

InfinID Technologies, Inc.

V-TAG RFID Tag and USB Gateway

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1.0 System Overview

The V-TAG is a RFID tag with a set of sensors for temperature, light level, acceleration and battery level. In contrast to other systems where each tag is polled by a central gateway, the V-TAG tag relays messages from other V-TAG tags which aids with tag read range and communications reliability. See Figure 1.

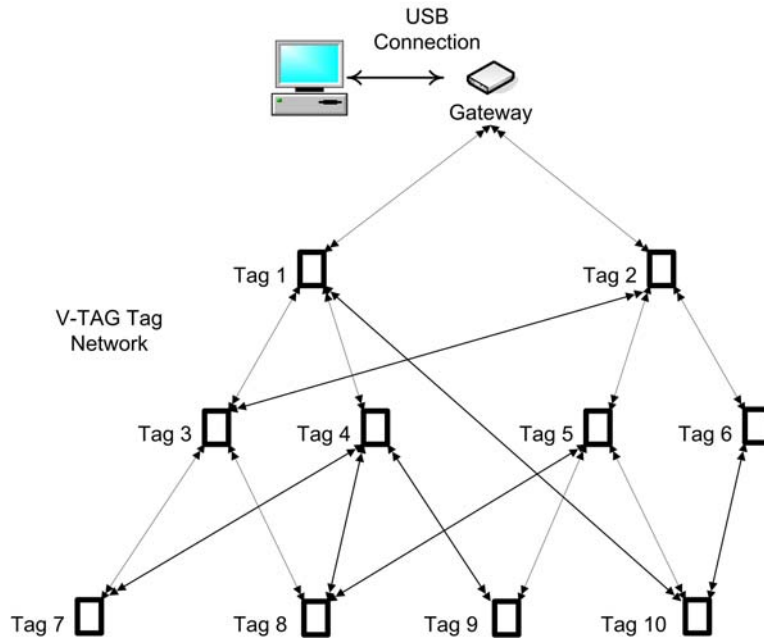


Figure 1 V-TAG System Overview

2.0 Getting Started

To start using your V-TAG RFID tags, insert a battery into each tag. The LED light on the tag should blink once every 20 seconds indicating normal operation.

To start using your V-TAG USB Gateway, attach the gateway to a USB port on a PC running Windows XP, Vista or Windows 7. Select “OK” when the operating system asks to use the Internet to locate drivers.

Install the InfinID Technologies, Inc. AssetWorx! asset tracking software on your PC by running setup.exe and following the prompts.

3.0 Viewing Sensor Readings

To associate a V-TAG tag with an asset, simply enter the V-TAG ID printed on the tag label into the VTAG ID field for the asset as shown:

The screenshot shows a software window titled "Asset A1001" with a blue title bar and standard window controls. The window has several tabs: "General", "Financial", "Picture", "Maintenance", "Location History", "Check Out History", "Custom Fields", and "Sensors". The "General" tab is active. The form contains the following fields and controls:

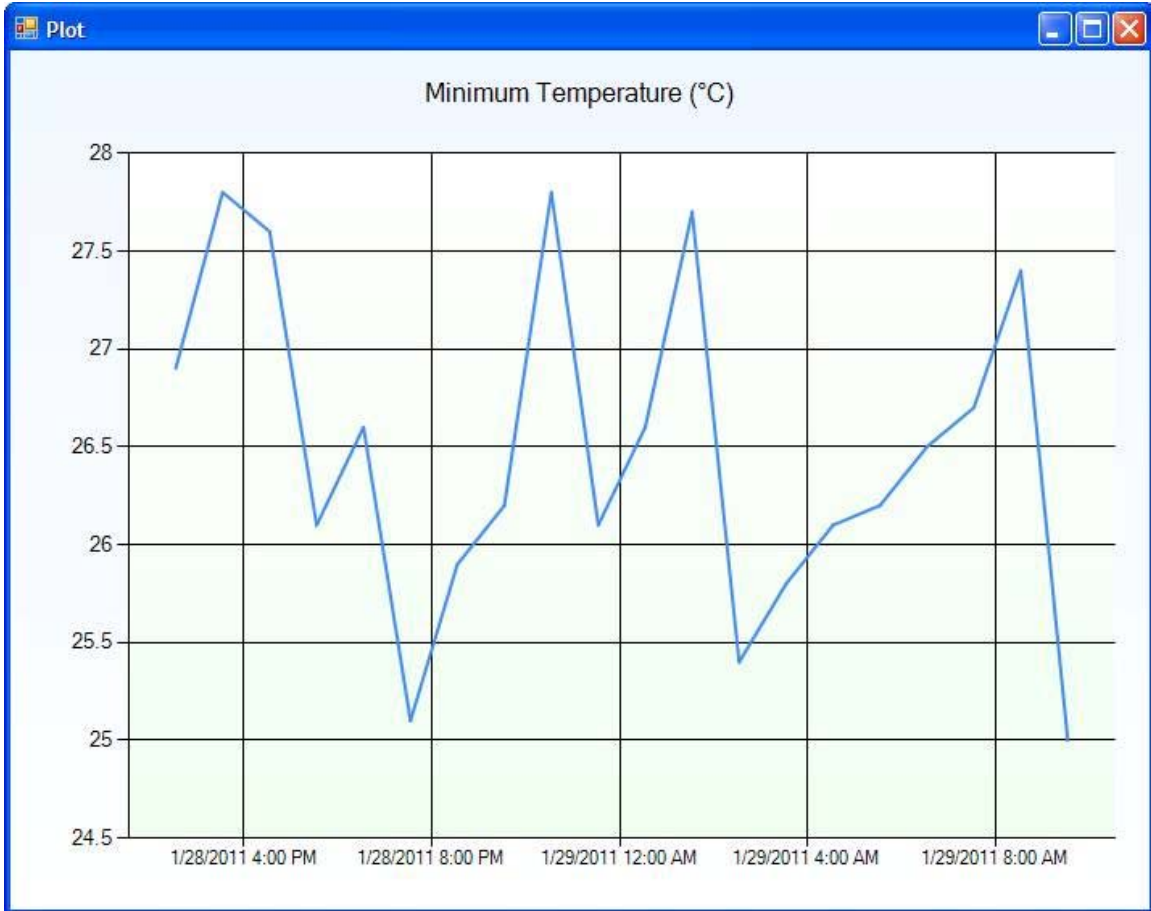
- Asset ID:** Text box containing "A1001".
- Asset Type:** Empty text box.
- Description:** Empty text box.
- RFID Tag:** Empty text box.
- V-TAG ID:** Empty text box, highlighted with a red rectangle.
- Location:** Dropdown menu with "Missing" selected.
- Department Code:** Empty text box.
- Condition:** Dropdown menu with "Good" selected.
- Last Observed Location:** Empty text box.
- Last Observed Time:** Empty text box.
- Last Sensor Time:** Empty text box.
- Alert if Unseen for:** Dropdown menu with "- No Alerts -" selected.
- Checkin Status:** Dropdown menu with "Checked In" selected.
- Checked Out To:** Empty text box.
- Print Label:** Button.
- Additional Information:** Large empty text area.
- Buttons:** "OK", "Cancel", and "Help" buttons at the bottom right.

To view sensor readings for the asset, choose the sensors tab for the asset:

The screenshot shows a software window titled "Asset 10001" with a tabbed interface. The "Sensors" tab is selected. The window contains two columns of sensor-related fields, each with a text input box. The first column includes: V-TAG ID (000001), Timestamp, Source Distance (Hops), TTL, Minimum Temperature (°C), Maximum Temperature (°C), Minimum Acceleration (Volts), Maximum Acceleration (Volts), Minimum Humidity (%), Maximum Humidity (%), and Minimum Battery (Volts). The second column includes: Maximum Battery (Volts), Neighbors, Active Neighbors, Total Exceptions, Last Exception, Best Neighbor, and Best Neighbor RSSI (dBm). At the bottom right, there are three buttons: "OK", "Cancel", and "Help".

V-TAG ID:	000001	Maximum Battery (Volts):	
Timestamp:		Neighbors:	
Source Distance (Hops):		Active Neighbors:	
TTL:		Total Exceptions:	
Minimum Temperature (°C):		Last Exception:	
Maximum Temperature (°C):		Best Neighbor:	
Minimum Acceleration (Volts):		Best Neighbor RSSI (dBm):	
Maximum Acceleration (Volts):			
Minimum Humidity (%):			
Maximum Humidity (%):			
Minimum Battery (Volts):			

To view historical sensor readings for the asset, click on the “Plot” button for the asset:



To set thresholds for the asset, click on the thresholds button for the asset:

Sensor Alarm Thresholds

Temperature Lower (°C): Duration (Seconds):

Temperature Upper (°C): Duration (Seconds):

Acceleration Upper (V):

Humidity Lower (%): Duration (Milli-Seconds):

Humidity Upper (%): Duration (Seconds):

Battery Lower (V): Duration (Seconds):

Ok **Options...** **Cancel**

Appendix A FCC Compliance Statement

FCC NOTICE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate the equipment.

To satisfy RF exposure requirements, this device and its antennas must operate with a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.