

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, 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.

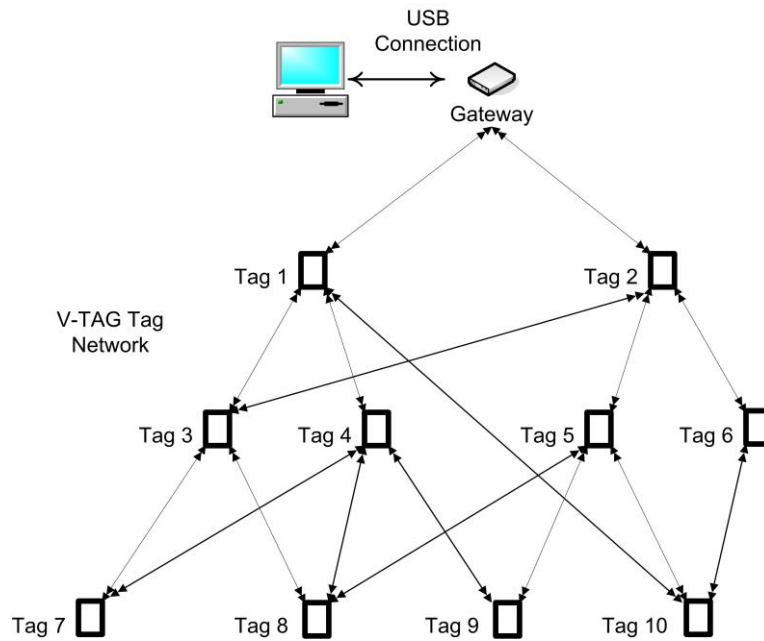


Figure 1 V-TAG System Overview

2.0 Getting Started

To start using your V-TAG RFID tags, insert batteries 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 10 or Windows 11. 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 contains several tabs: "General", "Financial", "Picture", "Maintenance", "Location History", "Check Out History", "Custom Fields", and "Sensors". The "General" tab is selected. The form is organized into two columns. The left column contains fields for "Asset ID" (with value "A1001"), "Asset Type:", "Description:", "RFID Tag:", "V-TAG ID:", "Location:" (with a dropdown menu showing "Missing"), "Department Code:", and "Condition:" (with a dropdown menu showing "Good"). The right column contains fields for "Last Observed Location:", "Last Observed Time:", "Last Sensor Time:", "Alert if Unseen for:" (with a dropdown menu showing "- No Alerts -"), "Checkin Status:" (with a dropdown menu showing "Checked In"), and "Checked Out To:". A "Print Label" button is located below the "Checked Out To:" field. At the bottom of the window, there are three buttons: "OK", "Cancel", and "Help". The "V-TAG ID:" field is highlighted with a red rectangle.

Asset ID	A1001	Last Observed Location:	
Asset Type:		Last Observed Time:	
Description:		Last Sensor Time:	
RFID Tag:		Alert if Unseen for:	- No Alerts -
V-TAG ID:		Checkin Status:	Checked In
Location:	Missing	Checked Out To:	
Department Code:			
Condition:	Good		

Additional Information:

