



StarMOBILE™

Network Configuration Guide

A guide to configuring your StarMOBILE™
system for networking



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Introduction

This guide outlines the process for enabling and connecting your StarMOBILE device to an Ethernet network infrastructure. This document was created to suit the most common network configurations (wired or wireless). This guide is intended for network administrators and does not in any way attempt to make recommendations in regard to network setup. Please refer to the STAR™ Dealership Infrastructure Guide for network infrastructure setup guidelines and recommendations.

Since the dealership infrastructure is under the control of each dealer, the StarMOBILE system allows for a variety of configurations. Given the complexity of configuring secure networks, we highly recommend that your StarMOBILE system network configuration be performed by your Network Systems Coordinator.

What is Discovery?

The StarMOBILE system uses a unique protocol to discover the StarMOBILE devices on the local Ethernet segment. Ethernet networks are divided into segments. Segments can be defined as two or more machines sharing the same base and broadcast address. For example, a machine having an IP address of 192.168.100.5 with a subnet mask of 255.255.255.0 would have an Ethernet base address of 192.168.100.0 and a broadcast address of 192.168.100.255. Any machine in the range between the base and broadcast address could see broadcast/multicast traffic from all other machines on that segment.

Typically, a Microsoft Windows machine, upon boot-up will broadcast to all the machines in its local broadcast domain (range from the base address to the broadcast address) a "hello" message. All the machines sharing the broadcast domain would see that "hello" traffic and know that the specific Windows machine has booted. The StarMOBILE communication system uses a process similar where the StarMOBILE desktop application, upon initialization, broadcasts an mDNS query asking for all mDNS responders to answer with their IP address. The StarMOBILE tool has an mDNS responder built-in and responds to the query with its IP address.

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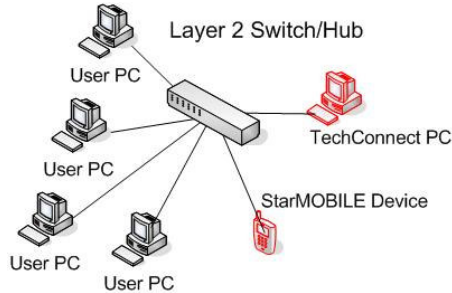
mDNS is a common discovery protocol and is in use with many applications today. In order for mDNS discovery to work, machines must be on the same network segment (broadcast domain). In this way, when an mDNS query is broadcast from a machine, all of the machines in the broadcast domain will see the query and if a device has a built-in mDNS responder, will respond.

The StarMOBILE discovery protocol is a method of easily connecting the StarMOBILE Desktop Client application with the StarMOBILE device. In more complex network environments with routers and firewalls that may separate the desktop application and the device, the discovery protocol cannot be used. This does not in anyway prevent communication or normal operation of the system. The discovery mechanism is a feature for convenience and can be superseded by direct connectivity via IP address to a device on a non-local network segment.

Below are examples of possible network configurations where the StarMOBILE Discovery Protocol will and will not function. Please use these examples and consult your Network Systems Coordinator for specific information regarding your environment.

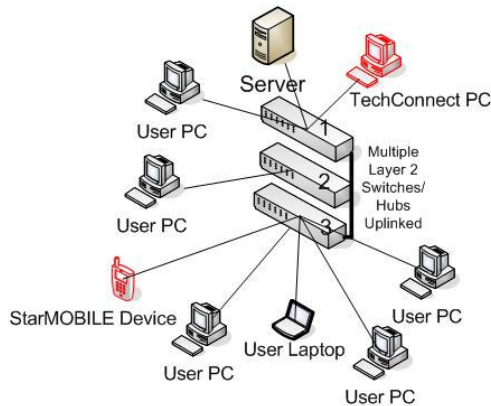
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StarMOBILE Wired Configuration Scenarios Network Sharing a Broadcast Domain StarMOBILE Discovery Functions Properly



