ConnectPort® X4
Getting Started Guide

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Introduction to the ConnectPort X4

Important Information Regarding Your Device

Your device is configured to automatically register with a Device Cloud Technical Support Account when you first power up your device*. Activation with Device Cloud Technical Support is free. Our Device Cloud Technical Support team will only access your device upon your approval. With your consent, the Device Cloud Technical Support team is afforded visibility and access to your device to diagnose and resolve issues, should you require assistance.

For any support queries, please contact the Device Cloud Customer Support Center by phone at 952.912.3456 or via our web portal at: http://www.digi.com/support/eservice/login.jsp?p=true

Should you wish to forego the enhanced service and benefits that automated registration with Device Cloud Technical Support provides, you can disable this feature via the gateway's web UI:

- Open the web UI of the gateway using the method outlined in the Quick Start Guide
- Navigate to the **Configuration > Device Cloud** section
- From the "Short Messaging" menu, uncheck the box labeled **Opt-in**.
- To completely disable SMS, uncheck the box labeled **Enable SMS**.
- Uncheck the box labeled **Enable Device-Initiated Device Cloud Connection**.
- Click **Apply**.
- Reboot the gateway

*The registration process involves sending a single SMS message containing the device's mobile phone number. Network costs associated with this single SMS transmission are the customer's responsibility. Any device information stored in the Device Cloud Technical Account is secured with adherence to Device Cloud security and privacy procedures, and will not be disclosed to, or accessible by third parties.

If you currently configure your Digi device using a configuration file (defaults.rci), then in order to disable this feature, you will have to update that file.

Using this Guide

This guide is meant to be used in conjunction with Digi's ConnectPort X4 Quick Start Guides. Depending on which ConnectPort X4 model you have purchased, all of the information in this guide will not be

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relevant to the configuration of your ConnectPort X4. To determine which chapters of this guide are relevant to your ConnectPort X4 refer to the following chart:

If you have a	Refer to chapter
ConnectPort X4 with Ethernet ConnectPort X4 IA with Ethernet ConnectPort X4 for Smart Energy with Ethernet	1
ConnectPort X4 with Cellular and Ethernet ConnectPort X4 IA with Cellular and Ethernet	2
ConnectPort X4 with WiMAX and Ethernet ConnectPort X4 IA with WiMAX and Ethernet	3
ConnectPort X4 with Wi-Fi and Ethernet ConnectPort X4 IA with Wi-Fi and Ethernet	4

Digi Information

Contact Information

For more information about your Digi products, or for customer service and technical support, contact Digi International.

To contact Digi International by	Use
Mail	Digi International World Headquarters 11001 Bren Road East Minnetonka, MN 55343
Phone	1-877-434-4439 or 1-952-912-3456
Web	*www.digi.com/support*

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Chapter 1: ConnectPort X4 Ethernet Models

By default, ConnectPort X4 Ethernet models are configured to be DHCP clients. In order to configure your device, simply put it on an Ethernet network with a DHCP Server.

Connecting to the ConnectPort X4 Home Page

If you already know the IP address of your ConnectPort X4 open a web browser and type in the IP address, otherwise use the Digi Device Discovery Utility.

To download the Digi Device Discovery Utility:

1. Navigate to *http://www.digi.com/connectportx4* and then click on the "Download: Digi Device Discovery Utility" link.
2. Click the "Download your file" link and then follow the prompts to install the application.
3. Run the Digi Device Discovery Utility from your PC's Start Menu (**Digi > Digi Device Discovery > Digi Device Discovery**), if it is not already open.

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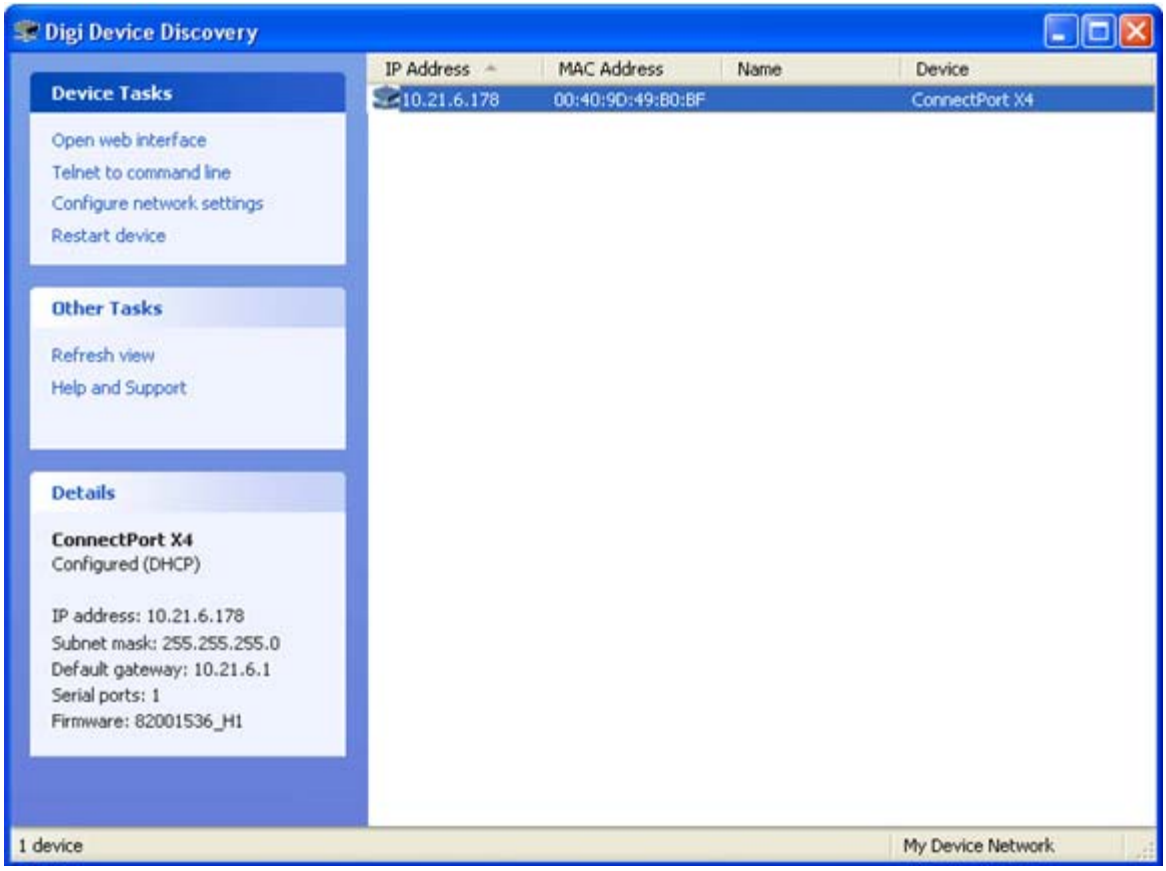
4. Once the application opens, locate your device within the Digi Device Discovery Application Devices List. The IP address of your device should be displayed.



5. Open a web browser and type in the IP address of your ConnectPort X4 device. This will open the ConnectPort X4's Home page.

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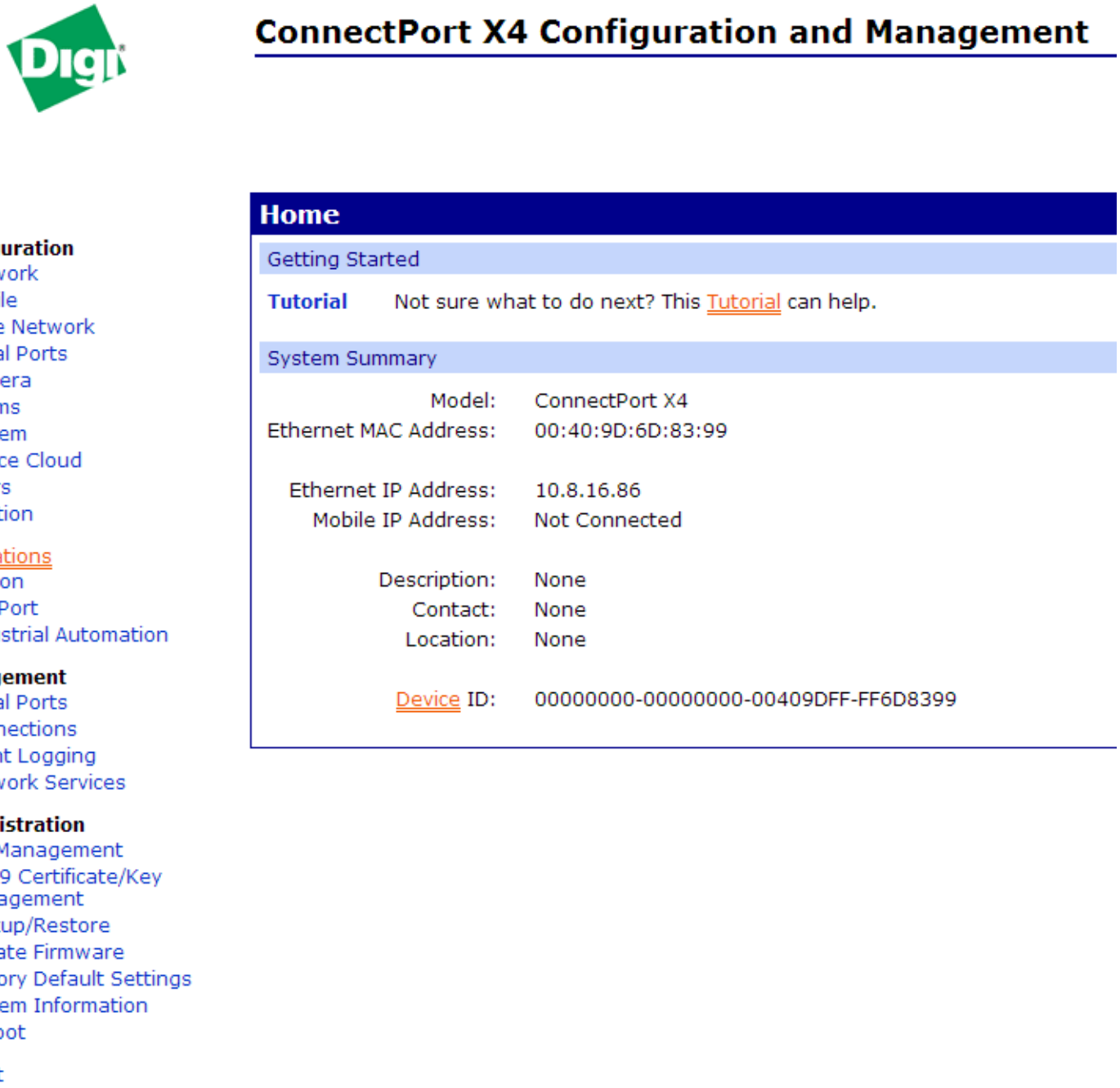
After you enter the IP address of the ConnectPort X4 into your web browser, you will see a screen similar to the following:



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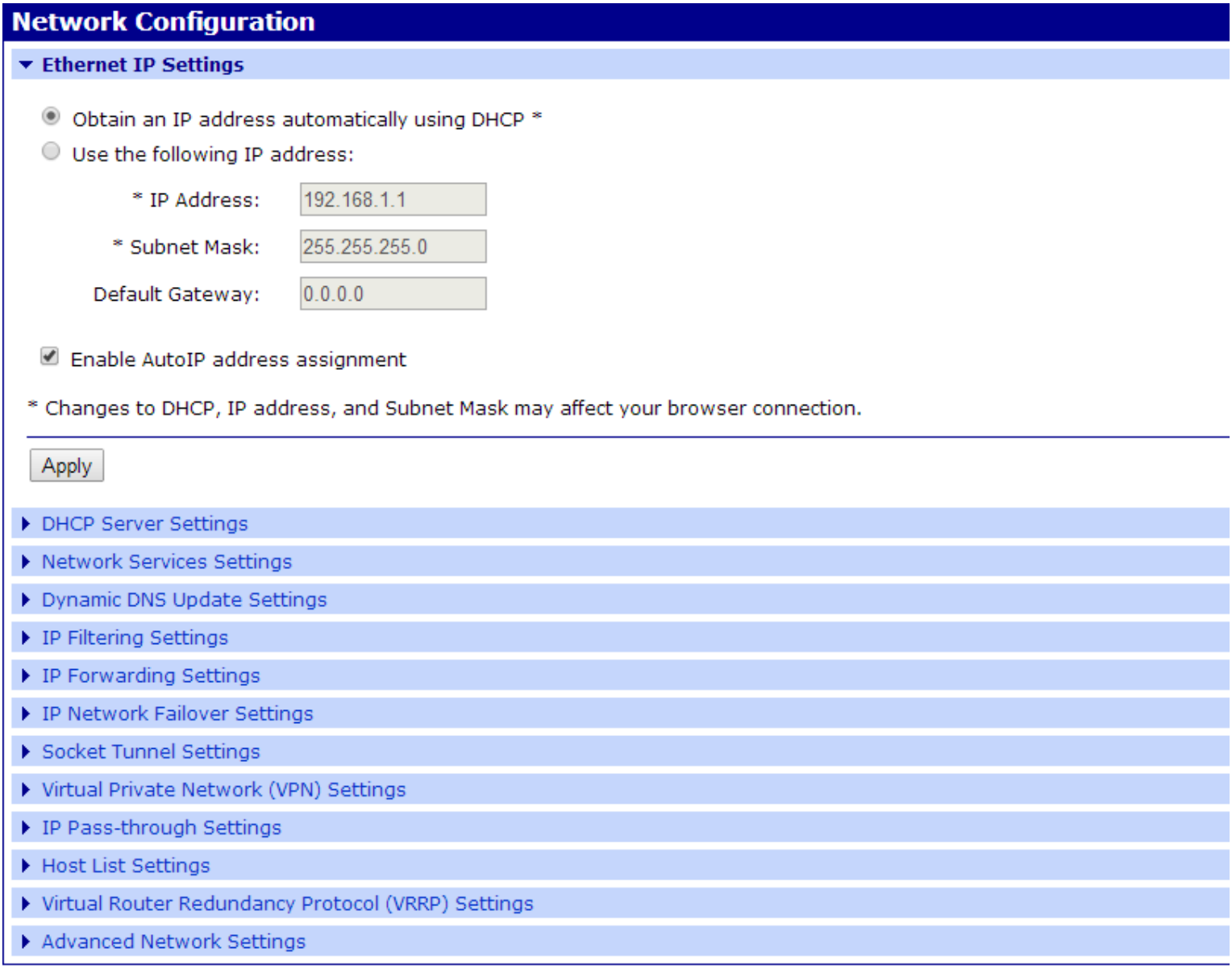
Configuring Ethernet Settings for the ConnectPort X4

To configure your device's Ethernet settings open the Ethernet Network Configuration page by clicking on **Configuration > Network** from the left-hand menu.



