Monitoring Solutions

BANNER®

more sensors, more solutions

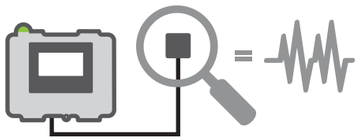
Monitoring Solutions from Banner

Are you doing enough to optimize and protect your plant's critical assets? Monitoring Solutions from Banner Engineering provide data you can use to ensure your equipment continues to deliver consistent, high-quality output with maximum uptime and optimal performance. Prevent unexpected maintenance issues from interrupting production.

- Automatically recognizes an array of compatible sensors—deploys in mere minutes
- No programming or coding required
- Performance monitoring of almost any equipment in your facility via customizable dashboards
- Manage locally with the onboard touchscreen display or remotely via Banner Cloud Data Services

Technologies from Banner that Simplify Machine Monitoring

SNAP ID™ Recognizes an Array of Compatible Wired Sensors

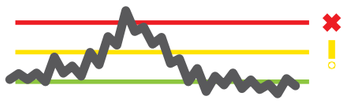


SNAP ID enables our gateways to automatically identify a wired sensor, understand what data it is able to share, and present the data in easy-to-understand units such as pressure and current. This technology is found in many of our wired sensors that can monitor vibration, temperature, humidity, current, pressure, level, and dew point.

CLOUD ID™ Recognizes an Array of Compatible Wireless Sensors

CLOUD ID is a technology that allows gateways to automatically recognize sensors and configure a cloud dashboard. This technology is found in many of our wireless sensor nodes that measure vibration, differential pressure, temperature and humidity, tank level, and more.

VIBE-IQ® Takes the Complexity out of Vibration Monitoring

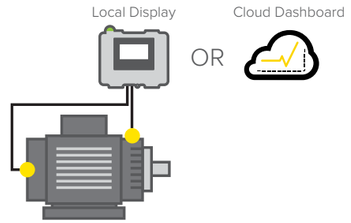


VIBE-IQ vibration monitoring software uses machine learning to simplify the process of setting warning and alarm thresholds for rotating assets like motors and gearboxes. The software continuously monitors vibration for changes and sends warnings and alarms automatically to ensure optimal performance and prevent unplanned downtime. VIBE-IQ does all the complicated analytical work, making the process effortless for users.

Monitoring Gateways

Monitoring gateways gather data from our compatible sensors to give you a comprehensive understanding of how well equipment is performing. Banner offers monitoring gateways that connect to either wired sensors via our SNAP ID technology, or our wireless sensors via our CLOUD ID technology.

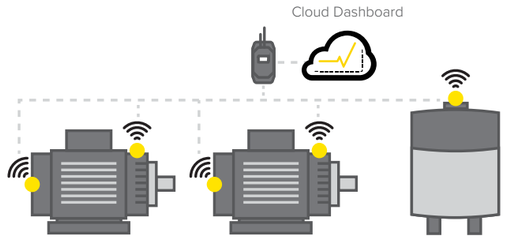
Asset Monitoring Gateway with SNAP ID™



For wired monitoring of one or more local assets in your facility.

- Serves as a hub for up to 20 wired condition monitoring sensors to track a variety of components
- Touchscreen display provides easy access to data, sensor alerts, and alarms
- Local operators can view critical system information or send data to the cloud for remote monitoring
- Banner Cloud Data Services offers preconfigured online dashboards that users can easily customize

Asset Monitoring Gateway with CLOUD ID™



For wireless monitoring of multiple remote assets in your facility.

- Serves as a hub for up to 40 wireless condition monitoring sensors to track machine performance
- Banner CDS enables access to data, sensor alerts and alarms, and setup via preconfigured (yet customizable) online dashboards
- Set condition-based alerts in the cloud to notify users via email or SMS

Compatible Sensors

Banner offers a variety of sensor types to monitor any piece of equipment. Below are some of the common sensor measurements for condition monitoring, and the sensors compatible with our monitoring gateways provide access to all of this critical performance data.

Current | Pressure | Temperature | Vibration | Level | Dew Point

Asset Monitoring Gateway with SNAP ID™

SNAP ID is our technology that simplifies setup and eliminates the need for programming. It enables our gateways to automatically recognize a wired sensor and understand what data it is able to share, automatically scaling the data into more easily understood units of pressure and current instead of milliamps or volts.

Pick Your Gateway, Pick Your Sensors

There is no guesswork when it comes to creating a monitoring solution for your equipment with SNAP ID. All you do is pick the gateway you need along with up to 20 sensors to monitor the points on your equipment.

Set Up in Three Simple Steps:

1. Install and power up the Asset Monitoring Gateway
2. Connect and address the sensors
3. Install sensors on equipment and commission the system

Local Display

Critical system information is easily viewed locally via the onboard touchscreen display. It can also be sent to the cloud for remote monitoring.

Machine Learning with VIBE-IQ™

VIBE-IQ continuously monitors vibration on your rotating equipment like motors, bearings, and pumps. It does all the complicated analytical work, making the process simple for users by providing a "check engine light" to signal maintenance teams when potential problems arise.

Select Your Asset Monitoring Gateway with SNAP ID

Options are based on your data connectivity needs.