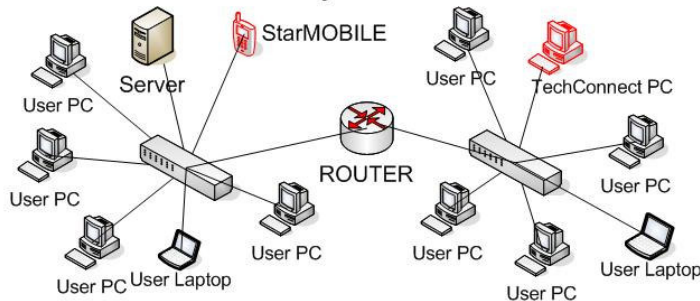
This network setup shows a number of PC's connected to a switch or a hub. The TechConnect PC as well as the StarMOBILE are connected to the same switch. All devices on the same Layer 2 network gear share the same broadcast domain. When the PC running the StarMOBILE Desktop Client broadcasts the mDNS request, all devices on the broadcast domain (in this case the same network gear) are able to see the request.

Large Network Sharing a Broadcast Domain StarMOBILE Discovery Functions Properly



This network setup shows multiple Layer 2 Switches or Network Hubs uplinked together. Each switch/hub will share its broadcast domain with the other switches/hubs via the uplink cable connect the devices. The TechConnect PC and StarMOBILE are connected to the gear although on different switches. Multicast/Broadcast traffic sent from a device connected to switch #1 will be seen by devices connected to switches #2 and #3. When the PC running the StarMOBILE Desktop Client broadcasts the mDNS request, all devices on the broadcast domain (in this case the same network gear) are able to see the request.

Large Network with Distinct Broadcast Domains StarMOBILE Discovery Does NOT Function



This network setup shows the TechConnect PC and the StarMOBILE on different segments (or subnets). The segments are separated by a router. Broadcast/multicast traffic DOES NOT pass beyond a router. The TechConnect PC and the StarMOBILE do not share the same broadcast domain. mDNS requests will stop at the router connecting the two segments.



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Network Requirements

Wired Network Requirements

The StarMOBILE device will operate in a 10/100 Mbps Ethernet environment. The StarMOBILE device network interface card is set for 10 Mbps network speed. Hub or switch gear connecting the device to the rest of the network must have the ability to auto-sense the connection speed or communicate at 10 Mbps. Environments with switch gear that require 100 Mbps will need to be set to auto-sense the connection speed on the port the StarMOBILE is connected to. In most environments this is not an issue.

Wireless Network Requirements

The StarMOBILE device will participate in an 802.11b/g wireless network. Make sure the access point layout maintains adequate coverage area for optimal tool operation.

We recommend that you connect a wireless enabled PC to your wireless network first to ensure proper access point configuration, as troubleshooting access point and wireless infrastructure configuration problems is easier with a PC than it is with a StarMOBILE device.

We recommend the use of WPA encryption for securing the StarMOBILE system in the wireless environment. For further recommendations on wireless encryption and infrastructure setup, refer the STAR™ Dealership Infrastructure Guide.



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Before You Begin

Before you begin configuring your StarMOBILE device for networking, follow the steps below. **Note: Following these steps will limit configuration errors and help minimize configuration time.**

1. Review the StarMOBILE *Read-Me First* document

Follow the instructions in the Read-Me First document included with your StarMOBILE Kit.

This document is available at the DealerCONNECT website located at <https://dealerconnect.chrysler.com> by navigating to: DealerCONNECT > Service > Repair > StarSCAN and StarMOBILE Tools. This guide is also available from the *Download Center* at the DCC Tools website located at <http://www.dcctools.com>.

2. Install the StarMOBILE Desktop Client

Follow the steps outlined in the *StarMOBILE Software Installation Guide* to install your StarMOBILE Desktop Client application. **Note: You will not need to launch your StarMOBILE Desktop Client in order to configure your StarMOBILE device for networking. Network configuration is accomplished through a web browser, which is discussed later in this document.**

This guide is available at the DealerCONNECT website located at <https://dealerconnect.chrysler.com> by navigating to: DealerCONNECT > Service > Repair > StarSCAN and StarMOBILE Tools. This guide is also available from the *Download Center* at the DCC Tools website located at <http://www.dcctools.com>.

If you have problems installing the StarMOBILE Desktop Client, a *Software Installation Troubleshooting Guide* is also available at the above websites.

3. Understand Your Network

Understand which method of connectivity you will be using with the StarMOBILE system, including what proxy, DNS or routing information you will need for the StarMOBILE system to use the Internet.

