MOTOROLA

SURFboard® SBV6220
DOCSIS® 3.0 Digital Voice Modem

Quick Start Guide

Contents

Introduction

Congratulations on your purchase of a Motorola SURFboard® SBV6220 DOCSIS® 3.0 Digital Voice Modem. This document will help you set up your digital voice modem to quickly get it up and running.

System Requirements

Your computer must meet the following minimum requirements:

- An established coaxial cable connection
- Any web browser, such as Microsoft® Internet Explorer®, Netscape Navigator®, or Mozilla® Firefox®
- Windows® 2000, Windows XP™, Windows Vista®, Macintosh®, UNIX®, or Linux®

Note: Make sure the latest service packs and patches are installed for the operating system you are running.

In the Box

Before starting the installation, make sure the following items are included in the box:

SBV6220 Digital Voice Modem

Battery

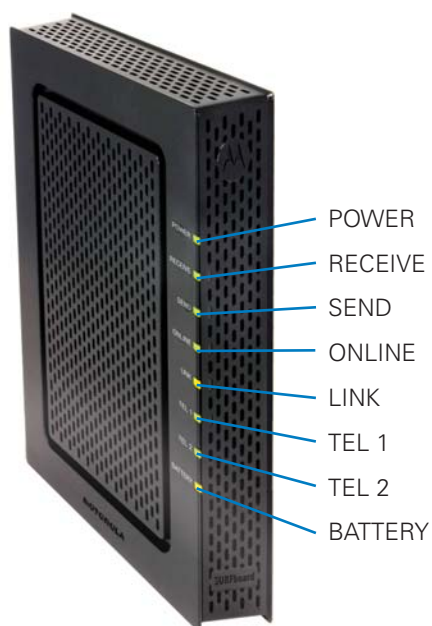**Power adapter and cord**

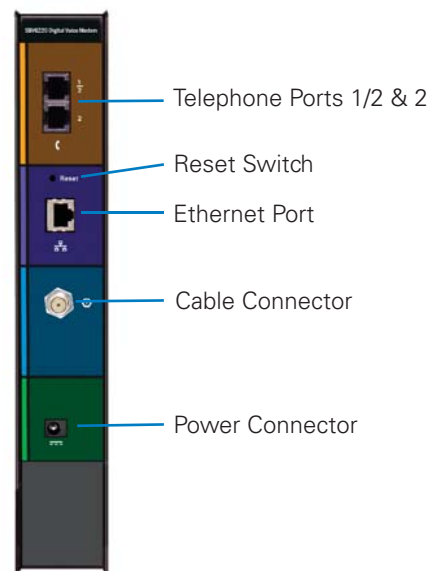**Ethernet cable**

Install Sheet

SW License & Regulatory Card

Front Panel LEDs

POWER
RECEIVE
SEND
ONLINE
LINK
TEL 1
TEL 2
BATTERY

Rear Panel Ports and Connectors

Telephone Ports 1/2 & 2
Reset Switch
Ethernet Port
Cable Connector
Power Connector

Front Panel Description

The SBV6220 front panel contains indicator lights that provide the following status information:

LED	OFF	FLASHING	ON
POWER	Power is disconnected	Startup diagnostics in progress	**Green:** Digital voice modem is powered on
RECEIVE	Receive channel not found	Scanning for a downstream channel connection	**Green:** Receive (downstream) channel is connected **Blue***: Downstream channel connection with bonded channels
SEND	Send channel not found	Scanning for an upstream channel connection	**Green:** Send (upstream) channel is connected **Blue***: Upstream channel connection with bonded channels
ONLINE	Internet connection failed	Scanning for an Internet connection; transmitting or receiving data over the Internet	**Green:** Startup process completed
LINK	No connection to SBV6220 Ethernet port detected	LAN activity; transmitting or receiving data	**Amber:** A device (computer or hub) is connected to Ethernet (10Base-T) or Fast Ethernet (100Base-T) port on rear panel **Blue***: High-speed Ethernet (1000Base-T) connection made from SBV6220 to your computer
TEL 1 TEL 2	Telephone line is not set up for service. Contact your VoIP service provider.	Telephone is off-hook; dialing or usage in progress; telephone service is not provisioned	**Green:** Telephone is connected and activated; on-hook
BATTERY	Battery is discharged or not properly installed	Battery is not fully charged or power is not on	**Amber:** Power is on and battery is in good condition

** **Blue** LED operation is not available in all locations. Your service provider may implement bonded channels for high-speed Internet and Ethernet connections.*

Please make sure to follow the installation instructions in the order presented. Before starting the installation, you must first install the battery in your digital voice modem.

