

APPLICATION NOTE

Converge Console (Version 1.0.4)
Converge Pro Firmware (Version 1.04)

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USB & DYNAMIC IP ADDRESSING

Purpose

This document describes a potential issue with USB connections between Converge Pro devices and PCs, and provides a solution to the issue.

Overview

Converge Pro devices and the Console application use USB over TCP/IP to communicate. When a USB cable is connected between a Converge Pro device and a PC, the Converge Pro device functions as a DHCP server with an address range of 169.254.XXX.XXX. A unique IP address is dynamically assigned to the PC by the Converge Pro device. The address can be viewed in the Network Connections section Windows Control Panel.

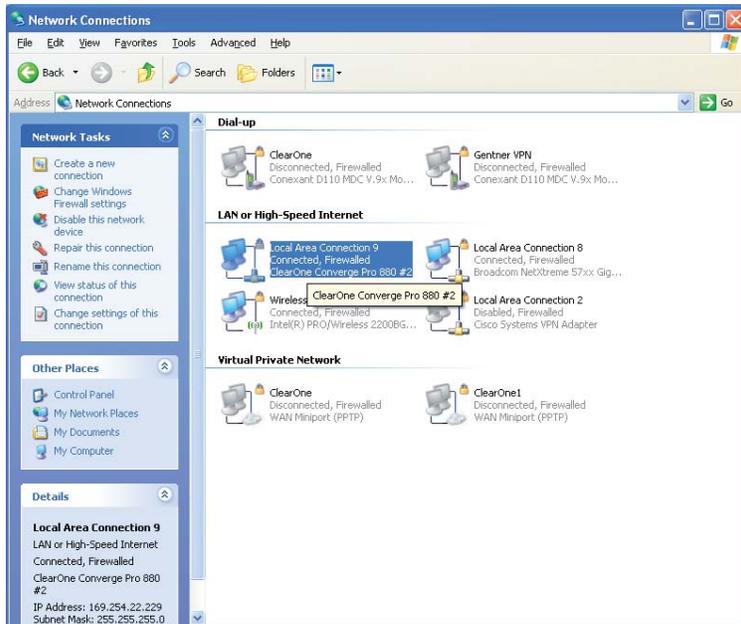
In addition to viewing the IP address, a user can also modify the address and other related IP settings. If the address is changed to a static IP address, or a default gateway is specified through control panel, communication with the Converge Pro device will be lost. This affects only the IP address for the PC (the Converge Pro USB port IP address cannot be changed).

The Solution

If USB communications with a Converge Pro device are lost due to user changes to IP settings, use the following procedure to correct the problem:

Verify Converge Pro IP settings using Windows control panel and/or the Windows command prompt:

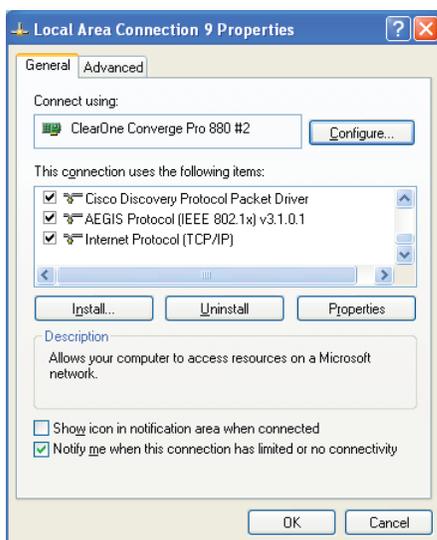
1. Select **Control Panel** from the Windows **Start** menu, and double click **Network Connections**. The Converge Pro USB connection will be listed under the **LAN or High-Speed Internet** heading, along with any other wired or wireless IP connections on the system (as shown below).



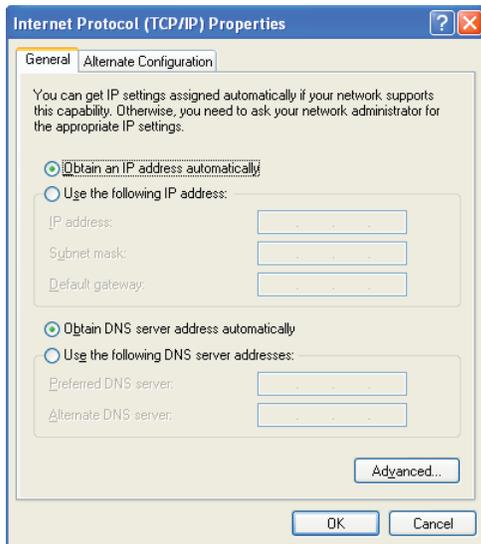
2. Double click on the connection icon, and select the **Support** tab in the **Local Area Connection Status** dialog that appears. The IP settings for the connection are shown on the support tab.
3. In the **Local Area Connection Status** dialog and/or the command prompt window, verify that the **Address Type** is set to **Assigned by DHCP**, and that a **Default Gateway** is not specified.
4. Alternatively, or in conjunction with using control panel, the IP settings can be viewed using the Windows command prompt. From the Windows **Start** menu, select **All Programs | Accessories | Command Prompt**. At the prompt, type **ipconfig /all** and press **Enter**. This will list all IP network connections on the PC and their settings. Verify that **DHCP Enabled** is set to **Yes**.

If the address is manually configured, or a default gateway is specified, change them to the correct settings:

1. On the **General Tab** in the **Local Area Connection Status** dialog, click the **Properties** button. The **Local Area Connection Properties** dialog for the connection appears (as shown below).



2. From the **This connection uses the following items** list, select **Internet Protocol (TCP/IP)** and press the **Properties** button.
3. On the **General** tab of the **Internet Protocol (TCP/IP) Properties** dialog that appears (shown below), select the **Obtain an IP address automatically** radio button.



4. Press the **Advanced...** button. In the **Advanced TCP/IP Settings** dialog that appears, remove any default gateways that are specified, and press the **OK** button to close the dialog.
5. In the **Internet Protocol (TCP/IP) Properties** dialog, press the **OK** button to save the changes.
6. Close the **Local Area Connection Properties** dialog.

USB communications between the Converge Pro device and the PC should now function normally.