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The supported network connection methods are:

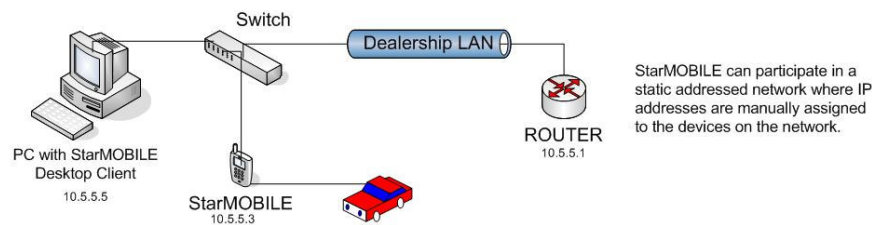
- Wired with Static IP Addressing
- Wired with DHCP
- Wired with a Link-Local Network and a Cross-over Cable
- Wireless with Static IP Addressing and an Access Point
- Wireless with DHCP and an Access Point

The following are unsupported methods and are not recommended:

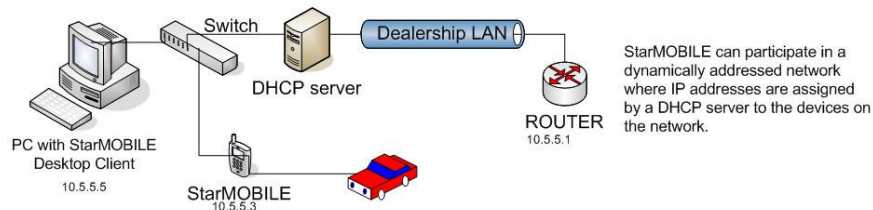
- ~~○ Wireless with either Static or DHCP addressing behind a Wireless Router~~
- ~~○ Wireless Adhoc with a PC~~

StarMOBILE Wired Configuration Options

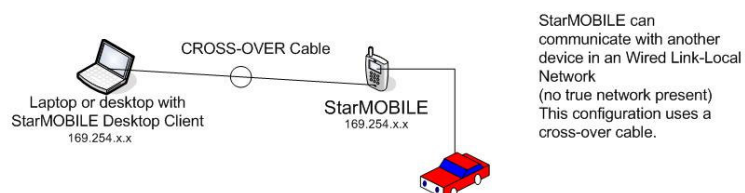
Wired Network using Statically Assigned Addressing - STATIC



Wired Network using a Dynamically Assigned Addressing- DHCP



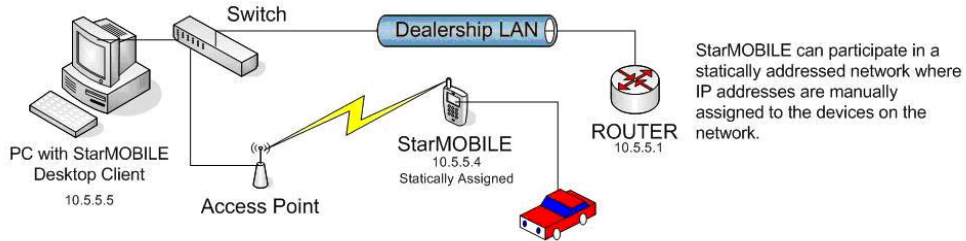
Wired Link-Local Network



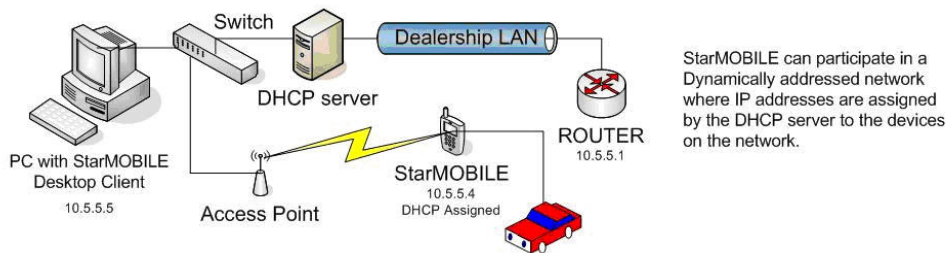
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StarMOBILE Wireless Configuration Options

