Building Control, Without the Wires

Andover Continuum™

Wireless Solution

Make the most of your energy

Schneider Electric

Delivering
the freedom of
wireless

Andover Continuum Wireless Solution

Studies show that wiring alone can account for 20% to 80% of the cost for a control point in HVAC or lighting networks. What if you could reduce that cost to nearly zero in many cases? And what if you could achieve superior building performance at the same time?

Introducing the Andover Continuum wireless solution

Schneider Electric® has made the promise of wireless a reality for building owners. Our broad line of wireless-enabled controllers allows building owners and facility managers to improve building control while dramatically reducing costs.

The Schneider Electric wireless solution is based on the Andover Continuum family of controllers, proven in more than 40,000 buildings around the world. Fully open and standards-based, Schneider Electric's wireless solution can be deployed easily, wherever needed, alongside existing networks and systems. What's more, Schneider Electric provides a powerful and graphical management tool so you can see and manage the entire wireless network based on real-time information.

It's the kind of highly reliable and cost-effective building control solution thousands of customers worldwide have come to expect from Schneider Electric. Only now, no wires are needed.

A comprehensive solution you can start using today

Schneider Electric's wireless solution provides a full set of capabilities for implementing a wireless network solution in your building, including:

- A full line of wireless-enabled Andover Continuum BACnet and Infinet controllers for controlling the largest to the smallest applications - from chillers, cooling towers, boilers and air handling units to packaged HVAC units, heat pumps, and fan coils units, to security applications (motion detection, glass break detection, intrusion detection, etc.).
- A wireless adapter/repeater that allows you to create a wireless mesh network connecting BACnet or Infinet controllers.
- A powerful and graphical maintenance tool that helps you manage and maintain a stable and robust wireless network.
- CyberStation software to discover wireless controllers and integrate them seamlessly into an Andover Continuum network.

Ready when you are
You can begin deploying Schneider Electric's wireless solution whenever you're ready—to outfit a new building with the most flexible control network available, to improve current control networks, or to phase in your wireless applications as you go - one room, area, floor or building at a time.

Whenever and wherever you start, you gain the immediate benefits of a flexible, easy-to-install, and easy-to-maintain wireless network.

High reliability of a mesh network
Schneider Electric wireless controllers use distributed intelligence to communicate with all other devices within range. Not only can all nodes send and receive messages, but they also function as routers and can relay messages for their neighbors. Through this relaying process, a packet of wireless data finds its way to its ultimate destination, passing through whatever intermediate nodes are available. This makes the entire network highly reliable, with no weak links.

To operate effectively, the wireless controllers must be within signal range of two or more other controllers (in order to form a mesh). Schneider Electric provides low-cost repeaters that can be placed where needed to ensure all devices are in communication with the network.

In addition, the building must have an Ethernet level controller that the wireless network connects to.

Andover Continuum Controller with Wireless Adapter

Wireless Adapters and Repeaters are small, attractive and suitable for mounting in the architectural space.

Benefits of Schneider Electric's wireless solution

Self-configuring. Schneider Electric wireless networks are self-configuring. One person can walk around the building placing controllers wherever needed. The wireless controllers then detect each other and form a network automatically.

Self-healing. Schneider Electric's wireless solutions are reliable, because there are no weak links. If a device loses contact with one neighbor, it simply finds another one to "talk" to.

Reduced maintenance and life-cycle costs. Wireless networks continue to generate savings throughout their life-cycle because they are so easy to maintain, move or replace.

Seamless upgrades, transitions. You can phase in Schneider Electric's wireless solution as you're ready, seamlessly and easily. A building undergoing floor plan or other changes is an ideal opportunity to install wireless devices.

Flexibility. Instead of placing controllers where they are easy to wire, controllers can be placed where they are actually needed to adjust to changing floor plans and to optimize building performance.

Energy efficiency. Building owners are free to place controls to achieve optimum performance and comfort, and fine-tune facilities for maximum energy efficiency.

How Schneider Electric's wireless solution works

The Andover Continuum Wireless Solution uses a mesh network topology to achieve both high reliability and easy installation and maintenance. Schneider Electric's wireless adapters connect easily to Andover Continuum's i2 Infinet and BACnet™ controllers. The controls can then be placed wherever needed and the wireless network configures itself.

Open and standards-based

Schneider Electric's wireless solution is based on leading industry standards, in order to provide interoperability and backward compatibility.

- **BACnet.** Andover Continuum's full family of BACnet controllers conforms to the ASHRAE standard 135-2004. Any one of these devices can become part of a wireless network, keeping your system BACnet compliant while maintaining the convenience of wireless.

- **ZigBee.** Schneider Electric's solution is based on the same IEEE 802.15.4 standard that the ZigBee Alliance is using in their evolving standard.

