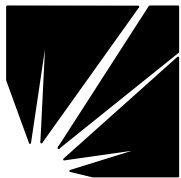# microPod II
User Guide

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Table of Contents

Revision History

Revision	Date	Description
1.0	September 21, 2012	Initial release of platform documentation

Getting Started with the Device

Powering On

The device can be powered either by attaching to a vehicle or connecting a USB cable which is attached to a PC or USB power source. Verify the LED is illuminated GREEN. As soon as power is supplied to the device it will begin a boot sequence. The LED will blink RED during the boot phase. Once the device is booted into normal operational mode the LED will revert back to GREEN.

Connecting to the Device over USB

You should use a Windows PC that has the Bright Star Engineering CDCECM drivers installed. The drivers provide TCP/IP over USB capability to the Windows PC. Use a USB cable to connect the device to the PC. Once the device is booted you will be able to use an HTTP browser to connect to the device using the following URL:

HTTP://172.22.22.22

The device configuration web site will appear.
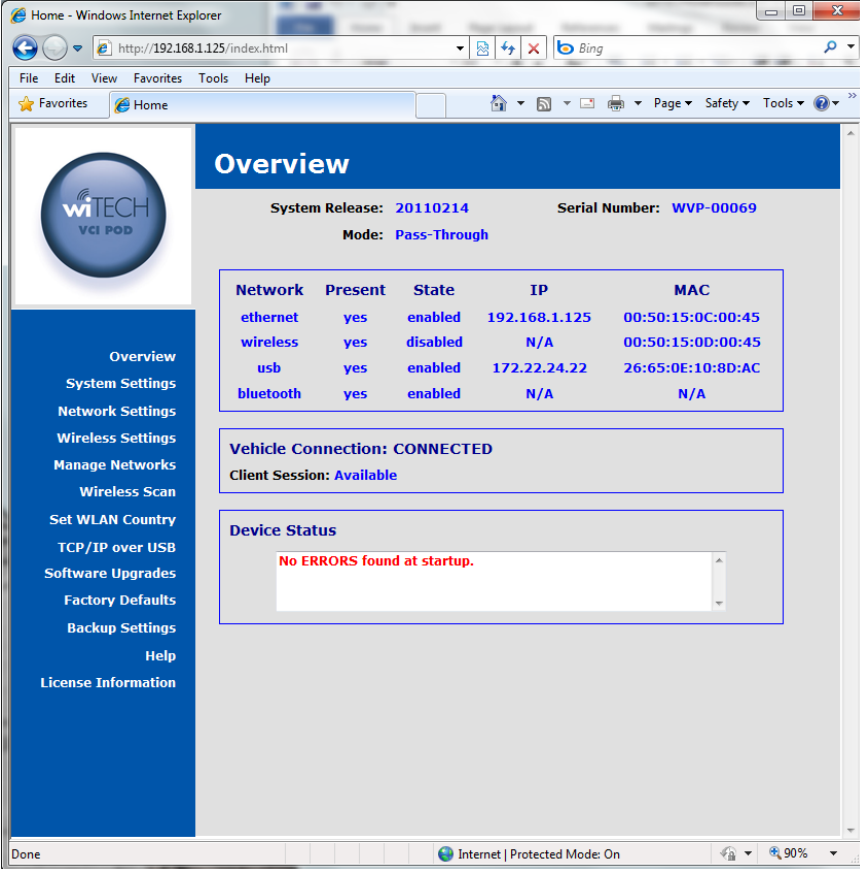
Device Overview

LED

The device has one LED which is capable of illuminating RED and GREEN. The following table describes the LED behavior when the device is in the designated state or mode.

Power On	When power is applied to the device the LED will illuminate GREEN for a brief period.
BOOT	When the system software initializes the LED will illuminate RED and blink at a moderate pace.
RUNNING	In a normal operating state the LED will illuminate GREEN. Note: If an application is running on the device, it has the ability to alter the behavior of the LED which may result in LED appearing in a differently.
ERROR	Under error conditions the LED will illuminate RED and blink at a very fast pace.
S/W Upgrade	During a software upgrade the LED will be illuminated READ and blink at a slow pace.
RECOVERY	If the device is unable to boot normally, an alternate system software configuration will be used. This is referred to as RECOVERY MODE. When running in this mode the LED will blink, alternating between RED and GREEN in a rapid pace.

