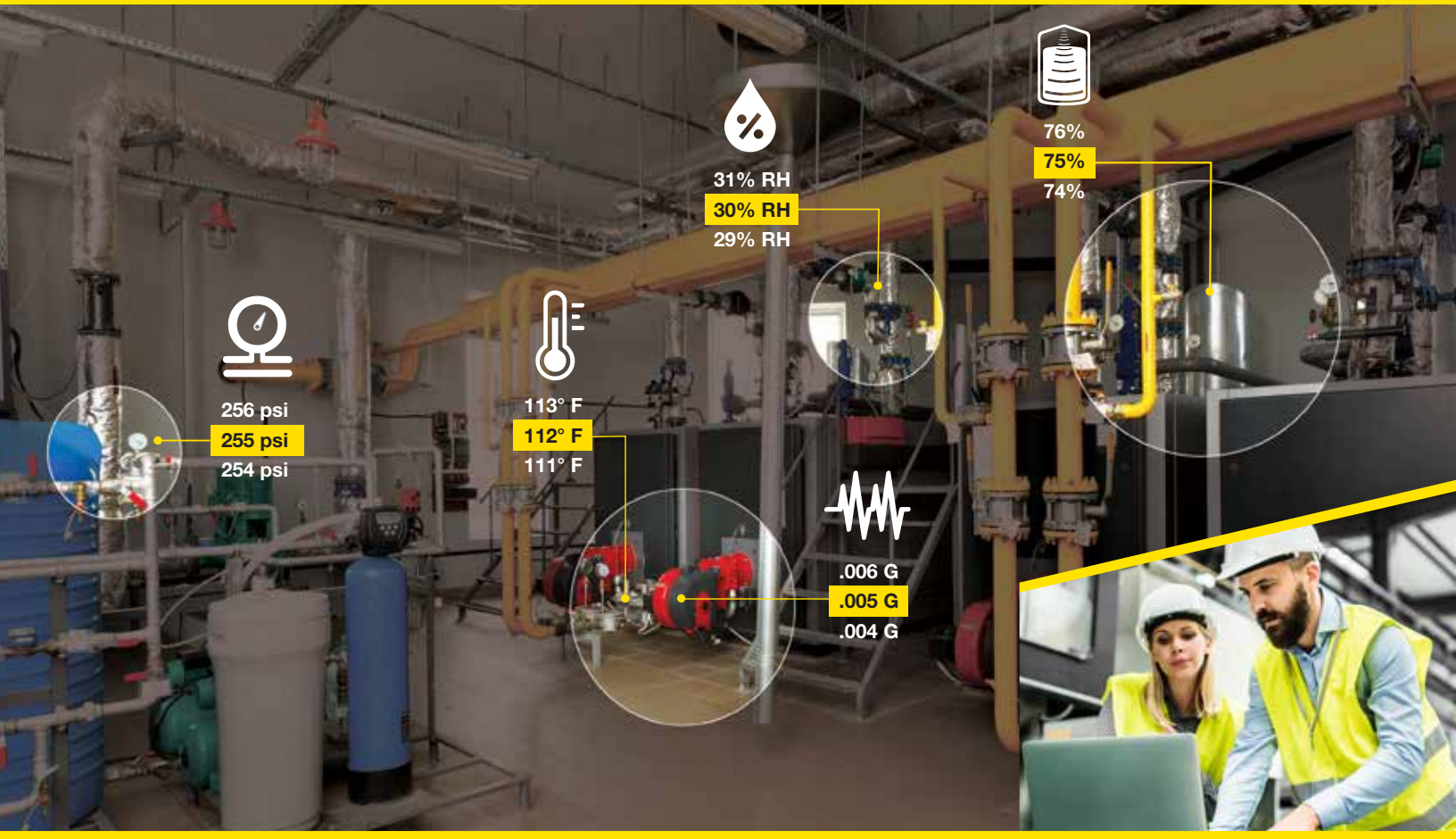
BANNER CLOUD ID™ Kit

Condition Monitoring and Preventative Maintenance



Scalable Predictive Maintenance Solutions

Identify equipment problems and increase productivity by monitoring the health of motors, fans, pumps, and similar equipment. This kit provides a comprehensive monitoring solution, ensuring you get fast and powerful insights, key to preventing downtime or damage to critical assets. Solve operational challenges by monitoring pressurized systems, material levels, environmental conditions, and vibrational characteristics for the health of machinery that keeps your process working smoothly. These kits allow you to customize and scale toward the application and requirements that are most important to your bottom line.

