WIRELESS NETWORK BRIDGE SERIES (BACNET, LONWORKS, ETHERNET)

|WBT-900

Synchronous point-to-multipoint communication

Penetrates foliage, building walls, and floors

Antenna options for close or long range wireless connectivity

Maintains network architecture for optimal performance

Encrypted for secure data delivery

902-928MHz Direct Sequence Spread Spectrum (DSSS)

Description

The Wireless Network Bridge family extends BACnet MS/TP, BACnet/IP, LonWorks, and Ethernet networks beyond the confines of individual buildings. This enables coordinated control of interior and exterior lighting, as well as other building loads, without costly building-to-building conduit runs or the maintenance associated with water seepage that can occur with direct burial.

Operation

Wireless Network Bridges operate on input power from 12-24 VAC or VDC and require minimal configuration. Basic addressing is performed using a built in WebServer for the IP radios and a configuration text file upload for the serial radios. The 900MHz spectra then allow robust non-line-of-sight coverage to extend field bus networks. 900MHz is capable of penetrating foliage as well as building walls or floors given appropriate consideration to antenna gain and placement. Data for the remote networks connected via wireless bridges appears to supervisory controllers identically as data from networks connected via hard wired data lines.

BACnet Wireless Link

Wireless Network Bridges can be used to extend DLM's BACnet architecture (BACnet MS/TP or BACnet/IP) ensuring that data is transmitted correctly using algorithms optimized for BACnet. Utilizing a BACnet-specific radio platform adds to the stability and efficiency of the lighting-optimized Niagara AX automation technologies used to develop the Segment Manager.

Applications

The WBT900 is the perfect solution for extending DLM without the need for a buried data line. Common key applications include: athletic field houses or maintenance sheds where a buried dataline would be cost prohibitive; multi-building, single story campus style designs common in earthquake prone regions; campus-wide building links at higher education campuses; parking garage building connected only by pathways or tunnels; multi-building corporate campuses; interior link replacement where firewall penetration is cost prohibitive; and controls retrofit applications where pulling global datalines is cost prohibitive.

Features

- 902-928 MHz frequency provides excellent non-line-of-sight performance to penetrate foliage, building walls, and floors
- Includes unity gain antenna; consult factory for additional antenna options
- Highest Quality of Service (QoS) available – synchronous point-to-multipoint protocol enables extremely low data and latency and jitter
- AES 128-bit encrypted payload protection provides secure data delivery

- Simple plug and play setup with minimal configuration required
- DIN rail mounting clip
- UL 2043 plenum rated
- BAA/TAA-compliant models available

PROJECT		LOCATION/TYPE	

Specifications

- Operating voltage: 12-24VAC/VDC, from 100-240VAC plug in power supply (included)
- Power consumption: TX 1.4W, RX 0.8W
- Transmit current draw: 100mA@24VAC/VDC
- RF transmission rate: 1.536Mb/s
- Ethernet throughput: 935Kb/s
- Output power +21 dBm (4 Watts EIRP when used with optional 15dBi antenna)
- Receive sensitivity: -97dBm at 10e4 BER (-112dBm with optional 15dBi antenna)
- 12 non-overlapping radio channels with 2.0833MHz spacing,1.75MHz occupied bandwidth

- Radio link budget: 148dB with optional 15dBi antenna
- Radio channel automatically selected and adaptively optimized
- Status LEDs for RF RX, RF TX, Channel, Link Quality
- Sub-block error detection and retransmission
- Switching regulator
- Bracket for DIN rail mounting
- Operating conditions: for indoor use only; -4-158°F (-20-70°C); 0-95% RH, non-condensing
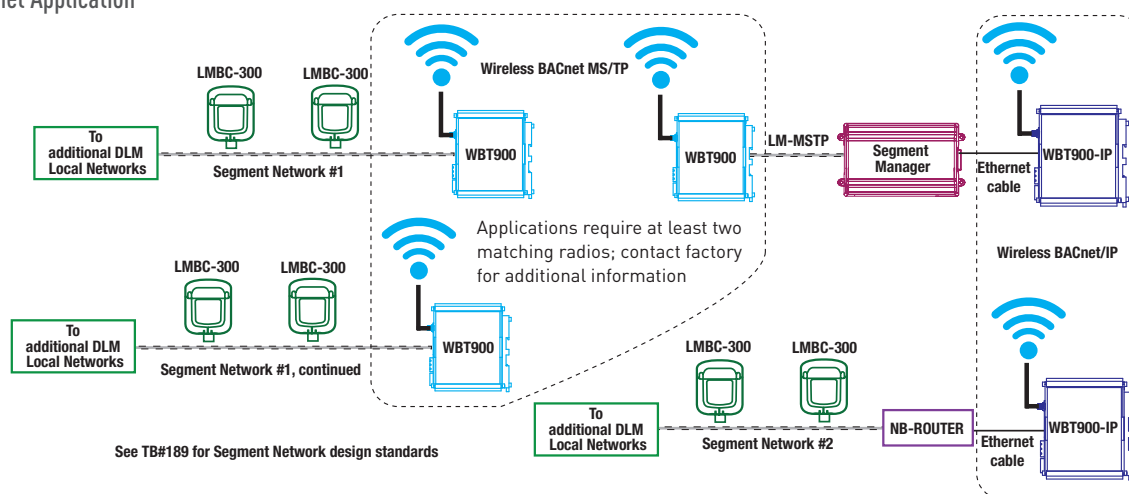- FCC part 15 compliant
- Five year warranty

Dimensions

Product Dimensions

4.2" (107mm)

4.3" (109mm)

1.75" (44mm)
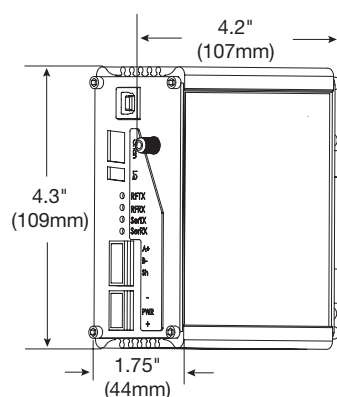
Connecting

Typical BACnet Application

Ordering Information

Catalog #	Description
☐ WBT900	Wireless BACnet MS/TP Bridge
☐ WBT900-F	Wireless BACnet MS/TP Bridge with AES 256-bit/FIPS140.2 encryption*
☐ WBT900-IP	Wireless BACnet IP Bridge
☐ WBT900-IP-F	Wireless BACnet IP Bridge with AES 256-bit/FIPS140.2 encryption*
☐ WLT900	Wireless LonWorks Bridge
☐ WLT900-F	Wireless LonWorks Bridge with AES 256-bit/FIPS140.2 encryption*
☐ AIC900-E	Wireless Ethernet Bridge
☐ AIC900-E-F	Wireless Ethernet Bridge with AES 256-bit/FIPS140.2 encryption*