Within the Network Configuration page various Ethernet parameters can be configured depending on your type of installation. Basic settings can be configured in the Ethernet IP Settings page.

ConnectPort X4 Ethernet IP Settings Page

The Ethernet IP Settings page (shown in the image above) allows you to set your device to obtain IP addresses automatically (using DHCP) or enter in your own IP address.

Configure your Ethernet IP settings as desired, click **Apply** when finished.

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Viewing ConnectPort X4 IP Address Information

The ConnectPort X4 Home page will display the IP address of the unit.

Viewing ConnectPort X4 Ethernet Statistics

To view information about the Ethernet Link as well as Ethernet and IP statistics, navigate to the **Administration > System Information > Network** page**.**

X4 Smart Energy

For information regarding connecting your Smart Energy device with the Veris Clamp, reference the X4 Smart Energy Quick Start Guide *http://www-qa.digi.com/*

You have completed basic configuration of your ConnectPort X4.

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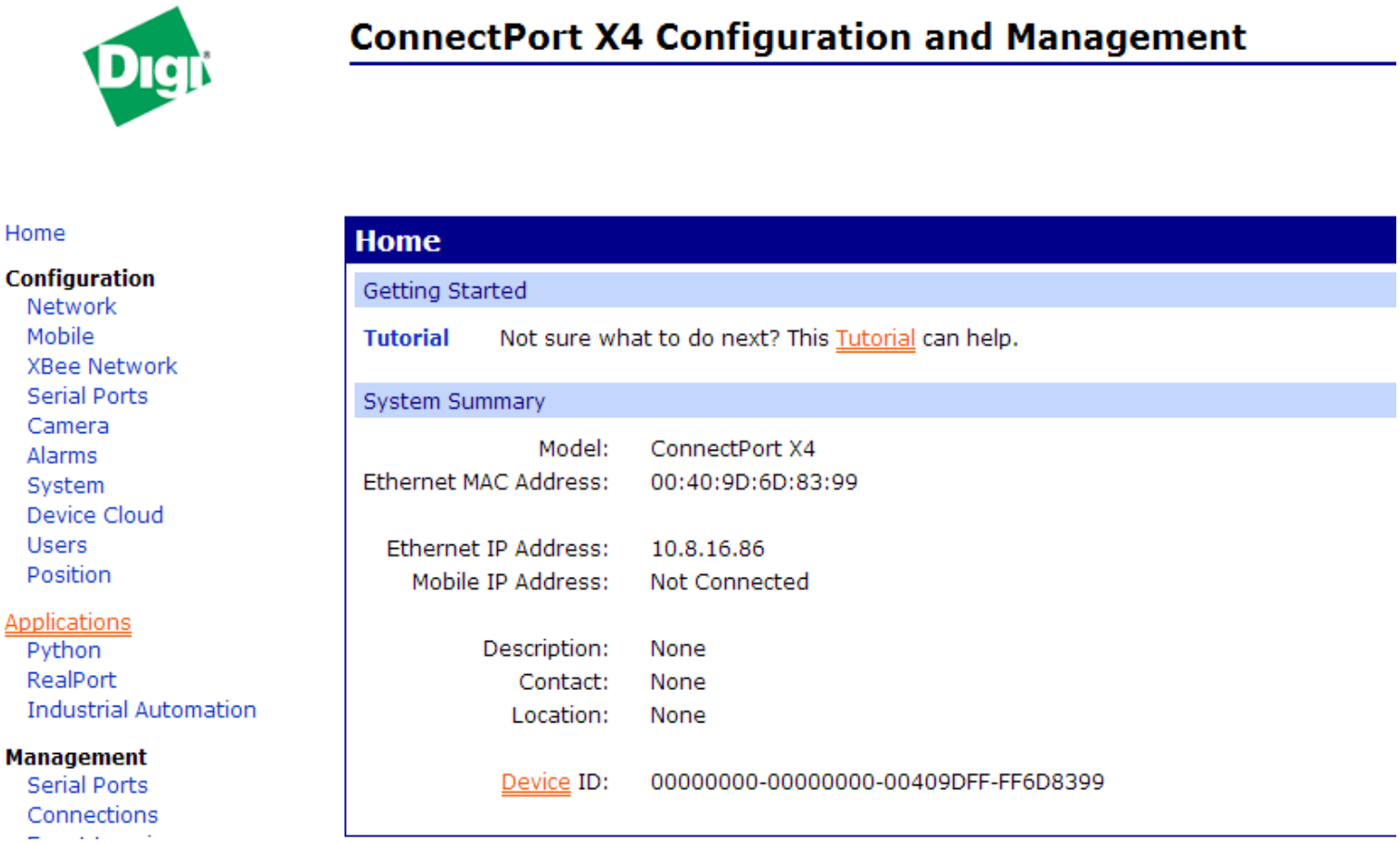
Chapter 2: ConnectPort X4 Cellular Models

The ConnectPort X4 cellular models have cellular and Ethernet interfaces. By default, the Ethernet interface is configured as a DHCP Server with a static IP Address of 192.168.1.1. This configuration simplifies the initial configuration of the unit.

Connecting to the ConnectPort X4 Home Page

1. Connect one end of the provided Ethernet cable to your PC, and the other end to the ConnectPort X4 Ethernet port (ensure that your PC is configured to obtain its IP address via DHCP).
2. Open the web interface of the ConnectPort X4 by navigating to the 192.168.1.1 address in a web browser on the PC. You will see a screen similar to the following (this is the device's Home page):



Configuring the ConnectPort X4 Cellular Interface

Configuring the ConnectPort X4 cellular interfaces will vary depending on whether the ConnectPort X4 supports the GSM/Edge or CDMA cellular network.

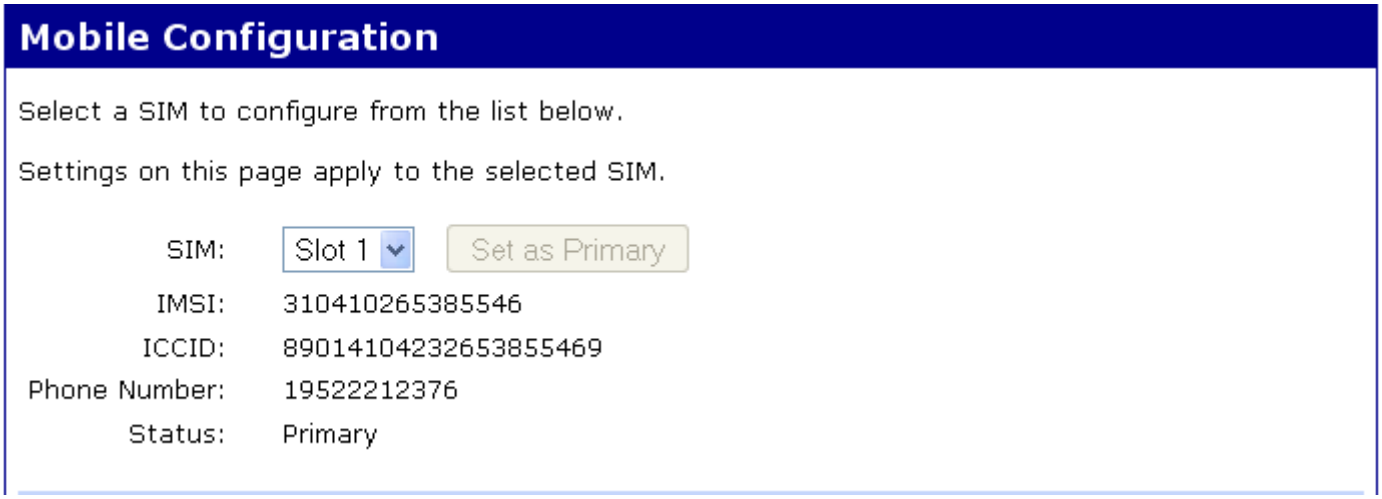
This section provides examples of how to configure the ConnectPort X4 cellular interface for three of the popular cellular networks: AT&T, Verizon, and Sprint.

After following the example for your specific cellular provider (for Verizon users see page 15, for Sprint users see page 18), go to the "Verifying the ConnectPort X4 Cellular Connection Status" section on page 21.

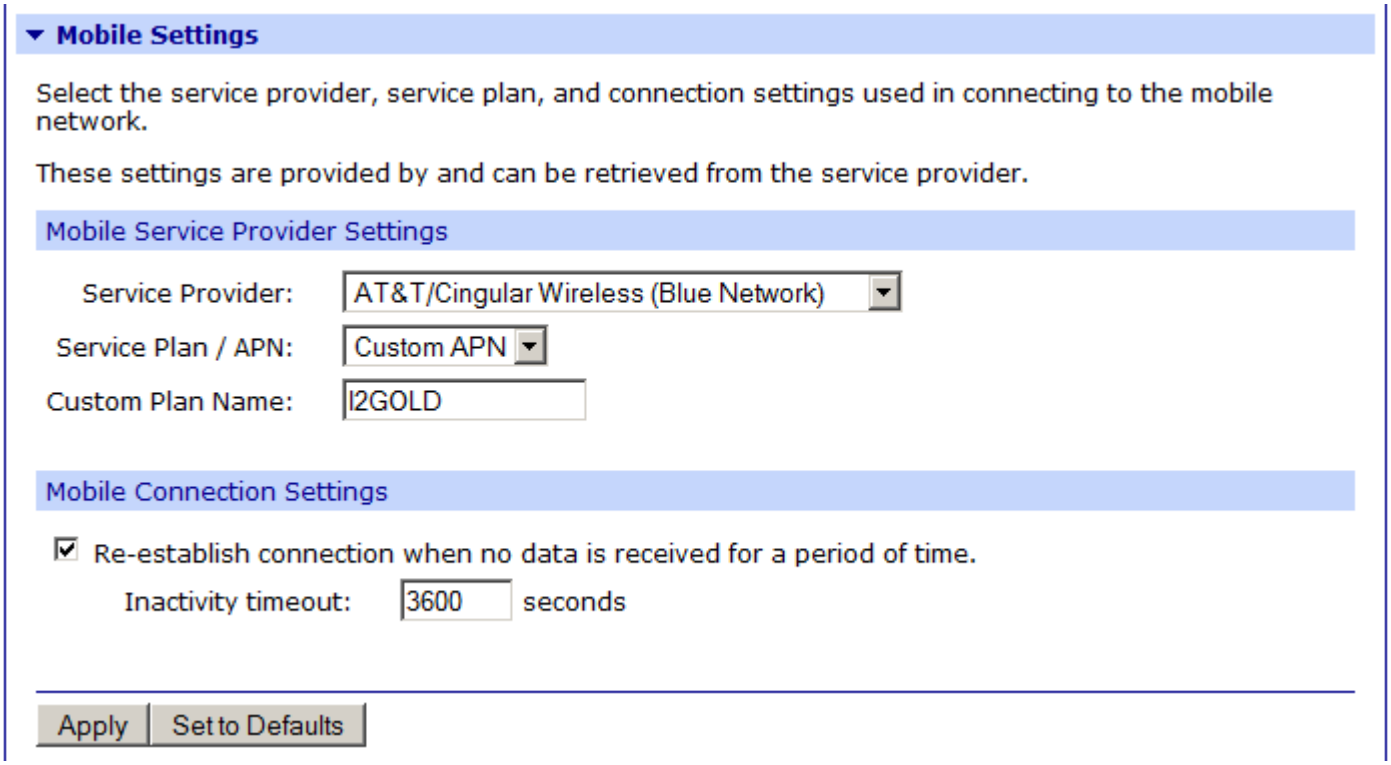
GSM/Edge Cellular Configuration Example (AT&T)

To configure a GSM/Edge ConnectPort X4 cellular interface perform the following steps:

1. Click on **Configuration > Mobile** from the left-hand menu.
2. The ConnectPort X4 has two SIM slots with Slot 1 being the primary SIM slot. If you wish to use SIM Slot 2, use the SIM drop-down box to select "Slot 2", and then click **Set as Primary**.



