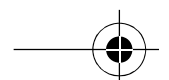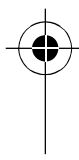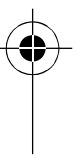# Verizon Wireless

N e t w o r k   E x t e n d e r

User Manual
Please read this manual before operating your
device, and keep it for future reference.

SAMSUNG

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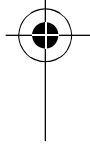
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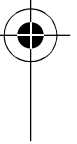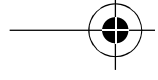
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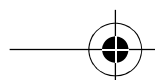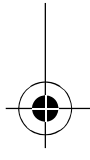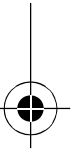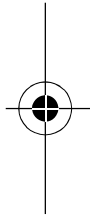For more information, refer to *"Warranty Information"* on page 26.
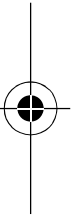
Table of Contents

Section 1: Getting Started

Introduction

Congratulations on the purchase of your Verizon Wireless Network Extender.

Your purchase of this Network Extender enhances the wireless telephone service that you and your family will receive while in your home or home office.

This User Guide introduces you to the Verizon Wireless Network Extender service and all the features of your new device. It includes the following sections:

• Getting Started

• Using Your Device

• External GPS Antenna

• Troubleshooting

• Important Safety Information

• Manufacturer's Warranty

Throughout this guide, you'll find tips and techniques that will help you make the most of your new device and service.

It is important that you read each section and note any special requirements. However, if you'd like to get right to a specific feature, simply locate that section in the Table of Contents and go directly to that page. Follow the instructions in that section, and you'll be ready to use your Network Extender.

Note: Due to updates in software and procedure, this printed guide may not be the most current version for your Network Extender. Visit www.verizonwireless.com/support to access the most recent version of this guide.

What's In the Box?

• Network Extender

• Ethernet Cable

• Power Supply and Power Cord

• GPS extension cable

• User Guide

• Quick Start Guide

System Requirements

• An always-on broadband Internet connection with a minimum speed and available bandwidth of 300 kbps (3.1 Mbps to support the maximum EVDO data rate.)

Note: Satellite, MiFi or wireless connections are not supported.

• An available Ethernet (LAN) port on either your broadband modem or a router connected to the modem.

Note: If you are connecting your Verizon Wireless Network Extender to a router, please ensure it supports Virtual Private Networking (VPN). Although most routers support this functionality, refer to your router's product documentation to confirm compatibility.

Quick Setup

Setting up service on your new Verizon Wireless Network Extender is fast and easy. This section outlines the procedures needed to quickly set up the Network Extender.

Note: You may also visit www.verizonwireless.com/b2c/store/ accessory?action=gotoSetup to view the online setup and usage tutorial. Follow the onscreen prompts.

1. Confirm your package contains all components.

2. Review the "Important Safety Information" on page 20 before installing the Network Extender.

3. Make sure that both your router and your Internet broadband modem are functioning properly. Refer to your particular product's documentation for more information.

4. If possible, place the Network Extender near a window in a central location.

Router   Network Extender
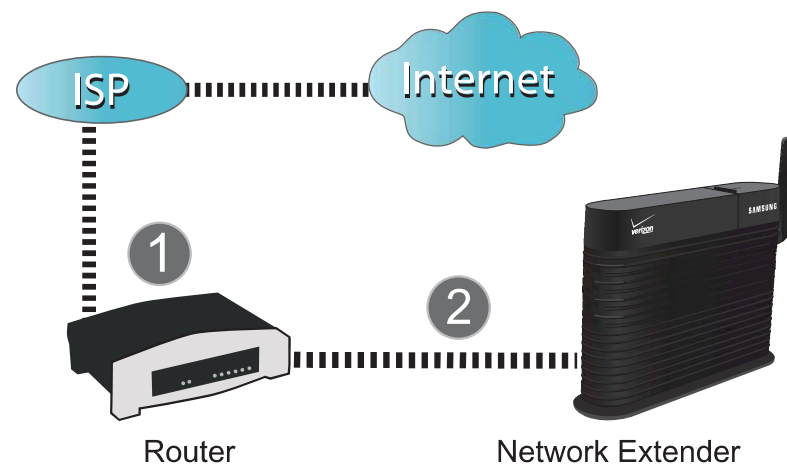
5. Connect one end of the included Ethernet cable to an open LAN port on the router (1) and connect the other end to the WAN port located at the rear of the Network Extender (2).

