

The 6424 Meshscape® Wireless Sensor Input/Output Node, Functions As A Device For Integrating A Variety Of Sensors Into In A Self-Forming And Self-Healing Wireless Network.

Features At a Glance

- MeshScape® compatible wireless sensor node
- Available in two configurations:
 1. Battery powered End Node:
 - Complete wireless operation
 - Low-power consumption for extended use
 2. Line Powered Mesh Node
- Operates on worldwide license-free 2.4 GHz ISM radio band, with 16 user selectable channels
- Star and star-mesh network topologies
- Data rates up to 250 kbps
- Two RJ11 connectors for ease of installation
- Four 12-bit analog input channels
- Four digital I/O channels or serial UART port

Wi-IO Input/Output

Wi-IO enables wireless bi-directional communication to virtually any analog, digital sensor or serial output device. Each Wi-IO node provides great flexibility with the four analog inputs and four digital I/O pins that connect directly to sensors and output devices. The digital pins can be configured as a 4-bit parallel port or a UART for serial communications.

Ease of Installation

The Wi-IO can be installed in minutes right at the local input device. There is no need to run network wires. The Wi-IO is designed for low power consumption to enable battery-powered operation with configurable duty cycling for optimal battery life.

Typical Applications

The Wi-IO is a general purpose device used to monitor and control a wide variety of analog, digital and serial input and/or outputs. Examples of input switches and signals are light sensors, motion detectors, proximity, pressure, flow, amps, voltage and serial instruments.

Long Range

Wi-IO 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, 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 ease of operation.

For more information, visit www.millennialnet.com

MeshScape® 4 Networking

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

- **Self-administrating:** 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:** very low power consumption
- **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-IO is designed to be part of the MeshScape 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 Millennial Net Wi-IO is a general purpose node featuring two RJ11 connectors with six conductors each, to interface a variety of sensors and actuators to a wireless mesh sensor network.

Remote Monitoring/Control Software Features

The Wi-IO is designed to interface with any ModBus® or MeshScape compatible Remote Monitoring and Control software applications. For example, Millennial Net's Wi-EMS is a full-featured, easy-to-use Wireless Energy Management System. Wi-EMS provides all the tools you need for reporting, historical trending and in-depth energy analysis.