# *digi*VIT GUI

# User Guide

## Introduction

The *digi*VIT GUI is a Windows desktop application used to discover and communicate with *digi*VITs over a wired Ethernet connection. It can communicate with a single *digi*VIT connected via a peer-to-peer connection or with many *digi*VITs over a local area network. Its purpose is to make it very easy to configure your *digi*VITs with IPv4 addresses suitable for your local area network. Customized versions of the software can address other, customer-specific needs as well. Contact the factory or Eigel-Danielson, Inc. (www.eigeldanielson.com) for more information.
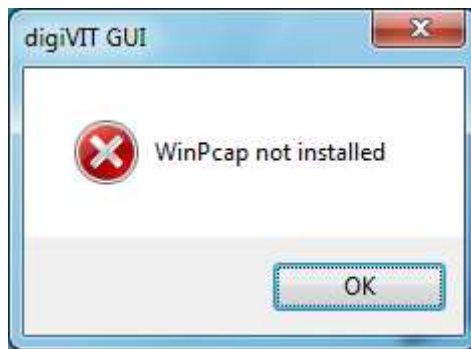
## Windows Compatibility

The *digi*VIT GUI has been tested and is compatible with Windows 7 (both 32-bit and 64 bit versions) and Windows 10 (64-bit version). It is not compatible with Windows XP and has not been tested on Windows Vista or Windows 8.
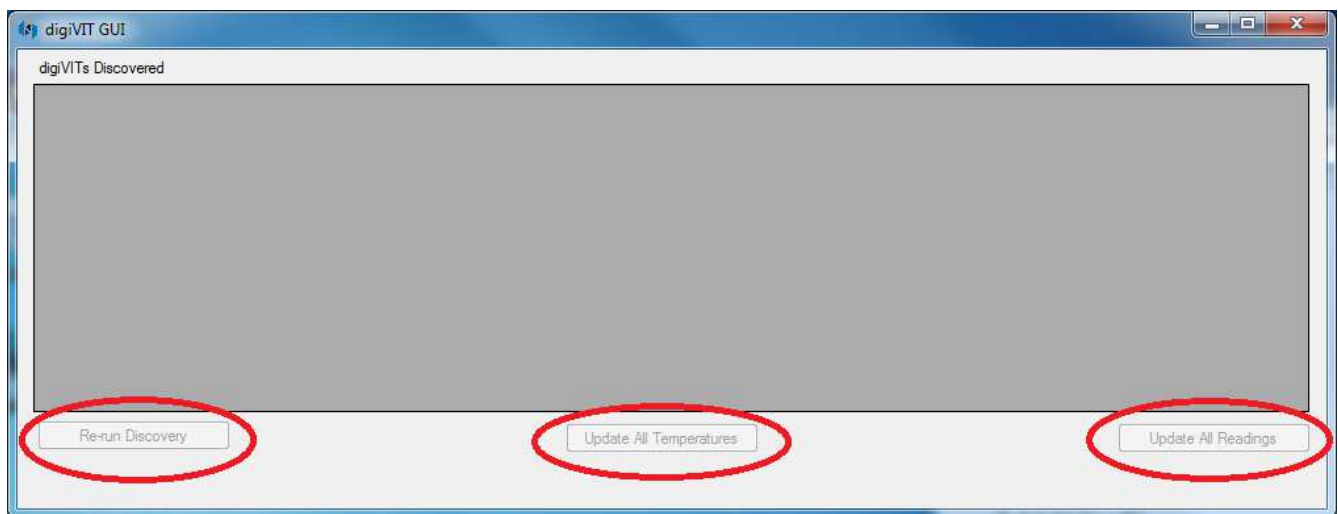
## Installation

To install the *digi*VIT software simply double-click on the file named 'setup.exe' and follow the instructions. You may need to accept changes to the machine for the *digi*VIT software to be installed.



NOTE: The *digi*VIT GUI requires WinPcap, a common library for capturing network packets on Windows machines. A copy of the WinPcap installer (WinPcap_4_1_3.exe) is provided along with the *digi*VIT GUI installer (setup.exe). If WinPcap has not been installed prior to running the *digi*VIT GUI an error message will be displayed:

When this happens the *digi*VIT GUI still runs but all of its buttons are disabled:



You can install WinPcap without reinstalling the *digi*VIT software.  Simply restart the *digi*VIT program once WinPcap has been installed.