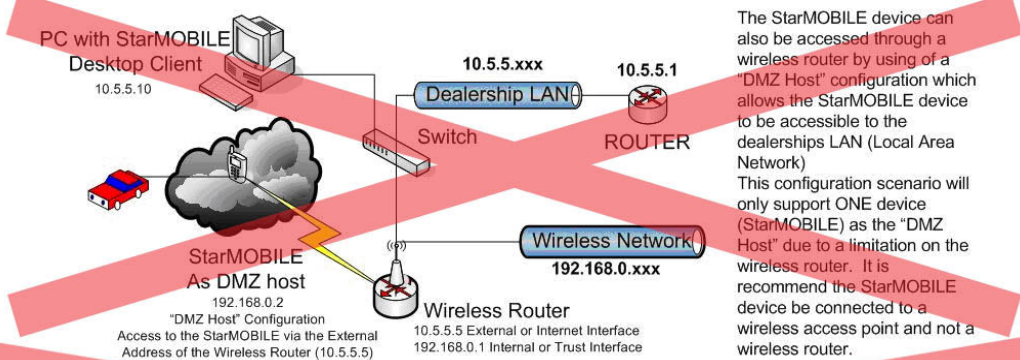
Wireless with Access Point on a Statically Addressed Network - STATIC



Wireless with Access Point on a Dynamically Addressed Network- DHCP



Wireless with Wireless Router (Tested but known to be problematic)



Wireless ad-hoc network (Tested but unsupported)



Configuration Tip: If the tool will be using a wireless setup, connect a PC to the wireless network prior to connecting the StarMOBILE device. This will ensure a properly working wireless environment and allow for any troubleshooting to be completed using the PC rather than the StarMOBILE device.



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Use the Network Configuration Worksheet below to capture information on your network prior to starting the StarMOBILE device configuration. You should consult your Network Systems Coordinator for this information.

StarMOBILE Network Configuration Worksheet	
Connection Settings	
Connection Type	WIRED WIRELESS
<i>If Wireless</i>	
Wireless SSID	
Encryption Type	
Encryption Key	
Encryption Authentication Type	Open System Shared Key
IP Settings	
DHCP Present	yes no
<i>If No DHCP</i>	
Static IP Address*	
Subnet Mask	
Gateway Address	
Primary DNS	
Secondary DNS	
Proxy Settings (if you use proxy)	
Proxy Server IP address	
Proxy Server Port	
Proxy Username	
Proxy Password	
DealerCONNECT Settings	
DealerCONNECT™ UserID	
Dealer Code	
Password	
* If DHCP is not present, you will need to contact your Network Systems Coordinator to obtain a unique IP address for your StarMOBILE.	

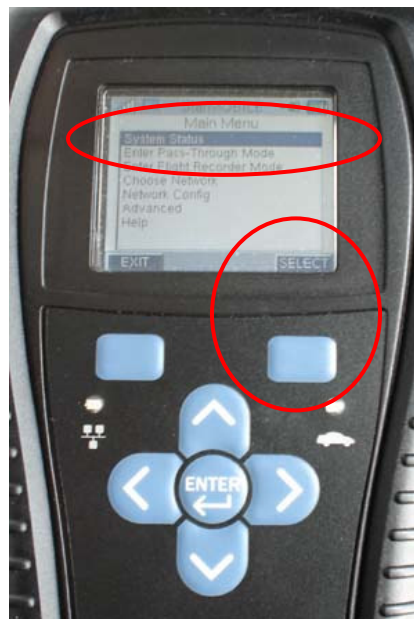
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Navigation Guidelines for the StarMOBILE device

Use the arrow keys in the center of the StarMOBILE device to navigate the "onscreen" menus.



A selection is made by navigating the highlighted bar to the selection you wish to change and pressing "Select" using the button located directly beneath the word "Select". The buttons are located to the upper left and upper right of the arrow keys.



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Configuring Your StarMOBILE Device for Networking

This section shows the steps required to configure your StarMOBILE system for use on your network. If you have trouble configuring your StarMOBILE device, refer to the StarMOBILE Network Troubleshooting Guide located at <https://dealerconnect.chrysler.com> by navigating to DealerCONNECT > Service > Repair > StarSCAN and StarMOBILE Tools. This document is also available in the *Download Center* of the DCC Tools website located at: <https://www.dcctools.com>.

