

The MeshScape® Wireless Thermostat (Wi-Stat-II) Provides Reliable Zone Comfort And Enhanced Energy Economy Through Remote Monitoring And Set Point Management, Enabling Greater Energy Policy Compliance And Usage Analysis.

Features At a Glance

Thermal Zone Features

- Wireless mesh thermostat provides remote monitoring and HVAC control capabilities
- +/- 1° F accuracy for maximum comfort
- Easy to install, economical retrofit is compatible with and uses existing thermostat to HVAC wiring for control and power
- Combines local conventional thermostat with local supervisory control, within specified energy policy constraints, with no programming required
- Internet-based occupancy scheduling and monitoring capabilities define and enforce energy policies
- Allows for local thermostat operation within specified comfort zone
- Override feature allows local operation during scheduled unoccupied periods
- Configurable “dead-zone” based on HVAC system type
- Setback control can continue independent of wireless communications

Wireless Sensor Network Features

- Operates on license-free 2.4 GHz ISM radio band, with 16 user selectable channels
- Configures as part of a MeshScape network including hundreds of wireless devices
- Compatible with remote monitoring client/server software
- Upgradeable firmware and device configuration
- Wireless communication ranges available up to 500 feet, between adjacent devices
- Extensive (1000's of feet) mesh network coverage
- CE and FCC compliant hardware modules

Typical Applications

The Wi-Stat-II is an intelligent energy conservation device for commercial, industrial and municipal HVAC environments, with retrofit, cost and ease of deployment as key drivers. It is ideal for any multi-zone HVAC application where remote monitoring and control of all zones is desirable. The Wi-Stat operates with a local conventional thermostat, familiar and easy to use for room occupants, while local supervisory control features enforce constraints and communicate via the mesh network to a remote monitoring and control application. Alternatively, a Wi-Stat can be configured to include the Wi-Zone temperature input, for improved temperature uniformity within a zone.

Long Range

Wi-Stat is available with two radio power choices: 10-mW and 18-mW (allowed by North American regulations). Higher power provides greater transmission distance up to 750 feet, line of sight.

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 ease of operation.

For more information, visit www.millennialnet.com

MeshScape® 4 Networking

The Wi-Stat uses industrially-proven MeshScape 4 networking software which features:

- **Self-administrating network:** a self-forming and self-healing mesh network that 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) environments
- **Power efficient:** can run for years on a single battery set
- **Scalable:** can scale with the application to hundreds of wireless nodes with minimal overhead
- **Low latency:** with very short network data delivery times

The Wi-Stat 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.



The Millennium Net Wi-Stat-II features an integrated Honeywell® thermostat for local control; a user supplied thermostat is also possible. The Wi-Stat-II is one of a family of Wi-Stats that provide local supervisory control and enables remote monitoring as a MeshScape Mesh Node. It overcomes the challenge experienced with point-to-point radios, by communicating through a robust wireless mesh sensor network.

Remote Monitoring/Control Software Features

The MeshScape Wi-Stat is designed to interface with any ModBus® or MeshScape compatible Remote HVAC Monitoring and Control software application. Millennium Net®'s Wi-EMS Remote HVAC Monitoring and Control provides a full-featured and easy to use 365-day occupancy scheduling calendar, reporting, and historical trending and analysis.

Wi-Stat HVAC Compatibility:

- The Wi-Stat family of products is compatible for use with:
- Pneumatics and most 24V Heating and A/C systems
 - 1- or 2-stage heat/ cool (oil, gas, electric or single stage heat pump systems)
 - 2-wire, heat-only Hydronic systems (hot water baseboard and radiator)
 - Ask for more details