

SB5100 Series Cable Modem User Guide

Click your selection (there is a complete Contents on page v):

Introduction

Introduces your SURFboard cable modem and the controls on the Top and Front Panel and Rear Panel.

Before You Begin

Lists the items needed to install your SURFboard cable modem and describes Precautions, Signing Up for Service, and Computer System Requirements.

Installation and Configuration Overview

Provides an overview and links for cabling and configuring your SURFboard cable modem, including Setting Up a USB Driver.

Troubleshooting

Provides suggestions to fix common problems.

Contact Us

Provides contact information.

Frequently Asked Questions

Provides answers to common questions about the SURFboard cable modem.



SURFboard[®] Cable Modem



WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE. THE DEVICE SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE DEVICE.

CAUTION: TO ENSURE REGULATORY AND SAFETY COMPLIANCE, USE ONLY THE PROVIDED POWER AND INTERFACE CABLES. TO PREVENT ELECTRICAL SHOCK, DO NOT USE THIS PLUG WITH AN EXTENSION CORD, RECEPTACLE, OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

CAUTION: DO NOT OPEN THE UNIT. DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE INSTALLATION AND TROUBLESHOOTING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.

Caution: Changes Or Modifications Not Expressly Approved By The Party Responsible For Compliance Could Void The User's Authority To Operate The Equipment.

It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damaging the equipment by local lightning strikes and other electrical surges.



This product was qualified under test conditions that included the use of the supplied cable between system components. To be in compliance with regulations, the user must use this cable and install it properly.



Different types of cord sets may be used for connections to the main supply circuit. Use only a main line cord that complies with all applicable product safety requirements of the country of use.

Installation of this product must be in accordance with national wiring codes.

To prevent overheating, do not block the ventilation holes on the sides of the cable modem.

Wipe the cable modem with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC.

Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de la classe B respects toutes les exigences du Règlement sur le matériel brouilleur du Canada.



This product is provided with a separate a separate *Regulatory, Safety, Software License, and Warranty Information* card. If one is not provided with this product, please ask your service provider or point-of-purchase representative, as the case may be.

- THIS PRODUCT IS IN COMPLIANCE WITH ONE OR MORE OF THE STANDARDS LISTED ON THE *REGULATORY, SAFETY, SOFTWARE LICENSE, AND WARRANTY INFORMATION* CARD. NOT ALL STANDARDS APPLY TO ALL MODELS.
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Before You Begin

Introduction

Easier!

Unlike dial-up modems or ISDN, you're always on, always connected. For easiest set-up, use the Installation Assistant on the SURFboard Cable Modem CD-ROM.

Faster!

Your cable modem is up to 100 times faster than a dial-up modem. It lets you enjoy surfing the web without the long wait. Because many network and other factors can affect performance, the actual speed will vary.

Better!

Your cable modem is made by the company with over 50 years of cable TV expertise.

Congratulations, you have a new Motorola[®] SURFboard[®] cable modem. It provides high-speed access to the Internet and other online services. This cable modem transmits and receives data much faster than traditional dial-up or ISDN modems. Unlike a dial-up modem, your SURFboard cable modem is always online. *Just open your browser and surf!*

You can use your high-speed, upgradeable cable modem to connect one or more computers in your home or business to the Internet. You can connect:

- A single computer equipped with a Universal Serial Bus (USB) port directly to the USB port on the SURFboard cable modem
- A single computer equipped with an Ethernet adapter directly to the Ethernet port on the SURFboard cable modem
- Two computers; one to the USB port and one to the Ethernet port
- Up to 32 computers to a single SURFboard cable modem using an Ethernet hub, as shown in "Cabling for Multiple Users" on page 40







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The model number on your cable modem may be different than in the illustrations and screen images in this guide.



Top and Front Panel

For added security, you can press the Standby button (1) to suspend your Internet connection. No data is transmitted or received from the Internet when the Standby light is on. All other front-panel lights turn off until you press the Standby button again.

The lights provide information about power, communications, and errors:

Key	Light	Flashing	On
2	Power	Startup diagnostics in progress	The cable modem is powered on
3	Receive	Scanning for a receive (downstream) channel connection	The downstream channel is connected
4	Send	Scanning for a send (upstream) channel connection	The upstream channel is connected
5	Online	Scanning for a network connection	The startup process is complete
6	PC/Activity	Transmitting or receiving data	A device, such as a computer or hub, is connected to the USB or Ethernet connectors on the back panel.
7	Standby	This light does not flash	Internet service is blocked because the Standby button was pressed. If this light is on, all other lights are off.

During normal operation, the Power, Receive, Send, and Online lights are on and the PC/Activity light flashes when the cable modem is transferring data.







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Rear Panel

The rear panel provides cabling connectors and the power receptacle.4









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Before You Begin

Before you begin the installation, check that you received the following items with your SURFboard cable modem:

Description

Item



You will need 75-ohm coaxial cable with F-type connectors to connect your cable modem to the nearest cable outlet. If a TV is connected to the cable outlet, you may need a 5-900 MHz RF splitter and a total of three coaxial cables to connect both the TV and the cable modem. The coaxial cable and RF splitter are available at consumer electronic stores.





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Before You Begin

To avoid damaging your cable modem or PC with static electricity:



Before you connect or disconnect the USB or Ethernet cable, *always touch the coaxial cable connector on the cable modem*.

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Precautions

Postpone cable modem installation until there is no risk of thunderstorm or lightning activity in the area.

To avoid damaging the cable modem with static electricity:

- Always first connect the coaxial cable to the grounded cable TV wall outlet.
- Before you connect or disconnect the USB or Ethernet cable from your cable modem or PC, always touch the coaxial cable connector on the cable modem to release any static charges.

To prevent overheating the cable modem, do not block the ventilation holes on its sides.

Do not open the cable modem. Refer all service to your cable service provider.

Wipe the cable modem with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.





Introduction	Before You Begin	Installation & Configuration	Troubleshooting	FAQ	Glossary	License	
		Signing Up f	or Service				
You must sign up with a cable service provider to access the Internet and other services.							

To activate your service, call your local cable service provider.

To receive data service, you need to provide the MAC address printed on the bar code label marked **CM HFC MAC ID** on the rear panel. You can record it here:

00 : _____ : _____ : _____ : _____ : _____

You should ask your cable service provider the following questions:

- Do you have any special system requirements?
- When can I begin to use my cable modem?
- Are there any files I need to download after I am connected?
- Do I need a user name or password to access the Internet or use e-mail?





Before You Begin

You can use any web browser such as Microsoft[®] Internet Explorer or Netscape Navigator[®] with your SURFboard cable modem.