Even if no *digi*VITs are found you can tell that the application ran successfully because the application's buttons are now enabled:
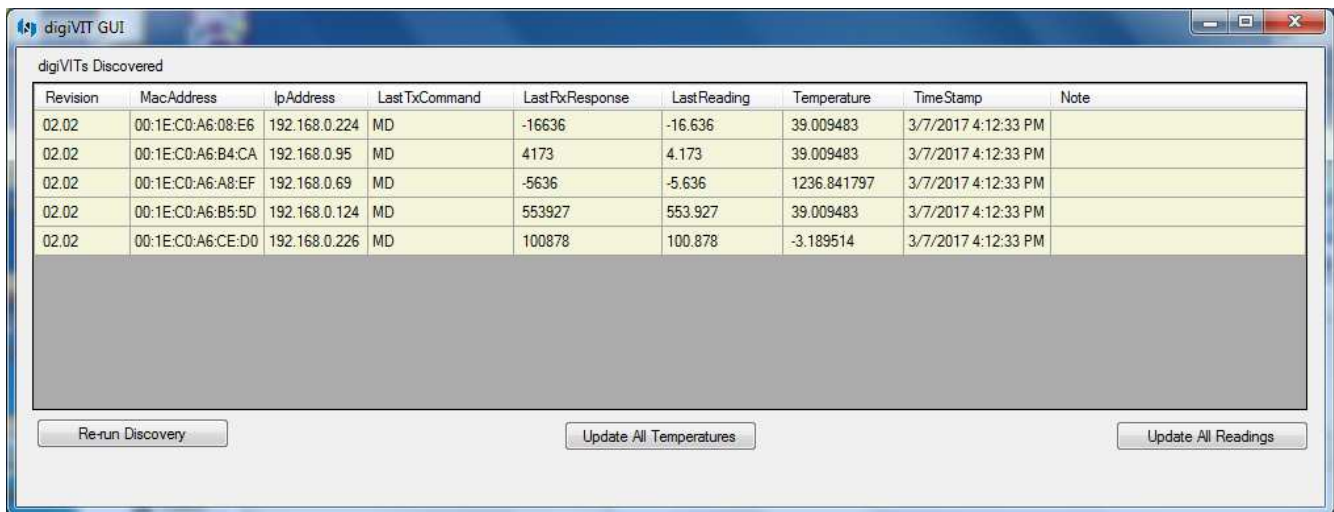
## Running the Software

Click on the *digi*VIT GUI icon on the desktop to run the software.



digiVIT GUI

The *digi*VIT GUI will start and discover all of the *digi*VITs on the local area network.  It shows each discovered *digi*VIT in a separate table row.



## Re-run Discovery Button

Clicking this button sends a broadcast packet out to re-discover all *digi*VITs on the local area network.
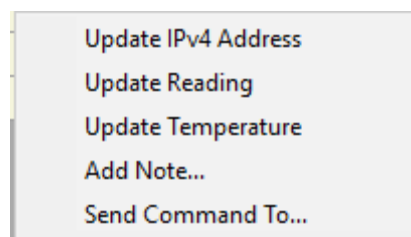
## Update All Temperatures Button

Clicking this button sends a broadcast packet out to all *digi*VITs requesting their sensor temperature.

## Update All Readings Button

Clicking this button sends a broadcast packet out to all *digi*VITs requesting their distance reading.

## Table Popup Menu

Right-click anywhere on a *digi*VIT row to see the pop-up menu:

## Update IPv4 Address Menu Item

Every *digi*VIT has a static IPv4 address (the default is 192.168.0.145) that should be updated to an address suitable for the local area network. Since *digi*VITs are embedded devices with a very limited network protocol stack it is not possible to use DHCP to assign it a suitable address. The *digi*VIT GUI attempts to mitigate this situation by looking at information about the network interface card (NIC) on which it is running and using that information to generate a suitable (random) address. It uses Address Resolution Protocol (ARP) to make sure that the address it generated is not in use by another device. If the generated address is in use, the *digi*VIT GUI generates a different address and tries again. Once *digi*VIT GUI finds an available address it reconfigures the selected *digi*VIT to use that address.

## Update Reading Menu Item

This updates the distance reading (shown in the table column labeled 'LastReading') for the selected *digi*VIT.

NOTE: The *digi*VIT returns an integer in the range 0 to 100000 where 100000 is 100% of the calibrated range.
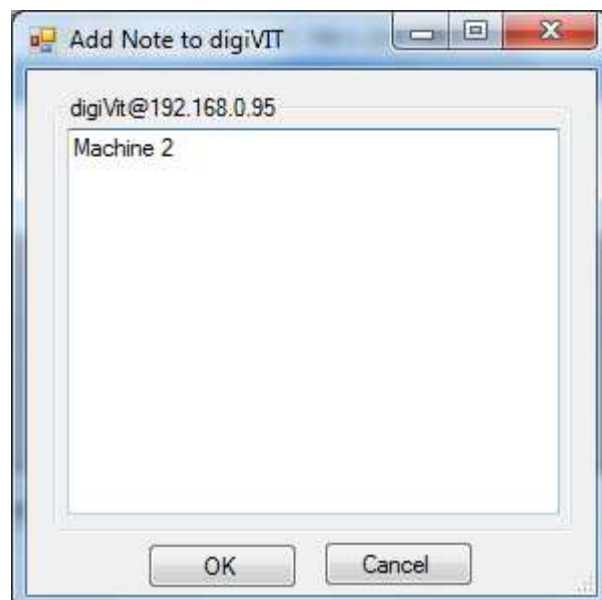
## Update Temperature Menu Item

