

# Wzzard Mesh Gen 2

## Product Launch Packet



**B+B SMARTWORX**

Powered by

**ADVANTECH**

**Audience** All Advantech B+B SmartWorx distributors, resale partners, System Integrators and end users in North American and Latin America

**Product Notice** **May 1 2018:** Promotions begin to external audience and Advantech-bb.com – pages will go live

**May 7 2018:** Product will be available to order

**Product Description** SmartSwarm342

<b>New Part Number</b>	<b>Description</b>	<b>MAP (USD)</b>	<b>Dist. Cost (USD)</b>
BB-SG30000520-42	SMARTSWARM 342 - 2 ETH, DUST, NO PS	\$587	\$410.90
BB-SG30000525-42	SMARTSWARM 342 - 2 ETH, DUST, INTNTL PS	\$628	\$439.60
BB-SG30300520-42	SMARTSWARM 342 - 2 ETH, LTE-EMEA, DUST, NO PS	\$867	\$606.90
BG-SG30300525-42	SMARTSWARM 342 - 2 ETH, LTE-EMEA, DUST, INTNTL PS	\$908	\$635.60
BG-SG30500520-42	SMARTSWARM 342 - 2 ETH, LTE-EMEA, DUST, INTNTL PS	\$867	\$606.90

Industrial/Commercial Nodes

<b>New Part Number</b>	<b>Description</b>	<b>MAP (USD)</b>	<b>Dist. Cost (USD)</b>
BB-WSD2C31010	Wzzard Mesh Industrial Power Monitor Node - Conduit	\$399	\$279.30
BB-WSD2M31010	Wzzard Mesh Industrial Power Monitor Node	\$399	\$279.30
BB-WSD2C21150	Wzzard Mesh Industrial Cooler/HVAC Node - Conduit	\$399	\$279.30
BB-WCD1H2102H	Wzzard Mesh Commercial Cooler/HVAC Node	\$174	\$121.80

Starter Kits

<b>New Part Number</b>	<b>Description</b>	<b>MAP (USD)</b>	<b>Dist. Cost (USD)</b>
BB-WSK-HAC-2	Wzzard Mesh HVAC Monitoring Starter Kit	\$995	\$696.50
BB-WSK-NRG-2	Wzzard Mesh Energy Monitoring Starter Kit	\$995	\$696.50
BB-WSK-REF-2	Wzzard Mesh Refrigeration Monitoring Starter Kit	\$895	\$626.20

**Timing** Orders can be placed on May 7, 2018

Shipments will begin on: May 7, 2018

**Action Required** B+B SmartWorx sales are encouraged to start product introductions to current customers and prospects

**Authorization** Kevin Nelson - Product Sales Manager 815.433.5100 [knelson@advantech-bb.com](mailto:knelson@advantech-bb.com)


## Accessories

<b>New Part #</b>	<b>Description</b>	<b>MAP (USD)</b>	<b>Dist. Cost (USD)</b>
BB-JC10F50-V	50A Clamp on current sensor	\$38.57	\$32.79
BB-JC24S250-V	250A Clamp on current sensor	\$62.39	\$53.04
BB-JC36S500-V	500A Clamp on current sensor	\$69.05	\$58.69
BB-LP252-2R2-1D	Vibration Sensor 4-20mA	\$352.94	\$300.00
BB-WTJ-10-36-TT	J-Type Thermocouple	\$49.02	\$41.67
BB-WCHCBL	Thermistor/Breakout cable	\$12.00	\$8.40
BB-WCHMS	Door Sensor Cable	\$14.00	\$9.80
BB-WCD-TM2M	WZZARD MESH IND THERMISTOR CBL	\$8.50	\$5.95

# Email

## Link

Introducing:  
**Wzzard Gen 2 Wireless Mesh Sensor**



**B·B SMARTWORX**  
Powered by **ADANTECH**


**NEW!**

**Wzzard Mesh Gen 2: Low-Power Wireless Sensing for Environmental and Energy Monitoring**

Wzzard Mesh Gen 2 devices can monitor temperature, humidity and vibration, and can accommodate virtually any industry-standard external sensors. Connections can be made via M12 connector or conduit fitting. The nodes provide a wide variety of sensor interface options, including general purpose analog input, digital input/output and thermocouple.