For Microsoft Windows[®] computers, the Installation Assistant application automatically checks your system configuration. You can start the Installation Assistant from the Main Menu on the SURFboard Cable Modem CD-ROM.

Computer System Requirements

Your SURFboard cable modem is compatible with Microsoft Windows[®], Macintosh[®], and UNIX[®] computers.

Ethernet Card

You can use the Ethernet connection with any Windows, Macintosh, or UNIX computer equipped with a 10Base-T or 10/100Base-T Ethernet card.

Windows® 95, UNIX, or Macintosh computers must use the Ethernet connection.

If you use an Ethernet card, it must be installed in your computer before you install the *cable modem*. If it is not installed, follow the installation instructions provided with your Ethernet card.

USB Connection

You can use the USB connection with any PC running Windows[®] 98, Windows[®] 2000, Windows $Me^{\text{®}}$, or Windows XP^{TM} that has a USB interface. The USB connection requires special USB driver software that is supplied on the *SURFboard Cable Modem* CD-ROM.

You can upgrade the USB drivers from the Internet. For information, check our website http://www.motorola.com/broadband.







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To connect a single PC running Microsoft Windows to a SURFboard cable modem, we recommend using the Installation Assistant application.

You can start the Installation Assistant from the Main Menu on the *SURFboard Cable Modem* CD-ROM. In most cases, the Installation Assistant automatically configures your cable modem.

Installation and Configuration Overview

To install and configure your cable modem for a single PC running Microsoft Windows, you can use the Installation Assistant.

Otherwise, to install and configure your cable modem:

- 1 Install the cables as described in one of:
 - "Cabling and Startup for a Single User" on page 9
 - "Cabling for Multiple Users" on page 40
- 2 If you are using the USB port *only*, go to "Setting Up a USB Driver" on page 11. *Ethernet users can skip this step.*
- 3 Configure TCP/IP and verify the IP address for your computer following *one* of:
 - "Configuring TCP/IP" on page 22
 - Your Macintosh or UNIX user manual



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		Cabling and	Startup for a	a Sing	gle Usei	r
		Allow 5 to 30 minutes to must find and lock on the	power up the first time be appropriate channels for	cause the communi	SURFboard cal cations.	ble modem
		1 Be sure your compu	ter is on and the cable me	odem is un	plugged.	

To cable outlet (step 2) To electrical outlet (step 4)

SURFboard cable modem

Always connect coaxial cable to the wall outlet first.

- 2 Connect one end of the coaxial cable to the cable outlet or splitter. Connect the other end of the coaxial cable to the CABLE connector on the cable modem. Hand-tighten the connectors to avoid damaging them.
- 3 Insert the SURFboard Cable Modem CD-ROM into your CD-ROM drive.
- 4 Plug the power cord into the +12VDC connector on the cable modem and the electrical outlet. *This turns the SURFboard cable modem on. You do not need to unplug it when not in use.*
- 5 Check that the lights on the cable modem front cycle through this sequence:
 - Power flashes during the self-test and changes to solid green when the self-test is successfully complete.
 - Receive flashes while scanning for the receive (downstream) channel and changes to solid green when it is connected.
 - Send flashes while scanning for the send (upstream) channel and changes to solid green when it is connected.
 - Online flashes while the cable modem downloads configuration data and changes to solid green when the download is complete.









7 Perform the procedures for "Configuring TCP/IP" on page 22.

Computer

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Be sure the SURFboard Cable Modem CD-ROM is inserted in your CD-ROM drive before you plug in the USB cable.

Setting Up a USB Driver

The following subsections describe setting up a USB driver. Perform the appropriate procedure for your Windows version:

- "Setting Up a USB Driver in Windows 98" on page 12
- "Setting Up a USB Driver in Windows 2000" on page 16
- "Setting Up a USB Driver in Windows Me" on page 20
- "Setting Up a USB Driver in Windows XP" on page 21

When you finish setting up the USB driver, you can continue with "Configuring TCP/IP" on page 22.

The SURFboard cable modem USB driver does not support Macintosh or UNIX computers. For those systems, you can connect through Ethernet *only*.



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Add New Hardware Wizard







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Setting Up a USB Driver in Windows 98

Be sure the SURFboard Cable Modem CD-ROM is inserted in your CD-ROM drive before you plug in the USB cable. This CD contains the USB drivers and must be inserted and read by the PC before you connect the cable modem to the PC.

A few seconds after you complete the USB connection, the Add New Hardware Wizard window is displayed.

- 1 Click Next.
- 2 Be sure "Search for the best driver for your device" is selected.
- 3 Click Next.



CD-ROM drive
 Microsoft Windows Update
 Specify a location:
 D:\

< <u>B</u>ack

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T Home Next>

Introduction	Before You Begin	Installation	& Configuration	Troubleshooting	FAQ	Glossary	License
		Se	etting Up a USB	Driver in Windows 9	98, conti	nued	
Add New Hardware V	Vizard	4	Be sure "CD-ROM	drive" is the only box chec	cked.		
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.	° 5	Click Next.				
	Eloppy disk drives ICD-RIOM drive Microsoft Windows Update		The message "Plea is displayed.	se wait while Windows se	earches for	a new driver fo	r this device"
	☐ Specify a location:	6	If your computer su	ccessfully locates the driv	er, skip to	step 8.	
*	D:\netGousb.inf		If your computer do Select Specify a lo	es not locate the driver, th cation and type the locat	ne previous ion of your	window is disp CD-ROM drive.	layed again.
	<u> </u>		To load the driver so NetMotCM.sys file o	uccessfully, you may need on the CD-ROM.	l to click Br	owse to manua	Ily select the
Add New Hardware V	Vizand Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Elick Next to start the search. Floopo disk drives	. 7	Click Next .				

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▼ Browse...



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to continue.

Location of driver:

< <u>B</u>ack

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Windows driver file search for the device:

Motorola SurlBoard 5100 USB Cable Modem Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next

Add New Hardware Wizard

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Next>

Next >

Cancel

Cancel

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Introduction	Before You Begin	Installation	& Configuration	Troubleshooting	FAQ	Glossary	License
		Se	etting Up a USB	Driver in Windows 9	8, conti	nued	
Add New Hardware W	izard	8	Select The updated	driver and click Next.			
	Windows has found an updated driver for this device, and also some other drivers that should work with this device. What do you want to install? If the updated driver [Recommended] Motorola SuriBoard 5100 USB Cable Modem Image: One of the other drivers.	9	If this window is not properly inserted in click Cancel to can USB Driver from W procedure. After the window at	displayed, verify that the the CD-ROM drive. If you cel the installation and pe ndows 98 or Windows Me bottom left is displayed, c	SURFboar still canno form the p " on page lick Next .	rd Cable Moderr ot find the correc rocedure for "R 45. Then repea	CD-ROM is ct driver file, emoving the t this

If a window with the message *Copying Files...* displays and asks for your CD-ROM drive, type your CD-ROM drive *letter* (for example, "D:") and click **OK**.

