A Safety Manager's Guide to Peer-to-Peer Wireless Connectivity

5-6 minutes

Every day, in facilities across the world, workers take on jobs without having all the information they need to get them done safely. More often than employers would like to admit, this lack of important information compromises worker safety.

Part of the challenge is that many facilities rely on traditional equipment, including gas detectors, that don't make it any easier for workers to get the information they need to make safe decisions.

Unfortunately, many organizations refuse to consider connected gas meters. The words "connected" and "wireless" often conjure thoughts of complicated IT setup, site surveys, extensive training, and other hurdles they'd rather avoid.

What many safety managers don't know is that there's a peer-to-peer wireless technology option called a mesh network. More and more companies are turning to gas detectors linked by mesh networks because they can connect workers and share gas readings without costly infrastructure or the hassles of IT setup.

What is a Mesh Network?

Mesh networks use devices as nodes to efficiently transmit data. In a mesh network, the data hops from node to node until reaching its destination. Think of a mesh network as students in a classroom: a student on one side of the room can pass a note to the other side of the room by handing it to a neighbor, who then passes the note to their own neighbor, all the way across the room.

How are Mesh Networks Different?

When it comes to safety, there's nothing more important than having the right information at the right time, and mesh networks facilitate fast and simple information flow.

While other networks can fail if one device loses connection, mesh networks can be self-healing. Self-healing mesh networks, like the ones Industrial Scientific devices use, continue to transmit information across the network even if one node or device disconnects. This means workers will always have a connection to other workers on the network.

Other peer-to-peer wireless networks require IT setup, infrastructure, and a central controller. The beauty of mesh networks, like LENS® Wireless from Industrial Scientific, is that they offer workers out-of-the-box operability without IT setup.

With gas monitors like the Ventis® Pro5 and Radius BZ1, connectivity to LENS Wireless is automatic as soon as the monitors are turned on. Other wireless solutions require site surveys, IT setup, and other configuration that could take between two hours or two days, wasting your valuable time.

Advantages of Mesh Networks

Mesh networks give safety managers several benefits over other peer-to-peer wireless technologies:

1. **Improved Site Communications:** Though gas hazards are an immediate issue for the workers exposed to them, they can also threaten others nearby. A mesh network like [LENS Wireless](#) extends worker visibility up to a mile away, so workers are always aware of hazards on site.

2. **Faster Response Times:** With a mesh network, there's no need to rely on a central controller or laptop to monitor peer readings. Every worker with a connected device can see peer readings and alarms, giving them immediate visibility into hazards, so they can make smarter, faster, and safer decisions.

3. **Safer Emergency Response:** Would-be rescuer fatalities are still too common, but mesh networks can help change that. Connected gas monitors can ensure panic and man-down alarms are relayed to other workers in the area, so they can see what they're about to encounter.

4. **Smarter Decision-Making:** Mesh networks ensure that every connected device receives peer alerts and gas readings, so workers have all the information they need before making decisions. Informed decisions are smarter decisions that ensure the safety of all workers.

5. **No Infrastructure Required:** Wireless networks are only valuable if you can use them. Without the time-consuming site surveys, IT setup, and configuration that other networks require, mesh networks like [LENS Wireless](#) get you up and running quickly and easily.

Traditional gas detectors cannot provide the same level of safety

as their wireless counterparts, and mesh networks like LENS Wireless, available in the Ventis Pro5 and Radius BZ1, are the solution to the most common wireless technology challenges safety managers face.

Want to learn more? Watch our on-demand webinar, How to Prevent Would-Be Rescuer Tragedies, to take a deeper dive into the mechanics behind peer-to-peer wireless gas detection and learn how to implement a peer-to-peer program at your facility.