

### Features and highlights

- **Flexible**  
Wireless mesh network provides ability to maximize coverage with low installation costs.
- **Reliable**  
Wireless extension of a BACnet network using mesh networking topology to ensure self-healing, reliable communications.
- **Dynamic**  
LEDs provide information on MS/TP communications performance as well as indications of Received Signal Strength (RSSI) to simplify the installation process.
- **Interoperable**  
Provides a BACnet Addendum q wireless interface and router to BACnet MS/TP.



The Alerton® AZW-5000 provides for the wireless extension of a BACnet network using mesh networking topology to ensure self-healing, reliable communications.

The AZW-5000 offers the ability to locate Alerton VisualLogic controllers (VLCs) up to 200 feet away from the nearest wired or wireless connection point.

Three or more AZW-5000s make up a wireless mesh network. Each AZW-5000 on that network supports an MS/TP network with one or more unitary controllers (VLC, VLD, VAV, or MS/TP Microset). Each AZW-5000 also supports up to 50 Alerton Wireless Temperature Sensors (WTS-1000-H OR WTS-1050-H). As with wired networks, the number of devices on a wireless network must be managed carefully to optimize network traffic.

The AZW-5000 is easy to install and maintain. It provides an optimized solution to integrate previously disconnected portions of a facility into the centralized energy management system (EMS). It is ideal for adding control to expensive-to-wire or hard-to-wire locations such as portable classrooms, retrofits and pneumatic controls replacements. In historic or architecturally sensitive buildings, the AZW-5000 may alleviate the need for unsightly or obtrusive cabling.

### Technical data

- **Power** 24VAC power from a UL Listed Class 2 24VAC transformer (not provided); wall or DIN rail mount. Utilizes a half-wave rectifier, which converts the AC power supply to onboard power. This enables multiple devices with half-wave power supplies to be powered from a single, grounded transformer. One leg of 24VAC secondary circuit connects to an earth (panel) ground; GND terminal on the AZW-5000 connects to the same known earth ground. The AZW-5000 wireless transceiver consumes approximately 5w.
- **Processor & Memory** A powerful 32-bit processor.
- **Dimensions** 5.50" (139.6mm)H (including connectors) x 3.51" (89.1mm)W x 2.21" (56.1mm)D.
- **Terminations** Header-style terminal blocks accept 18 AWG wire for power and for MS/TP connectivity.
- **Wired MS/TP transmission speed** 9.6, 19.2, 38.4, 76.8, 115.2 Kbps. MS/TP baud rate can be set to a specific speed or "Auto."
- **Cabling** Shielded, twisted-pair cabling with characteristic impedance between 100 and 130 Ohms.
- **Range** Effective communication range in open air is approximately 200 feet (60.96m). Inside a building ranges in excess of 100 feet may be reached through two nonmetallic walls. A WTS may also be located up to 100 feet (30.48m) from the AZW-5000. Range is dependent on the materials the signal must penetrate and the configuration of the antennas.
- **External antenna** A compatible antenna is available from [www.antennafactor.com](http://www.antennafactor.com) or [www.digikey.com](http://www.digikey.com), using part number ANT-2.4-CW-RCT-SS.
- **Environmental** Operating temperature range: -40–149 deg. F (-40–65 deg. C). Storage temperature range: -40–149 deg. F (-40–65 deg. C). Relative humidity range: 5–95%, non-condensing.
- **Communications** Wired MS/TP and wireless BACnet Addendum q mesh network. One of three antennae can be selected using Envision for BACTalk - internal horizontal, internal vertical, and external. The external antenna is enabled using a DIP switch. DIP switches are also used to set MS/TP Mac address and the ZigBee MAC address.
- **Ratings**  
EU Wireless: EN300328-1 2.4 GHz Spread Spectrum, EN301489-1:2000 Standard,  
FCC: FCC Part 15.247 Subpart C, EN55024, CSA 22.2 No. 205-M1983  
EMC: EN61000-6-3:2001, EN-61000-6-2  
Safety: Self Certified to EN60950  
BACnet Addendum q of ANSI/ASHRAE 135-2008  
UL916 Open Energy Management

Specifications subject to change without notice

### Ordering information

Item number	Description
AZW-5000	Wireless transceiver
WTS-1050-H	Wireless temperature sensor with temperature adjustment knob and manual override
WTS-1000-H	Wireless temperature sensor