Wzzard Mesh Gen 2 includes a light industrial model, ideal for commercial applications that don't need a full rugged IP67 design. Industries that will realize this new benefit quickly are ones in which temperature monitoring is needed, such as refrigerator monitoring for temperature-controlled inventory. The new price point of the commercial application model also allows for quick and easy ROI. [Learn more here.](#)

**VIDEO: Discover Low-Power Wireless Sensing for Environmental and Energy Monitoring**  
It's secure, scalable, reliable and easy to install. [Watch the video here.](#)

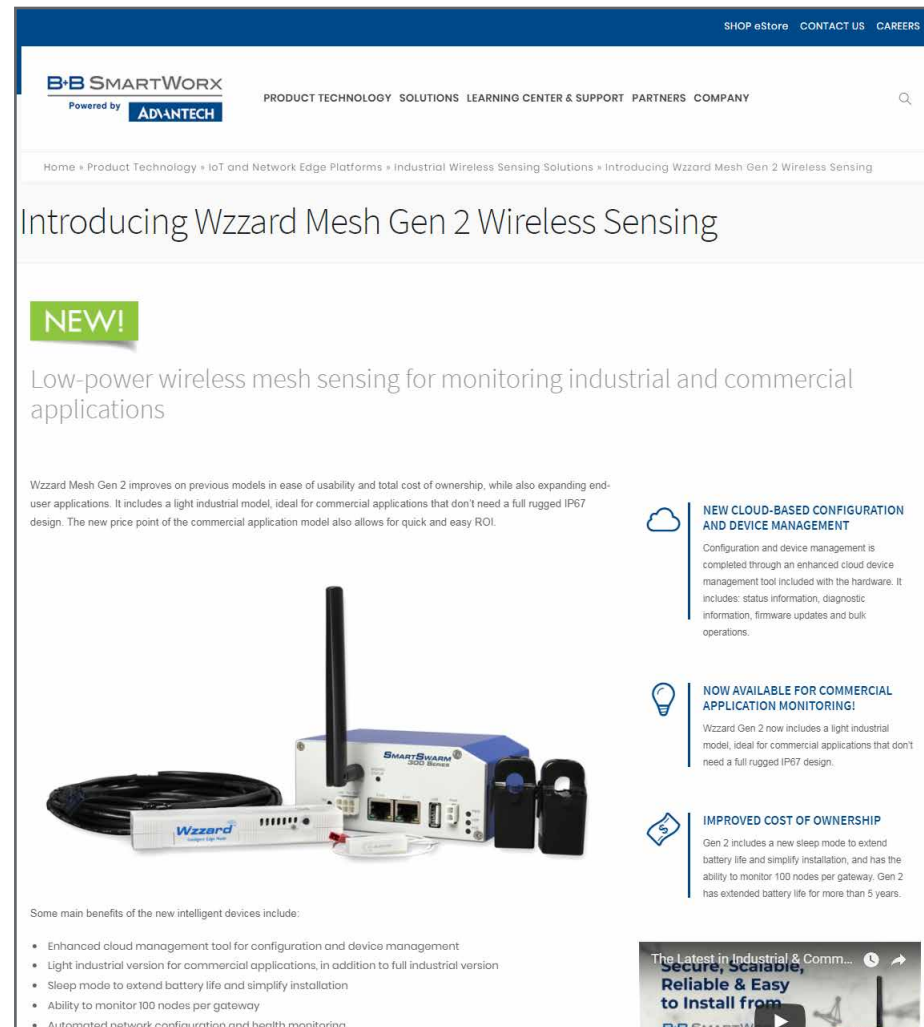


**Click Here to Learn More About Wzzard Mesh Gen 2**

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[Follow on YouTube](#)

# Landing Pages

**Link:** <http://advantech-bb.com/product-technology/iot-and-network-edge-platforms/industrial-wireless-sensing-solutions/introducing-wzzard-mesh-gen-2-wireless-sensing/>