If an Insert Disk window similar to the one below is displayed, Windows 98 system files are needed to complete the installation. To install the files, insert your Windows 98 CD-ROM is in the CD-ROM drive and click **OK**.



Although your SURFboard cable modem model number may be different than in the images in this guide, the procedure is the same.





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		Setting Up a USB	Driver in Windows S	98, conti	nued	
Add New Hardware V	Vizard Ingences, Motorola Surfboard 5100 USB Cable Mod	After all the necess confirming a succe	sary files are loaded, the w ssful installation.	vindow at u	pper left is displ	ayed
		10 Click Finish. The v	vindow at bottom left is dis	played.		
	Windows has finished installing the software that yo hardware device requires.	11 Click Yes to restart	your computer.			
		When you finish setting Windows 95, 98, or Wir	up the USB driver, you candows Me" on page 23.	an continue	e with "Configuri	ng TCP/IP in
	< <u>B</u> adk Finish Car	If you have difficulties s Windows 98 or Window correct your problem, s Information card provid obtaining warranty serv	etting up the USB driver, p rs Me" on page 45 and rep ee the <i>Regulatory, Safety,</i> ed with your SURFboard c ice.	erform "Re beat this pro Software I cable mode	emoving the USE ocedure. If that License, and Wa em for informatio	B Driver from does not arranty on about



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Setting Up a USB Driver in Windows 2000

Be sure the *SURFboard Cable Modem* CD-ROM is inserted into the CD-ROM drive before you plug in the USB cable. A few seconds after you complete the USB connection, the Found New Hardware window is displayed.

- 1 Click Next.
- 2 Be sure "Search for a suitable driver for my device" is selected.
- 3 Click Next.

Although your SURFboard cable modem model number may be different than in the images in this guide, the procedure is the same.



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			Se	etting Up a USB [Driver in Windows 2	2000, co	ntinued	
Found New Hardware W Locate Driver Files Where do you war Seach for driver fil Seach for driver fil Seach for driver fil Seach for driver fil Diplomat feach to following To dat the seach inset the following To dat the seach Foot 90A Foot 90A Foot 90A Specify als Seach value Specify als Microsoft W Foot 90A Microsoft W Driver Files Seach The weard has fin Windows found a c Specify als Microsoft W	Wizard In Windows to search for driver files? les for the following hardware device: USB Cable Modem set for studied ediversity in a driver database on your compute gotimal reach how in the driver database on your compute socionary, click Next II you are searching on a floppy disk or CD-RO socionary, click Next II you are searching on a floppy disk or CD-RO socionary, click Next II you are searching on a floppy disk or CD-RO socionary, click Next II you are searching on a floppy disk or CD-RO socionary Areard Interview used or for the following device: USB Cable Modem driver for this device. To install the driver Windows found, cl Atom inf < Eack < Eack	r and in M drive; Cancel	4 5 6	Be sure "CD-ROM d Click Next . Click Next . If the Insert Disk win CD-ROM is in the C to step 13.	rives" is the only box ch dow is displayed, be sur D-ROM drive and follow	ecked. re the <i>SUR</i> steps 7 to	<i>Fboard Cable M</i> 12. Otherwise, y	'od <i>em</i> ′ou can skip
n Home	Print Ex	it		17	SB5100 Series	s Cable Mod	lem User Guide	



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			Se	tting Up a USB	Driver in Windows 2	000, coi	ntinued	
Insert Disk	Please insert the Compact Disc labeled "USBCM" into our CD-ROM drive (D:) and then click OK. 'ou can also click OK if you want files to be copied	OK Cancel	7 8	On the Insert Disk with the In	vindow, click OK . The File your CD-ROM drive in the	s Needed e Copy file	window is displa s from list.	ayed.
	rom an alternate location, such as a floppy disk or a network server.		9 10 11	Click Browse. Locate the NetMotO Double-click the Net	CM.sys file in the CD-ROM	l root direc s Needed	tory. window is displa	aved.
Files Neede	d Some files on USBCM are needed.	OK Cancel	12	Click OK . The Four	d New Hardware Wizard	window is	displayed.	.,
	nsert USBCM into the drive selected below, and then lick OK.							
I		Browse						



X Exit





Introduction	Before You Begin	Installation & Configuration	Troubleshooting	FAQ	Glossary	License
Introduction	Before You Begin Completing the Found New Hardware Wizard Worrola SuriBoard 5100 USB Cable Modem Windows has finished installing the software for this device.	Installation & Configuration Setting Up a USB 13 Click Finish to con When you finish setting Windows 2000" on pag If you have any difficult from Windows 2000" or	Troubleshooting Driver in Windows 2 applete the installation. up the USB driver, you ca e 26. les setting up the USB driven page 49 and repeat this p	FAQ 2000, col an continue ver, perform procedure.	Glossary ntinued e with "Configuri n "Removing the	License
	To close this wizard, click Finish.	e				







Add New Hardware Wizard Image: Add New Hardware Vizard Image: Add New Hardware Vizard

Setting Up a USB Driver in Windows Me

Be sure the *SURFboard Cable Modem* CD-ROM is inserted into the CD-ROM drive before you plug in the USB cable. A few seconds after you complete the USB connection, the Add New Hardware Wizard window is displayed.

- 1 Click **Next**. Windows automatically searches for the correct USB drivers and installs them. If the installation is successful, the window at bottom left is displayed.
- 2 Click **Finish** to complete the installation. Otherwise, be sure the *SURFboard Cable Modem* CD-ROM is correctly inserted in your CD-ROM drive.

When you finish setting up the USB driver, you can continue with "Configuring TCP/IP in Windows 95, 98, or Windows Me" on page 23.

Although your SURFboard cable modem model number may be different than in the images in this guide, the procedure is the same.