Installing the Battery

1. Place the SBV6220 on its side and press down on the two locking tabs to remove the battery cover from the bottom of the digital voice modem.

2. Slide the battery into the battery compartment until it is fully seated.

3. Replace the battery cover with the locking tabs facing upward, and then push the cover into place.

   **Note:** The battery may take up to 12 hours to reach a full charge.

1

2

3
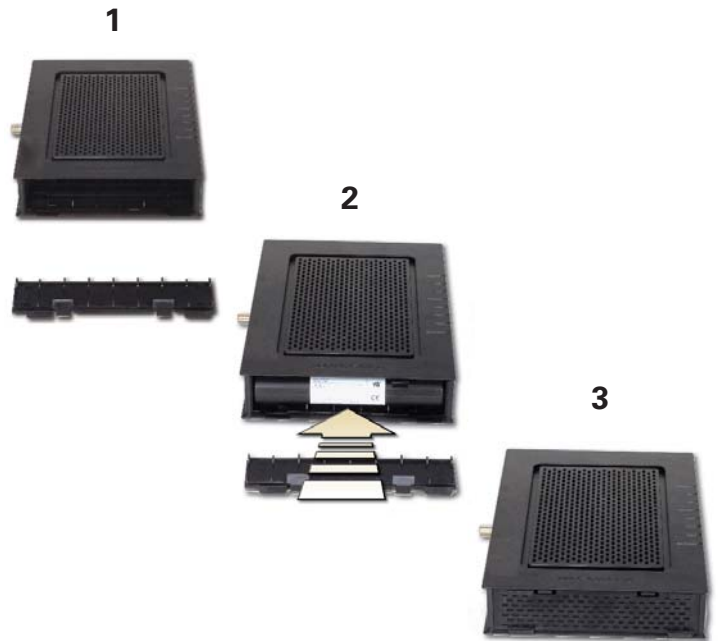
Cabling

> **IMPORTANT**
>
> - Before starting this part of the installation, make sure to power off your computer and unplug the power cord to your digital voice modem.
> - Contact your cable service provider before connecting the Motorola SURFboard Digital Voice Modem to your existing telephone wiring. Do not connect the telephone cable from the TEL port to a traditional telephone service.

Note: To prevent damage to the SBV6220 Digital Voice Modem from static electricity, perform each installation step in the following order:

1. Connect one end of the coaxial cable to a grounded cable TV outlet or splitter.

2. Connect the other end of the coaxial cable to the Cable connector on the rear of the SBV6220.

3. Insert the power cord plug into an AC electrical outlet.

4. Connect the power cord to the power adapter and insert the power connector end of the power adapter into the Power connector on the rear of the SBV6220.

1   **2**

3   **4**

Connecting Your Digital Voice Modem
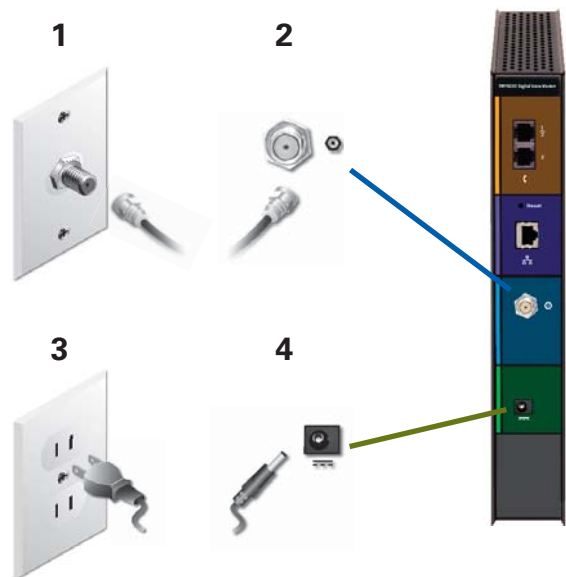
Connect your telephone and computer to the SBV6220

Note: Do not connect the telephone cable from either TEL port to a traditional telephone service; only connect it to a telephone.

For a single or two-line telephone:

1. Plug one end of the telephone cable into your telephone.

2. Plug the other end of the telephone cable into TEL 1/2 port on the back of the SBV6220.

   Note: You must use the TEL 1/2 port to connect a two-line telephone.