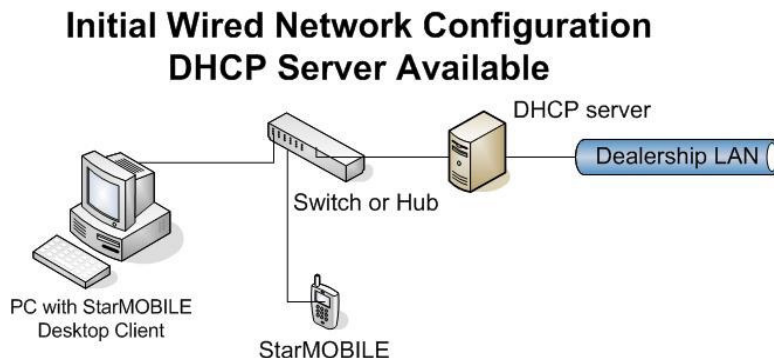
Configuration Tip: Consider performing a factory reset on the StarMOBILE device before starting, especially if you are having problems configuring your StarMOBILE device for networking. This will ensure that previously failed configuration sessions have been cleared. From the StarMOBILE device's *Main Menu*, navigate to *Settings* and choose *Perform Factory Reset*.

Configuration Tip: Confirm that you are in *Pass-through* mode on the device, as networking is only enabled in this mode. Note: Performing a factory reset on the StarMOBILE device will also change the mode back to *Pass-Through*.

Initial StarMOBILE Wired Network Configuration

To perform initial configuration, the StarMOBILE Desktop Client must be installed and network connectivity to the device must be initiated via an Ethernet wire. Note: You do not have to launch the StarMOBILE Desktop Client to configure your StarMOBILE device for networking.

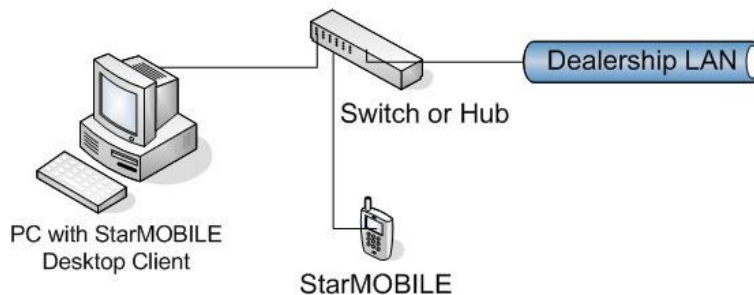
If you have a DHCP network, simply plug the StarMOBILE device into the network and allow the device to obtain an IP Address automatically.




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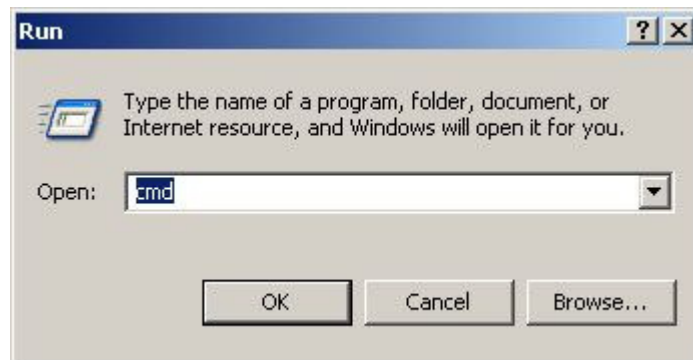
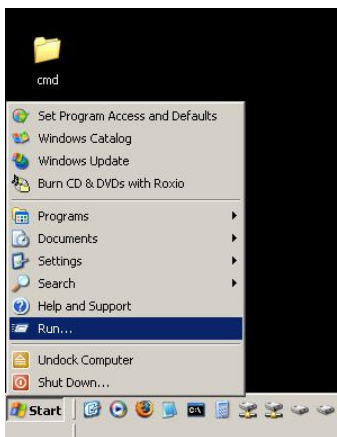
If you do not have a DHCP network, the StarMOBILE device can be accessed via the Link-Local address (169.254.x.x) if the PC and the StarMOBILE device are connected on the same network segment (i.e. have the same broadcast domain) and the StarMOBILE Desktop Client is installed.