Configuring Device and Network Settings

Using the HTTP Interface

Shown below is the main screen for the device configuration web site. The Overview page will provide you with version information for the hardware and software and the device serial number.

System Settings

You can assign a name to the device that will be shown on the device discovery utility screen in place of the default serial number. You may also wish to set the date and time on the device.

Device Name   Assign a name to the device. This name will appear on the device locator utility screen that shows the devices available on the network.   Click on the **Save** button to store the new device name.

Work Group   Assign a work group name to the device. Click on the **Save** button to store the new device name.

Date & Time   Set the date and time for the device. Use the drop down selection boxes to select the current date and time. Click on the **Set Date & Time** button to store the new date and time.

Reboot Device   Use this button to force the device to perform a system reboot.

Network Settings

You can choose to have your network address and settings automatically assigned if your network supports it. Otherwise, please check with your Network Systems Coordinator to obtain the appropriate settings to enter on this screen.

Automatic or Static To have an automatically assigned network address choose **Obtain an IP address automatically from a DHCP server**

If you will be using static IP addressing for the device, choose **Use the following IP address and settings**

IP Settings
IP Address Enter the IP address assigned to this device, typically provided to you by your network or system administrator, for example 192.168.1.100.

Net Mask Enter the network address mask used by the device, typically provided to you by your network or system administrator, for example 255.255.255.0.

Gateway Enter the IP address for the machine on your network that

	acts as a gateway to other networks. Your network or system administrator typically provides this address, for example 192.168.1.1, to you.
DNS1	Enter the IP address for the machine that should be used as the primary Domain Name Server. If your network is configured to use DNS your network or system administrator will provide this to you.
DNS2	Enter the IP address for the machine that should be used as the secondary Domain Name Server. If your network is configured to use DNS your network or system administrator will provide this to you.

Wireless Settings

You can choose to have your network address and settings automatically assigned if your network supports it. Otherwise, please check with your Network Systems Coordinator to obtain the appropriate settings to enter on this screen.

Automatic or Static	To have an automatically assigned network address, choose **Obtain an IP address automatically from a DHCP server**.
	If you will be using static IP addressing for the Device, choose **Use the following IP address and settings**.

