



ConnectPort[®] X4
Getting Started Guide

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Table of Contents

Introduction	5
Using this Guide.....	5
Digi Information	5
Contact Information	5
Chapter 1: Ethernet Models	6
Connecting to the ConnectPort X4 Home Page.....	6
Configuring Ethernet Settings.....	9
Ethernet IP Settings Page	9
Viewing IP Address Information	10
Viewing Ethernet Statistics	10
Chapter 2: Cellular Models	11
Connecting to the ConnectPort X4 Home Page.....	11
Configuring the Cellular Interface.....	12
GSM/Edge Cellular Configuration Example (AT&T)	12
CDMA Cellular Configuration Example (Verizon)	14
CDMA Cellular Configuration Example (Sprint)	17
Verifying the Cellular Connection Status.....	20
Configuring the ConnectPort X4 IP Gateway Priority	21
Configuring the Ethernet Interface	22
Viewing IP Address Information	23
Viewing Ethernet Statistics	24
Chapter 3: WiMAX Models	25
Connecting to the ConnectPort X4 Home Page.....	25
Connecting the WiMAX Interface	26
Viewing the WiMAX Connection Status	28

Configuring the ConnectPort X4 IP Gateway Priority	29
Configuring the Ethernet Interface	30
Viewing IP Address Information	31
Viewing Ethernet Statistics	31
Chapter 4: WiFi Models	32
Connecting to the ConnectPort X4 Home Page.....	32
Configuring the WiFi Interface	33
WiFi IP Settings Page	34
WiFi LAN Settings Page	35
WiFi Security Settings Page	36
DHCP Server Settings Page	37
Verifying the WiFi Connection Status.....	38
Configuring the ConnectPort X4 IP Gateway Priority	39
Configuring the Ethernet Interface	40
Viewing IP Address Information	41
Viewing Ethernet Statistics	41

Introduction

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 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	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

Chapter 1: 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.

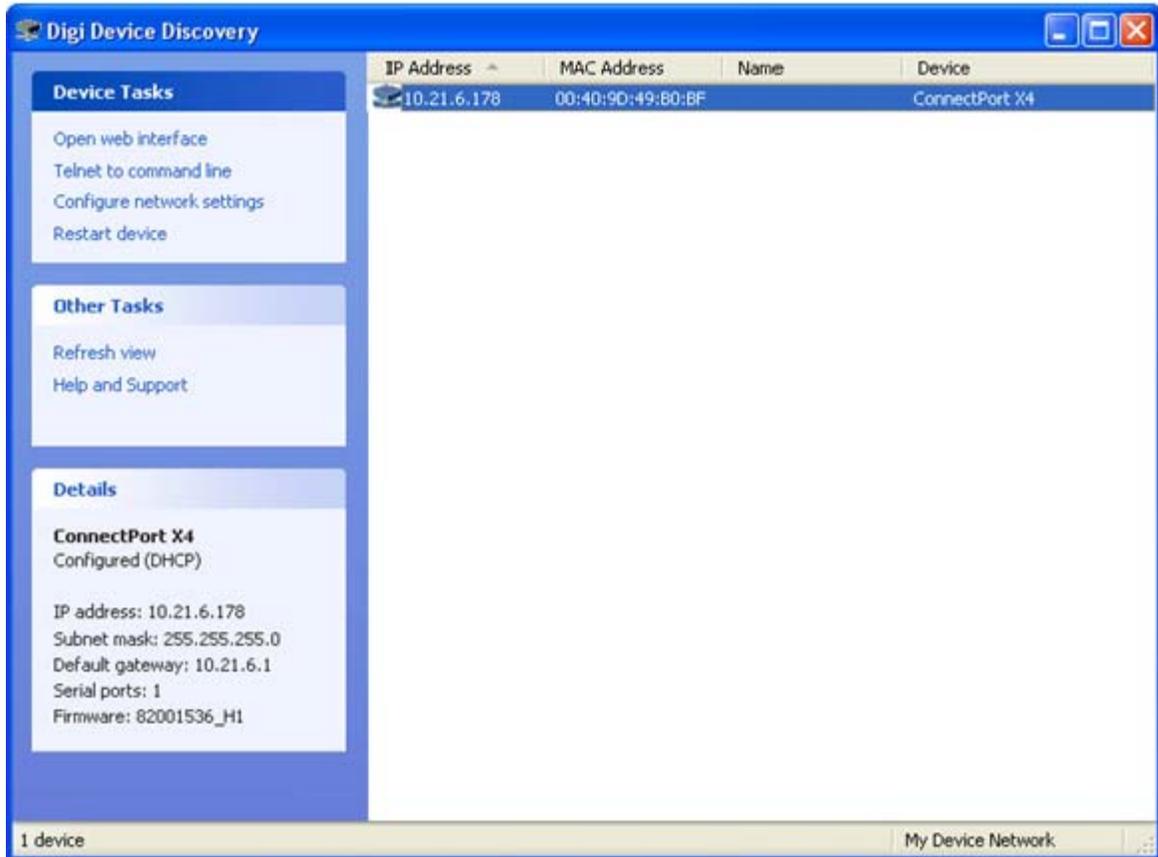
Connecting to the ConnectPort X4 Home Page

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.