- Products with proven wireless communication and integrated cellular or ethernet connectivity
- Default dashboards and alarms assist in data-driven decisions and solutions
- Wireless battery-powered sensor nodes for convenient installation
- Durable IP-rated sensors and gateways

Kit includes:

Wireless Gateway

Prepaid Banner Cloud Data Services

Sold Separately:

Banner Wireless Sensors

BANNER®

more sensors, more solutions

Banner Cloud ID™ Kit Series

Scale Your IIoT System with Banner

Kit Features:

- Connect a total of 40 sensor nodes for your specific application needs
- Preconfigured gateway provides time-saving direct-to-cloud functionality
- Wireless gateway options rated for indoor and outdoor applications
- Proven secure and reliable communications between sensors and the gateway
- 900 MHz or 2.4GHz ISM radio for long range communication with wireless sensor nodes
- On-board display for wireless sensor network commissioning and configuring device for ethernet or optional cellular connectivity

Acquire insights with one Direct-to-Cloud Solution



Data Generation from Multiple Sensor Types | Wireless Gateway to Collect Data | Ethernet or Cellular Connectivity | Banner Cloud Data Services Platform



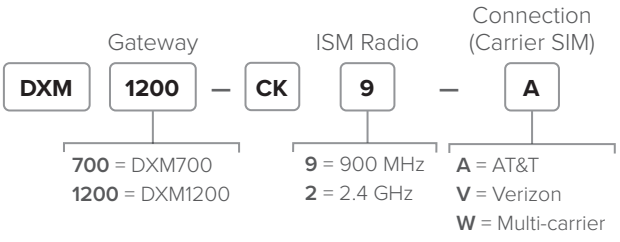
Banner Cloud Data Services Dashboard

Designed to get up to speed quickly and scale with ease

The Banner Cloud ID™ Kits 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 kits and adapt the system for the specific requirements of the application or facility.

Banner Cloud ID™ Series

Designed to enable owners of assets and processes to obtain actionable insights that will solve industrial challenges delivered in a robust and easily deployable solution. From high-grade sensing hardware and gateways, to trusted network connectivity and intuitive software, the Banner Cloud ID™ Kit Series provides the entire stack of technologies needed to evaluate the Industrial Internet of Things (IIoT) within an enterprise.



Note: Not all combinations are available

Wireless Gateways



DXM1200 | DXM700

All-in-One Sensor Nodes



Vibration | Temp/ Humidity | Tank Level | Pressure | Differential Pressure | Temp Probe | Dual Temp Probe | Current

DXM1200 Wireless Gateway

Banner's wireless gateway is an industrial wireless device that facilitates Industrial Internet of Things (IIoT) applications. As a communications gateway, it offers seamless connectivity by hosting a robust ISM radio network for local wireless devices used to acquire and transmit data from assets within the industrial environment. The intuitive on-board display is used to bind the nodes to the wireless network and the device arrives preconfigured for ethernet communication to Banner Cloud Data Services.

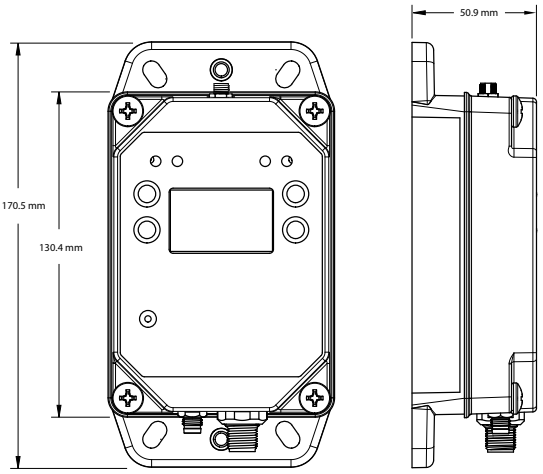


- ISM local radio network in 900 MHz or 2.4 GHz frequency band
- Equipped with IP67-rated housing for use in challenging environments
- DC Power Supply included within Banner Cloud ID™ Kit
- Embedded cellular device provides optional connection to Verizon, AT&T, or multiple carriers for international regions
- External radio and internal cellular antennas ensure reliable data transmission in all conditions
- Use default Ethernet connection or enable Cellular Data Services in minutes

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

Supply Voltage	12 to 30 V DC (use only with a suitable Class 2 power supply (UL) or a Limited Power Source (LPS) (CE) power supply
Construction	Polycarbonate
Environmental Rating	IEC IP67
Operating Conditions	–20 to +60 °C (–4 to +140 °F)
Push to Cloud Rate	Once every 5 minutes (ethernet connection) [default] Once every 10 minutes (cellular connection)
900 MHz Compliance	FCC ID UE3RM1809: FCC Part 15, Subpart C, 15.247 IC: 7044A-RM1809 IFT: RCPBARM13-2283
Cellular Connectivity	4G LTE CATM1 (LTE-M/NB-IoT)
2.4 GHz Compliance (SX243 Radio Module)	FCC ID: UE3SX243: FCC Part 15, Subpart C, 15.247 Radio Equipment Directive (RED) 2014/53/EU IC: 7044A-SX243
900 MHz Certifications	NOM, NYCE, c UL US LISTED
2.4 GHz Certifications	CE, UKCA