3. Configure the Mobile Service Provider Settings by entering the Service Provider, Service Plan/ APN, and Customer Plan Name appropriate for your environment as shown.



4. Click **Apply** when finished.

Your mobile configuration is complete. Proceed to the "Verifying the ConnectPort X4 Cellular Connection Status" section on page 21.

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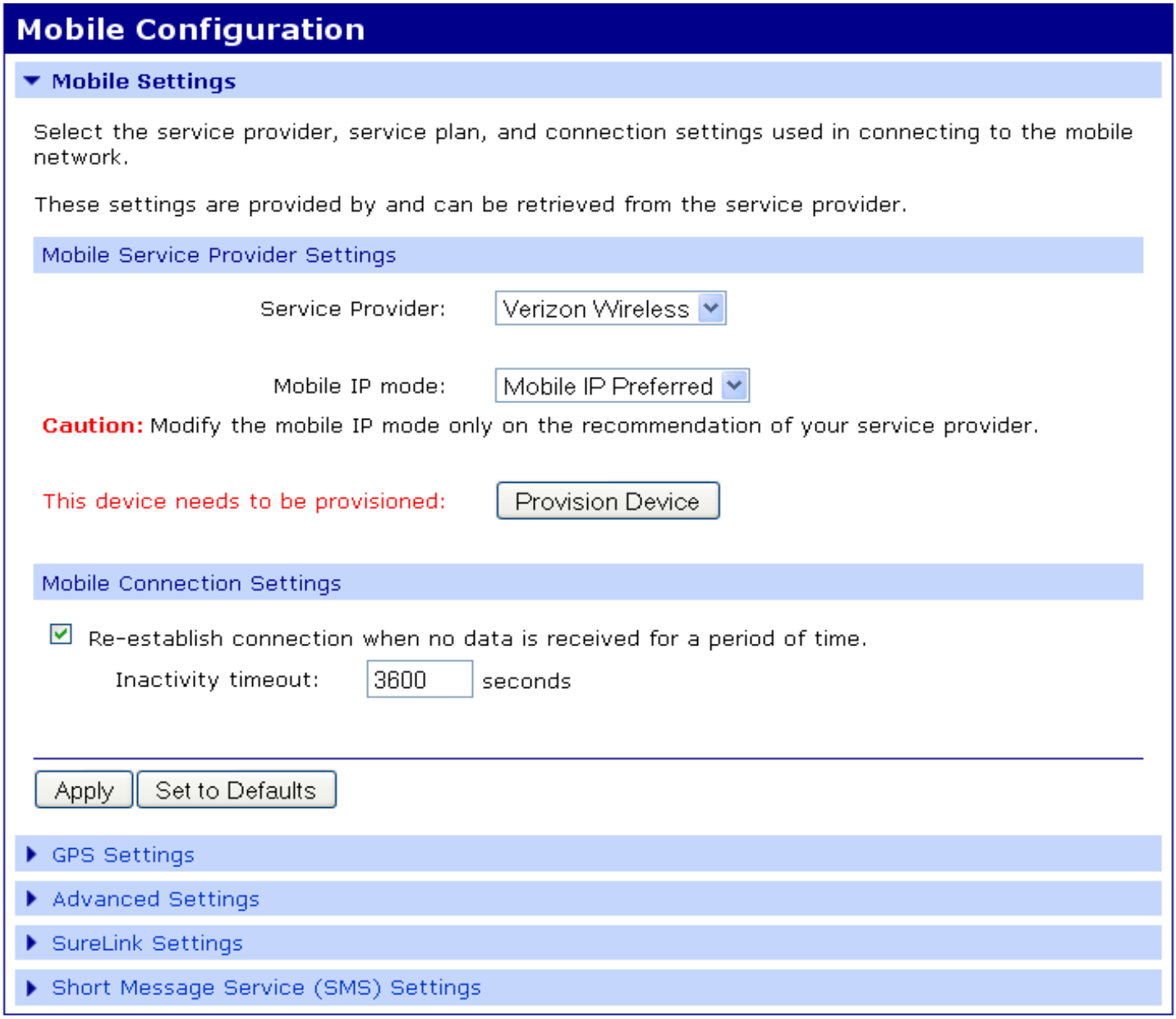
CDMA Cellular Configuration Example (Verizon)

NOTE: This example assumes that the ESN/MEID# for the ConnectPort X4 has been activated with your cellular provider. You can find the ESN/MEID# on the bottom of your unit.

To configure a CDMA ConnectPort X4 cellular interface perform the following steps:

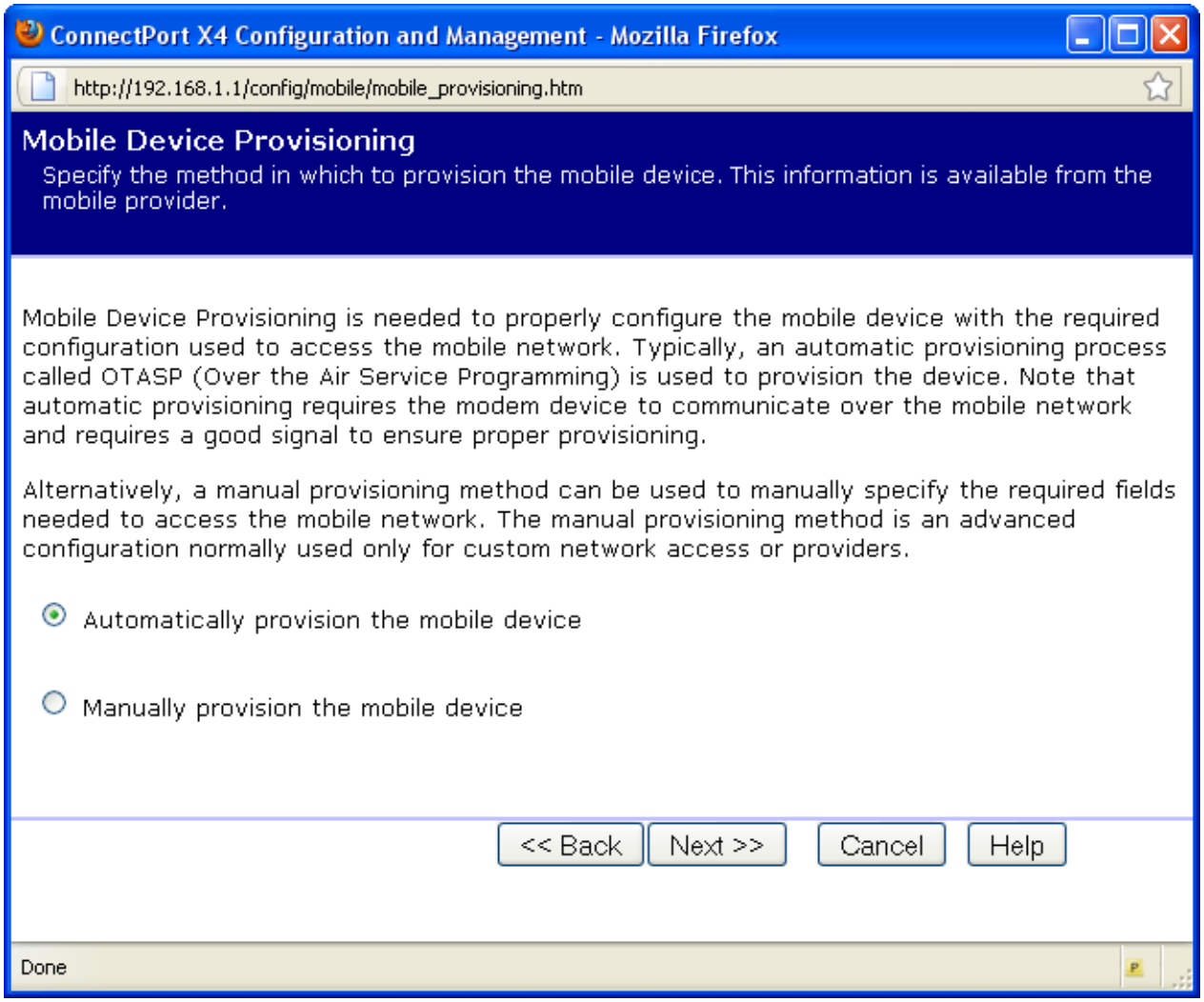
1. Click on **Configuration > Mobile** from the left-hand menu and select **Verizon Wireless** from the Service Provider drop-down menu. You should see a screen similar to the following:



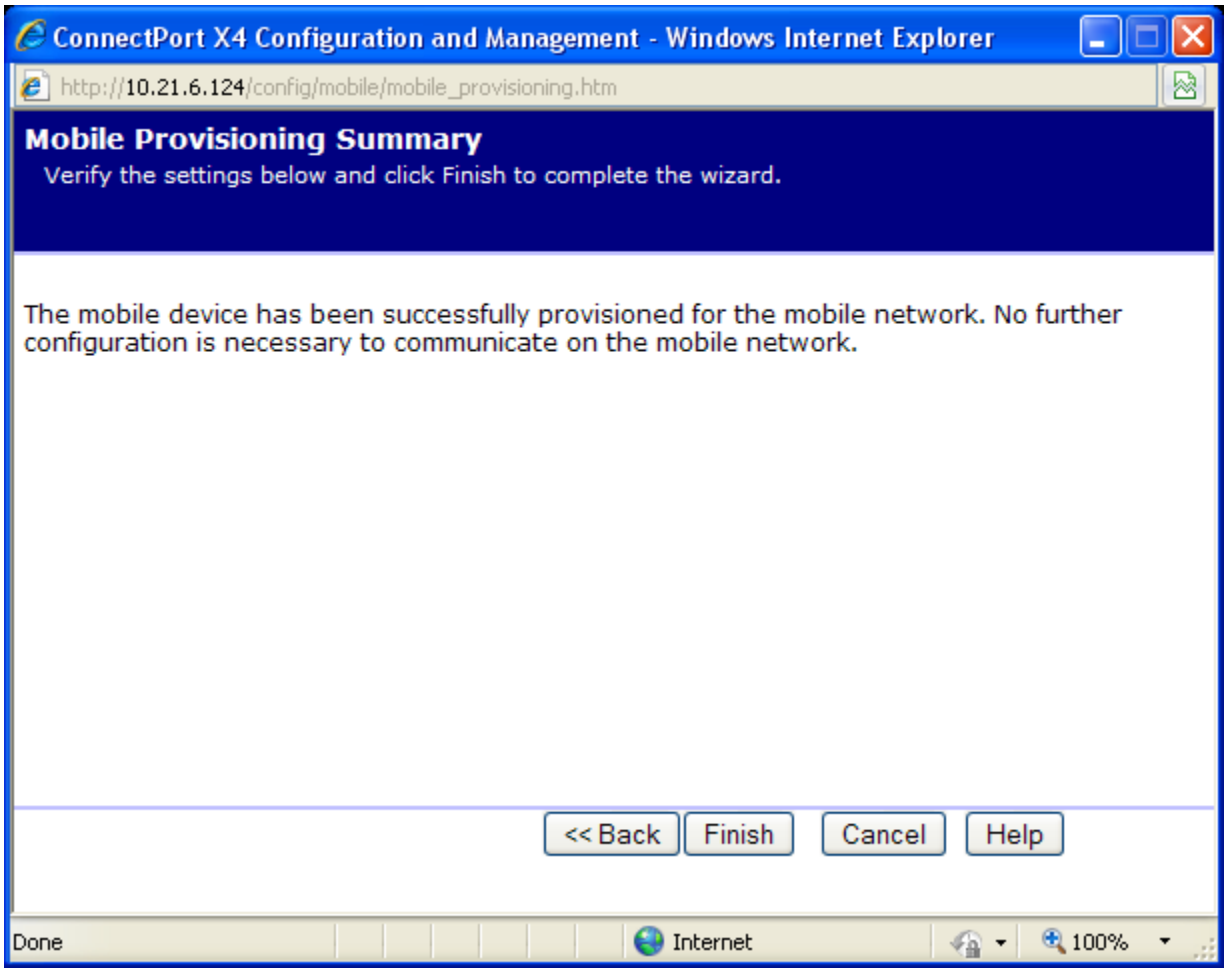
2. After selecting a Service Provider, the unit needs to go through its provisioning process. Click the **Provision Device** button, and then follow the steps displayed within the Mobile Device Provisioning dialog screens.

   NOTE: The default options within the Mobile Device Provisioning dialog screens will be correct for most installations.

3. When the following screen is displayed, select the **Automatically provision the mobile device** option.



4. Continue to go through the mobile provisioning process until you see the following screen. This screen will indicate that the mobile provisioning process completed successfully.



