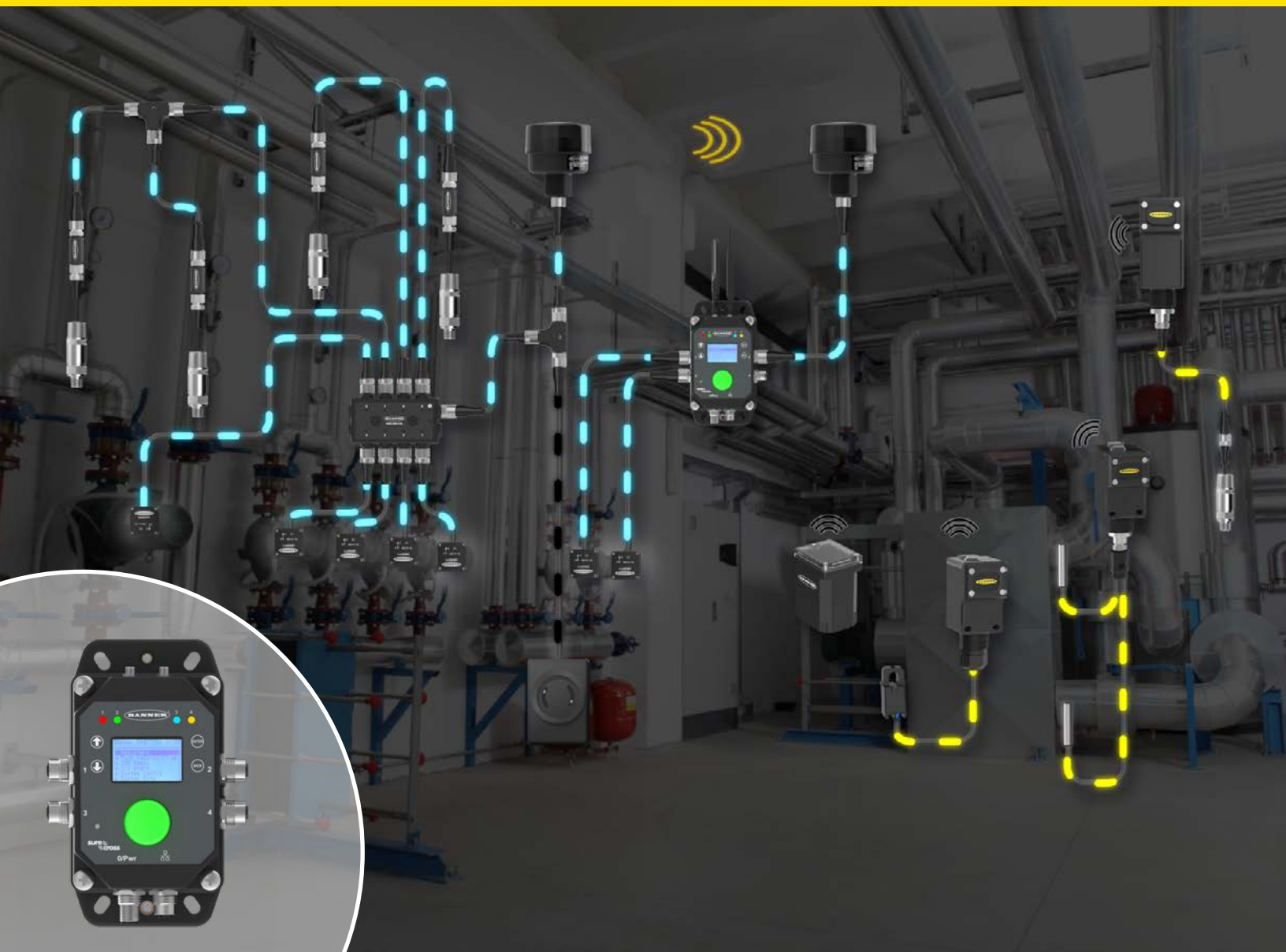


# DXM1200-X2 IIoT Gateway



## Simplify Condition Monitoring by Connecting Wired and Wireless Devices to One Gateway

- Harness the installation benefits of wireless devices along with the fast sample rates of wired devices
- Monitor more assets by connecting up to 200 devices to one gateway
- Quickly install the IP67-rated gateway anywhere with its rugged and sealed design
- Transform data at the edge with our DXM configuration tool or customize further with ScriptBasic or MicroPython
- Get your data where you need it by connecting to networks via Ethernet or Cellular



# Versatile Gateways that Scale with Your Condition Monitoring Needs

The DXM1200-X2 brings condition monitoring to every part of a facility: easy-to-access areas, hard-to-reach places, and everywhere in-between, including harsh environments with its IP67-rated housing.



