

## Product Overview

The Banner Sure Cross® DXM Wireless Controller product series provide simple communications gateway options that can be used to interface with local I/O, interface with Sure Cross Wireless I/O, transmit data wirelessly between traditional controllers, and/or facilitate Industrial Internet of Things (IIoT) through the Cloud.

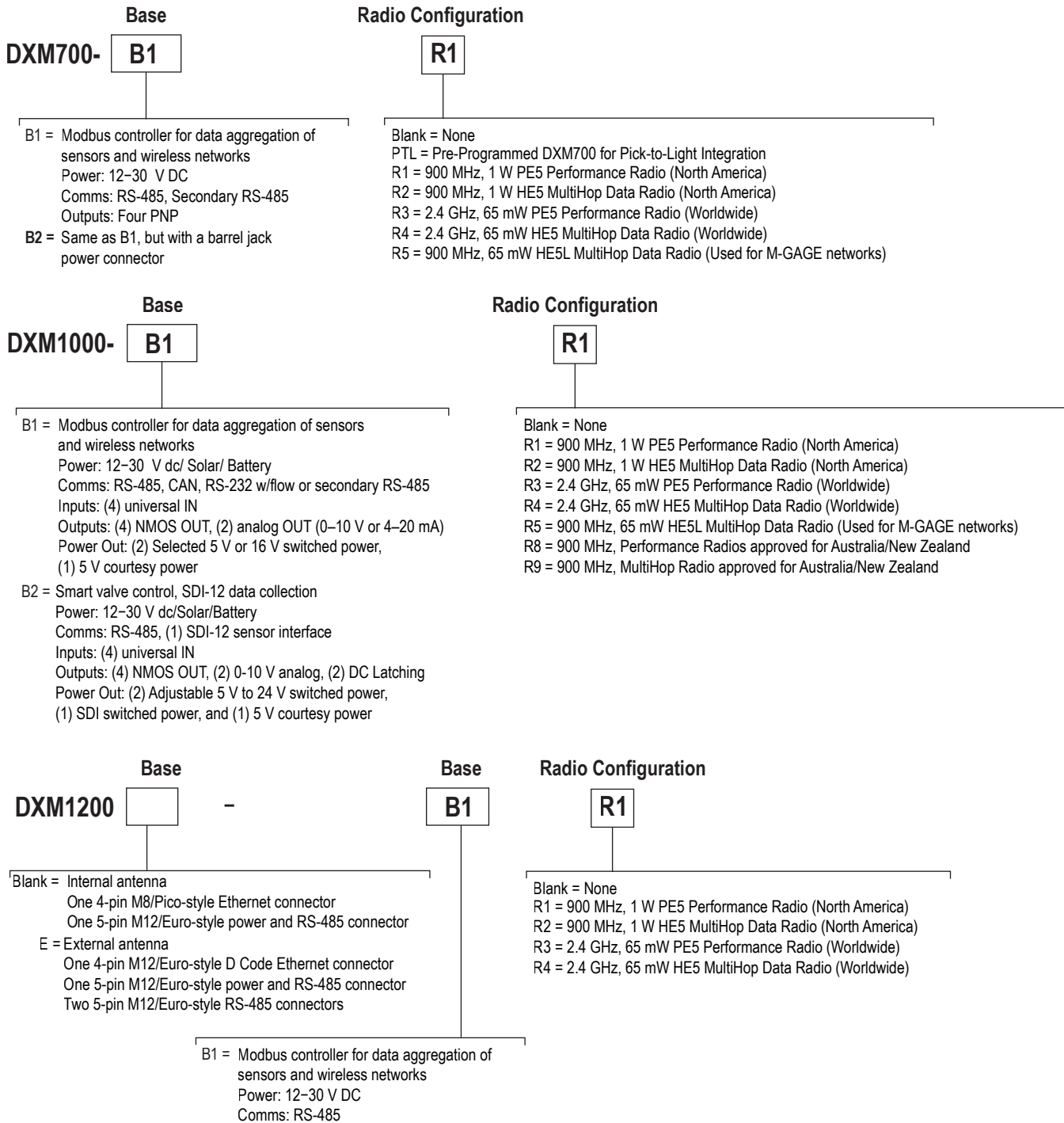
## Banner Wireless Value

- Low cost method for retrofits or IIoT connectivity (ability to monitor/control via the Cloud)
- High feature content allows flexibility to choose the features you need
- Small DIN-rail footprint eases panel constraints
- Standard protocol options simplify integration
- Simple menu-driven LCD display