5. Click **Finish** to return to the Mobile Configuration page.
6. Click **Apply** on the Mobile Configuration page when finished.

Your Mobile configuration is complete. Proceed to the "Verifying the ConnectPort X4 Cellular Connection Status" section on page 21.

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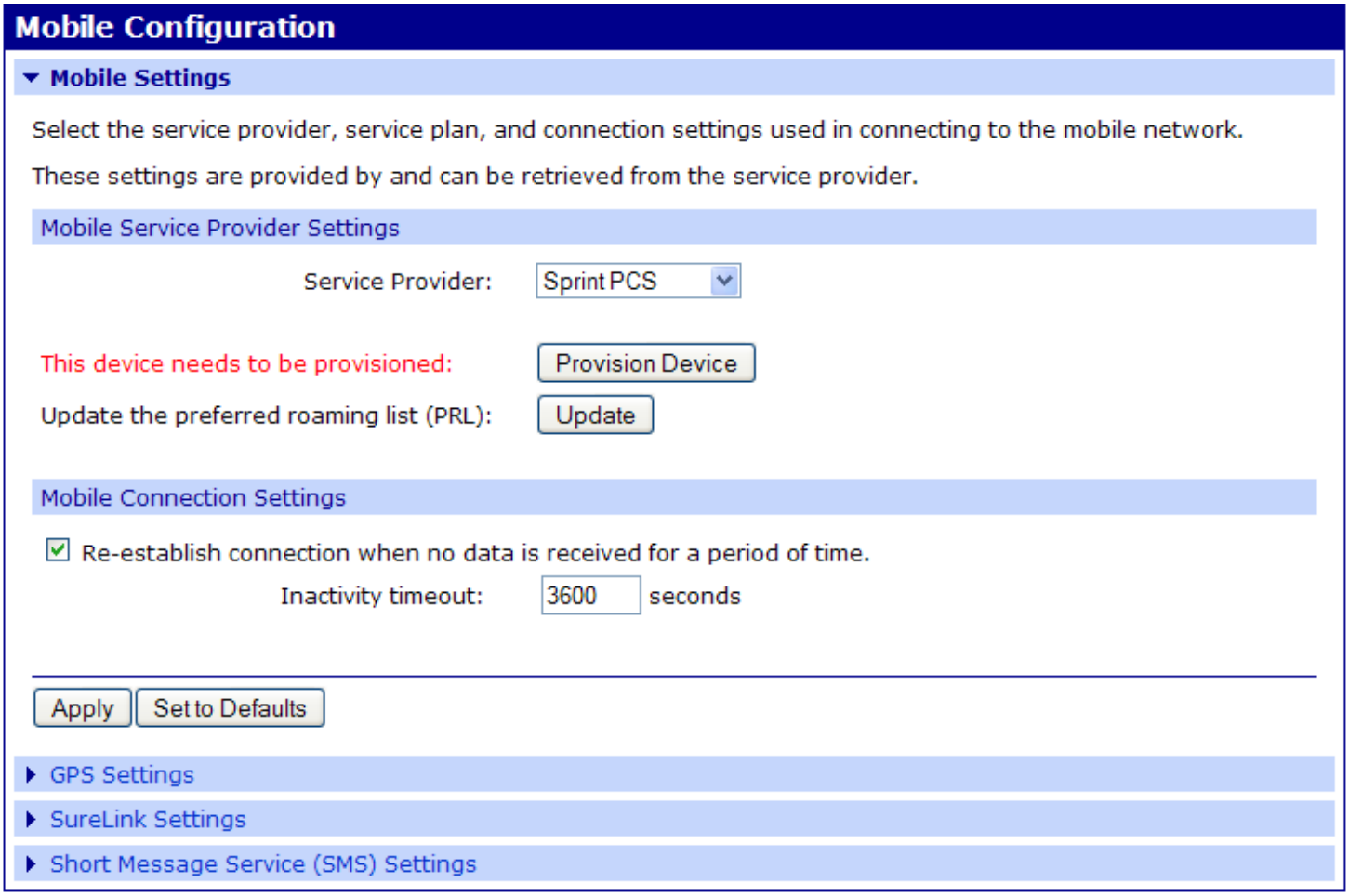
CDMA Cellular Configuration Example (Sprint)

NOTE: This example assumes that the ESN/MEID# for the ConnectPort X4 has been activated with your cellular provider. You can find the ESN/MEID# on the bottom of your unit.

To configure a CDMA ConnectPort X4 cellular interface perform the following steps:

1. Click on **Configuration > Mobile** from the left-hand menu and select **Sprint PCS** from the Service Provider drop-down menu. You should see a screen similar to the following:



2. After selecting a Service Provider, the unit needs to go through its provisioning process. Click the **Provision Device** button, and then follow the steps displayed within the Mobile Device Provisioning dialog screens.

   NOTE: The default options within the Mobile Device Provisioning dialog screens will be correct for most installations.

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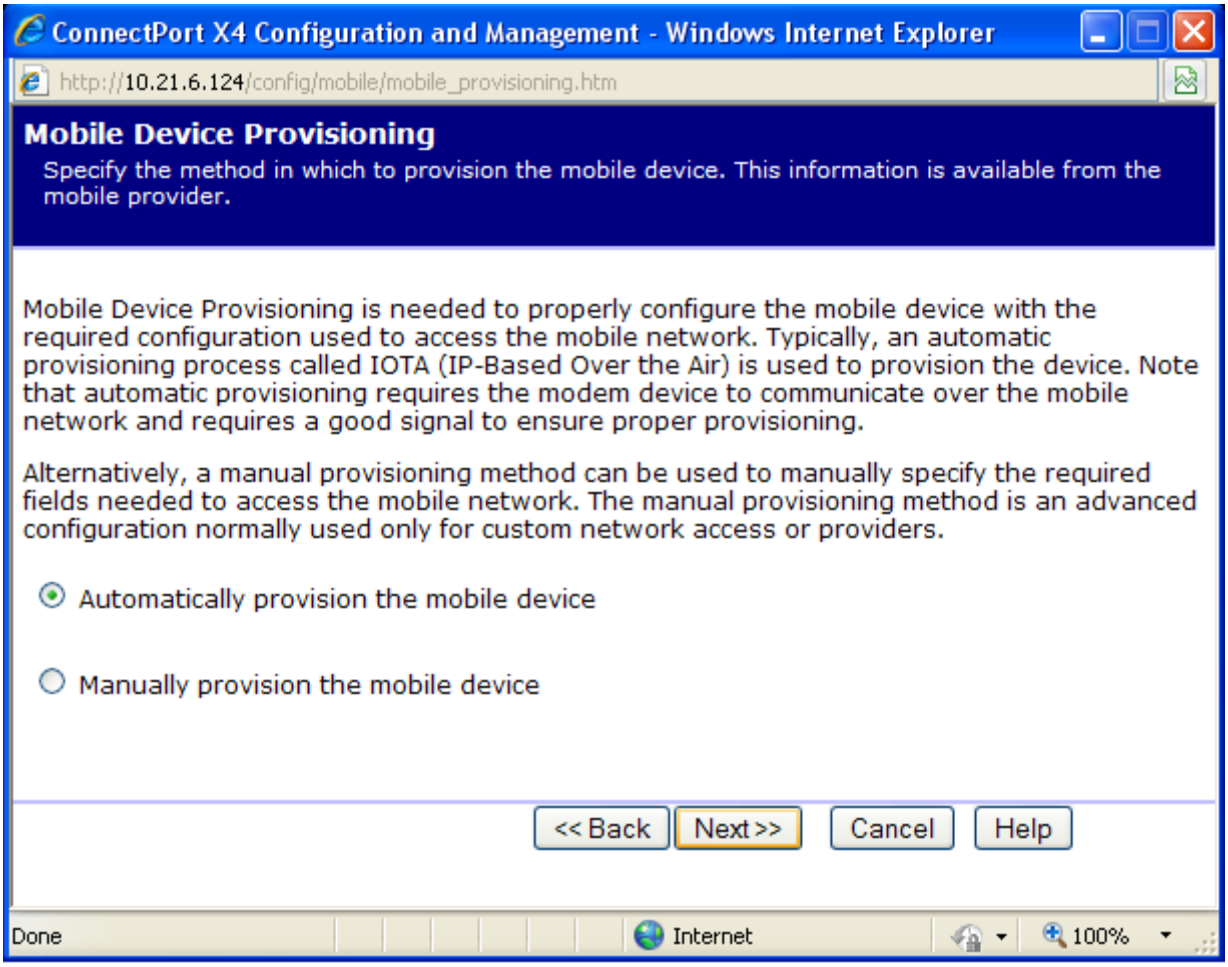
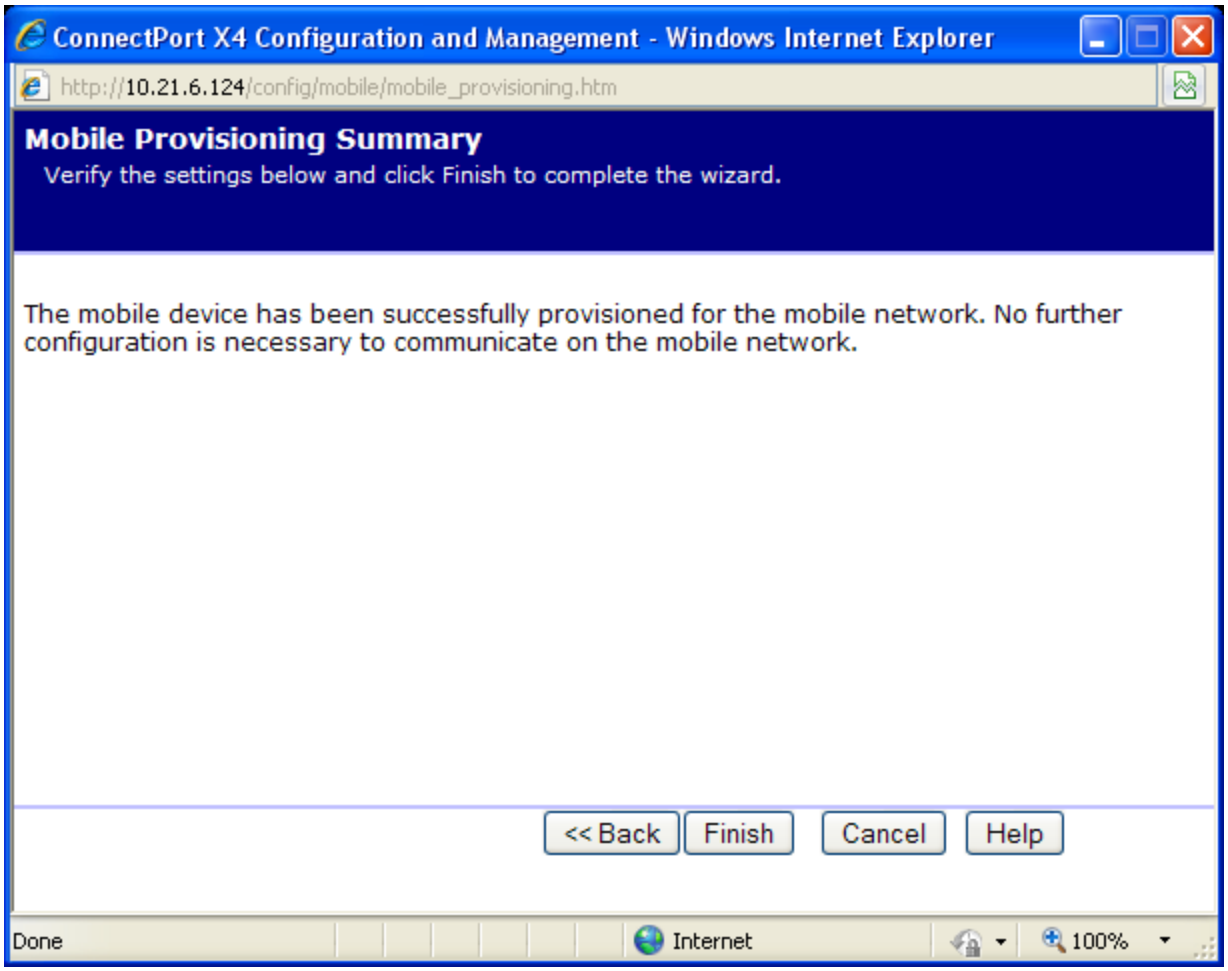
3. When the following screen is displayed, select the **Automatically provision the mobile device** option.



4. Continue to go through the mobile provisioning process until you see the following screen. This screen will indicate that the mobile provisioning process completed successfully.



5. Click **Finish** to return to the Mobile Configuration page.
6. Click **Apply** on the Mobile Configuration page when finished.

Your Mobile configuration is complete. Proceed to the "Verifying the ConnectPort X4 Cellular Connection Status" section on the next page.