# Compatible Wired Sensors

## Vibration and Temperature Sensors



Input	Output	Housing Type	Connection	Models
Vibration and temperature	Modbus	Aluminum	150 mm cable with M12 male quick disconnect	QM30VT3-MQP
		316L Stainless Steel		QM30VT3-SS-MQP

### 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

# Compatible Wired Sensors



## 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	<b>S24AS-D-MQP</b>

## Differential Pressure Sensors



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

### 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	<b>S15C-PS150C-MQ</b>

\*Ceramic element intended for gas media only

## Current Transformers



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

## Rogowski Coil Current Sensors



AC Current Range (A)	Coil Diameter (mm)	Models
500	50	<b>S15S-R500-MQ</b>
1000		<b>S15S-R1000-MQ</b>
3000	200	<b>S15S-R3000-MQ</b>
6000		<b>S15S-R6000-MQ</b>



## 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			S15C-I-MQ
Analog voltage		4-pin M12 female/male quick disconnect	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	Frequency	Models
Pre-bound client/server pair	900 MHz ISM band	R70KSR9MQ
	2.4 GHz ISM band	R70KSR2MQ
One individual unit	900 MHz ISM band	R70SR9MQ
	2.4 GHz ISM band	R70SR2MQ

### Brackets



Right-angle, low profile

**LMB30LP**

# Compatible Wireless Sensor Nodes

## 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	<b>DX80N9Q45VAC</b>
2.4 GHz ISM band	C cell lithium battery (sold separately)		<b>DX80N2Q45VAC NB</b>

Includes mounting bracket BWA-Q45VAC-FESS.

### Accessories

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

## 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)	<b>DX80N9Q45VTPD-QM30</b>
2.4 GHz ISM band	D cell lithium battery (sold separately)		<b>DX80N2Q45VTPD-QM30 NB</b>

### Accessories

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



## 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)	Temperature and relative humidity (%)	<b>DX80N9Q45THA</b>
2.4 GHz ISM band	AA lithium cell batteries (sold separately)	0 to 100% relative humidity		<b>DX80N2Q45THA NB</b>

### 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	<b>DX80N9Q45TA</b>
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			<b>DX80N2Q45TA NB</b>

### 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 Wireless Sensor Nodes



## 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	<b>DX80N9Q45DT</b>
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			<b>DX80N2Q45DT NB</b>

### 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	<b>DX80N9Q45UAA</b>
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			<b>DX80N2Q45UAA NB</b>
900 MHz ISM band	AA lithium cell batteries	Range: 300 mm to 3 m (11.8 in to 118 in) Frequency: 114 kHz		<b>DX80N9Q45UAC</b>
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			<b>DX80N2Q45UAC NB</b>

### 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)	<b>DX80N9Q45CT</b>
2.4 GHz ISM band	AA lithium cell batteries (sold separately)			<b>DX80N2Q45CT NB</b>

### 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**



## 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	0–150 PSI	Pressure	<b>DX80N9Q45UPSD-PS150</b>
2.4 GHz ISM band	D cell lithium battery (sold separately)			<b>DX80N2Q45UPSD-PS150 NB</b>

### 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	<b>DX80N9Q45DPSD-DP1</b>
2.4 GHz ISM band	D cell lithium battery (sold separately)			<b>DX80N2Q45DPSD-DP1 NB</b>
900 MHz ISM band	D cell lithium battery	±5 inches of water column		<b>DX80N9Q45DPSD-DP5</b>
2.4 GHz ISM band	D cell lithium battery (sold separately)			<b>DX80N2Q45DPSD-DP5 NB</b>
900 MHz ISM band	D cell lithium battery	±20 inches of water column		<b>DX80N9Q45DPSD-DP20</b>
2.4 GHz ISM band	D cell lithium battery (sold separately)			<b>DX80N2Q45DPSD-DP20 NB</b>