**B·B SMARTWORX**  
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PRODUCT TECHNOLOGY SOLUTIONS LEARNING CENTER & SUPPORT PARTNERS COMPANY

Home » Product Technology » IoT and Network Edge Platforms » Industrial Wireless Sensing Solutions » Introducing Wzzard Mesh Gen 2 Wireless Sensing


## Introducing Wzzard Mesh Gen 2 Wireless Sensing

**NEW!**

### Low-power wireless mesh sensing for monitoring industrial and commercial applications

Wzzard Mesh Gen 2 improves on previous models in ease of usability and total cost of ownership, while also expanding end-user applications. It includes a light industrial model, ideal for commercial applications that don't need a full rugged IP67 design. The new price point of the commercial application model also allows for quick and easy ROI.

- NEW CLOUD-BASED CONFIGURATION AND DEVICE MANAGEMENT**  
Configuration and device management is completed through an enhanced cloud device management tool included with the hardware. It includes: status information, diagnostic information, firmware updates and bulk operations.
- NOW AVAILABLE FOR COMMERCIAL APPLICATION MONITORING!**  
Wzzard Gen 2 now includes a light industrial model, ideal for commercial applications that don't need a full rugged IP67 design.
- IMPROVED COST OF OWNERSHIP**  
Gen 2 includes a new sleep mode to extend battery life and simplify installation, and has the ability to monitor 100 nodes per gateway. Gen 2 has extended battery life for more than 5 years.



Some main benefits of the new intelligent devices include:

- Enhanced cloud management tool for configuration and device management
- Light industrial version for commercial applications, in addition to full industrial version
- Sleep mode to extend battery life and simplify installation
- Ability to monitor 100 nodes per gateway
- Automated network configuration and health monitoring

The Latest in Industrial & Comm...  
**Secure, Scalable, Reliable & Easy to Install from**  
**B·B SMARTWORX**

# Application Stories

## Aggregate Quarry - Condition Based Monitoring

**B+B SMARTWORX**  
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WHITE PAPER | APPLICATION STORY  
Industry: Aggregate Producers  
Product: Wizzard™ Mesh Wireless Sensor for Industrial Applications

### + CONDITION BASED MONITORING FOR INDUSTRIAL SYSTEMS

**CHALLENGE**  
A construction aggregate plant operates 10 high horsepower secondary crusher drive motors and associated conveyor belts, producing 600 tons of product per hour. All heavy equipment requires maintenance, but the aggregate producer's costs were greatly magnified any time necessary maintenance was unplanned and unscheduled. The product must be supplied to the customers on a tight time schedule to fulfil their contracts, avoid penalties and prevent loss of future business. Furthermore, a sudden failure in one of the drive motors would cause rock to pile up in unwanted locations, extending downtime and increasing costs.

Clearly, preventative maintenance was preferable to unexpected failures. So, twice each year, the company brought in an outside vendor to attach sensors to the motors, do vibration studies, measure bearing temperatures and attempt to assess the health of the motors. But that was not enough. Unexpected breakdowns continued to occur. The aggregate producer decided to upgrade to a Condition Based Monitoring (CBM) sensor system that could continually monitor the motors in real time, apply data analytics to detect changes in motor behavior before they developed into major problems and alert maintenance staff via email or text—anywhere they happened to be.

A wired sensor network would have been cost prohibitive. An aggregate plant has numerous heavy vehicles moving around, so any cabling would have to be protected. Additionally, the plant covers 400 acres and the cable would have to be trench to numerous locations. Cable splicing was not an option. The aggregate producer needed a wireless solution.

**SOLUTION**  
**B+B SmartWorx Provides an Intelligent, Complete Solution**  
B+B SmartWorx installed the Wizzard Mesh Wireless Sensor Platform. First, each motor was equipped with three industry standard sensors: current draw, vibration and temperature. Changes in any of these parameters can be an early indicator of future problems. Each motor was provided with a single Wizzard mesh wireless sensor edge node with each node capable of connecting up to three sensors. The Wizzard edge nodes then used wireless mesh networking to publish the sensor data to a network gateway. The gateway then sent the data to the monitoring application.