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



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

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



ConnectPort X4 Configuration and Management

[? Help](#)

[Home](#)

Configuration

- [Network](#)
- [XBee Network](#)
- [Serial Ports](#)
- [Camera](#)
- [Alarms](#)
- [System](#)
- [iDigi](#)
- [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:49:B0:BF
Ethernet IP Address:	10.21.6.122
Description:	None
Contact:	None
Location:	None
Device ID:	00000000-00000000-00409DFF-FF49B0BF

Configuring Ethernet Settings

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

The screenshot shows the 'Network Configuration' page with a dark blue header. Underneath, the 'Ethernet IP Settings' section is expanded, showing two radio button options: 'Obtain an IP address automatically using DHCP *' (unselected) and 'Use the following IP address:' (selected). Below these are three input fields: '* IP Address:' with '10.21.6.122', '* Subnet Mask:' with '255.255.255.0', and 'Default Gateway:' with '10.21.6.1'. A checked checkbox labeled 'Enable AutoIP address assignment' is also present. A note at the bottom of the section states '* Changes to DHCP, IP address, and Subnet Mask may affect your browser connection.' Below the settings is an 'Apply' button. A sidebar on the left contains a list of other network settings: DHCP Server Settings, Network Services Settings, Dynamic DNS Update Settings, IP Filtering Settings, IP Forwarding Settings, Socket Tunnel Settings, Virtual Private Network (VPN) Settings, Host List Settings, and Advanced Network Settings.

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.

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.

Viewing IP Address Information

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

Viewing 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 2: 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):



ConnectPort X4 Configuration and Management

Home ? Help

Home

Configuration

- Network
- Mobile
- XBee Network
- Serial Ports
- Camera
- Alarms
- System
- iDigi
- Users
- Position

Applications

- Python
- RealPort
- Industrial Automation

Management

- Serial Ports
- Connections
- Event Logging
- Network Services

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:4F:D5:E2
Ethernet IP Address:	192.168.1.1
Mobile IP Address:	Not Connected
Description:	None
Contact:	None
Location:	None
Device ID:	00000000-00000000-00409DFF-FF4FD5E2

Configuring the 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 14, for Sprint users see page 17), go to the “Verifying the Cellular Connection Status” section on page 20.

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**.

Mobile Configuration

Select a SIM to configure from the list below.

Settings on this page apply to the selected SIM.

SIM:	Slot 1 <input type="button" value="v"/>	<input type="button" value="Set as Primary"/>
IMSI:	310410265385546	
ICCID:	89014104232653855469	
Phone Number:	19522212376	
Status:	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.

▼ Mobile Settings

Select the service provider, service plan, and connection settings used in connecting to the mobile network.

These settings are provided by and can be retrieved from the service provider.

Mobile Service Provider Settings

Service Provider:

Service Plan / APN:

Custom Plan Name:

Mobile Connection Settings

Re-establish connection when no data is received for a period of time.

Inactivity timeout: seconds

4. Click **Apply** when finished.

Your mobile configuration is complete. Proceed to the “Verifying the Cellular Connection Status” section on page 20.

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:

Mobile Configuration

▼ **Mobile Settings**

Select the service provider, service plan, and connection settings used in connecting to the mobile network.

These settings are provided by and can be retrieved from the service provider.

Mobile Service Provider Settings

Service Provider:

Mobile IP mode:

Caution: Modify the mobile IP mode only on the recommendation of your service provider.

This device needs to be provisioned:

Mobile Connection Settings

Re-establish connection when no data is received for a period of time.

