

6424 Wi-Controller

The MeshScape® 6424 Wi-Controller Operates in a Wireless Mesh Sensor Network to Regulate Equipment Operation. It Executes Output Signals, Enabling Control Loops to be Formed in Conjunction with Remote Wireless Devices in the Network.

Features at a Glance

Wi-Controller Features

- Schedule pump operations
- Switch controls among multiple pumps
- Turn pump and furnace on/off based on the outside temperature
- Turn furnace burner on/off based on the set-point for feed water, defined according to the outside air temperature
- Actuate damper motors based on zone temperature and integrate HVAC operation with damper operation
- Schedule exhaust fan operations and switch among multiple fans
- Control variable speed drivers on air handlers based on air temperature, humidity, and a defined schedule
- Remotely monitor and control most HVAC components (dampers, boilers, air handlers, etc.)
- Program a general purpose relay control
- Provide a modulating control signal
- Internet-based occupancy scheduling and monitoring capabilities define and enforce energy policies
- Setback control is preserved independent of wireless communications
- CE- and FCC-compliant hardware modules
- RoHS-compliant

Wireless Sensor Network Features

- Operates on a license-free 2.4 GHz ISM radio band with 15 user-selectable channels
- Configures as part of a MeshScape network that includes hundreds of wireless devices
- Compatible with remote monitoring client/server software
- Upgradeable firmware and device configuration
- Wireless communication ranges available at least 750 feet between adjacent devices

Typical Applications

The Wi-Controller is designed to work with other wireless devices to monitor and control equipment. It is ideal for retrofit applications as it leverages the existing electric and/or pneumatic infrastructure, minimizing installation time, cost, and disruption to buildings and productivity.

Applications of the Wi-Controller broadly include:

- Control of valves and dampers for temperature and air quality
- Regulation of heating, cooling, and ventilation
- Operation of boilers
- Activation of enunciators and indicators
- Variable speed regulation of fans, pumps, and other motors (e.g. Unit Ventilator, Variable Air Volume -VAV- boxes, Variable Frequency Drives - VFD)

The Wi-Controller communicates via a mesh network to a remote monitoring and control Energy Management Software.

Try it for yourself

Setting up a wireless mesh network is fast and easy. The MeshScape self-forming and self-healing network is designed for rapid deployment and easy operation.

For more information, visit www.millennialnet.com

MeshScape 4 Networking

The Wi-Controller uses the industrially-proven MeshScape 4 networking system, which features:

- **Self-administrating network:** a self-forming and self-healing mesh network requires no administration
- **Robust:** a network that ensures multi-route, reliable data transmission over extensive distances
- **Responsive:** a network that quickly adapts itself to changes in topology or radio frequency (RF)
- **Power efficient:** can run for years on a single battery set
- **Scalable:** with the application, can scale to hundreds of wireless nodes with minimal overhead
- **Low latency:** very short network data delivery times

The Wi-Controller is designed to be part of the MeshScape system, which can be configured to provide either single-site monitoring/control via a local PC or multi-site monitoring/control via an internet web interface.



Remote Monitoring/Control Software Features

The MeshScape Wi-Controller is designed to interface with any Modbus®- or MeshScape-compatible Remote HVAC Monitoring and Control software application. Millennial Net's Wi-EMS Remote HVAC Monitoring and Control provides a full-featured and easy-to-use 365-day occupancy scheduling calendar that reports, trends, and analyzes energy consumption.

Long Range

The Wi-Controller transmits at a radio power of 60-mW, allowing for communication distances of at least 750 feet clear line of sight.