Support Literature	
216539	Sure Cross® DXM1200-Bx Wireless Controller Instruction Manual
196719	Sure Cross® DXM1200-Bx Wireless Controller Datasheet
222401	Banner Cloud ID™ Kit Setup Guide



DXM700 Wireless Gateway

Banner's wireless gateway is an industrial wireless device that facilitates Industrial Internet of Things (IIoT) applications. As a communications gateway, it offers seamless connectivity by hosting a robust ISM radio network for local wireless devices used to acquire and transmit data from assets with the industrial environment. The intuitive on-board display is used to bind the nodes to the wireless network and the device arrives preconfigured for ethernet communication to Banner Cloud Data Services.

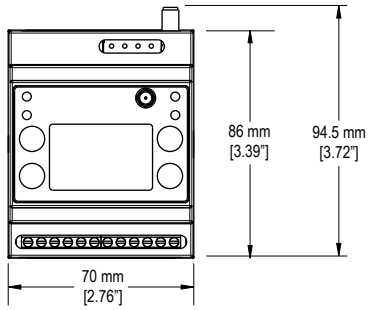


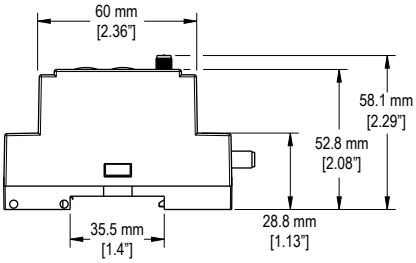
- ISM local radio network in 900 MHz or 2.4 GHz frequency band
- DIN-rail mounting for use in factory floor and enclosures
- DC Power Supply included within Banner Cloud ID™ Kit
- Embedded cellular device provides optional connection to Verizon, AT&T, or multiple carriers for international regions
- External radio and cellular antennas for increased reception or extension
- Use default Ethernet connection or enable Cellular Data Services in minutes

Description	Models
ISM 900 MHz Radio; preconfigured device detection and ethernet communication with Verizon cellular module & SIM	**DXM700-CK9-V**
ISM 900 MHz Radio; preconfigured device detection and ethernet communication with AT&T cellular module & SIM	**DXM700-CK9-A**
ISM 2.4 GHz Radio; preconfigured device detection and ethernet communication with Multi-carrier cellular module & SIM	**DXM700-CK2-W**

Supply Voltage	12 to 30 V DC (use only with a suitable Class 2 power supply (UL) or a Limited Power Source (LPS) (CE) power supply)
Construction	Polycarbonate; DIN rail mount option
Environmental Rating	IEC IP20
Operating Conditions	–20 to +60 °C (–4 to +140 °F)
Push to Cloud Rate	Once every 5 minutes (ethernet connection) [default] Once every 10 minutes (cellular connection)
900 MHz Compliance	FCC ID UE3RM1809: FCC Part 15, Subpart C, 15.247 IC: 7044A-RM1809 IFT: RCPBARM13-2283
Cellular Connectivity	4G LTE CATM1 (LTE-M/NB-IoT)
2.4 GHz Compliance (SX243 Radio Module)	FCC ID: UE3SX243: FCC Part 15, Subpart C, 15.247 Radio Equipment Directive (RED) 2014/53/EU IC: 7044A-SX243 ANATEL: 03737-22-04042
900 MHz Certifications	NOM, NYCE, c UL us LISTED
2.4 GHz Certifications	CE, UKCA

Support Literature	
207894	Sure Cross® DXM700-Bx Wireless Controller Instruction Manual
207893	Sure Cross® DXM700-Bx Wireless Controller Datasheet
222401	Banner Cloud ID™ Kit Setup Guide





Sensor Nodes to Customize your Banner Cloud ID™ Kit

Use the simple binding process to join up to 40 sensor nodes per gateway that monitor tank level, ambient temperature and humidity, the health of rotating machines and pressurized systems.

Radio Frequency of compatible sensors must match the radio frequency of the DXM1200 or DXM700 Gateway Controller (or some other designator).



Banner Engineering has hundreds of sensor solutions to meet your needs. Please visit BannerEngineering.com to discover the right solution for your specialized applications.