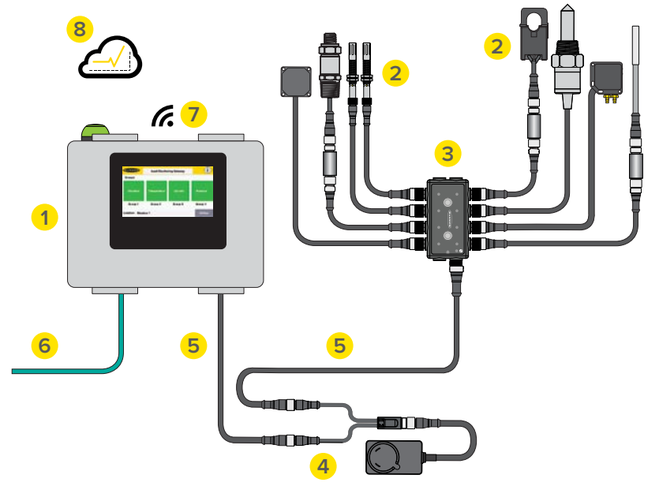
Description	Network	Cloud and Cellular	Models
Asset Monitoring Gateway with SNAP ID (See last page for dimensions, specifications, and included accessories)	Ethernet	No cloud or cellular	**AMG-SNAP-ID**
		Includes 1 year of Banner Cloud Data Services	**AMG-SNAP-ID-C**
	AT&T (SIM)	Includes 1 year of Banner Cloud Data Services and 1 year of cellular network connectivity	**AMG-SNAP-ID-A**
	Verizon (SIM)		**AMG-SNAP-ID-V**
	Multi-carrier (SIM)		**AMG-SNAP-ID-W**

Think Big, Start Small, Scale Fast

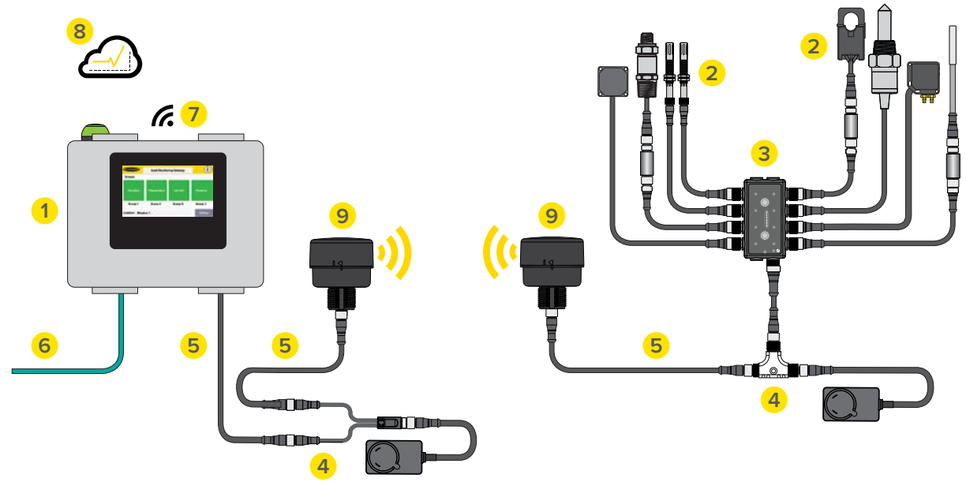
Equal parts brains and beating heart, Banner's Asset Monitoring Gateway helps optimize and maintain your critical equipment. Start with a few connected sensors, then simply add more as your needs grow. Additional Asset Monitoring Gateways can be plugged in to accommodate even more sensors. Your asset monitoring system can be as big—or as small—as you need it to be, and it always assembles quickly and simply, and operates with ease.

Monitoring Solution Examples

The diagrams illustrate some of the nearly limitless combinations of SNAP ID sensors and connectivity accessories that can be used with the Asset Monitoring Gateway.



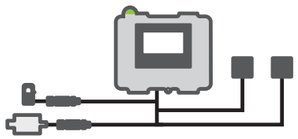
1. Asset Monitoring Gateway
2. Sensor
3. Molded Junction Block
4. Splitter
5. Cordset
6. Ethernet
7. Optional Cellular Connectivity
8. Banner Cloud Data Services
9. Wireless Radio for Cable Replacement



Compatible Sensors for Your Asset Monitoring Gateway

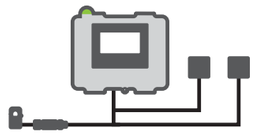
You can have up to 20 sensors connected to one Asset Monitoring Gateway with SNAP ID.
Select from the list of compatible sensors below to begin monitoring more equipment.