Print Label

OK Cancel Help

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

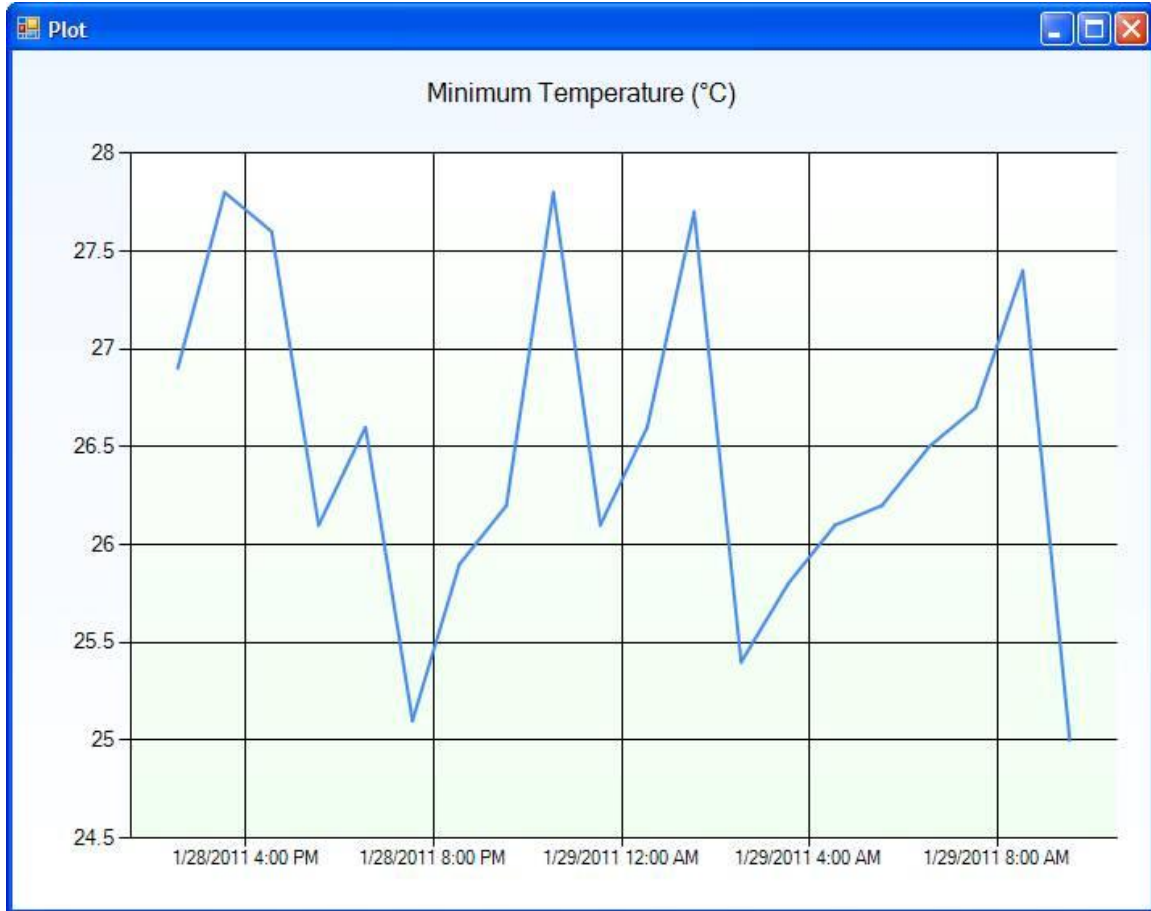
Asset 10001

General Financial Picture Maintenance Location History Check Out History Custom Fields Sensors

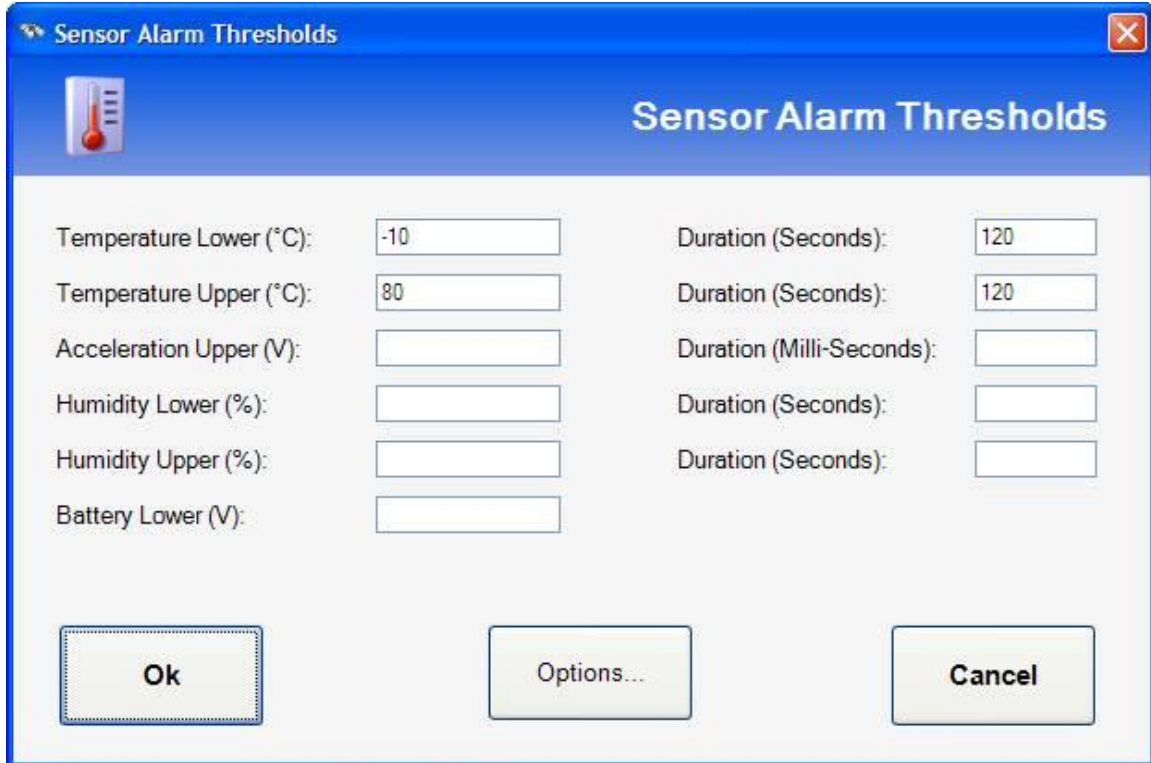
V-TAG ID:	000001	Maximum Battery (Volts):	
Timestamp:		Neighbors:	
Source Distance (Hops):		Active Neighbors:	
TTL:		Total Exceptions:	
Minimum Temperature (°C):		Last Exception:	
Maximum Temperature (°C):		Best Neighbor:	
Minimum Acceleration (Volts):		Best Neighbor RSSI (dBm):	
Maximum Acceleration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

OK Cancel Help

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:



The image shows a software dialog box titled "Sensor Alarm Thresholds". It features a blue header bar with a thermometer icon on the left and a close button (X) on the right. Below the header, the title "Sensor Alarm Thresholds" is displayed in white. The main area of the dialog is light gray and contains two columns of input fields. The left column lists sensor types with their respective threshold values: Temperature Lower (°C) at -10, Temperature Upper (°C) at 80, Acceleration Upper (V) as an empty field, Humidity Lower (%) as an empty field, Humidity Upper (%) as an empty field, and Battery Lower (V) as an empty field. The right column lists duration settings: Duration (Seconds) at 120, Duration (Seconds) at 120, Duration (Milli-Seconds) as an empty field, Duration (Seconds) as an empty field, and Duration (Seconds) as an empty field. At the bottom of the dialog, there are three buttons: "Ok", "Options...", and "Cancel".

Sensor Type	Value	Duration Type	Value
Temperature Lower (°C):	-10	Duration (Seconds):	120
Temperature Upper (°C):	80	Duration (Seconds):	120
Acceleration Upper (V):		Duration (Milli-Seconds):	
Humidity Lower (%):		Duration (Seconds):	
Humidity Upper (%):		Duration (Seconds):	
Battery Lower (V):			

Buttons: 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 manufacturer could void the user's authority to operate this equipment.