Note: Plug the Ethernet cable into the Network Extender before connecting the power supply.

6. Plug the power supply connector into the DC 12V power port located at the rear of the Network Extender (3).

7. Insert one end of the power cord into the power supply and then plug the other end into an available power outlet (4).

Warning!: Insert the plug into the power outlet last. Failure to do so could cause an electrical short or power surge to the Network Extender.

Note: The use of a surge protector is recommended for the Verizon Wireless Network Extender.

Network Extender

④

Power Supply

Power Cord

③

Ethernet Cable

②

①

Router
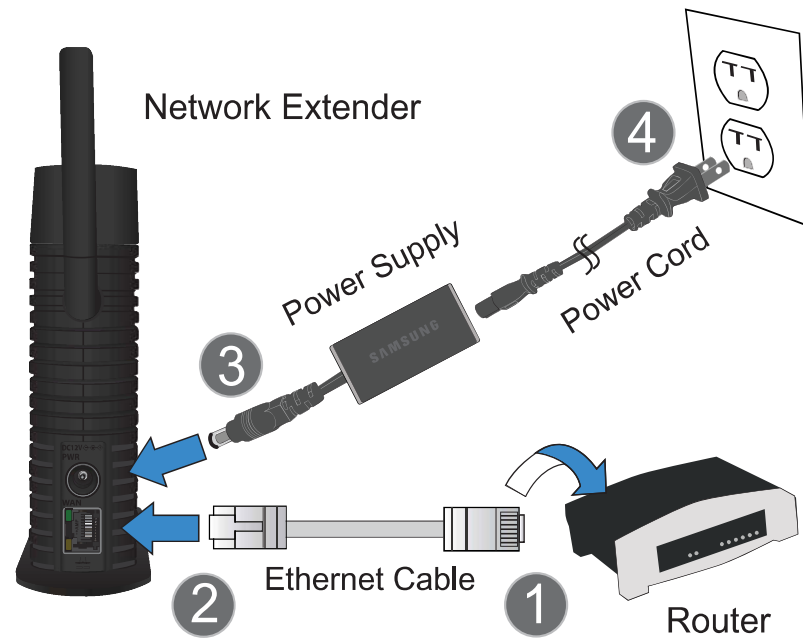
8. Confirm that the front LEDs are illuminated as indicated below:

- **Power LED**: should be a continuous blue light, indicating that the Network Extender is receiving power. No illumination or magenta color indicates there is an issue with the power supply or power connector.

- **System LED**: should be a continuous blue light, indicating that the Network Extender is properly communicating with the Verizon Wireless network. Blinks red while establishing an initial network connection. Continuous red or orange color indicates an abnormal condition.

- **GPS LED**: should be a continuous blue light, indicating that the Network Extender has locked onto a valid GPS signal. If the GPS LED is solid red, the internal antenna may not be able to detect a GPS signal and installation of the external GPS antenna might be necessary. If the GPS LED is persistent Orange, contact the customer service and have the unit replaced.

Power LED

System LED

GPS LED

WAN LED

PWR

SYS

GPS

WAN
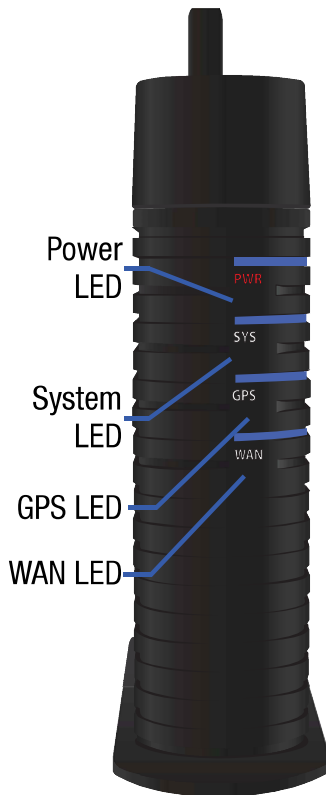
- **WAN LED**: should be a steady blue light, indicating that the Network Extender has detected a valid Ethernet connection. A blinking blue LED indicates data communication.