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Found New Hardware Wizard Weizard helps you initial software for Software wizard to do? Initial from all to software automatically (Relevant) Initial from all to software automatically (Relevant) Initial from all to software in the wizard to do? Initial from all to software in the wizard to do? Initial from all to software in the wizard to do? Initial from all to software in the wizard to do? Initial from all to software in the wizard to do? Initial from all to software wizard Initial from all to software wizard	 Setting Up Be sure the SURFboard before you plug in the U connection, the Found I Be sure "Install the I connection, the Found I Be sure "Install the I Click Next. Window them. If the installar Click Finish to con Modem CD-ROM is When you finish setting Windows XP" on page I Although I be different the same. . 	a USB Driver d Cable Modem CD-ROM JSB cable. A few seconds New Hardware Wizard win software automatically" is vs automatically searches tion is successful, the win nplete the installation. Oth s correctly inserted in you up the USB driver, you ca 30.	is inserted into the CD- after you complete the ndow is displayed. s selected. for the correct USB drividow at bottom left is dis nerwise, be sure the <i>SU</i> r CD-ROM drive. an continue with "Config	S XP ROM drive USB vers and installs splayed. <i>RFboard Cable</i> uring TCP/IP in

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Configuring TCP/IP

The SURFboard cable modem contains all required software. You do not need to configure the cable modem, but you must be sure that your computer is configured for TCP/IP (a protocol for communication between computers). Perform *one* of:

- "Configuring TCP/IP in Windows 95, 98, or Windows Me" on page 23
- "Configuring TCP/IP in Windows 2000" on page 26
- "Configuring TCP/IP in Windows XP" on page 30
- Follow the instructions in your Macintosh or UNIX user manual

After configuring TCP/IP, perform one of the following to verify the IP address:

- "Verifying the IP Address in Windows 95, Windows 98, or Windows Me" on page 37
- "Verifying the IP Address in Windows 2000 or Windows XP" on page 38
- Follow the instructions in your Macintosh or UNIX user manual

Your cable service provider may provide additional instructions to set up your computer.





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etwork
Configuration Identification Access Control
The following network components are installed:
Client for Microsoft Networks Client for Microsoft Networks Dat-Up Adapter DeX-Up Adapter DPX-110 USB Cable Modern Adapter Microsols SuriBoard USB Cable Modern SB5100
Add Remove Properties
Primary Network Logon:
Eile and Print Sharing
Description
OK Cancel

Configuring TCP/IP in Windows 95, 98, or Windows Me

- 1 On the Windows Desktop, click **Start**.
- 2 Select **Settings** and then **Control Panel** from the pop-up menus.
- **3** Double-click the **Network** icon on the Control Panel window.
- 4 Select the **Configuration** tab on the Network window.
- 5 Verify that TCP/IP is installed for the adapter that will be used to connect to the SURFboard cable modem. If TCP/IP is installed, then skip to step 10. If TCP/IP is not installed for the adapter, continue with step 6.

Although your SURFboard cable modem model number may be different than in the images in this guide, the procedure is the same.







Introduction Before You Begin Installation & Configuration Troubleshooting FAQ Glossary License Configuring TCP/IP in Windows 95, 98, or Windows Me, continued

click Add.

Click OK.

6

7

8

9

elect Network Component Type	<u>?</u> ×
Click the type of network component you want to install:	
📇 Client	<u>A</u> dd
🖳 Adapter	
Y Protocol	Cancel
Service	
Protocol is a 'language' a computer uses. Computers must use the same protocol to communicate.	

Select Network Protocol	×
Click the Network P an installation disk fo	rotocol that you want to install, then click OK. If you have or this device, click Have Disk.
Manufacturers:	Network Protocols:
🖗 Banyan	FIPX/SPX-compatible Protocol
¥ IBM	Wicrosoft 32-bit DLC
Y Microsoft	G Microsoft DLC
Vovell	VetBEUI
	Y ТСР/IР
	WAN support for ATM
	Have Disk
	OK Cancel

Select the adapter to be used for the SURFboard cable modem connection and then

Double-click the **Protocol** option on Select Network Component Type window. Click **Microsoft** in the Manufacturers section and click **TCP/IP** in the Network

Protocol section of Select Network Protocol window.



Introduction	Before You Begin	Installation	& Configuration	Troubleshooting	FAQ	Glossary	License
		Co	onfiguring TCP/I	P in Windows 95, 98	, or Win	dows Me, co	ontinued
TCP/IP Properties Bindings DNS Configuration An IP address or If your network ad the space below © Dbtain an I © Specify an IP Address Sigbnet Ma	Advanced NetBIOS Gateway WINS Configuration IP Addre an be automatically assigned to this computer. loses not automatically assign IP addresses, ask ministrator for an address, and then type it in . P address automatically IP address:	10 11 12 13 14 15 16 Wh Wir	Click TCP/IP on the the one for the Ethe Click Properties . T Click the IP Addres Click Obtain an IP Click OK to accept Click OK to close th Click OK to close th Click OK when pror en you complete TCP adows 98, or Window	Network window. If there ernet card or USB port con he TCP/IP window is displ at ab. address automatically. the TCP/IP settings. he Network window. npted to restart your comp P/IP configuration, go to "V rs Me" on page 37.	is more than ected to ayed.	an one TCP/IP e the cable mode click OK again. e IP Address in '	ntry, choose m. Windows 95,
	OK Cancel						







Configuring TCP/IP in Windows 2000

- 1 On the Windows Desktop, click Start.
- 2 Select **Settings** and then **Control Panel** from the pop-up menus.
- 3 Double-click the **Network and Dial-up Connections** icon on the Control Panel window.
- 4 On the Network and Dial-up Connections window, double-click Local Area Connection number. The value of number varies from system to system. The Local Area Connection number Status window is displayed.

🗟 Control P	anel						_ 🗆 ×
<u>E</u> ile <u>E</u> dit	<u>View</u> F <u>a</u> vori	ites <u>T</u> ools <u>H</u>	<u>H</u> elp				-
🖨 Back 👻	⇒ - 🖻 🛛 🖗	🗟 Search 🖓	Folders 🌀	暗空×	S		
Address 🙆	Control Panel						▼ ∂‰
*		78	8	9 4	8	2	- A
Add/Remove Hardware	Add/Remove Programs	Administrative Tools	ATI Multime	CSNW	Date/Time	Display	Folder Options
A	ø.	9	1		Ø		
Fonts	Gaming Options	Internet Options	Java Plug-in	Keyboard	Mouse	Network and Dial-up	Phone and Modem
ų	3	0	real	3	2	O	
Power Options	Printers	QuickTime	RealPlayer	Regional Options	Scanners and Cameras	Scheduled Tasks	Sounds and Multimedia
<u>e</u>	See.						
System	Users and Passwords						
Connects to of	ther computers,	, networks, and	the Internet				11







Introduction Before You Begin Installation & Configuration Troubleshooting FAQ Glossary License Configuring TCP/IP in Windows 2000, continued

Local Area Connectio	n 2 Status	<u>?×</u>
General		
Connection		
Status:		Connected
Duration:		00:04:20
Speed:		750.0 Kbps
Activity	Sent 🕮 1	Received
Packets:	0	0
Properties	Disable	
		Close

al Area Connection	2 Properties	<u>?×</u>
ieneral		
Connect using:		
B Motorola SurfB	oard USB Cable Moder	n SB5100
		Configure
Components checked	are used by this conn	ection:
Client for Micr	osoft Networks r Sharing for Microsoft col (TCP/IP)	Networks
Install	Uninstall	Properties
Transmission Contr wide area network across diverse inter	al Protocol/Internet Pro protocol that provides connected networks.	otocol. The default communication
Show icon in task	oar when connected	



- 5 Click **Properties**. Information similar to the lower window is displayed.
- 6 If Internet Protocol (TCP/IP) is in the list of components, TCP/IP is installed. You can skip to step 10.