Initial Wired Network Configuration No DHCP Server Available



The IP Address of the StarMOBILE device is available upon initial boot up at the "System Status" screen. Once you are familiar with the method of initial configuration of the StarMOBILE device, power on the device by pressing  on the front panel. The tool will go through the boot sequence. Upon successful boot, the "System Status" screen will appear with the IP Address of the device.

On the PC running the StarMOBILE Desktop Client installed, click "Start", then choose "Run" and type "**cmd**" (no quotes). This will pop-up and DOS command window.

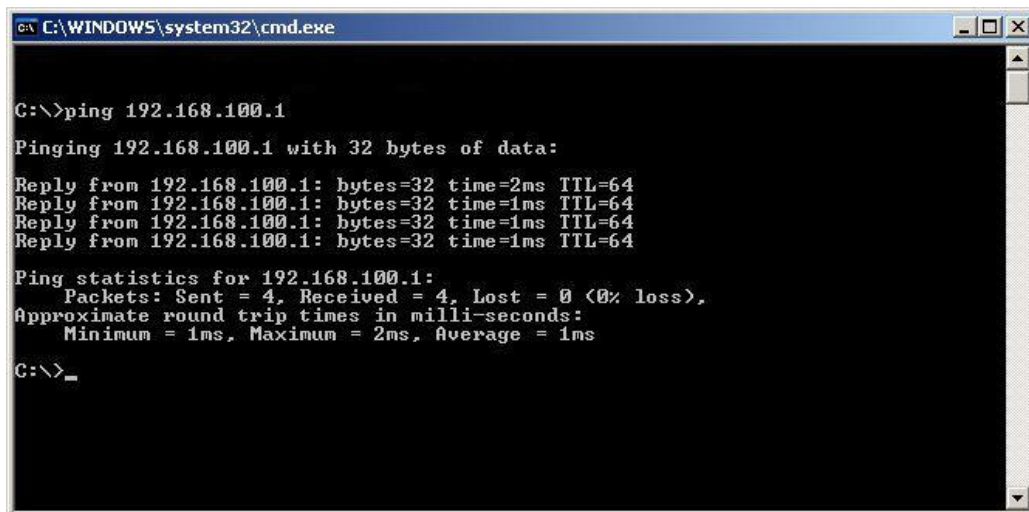


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To ensure network connectivity to the StarMOBILE device, type "ping" and the IP Address of the device. The IP Address of the StarMOBILE device is available upon initial boot up at the "System Status" screen.



You should see "replies" from the device if proper connectivity is available.

