

The 6424 MeshScape® Wireless Zone Sensor (Wi-Zone) Measures and Communicates Temperature and Relative Humidity as a Node in a Self-Forming and Self-Healing Wireless Network

Features at a Glance

- MeshScape-compatible wireless sensor node
- Operates on a worldwide and license-free 2.4 GHz ISM radio band with 15 user-selectable channels
- Available in two configurations:
 1. Battery-powered end node
 - Complete wireless operation
 - Low power consumption for extended use
 2. Line-powered mesh node
- Factory-installed temperature and relative humidity sensors
- Battery-pack for completely wireless operation
- Low power and configurable duty cycling
- CE- and FCC-compliant hardware module
- RoHS-compliant
- Indoor/Outdoor enclosure is easy to mount

Wireless Zone Sensor

The 6424 MeshScape Wireless Zone Sensor, Wi-Zone, is ideal for retrofit or new installations and is designed for purposes such as HVAC monitoring and control, energy management, environmental monitoring, and storage or refrigeration condition monitoring. The Wi-Zone is a MeshScape 6424 End Node with factory-installed temperature and relative-humidity sensors.

Zone Sensing Where It's Needed

The Wi-Zone can be placed wherever sensing a thermal zone's environmental conditions is most advantageous in order to monitor HVAC and control applications. The Wi-Zone is designed to consume minimal amounts of energy and to enable battery-powered operation with configurable duty cycling, allowing for optimal battery life. Since the Wi-Zone is a wireless device, there is no need to run signal wires for control and monitoring.

Typical Applications

The Wi-Zone is ideal for indoor and outdoor temperature and relative humidity sensing. When used in conjunction with a MeshScape Wireless Thermostat (Wi-Stat) within the same thermal zone, the Wi-Stat can be configured to include the Wi-Zone temperature input for improved temperature uniformity within the zone.

Long Range

The Wi-Zone transmits at a radio power of 60-mW, allowing for communication distances of at least 750 feet clear 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 easy operation.

For more information, visit www.millennialnet.com

MeshScape 4 Networking

The Wi-Zone uses the industrially-proven MeshScape 4 networking system, which employs patented Persistent Dynamic Routing™ (PDR) techniques to form a self-configuring wireless mesh network. PDR uses a node-initiated network formation to enable efficient topology discovery and facilitates network re-formation (required in ever-changing RF environments) by applying "best route" information. With MeshScape, you can deploy industrial-class wireless mesh networks that are:

- **Self-administrating:** 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 to changes in topology and 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-Zone is designed to be part of the MeshScape 4 LAN-based 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 Wi-Zone is ideal for indoor or outdoor temperature and relative humidity sensing. The indoor/outdoor enclosure is easy to mount.

Remote Monitoring/Control Software Features

The MeshScape Wi-Zone is designed to interface with any Modbus®- or MeshScape-compatible Remote Monitoring and Control software application, such as Millennial Net's Wi-EMS. The Wi-EMS is a full-featured and easy-to-use Wireless Energy Management System that provides all the tools you need to report, trend, and analyze energy consumption.