

wireless sensor networking for

# Industrial Automation

## New Opportunities for OEMs

Whether it's remote monitoring, predictive maintenance, or precision instruments, the innovative MeshScape® wireless sensor networking platform lets OEMs of industrial automation offer new-breed solutions that provide:

**Greater control through enhanced monitoring:** Extend manufacturing- and process-control systems reliably by continuously monitoring critical equipment and inventory.

**Improved utilization:** The MeshScape platform lets your solutions reduce energy expenses through optimized manufacturing processes and remedying inefficient or poorly performing equipment.

**Better efficiency for more uptime:** Automate data acquisition from remote sensors to reduce user intervention and provide detailed data to improve preventive/predictive maintenance programs and increase operational efficiencies.

## Meeting the Unique Requirements of Industrial Environments

Millennial Net offers a comprehensive platform for OEMs and systems integrators to deploy highly efficient, scalable, self-organizing wireless sensor networking systems. The award-winning MeshScape network system software—driven by Persistent Dynamic Routing™—is the foundation of an efficient, responsive, and resilient wireless sensor network. Ready-to-embed hardware modules and assemblies and easily integrate with your gauge, sensor, actuator, or other instrumentation/sensing device to connect and communicate over the MeshScape self-organizing, self-healing network. The networks easily and fully integrate with network-management and applications.

MeshScape is the only wireless sensor networking solution available today that supports the unique requirements of industrial environments:

**Scalability across large facilities:** Wireless sensor network deployed in industrial facilities must be able to scale to hundreds of nodes; only MeshScape has deployed networks of this size in hardened industrial environments.

**Responsiveness to harsh environments:** Each facility has a unique set of characteristics and requirements that affect deployment of the sensor network modules. Regulatory requirements may dictate requirements for the housing encasing the sensor node, or special equipment may create RF interference in an area of a building. MeshScape's highly responsive topology discovery method enables these unique requirements to be addressed.

**Power efficiency for remote deployment:** In cases where networks are deployed in remote sites where power is not available, sensor nodes must operate for years on batteries.

## MeshScape® 4 Networking

MeshScape® 4.0 is Millennial Net's advanced system for commercial and industrial class wireless sensor networks which features:

- **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:** 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

## New Possibilities, New Markets, New Value

Plant and warehouse managers know the cost of failure is often staggeringly high, which is why they're looking for innovative new ways to manage processes, control costs, and improve uptime performance.

MeshScape wireless sensor networks provide excellent reliability, power-efficiency, adaptability, and scalability. You can easily embed and integrate low-profile MeshScape modules with your sensing devices throughout a building to form seamless networks. With MeshScape, you can solve problems cost-effectively and create new opportunities to deliver greater value to your customers.

## Faster Retrofitting

Retrofitting and retooling factories leads to cost overruns and time-delays from labor-intensive movement of utility wiring. With wirelessly networked sensors, you can relocate sensors quickly and conveniently without intrusive, disruptive, costly, rewiring efforts.

## Start with an Evaluation Kit

The MeshScape® Evaluation Kit contains everything you need to set up a self-organizing star-mesh wireless network. With our hardware and software you will easily prototype your application and evaluate network operation and performance. Each kit will be customized to meet your specific needs.

To order an Evaluation Kit or to learn more about our products and services, contact us at +1-978-569-1921 or e-mail us at [info@millennialnet.com](mailto:info@millennialnet.com).

### 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](http://www.millennialnet.com)