If Internet Protocol (TCP/IP) is not in the list, click **Install**. The Select Network Component Type window is displayed. Continue with step 7.



Click the type of network component you want to install:

Protocol is a 'language' a computer uses. Computers must use the same protocol to communicate. Add.

Cancel

🛄 Client

Protocol

Introduction Before You Begin Installation & Configuration Troubleshooting FAQ Glossary License Configuring TCP/IP in Windows 2000, continued Select Network Component Type Image: Configuring TCP/IP in Windows 2000, continued Select Network Component Type Image: Configuring TCP/IP in Windows 2000, continued Select Network Component Type Select Network Protocol on the Select Network Component Type window and click Add. The Select Network Protocol window is displayed.

- 8 Click Internet Protocol (TCP/IP) in the Network Protocol section on the Select Network Protocol window.
- 9 Click **OK**. The Local Area Connection *number* Properties window is re-displayed.







Description

Introduction	Before You Begin	Installation & Configuratio	n Troubleshooting	FAQ	Glossary	License
		Configuring TC	P/IP in Windows 2000,	continu	led	
Local Area Connection 2 Properties 2 / 2 General Connect using		10 On the Local Area Connection <i>number</i> Properties window, be sure the box next to Internet Protocol (TCP/IP) is checked.				
Competition	Matorola SuriBoard USP Cable Modem SB5100 Configure aments checked are uned by this connection: Gran for Microsoft Networks File and Pinter Sharing for Microsoft Networks	11 Click Properties shown at botton	s . The Internet Protocol (TCF n left.	P/IP) Prope	rties window is	displayed as
	InstallUninstall Properties	12 Be sure Obtain automatically a	IP address automatically a are selected.	nd Obtain	DNS server ad	dress

- 13 Click OK to accept the TCP/IP settings.
- 14 Click **OK** to close the Local Area Connection *number* Properties window.
- 15 Click **OK** when prompted to restart your computer and click **OK** again.

When you complete the TCP/IP configuration, go to "Verifying the IP Address in Windows 2000 or Windows XP" on page 38.



Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

Close

Show icon in taskbar when connected





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Exit





Before You Begin

Configuring TCP/IP in Windows XP

Troubleshooting

- On the Windows desktop, click Start to display the Start window shown at left. 1
- 2 Click Control Panel to display the Control Panel window. The display varies, depending on your Windows XP view options. If the display is a Category view as shown below, continue with step 3. Otherwise, skip to step 5.

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3 Click Network and Internet Connections to display the Network and Internet Connections window.



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Installation & Configuration


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4 On the Network and Internet Connections Pick a task window, click **Network Connections** to display the LAN or High-speed Internet connections. Skip to step 6.







Introduction Before You Begin Installation & Configuration Troubleshooting FAQ Glossary License Configuring TCP/IP in Windows XP, continued



5 If a classic view similar to at left is displayed, click **Network Connections** to display the LAN or High-speed Internet connections.







Introduction Before You Begin Installation & Configuration Troubleshooting FAQ Glossary License Configuring TCP/IP in Windows XP, continued



- 6 Right-click on your network connection. If more than one connection is displayed, be sure to select the one for your network interface.
- 7 Select **Properties** from the pop-up menu to display the Local Area Connection Properties window.





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		C	onfiguring TCP/II	P in Windows XP, c	ontinued	I	
Local Area Con General Authentic Connect using:	Innection Properties	≥ × 8 9	On the Local Area C is checked. If it is no Select Internet Pro Protocol (TCP/IP) P	Connection Properties wind ot checked, check it. tocol (TCP/IP) and click I Properties window.	dow, be su Properties	re Internet Proto	rcol (TCP/IP)
	OK Cano	cel					



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Internet Protocol (T General Alternate Cor You can get IP setting this capability. Otherwit the appropriate IP sett O Use the following IP address: Sybnet mask: Default gateway: O Obtain DNS serv Alternate DNS serv	CCP/IP) Properties nfiguration gs assigned automatically if your network suppor ise, you need to ask your network administrato ings. dress automatically g IP address: ver address automatically g DNS server addresses: ver: Advance OK OK C	Cc 10 11 11 12 Wr 200	On the Internet Pro correct, as shown a Click OK to close th Click OK to close th then you complete the D0 or Windows XP" o	P in Windows XP, co tocol (TCP/IP) Properties it left. TCP/IP Properties wind the Local Area Connection TCP/IP configuration, go to n page 38.	ontinued window, ve ow. Properties o "Verifying	erify that the set window. g the IP Address	tings are





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Verifying the IP Address

The following subsections describe verifying an IP Address. Perform the appropriate procedure for you Windows version:

- "Verifying the IP Address in Windows 95, Windows 98, or Windows Me" on page 37
- "Verifying the IP Address in Windows 2000 or Windows XP" on page 38

For a Macintosh or UNIX system, refer to your user guide.





[P Configuration Ethernet Adapter Information			
		PCI Bus M	aster Adapter	-
	Adapter Address	00-80-	C6-E7-59-E6	
	IP Address	206.19.86.132		
	Subnet Mask	255.255.255.224		
	Default Gateway	206.19.86.129		
	OK B	elease	Renew	
	Rele <u>a</u> se All Re	ne <u>w</u> All	More Info >>	

The values for Adapter Address, IP Address, Subnet Mask, and Default Gateway on your PC will be different than in the image above.

Adapter Address	00-80-C6-E7-59-E6
IP Autoconfiguration Address	169.254.191.251

In Windows 98, if autoconfiguration is displayed before the IP Address, call your service provider.

Verifying the IP Address in Windows 95, Windows 98, or Windows Me

To check the IP address:

- 1 On the Windows Desktop, click **Start**.
- 2 Select Run. The Run window is displayed.
- 3 Type winipcfg.exe and click OK. A window similar to the example at top left is displayed.
- 4 Select your adapter name the Ethernet card or USB device.
- 5 Click Renew.
- 6 Click **OK** after the system displays an IP address.