Compressed Air System Example



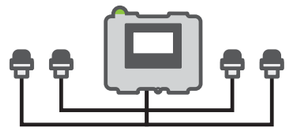
1 Asset Monitoring Gateway
2 Vib. and Temp. Sensors
1 Current Transformer
1 Pressure Sensor

Motor and Gearbox System Example



1 Asset Monitoring Gateway
2 Vib. and Temp. Sensors
1 Current Transformer

Fill Level System Example



1 Asset Monitoring Gateway
4 Ultrasonic Sensors

Vibration and Temperature Sensors

Input	Output	Housing Type	Connection	Models
Vibration and temperature	Modbus	Aluminum	2 m cable with M12 male quick disconnect	**QM30VT2**
			150 mm cable with M12 male quick disconnect	**QM30VT2-QP**

Accessories

	Curved surface magnet mount	**BWA-QM30-CMAL**
	Flat surface magnet mount	**BWA-QM30-FMSS**
	Flat surface screw mount with rapid release set screw	**BWA-QM30-FSALR**

Infrared Non-Contact Temperature Sensor

Input	Output	Measurement Range	Connection	Model
Temperature	Modbus	-20 to +320 °C (-4 to +608 °F)	Integral M12 male quick disconnect	**S15S-T-MQ**

Brackets

	Stainless steel mounting flange with M5 screw holes	**SMB-S15S-SWIVEL**
	Stainless steel mounting flange with M5 screw holes and mounting magnets included	**SMB-S15S-SWIVEL-MAG**

In-Line Converter with Thermistor

Input	Output	Measurement Range	Connection	Model
Thermistor	Modbus	-20 to 105 °C (-4 to +221 °F) (+/-1.5C, 10K ohm thermistor, Beta Constant = 3575K (G-Curve))	2.9 m cable with M12 male quick disconnect	**S15C-TMS-MQ**
2 x Thermistor				**S15C-DTMS-MQ**

Temperature and Humidity Sensor

Input	Output	Measurement Range	Connection	Model
Temperature and humidity	Modbus	Temperature: -40 to +85 °C (-40 to +185 °F) Humidity: 0 to 100%	Integral M12 male quick disconnect	**S15S-TH-MQ**
				M12FTH3Q

Dew Point Sensor

Input	Output	Measurement Range	Connection	Model
Temperature and humidity	Modbus	Temperature: -40 to +85 °C (-40 to +185 °F) Humidity: 0 to 100% Dew point: -116 to +85 °C (-176 to +185 °F)	Integral M12 male quick disconnect	**S24AS-D-MQP**

Differential Pressure Sensors

Input	Output	Measurement Range	Connection	Models
Pressure	Modbus	±1 inches water column	2.09 m M12 pigtail quick disconnect	**QM42-DPS1-2Q**
		±5 inches water column		**QM42-DPS5-2Q**
		±20 inches water column		**QM42-DPS20-2Q**

Brackets

	Magnetic bracket with screws	**BWA-BK-001**
	Center mounting bracket with screws	**BWA-BK-005**

Pressure Sensor

Input	Output	Measurement Range	Connection	Models
Pressure sensor	Modbus	0–150 PSI*	M12 male quick disconnect, 1/4-inch NPT fitting	**S15C-PS150C-MQ**

*Ceramic element intended for gas media only

Compatible Sensors for Your Asset Monitoring Gateway

Current Transformers

Input	Output	Measurement Range	Connection	Model
Current transformer	Modbus	0–20A	1 m cable with M12 male quick disconnect	**S15C-CT20A-MQ**
		0–150A		**S15C-CT150A-MQ**
		0–600A		**S15C-CT600A-MQ**

Ultrasonic Sensors

Input	Output	Range	Frequency	Connection	Models
Ultrasonic level	Modbus	300 mm to 3 m	114 kHz	230 mm integral 5-pin M12 male quick disconnect	**K50UX2CRA**
		100 mm to 1 m	224 kHz		**K50UX2ARA**

Brackets

	Mounts the K50U Ultrasonic sensor	**BWA-BK-004**
	Right-angle, low profile	**LMB30LP**

In-Line Converters

Can be used to collect signals from other devices currently on or planning to be used with your equipment.

Female	Male	Connection	Models
Discrete input	Modbus	5-pin M12 male quick disconnect	**S15C-B22-MQ**
Analog current		4-pin M12 female/male quick disconnect	**S15C-I-MQ**
Analog voltage			**S15C-U-MQ**
RTD			**S15C-RTD-MQ**

Compatible Wire Replacement

If you are ever unable to run cable between two devices, use our R70 serial data radios for simple wire replacement. These radios are pre-bound and ready to connect to the end point of each network you are trying to join. For individual units, refer to instruction manual 234288 for wireless configuration and implementation. External power supply (PSW-24-1) required.

Description	Transmit Power	Frequency	Models
Pre-bound client/server pair	1 Watt	900 MHz ISM Band	**R70KSR9MQ**
	65 mW (100 mW EIRP)	2.4 GHz ISM Band	**R70KSR2MQ**
One individual unit	1 Watt	900 MHz ISM Band	**R70SR9MQ**
	65 mW (100 mW EIRP)	2.4 GHz ISM Band	**R70SR2MQ**

Brackets

	Right-angle, low profile	**LMB30LP**

Included Accessories

PSW-24-1
Power Supply

STP-M12D-406
6 ft Ethernet Cordset (included with Ethernet models only)

Optional Brackets

LMBS15MAG
Attaches to S15C (magnetic)

BWA-M12CAB-MAG
Attaches to M12 cable (magnetic, pack of 10)

BWA-BK-020
Two 80 lb magnetic mounts (to mount gateway order two sets)