IP Settings

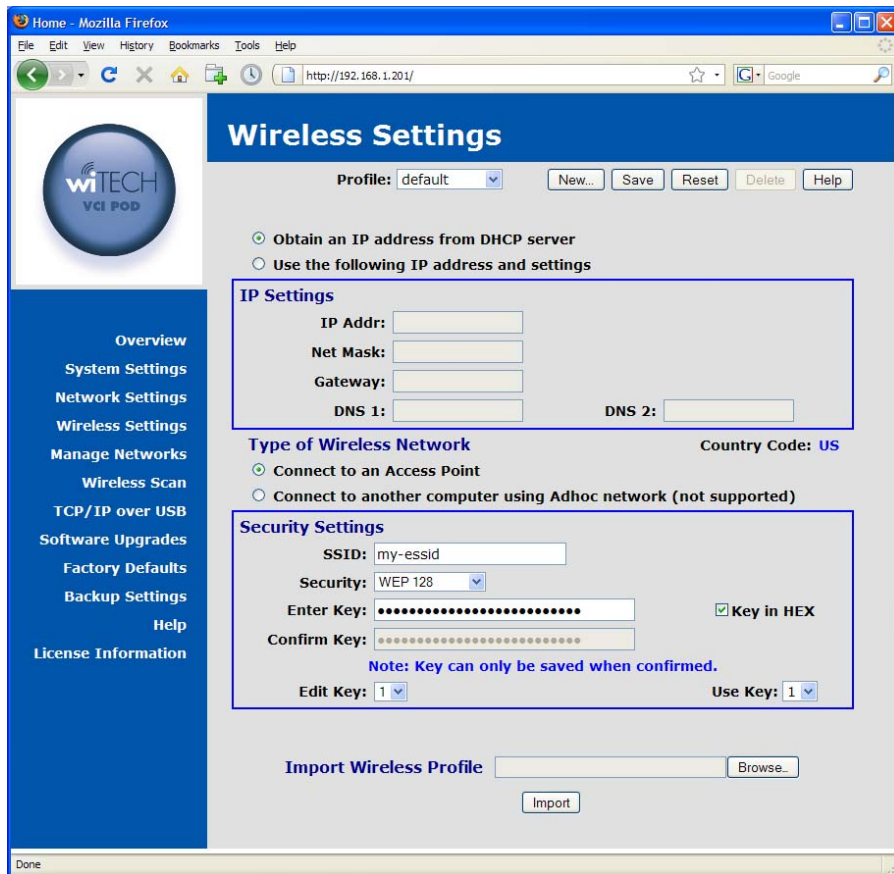|	
IP Address	Enter the IP address assigned to this Device, typically provided to you by your network or system administrator, for example 192.168.1.100.
Net Mask	Enter the network address mask used by the Device, typically provided to you by your network or system administrator, for example 255.255.255.0.
Gateway	Enter the IP address for the machine on your network that acts as a gateway to other networks. Your network or system administrator typically provides this address, for example 192.168.1.1, to you.
DNS1	Enter the IP address for the machine that should be used as the primary Domain Name Server. If your network is configured to use DNS your network or system administrator will provide this to you.
DNS2	Enter the IP address for the machine that should be used as the secondary Domain Name Server. If your network is configured to use DNS your network or system administrator will provide this to you.
Type of Wireless Network	To connect your Device to the network via a wireless access point, choose **Connect to an Access Point**. If you need to connect your Device directly to PC or some other computer, choose **Connect to another computer using Adhoc network.**

Security Settings

|	
SSID	Enter the Service Set Identification that should be used by your Device to join a 802.11 wireless network.
Security	Select the encryption technique to be used when communicating on the wireless network. This must be the same as is being used by the access point or other computer you will be connecting to.
Enter Key	Enter the key to be used by the encryption software used when communicating on the wireless network. This key must match the key being used by the access point or other computer you will be connecting to.
Confirm Key	Re-enter the key to be used by the encryption software used when communicating on the wireless network. This is done to confirm the value since it is hidden on entry.
Key in HEX	Select this option if the value entered for the encryption key was entered using HEX values.
Edit Key	For security mechanisms that allow multiple keys, use this selection box to select the key that is to be edited.
Use Key	For security mechanisms that allow multiple keys, use this selection box to select the key that is to be used when

communicating on the wireless network. If multiple keys are present, the one selected must match the key being used on the access point or other computer the Device will be connecting to.

Miscellaneous
Import Wireless
Profile

Allow you to import a wireless profile that is provided by a network administrator or other system administrator. The profile must be provided in a file formatted specifically for this purpose.