Inactivity timeout: seconds

▶ GPS Settings

▶ Advanced Settings

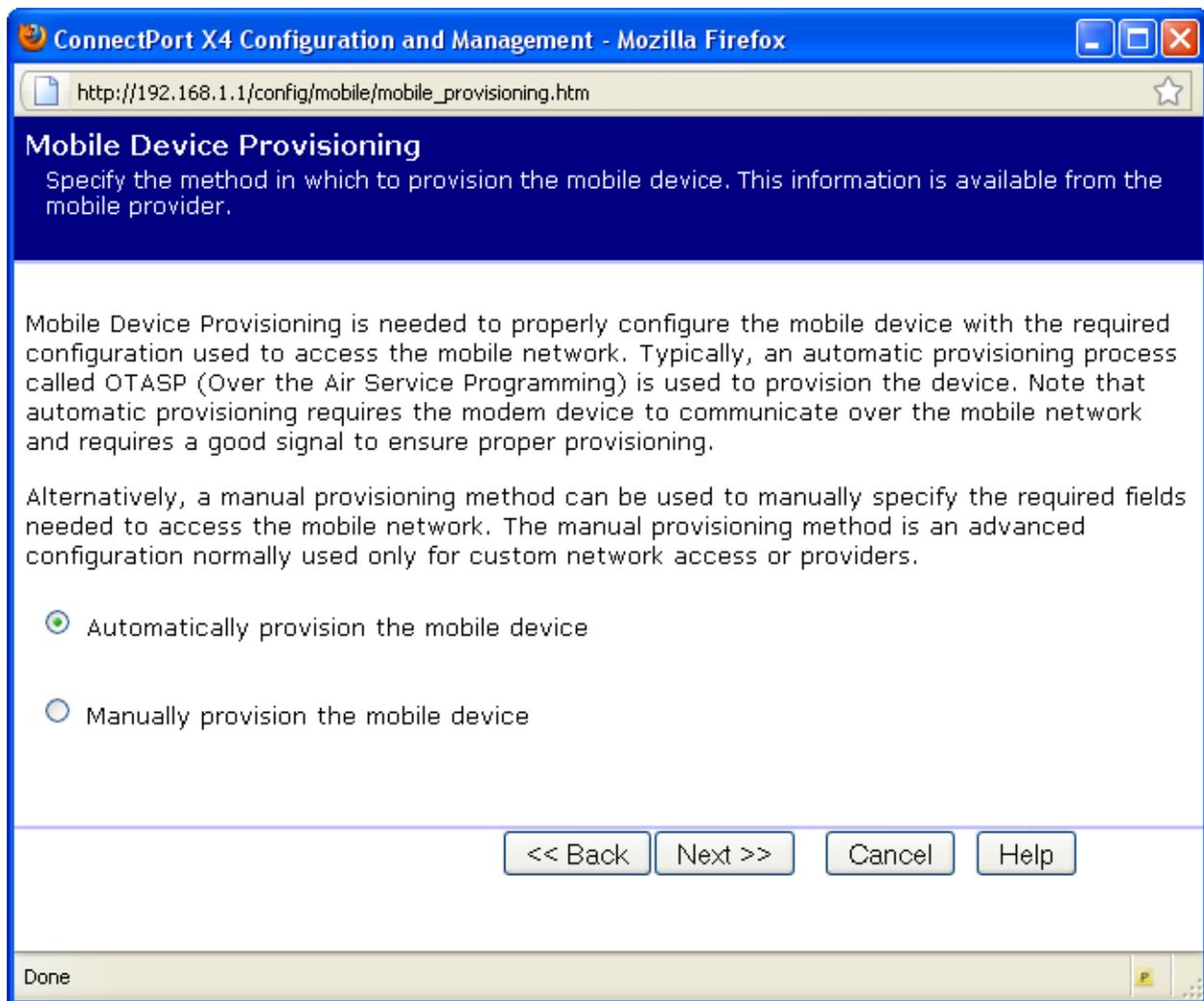
▶ SureLink Settings

▶ Short Message Service (SMS) Settings

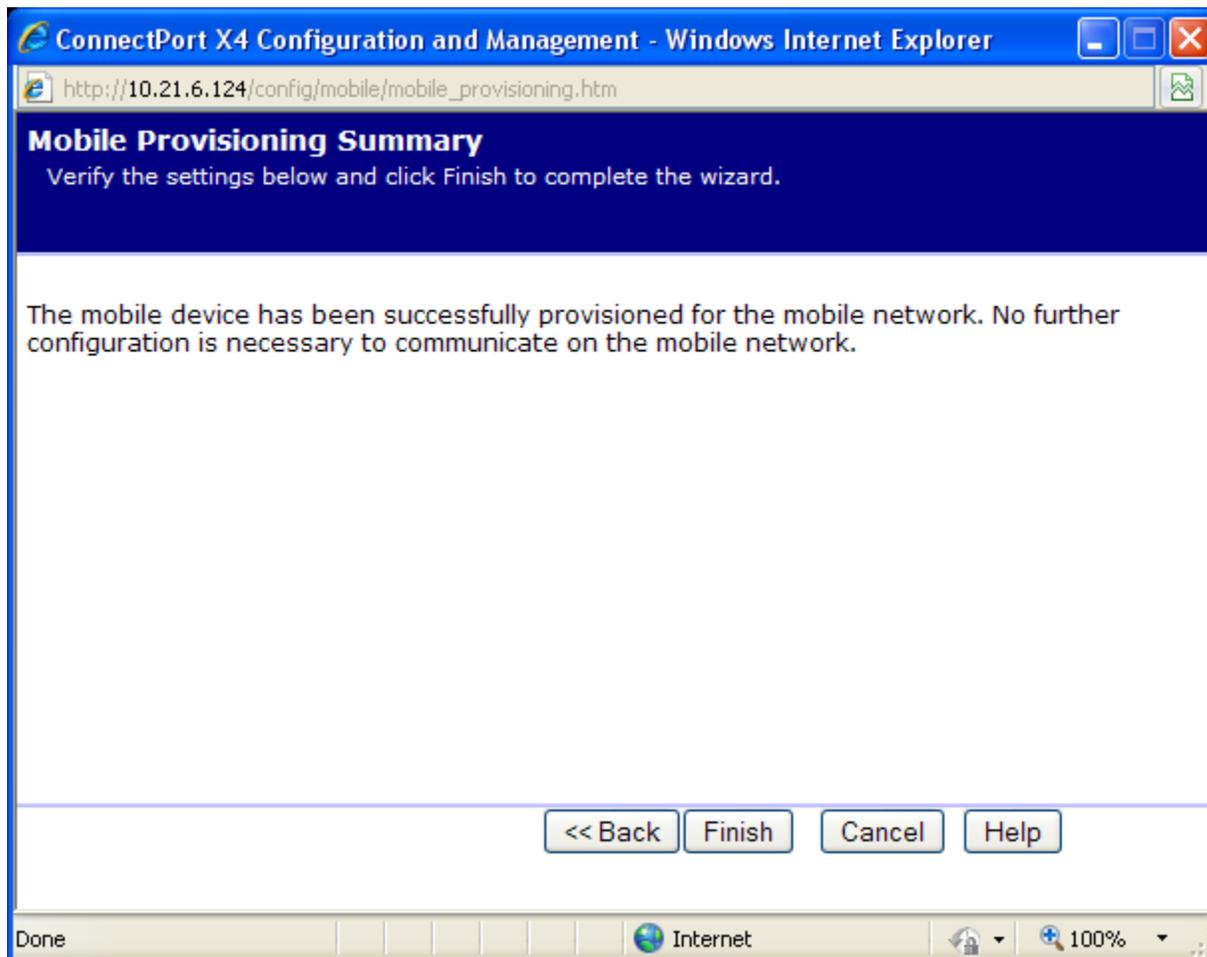
2. After selecting a Service Provider, the unit needs to go through its provisioning process. Click the **Provision Device** button, and then follow the steps displayed within the Mobile Device Provisioning dialog screens.

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 Cellular Connection Status” section on page 20.

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:

Mobile Configuration

▼ **Mobile Settings**

Select the service provider, service plan, and connection settings used in connecting to the mobile network. These settings are provided by and can be retrieved from the service provider.