All-in-One Vibration Sensor Node

Vibration and temperature sensors that monitor the health and performance of motors, pumps, and similar equipment with rotating motion; mounting kits with magnetic and non-magnetic brackets are available

Radio Frequency	Power Supply	Inputs	Models
900 MHz ISM Band	C Cell Lithium Battery	Vibration and temperature detection	**DX80N9Q45VAC**
2.4 GHz ISM Band			**DX80N2Q45VAC**



Wireless Node and Compact Vibration Sensor (must be purchased together)

Communication	Radio Frequency	Power Supply	Inputs	Models
ISM Radio Band	900 MHz	D Cell Lithium Battery	Vibration and temperature detection	**DX80N9Q45VTP**
	2.4 GHz			**DX80N2Q45VTP**
1-Wire Serial	–	–		**QM30VT1**
				QM30VT1-SS*

*316 Stainless Steel Model



All-in-One Temperature and Humidity Sensor Node

Temperature and humidity wireless node monitors environmental conditions in a variety of applications, such as refrigerators or chillers, warehouses, cleanrooms, incubators, storage rooms, and distribution centers

Radio Frequency	Measurement Range	Inputs	Models
900 MHz ISM Band	–40 to +85 °C (–40 to +185 °F) 0 to 100% Relative Humidity	Temperature and relative humidity (%)	**DX80N9Q45THA**
2.4 GHz ISM Band			**DX80N2Q45THA**



All-in-One Temperature Probe Sensor Node

Thermistor nodes measure temperature in key areas or processes like air- and liquid- handling applications

Radio Frequency	Measurement Range	Inputs	Models
900 MHz ISM Band	–20 to +105 °C (–4 to +221 °F)	Temperature	**DX80N9Q45TA**
2.4 GHz ISM Band			**DX80N2Q45TA**



All-in-One Dual Temperature Probe Sensor Node

Radio Frequency	Measurement Range	Inputs	Models
900 MHz ISM Band	-20 to +105 °C (-4 to +221 °F)	Temperature	**DX80N9Q45DT**
2.4 GHz ISM Band			**DX80N2Q45DT**

All models include a battery of respective size. To order an integrated battery model without the battery, add a NB to the model number.

Sensor Nodes to Customize your Banner Cloud ID™ (continued)



All-in-One Ultrasonic Sensor Node

Ultrasonic sensor sensor nodes monitor the level or position of fluid or dry assets in tanks, totes, and containers

Radio Frequency	Ultrasonic input Range and Frequency	Inputs	Models
900 MHz ISM Band	Range: 100 mm to 1 m (3.94 in to 39.4 in) Frequency: 240 kHz	One Ultrasonic Input One Thermistor Input	**DX80N9Q45UAA**
2.4 GHz ISM Band			**DX80N2Q45UAA**
900 MHz ISM Band	Range: 300 mm to 3 m (11.8 in to 118 in) Frequency: 114 kHz		**DX80N9Q45UAC**
2.4 GHz ISM Band			**DX80N2Q45UAC**



Wireless Node and Quick-Disconnect Pressure Sensor (must be purchased together)

Wireless node and pressure transducer accessories measure air, gas, and fluid pressure of systems and equipment

Communication	Pressure Range	Inputs	Models
900 MHz ISM Frequency Band	Universal	Pressure	**DX80N9Q45UPSD**
2.4 GHz ISM Frequency Band			**DX80N2Q45UPSD**
Analog Voltage	0-50 PSI		**BWA-PRESSURE-SENSOR-50**
	0-150 PSI		**BWA-PRESSURE-SENSOR-150**
	0-500 PSI		**BWA-PRESSURE-SENSOR-500**
	0-3000 PSI		**BWA-PRESSURE-SENSOR-3000**



Wireless Node and Quick-Disconnect Differential Pressure Sensor (must be purchased together)

Wireless node and differential pressure accessories provide the ability to monitor low pressure applications such as filter and vacuum lines, HVAC and duct pressure, dust collectors, clean rooms, fume hoods, and air flow

Communication	Pressure Range	Inputs	Models
900 MHz ISM Frequency Band	Universal	Low pressure differential sensor	**DX80N9Q45DPSD**
2.4 GHz ISM Frequency Band			**DX80N2Q45DPSD**
1-Wire Serial	±1 inches of water column		**QM42-DPS1-1Q**
	±5 inches of water column		**QM42-DPS5-1Q**
	±20 inches of water column		**QM42-DPS20-1Q**



All-in-One Current Sensor Node

Wireless node uses a current transformer to measure current draw, helping to reveal issues with critical motor performance

Radio Frequency	Measurement Range	Inputs	Models
900 MHz ISM Band	0-20 or 0-150 Amps	Amperage (Two Current Transformers Included)	**DX80N9Q45CT**
2.4 GHz ISM Band	0-20 or 0-150 Amps		**DX80N2Q45CT**

All models include a battery of respective size. To order an integrated battery model without the battery, add a NB to the model number.

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