Connectivity

Molded Junction Blocks

Trunk	Branches	Connection	Models
No Trunk/Integral QD (male)	4 x No Branch/Integral QD (female)	M12 quick disconnect	**R50-4M125-M125Q-P**
	8 x No Branch/Integral QD (female)		**R95-8M125-M125Q-P**

Splitters

Trunk	Branches	Models
No Trunk/Integral QD (female)	2 x No Branch/Integral QD (female and male)	**CSB-M1250M1250-T**
No Trunk/Integral QD (male)	2 x 0.3 m (female)	**S15YB-M124-M124-0.2M**

Cordsets

Description	Length	Connection	Models
Double-ended cordset	1 ft	M12 quick disconnect	**MQDEC-401SS**
	3 ft		**MQDEC-403SS**
	6 ft		**MQDEC-406SS**
	10 ft		**MQDEC-410SS**

Asset Monitoring Gateway with CLOUD ID™

CLOUD ID is a technology from Banner Engineering that simplifies IIoT projects by providing a no-code platform where wireless sensor nodes are automatically recognized by compatible gateways. CLOUD ID also automatically configures dashboards based on the sensor nodes connected to the gateway.

Pick Your Gateway, Pick Your Sensor Nodes

There is no guesswork when it comes to creating a monitoring solution for your equipment with CLOUD ID. All you do is pick the gateway you need along with up to 40 sensor nodes to monitor the points on your equipment.

Set Up in Four Simple Steps:

1. Install and power up the Asset Monitoring Gateway
2. Bind and address the sensor nodes
3. Install sensor nodes on equipment
4. Connect and gain insights

Enables Data-Driven Decision Making

CLOUD ID solutions combine both hardware and software as part of a comprehensive condition monitoring strategy. With wireless and cloud technology, you can actively track machine performance online, conduct predictive maintenance, and improve operational efficiency. This approach is a prime application of IIoT (the Industrial Internet of Things).

Machine Learning with VIBE-IQ™

VIBE-IQ continuously monitors vibration on your rotating equipment like motors, bearings, and pumps. It does all the complicated analytical work, making the process simple for users by providing a "check engine light" to signal maintenance teams when potential problems arise.

Select Your Asset Monitoring Gateway with CLOUD ID

Options are based on your data connectivity needs.

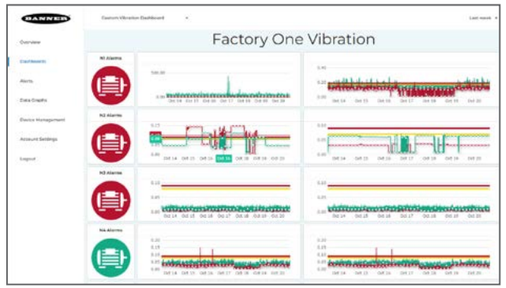
Description	Models
ISM 900 MHz radio; preconfigured device detection and Ethernet communication with Verizon cellular module and SIM	**DXM1200-CK9-V**
ISM 900 MHz radio; preconfigured device detection and Ethernet communication with AT&T cellular module and SIM	**DXM1200-CK9-A**
ISM 2.4 GHz radio; preconfigured device detection and Ethernet communication with multi-carrier cellular module and SIM	**DXM1200-CK2-W**

Think Big, Start Small, Scale Fast

The Asset Monitoring Gateway with CLOUD ID can deliver value in minutes with a simple curated setup and commissioning process. Choose from a family of industrial-grade sensor nodes that are compatible with these gateways, and adapt the system for the specific requirements of the application or facility.

Features:

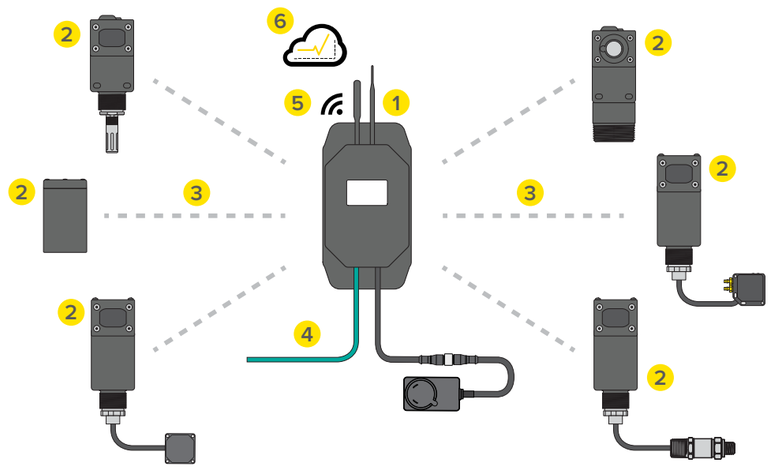
- Up to 40 sensor nodes can be connected for your specific application needs
- Preconfigured gateway provides time-saving direct-to-cloud functionality
- Wireless gateway rated for indoor and outdoor applications
- Prepaid trial for Banner Cloud Data Services platform, which delivers valuable insights and alerts
- 900 MHz or 2.4 GHz ISM radio for long-range communication with wireless sensor nodes
- On-board display for wireless sensor network commissioning and configuring the solution for Ethernet or optional cellular connectivity



Banner Cloud Data Services Dashboards

Monitoring Solution Example

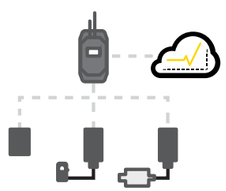
This diagram illustrates one of the nearly limitless combinations of CLOUD ID sensor nodes that can be used with the Asset Monitoring Gateway.