Mobile Service Provider Settings

Service Provider:

This device needs to be provisioned:

Update the preferred roaming list (PRL):

Mobile Connection Settings

Re-establish connection when no data is received for a period of time.

Inactivity timeout: seconds

▶ **GPS Settings**

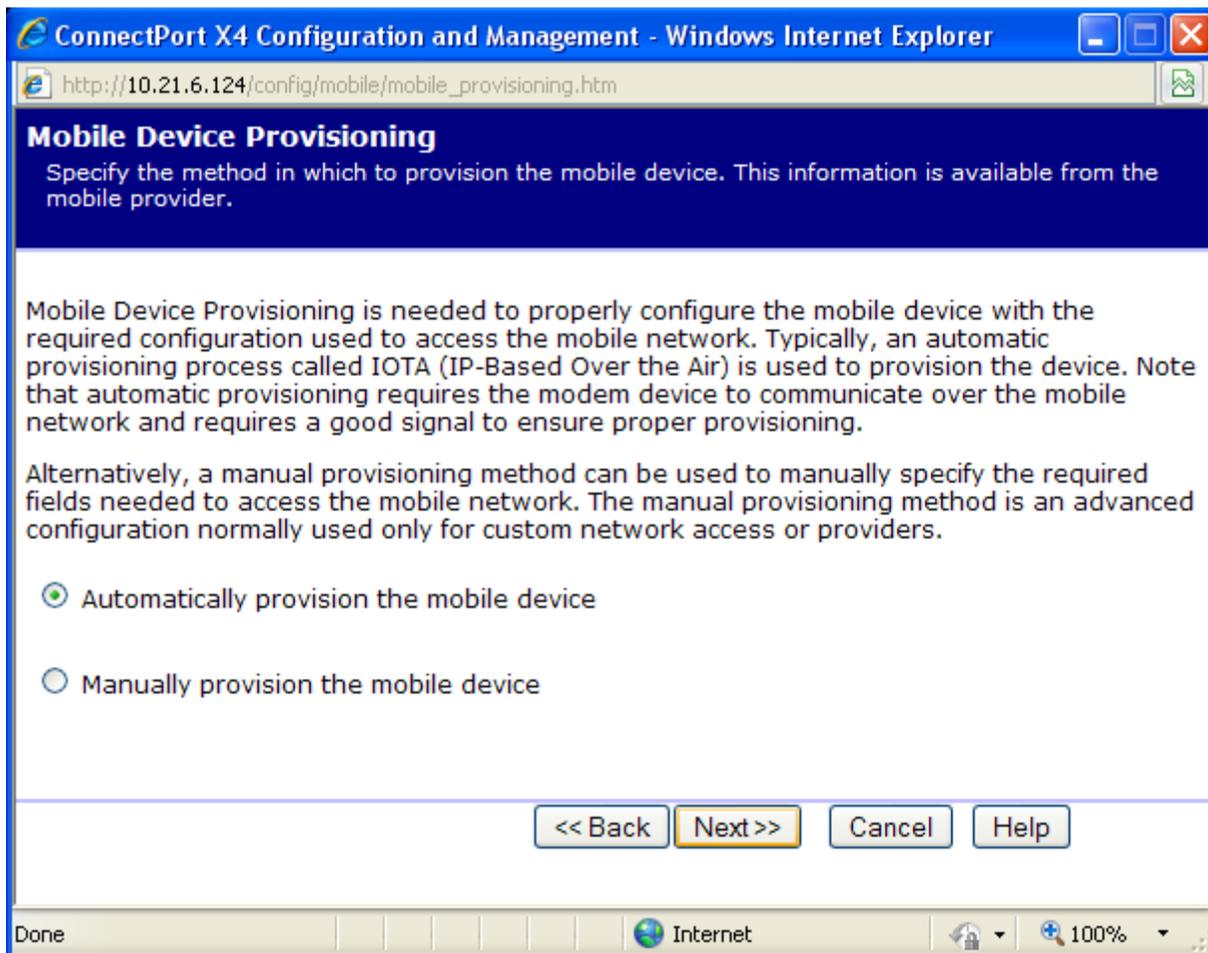
▶ **SureLink Settings**

▶ **Short Message Service (SMS) Settings**

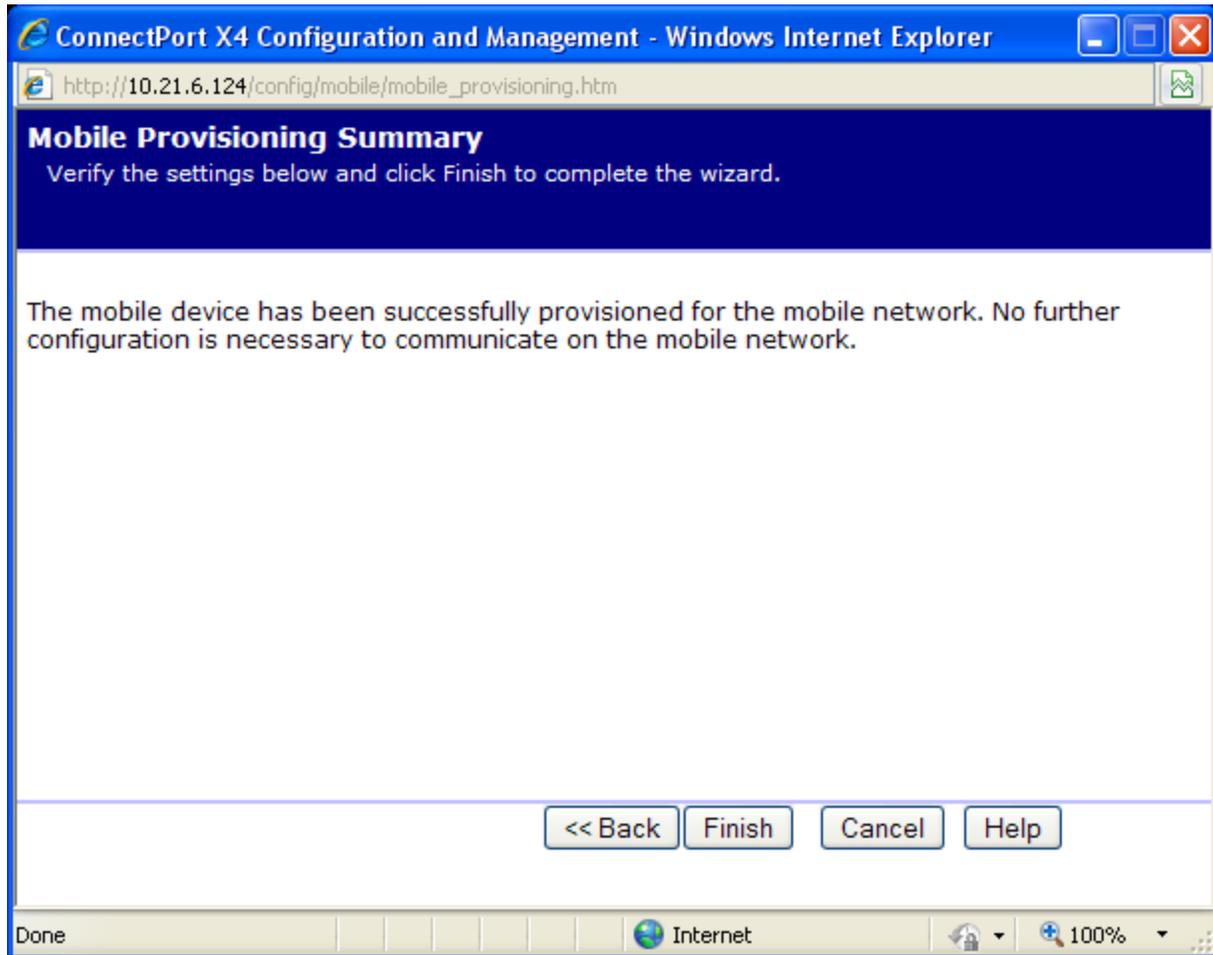
2. After selecting a Service Provider, the unit needs to go through its provisioning process. Click the **Provision Device** button, and then follow the steps displayed within the Mobile Device Provisioning dialog screens.

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 Cellular Connection Status” section on the next page.

Verifying the 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.

System Information

▶ General

▶ Serial

▶ Network

▼ Mobile

The following information and statistics can be used to manage and monitor your mobile connection. This information may also be helpful in troubleshooting problems with the mobile network.

SIM Information

Slot	IMSI and ICCID	Phone Number	Status	PIN Status	Active
1	310410265385546 89014104232653855469	19522212376	Primary	Ready	
2	IMSI: N/A ICCID: N/A	N/A	Not configured	N/A	

Mobile Connection

Registration Status: Registered (Home Network)
 Location Area Code: 0xD6EF (55023)
 Cell ID: 0x969E (38558)

Signal Strength:  (-88 dBm)

Mobile Statistics

IP Address: 166.130.120.49
 Primary DNS Address: 209.183.33.23
 Secondary DNS Address: 209.183.33.23
 Data Received: 30222 bytes
 Data Sent: 42331 bytes

Idle Resets: 26
 Inactivity Timer: 3600 seconds (receiving)
 0 seconds (sending)

Mobile Information

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.

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:

▼ Advanced Network Settings

The following settings are advanced settings used to fine tune the network connection and network interfaces. The default settings will typically work in most situations.