Standard Features	DXM1200-B1	DXM1000-B1	DXM700-B1	DXM100-Bx	DXM150-B2	DXM150-B1
Performance or Multi-Hop Radio option	✓	✓	✓	✓	✓	✓
900 MHz or 2.4 GHz ISM Radio option	✓	✓	✓	✓	✓	✓
Cellular communications option	✓	✓	✓	✓	✓	✓
LCD User Interface and 4 LEDs	✓	✓	✓	✓	✓	✓
8GB Removable Micro SD Card	✓	✓	✓	✓	✓	✓
Environmental Rating	IP67	IP20	IP20	IP20	IP20	IP20
Battery backup option		✓		✓	✓	✓
Solar power option		✓		✓	✓	✓
Modbus/TCP and Ethernet/IP	✓	✓	✓	✓	✓	✓
Modbus RTU RS-485	✓	✓	✓	✓	✓	✓
RS-232		✓		✓ (B1 only)	✓	✓
CANBus		✓		✓ (B1 only)		
USB and Ethernet Configuration	✓	✓	✓	✓	✓	✓
Logic Controller (Action rule or ScriptBasic programmable)	✓	✓	✓	✓	✓	✓
SMS Capability				✓	✓	✓
Slave Option (IO Board and Radio Only)				✓	✓	✓
Processor Speed and Memory	300 MHz/16 MB	300 MHz/16 MB	300 MHz/16 MB	100 MHz/2 MB	100 MHz/2 MB	100 MHz, 2 MB
Sinking (NPN)/Sourcing (PNP) Outputs					8	
Sourcing (PNP) Outputs			4			
Sinking (NMOS) Outputs (up to 30 V DC at <1 A max)		4		4		4
Analog Outputs (0–20 mA or 0–10 V DC, 12-bit resolution)		2		2	2	2
Relay Outputs (SPDT Form C - 250 V AC 16 A)						2
Universal Inputs (NPN, PNP, 0–20mA, 0–10 V, 10K Thermistor, Potentiometer, NPN Raw Fast)		4		4	8	8
Optically Isolated Discrete Inputs (30 V AC or V DC up to 2.5 kV isolation)					2	2
Courtesy Power Out		1 (5 V, 500 mA max)		1 (5 V, 500 mA max)	4 (2.7 V up to device power)	2 (2.7 V up to device power)
Switched Power Out		2 (5 V, 400 mA max or 16 V, 125 mA max)		2 (5 V, 400 mA max or 16 V, 125 mA max)		
DIN Rail Width		105 mm	70 mm	105 mm	155 mm	155 mm

## DXM Controller Selection Guide



Cellular Communication—Controllers accept Banner LTE (United States) and GSM (outside the United States) modems only. Cellular modems are ordered separately as accessories under the following part numbers:

- LTE-Verizon (United States only): SXI-LTE-001
- GSM/3G (HSPA) (International only): SXI-GSM-001
- CATM Verizon (US only): SXI\_CATM\_001
- CATM ATT (US only): SXI\_CATM\_002

**Base**  
**DXM100- B1**

B1 = Modbus controller for data aggregation of sensors and wireless networks  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485, CAN, RS-232 w/flow or secondary RS-485  
 Inputs: (4) universal IN  
 Outputs: (4) NMOS OUT, (2) analog OUT (0–10 V or 4–20 mA)  
 Power Out: (2) Selected 5 V or 16 V switched power, (1) 5 V courtesy power

**Radio Configuration**  
**R1**

Blank = None  
 R1 = 900 MHz, 1 W PE5 Performance Radio (North America)  
 R2 = 900 MHz, 1 W 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)  
 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R8 = 900 MHz, Performance Radios approved for Australia/New Zealand  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

**Base**  
**DXM100- B2**

B2 = Smart valve control, SDI-12 data collection  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485, (1) SDI-12 sensor interface  
 Inputs: (4) universal IN  
 Outputs: (4) NMOS OUT, (2) 0–10 V analog, (2) DC Latching  
 Power Out: (2) Adjustable 5 V to 24 V switched power, (1) SDI switched power, and (1) 5 V courtesy power

**Radio Configuration**  
**R1**

Blank = None  
 R1 = 900 MHz, 1 W PE5 Performance Radio (North America)  
 R2 = 900 MHz, 1 W 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)  
 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R8 = 900 MHz, Performance Radios approved for Australia/New Zealand  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