Manage Networks
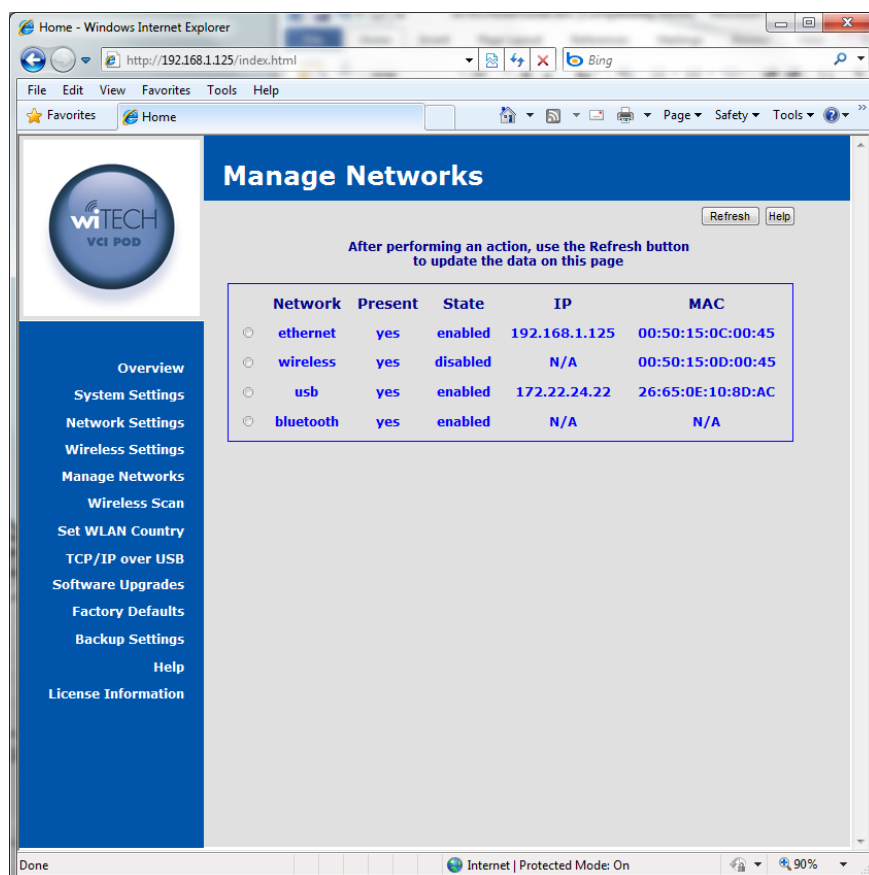
You will have one or more network interfaces on the device, such as Ethernet, WLAN, USB, and Bluetooth. Ethernet and WLAN interfaces can have one or more sets of configuration data, referred to as a profile. Profiles are manipulated on the Network and Wireless Settings pages. The Manage Networks page allows you to make a configuration profile active for an interface. You can restart the Ethernet interface, and stop/start/restart the WLAN interface. The USB interface can only be restarted as it is also present and active. The Bluetooth interface is provided via an optional wiTECH SmartCable. If present and enabled

this screen offers a button to restart the interface if some problem is encountered and customer support asks you to restart the interface.

Ethernet Adapter
The Ethernet network interface is always present and active on this device. The device is factory configured with a default profile that is initially set to obtain an IP Address via DHCP. You can change this profile on the Network Settings page.

Enable Button	Enable the interface when it has been previously disabled
Disable Button	Disable the interface, preventing any traffic across the interface
Restart Button	This button can be used to restart the Ethernet network interface with the currently active profile settings.
Status	Shows the current state of the interface, Active, Started, and Disabled
IP Address	The IP address currently assigned to this device, either via DHCP or static assignment. If no IP Address is listed the network connection may be down or the Ethernet cable might be unplugged.
Profiles	A list of profiles containing configuration settings for the Ethernet network interface is provided here. The settings in use will be shown as **Currently Active**. Other available profiles will have a **Make Active** button next to the profile name that allows you to change the settings used by the Ethernet interface and restart the network.

Wireless Adapter (optional)
The Wireless LAN network interface is a device hardware option. When it is present, a factory configured default profile initially set to obtain an IP Address via DHCP is provided. However, the access point and security information will need to be entered via the Wireless Settings page.

Enable Button	Enable the interface when it has been previously disabled
Disable Button	Disable the interface, preventing any traffic across the interface
Restart Button	This button can be used to restart the Wireless LAN network interface with the currently active profile settings.
Status	Shows the current state of the interface, Active, Started, and Disabled
IP Address	The IP address currently assigned to the WLAN interface, either via DHCP or static assignment. If no IP Address is listed the network connection may be down, the access point security settings are incorrect, or the wireless access point is unreachable.
AP Address	The access point hardware address is provided here. It is taken directly from the access point when a wireless

	connection is established. If the address shows as all 0s no connection is present.
Profiles	A list of profiles containing configuration settings for the Wireless LAN network interface is provided here. The settings in use will be shown as **Currently Active**. Other available profiles will have a **Make Active** button next to the profile name that allows you to change the settings used by the Wireless LAN interface and restart the network.

Bluetooth Adapter

The device can make a connection to a Bluetooth enabled PC. A zero configuration IP (ZCIP) address will be used. The Bluetooth and WLAN network interfaces cannot be used concurrently. Enabling one will force the other to be disabled.