IP Settings

Host Name:

Static Primary DNS:

Static Secondary DNS:

DNS Priority:

Static	▲
Mobile	
Ethernet	▼

Gateway Priority:

Mobile	▲
Ethernet	▼

See also [IP Network Failover Settings](#) for default gateway management.

DNS Proxy Settings

Enable DNS Proxy Service

Request Cache Size Maximum: entries (16-1024)

Configuring the 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:



ConnectPort X4 Configuration and Management

Home

Configuration

- Network
- Mobile
- XBee Network
- Serial Ports
- Camera
- Alarms
- System
- iDigi
- 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

Network Configuration

▼ Ethernet IP Settings

Obtain an IP address automatically using DHCP *

Use the following IP address:

* IP Address:

* Subnet Mask:

Default Gateway:

Enable AutoIP address assignment

* Changes to DHCP, IP address, and Subnet Mask may affect your browser connection.

- ▶ DHCP Server Settings
- ▶ Network Services Settings
- ▶ Dynamic DNS Update Settings
- ▶ IP Filtering Settings
- ▶ IP Forwarding Settings
- ▶ IP Network Failover Settings
- ▶ Socket Tunnel Settings
- ▶ Virtual Private Network (VPN) Settings
- ▶ IP Pass-through Settings
- ▶ Host List Settings
- ▶ Virtual Router Redundancy Protocol (VRRP) Settings
- ▶ Advanced Network Settings

Help

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 IP Address Information

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



ConnectPort X4 Configuration and Management

[? Help](#)

[Home](#)

Configuration

- [Network](#)
- [Mobile](#)
- [XBee Network](#)
- [Serial Ports](#)
- [Camera](#)
- [Alarms](#)
- [System](#)
- [iDigi](#)
- [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:50:12:1A
Ethernet IP Address:		10.21.6.124
Mobile IP Address:		68.26.179.6
Description: None		
Contact: None		
Location: None		
Device ID: 00000000-00000000-00409DFF-FF50121A		