If after performing this procedure your computer cannot access the Internet, call your cable service provider for help.





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C:\WINNT\System32\cmd.exe	
Microsoft Windows 2000 [Version 5.00.2195] <c> Copyright 1985-2000 Microsoft Corp.</c>	-
C:∖>ipconfig	
Windows 2000 IP Configuration	
Ethernet adapter Local Area Connection 2:	
Connection-specific DNS Suffix . : surfboard.com IP Address 206.19.86.174 Subnet Mask	
Ethernet adapter Local Area Connection:	
Media State Cable Disconnected	
C:∖>	_

🖾 cmd	_ 🗆 ×
Microsoft Windows 2000 [Version 5.00.2195] (C) Copyright 1985-2000 Microsoft Corp.	-
C:\>ipconfig	_
Windows 2000 IP Configuration	
Ethernet adapter Local Area Connection 2:	
Connection-specific DNS Suffix .: Autoconfiguration IP Address: 169.254.45.20 Subnet Mask	
c:\>	
	-

Verifying the IP Address in Windows 2000 or Windows XP

To check the IP address:

- 1 On the Windows Desktop, click **Start**.
- 2 Select Run. The Run window is displayed.
- 3 Type cmd and click OK. A window like the one at upper left is displayed.
- 4 Type **ipconfig** and press ENTER to display your IP configuration. A display, like the window at upper left, indicates a normal configuration.

If an Autoconfiguration IP Address is displayed as in the window at bottom left, there is an incorrect connection between your PC and the cable modem or there are cable network problems. Check:

- Your cable connections
- Whether you can see cable-TV channels on your television

After verifying your cable connections and proper cable-TV operation, you can renew your IP address.





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🖾 cmd	_ 🗆 🗵
Microsoft Windows 2000 [Version 5.00.2195] (C) Copyright 1985-2000 Microsoft Corp.	-
C:\>ipconfig /renew	
Windows 2000 IP Configuration	
Ethernet adapter Local Area Connection 2:	
Connection-specific DNS Suffix .: surfboard.com IP Address 206.19.86.174 Subnet Mask 255.255.255.25 Default Gateway 206.19.86.161	24
c:>_	-

Renewing Your IP Address

To renew your IP address:

- 1 Type **ipconfig** /renew and press ENTER. If a valid IP address is displayed as shown at left, Internet access should be available.
- 2 Type **exit** and press ENTER to return to Windows.

If after performing this procedure your computer cannot access the Internet, call your cable service provider for help.





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Home

Cabling for Multiple Users

The SURFboard cable modem supports several multiple user configurations. Along with an optional hub or router, it can serve as an Internet gateway for up to 32 computers.

Not all service providers support multiple user service. For information about multiple user service, contact your cable service provider.

Ethernet and USB

You can connect the USB port on one computer and the Ethernet port on another computer directly to the cable modem, as shown at top left.

Caution



Do not connect *both* the Ethernet and USB cables to the same computer.

You can connect a single computer to the USB port and from one to 31 remaining users to an Ethernet hub, as shown at bottom left. You cannot connect more than one computer to the cable modem through the USB port.





Ethernet



You can connect up to 32 computers to an Ethernet hub connected to a SURFboard cable modem, as shown at left.







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Troubleshooting

If the solutions listed here do not solve your problem, contact your cable service provider. Before calling your service provider, try unplugging and plugging in the cable modem power cord in the AC wall outlet to restart the cable modem. Restarting the cable modem may take 5 to 30 minutes.

Before calling your service provider, try pressing the reset button on the rear panel. Resetting the cable modem may take 5 to 30 minutes. Your service provider may ask for the status of the front-panel lights as described in "Front-Panel Lights and Error Conditions" on page 44.

Problem

Possible Solutions

 Green POWER light is off
 Check that the power cord is properly plugged into the electrical outlet and the cable modem.

 Check that the electrical outlet is working.
 If the Standby light is on, the Internet connection is off. Press the Standby button to reconnect to the Internet.



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Introduction	Before You Begin	Installation & Configuration	Troubleshooting	FAQ	Glossary	License		
Problem	Ро	ssible Solutions						
Cannot send or r	receive data Che the	eck the lights on the front panel. Note the error occurred as described in "Front-Pa	first light from top to botton nel Lights and Error Condit	n that is off ions" on pa	. This light indica ge 44.	ates where		
	If al reco	II lights are off except the Standby light, th onnect your Internet service.	ne cable modem is in Stand	by mode. F	Press the Standb	y button to		
	lf yo TV	ou have cable TV, check that your TV is v channels, your data service will not funct	vorking and the picture is cl ion.	ear. If you	cannot receive y	our regular		
	Che	eck the coaxial cable at the cable modem	and wall outlet. Hand-tight	en if neces	sary.			
	Che Me' serv	eck the IP address. Follow the steps in "V " on page 37 or "Verifying the IP Address vice provider if you need an IP address.	erifying the IP Address in V in Windows 2000 or Windo	Vindows 95 ows XP" on	, Windows 98, c page 38. Call yc	or Windows our cable		
	Che	eck that the USB or Ethernet cable is prop	perly connected to the cabl	e modem	and your compu	ter.		
Problems related	to unsuccessful Rer	move the USB driver. Follow the instruction	ons in <i>one</i> of:					
USB driver instal	llation •	 "Removing the USB Driver from Windows 98 or Windows Me" on page 45 						
	•	"Removing the USB Driver from Window	ws 2000" on page 49					
	•	"Removing the USB Driver from Window	vs XP" on page 54					





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Front-Panel Lights and Error Conditions

Light	Turns Off During Startup If	Turns Off During Normal Operation If
Receive	The receive channel cannot be acquired	The receive channel is lost
Send	The send channel cannot be acquired	The send channel is lost
Online	IP registration is unsuccessful	The IP registration is lost
Power	The cable modem is not properly plugged into the power outlet	The cable modem is unplugged or is in standby mode. Press the Standby button

For more information about the lights, see "Top and Front Panel" on page 2.





Introduction

Configuration	lentification A	ccess Contra		
The following <u>r</u>	jetwork compor	nents are inst	alled:	
Client for N 3 Com Fasi Client for N 3 Com Fasi Dial-Up Ac 4 TCP/IP ->	licrosoft Netwo EtherLink XL 1 Japter urfBoard 5100 3Com Fast Eth	rks 0/100Mb TX USB Cable M erLink XL 10/	Ethernet Ad odem /100Mb TX	dapter Etherne V
<u>A</u> dd Primary Netwo Client for Micr	F k Logon: psoft Networks	emove	Prop	erties -
Eile and Pr Description A network ar connects you	int Sharing Japter is a hardi ır computer to a	ware device t a network.	hat physical	ly .