1. Asset Monitoring Gateway
2. Battery-Powered Sensor Node
3. 900 MHz or 2.4 GHz Wireless Technology
4. Ethernet
5. Cellular Connectivity
6. Banner Cloud Data Services

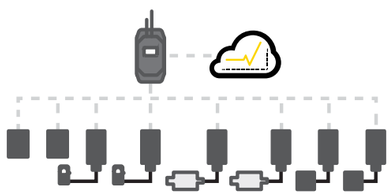
Asset Monitoring Gateway Examples

Simple Facility System Example



1 Asset Monitoring Gateway
1 Vibration Sensor
1 Current Transformer
1 Pressure Sensor

Complex Facility System Example



1 Asset Monitoring Gateway
2 Vibration Sensors
2 Current Transformers
2 Pressure Sensors
2 Vib. and Temp. Sensors

Compatible Sensor Nodes for Your Asset Monitoring Gateway

Use the simple binding process to bind sensor nodes to a gateway, and monitor tank level, ambient temperature and humidity, and the health of rotating machines and pressurized systems.

The radio frequency of compatible sensors must match the radio frequency of the gateway controller (or some other designator).

All-in-One Vibration Sensor Node

Vibration and temperature sensors monitor the health and performance of motors, pumps, and similar equipment with rotating motion. Available accessories are shown below.

Radio Frequency	Power Supply	Inputs	Models
900 MHz ISM band	C cell lithium battery (included)	Vibration and temperature detection	**DX80N9Q45VAC**
2.4 GHz ISM band	C cell lithium battery (sold separately)		**DX80N2Q45VAC NB**

Includes mounting bracket BWA-Q45VAC-FESS.

Accessories

	Curved-surface magnet mount	**BWA-Q45VAC-CMSS**
	Flat-surface epoxy mount	**BWA-Q45VAC-FESS**
	3.6 V C cell lithium replacement battery	**BWA-BATT-013**

Wireless Node and Compact Vibration Sensor

Vibration and temperature sensors monitor the health and performance of motors, pumps, and similar equipment. Available accessories are shown below.

Radio Frequency	Power Supply	Bracket	Models
900 MHz ISM band	D cell lithium battery	Aluminum flat-surface tape mount (BWA-QM30-FTAL)	**DX80N9Q45VTPD-QM30**
2.4 GHz ISM band	D cell lithium battery (sold separately)		**DX80N2Q45VTPD-QM30 NB**

Accessories

	Right-angle, low profile bracket	**LMB30LP**
	Back-side magnet mount	**BWA-Q45VA-FMSSB**
	Curved-surface magnet mount for sensor	**BWA-QM30-CMAL**
	Flat-surface magnet mount for sensor	**BWA-QM30-FMSS**
	Flat-surface screw mount with rapid-release set screw for sensor	**BWAQM30-FSALR**
	3.6 V D cell lithium replacement battery	**BWA-BATT-011**

Compatible Sensor Nodes for Your Asset Monitoring Gateway

All-in-One Temperature and Humidity Sensor Node

Temperature and humidity wireless nodes monitor environmental conditions in a variety of applications, such as refrigerators or chillers, warehouses, cleanrooms, incubators, storage rooms, and distribution centers. Available accessories are shown below.

Radio Frequency	Power Supply	Measurement Range	Inputs	Models
900 MHz ISM band	AA lithium cell batteries	-40 to +85 °C (-40 to +185 °F) 0 to 100% relative humidity	Temperature and relative humidity (%)	**DX80N9Q45THA**
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			**DX80N2Q45THA NB**

Accessories		
	Right-angle, low profile	**LMB30LP**
	Backside magnet mount	**BWA-Q45VA-FMSSB**
	2 x 3.6 V 2.4 Ah AA lithium cell replacement batteries	**BWA-BATT-006**

All-in-One Temperature Probe Sensor Node

Thermistor nodes measure temperature in key areas or processes like air- and liquid-handling applications. Available accessories are shown below.

Radio Frequency	Power Supply	Measurement Range	Inputs	Models
900 MHz ISM band	AA lithium cell batteries	-20 to +105 °C (-4 to +221 °F)	Temperature	**DX80N9Q45TA**
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			**DX80N2Q45TA NB**

Accessories		
	Right-angle, low profile	**LMB30LP**
	Backside magnet mount	**BWA-Q45VA-FMSSB**
	2 x 3.6 V 2.4 Ah AA lithium cell replacement batteries	**BWA-BATT-006**

All-in-One Dual Temperature Probe Sensor Node

Dual Thermistor nodes measure two temperatures in key areas of processes like air- and liquid-handling applications and also report the differential between them. Available accessories are shown below.

