

FEATURE BLAST



Wireless BACnet Field Bus v1.1

Product Overview

Andover Continuum is the first BACnet system to offer a full-range Wireless BACnet Field Bus solution. Wireless has lowered installation costs while providing a level of connectivity freedom never before seen. The Andover Continuum Wireless BACnet solution now introduces these cost savings and ease of installation benefits to the BACnet world of open protocol building automation.

Change Wireless Adapter/Repeater Properties using the Wireless Maintenance Tool

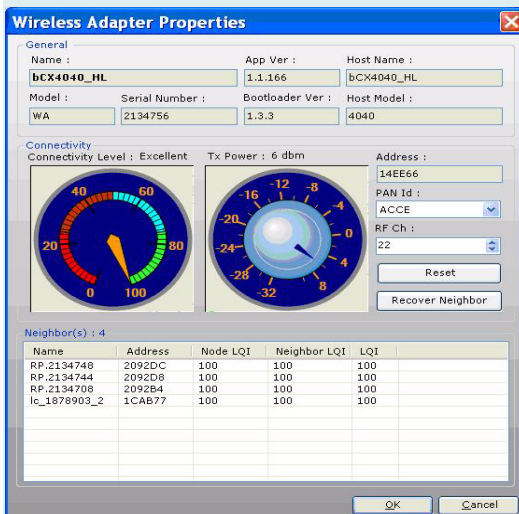
There is no need to individually and physically configure each Wireless Adapter/Repeater. The RF channel numbers, power levels and PAN IDs (i.e. network addresses) can be adjusted using the Wireless Maintenance Tool. This feature makes the wireless mesh network easy to deploy and reconfigure.

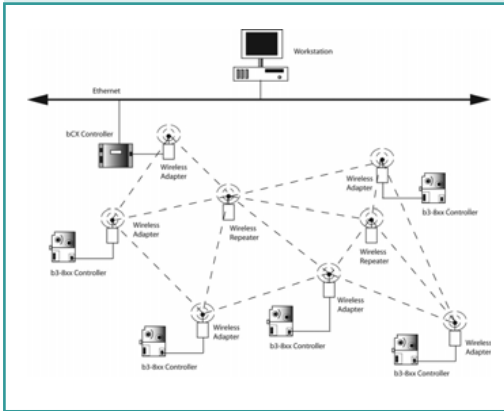
Conveniently change Wireless Adapter/Repeater settings from a remote central location.

Lower Costs and Solve Wiring Challenges

Wiring a field bus can be very labor intensive. Many field buses require controllers to be wired serially in a daisy chain, increasing the run lengths. Furthermore, certain controller locations may be extremely hard to wire, yet easily accessed by wireless. Wireless solves these challenges while greatly reducing the labor required for connectivity.

With wireless controls, installation/wiring costs and challenges can be significantly reduced.





2.4 GHz Wireless Mesh Provides High Reliability

Like a spider web, a wireless mesh becomes stronger with every node that is added to the system. If a node becomes unreachable, the mesh simply heals itself by connecting to the next nearest neighbors. The wireless nodes operate at the 2.4 GHz wireless frequency, which has been approved for use in countries worldwide. The transmission level of each node can be attenuated by the software for use in radio sensitive environments. The software can also be used to select channels for systems with multiple communication buses.

Wireless Mesh Networks provide the reliability required for building automation systems 24/7.

ZigBee Ready

TAC and Schneider Electric are committed to actively developing ZigBee in order to better support the needs of existing customers and create new opportunities for energy and cost savings. TAC's parent company, Schneider Electric, actively participates in the ZigBee Alliance at the highest membership level of "Promoter." TAC's wireless mesh technology is ZigBee-ready: the hardware and the radio frequency bands are the same as ZigBee's.

Prepare for the future today.



Full Family of Wireless BACnet B-AAC Controllers

Any one of the 15 BTL listed Andover Continuum BACnet controllers can become part of a wireless mesh with version 4.5 firmware. As a wireless BACnet controller, these controllers support the same BACnet objects and services as when they are wired to an MS/TP field bus and meet the requirements of a BACnet Advanced Application Controller (B-AAC) with support for BACnet trends per ASHRAE 135-2004. An Ethernet level controller with wireless firmware (NetController II, bCX1 or ACX Series) is required to manage the wireless network.

