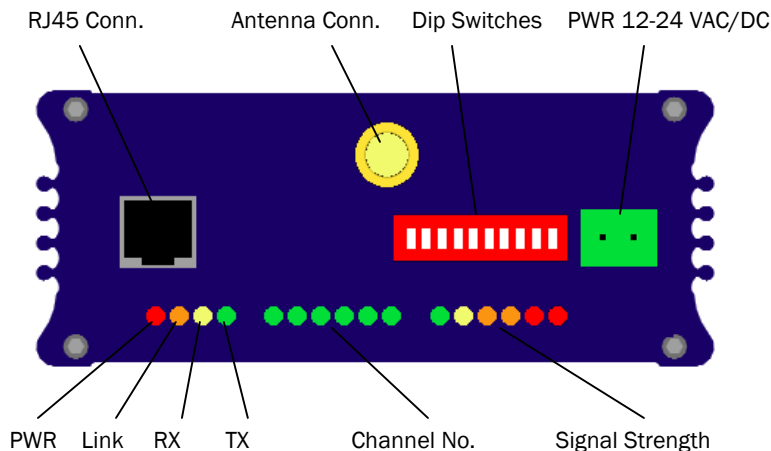# WBT900-IP

The WBT900-IP is a device designed to transport BACnet IP communication data over short to extended ranges using the 900 MHz frequency (902-928). The WBT900-IP is designed to be plug-and-play, requiring no special programming tools. Using a simple software tool (provided) radios can be addressed to one another in the field. See below for installation instructions and configuration.

| | |
|---|---|
| Antenna | RPSMA Connector |
| PWR | Power LED |
| Link | Link between Server/Client |
| RX | Receive Indicator |
| TX | Transmit indicator |
| Dip Switch | WBT900 settings (see installation instructions) |
| Channel | Channel Indicator |
| Signal Str. | Signal Quality Indicator—Red to Green (0-100%) |
| RJ45 | BACnet IP in |
| PWR | 12-24VAC/DC  * see Warning |
| GND | 12-24VAC/DC  * see Warning |

RJ45 Conn.    Antenna Conn.    Dip Switches    PWR 12-24 VAC/DC

PWR    Link    RX    TX         Channel No.         Signal Strength

*Operating Voltage: 12-24 VAC/DC  (not polarity sensitive)*
*Power Consumption at Max Power: 200mA @ 12VAC/DC*

*** WARNING:  If using AC power option, 24 VAC isolation transformer must be used!  Ensure neither of the two secondaries are bonded.**

## INSTALLATION INSTRUCTIONS:

1. Connect BACnet IP bus as labeled in the above diagram.

2. Connect 12-24 VAC/DC power as labeled in the above diagram.

3. Red power Led should light up.

4. Adjust dip switch for desired operation.  See Dip Switch Definitions on back.

5. Perform a *local download* on the remote BACnet site.

6. Verify the Rf network communication with the Signal Strength, TX, RX, and Link led indicators.

7. Lastly, perform a commission at the base station site to establish the link with the remote location.

Note:  As with any Rf network, plan ahead for antenna location and placement.  It is the intention of AIC Wireless to provide a reliable wireless communication device for existing BACnet IP networks.  However, in some conditions, reliability is determined largely by correct antenna placement, which is the responsibility of the installer.  Using good judgment in antenna placement will help decrease service related issues and increase reliability.  This product is NOT TO BE USED in situations where life safety issues may arise.  AIC Wireless makes no claims, expressed or implied, of the products usefulness with regard to specific applications.  Determination of the product's suitability for an application is the sole responsibility of the purchasing parties.  In any installation application, ensure devices are properly protected from the elements by installing in appropriate enclosure.  Additional surge protection devices may be necessary to protect from lightning/power surges.

### Dip Switch Definitions For All W*T Products by AIC Wireless

SW1  On (Channel 1 On)          SW1 Off (Channel 1 Off)

SW2  On (Channel 2 On)          SW2 Off (Channel 2 Off)

SW3  On (Channel 4 On)          SW3 Off (Channel 4 Off)

SW4  On (Channel 8 On)          SW4 Off (Channel 8 Off)

SW5  Leave in Off Position

SW6  Leave in Off Position

SW7 and SW8 must work in combination.

SW7 On and SW8 Off  Ethernet port communication to the radio.  Used for programming of the radio server or client radio relationship.

SW7 Off and SW8 Off  Ethernet port communication to the device server.  Used for programming the device server  based on the RS485 baud rate.

SW7 On and SW8 On  No function.  DO NOT OPERATE IN THIS MODE.

SW7 Off and SW8 On  Normal operating mode between the device server and the radio.

SW9  FACTORY USE ONLY, leave in Off position

SW10  On  Server Mode          SW10 Off Client Mode

*There are 12 selectable channels available by combining SW1 through SW4.  (Example SW2 On [CH2} and SW3 On [CH4] =  Channel 6)*

### 900 MHz Channel Table

| Channel | Dip Switch Setting | Center Frequency |
|---|---|---|
| 1 | 1 On/2 Off/3 Off/4 Off | 903.12500 MHz |
| 2 | 1 Off/2 On/3 Off/4 Off | 905.20833 MHz |
| 3 | 1 On/2 On/3 Off/4 Off | 907.29167 MHz |
| 4 | 1 Off/2 Off/3 On/4 Off | 909.37500 MHz |
| 5 | 1 On/2 Off/3 On/4 Off | 911.45833 MHz |
| 6 | 1 Off/2 On/3 On/4 Off | 913.54167 MHz |
| 7 | 1 On/2 On/3 On/4 Off | 915.62500 MHz |
| 8 | 1 Off/2 Off/3 Off/4 On | 917.70833 MHz |
| 9 | 1 On/2 Off/3 Off/4 On | 919.79167 MHz |
| 10 | 1 Off/2 On/3 Off/4 On | 921.87500 MHz |
| 11 | 1 On/2 On/3 Off/4 On | 923.95833 MHz |
| 12 | 1 Off/2 Off/3 On/4 On | 926.04167 MHz |

### Device Server Configuration/Programming:

In the event it is necessary to change factory settings for the BACnet IP device network, please refer to the WBT900-IP Device Sever Programming Guide.

For Support Information, contact AIC Wireless at 229-776-2510, or e-mail support@aic-wireless.com.
For Sales Information, contact AIC Wireless at 229-776-2510, or e-mail sales@aic-wireless.com.

FCC ID: R4N-AW900M

IC:5303A-AW900M

This device complies with Part 15 of the FCC rules.  Operation is subject to the following two conditions: (1) This device may not cause harmful interference; (2) This device must accept any interference received, including interference that may cause undesired operation.