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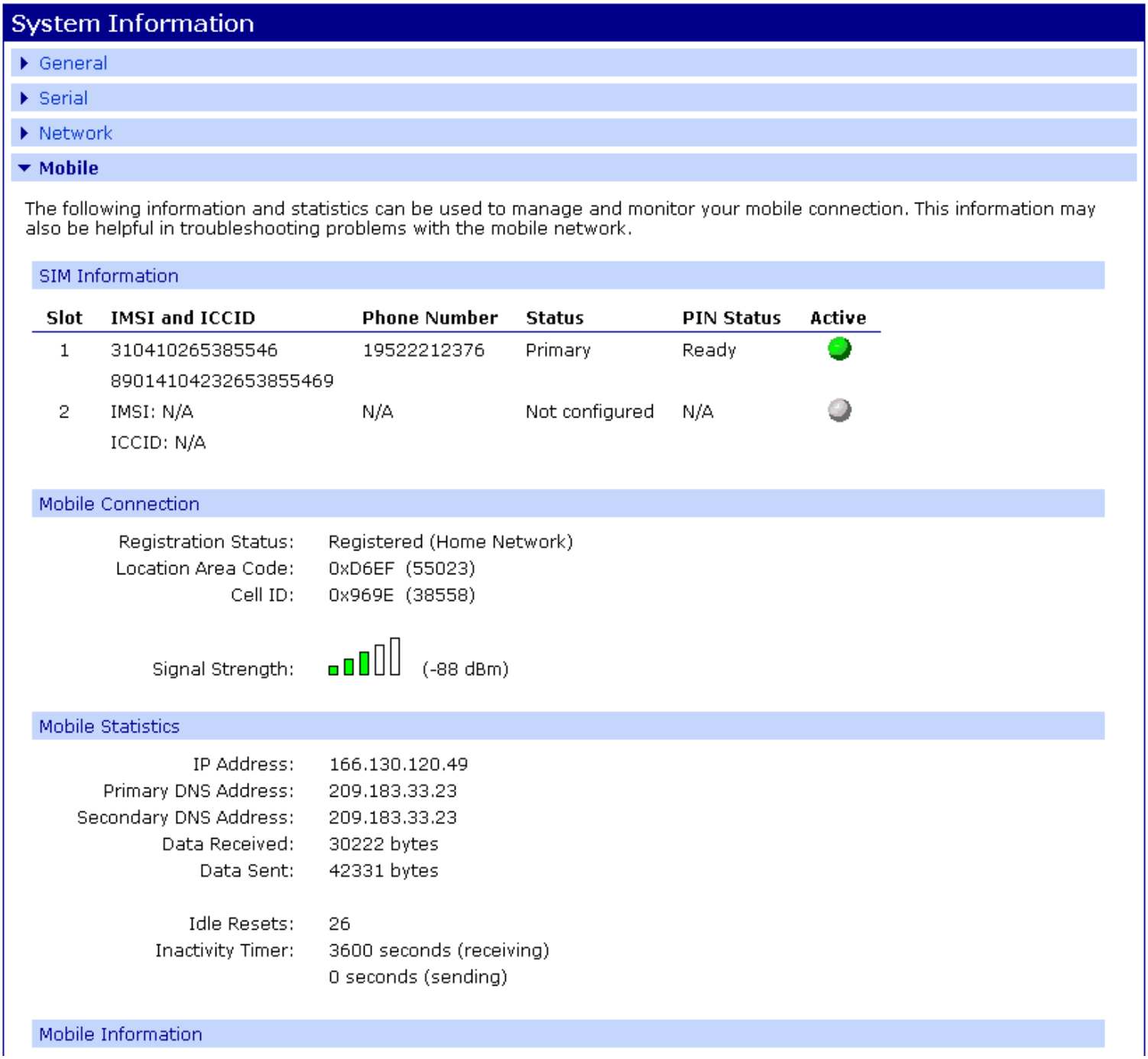
Verifying the ConnectPort X4 Cellular Connection Status

Once the correct cellular configuration has been applied, the ConnectPort X4 will begin to establish the cellular connection. You can verify the connection status by navigating to the **Administration > System Information > Mobile** page.



NOTE: In the above example, the ConnectPort X4 is connected to the cellular network and has obtained the 166.130.120.49 address for its cellular interface.

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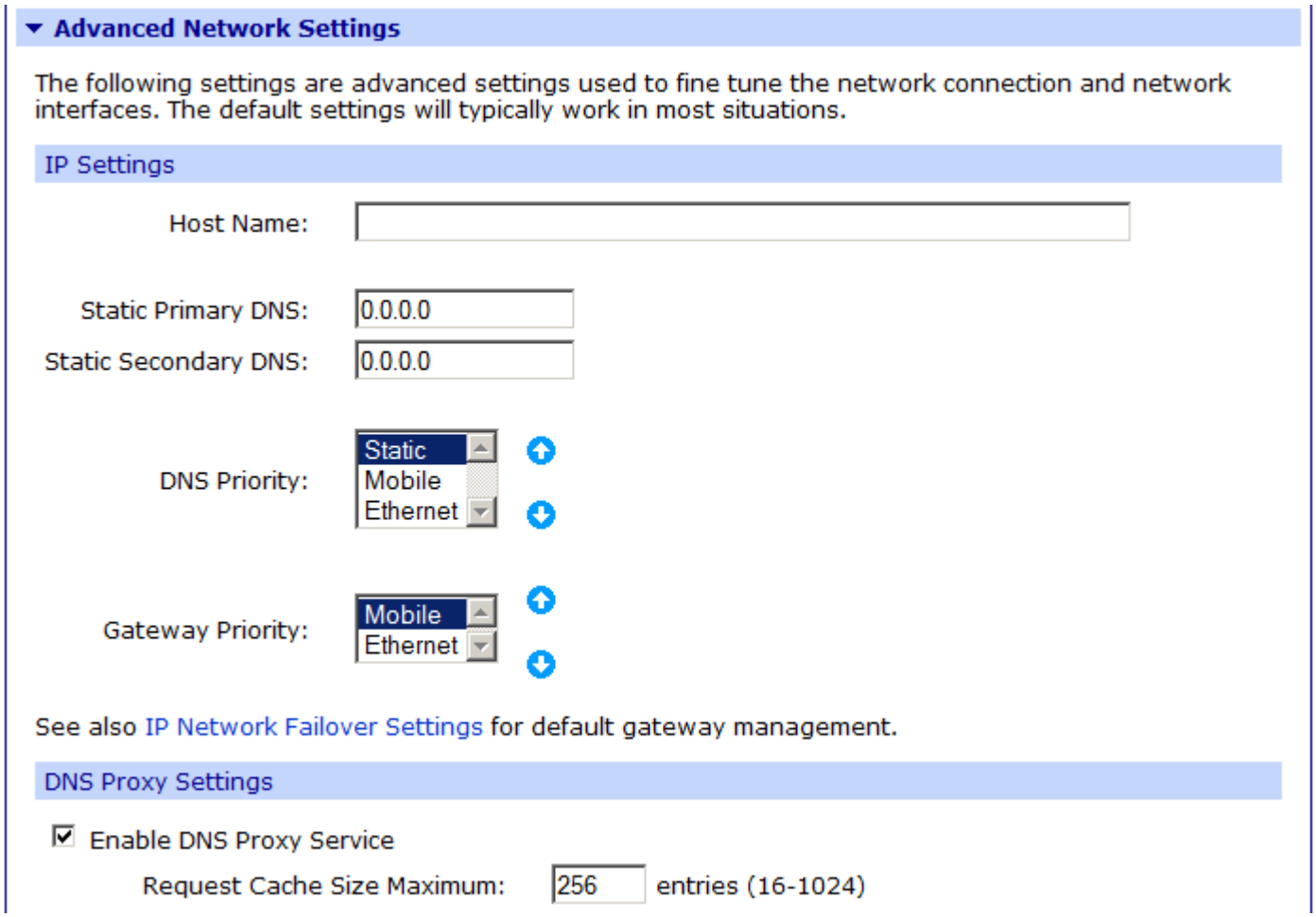
Configuring the ConnectPort X4 IP Gateway Priority

Once the ConnectPort X4's cellular interface is connected, it could conceivably reach the Internet via either of its network interfaces (Mobile or Ethernet). Configuring the ConnectPort X4 Gateway Priority List determines the priority for each of its network interfaces. By default the ConnectPort X4 gives the Mobile interface the highest priority.

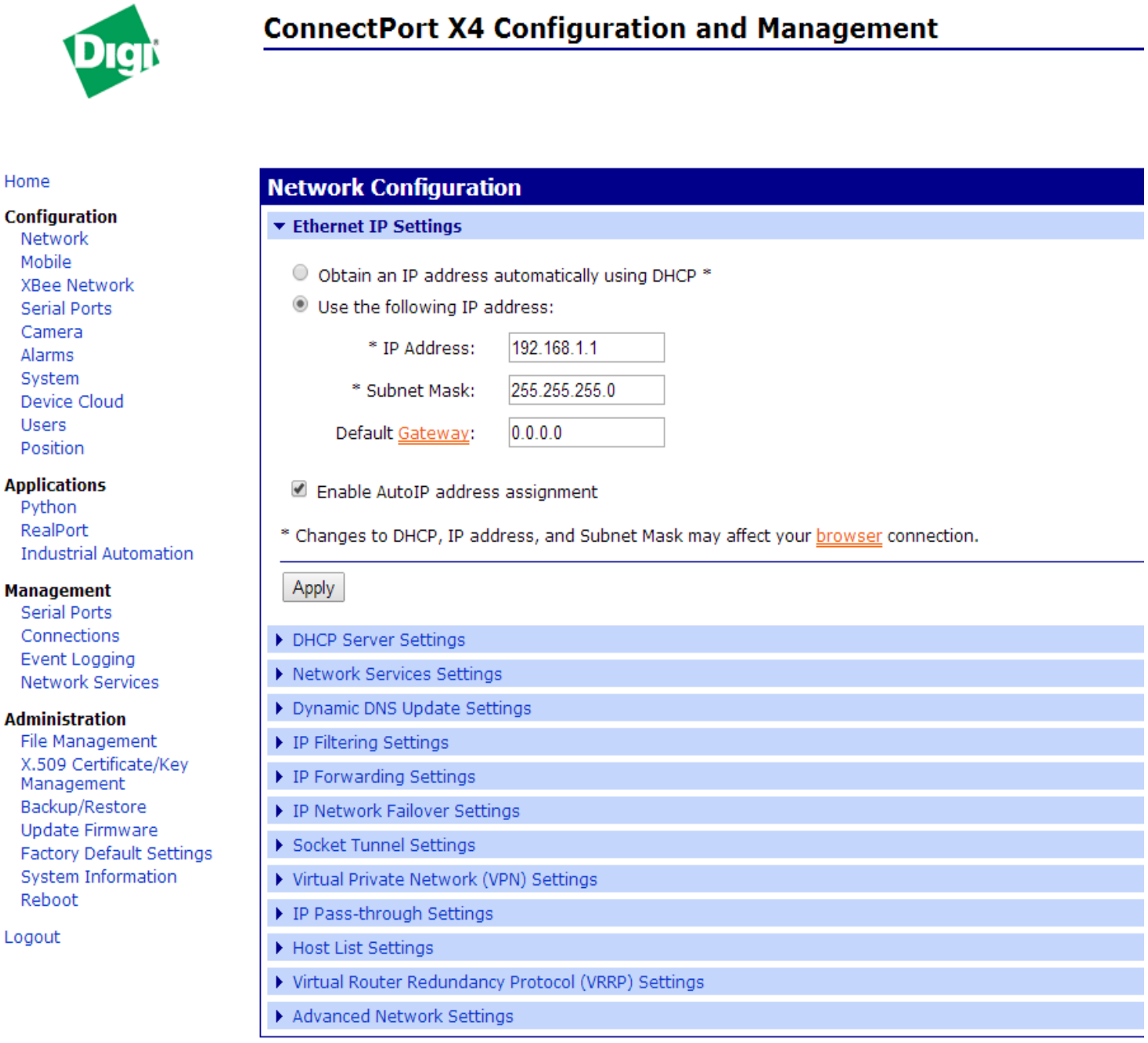
The ConnectPort X4 IP Gateway Priority List and the DNS Priority List are configurable via the **Configuration > Network > Advanced Network Settings** page, as displayed below:



Configuring the ConnectPort X4 Ethernet Interface

Now that the ConnectPort X4's cellular interface is configured, you will need to configure the Ethernet interface. The Ethernet configuration changes will involve disabling the DHCP Server and determining how the ConnectPort X4 will be given its IP address.

1. Click on **Configuration > Network** from the left-hand menu. You should see the Network Configuration screen (with the Ethernet IP Settings page displayed by default) as shown:



2. Click the DHCP Server Settings link and open the DHCP Server Settings page.

3. To disable the DHCP Server, un-check the "Enable Dynamic Host Configuration Protocol (DHCP) Server" entry. Click **Apply** when finished.
4. Return to the Ethernet IP Settings page by clicking the Ethernet IP Settings link.
5. Configure the ConnectPort X4 with either a static IP address, or have it get its IP address from a DHCP Server, whichever method is appropriate. Click **Apply** when finished.

The ConnectPort X4 is now ready to be moved to your Ethernet network, and by default will use its cellular interface as its primary network interface.

Disconnect the ConnectPort X4 from your PC and then connect it to the Ethernet network (if the PC needs to be reconfigured with a static IP address, do this prior to moving the PC to the Ethernet network as well).

