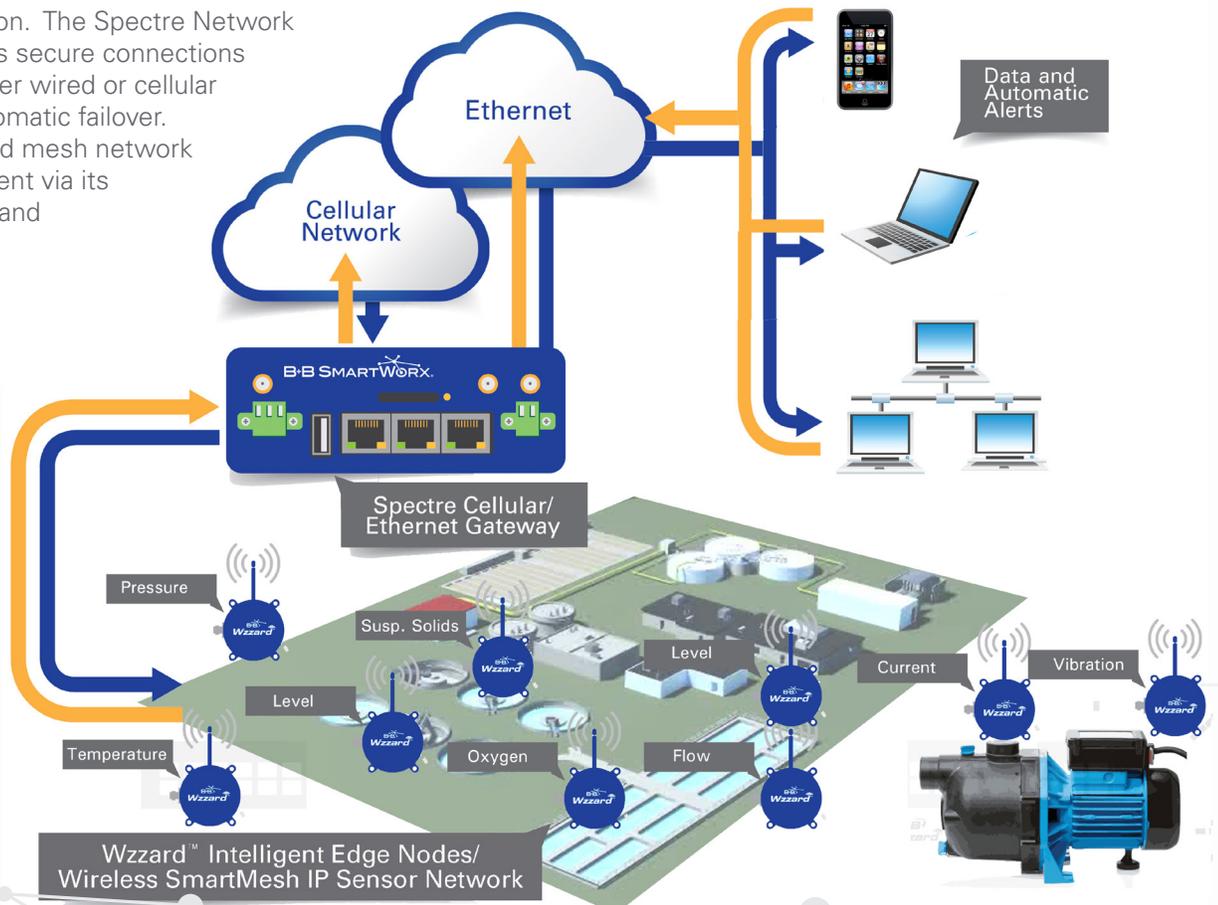
Product: Wzzard Intelligent Sensing Platform

The small water treatment plant in the city of South Beloit needed to comply with an EPA requirement for monthly inflow reports. But their recorders were old and out of order, they had no traditional SCADA system in place, and they didn't have the budget for a new, complex SCADA system. The plant needed a sensor monitoring solution that would keep them in compliance with EPA regulations at a price they could afford.

### THE SOLUTION

Their system integrator was able to make the plant EPA-compliant in just half a day, and at an extremely low cost. The system integrator installed the Wzzard Intelligent Sensing Platform from B+B SmartWorx. The Wzzard platform creates a complete connectivity stack between sensors at the network edge and applications at the network core or in the cloud. It uses two pieces of IoT technology to do so; wireless Wzzard Intelligent Edge Nodes and the Spectre Network Gateway.

The Wzzard Intelligent Edge Nodes connect to new or pre-existing industry standard sensors, read their data and wirelessly transmit it to the Spectre Network Gateway. Every node has routing capabilities, so they are able to form extremely reliable, highly scalable, self-sustaining wireless mesh networks. Individual nodes need not be within wireless range of the gateway, as they can route the data across fellow nodes until it reaches its destination. The Spectre Network Gateway then provides secure connections to the Internet via either wired or cellular connections, with automatic failover. It connects the Wzzard mesh network and additional equipment via its Ethernet, RS-232/485 and I/O ports.



# IoT WORKS IN TANDEM with EXISTING OPERATIONS TECHNOLOGY



**Existing M2M Technologies  
Continue to Report Their Data  
As They Always Have**

**IoT M2M Technologies  
Make the Same Data  
Available to New or Existing  
Applications**

## THE WZZARD INTELLIGENT SENSING PLATFORM

- Wizzard wireless mesh networks cover distances where a wired sensor network would be cost prohibitive.
- Wizzard is an easy retrofit – it works with existing, industry standard sensors
- The monitored machines need no data ports – Wizzard collects the relevant information from external sensors.

## BENEFITS ENABLED BY THE WZZARD PLATFORM

- Real-time access to data through a remote dashboard
- Data analytics not only detects failures, it predicts failures.
- Alert levels set to provide real-time text message or email notification of thresholds exceeded
- Diminished downtime and related costs.
- Machine condition data is made available wherever it is useful.
- Automatic alerts on your computer, tablet or smart phone



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