Radio Frequency	Power Supply	Measurement Range	Inputs	Models
900 MHz ISM band	AA lithium cell batteries	-20 to +105 °C (-4 to +221 °F)	Temperature	**DX80N9Q45DT**
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			**DX80N2Q45DT NB**

Accessories		
	Right-angle, low profile	**LMB30LP**
	Backside magnet mount	**BWA-Q45VA-FMSSB**
	2 x 3.6 V 2.4 Ah AA lithium cell replacement batteries	**BWA-BATT-006**

All-in-One Ultrasonic Sensor Node

Ultrasonic sensor nodes monitor the level or position of fluid or dry assets in tanks, totes, and containers. Available accessories are shown below.

Radio Frequency	Power Supply	Ultrasonic Input Range and Frequency	Inputs	Models
900 MHz ISM band	AA lithium cell batteries	Range: 100 mm to 1 m (3.94 in to 39.4 in) Frequency: 240 kHz	One ultrasonic input and one thermistor input	**DX80N9Q45UAA**
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			**DX80N2Q45UAA NB**
900 MHz ISM band	AA lithium cell batteries	Range: 300 mm to 3 m (11.8 in to 118 in) Frequency: 114 kHz		**DX80N9Q45UAC**
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			**DX80N2Q45UAC NB**

Accessories		
	Backside magnet mount	**BWA-Q45VA-FMSSB**
	2 x 3.6 V 2.4 Ah AA lithium cell replacement batteries	**BWA-BATT-006**

All-in-One Current Sensor Node

This wireless node uses a current transformer to measure current draw, helping to reveal issues with critical motor performance. Available accessories are shown below.

Radio Frequency	Power Supply	Measurement Range	Inputs	Models
900 MHz ISM band	AA lithium cell batteries	0–20 or 0–150 Amps	Amperage (two current transformers included)	**DX80N9Q45CT**
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			**DX80N2Q45CT NB**

Accessories		
	Right-angle, low profile	**LMB30LP**
	Backside magnet mount	**BWA-Q45VA-FMSSB**
	2 x 3.6 V 2.4 Ah AA lithium cell replacement batteries	**BWA-BATT-006**

Compatible Sensor Nodes for Your Asset Monitoring Gateway

Wireless Node and Pressure Sensor

Wireless node and pressure transducers measure air, gas, and liquid pressure systems and equipment. Available accessories are shown below.

Communication	Power Supply	Pressure Range	Inputs	Models
900 MHz ISM band	D cell lithium battery	0–50 PSI	Pressure	**DX80N9Q45UPSD-PS50**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45UPSD-PS50 NB**
900 MHz ISM band	D cell lithium battery	0–150 PSI		**DX80N9Q45UPSD-PS150**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45UPSD-PS150 NB**
900 MHz ISM band	D cell lithium battery	0–500 PSI		**DX80N9Q45UPSD-PS500**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45UPSD-PS500 NB**
900 MHz ISM band	D cell lithium battery	0–3000 PSI		**DX80N9Q45UPSD-PS3000**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45UPSD-PS3000 NB**

Accessories

	Right-angle, low profile	**LMB30LP**
	3.6 V D lithium cell replacement battery	**BWA-BATT-011**

Wireless Node and Differential Pressure Sensor

Wireless node and differential pressure sensors provide the ability to monitor low-pressure applications such as filter and vacuum lines, HVAC and duct pressure, dust collectors, clean rooms, and fume hoods. Available accessories are shown below.

Communication	Power Supply	Pressure Range	Inputs	Models
900 MHz ISM band	D cell lithium battery	±1 inches of water column	Low-pressure differential sensor	**DX80N9Q45DPSD-DP1**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45DPSD-DP1 NB**
900 MHz ISM band	D cell lithium battery	±5 inches of water column		**DX80N9Q45DPSD-DP5**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45DPSD-DP5 NB**
900 MHz ISM band	D cell lithium battery	±20 inches of water column		**DX80N9Q45DPSD-DP20**
2.4 GHz ISM band	D cell lithium battery (sold separately)			**DX80N2Q45DPSD-DP20 NB**

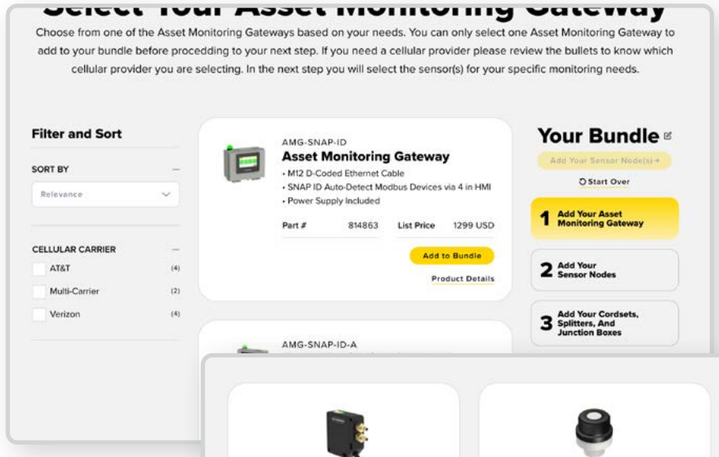
Accessories

	Right-angle, low profile	**LMB30LP**
	3.6 V D lithium cell replacement battery	**BWA-BATT-011**

