



## InteleCell™ RFID Sensor Quick Start Guide

### *General Operation*

The InteleCell is designed to work with the RFID receiver to provide both rapid updates and continuous monitoring of RFIDs. When used with an RFID module, all sensors are sampled at the predefined interval (default of 1 hour but can be user defined). However, when the first RFID comes within range of the InteleCell, the InteleCell will wake-up and record all RFIDs within range. The InteleCell will also take measurements from any other sensor modules attached to the Intelecell. The Intelecell will then wake the entire network to transmit the data to a base-station module. The InteleCell will continue to wake at preset sampling interval and sample any attached sensors including the RFID. When no RFIDs are detected by the InteleCell, it will return to the initial mode where it will wake from sleep as soon as an RFID is detected as well as sampling other attached sensors at the regular interval.

### *A note on RFID transmissions*

The active RFIDs use a superheterodyne design for transmitting the ID. As a result the receivers cannot detect an ID sent from within 1-2 meters of the receiver.

### *Instructions*

- 1) Insert a 9V battery into the receiver (a).
- 2) Put the InteleCell into sleep mode.
- 3) Connect the InteleCell to RFID with the provided cable (b).
- 4) Insert batteries into the RFID transmitter or transmitters. The receiver uses a single 9V battery. 8m RFID transmitters require one 2032 coin cell. 40m transmitters require two 2032 coin cells. The 900m transmitters use two, stacked 2016 coin cells (c). Batteries are placed positive/flat side-up into the holders.
- 5) The InteleCell will wake from sleep when the first RFID is received by the receiver and record all RFIDs within range. You can also manually sample the RFID receiver from the InteleCell user interface with the “Sample Sensors” command.



(a)

(b)

(c)



# INTELESENSE TECHNOLOGIES

*Global Integrated Monitoring™*

---

## *About Intelesense*

Intelesense Technologies provides global integrated monitoring products and services for environmental, public health, and other data. Intelesense develops technologies for real-world wireless sensor networks for air, water, weather, and imagery that communicate their data over the Internet from anywhere in the world, integrates with data from many other sources automatically and provides real-time advanced visualization. This global IntelNet forms an integrated *georepository* of all relevant information for a particular region. At the same time it provides wireless communication infrastructure for remote areas.

Intelesense Technologies was founded in early 2005 to enable worldwide integrated monitoring of the environment and its inhabitants. A global network of wireless sensors that are integrated with many other data sources helps to better understand their interrelationships. The IntelNet technology is currently deployed in multiple sites in Hawaii (Kauai, Oahu, and Maui), in the continental US (California), and in Asia (Vietnam). Planning for future deployments in other areas of the Pacific (Palau, Palmyra, Okinawa), Asia (Thailand), and Africa (Ethiopia) is currently underway.

Intelesense currently has a corporate office in Honolulu, Hawaii; Research and Development offices in Silicon Valley, California; and field offices with collaborative partners in each of the deployment zones listed above.

Current projects range from protecting some of the most beautiful and biodiverse places on our planet, to tracking emerging infectious diseases (e.g. bird flu), to helping children from around the world to connect and interact with each other, and better understand their environment.