Enable Button	Enable the interface when it has been previously disabled
Disable Button	Disable the interface, preventing any traffic across the interface
Restart Button	This button can be used to restart the Bluetooth network interface.
Status	Shows the current state of the interface, Active, Started, and Disabled
IP Address	The IP address currently assigned to the Bluetooth interface via ZCIP.

USB Adapter

The USB network interface is provided via the USB connector on the device. The connector can be found on the faceplate just below the antenna. The USB cable provided with the device when purchased should be used. Connect the mini-connector end to the device and the other end to a Windows PC which has the Bright Star Engineering Ethernet Gadget drivers installed. A DHCP server is provided on the device to assign an IP address to the PC when connected over the USB interface. Refer to the TCP/IP over USB web page description further on in this document for more information.

| **Restart Button**	This button can be used to restart the USB network interface should a problem occur
Status	Shows the current state of the interface, Active, Started, and Disabled
IP Address	The IP address currently assigned to the Bluetooth interface via static assignment.

Wireless Scan
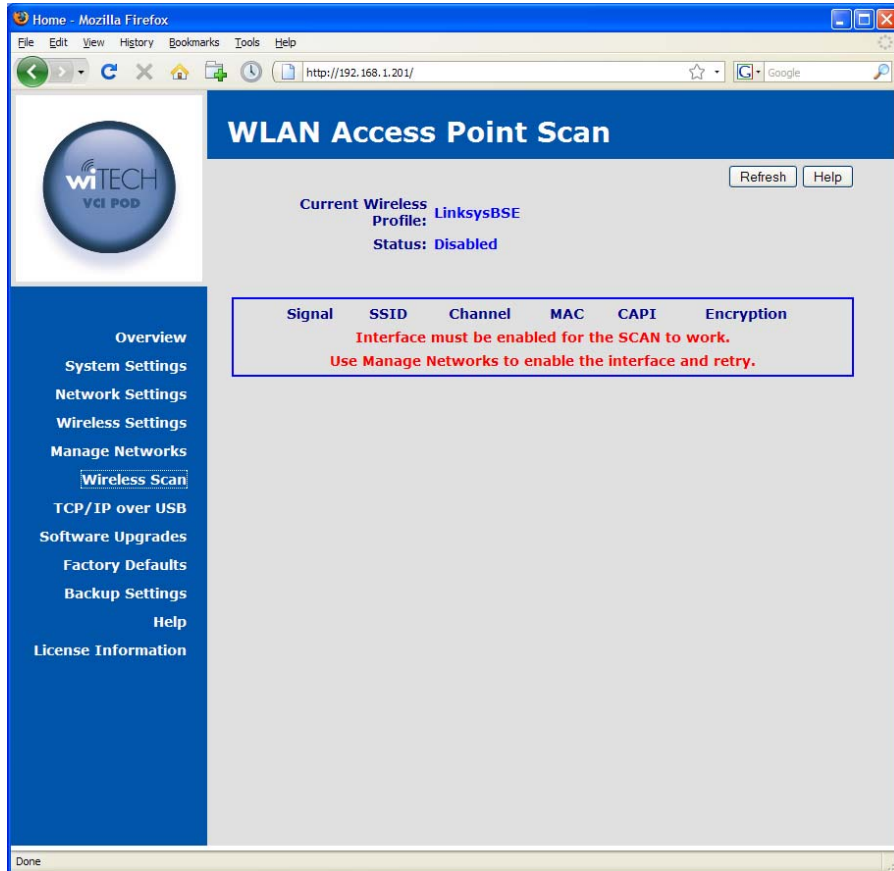
Use this utility to scan for available wireless networks at your location. Some networks may not be visible if the wireless access point(s) has been configured to not broadcast the SSID. Please note that the wireless interface on the device must be enabled for this feature to work.