Viewing Ethernet Statistics

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



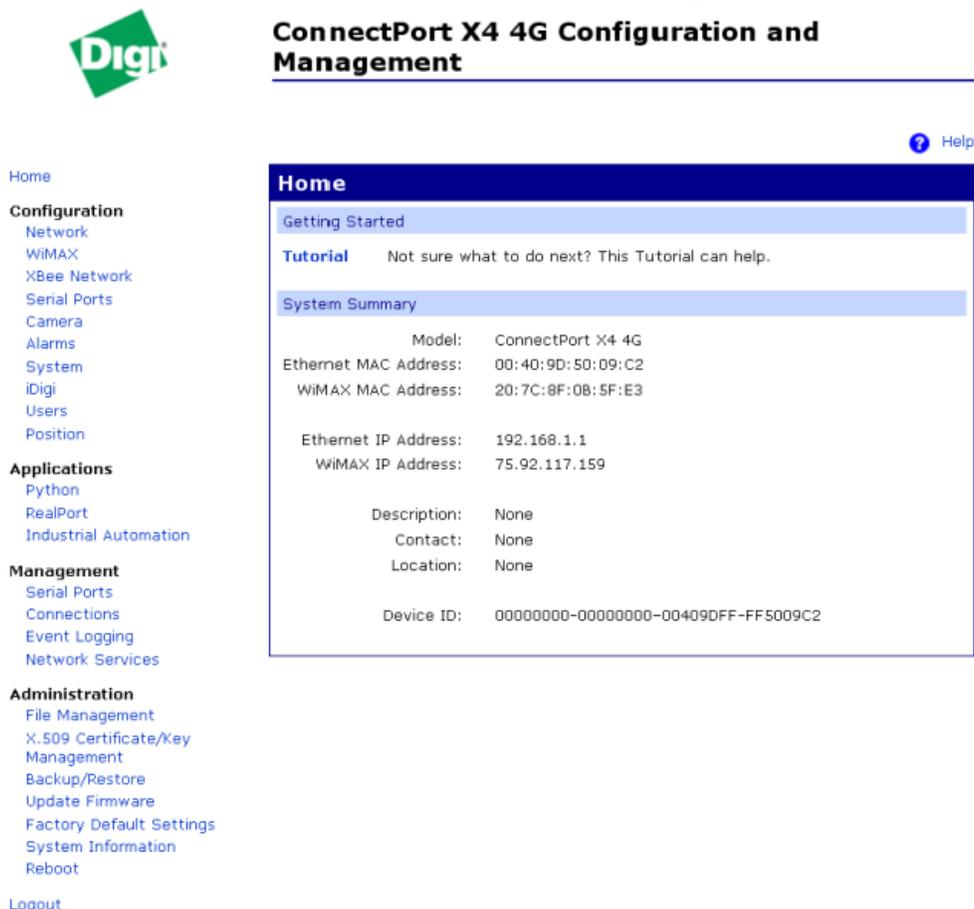
You have completed basic configuration of your ConnectPort X4.

Chapter 3: WiMAX Models

The ConnectPort X4 WiMAX models have WiMAX 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):



ConnectPort X4 4G Configuration and Management

Home

Configuration

- Network
- WiMAX
- XBee Network
- Serial Ports
- Camera
- Alarms
- System
- iDigi
- 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

Help

Home

Getting Started

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

System Summary

Model:	ConnectPort X4 4G
Ethernet MAC Address:	00:40:9D:50:09:C2
WiMAX MAC Address:	20:7C:8F:0B:5F:E3
Ethernet IP Address:	192.168.1.1
WiMAX IP Address:	75.92.117.159
Description:	None
Contact:	None
Location:	None
Device ID:	00000000-00000000-00409DFF-FF5009C2

Connecting the WiMAX Interface

NOTE: This example assumes that the WiMAX (WAN) MAC address for the ConnectPort X4 has been activated with your WiMAX provider. You can find the (WAN) MAC address on the bottom of your unit.

The WiMAX activation process for a ConnectPortX4 behaves more like WiFi than Cellular CDMA. Instead of activating an ESN or MEID on the cellular network, and then provisioning the ConnectPort X4 with the appropriate cellular network settings, once the Wireless WAN WiMAX MAC is activated on the WiMAX network the ConnectPort X4 may automatically establish its WiMAX connection.

This example assumes that the ConnectPort X4 has already been activated on the WiMAX network. As a result, you can refer back to the ConnportX4 Home page (displayed on the previous page) and observe that this particular unit has already obtained a WiMAX IP address.

In the event you need to modify this configuration, perform the following steps:

1. Click on **Configuration > WiMAX** from the left-hand menu and you should see a screen similar to the following:

WiMAX Configuration

Radio Settings

These settings control the behavior of the radio when the ConnectPort X4 4G is started.

Enable the WiMAX radio

Automatically connect to the selected subscription:

WiMAX Subscriptions			
Operator	Name	NSP-ID	Activated
Clear	Clear	000002	Yes
Clear	Sprint 4G	000002	Yes
Clear	Sprint PCS	000002	Yes

Enable user authentication

Apply
Set to Defaults

2. By default the ConnectPort X4 enables the WiMAX radio and attempts to connect to the best available network based on all the active subscriptions. In the event you wish to select a specific WiMAX subscription, click the appropriate WiMAX subscription (Sprint 4G in this example), then click **Apply**.

3. Before the ConnectPort X4 attempts to establish this new WiMAX configuration, the existing WiMAX connection needs to be disconnected by clicking **Disconnect**.

Network Connection

These options may be used to make a manual connection.

Connect with automatic network selection
Select a subscription from the list above.