Note: Allow 3 - 5 minutes for the Network Extender to complete the startup sequence and detect both its connections and available communications. The first time the Network Extender is used, it may take as long as one hour for the initial GPS acquisition. If the GPS LED is still red after one hour, relocate the GPS antenna to receive a stronger signal. See "Antenna Installation" on page 14.

9. Confirm your setup was successful and your Network Extender is functioning properly:

- Confirm that all the LEDs are blue.

- Dial #48 from your Verizon Wireless phone and listen for the "You are on the Network Extender" message.

Verizon Wireless strongly recommends you access your Network Extender account online via **My Verizon** on verizonwireless.com and set up a list of priority users.

- You may want to include all members of your household that have a Verizon Wireless phone.

- If you do not choose to manage the access to your Network Extender, other Verizon Wireless subscribers within range of your Network Extender will be able to use your Network Extender.

Section 2: Using Your Device

Additional Setup Information

Getting started with your new Verizon Wireless Network Extender is easy. This section walks you through an overview of the product, package contents, activation, and how to contact Verizon Wireless for assistance with your service and your Network Extender.

The Verizon Wireless Network Extender is used within your home or home office to extend your Verizon Wireless coverage area through an existing Internet broadband connection.
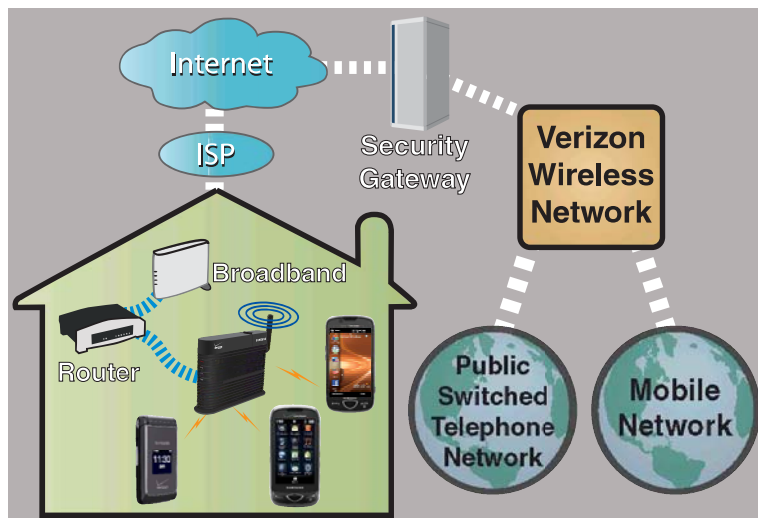
About the size of a traditional wireless access point (WAP), the Network Extender facilitates the delivery of cellular traffic through the Internet to the Verizon Wireless network, which then routes the signal to the desired party.

• **Number of Users**: A maximum of **eight** (8) phones can connect to the Verizon Wireless Network Extender at any one time.

– The first seven callers to initiate or receive a call will connect to the Network Extender. Additional users who make or receive a call while all Network Extender channels are in use are redirected to the nearest compatible cell tower (if available). An eighth channel, opens to all callers, is always reserved for emergency (E911) calls.

– As each caller ends a call, that channel then becomes available for another user to initiate (or receive) a new call.

Note: The Network Extender can be managed to ensure Verizon Wireless phone numbers you authorize will always enjoy priority access to the Network Extender network. For more information, see "Quick Setup" on page 3, or view the online Setup tutorial at: http://www.verizonwireless.com/b2c/store/accessory?action=gotoSetup

• **Manage Access**: Authorized account users can manage access settings for their Verizon Wireless Network Extender by logging into My Verizon at www.verizonwireless.com.