Viewing ConnectPort X4 IP Address Information

The ConnectPort X4 Home page will display the IP address for both the Ethernet and Cellular networks.

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ConnectPort X4 Configuration and Management

Home

Configuration
- Network
- Mobile
- XBee Network
- Serial Ports
- Camera
- Alarms
- System
- Device Cloud
- Users
- Position

Applications
- Python
- RealPort
- Industrial Automation

Management
- Serial Ports
- Connections
- Event Logging
- Network Services

Administration
- File Management
- X.509 Certificate/Key Management
- Backup/Restore
- Update Firmware
- Factory Default Settings
- System Information
- Reboot

Logout

Home

Getting Started

Tutorial Not sure what to do next? This Tutorial can help.

System Summary

Model:	ConnectPort X4
Ethernet MAC Address:	00:40:9D:6D:83:99
Ethernet IP Address:	10.8.16.86
Mobile IP Address:	Not Connected
Description:	None
Contact:	None
Location:	None
Device ID:	00000000-00000000-00409DFF-FF6D8399

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Viewing ConnectPort X4 Ethernet Statistics

To view information about the Ethernet Link as well as Ethernet and IP statistics, navigate to the **Administration > System Information > Network** page**.**

You have completed basic configuration of your ConnectPort X4.

Chapter 3: ConnectPort X4 WiFi Models

The ConnectPort X4 WiFi models have WiFi and Ethernet interfaces. By default, the Ethernet interface is configured as a DHCP Server with a static IP Address of 192.168.1.1. This configuration simplifies the initial configuration of the unit.

Connecting to the ConnectPort X4 Home Page

1. Connect one end of the provided Ethernet cable to your PC, and the other end to the ConnectPort X4 Ethernet port (ensure that your PC is configured to obtain its IP address via DHCP).

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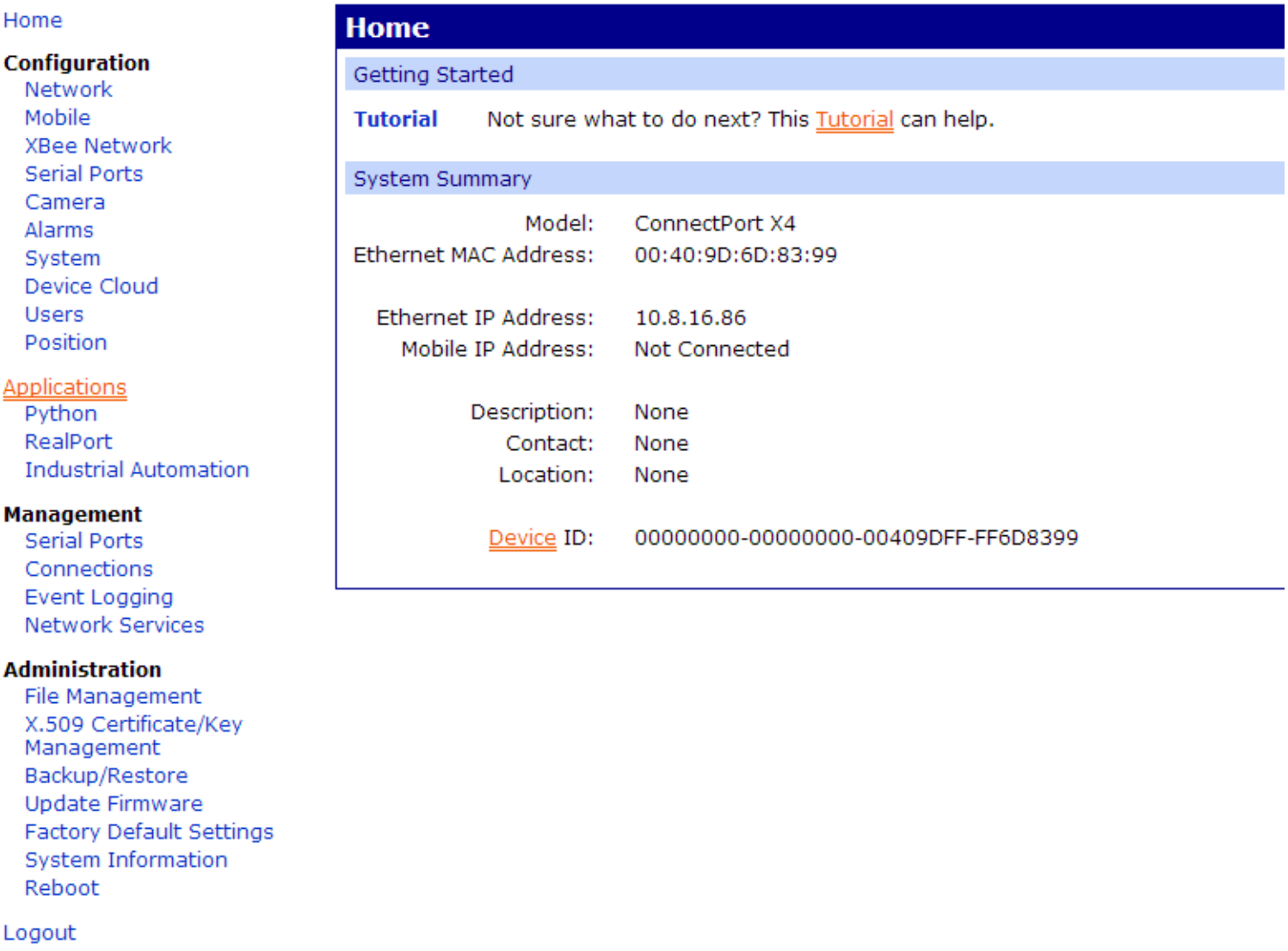
2. Open the web interface of the ConnectPort X4 by navigating to the 192.168.1.1 address in a web browser on the PC. You will see a screen similar to the following (this is the device's Home page):



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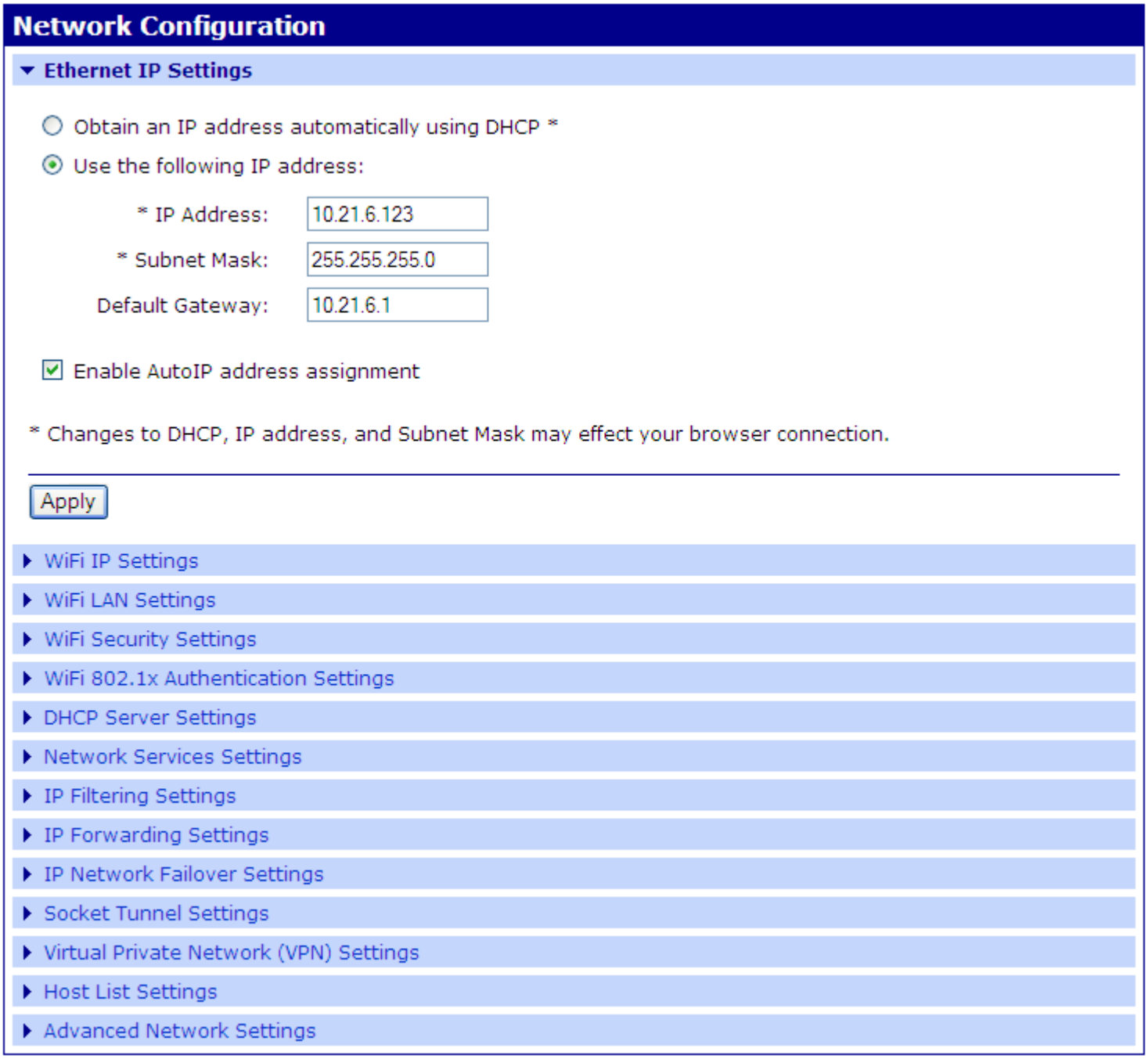
Configuring the ConnectPort X4 WiFi Interface

To configure the ConnectPort X4 WiFi interface perform the following steps:

1. Click on **Configuration > Network** from the left-hand menu. You should see the Network Configuration screen (with the Ethernet IP Settings page displayed by default) as shown:



Within the Network Configuration page WiFi IP, LAN, and Security settings can be configured depending on your type of installation.

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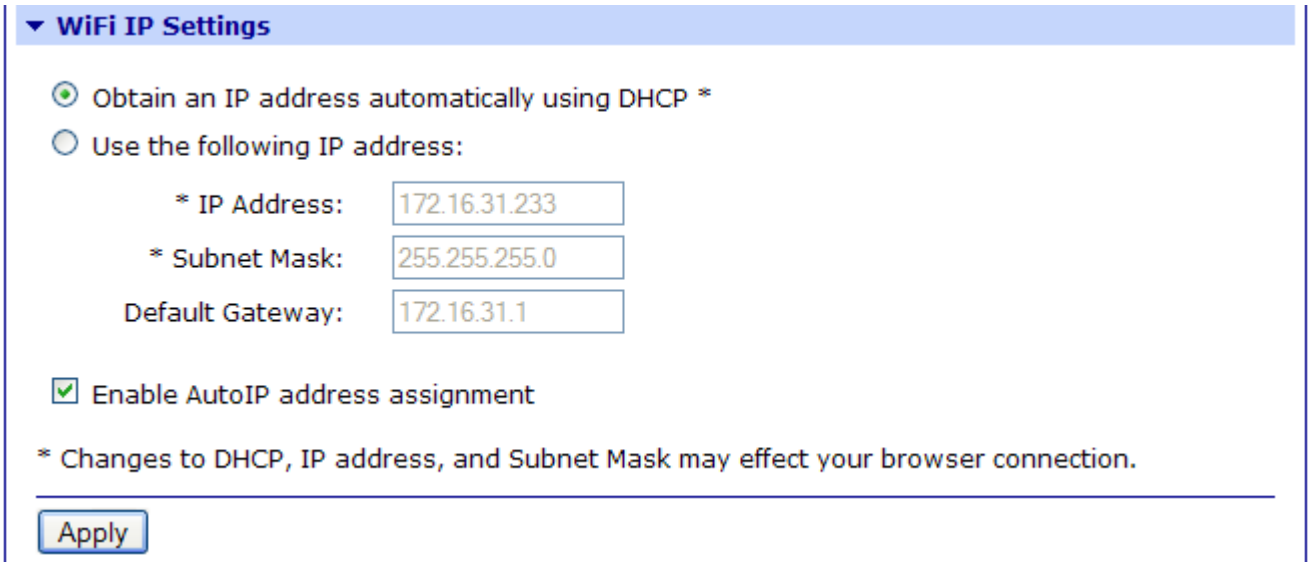
ConnectPort X4 WiFi IP Settings Page

2. Open this page by clicking on the WiFi IP Settings link (**Configuration > Network > WiFi IP Settings**), and configure how the ConnectPort X4 should determine its IP address on the WiFi network..



The WiFi IP Settings page allows you to set your ConnectPort X4 to obtain an IP address on the WiFi network automatically (using DHCP) or enter in your own IP address.