**Base**  
**DXM100- S1**

S1 = Modbus slave I/O device for MultiHop wireless networks or wired networks  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485  
 Inputs: (4) Universal IN  
 Outputs: (4) NMOS OUT, (2) Analog OUT (0–10 V or 4–20 mA)  
 Power Out: (2) Selectable 5 V or 16 V switched power, (1) 5 V courtesy power

**Radio Configuration**  
**R2**

Blank = None  
 R2 = 900 MHz, 1 W HE5 MultiHop Data Radio (North America)  
 R4 = 2.4 GHz, 65 mW HE5 MultiHop Data Radio (Worldwide)  
 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

**Base**  
**DXM100- S2**

S2 = Modbus slave device for valve control, SDI-12 data collection for MultiHop wireless networks or wired networks  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485, (1) SDI-12 sensor interface  
 Inputs: (4) universal IN  
 Outputs: (4) NMOS OUT, (2) 0–10 V analog, (2) DC Latching  
 Power Out: (2) Adjustable 5–24 V switched power, (1) SDI switched power, and (1) 5 V courtesy power

**Radio Configuration**  
**R2**

Blank = None  
 R2 = 900 MHz, 1 W HE5 MultiHop Data Radio (North America)  
 R4 = 2.4 GHz, 65 mW HE5 MultiHop Data Radio (Worldwide)  
 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

Cellular Communication—Controllers accept Banner LTE (United States) and GSM (outside the United States) modems only. Cellular modems are ordered separately as accessories under the following part numbers:

- LTE-Verizon (United States only): SXI-LTE-001
- GSM/3G (HSPA) (International only): SXI-GSM-001
- CATM Verizon (US only): SXI\_CATM\_001
- CATM ATT (US only): SXI\_CATM\_002

## DXM Controller Selection Guide

**Base**

**DXM150- B1**

**B1** = Modbus controller designed for applications with high I/O count, isolated inputs or integrated relays  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485 and RS-232 or secondary RS-485  
 Inputs: (2) Isolated discrete, (8) Universal  
 Outputs: (2) Relay, (4) NMOS, (2) Analog  
 Power Out: (2) Jumper selectable between 2.7 V or battery, 4.2 V or incoming power

**Radio Configuration**

**R1**

Blank = None  
 R1 = 900 MHz, 1 W PE5 Performance Radio (North America)  
 R2 = 900 MHz, 1W 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)  
 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R8 = 900 MHz, Performance Radios approved for Australia/New Zealand  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

**Base**

**DXM150- B2**

**B2** = Modbus controller for high I/O count applications  
 Power: 12-30 V DC/Solar/Battery  
 Comms: RS-485  
 Inputs: (2) Isolated discrete, (8) Universal  
 Outputs: (8) PNP/NPN Selectable, (2) Analog  
 Power Out: (2) Courtesy power out; (2) jumper selectable between 2.7 V or battery, 4.2 V or incoming power

**Radio Configuration**

**R1**

Blank = None  
 R1 = 900 MHz, 1 W PE5 Performance Radio (North America)  
 R2 = 900 MHz, 1W HE5 MultiHop Data Radio (North America)  
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 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R8 = 900 MHz, Performance Radios approved for Australia/New Zealand  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

**Base**

**DXM150- S1**

**S1** = Modbus slave with high I/O count for MultiHop wireless networks or wired networks  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485  
 Inputs: (2) Isolated discrete, 8 Universal  
 Outputs: (2) Relay, (4) NMOS Discrete, (2) Analog  
 Power Out: (2) Jumper selectable between 2.7 V or battery, 4.2 V or incoming power

**Radio Configuration**

**R2**

Blank = None  
 R2 = 900 MHz, 1W HE5 MultiHop Data Radio (North America)  
 R4 = 2.4 GHz, 65 mW HE5 MultiHop Data Radio (Worldwide)  
 R5 = 900 MHz, 65 mW HE5L MultiHop Data Radio (Used for M-GAGE networks)  
 R9 = 900 MHz, MultiHop Radio approved for Australia/New Zealand

**Base**

**DXM150- S2**

**S2** = Modbus slave with high I/O count for MultiHop wireless networks or wired networks  
 Power: 12–30 V DC/Solar/Battery  
 Comms: RS-485  
 Inputs: (2) Isolated discrete, (8) Universal  
 Outputs: (8) PNP/NPN Selectable, (2) Analog  
 Power Out: (2) Courtesy power out; (2) Jumper selectable between 2.7 V or battery, 4.2 V or incoming power

**Radio Configuration**

**R2**

Blank = None  
 R2 = 900 MHz, 1W HE5 MultiHop Data Radio (North America)  
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