For a second single-line telephone, fax machine, or other device:

3. Plug one end of the device cable into the device.

4. Plug the other end of the device cable into the TEL 2 port on the back of the SBV6220.

5. To connect your computer, insert one end of the Ethernet cable into the Ethernet port on your computer.

6. Insert the other end of the Ethernet cable into the Ethernet port on the back of the SBV6220.
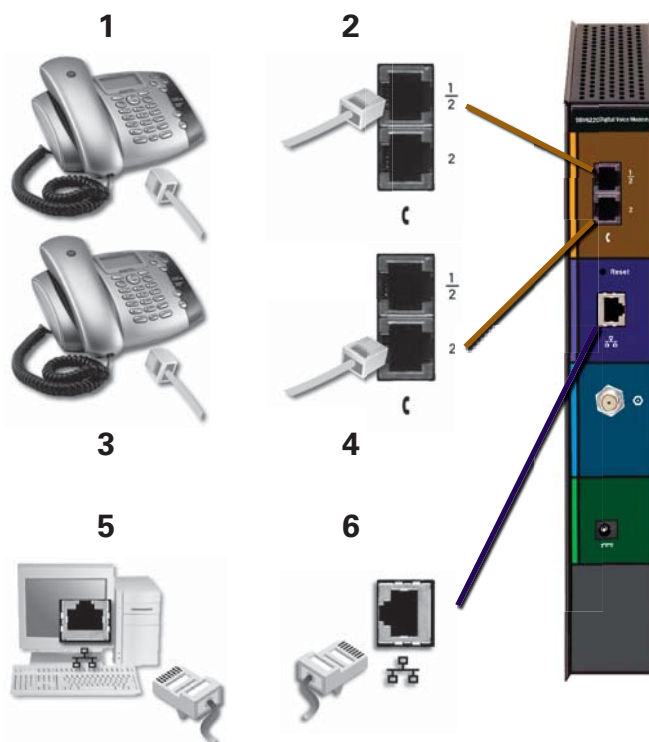
Testing the Connections

To verify that all the components were properly installed, perform the following connectivity test:

1. Power on your computer and then log on.

2. Check that all the LEDs on the SBV6220 front panel are either **on** or **flashing**, except for TEL 1 and TEL 2. The telephony LEDs will be **on** if the SBV6220 is set up for telephone service.

   Note: See *Front Panel Description* on page 2 for status information on the LEDs that are **flashing**.

3. Open a web browser.

4. Go to any website to check for an Internet connection.

5. Check the telephone for a dial tone. If there is no dial tone, then you may not have a telephone service subscription.

   Note: Contact your service provider to provision the telephony line(s).

If the connectivity test failed, see *Troubleshooting* on page 5 for a possible solution.

This section covers some of the common problems that may occur during installation of your digital voice modem. Before calling your service provider, follow the applicable instructions provided below to quickly resolve the problem. If the problem still exists, then you should contact your cable service provider.

For more information on advanced troubleshooting issues and using your digital voice modem, see the *SBV6220 DOCSIS 3.0 Digital Voice Modem Installation Guide* available at **Digital Voice Modems** area on the Motorola website, **http://broadband.motorola.com/ consumers/support.**

Problem	Solution
Green POWER LED is **off** - or - All LEDs are **off**	• Check that the AC/DC power adapter is securely plugged into the back of the SBV6220 **and** the electrical wall outlet. • Make sure the power adapter is plugged into a live electrical outlet that is **not** switch-controlled.
SBV6220 cannot receive or send data	• Check the coaxial cable connection on the SBV6220 and cable service wall outlet. Hand-tighten the cable connectors, if necessary. • Check that the Ethernet cable is properly connected to the SBV6220 and your computer. • Check the LEDs on the front of the SBV6220. Note the first LED from top to bottom that is **off** or **flashing**. This LED shows where the error occurred; see *Front Panel Description* on page 2 for more information. POWER, RECEIVE, SEND, and ONLINE LEDs should always be **on**. LINK LED should be **flashing**. • If you do not have cable TV service, then you must contact a cable service provider. If you have cable TV service, then you can determine if the cable system is working properly by viewing a channel on your TV. If you cannot see a picture on the TV, then your data and voice service will not work; you will need to contact your cable service provider. • Check the IP address by following the steps for your operating system in the user guide: See the *SBV6220 DOCSIS 3.0 Digital Voice Modem Installation Guide* for the operating system you are running by performing the steps in one of the following sections: o Verifying the IP Address in Windows Vista o Verifying the IP Address in Windows XP o Verifying the IP Address in Windows 2000 If you need an IP address, call your cable service provider.
No telephone service - or - TEL 1 or TEL 2 LED is **off**	• If your telephone requires external power, check the AC power connection to your telephone. • Check that the telephone lines are properly connected to the SBV6220. If they are and the TEL 1 or TEL 2 LED remains **off**, the telephone line is not set up for voice service. Contact your service provider.
TEL 1 or TEL 2 LED is **flashing** (rapidly)	• A telephone wiring fault was detected. Check the applicable telephone wiring.

MOTOROLA