– Up to 50 Verizon Wireless cell phones can be registered.

– When the Network Extender is set to managed access mode, unauthorized users are redirected to the nearest compatible cell tower wherever possible.

• **Verify service on Network Extender**: Users can verify that they are on the Verizon Wireless Network Extender network by dialing #48 (and receiving an audio announcement). You will also hear a short double tone on your wireless phone when making or receiving a call while on the Network Extender network. The tone is played at the beginning of the call.

Note: An eighth channel, opens to all callers, is always reserved for emergency (E911) calls.

• **Connect to the Network Extender**: In order to establish an initial connection to the Network Extender network, your Verizon Wireless mobile phone needs to move within close proximity (approximately 15 feet) of the Network Extender unit.

• **Calling on Network Extender**: After connecting to the Network Extender network, you can move within a broader perimeter while remaining under Network Extender coverage (approximately 40 feet). Refer to www.verizonwireless.com/support for additional details.

• **Ranges Will Vary**: Both the coverage area required to establish an initial connection and the broader coverage area of the Network Extender cannot be guaranteed and may vary due to environmental factors, such as physical structures and the strength of the external cell tower coverage.

7

The Network Extender uses approximately 40 kbps (downlink and uplink) of the broadband connections bandwidth per voice call. EVDO data calls will uses a maximum of 3.1 Mbps downlink and 1.8 Mbps uplink

The Network Extender maximizes wireless phone utility within a small area by not only providing better voice quality, but by also allowing you to use this new service without any enhancements to your existing Verizon Wireless mobile phones.

By utilizing a built-in GPS antenna, the Network Extender is capable of maintaining exact network timing updates and providing E911 services with an accurate location.

• The GPS extension cable (provided with your Verizon Wireless Network Extender) allows you to place the Verizon Wireless Network Extender further from a window and run the antenna to an area with stronger GPS reception.

Warning!: You may not be able to make 911 calls in the event of an electrical power outage, broadband connection failure, or other service disruption outside of the Verizon Wireless network coverage area. 911 services may be limited in areas outside of the Verizon Wireless network coverage area. Not all public safety answering points have location-based E911 technology. Always be prepared to report your location to the 911 operator when placing an emergency call. Mobile phones operate using radio signals which cannot guarantee connection in all conditions.

Activating Your Verizon Wireless Network Extender

Your Network Extender should already be activated. If it is not activated, please call Verizon Wireless Customer Service at **(800) 922-0204** or ***611** from your Verizon Wireless mobile phone and select the option for technical support.

Note: The Network Extender must be activated for use on the Verizon Wireless network before setup. It will not work unless it has been activated.

Should you need to activate your Network Extender, you will be asked to provide the following information:

• Primary Wireless Phone Number or Verizon Wireless Account Number (located on your Verizon Wireless billing statement)

• Account Password

• MAC ID of the Network Extender found on the sticker affixed to the device.

Getting Help

Note: In order to establish an initial connection to the Verizon Wireless Network Extender network, your mobile phone needs to move within close proximity of your Network Extender unit. After connecting to the network, you can move within a broader perimeter while remaining under Network Extender coverage. Refer to www.verizonwireless.com/support for additional details.

Note: Both the coverage area required to establish an initial connection and the broader coverage area of the Network Extender cannot be guaranteed and may vary due to environmental factors, such as physical structures and the strength of external cell tower coverage.

Reaching Verizon Wireless Customer Service

You can reach Verizon Wireless Customer Service in a number of ways:

• Call us toll free at **(800) 922-0204** or ***611** from your Verizon Wireless mobile phone.

• Visit the support pages at www.verizonwireless.com/support.