Build Your Bundle

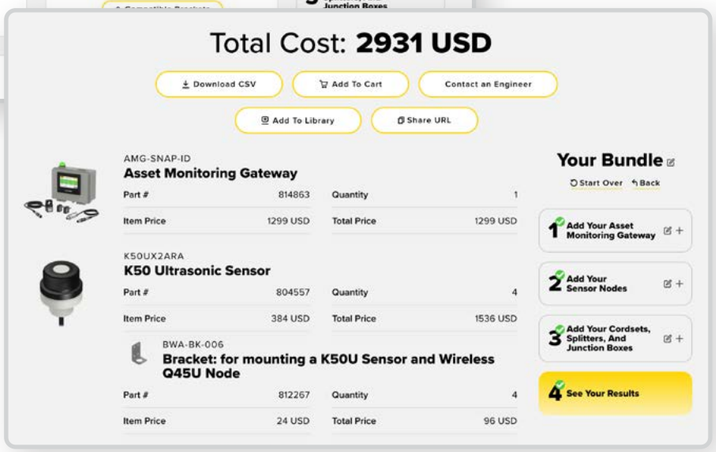
This tool will help you build out your monitoring bundle with either SNAP ID or CLOUD ID. Pick from either the Asset Monitoring Gateway with SNAP ID or CLOUD ID, and choose either sensor(s) or sensor node(s) to monitor all of your critical assets in your process. If you have any questions, please contact a trained engineer to help build your solution with you on the phone or via chat.

Go to bannerengineering.com/monitoringsolutions to start building your bundle.



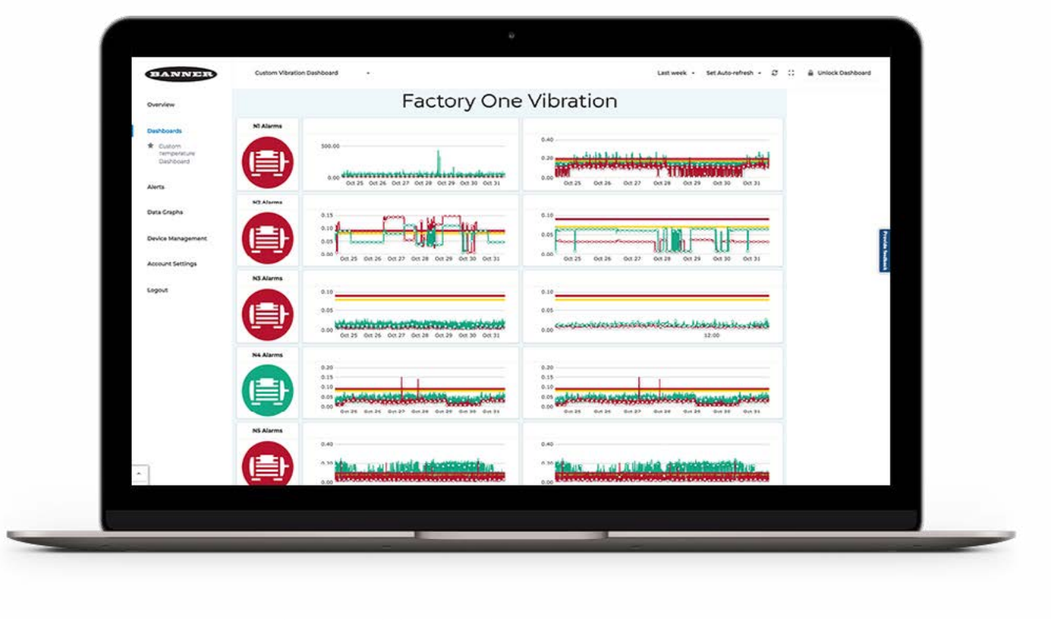
Select Your Gateway

Select Your Sensors



Purchase From Your Bill of Materials

View Your Equipment's Data Remotely with Banner Cloud Data Services (CDS)



Enables Data-Driven Decision-Making

Banner's Asset Monitoring Gateway with SNAP ID and Asset Monitoring Gateway with CLOUD ID are designed to begin collecting data and providing value on day one. With more information on the health and productivity of your equipment, you can make more informed decisions about maintenance, where to assign production based on availability and throughput, and more.

Provides End-to-End IIoT Solutions

Both Banner monitoring gateways are preconfigured to easily connect with a wide variety of our compatible sensors right out of the box. Because there is no programming needed, you spend less time setting up and commissioning the system. It also means that more people across your organization can deploy the system, with less reliance on your most technical personnel.

Reduces Installation Time and Cost

Set up your entire end-to-end condition monitoring solution in a few simple steps: apply power, bind sensors to the gateway, activate the data services, then install sensors on your equipment and immediately push data to the cloud.