3. Configure your WiFi IP settings as desired. Click **Apply** when finished.

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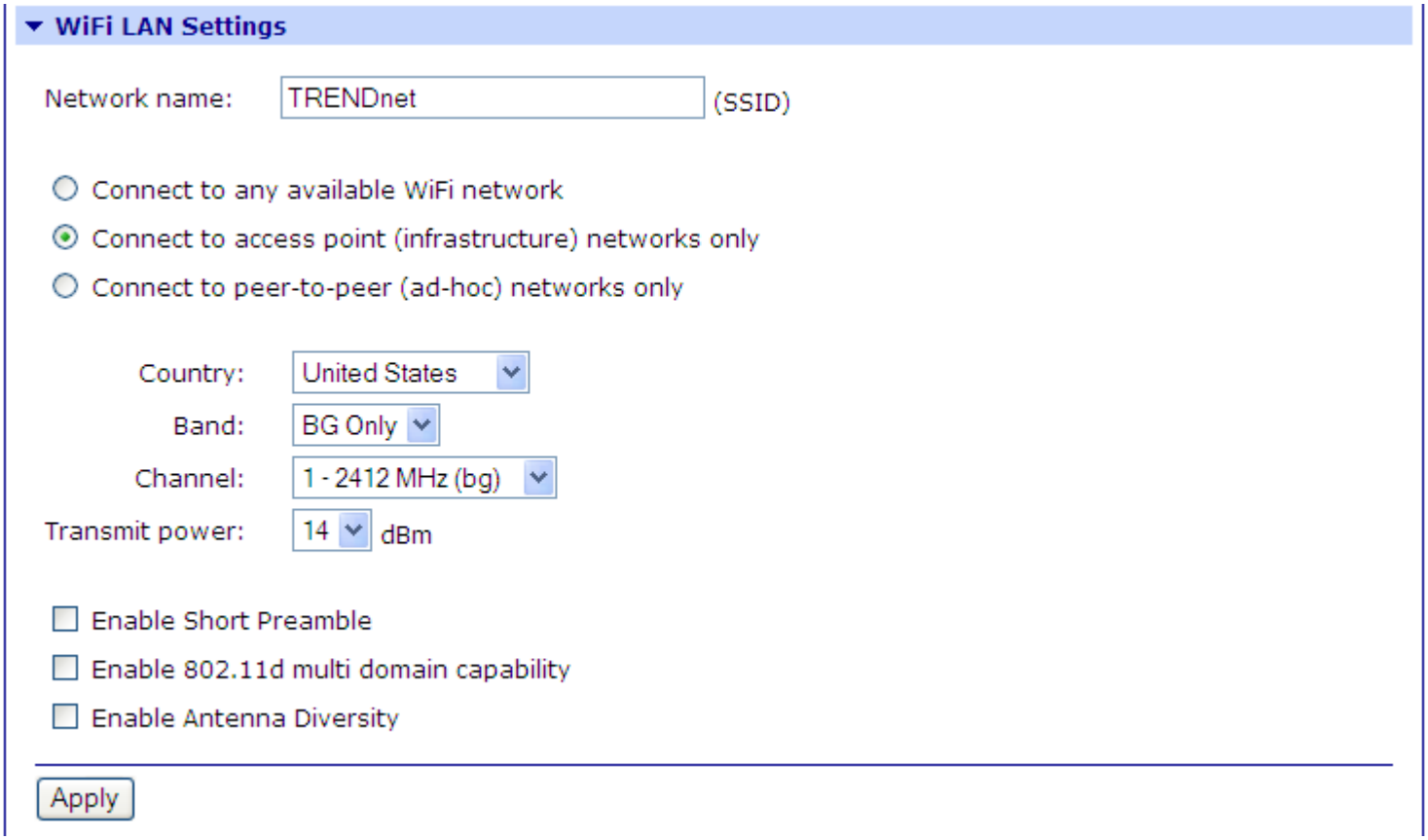
ConnectPort X4 WiFi LAN Settings Page

4. Open this page by clicking on the WiFi LAN Settings link (**Configuration > Network > WiFi LAN Settings**).



The WiFi LAN Settings page allows you to set your connection type and name your network. The above example configures the ConnectPort X4 to connect to the "TRENDnet" WiFi network, using Channel 1.

5. Configure your WiFi LAN settings as desired. Click **Apply** when finished.

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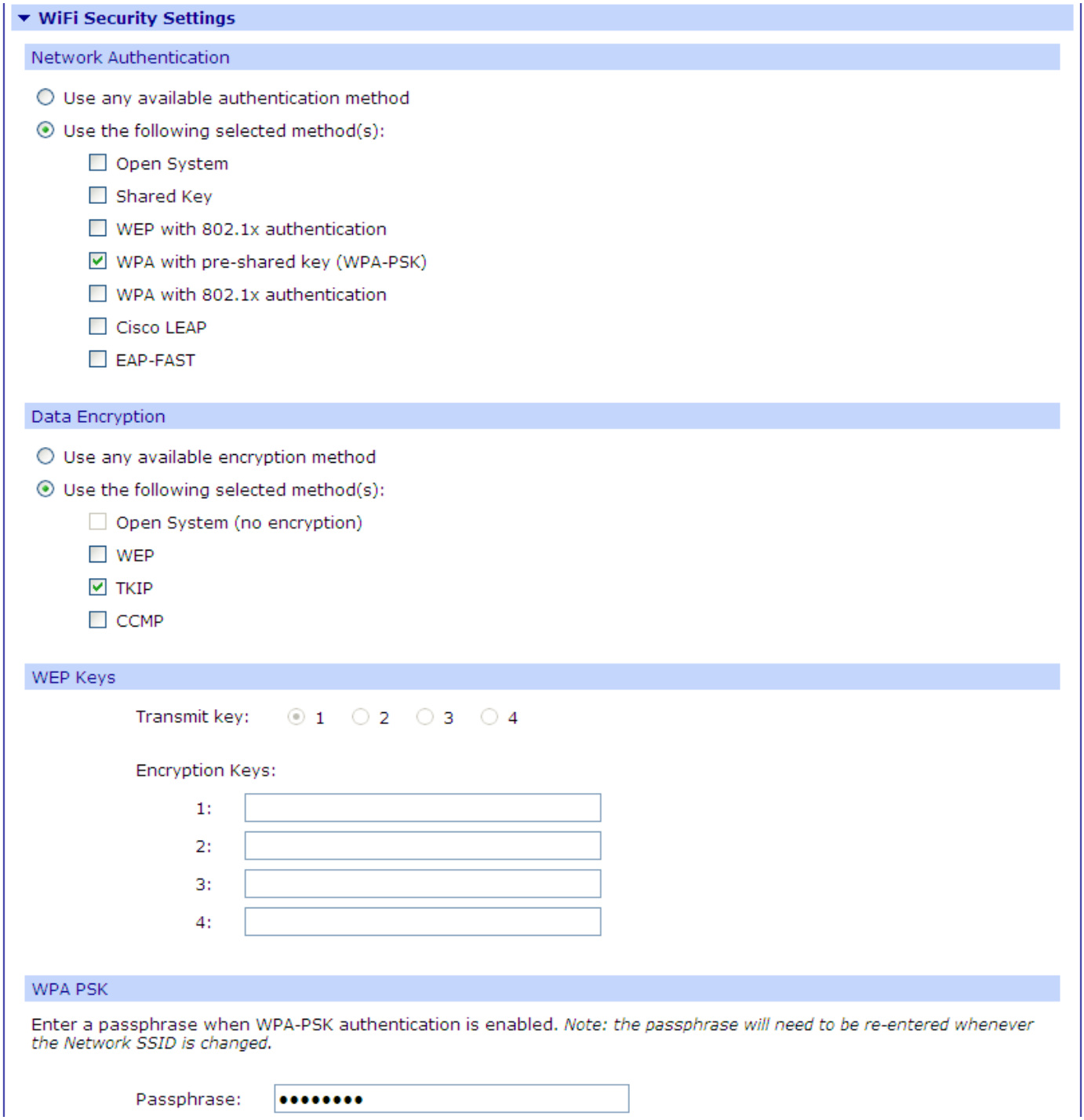
ConnectPort X4 WiFi Security Settings Page

6. Open this page by clicking on the WiFi Security Settings link (**Configuration > Network > WiFi Security Settings**).



The WiFi Security Settings page allows you to set Network Authentication, Data Encryption, WEP Key, WPA PSK, and Username/Password information for your network. The above example configures the ConnectPort X4 to use WPA-PSK authentication using TKIP encryption with a WPA PSK passphrase.

7. Configure your WiFi security settings as desired. Click **Apply** when finished.

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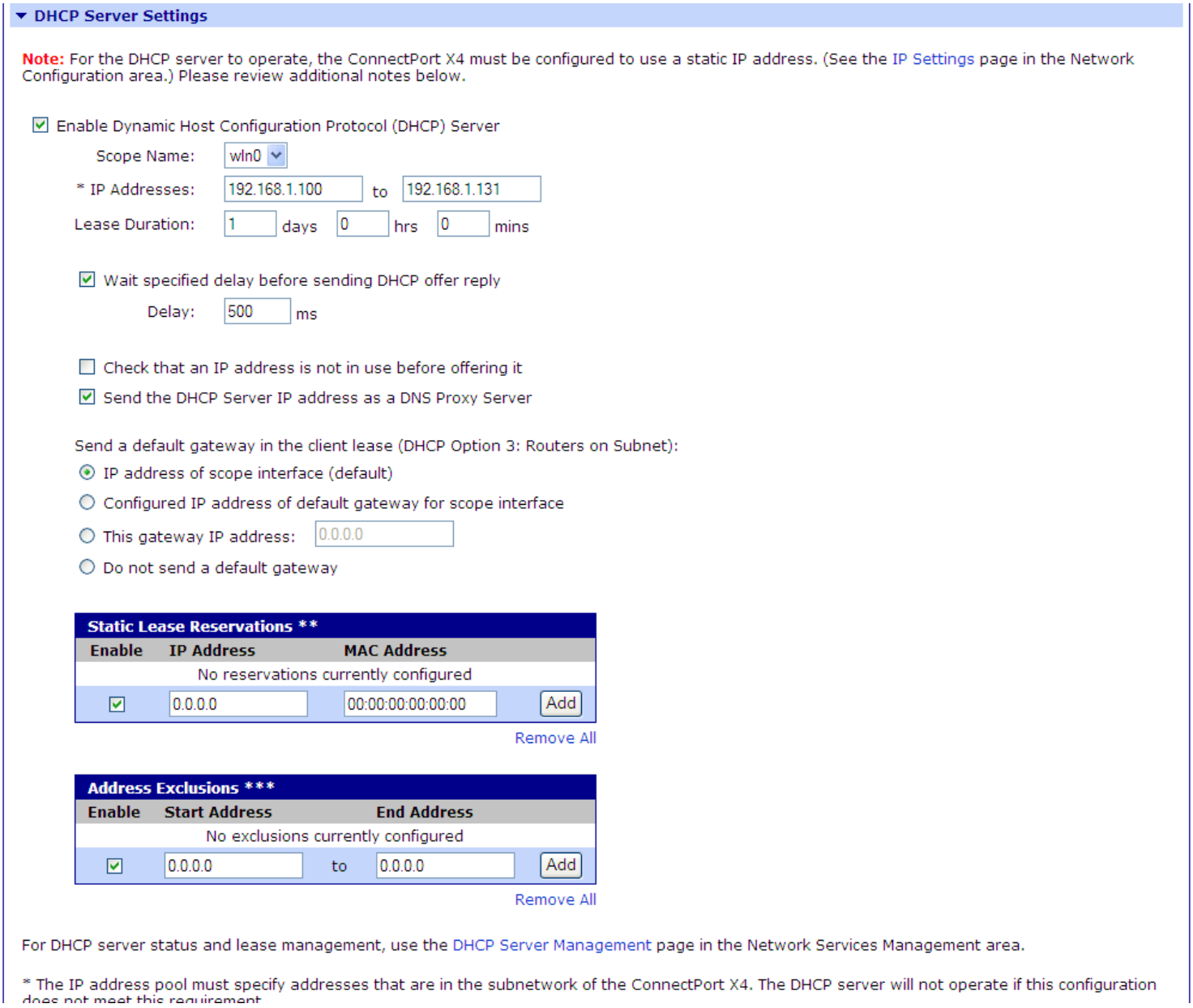
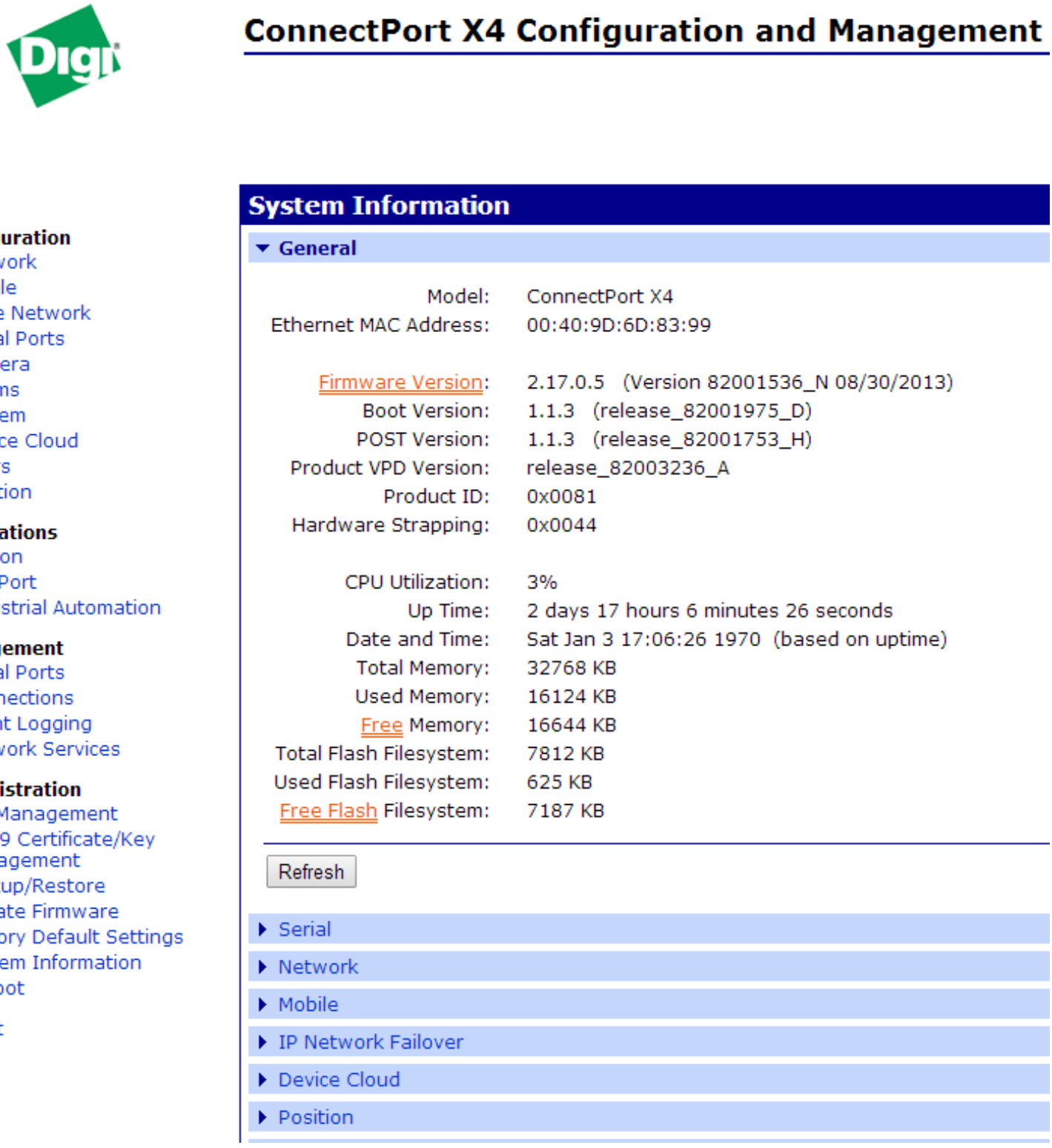
ConnectPort X4 DHCP Server Settings Page