LED	Function	Description
PWR	Power	• **Solid blue**: normal • **Magenta or no light**: abnormal
SYS	System connected	• **Solid blue**: normal • **Solid red or orange**: abnormal

LED	Function	Description
GPS	GPS signal	• **Solid blue**: normal (GPS is received) • **Blinking blue or red**: while searching for GPS • **Solid red:** The internal antenna may not be able to detect a GPS signal and installation of the external GPS antenna might be necessary. • **Persistent Solid Orange**: Contact the customer service and have the unit replaced.
WAN	WAN (Ethernet) connection	• **Solid blue**: normal • **Blinking blue**: data communication • **Solid red or no light**: abnormal

9

Verizon Wireless Network Extender Basics

• Components (page 10)

• Features (page 12)

• Maintenance Notes (page 13)

Your Network Extender is packed with features that expand your ability to stay connected to the people and information important to you. This section will guide you through the basic features and functions of your Verizon Wireless Network Extender.

Components - Front View

In addition to a wireless antenna, the Network Extender has four LED lights that are used to indicate the device connectivity status.

• **Wireless Antenna** provides omnidirectional transmission and reception of signals between the Network Extender and communicating Verizon Wireless mobile phones. The wireless antenna rotates 360 degrees.

• **Power LED (PWR)** indicates the power status.

• **System LED (SYS)** indicates the status of Network Extender connectivity to the Verizon Wireless network.

• **GPS LED** indicates the GPS connection status.

Note: If the unit's GPS signal strength is weak (due to location), it is recommended that you either move the Network Extender near a window or install the external GPS antenna. For more details, see "External GPS Antenna" on page 14.

Note: GPS antenna receives signals from Global Positioning System satellites and uses them to obtain time and location information.

• **WAN LED** indicates the status of the Ethernet connection and traffic activity on the Network Extender.

Wireless Antenna

Power LED

System LED

GPS LED

WAN LED
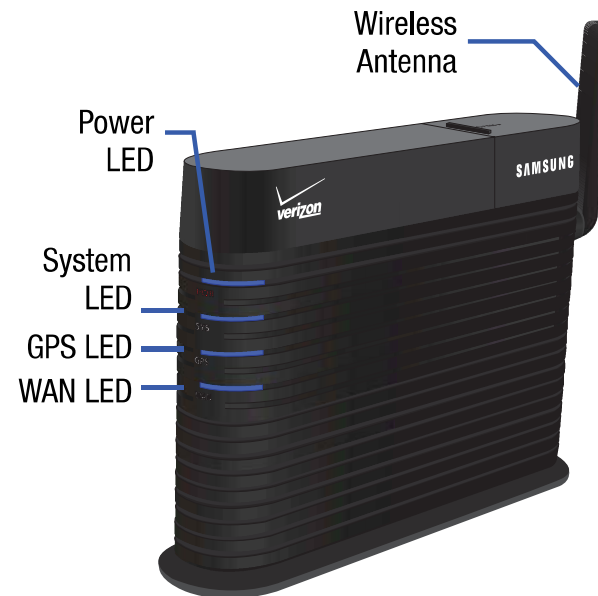
Components - Rear View

The rear of the Network Extender provides access to the WAN port, power port, and external GPS antenna.

1. **GPS Antenna Port** slides to provide access to the external GPS antenna for removal and relocation.

    • A red GPS LED indicates a GPS signal could not be detected using the internal GPS antenna. The external GPS antenna should be connected. See "External GPS Antenna" on page 14.

2. **Heat Vents** provide passive ventilation for the Network Extender and allow for dissipation of internally generated heat.

Note: The Network Extender needs to remain vertical and in a well-ventilated location. The vertical position allows proper air flow to the internal components.

3. **DC 12V Power Port** provides power to the Network Extender when connected to the AC power supply and cord (included).

Warning!: Only use the provided power cord and supply. Using any other power source may damage the Network Extender.