Before You Begin

Removing the USB Driver from Windows 98 or Windows Me

FAQ

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Troubleshooting

- On your Windows Desktop, right-click the Network Neighborhood icon for Windows 98 or My Network Places for Windows Me and then select Properties. The Network window is displayed.
- 2 Click the Motorola SurfBoard USB Cable Modem.

Installation & Configuration

Although your SURFboard cable modem model number may be different than in the images in this guide, the procedure is the same.





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		Re	emoving the USB Intinued	Driver from Windo	ws 98 o	r Windows N	le,
Network Configur	ition Identification Access Control	3	Click Remove. The Cable Modem in the	Network window no longe list.	er displays	Motorola SurfB	oard USB
The fo	lowing <u>n</u> etwork components are installed:	4	Click OK . The Syste	m Settings Change wind	ow is displ	ayed.	
i≣)) 100 100 100 100	iom Fast EtherLink XL 10/100Mb TX Ethernet NIC (3C9 al-Up Adapter	5	Disconnect the USB	cable from your PC or ca	able modei	m.	
S≣ N S≣ TI Rimar Client Des	HEEUI > 3Com Fast EtherLink XL 10/100Mb TX Etherr P/IP > 3Com Fast EtherLink XL 10/100Mb TX Etherr Add	6	Click Yes to restart y	rour computer.			
System Setting You Do y	Is Change In a computer before the new settings will take effect ou want to restart your computer now?	× at					
Hor	ne Print Exit		◀ 46 ►	SB5100 Series	Cable Mode	em User Guide	



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		Re co	moving the USE ntinued	3 Driver from Windo	ws 98 o	r Windows I	Vle,
File Edit View Favorites	Tools Help	.□× 7 	Insert the SURFboa time, a window with	ard Cable Modem CD-ROI language choices is disp	M in the C layed.	D-ROM drive. A	fter a short
Address D:\	Name A Size Type	<i>₽</i> G0 9	To start Windows E	xplorer, click Start and se	lect Run.		
My Computer B B 3½ Floppy (A:) Cocal Disk (C:)	Bin File Folder Common File Folder English File Folder	10	In the Run window,	type explorer and click O	K. The Ex	ploring window	is displayed.
H	Korean File Folder TradChinese File Folder USB File Folder	11	Select your CD-RO	M drive (D: in the image a	t left).		
	Blauch.ni 1 KB Setup Information Blauch.ni 1 KB Confliction Blauch.ni 1 KB Confliction Blauch.ni 1 KB Security Catalog Blauch.ni 8 KB Security Catalog NetNotCN.nrs 8 KB Setup Information NetNotCN.srs 16 KB System file Vietnover.exe 268 KB Application	tings	Double-click remov <i>Cable Modem</i> CD-F window is displayed	e or remove.exe to run th ROM. The SURFboard Ca d.	ne Remove ble Moder	e utility from the n USB Driver R	SURFboard emoval
14 object(s) (Disk free space: 0 byte	s) 374 KB Wy Computer		Your Windows on this page. T	Explorer may appear sligh here are slight variations	ntly differe between V	nt than in the im Vindows versior	lage Is





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and you can configure Windows Explorer as you like.



Sufficient Cable Moden USB Driver Removal Image: Cable Moden USB Driver Removal Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver Removal Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver Removal Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver Removal Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver Removal UBB Image: Cable Moden USB Driver In Windows 98" on page 12 Image: Cable Moden USB Driver In Windows Me" on page 20 Image: Cable Moden USB Image: Cable Moden USB Cable Moden Image: Cable Moden USB	Glossary	License
SUFFboard Cable Modem USB Driver Removal Utility Image: Cancel Cance	Windows N	le,
SUBFboard Cable Modem USB Driver Removal Image: contract processes and proceseses and processes and processes and processes and proce		
Motorola Inc. USB Driver Removal Ultity Cancel This utility will remove the USB driver files and registry entries that are not remove the USB driver files and registry entries that are not remove the USB driver files and registry entries About Operating System is Microsoft Windows 2000 Operations SURFboard Operations SURFboard USB Remove Driver: and file(s) [Information) USB Remove Briver in file(s) [Information) USB Status Cable Modem Press "Remove Driver" to start the Removal Process. Cable Modem	your computer	:
This utility will remove the USB driver files and registry entries that are not removed by the Device Manager uninstal process. Be sure to encove the driver using the "Device Manager" first. Operations Remove Driver is file(s) (System) Remove Driver in file(s) (Information) Remove Driver in file(s) (Information) Remove Driver in the Digital Catalog) Remove Driver in the Removal Process. Need New Drivers or more Information?		
Derating System is Microsoft Windows 2000 Derations Remove Driver : sys file(s) (System) Remove Driver : in file(s) (Information) USB Cable Modem Status Press 'Remove Driver' to start the Removal Process. Need New Drivers or more Information?		
Operations SURFboard Remove Driver. sys file(s) (System) SURFboard Remove Drigital Signature File (Digital Catalog) USB Remove Registry entries Cable Modern	provider.	
Remove Driver: sys file(s) (System) SURPEboard Remove Driver: inf file(s) (Information) USB Remove Drightal Signature File (Digital Catalog) Cable Modem Remove Registry entries Cable Modem		
Remove Digital Signature File (Digital Catalog) Cable Modem Remove Registry entries Cable Modem Status Press "Remove Driver" to start the Removal Process. Need New Drivers or more Information?		
Status Press "Remove Driver" to start the Removal Process. Need New Drivers or more Information?		
Need New Drivers or more Information?		
You can check for the latest Information about your Motorola SURFboard Cable Modem here. http://www.Motorola.com/broadband		











Removing the USB Driver from Windows 2000

- 1 On your Windows desktop, click **Start**.
- 2 Click Settings.
- 3 Click Control Panel to display the Control Panel window.
- 4 Double-click **System** to display the System Properties window.



properties of any device. Driver Signing...

- Hardware Profiles

Device Manager..

Hardware Profiles..

X Exit

Cancel

Hardware profiles provide a way for you to set up and store different hardware configurations.