Maximizes Uptime and Increases Efficiency

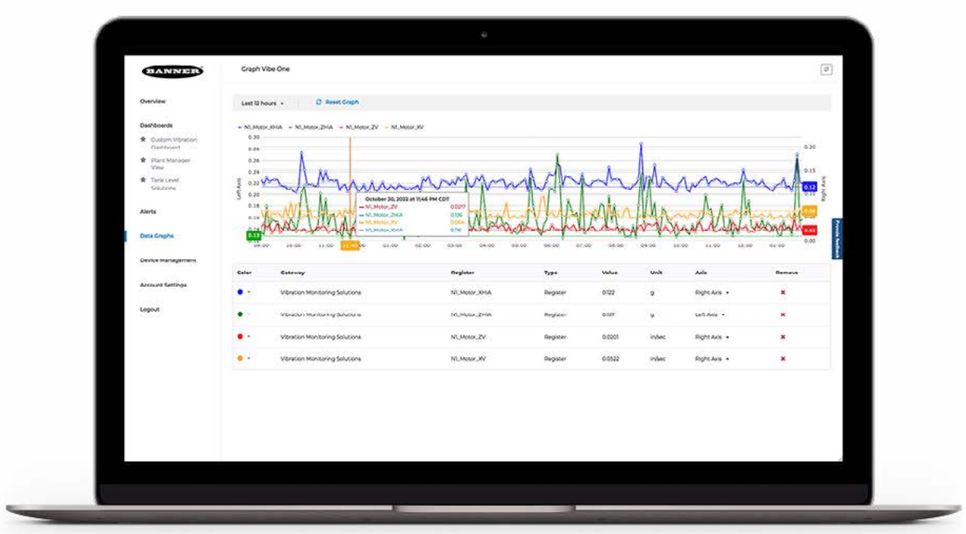
Condition monitoring for predictive maintenance is a key capability of Banner monitoring gateways. Our Banner Cloud Data Services (CDS) platform allows users to access, store, protect, and export critical data collected by Banner's wireless sensors. Device data is actionable, making it easy to identify trends, predict maintenance requirements, avoid costly equipment failures, and prevent unplanned downtime.

Preconfigured Web Dashboards

Banner CDS lets users set condition-based alerts from the cloud using multiple metrics of event severity and duration of time. These provide remote users with email or SMS notifications, based on parameters set in the cloud. Running multiple shifts? Set time constraints so the right people get notified at the right time.

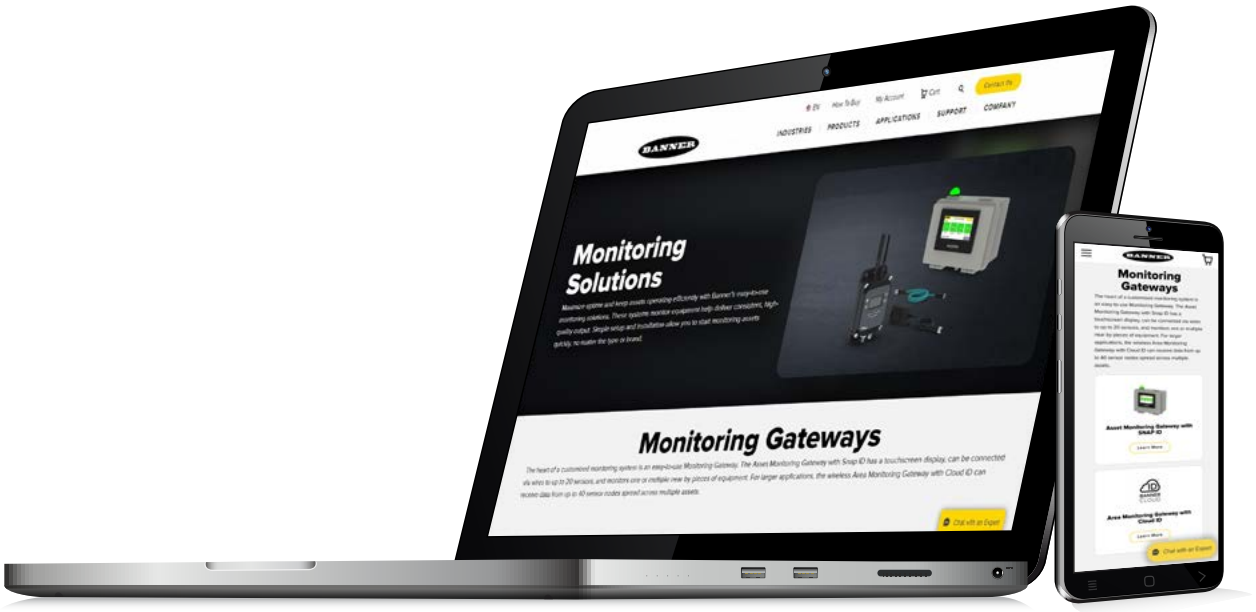
Customizable Dashboards and Alerts

If you want a more customized look, building a dashboard in Banner CDS is easy. Drag-and-drop widgets and the ability to load images to your dashboard let you build exactly what you need to visualize your operation. Create alarms and alerts for the measurement sensors installed on your equipment.



More Sensors, More Solutions.

Banner Engineering designs and manufactures industrial automation products including sensors, smart IIoT and industrial wireless technologies, LED lights and indicators, measurement devices, machine safety equipment, as well as barcode scanners and machine vision. These solutions help make many of the things we use every day, from food and medicine to cars and electronics. A high-quality, reliable Banner product is installed somewhere around the world every two seconds. Headquartered in Minneapolis since 1966, Banner is an industry leader with more than 10,000 products, operations on five continents, and a world-wide team of more than 5,500 employees and partners. Our dedication to innovation and personable service makes Banner a trusted source of smart automation technologies to customers around the globe.



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