Go wireless without sacrificing interoperability.





Small, Attractive Wireless Adapter/Repeater

Andover Continuum BACnet controllers communicate wirelessly when a Wireless Adapter is connected to its service port. The adapter itself contains the wireless antenna and is connected to the controller with a cable which allows for flexible mounting options. The adapter is plenum rated and may be mounted outside the controller enclosure or within an architectural space. The adapter is light and mounts with a single screw, adhesive tape, or tie wrap.

It's what you don't see that makes the difference.



Amplified Output

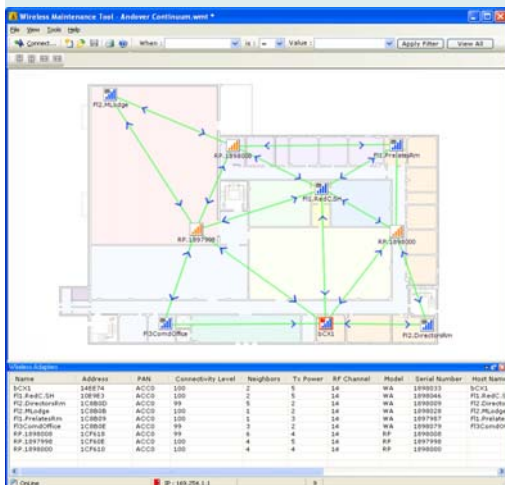
With a maximum of +6dBm power to their onboard antenna and a maximum radiated power output of +10dBm, the TAC Wireless Adapters/Repeaters are capable of delivering the strongest output permitted by FCC and CE regulations. Line-of-sight distances up to 600 feet and distances up to 200 feet have been measured in a typical office building. The power output levels generated by each node may be attenuated through software to either meet the maximum power requirements of the local site or to balance the wireless network.

Extra power to go the distance.

Simple Power Connections

The Wireless Adapter/Repeater is powered directly from the 3.3V power feeds of the controller's service port. Power kits are available to run the adapter as a repeater to bridge controllers that are far apart.

Adding the Wireless Adapter is a snap.



Wireless Maintenance Tool for Mesh Optimization

Visualize your wireless mesh with the Wireless Maintenance Tool. The maintenance tool automatically discovers all wireless adapters and repeaters while showing the signal strength of each node, its neighbor table and the line quality of each connection. The graphic display allows you to arrange the wireless nodes over a floor plan graphic, making it easy to see if the placement of the wireless adapter needs to be modified or if repeaters need to be added.

Easily setup and manage your wireless from your desktop.

Feature History Table

Wireless BACnet Field Bus Firmware Feature Upgrades	1.0	1.1
Controllers		
15 BACnet b3 Controllers with v4.5 firmware (P/N with –WL extension)	•	•
Complies with ASHRAE 135-2004 (protocol revision 4)	•	•
Adheres to BACnet Application Specific Controller (B-AAC) Profile	•	•
Supports BACnet Trend Log Object	•	•
Supports BACnet Loop Object	•	•
Supports BACnet Backup and Restore service	•	•
Wireless Adapters/Repeaters		
Small, attractive wireless mesh antenna suitable for mounting in architectural space	•	•
Plenum rated	•	•
Complies with IEEE 802.15.4 wireless mesh standard	•	•
ZigBee ready hardware and flashable firmware to support future ZigBee compliant version	•	•
Amplified power output to antenna settable up to +6dBm gain	•	•
Adapter power is supplied directly by the controller's service port	•	•
Repeater power is supplied by optional repeater power supply	•	•
All settings are software settable using the Wireless Service Cable (channel numbers, power levels, PAN IDs)	•	•
All settings are software settable using the Wireless Maintenance Tool (channel numbers, power levels, PAN IDs)		•
Wireless Maintenance Tool		
Monitor the health of the wireless mesh network	•	•
Graphically view node connectivity levels and line qualities over imported floor plan or map	•	•
View neighbor tables showing the line qualities to each neighbor.	•	•
Adjust channel numbers, power levels and PAN IDs		•
Update Wireless Adapter Firmware		•

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