Connect to a specific network
Select a subscription from the list above, and a network from the list below.

WiMAX Networks				
Name	Type	NAP-ID	RSSI	CINR
Clear	Home	000002	-65 dBm	14 dB

Radio Status: Connected to Clear (000002)
[See detailed radio information](#)

4. At this point the ConnectPort X4 has no WiMAX connection established. Click **Connect** in order to establish the new WiMAX connection.

Viewing the WiMAX Connection Status

After a few moments, you can check the WiMAX connection status by navigating to the **Administration > System Information > WiMAX** page. You should see a screen similar to the following displaying the active Subscription Name (Sprint 4G in this case) as well as additional WiMAX information.

System Information

- ▶ General
- ▶ Serial
- ▶ Network
- ▼ **WiMAX**

The following information and statistics can be used to manage and monitor your WiMAX connection. This information may also be helpful in troubleshooting problems with the WiMAX network.

Connection Information

Radio Status:	Connected
Connection Duration:	00:00:04
Disconnect Reason:	User Requested
Subscription Name:	Sprint 4G
Network Type:	Home
NAP-ID:	000002
RSSI:	-65 dBm
CINR:	17 dB
Signal Quality:	 (4 of 5 bars)

Network Information

IP Address:	75.92.117.159
Gateway:	75.92.64.1
Primary DNS:	66.233.169.12
Secondary DNS:	64.13.115.12
Data Received:	1180 bytes
Data Sent:	984 bytes

Radio Module Information

Configuring the ConnectPort X4 IP Gateway Priority

Once the ConnectPort X4's WiMAX interface is connected, it could conceivably reach the Internet via either of its network interfaces (WiMAX 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 WiMAX 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:

▼ Advanced Network Settings

The following settings are advanced settings used to fine tune the network connection and network interfaces. The default settings will typically work in most situations.

IP Settings

Host Name:

Static Primary DNS:

Static Secondary DNS:

DNS Priority: Static WIMAX Ethernet  

Gateway Priority: WIMAX Ethernet  

See also [IP Network Failover Settings](#) for default gateway management.

DNS Proxy Settings

Enable DNS Proxy Service

Request Cache Size Maximum: entries (16-1024)

Request Idle Time-To-Live: seconds (10-120)

Request Retries Per DNS Server: retries (0-4)

For new client requests received when the request cache is full:

Replace the Least Recently Used (LRU) client request with the new request

Configuring the Ethernet Interface

Now that the ConnectPort X4's WiMAX 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. Navigate to **Configuration > Network** from the left-hand menu. You should see an Ethernet IP Settings screen similar to the following:



ConnectPort X4 4G Configuration and Management

Home

Configuration

- Network
- WiMAX
- XBee Network
- Serial Ports
- Camera
- Alarms
- System
- iDigi
- 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

Network Configuration

Ethernet IP Settings

Obtain an IP address automatically using DHCP *

Use the following IP address:

* IP Address:

* Subnet Mask:

Default Gateway:

Enable AutoIP address assignment

* Changes to DHCP, IP address, and Subnet Mask may affect your browser connection.

- ▶ DHCP Server Settings
- ▶ Network Services Settings
- ▶ Dynamic DNS Update Settings
- ▶ IP Filtering Settings
- ▶ IP Forwarding Settings
- ▶ IP Network Failover Settings
- ▶ Socket Tunnel Settings
- ▶ Virtual Private Network (VPN) Settings
- ▶ IP Pass-through Settings
- ▶ Host List Settings
- ▶ Virtual Router Redundancy Protocol (VRRP) Settings
- ▶ Advanced Network Settings

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 WiMAX 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 IP Address Information

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

Viewing 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 4: 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).
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):



ConnectPort X4 Configuration and Management

[Home](#)

Configuration
[Network](#)
[XBee Network](#)
[Serial Ports](#)
[Camera](#)
[Alarms](#)
[System](#)
[iDigi](#)
[Security](#)
[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 [? Help](#)

[Getting Started](#)

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

System Summary

Model:	ConnectPort X4
Ethernet MAC Address:	00:40:9D:37:9C:C7
WiFi MAC Address:	00:40:9D:37:98:8C
Ethernet IP Address:	192.168.1.1
WiFi IP Address:	169.254.90.90
Description:	None
Contact:	None
Location:	None
Device ID:	00000000-00000000-00409DFF-FF379CC7

Configuring the 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:

The screenshot shows the 'Network Configuration' page with a dark blue header. Under the 'Ethernet IP Settings' section, there are two radio button options: 'Obtain an IP address automatically using DHCP *' (unselected) and 'Use the following IP address:' (selected). Below these are three input fields: '* IP Address:' with the value '10.21.6.123', '* Subnet Mask:' with the value '255.255.255.0', and 'Default Gateway:' with the value '10.21.6.1'. There is a checked checkbox for 'Enable AutoIP address assignment'. A note below states '* Changes to DHCP, IP address, and Subnet Mask may effect your browser connection.' An 'Apply' button is located below the settings. A list of other network settings is visible at the bottom, including WiFi IP, LAN, Security, 802.1x Authentication, DHCP Server, Network Services, IP Filtering, IP Forwarding, IP Network Failover, Socket Tunnel, Virtual Private Network (VPN), Host List, and Advanced Network Settings.

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

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..

▼ **WiFi IP Settings**

Obtain an IP address automatically using DHCP *

Use the following IP address:

* IP Address:

* Subnet Mask:

Default Gateway:

Enable AutoIP address assignment

* Changes to DHCP, IP address, and Subnet Mask may effect your browser connection.

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.