TCP/IP over USB
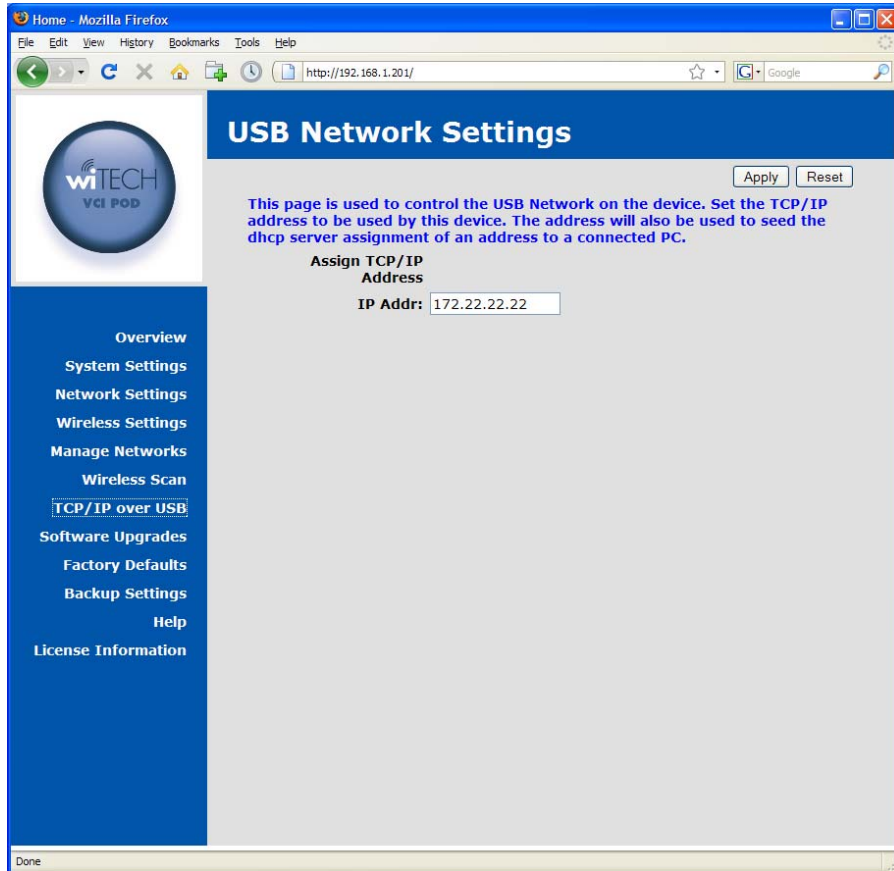
This page is used to configure the TCP/IP address to be used for the USB based network. This device can be connected directly to a Microsoft Windows PC with a USB cable. When connected, a TCP/IP network will be created between the device and the Windows PC over the USB cable. The TCP/IP address entered on this page will be assigned to the device and used to seed the DHCP address assigned to the Windows PC.