This updates the reference sensor temperature (shown in the table column labeled 'Temperature') for the selected *digi*VIT.
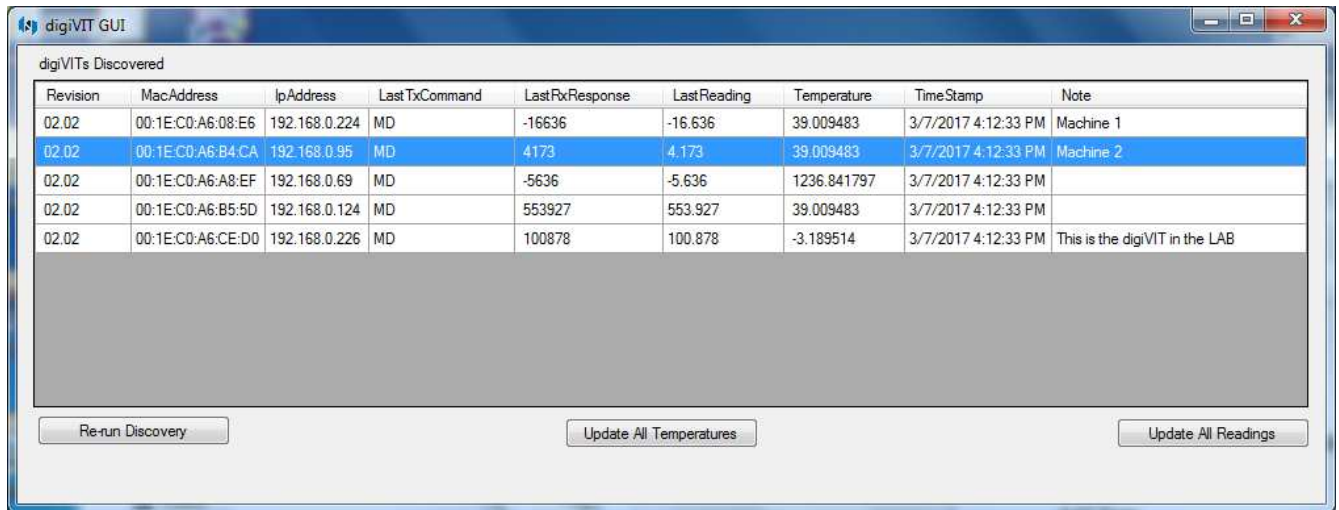
NOTE: This is a relative measurement of the temperature at the sensor head. It is approximately in degrees Celsius from the reference of 0 degrees Celsius at the time the *digi*VIT was calibrated; this scale factor can vary significantly. It should only be used as a relative measurement.

## Add Note… Menu Item

Clicking on this menu item brings up the 'Add Note' dialog:

Entering a note and clicking OK attaches the Note to the selected *digi*VIT. Notes are stored locally on the Windows PC and persist across application restarts and system reboots.