GPS Antenna Port

Heat
Vents

DC 12V Power Port

WAN
Port

11
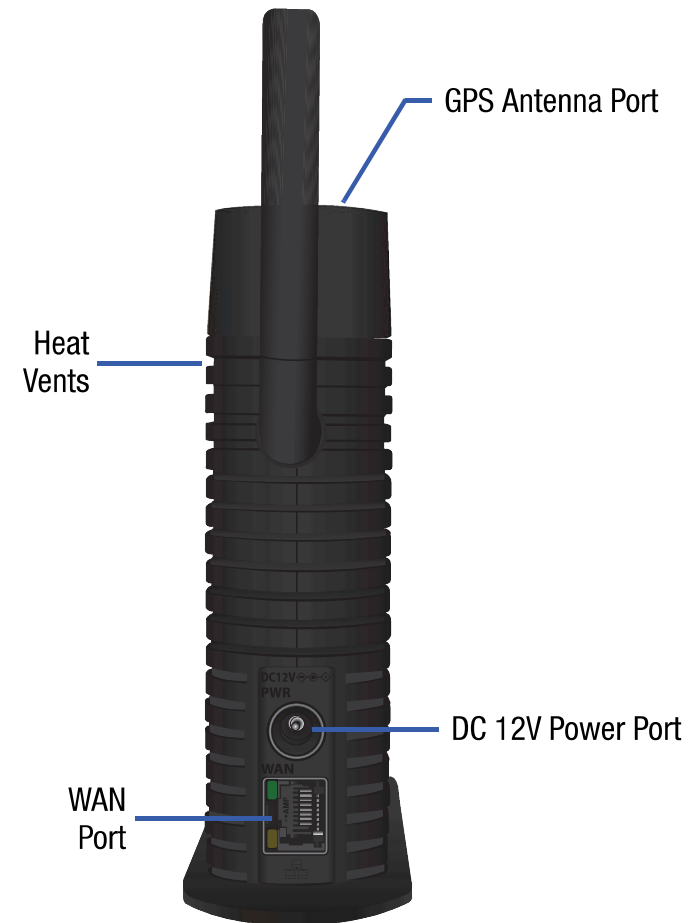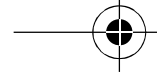
4. **WAN Port** allows you to connect the Ethernet cable provided to establish communication between the Network Extender and your broadband router. This connection port is then used to transmit voice and data through the Internet to the Verizon Wireless network, which then authenticates the Network Extender and allows communication with wireless phones.

- If the WAN LED does not illuminate, this indicates that the Ethernet cable connection has not been detected.
- Please see *"Troubleshooting"* on page 17.

Features

The following list highlights some of the Network Extender's features:

- The Network Extender is a Plug & Play device that can be installed to automatically provide enhanced wireless telephone service in a home or small office without having to change your existing mobile phone.
- The Network Extender enables users to easily install and configure the system by connecting to an existing broadband network.
- This Network Extender supports voice and data calls. It allows as many users as desired to register and supports up to seven calls. This is analogous to having seven telephone lines in the house.
- The Network Extender utilizes a GPS receiver to get both timing and unit location information. In case of a weak GPS signal, install the external GPS antenna and locate it near a window to receive a stronger signal.
- To prevent unauthorized users from accessing the Network Extender and diminishing your available bandwidth, you have the option to restrict the use of your Network Extender by logging into My Verizon at www.verizonwireless.com.

Note: Certain Verizon Wireless services are not compatible with the Network Extender, refer to www.verizonwireless.com/support for details.
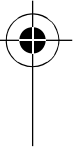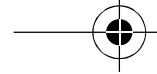
Maintenance Notes

These notes should be carefully reviewed before using the Network Extender:

• See "General Precautions" on page 20.

• Only connect the Network Extender's power plug to a 110–125 VAC outlet.

Note: The use of a surge protector is recommended.

• When cleaning the Network Extender, first unplug the connector from the power outlet. Do not clean the Network Extender using chemical solvents or detergents, but with an anti-static cleaning pad.

• If the Verizon Wireless Network Extender is connected to a Wi-Fi router, ensure that the unit is placed at least 2 feet away from the router (to avoid interference).

• Do not obstruct the heat vents by blocking the openings or covering the Network Extender.

• Remove the Network Extender's power connector from the power outlet if the device will not be used for an extended period of time.