WiFi LAN Settings Page

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

▼ **WiFi LAN Settings**

Network name: (SSID)

Connect to any available WiFi network
 Connect to access point (infrastructure) networks only
 Connect to peer-to-peer (ad-hoc) networks only

Country: ▼
Band: ▼
Channel: ▼
Transmit power: dBm

Enable Short Preamble
 Enable 802.11d multi domain capability
 Enable Antenna Diversity

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.

WiFi Security Settings Page

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

WiFi Security Settings

Network Authentication

Use any available authentication method
 Use the following selected method(s):

- Open System
- Shared Key
- WEP with 802.1x authentication
- WPA with pre-shared key (WPA-PSK)
- WPA with 802.1x authentication
- Cisco LEAP
- EAP-FAST

Data Encryption

Use any available encryption method
 Use the following selected method(s):

- Open System (no encryption)
- WEP
- TKIP
- CCMP

WEP Keys

Transmit key: 1 2 3 4

Encryption Keys:

1:

2:

3:

4:

WPA PSK

Enter a passphrase when WPA-PSK authentication is enabled. *Note: the passphrase will need to be re-entered whenever the Network SSID is changed.*

Passphrase:

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.

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.

▼ DHCP Server Settings

Note: For the DHCP server to operate, the ConnectPort X4 must be configured to use a static IP address. (See the [IP Settings](#) page in the Network Configuration area.) Please review additional notes below.

Enable Dynamic Host Configuration Protocol (DHCP) Server

Scope Name:

* IP Addresses: to

Lease Duration: days hrs mins

Wait specified delay before sending DHCP offer reply

Delay: ms

Check that an IP address is not in use before offering it

Send the DHCP Server IP address as a DNS Proxy Server

Send a default gateway in the client lease (DHCP Option 3: Routers on Subnet):

IP address of scope interface (default)

Configured IP address of default gateway for scope interface

This gateway IP address:

Do not send a default gateway

Static Lease Reservations **

Enable	IP Address	MAC Address	
No reservations currently configured			
<input checked="" type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="00:00:00:00:00:00"/>	<input type="button" value="Add"/>

[Remove All](#)

Address Exclusions ***

Enable	Start Address	End Address	
No exclusions currently configured			
<input checked="" type="checkbox"/>	<input type="text" value="0.0.0.0"/>	to <input type="text" value="0.0.0.0"/>	<input type="button" value="Add"/>

[Remove All](#)

For DHCP server status and lease management, use the [DHCP Server Management](#) page in the Network Services Management area.

* The IP address pool must specify addresses that are in the subnetwork of the ConnectPort X4. The DHCP server will not operate if this configuration does not meet this requirement

Verifying the 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.

System Information

- ▶ General
- ▶ Serial
- ▶ Network
- ▼ **WiFi LAN**

Active Settings

Status: Authenticated with Network
 Network Name: TRENDnet
 Network ID: 00:14:d1:cb:49:f4

 Channel: 1
 Transmit Rate: 54 Mbps
 Signal Strength: 100 % (-26 dBm) 
 Authentication: WPA with pre-shared key (WPA-PSK)
 Encryption: TKIP

Transmit Statistics

Bytes transmitted:	1940505	Directed frames transmitted:	5494
Broadcast frames transmitted:	2	RTS frames transmitted:	0
Retries:	1670	Exceeded retry limit:	16
Broadcast errors:	0	Not associated:	3

Receive Statistics

Bytes received:	100499528	Directed frames received:	33
Broadcast frames received:	839043	RTS frames received:	0
Retries:	0	No buffers:	0
Invalid frames:	5460	Duplicate frames:	0
Exceeded lifetime limit:	0	Decryption errors:	7118
Too large:	0	Hardware overruns:	0

Refresh

- ▶ IP Network Failover
- ▶ iDigi
- ▶ Position
- ▶ XBee Network
- ▶ Diagnostics

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.:

▼ Advanced Network Settings

The following settings are advanced settings used to fine tune the network connection and network interfaces. The default settings will typically work in most situations.

IP Settings

Host Name:

Static Primary DNS:

Static Secondary DNS:

DNS Priority: Static ↑
Ethernet ↓
WiFi

Gateway Priority: Ethernet ↑
WiFi ↓

See also [IP Network Failover Settings](#) for default gateway management.

DNS Proxy Settings

Enable DNS Proxy Service

Request Cache Size Maximum: entries (16-1024)

Request Idle Time-To-Live: seconds (10-120)

Request Retries Per DNS Server: retries (0-4)

For new client requests received when the request cache is full:

Replace the Least Recently Used (LRU) client request with the new request

Discard (ignore) new requests until some existing requests have expired

Ethernet Interface

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.

Configuring the 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:



ConnectPort X4 Configuration and Management

[? Help](#)

Home

Configuration

- Network
- XBee Network
- Serial Ports
- Camera
- Alarms
- System
- iDigi
- Security
- 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

Network Configuration

▼ **Ethernet IP Settings**

Obtain an IP address automatically using DHCP *

Use the following IP address:

* IP Address:

* Subnet Mask:

Default Gateway:

Enable AutoIP address assignment

* Changes to DHCP, IP address, and Subnet Mask may effect your browser connection.

- ▶ WiFi IP Settings
- ▶ WiFi LAN Settings
- ▶ WiFi Security Settings
- ▶ WiFi 802.1x Authentication Settings
- ▶ DHCP Server Settings
- ▶ Network Services Settings
- ▶ IP Filtering Settings
- ▶ IP Forwarding Settings
- ▶ IP Network Failover Settings
- ▶ Socket Tunnel Settings
- ▶ Virtual Private Network (VPN) Settings
- ▶ Host List Settings
- ▶ Advanced Network Settings

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

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 IP Address Information

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

Viewing 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.