## Send Command… Menu Item

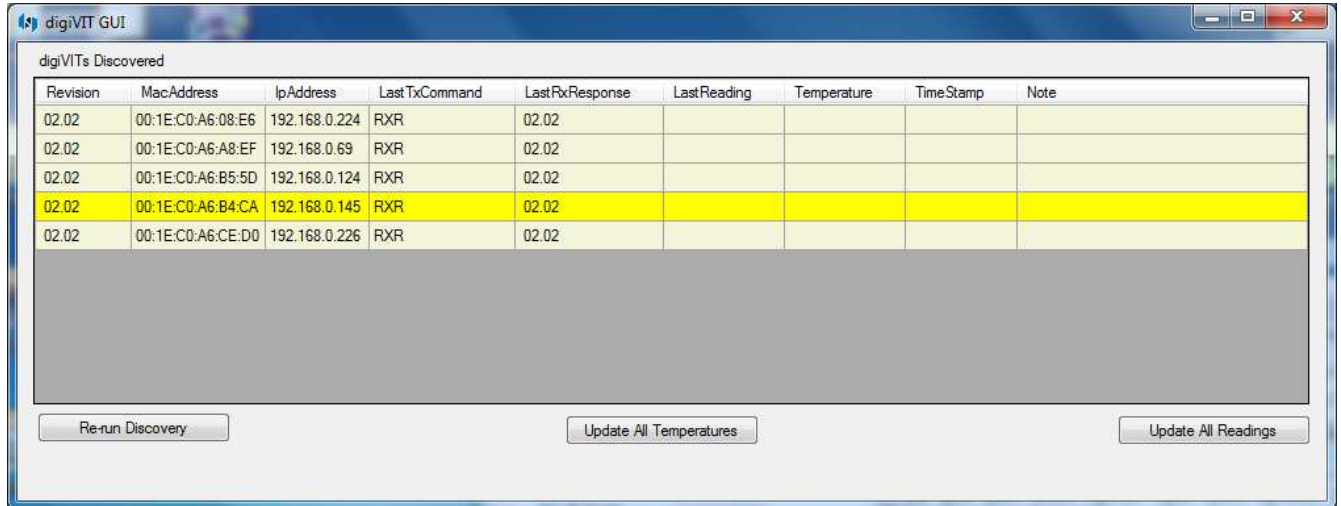Clicking on this menu item brings up the 'Talk to *digi*VIT' dialog:



Using this dialog the user can send any command to the *digi*VIT and see its response. Some common commands are:

MD – Monitor Distance
MEK – Monitor temperature of the sensor
ML – Monitor Limit status
CS – Calibration Save

See the *digi*VIT User Manual for more information on commands.

## Installing One or More *digi*VITs on a Local Area Network

Every *digi*VIT has a static IPv4 address and ships from the factory with a default address of 192.168.0.145 assigned to it. This address should be updated to an address suitable for the local area network that you want the *digi*VIT to run on. To assist with this process the *digi*VIT GUI highlights any *digi*VIT that it finds with the default IPv4 address:
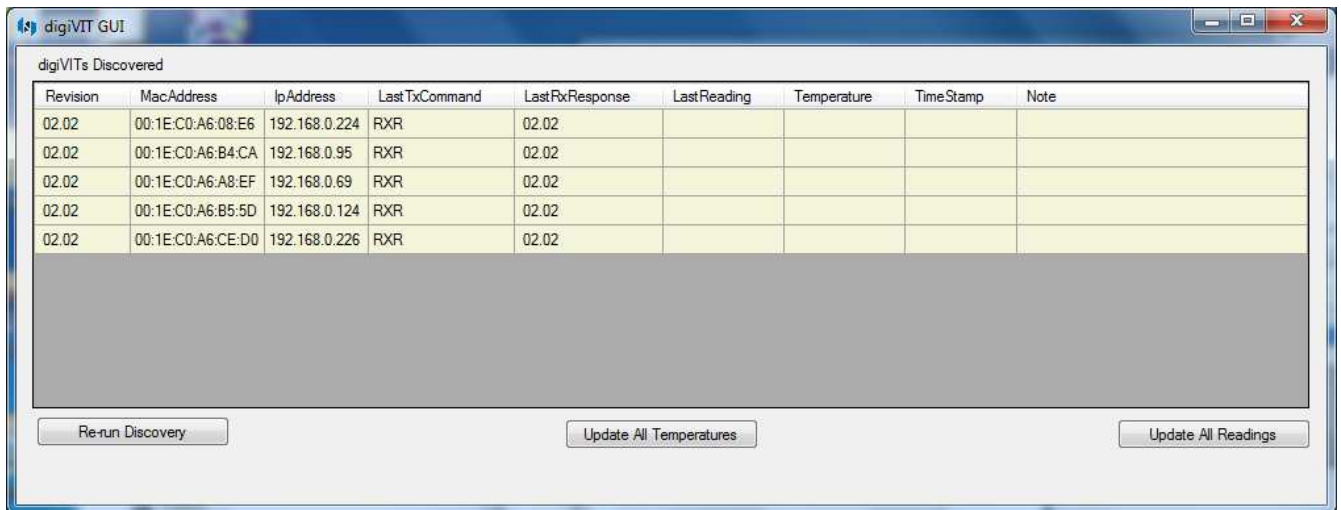


Simply right-click on the highlighted *digi*VIT and select 'Update IPv4 Address' from the popup menu. After assigning the selected *digi*VIT a new address the application re-runs discovery to show you the new address. In this example the *digi*VIT address was changed from 192.168.0.145 to 192.168.0.95 and is no longer highlighted:



NOTE: Since a local area network can only have one device at any given IPv4 address, you must install the *digi*VITs one at a time and update each IPv4 address before connecting another *digi*VIT to the network. This software makes that process easy.