



WHITE PAPER

*Monitoring, recording and maintaining temperature logs is a necessity. But why depend on the human factor in the process?*

*A mote consists of a processor-radio, a sensor and a radio.*

Efficient monitoring of equipment temperatures with battery operated, wireless Mogul Motes will optimize labor, eliminate suspect data and improve quality.

### **Why the need for such a system?**

*JCAHO-Joint Commission on Accreditation of Healthcare Organizations. HACCP-Hazard Analysis and Critical Control Points.*

Monitoring temperatures of equipment and the products they contain, is not only an important safeguard, but is now a best practice required by regulatory agencies. JCAHO oversees healthcare, USDA has mandated HACCP plans in schools, municipal health departments inspect all food processors, commercial and non under FDA regulations. Whatever the agency, all are demanding to review temperature logs.

*Dry-Labbing: Reporting of results not actually conducted.*

Equipment such as refrigerators, freezers, warming cabinets, incubators and dish machines all need temperatures monitored and logged. When staff and supervisory personnel are attending to the job at hand, can you be certain temperatures are being logged at required intervals? Can you be certain of the accuracy of the data, or might it be suspect? Can you be certain there is no 'dry-labbing' taking place? Even if you're certain of the intervals and the accuracy, can you find the logs when required to produce them?

## How does the Mogul system work?

*Xmesh fully supports bi-directional message communication throughout the network with fast alert propagation to support safety and security applications with stringent, response time requirements.*

Mogul Motes contain stamp-size OEM processor/radio modules that offer low-power, high data rates and also utilize a direct sequence spread spectrum (DSSS) radio for RF interference resistance and inherent data security. Motes operate on the 902-928 MHz band. Each battery operated, wireless mote serves as both receiver and transmitter providing easy network extendibility and eliminating the need for powered signal boosters. Based on the RF link characteristics, our Xmesh program automatically determines the optimal route through the network to the gateway, minimizing the power requirements throughout the network. When a RF link degrades in quality or becomes unavailable, Xmesh automatically re-routes messages through other motes in the network. Combined with the ability to select the optimal radio channel, this dynamic routing capability provides for self-healing, reliable communication even in environments with heavy interference, including WiFi communication in the 2.4GHz band. Connection of the password protected Mogul Gateway processor to the LAN allows for transmission of data to Mogul's secure servers and completes the installation. In the event of network failure, the gateway integrates a compact flash memory card to store all collected data until it can be uploaded to the server. A universal power supply is included to protect data against power failure.

## Dependable, Reliable, Worry-Free

*Highly educated and skilled staff are far more valuable to organizations when they're performing those duties for which they've been trained.*

Remove the burden of temperature monitoring from staff trained to handle higher priorities. Eliminate suspect data and improve efficiency using customized, online reports containing unfiltered information. Rely on current data always available at any networked computer with your password protected username. All corrective actions are automatically documented and include electronic signatures. Depend on immediate alert notifications 24/7.

## Turn Mogul On. Get Back To Business

With the Mogul system, there's no dedicated PC required, no software or upgrades to install, no client IT support required. Best of all, there's no need to add or reassign personnel to learn software, manage systems, track equipment or maintain user information. The headaches and frustrations of an outdated system such as this are gone. Mogul handles all these tasks for you, so you can **Get Back to Business.**