Two additional Wizzard nodes were also installed to provide data routing support and ensure that the mesh network was robust enough to provide reliable, five nines (99.999 percent) uptime and connectivity, even though the environment included many large metal surfaces.

**WHY USE WIRELESS?**  
When sensors are spread out across a wide area, establishing a wired sensor network may be impractical. At a quarry site, for example, there is a lot of heavy equipment moving around so, above ground cabling would be in constant danger. Trenching the cable would protect it, but trenching costs \$15USD/foot or more for cabling, conduit & installation. The quarry's farthest motor is 840 feet from the control center so, wiring that single motor would cost \$12,600 with nine more motors to go.

A wireless Wizzard mesh network installation is not only less expensive than running cable to all of the monitoring points in the quarry, it cannot be severed by mobile equipment or digging.



## Commercial Bakery - Temperature & Humidity Monitoring

**B+B SMARTWORX**  
Powered by **ADVANTECH**

WHITE PAPER | APPLICATION STORY  
Industry: Factory Automation  
Product: Wizzard™ Mesh Wireless Sensor 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 Wizzard Mesh Wireless Sensor for industrial applications from B+B SmartWorx. The Wizzard 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 Wizzard 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.



## School Refrigeration - USDA, HACCP Compliances

**B+B SMARTWORX**  
Powered by **ADVANTECH**

WHITE PAPER | SOLUTION STORY  
Industry: Food Production & Safety  
Product: Wizzard™ Mesh Wireless Sensor for Commercial Applications

### + USDA, HACCP COMPLIANCES FOOD SAFETY

**PROBLEM**  
The United States Department of Agriculture (USDA) and Hazard Analysis Critical Control Point (HACCP) compliance requirements in K-12 school kitchens called for upgrades to record keeping and the calibration and verification of refrigeration equipment. The requirements are part of a USDA food safety plan based on HACCP management principles.

**SOLUTION**  
**B+B SmartWorx Provides a Complete Solution**

- Wizzard Mesh Wireless Sensor Nodes report data via wireless mesh networks.
- Users can retrofit existing equipment regardless of brand or style, including: walk-in, reach-in or mobile refrigeration units.
- The Wizzard self-forming, self-healing mesh wireless network makes installation quick and easy. No special skills are required.
- The Wizzard mesh wireless networks enable monitoring of multiple refrigeration units at each school.
- Scalable – users can add additional sensing nodes at any time to monitor additional parameters like leaks/flood detection, compressor current, compressor charge state and door open/close.
- Low Maintenance - Wizzard mesh wireless sensor nodes are self-powered, using a lithium battery lasting up to 5 years. There is no need for external power, enabling easy placement.
- Generates email and/or SMS alerts if temperatures exceed a threshold.
- Generates reports for compliance and safety monitoring.
- All schools can be managed from a single location using a detailed graphical dashboard.

**WIZZARD BENEFITS**

- Regulatory compliances
- Labor savings - Unlike manual monitoring, Wizzard mesh networks provides 24x7 monitoring and reporting capabilities
- Eliminates food loss from spoilage caused by refrigeration temperature fluctuation
- Easily add and monitor HVAC, furnaces, water heaters, commercial dishwashers and more

**WHY ADVANTECH B+B SMARTWORX?**  
As part of Advantech's global Industrial IoT business group, B+B SmartWorx develops smart networking products that are easy to deploy, easy to use and easy to manage.