  ZigBee™ Alliance
  Wireless Control That Simply Works

- **2.4 GHz frequency range.** Schneider Electric's wireless solution uses the 2.4 GHz frequency range, the most globally compatible frequency range for wireless communications.

Superior wireless network Performance

The mesh network topology used by Schneider Electric's wireless solution is inherently reliable, since there are no weak links. Each device has multiple paths through which to communicate, so even if some connections are down, the network keeps operating.

To increase network performance and reliability even further, Schneider Electric uses "proactive discovery," where the network configures and reconfigures itself constantly, always searching for and remembering optimal linkages.

WIRELESS MESH NETWORK

Each wireless device strengthens and adds to the mesh network, passing along the data to the next nearest neighbor.

Graphic display and control

Network display screens graphically present the mesh network, all the devices in it, and their connectivity levels. Right click on any host or adapter icon, and you can filter the display or check the properties for that adapter. The network can be mapped onto actual floor plans, to accurately reflect the location of each wireless node.
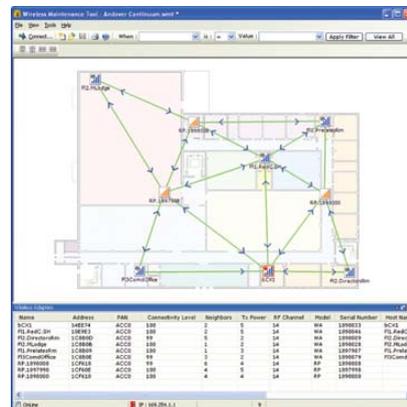
Unlike other wireless solutions, Schneider Electric provides the ability not only to monitor, but to take action and adjust settings remotely.

Using the Wireless Maintenance Tool, you can:

• Check and adjust link quality of each node
• Identify the number of 'neighbors' for each node
• View signal strength
• View and change PAN IDs and channel numbers
• View and change power settings
• Ping test
• Trace test

Take better control of your buildings and eliminate wiring costs

The Andover Continuum Wireless Solution is practical, reliable and comprehensive. And because it's based on the leading standards, it provides a smooth transition to wireless for Schneider Electric customers as well as users of other standards-based solutions.

Ask your Schneider Electric representative to assess the savings and improved building performance your facilities could achieve with a Schneider Electric wireless network solution.

Where can you use Schneider Electric's wireless solution

With Schneider Electric's combination of wireless capabilities, open standards, and a broad range of controllers, building owners can gain a new level of control over their facilities and their budgets. Areas that previously could not be wired - due to physical challenges or budgetary reasons - can now be monitored and controlled cost-effectively with wireless technology.

Here are just some of the applications where Schneider Electric wireless networks offer immediate advantages and opportunities:

Retrofits and upgrades. Buildings that are already wired can use Schneider Electric's wireless solution for phased upgrades, expansions or layering new capabilities onto the existing wired network. For example, you can use wireless to enhance environmental controls and achieve dramatic gains in energy efficiency.

Commercial offices. Office environments and layouts change often in response to changing business needs of tenants or companies. Wireless solutions offer significant savings, flexibility and less disruption of tenants or occupants.

Retail. Previously hard-to-wire, large retail spaces can take advantage of Schneider Electric's wireless solution to improve energy consumption and reduce energy costs.

New construction. New buildings can take advantage of Schneider Electric's wireless solution to reduce initial costs and offer tenants greater flexibility and ongoing savings.

Hotels/hospitality industry. Changes and retrofits can be made with a minimum of occupant disruption, thus preventing dissatisfied customers or loss of income.

Museums and historical buildings. Glass, marble, high ceilings or sealed wall construction are often found in museums and old buildings. Wireless technology offers a unique solution to those obstacles.

Fast track projects. Deadlines that would be impossible to meet with wiring solutions are quite possible, and even easy, using wireless networks.

High-cost installation areas. In some applications, the savings from wireless can be large, such as when labor costs are very high, when electrical codes require conduits, or when trenches between buildings are required.

Small remote structures. Areas that previously were not worth the cost and trouble can now be monitored and controlled, such as parking gates, pumping stations, warehouses and storage facilities.

Dangerous installations. Many walls in older buildings cannot be penetrated without exposing workers to asbestos or creating other health or safety issues. Wireless networks avoid these problems.
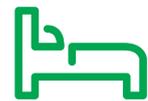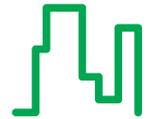
Schneider Electric

One High Street
North Andover, MA 01845 USA
Phone: + 1 978 975 9600
Fax: +1 978 975 9674
www.schneider-electric.com/buildings

All brand names, trademarks and registered trademarks are the property of their respective owners.