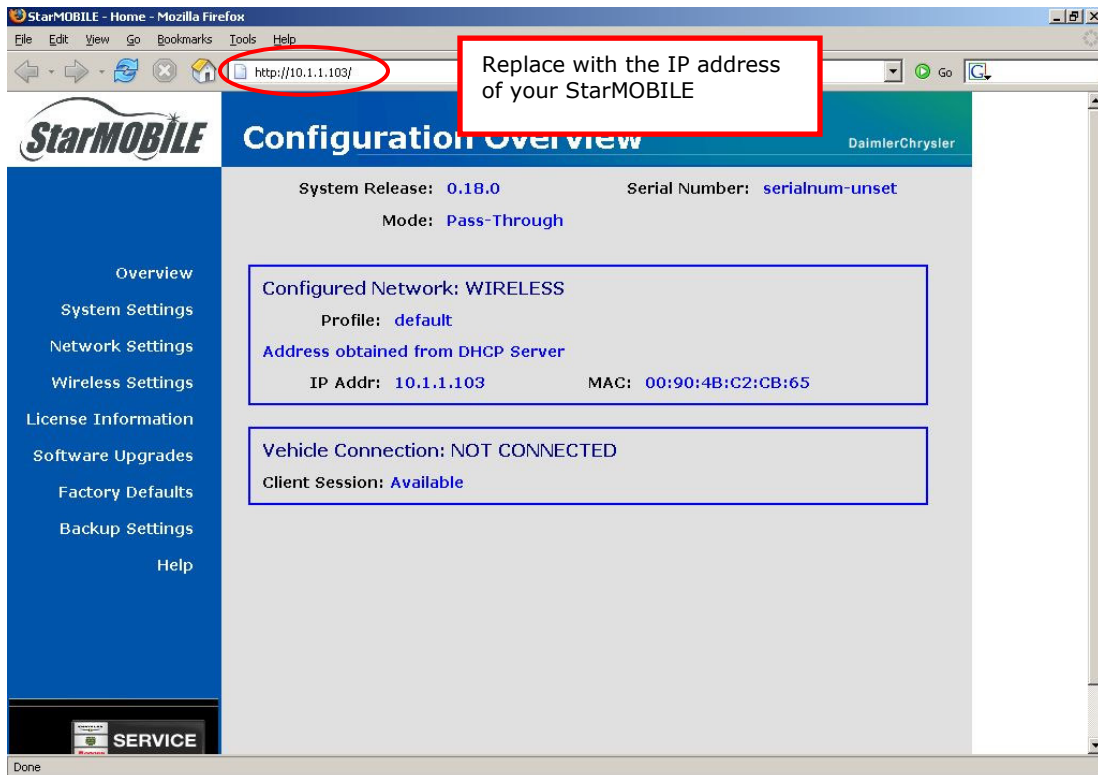


If the ping requests time-out, the PC and the StarMOBILE are not able to communicate via the network. Refer to the StarMOBILE Network Troubleshooting Guide to troubleshoot your StarMOBILE connection.

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Using a Web Browser to Configure Your StarMOBILE Device

Once initial wired network connectivity has been established, the StarMOBILE device can be configured via a standard web browser like Internet Explorer™ or Mozilla Firefox™. Start the web browser and enter the IP address of the StarMOBILE device in the address line. This IP address is the same one used to “ping” the device.

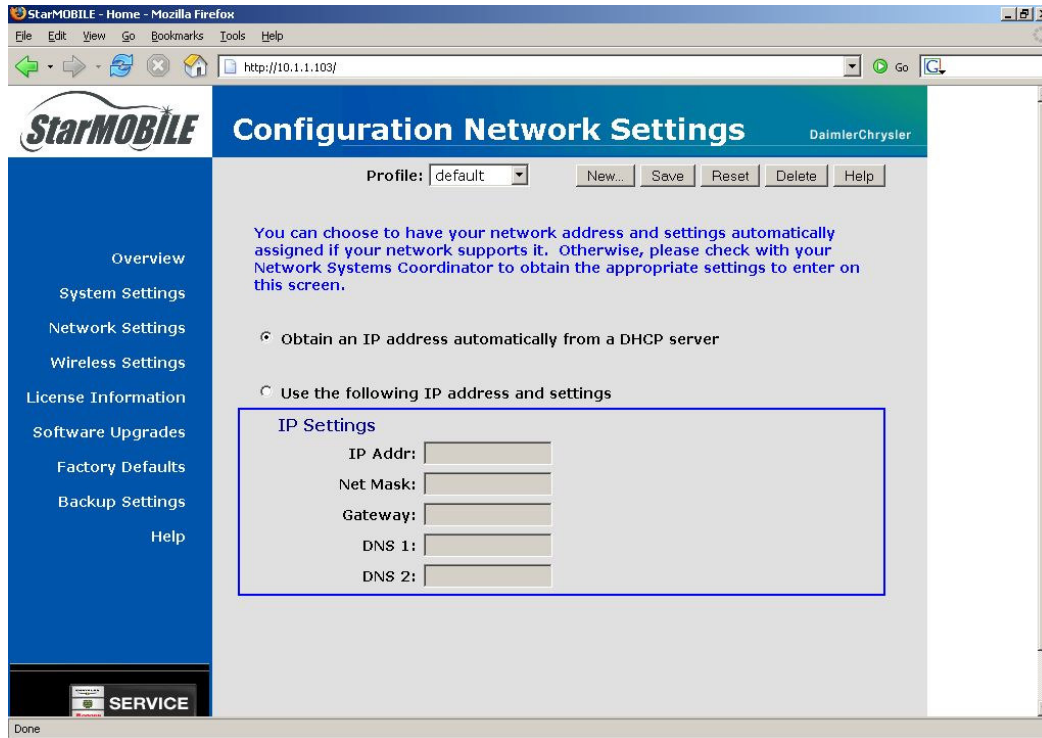


This web-based interface will allow you to configure the overall wired network settings, wireless settings, software upgrades or reset your device to factory defaults. Review the current configuration information and make any necessary changes based on your network configuration.