\*Two more are in development



# Press Release

**Link:** <https://www.dropbox.com/s/x446totdn7j3uba/Wzzard%20Gen%20%20PR%20V2.doc?dl=0>

## Sales Kit (PPT)

**Promotional:** [Link](#)



## Video

[“The Latest in Industrial & Commercial Low-Power Wireless Sensing”](#)

[“Wzzard Wireless Mesh Gen 2 Sensing Solution Network Set Up”](#)

[“Wzzard HVAC/Compressor Monitoring Starter Kit from B+B SmartWorx”](#)

[“How to Install a Wzzard HVAC Monitoring Starter Kit”](#)



## Online Banners

**Size:** 600x200

**File Link:** [https://www.dropbox.com/s/936xw880lrae917/Introducing-Wzzard-Gen-2\\_600x200.jpg?dl=0](https://www.dropbox.com/s/936xw880lrae917/Introducing-Wzzard-Gen-2_600x200.jpg?dl=0)



# Documentation

**QSG, DS, Manuals:** <https://www.dropbox.com/sh/9617onp0jk-ku7mx/AABq1MQkSYFMSDnkU30e12kqa?dl=0>

**Wizzard™ Mesh Wireless Sensor for Commercial Applications**  
Model BB-WSC2C1010, BB-WSC2C1010, BB-WSC2C1010

**Wizzard™ Mesh Wireless Sensor for Industrial Applications**  
Model BB-WSD2C1010, BB-WSD2C1010, BB-WSD2C1010

**Wizzard™ HVAC Monitoring Starter Kit**  
Wizzard Mesh Wireless Sensor for Industrial Applications  
Model BB-WSK-HAC-2

**Wizzard™ Energy Monitoring Starter Kit**  
Wizzard Mesh Wireless Sensor for Industrial Applications  
Model BB-WSK-ENG-2

**Wizzard™ Refrigeration Monitoring Starter Kit**  
Wizzard Mesh Wireless Sensor for Commercial Applications  
Model BB-WSK-REF-2

**QUICK START GUIDE**

**6 | Mounting Options**  
Adhesive Strip Mounting - The Wizzard Mesh Wireless Sensor can be mounted using the adhesive strip provided in the back of the unit.

**7 | Putting the Node**  
When not using the node should be put in deep sleep.

**8 | Restoring Node to Factory Default**  
To reset the node to factory defaults, press and hold the Status/Reset button for 10 seconds until the Status LED flashes quickly. This will clear the sensor type information.

**QUICK START GUIDE**

**4 | Recommended Accessories**  
# BB-ZXTMT Cable (Serial/USB Kit)  
# BB-WCD-TM2M The-Modular Cable  
# BB-WSCAM12-6 ATX 12V 200W 6Pin Terminal Cable

**Wizzard™ Mesh Wire for Industrial Appl**  
Model BB-WSD2C1010, BB-WSD2C1010, BB-WSD2C1010

**Wizzard™ Mesh Gen2 Starter Bundles**  
HVAC Monitoring Kit SETUP MANUAL  
Energy Monitoring Kit SETUP MANUAL  
Refrigeration Monitoring Kit SETUP MANUAL

# Sell Sheet

<https://www.dropbox.com/s/o49gzxq1a7qz5gx/Wizzard%20Gen%202%20Sell%20Sheet%201818.pdf?dl=0>

**B+B SMARTWORX**  
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## IoT Wireless Sensing

Lower your costs, increase productivity and reduce waste with B+B SmartWorx Low-Power Wireless Sensing

### 4 Reason to Choose B+B SmartWorx Wireless Sensing Solution

- Easily Demonstrate ROI**  
B+B SmartWorx Starter Kits include everything you need for energy and environmental monitoring. Starter kits are available for Energy Monitoring, HVAC Monitoring and Refrigeration Monitoring. Wizzard Starter Kits can help test a system with the technology and help to quickly prove a business case to expand the Mesh Network.
- Easy to Deploy**  
Nodes can be configured with scaling information, eng. units, friendly names, geo-location and other descriptive information. The platform simplifies physical installation, too. Nodes can be attached to any surface via mounting ear flanges and screws or the embedded magnetic base. The IP67 rated, fiber reinforced polyester PBT housing makes the units deployable in any industrial or commercial environment.

**Wizzard**

**6 Reason to Choose B+B SmartWorx Wireless Sensing Solution**

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# Photos

<https://www.dropbox.com/sh/ort11j0ddgcmfp4/AAB0opoewM17tfurYBuymFNFa?dl=0>