Factory Defaults
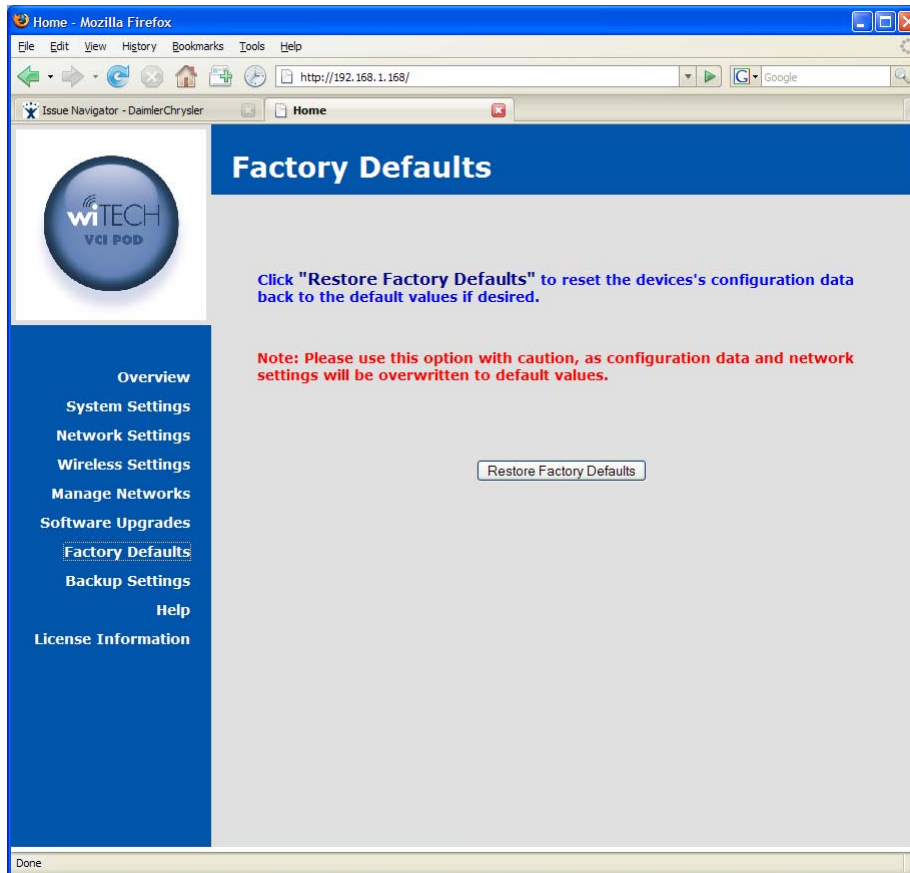
Use this page to reset the device configuration settings back to the factory default values.   **Note:** Please use this option with caution, as configuration data and network settings will be overwritten to default values.
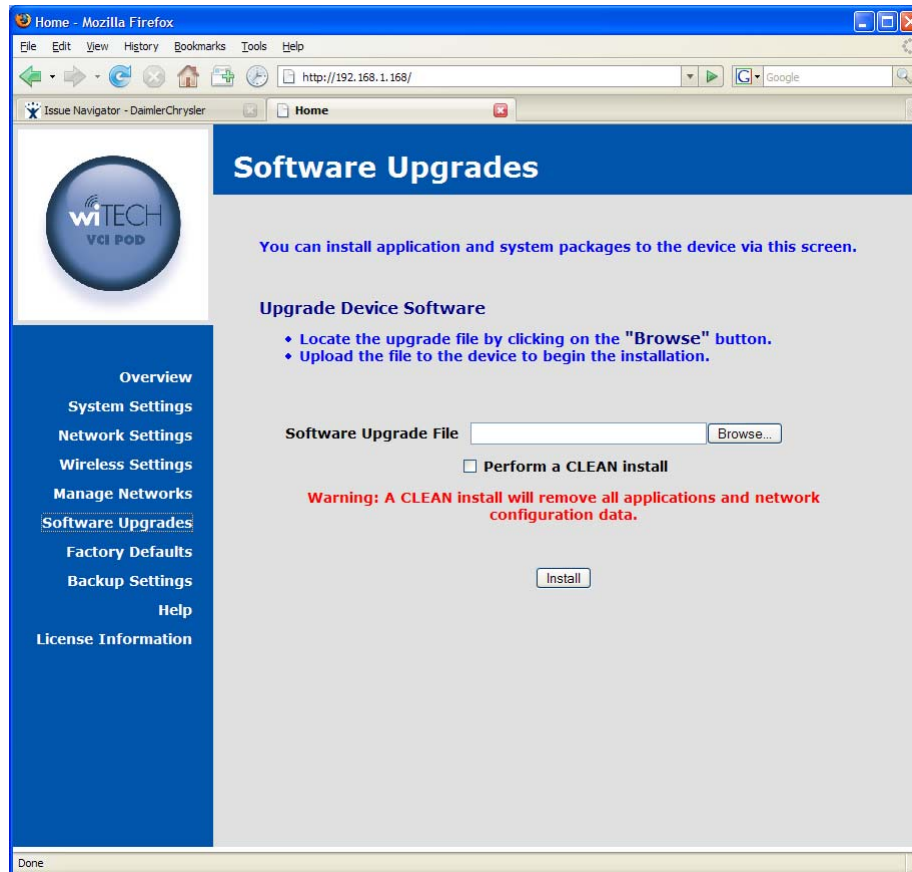
Backup Settings
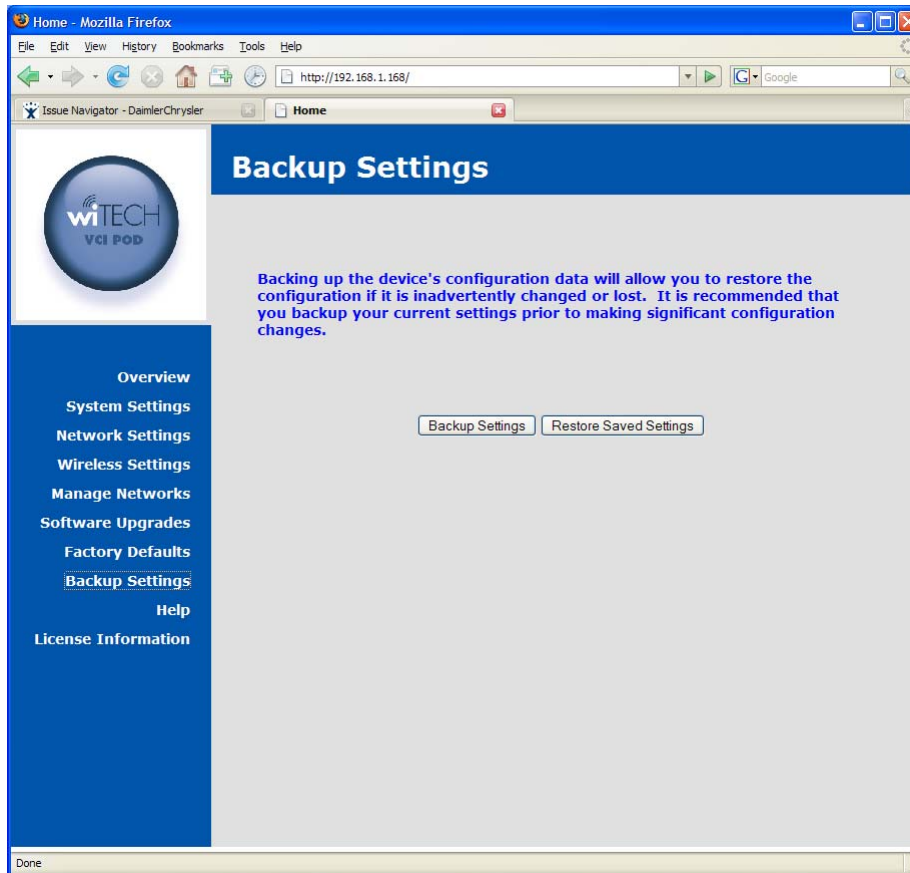
Back up the device's configuration data via this page. This will allow you to save and restore the configuration if it is inadvertently changed or lost. It is recommended that you backup your current settings prior to making significant configuration changes.