8. If the ConnectPort X4 is to act as a DHCP Server on the WiFi network, open this page by clicking on the DHCP Server Settings link (**Configuration > Network > DHCP Server Settings**).
9. The ConnectPort X4 can act as a DHCP Server on either its WiFi or Ethernet interface. To enable the DHCP Server on the WiFi network, check the "Enable Dynamic Host Configuration Protocol (DHCP) Server" entry and select the "wln0" Scope name. Configure the other parameters as appropriate. Click **Apply** when finished.



Verifying the ConnectPort X4 WiFi Connection Status

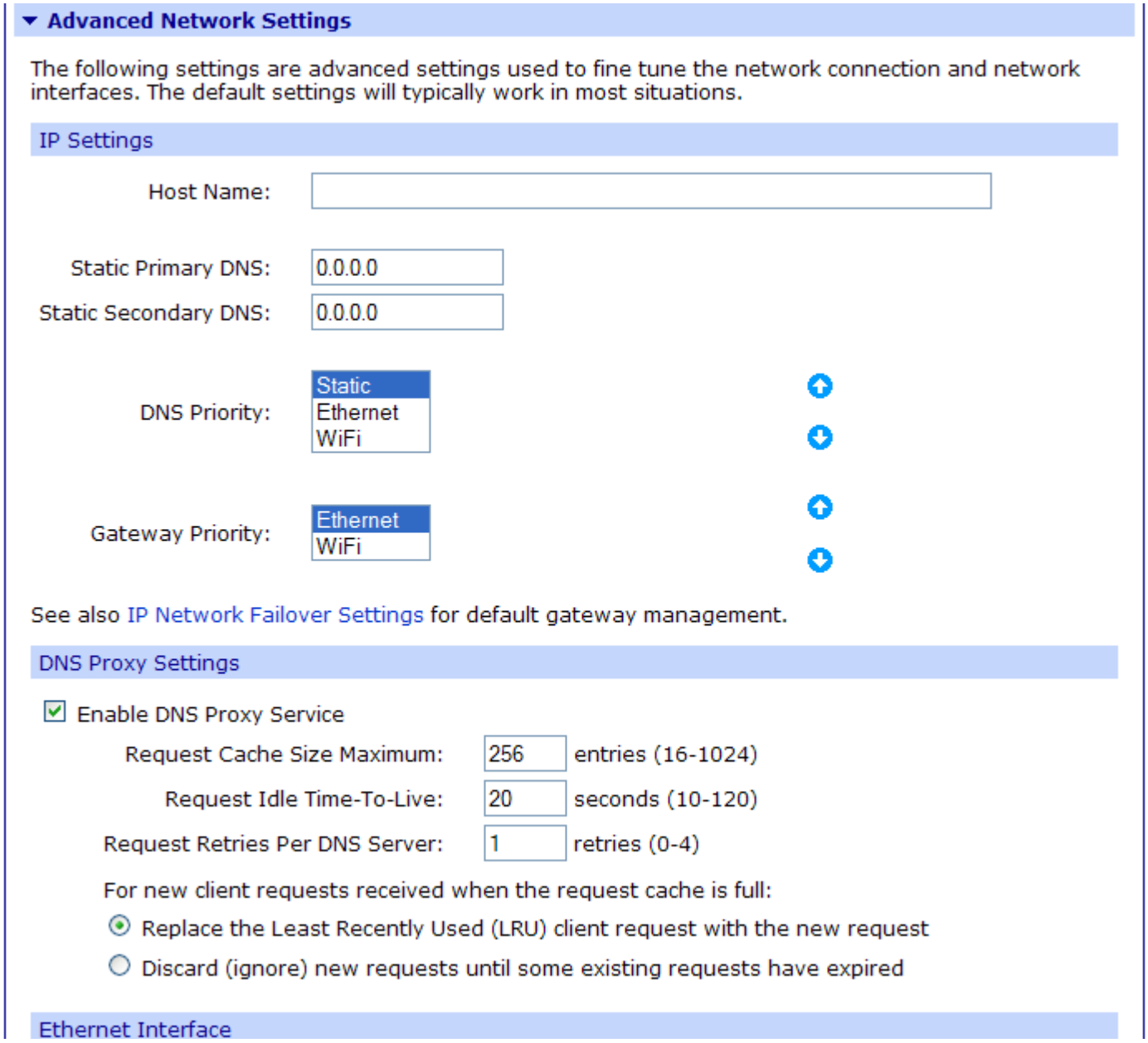
You can verify the WiFi connection status by navigating to the **Administration > System Information > Mobile** page. You should see a screen similar to the following displaying the settings and statistics for the WiFi network.



Configuring the ConnectPort X4 IP Gateway Priority

Once the WiFi interface is connected, the ConnectPort X4 could conceivably reach the Internet via either of its network interfaces (WiFi or Ethernet). Configuring the ConnectPort X4 Gateway Priority List determines the priority for each of its network interfaces. By default the ConnectPort X4 gives the Ethernet interface the highest priority.

The ConnectPort X4 IP Gateway Priority List and the DNS Priority List are configurable via the **Configuration > Network > Advanced Network Settings** page as displayed below.:



If you wish to change the DNS Server or IP Gateway Priority order, click on the desired entry and use the arrow keys to raise, or lowers its priority in the list of entries. Click **Apply** when finished.

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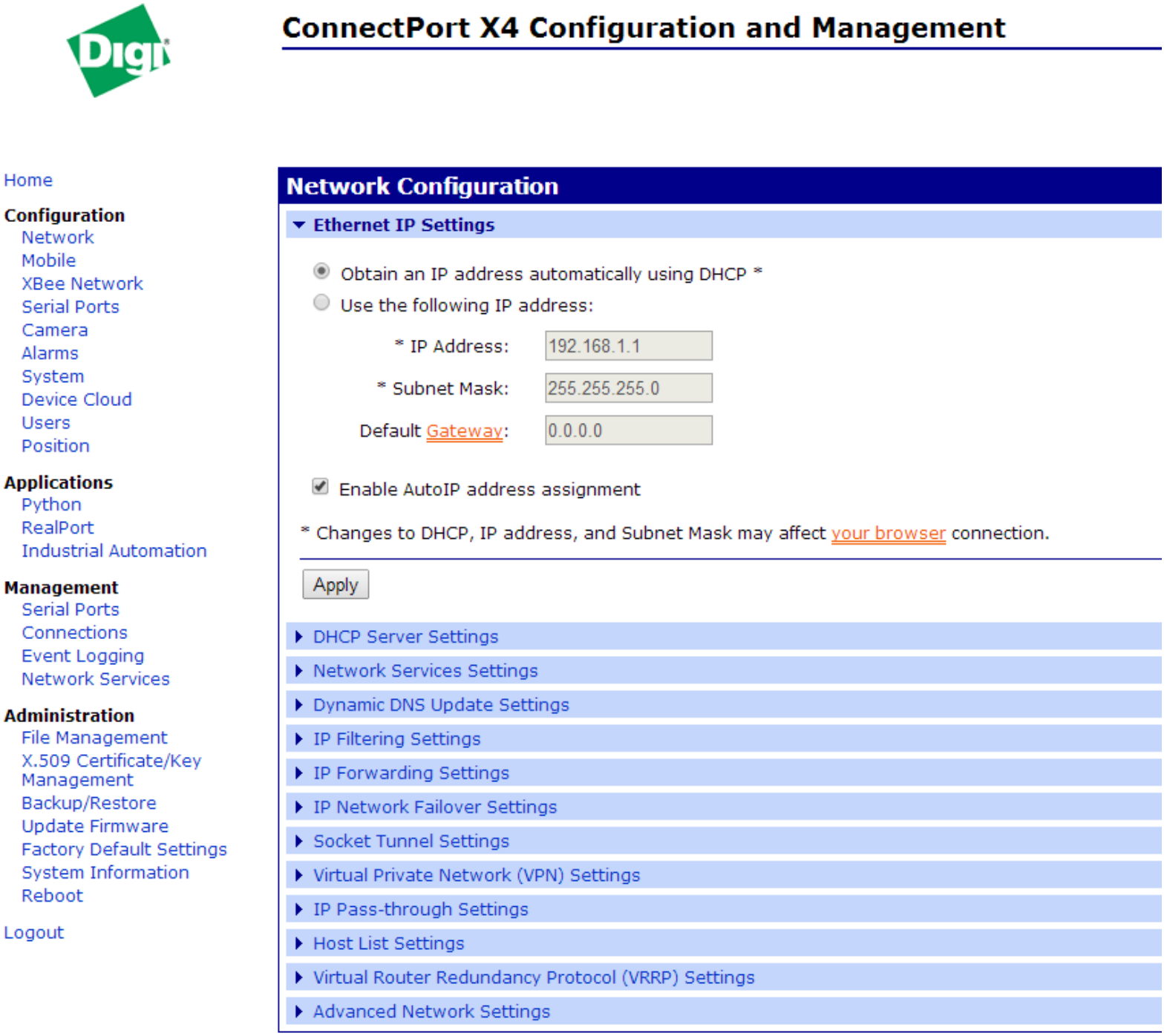
Configuring the ConnectPort X4 Ethernet Interface

Now that the ConnectPort X4's WiFi interface is configured, you will need to configure the Ethernet interface. The Ethernet configuration changes will involve disabling the DHCP Server and determining how the ConnectPort X4 will be given its IP address.

1. Click on **Configuration > Network** from the left-hand menu. You should see the Network Configuration screen (with the Ethernet IP Settings page displayed by default) as shown:



2. Click the DHCP Server Settings link and open the DHCP Server Settings page.

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3. The ConnectPort X4 can act as a DHCP Server on either its network interfaces. If it was not configured to act as a DHCP on the WiFi network above, and you do not wish for it to act as a DHCP Server on the Ethernet network, disable the DHCP Server by un-checking the "Enable Dynamic Host Configuration Protocol (DHCP) Server" entry. Click **Apply** when finished.

The ConnectPort X4 is now ready to be moved to your Ethernet network, and by default will use its Ethernet network as its primary network interface.

Disconnect the ConnectPort X4 from your PC and then connect it to the Ethernet network (if the PC needs to be reconfigured with a static IP address, do this prior to moving the PC to the Ethernet network as well).

Viewing ConnectPort X4 IP Address Information

The ConnectPort X4 Home page will display the IP address for both the Ethernet and WiFi networks.

Viewing ConnectPort X4 Ethernet Statistics

To view information about the Ethernet Link as well as Ethernet and IP statistics, navigate to the **Administration > System Information > Network** page.

You have completed basic configuration of your ConnectPort X4.