

wireless sensor networking for

Building Automation

Wireless Opportunities

When you're seeking monitoring and control for energy management, HVAC networking, air quality, access, lighting, or other applications, the innovative MeshScape® wireless sensor networking platform lets building automation OEM manufacturers and system integrators offer new-breed solutions that provide:

Greater building environment control: Integrate and centralize the management of heating, cooling, lighting, and security as well as automate the control of multiple systems.

Energy conservation: Create adaptive applications that reduce energy expenses through optimized HVAC management and allocate utility costs equitably based on actual consumption.

Flexibility for changing layouts: Easily reconfigure systems to create adaptable workspaces or less intrusively retrofit existing infrastructures while saving time and money.

Meeting the Unique Requirements of Commercial Buildings

The 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 commercial buildings:

Scalability across a large building: Wireless sensor network deployed in commercial buildings must be able to scale to hundreds of nodes; only MeshScape® has deployed networks of this size in commercial environments.

Responsiveness to unique building layout characteristics: Each building has a unique set of characteristics and requirements to determine placement of the sensor network modules. For example, a building might require that mesh nodes be installed only in public/shared space, or elevator shafts must be used for between-floor routing, 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 to support campus deployment: In cases where networks are deployed in campuses across multiple buildings, some between-building nodes may not have access to AC power and 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

Managers of commercial, retail, and residential properties are continually seeking innovative methods to cost-effectively and profitably manage millions of square feet of space, maximize property values, improve customer satisfaction, and attract prestigious tenants.

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

One of the major causes of cost overruns and time-delays in retrofitting office space arises from the labor-intensive movement of utility wiring to conform to new wall configurations. Using wireless sensors networks, property owners can relocate thermostats and other 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.

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