Software

Software Upgrades

Using the HTTP Installer

The Software Upgrades page on the device configuration web site allows you to install platform software and firmware upgrades. Use the **Browse** button on this screen to locate the software package on the local machine and click on the **Install** button to initiate the upload of the package file. The upgrade will be started automatically when the file is uploaded. Once the upgrade begins you will loose your browser connection to the device. The LED will be turned on to indicate the upgrade is being performed. The software upgrade notification screen will attempt to refresh to indicate the upgrade is complete.

If you wish to reset the device during the upgrade process, click on the checkbox labeled as **Perform a CLEAN Install**.

If a failure occurs during the upgrade, the LED will be turned on to indicate a problem exists. If this should occur follow the procedure outlined below.

Recovering from a Failed Upgrade

In the event a platform software and firmware upgrade fails in such a way that the device cannot operate normally, remove and then reattach the device power source. The device will reboot into a recovery mode. In this mode the device will boot into a limited configuration that will allow you to apply a product software upgrade via the provided web interface. You should not attempt to use the device for anything but a software upgrade when in recovery mode.

Installing Applications

Applications are installed in the same manner as platform software and firmware upgrades, using the **Software Upgrades** web page. Use the **Browse** button on this screen to locate the software package on the local machine and click on the **Install** button to initiate the upload of the package file. Once uploaded the upgrade will be automatically started. If the application provides progress information, it will be displayed in a popup window opened by the **Software Upgrades** web page.