### Accessories



Right-angle, low profile

**LMB30LP**



3.6 V D lithium cell replacement battery

**BWA-BATT-011**

# Compatible Wireless Nodes and Data Radios

## DX80 Performance Wireless Nodes



P8, P2, P1



P8C, P2C

Radio Frequency	I/O	Power Supply	Housing	Models
900 MHz ISM band	Up to 12 discrete PNP I/O	10-30 V DC	IP67	<b>DX80N9X6S-P8</b>
2.4 GHz ISM band				<b>DX80N2X6S-P8</b>
900 MHz ISM band			IP20	<b>DX80N9X6S-P8C</b>
2.4 GHz ISM band				<b>DX80N2X6S-P8C</b>
900 MHz ISM band	Input: 4 discrete, 2 analog Output: 4 discrete, 2 analog 0-20 mA		IP67	<b>DX80N9X6S-P2</b>
2.4 GHz ISM band				<b>DX80N2X6S-P2</b>
900 MHz ISM band			IP20	<b>DX80N9X6S-P2C</b>
2.4 GHz ISM band				<b>DX80N2X6S-P2C</b>
900 MHz ISM band	Input: 2 discrete, 2 analog, 2 thermistor Output: 2 discrete NMOS	Flex power, 10-30 V DC or 3.6-5.5 V DC	IP67	<b>DX80N9X1S-P1E</b>
2.4 GHz ISM band		D cell lithium battery	IP65	<b>DX80N2X1S-P1E</b>

### Accessories



Two 80 lb magnetic mounts

**BWA-BK-020**



DIN rail bracket

**SMBDX80DIN**



## Direct Select Wireless Operator Interface Nodes

Radio Frequency	Display	Input	Housing	Models
900 MHz ISM band	LCD 0-999, multicolor capacitive touch	Internal battery	IP65	<b>DX80N9DSTS</b>
2.4 GHz ISM band				<b>DX80N2DSTS</b>

### Accessories



Two 80 lb magnetic mounts

**BWA-BK-020**



3.6 V C cell lithium replacement battery

**BWA-BATT-013**

## DX80 MultiHop Data Radios

The following list of models does not represent a comprehensive list of available products that can be used to build a solution with this gateway. Please visit Banner Engineering website for more information.



H1, H2



H10

Radio Frequency	I/O	Power Supply	Housing	Models
900 MHz ISM band	Input: 4 discrete, 2 analog, 1 thermistor, 1 counter Outputs: 2 discrete NMOS	Flex power, 10-30 V DC or 3.6-5.5 V DC	IP67	<b>DX80DR9M-H1</b>
2.4 GHz ISM band				<b>DX80DR2M-H1</b>
900 MHz ISM band	Inputs: 4 discrete, 2 analog Outputs: 4 discrete, 2 analog	10-30 V DC		<b>DX80DR9M-H2</b>
2.4 GHz ISM band				<b>DX80DR2M-H2</b>
900 MHz ISM band	Inputs: 2 discrete, 2 event counters Output: DC latch (H-Bridge)	Flex power, 10-30 V DC or 3.6-5.5 V DC		<b>DX80DR9M-DCLATCHE</b>
900 MHz ISM band	1-wire serial interface			<b>DX80DR9M-H10</b>
2.4 GHz ISM band		10-30 V DC		<b>DX80DR2M-H10</b>

### Accessories



3.6 V D lithium cell replacement battery

**BWA-BATT-011**

# DXM1200-X2 IIoT Gateway

Series

**DXM1200-X2**

Radio Configuration

**R1**

Blank = None

**R1** = 900 MHz, 500 mW PE5 Performance Radio (North America)

**R2** = 900 MHz, 500 mW HE5 MultiHop Data Radio (North America)

**R3** = 2.4 GHz, 65 mW PE5 Performance Radio (Worldwide)

**R4** = 2.4 GHz, 65 mW HE5 MultiHop Data Radio (Worldwide)

## Specifications



**Supply Voltage**

12 to 30 V DC

**Communication Protocols**

Modbus RTU, Modbus TCP, Ethernet/IP, and PROFINET

**Construction**

Polycarbonate

**Operating Conditions**

-20 to +60 °C (-4 to +140 °F)

**Environmental Rating**

IP67

## Accessories



**PSD-24-4**

Desktop power supply,  
3.9 A, 24 V DC



**PSW-24-1**

Wall plug power supply,  
100–240 V AC 50/60 Hz input,  
24 V DC output

**Cellular Communications**

Controllers accept Banner LTE-M (CATM1) modems only. Cellular modems are ordered separately.

**SXI-CATM1ATT-001**

AT&T (North America only)

**SXI-CATM1VZW-001**

Verizon (United States only)

**SXI-CATM1WW-001**

Multi-Carrier (Europe only)



**5-Pin M12**

Straight connector models listed; for right-angle models, add RA to the end of model number (example, MQDC1-506RA)

**MQDC1-506**

2 m (6.5')

**MQDC1-515**

5 m (15')

**MQDC1-530**

9 m (30')



**RJ45 to 4-Pin M12**

Straight male  
D-code

**STP-M12D-406**

2 m (6.5')

**STP-M12D-415**

5 m (15')

**STP-M12D-430**

9 m (30')



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