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Configuring the StarMOBILE Wired Network Settings

To change the wired network settings, navigate to the *Network Settings* section of the StarMOBILE Configuration Menu.



You can enter Static IP Address information, Netmask, Gateway, and DNS information for the device if necessary.

Note: You must click on the "Save" button to save your changes to the tool. The saved changes will take effect when you reboot your StarMOBILE device.

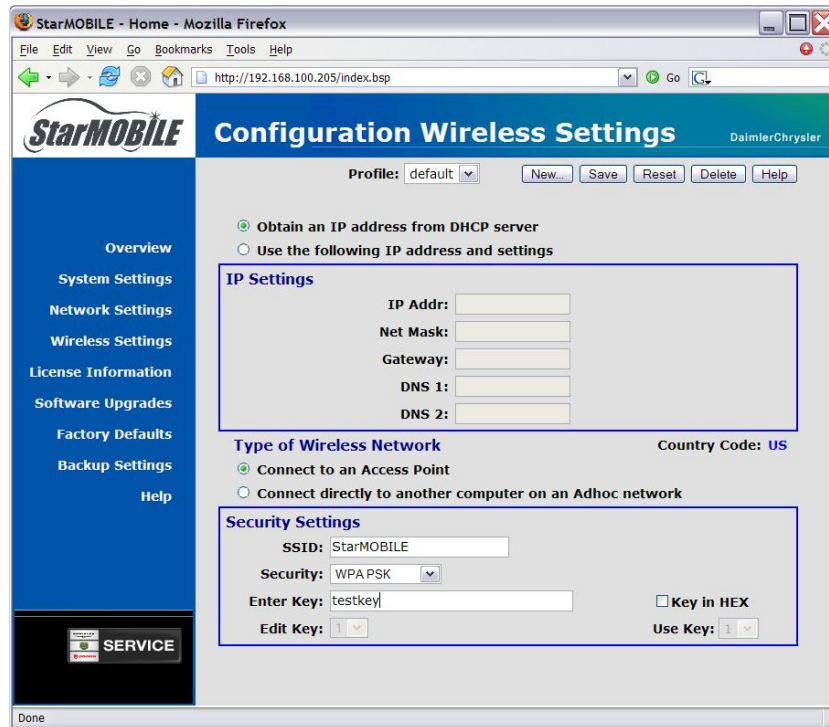
Once you have saved your settings using the web browser, you can choose which profile you want by setting it on the StarMOBILE device. From the StarMOBILE device's *Main Menu*, navigate to *Settings*, then *Choose Network*. Choose the specific profile you want to use for the network connectivity.

Note: You can verify your network configuration by viewing status information on the *System Status* screen, available by navigating to *System Status* screen from the StarMOBILE device's *Main Menu*.

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Configuring the StarMOBILE Wireless Network Settings

To change the wireless network settings, navigate to the “Wireless Settings” section of the StarMOBILE Configuration Menu.



You can enter Static IP Address information, Netmask, Gateway, and DNS information for the device if necessary. You can also enter the type of wireless network setup, SSID, Encryption Type, and Encryption Key.

Note: You must click on the *Save* button to save your changes to the tool. The saved changes will take effect when you reboot your StarMOBILE device.

Once you have saved your settings using the web browser, you can choose which profile you want by setting it on the StarMOBILE device. From the StarMOBILE device’s *Main Menu*, navigate to *Settings*, then *Choose Network*. Choose the specific profile you want to use for the network connectivity.

Note: You can verify your network configuration by viewing status information on the *System Status* screen, available by navigating to *System Status* screen from the StarMOBILE device’s *Main Menu*.

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Using Your StarMOBILE Device with the StarMOBILE Desktop Client

Once network configuration of the tool is complete, you can now connect to your StarMOBILE device using the StarMOBILE Desktop Client application.

Launching the StarMOBILE Desktop Client

Double-click on the StarMOBILE Desktop Client icon on the desktop of the PC. For instructions on the use of the StarMOBILE Desktop Client, refer to the usage guides available at the DealerCONNECT and DCC Tools websites.