OK

Introduction	Before You Begin	Installation	& Configuration	Troubleshooting	FAQ	Glossary	License
		Re	emoving the USB	Driver from Window	ws 2000	, continued	
System Properties General Network Identi Hardware Wizard Hardware Wizard The Hardwa unplug. elect Device Manager The Device The Device	Z	× 5 6	On the System Prop Click the Device Ma	erties window, click the H nager button to display th	ardware ta	ab. Manager window	<i>I</i> :













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		Re	moving the USB	Driver from Windo	ws 2000), continued	
ElD::\ File Edt View Favorites Back Forward Up Address ♀ 0:\ Folders × Computer Big Oct Disk (C:) Big USBCM (D:) Computer	Tools Help Search Folders History Move To Cory To Delete Name ▲ Size Type Acrobatio File Folder Common File Folder Common File Folder Corgan File Folder	■× 12 ^{**} ^{**} 13 14 15 16	Insert the <i>SURFboa</i> time, a window with Press the Esc key o To start Windows Ex In the Run window,	rd Cable Modem CD-ROI language choices is disp in the keyboard to exit the plorer, click Start and se type explorer and click O	M in the C layed. e start-up s lect Run. I K .	D-ROM drive. A	fter a short
관-G문 My Network Places 🏠 Recycle Bin	□ TradChinese File Folder □ US8 File Folder 圖 autorun.inf 1 KB Setup Information ▲Launch.exe 76 KB Application	10	Double-click My Co	mputer . torola CD icon (D: in the	image).		
14 object(s) (Disk free space: 0 bytes)	Standhuini 1 KB Configuration Sett ShetthocChi.sh MethodChi.sh 8 KB Security Catalog Setup Information MethodChi.sh 8 KB Setup Information MethodChi.sh 268 KB Application MethodChi.sh 268 KB Application MethodChi.sh 374 KB My Computer	ings 18	Double-click remov Cable Modem CD-R window is displayed	e or remove.exe to run th OM. The SURFboard Ca	ne Remove ble Moder	e utility from the n USB Driver R	<i>SURFboard</i> emoval

Your Windows Explorer may appear slightly different than in the image on this page. There are slight variations between Windows versions and you can configure Windows Explorer as you like.



X Exit



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Introduction Before You Begin	Installation & Configuration	Troubleshooting	FAQ	Glossary	License
Introduction Before You Begin SURFboard Cable Modem USB Driver Removal Image: Comparison of the c	Installation & Configuration Removing the USI 19 The window on the 20 Click Remove Drive Informational mess SURFboard Cable After you remove the U Driver in Windows 2000 cable service provider.	Troubleshooting 3 Driver from Windo left is displayed. <i>Be sure</i> rer. ages similar to the ones sho Modem USB Driver Remo SB driver, re-install the US " on page 16. If you contin	FAQ ws 2000 the USB ca hown at lea val window B driver fo oue to have	Glossary D, continued able is disconne ft are displayed w. blowing "Setting e problems, con	License ected. on the Up a USB tact your
Remove Digital signature rise (bigital Catalog) * Completed Cable Remove Registry entries - Completed Cable Status The SURFboard Cable Modem USB driver has been removed. Need New Drivers or more Information? You can check for the latest Information about your Motorola SURFboard Cable Model here. http://www.Motorola.com/broadband http://www.Motorola.com/broadband	Modem				







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troduction	Before You Begin	Installation	& Configuration	Troubleshooting	FAQ	Glossary	Lice
		> R W	emoving tl /indows XI	he USB Driv S	er from	I	
		1	On the Windows de	sktop, click Start to disp	play the Start w	vindow shown	ı at left.
SURFboard		2	Click Control Pane depending on your	I to display the Control Windows XP view optio	Panel window. ns.	The display v	/aries,
internet Internet Explorer Cuttook Express MSN Explorer	 ➢ My Documents ➢ My Recent Documents → ➢ My Pictures ➢ My Music 	3	If a Category view s Maintenance . Othe	similar to below is displa erwise, skip to step 5.	yed, click Perf e	ormance and	ł
Windows Media Player Command Prompt. Windows Movie Maker Windows Movie Maker Files and Settings Transfer Riter All Programs	W Computer Control Paul Control Paul Computer, add or remove programs, and set up network Phelp and Support Search Run	nd functionality of your connections and user	Control Panel Els Ext yow Fig Bick www Fig Bick - Els Ext yow Fig Bick - Els Ext yow Fig Extra Panel Els Ext you for Ext yo	Appearance and Internet Connections	Printers and Other Hardwa		
👪 start	Log Off 🧿 Turn Off Computer			Add or Remove Programs	Date, Time, Language, and	d Regional	

X Exit

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SB5100 Series Cable Modem User Guide

Sounds, Speech, and Audio Devices Accessibility Options

License



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		Removing the USB	Driver from Windo	ws XP, c	ontinued	



4 On the Performance and Maintenance window, click **System** to display the System Properties window. Skip to step 6.



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Introduction	Before You Begin	Installation & Configuration	Troubleshooting	FAQ	Glossary	License
		Removing the USB	Driver from Windo	ows XP, c	continued	



If a classic view similar to at left is displayed, click System to display the System Properties window.







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	Removing the USB Driver from Windows XP, continued						
System Properties	?	8	On the System Prop	erties window, click the H a	ardware ta	ab.	
System Restore General Co	Automatic Updates Remote mputer Name Hardware Advanced	7	Double-click the Dev	rice Manager button to di	splay the l	Device Manage	r window.

Ż	The Add Hardware Wizard helps you install hardware.
	Add <u>H</u> ardware Wizard
Device	Manager
.	The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
	Driver Signing Device Manager
Hardwar	re Profiles
	Hardware profiles provide a way for you to set up and store different hardware configurations.
S.	-
~	Hardware Profiles
~	Hardware <u>P</u> rofiles





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	Removing the USE	3 Driver from Windo	ws XP, o	continued	
	 8 On the Device Man 9 Click the Motorola on the window near 10 Click the Uninstall 11 Close the Device M 12 Close the Control F 	ager window, double-click SurfBoard USB Cable M r the top. icon. lanager window. Panel window.	Network a	adapters. e Uninstall icon	is displayed
Monitors Monitors	Although y be differen the same.	your SURFboard cable mo at than in the images in this	dem mode s guide, the	el number may e procedure is]







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	Rem	oving the USB	Driver from Windo	ws XP,	continued	
Name Size Back Forward Up Back Forward Up Search Folders Desktop Marcobatt0 Desktop Computer Bit Local Disk(c) Bit Diskfort (Dail Bit Diskfort (Dail	Image: Second	nsert the <i>SURFboa</i> ime, a window with Press the Esc key o o start Windows Ex n the Run window, the Double-click My Con Double-click the Mo Couble-click remove Cable Modem CD-R	rd Cable Modem CD-RO language choices is disp n the keyboard to exit the plorer, click Start and se type explorer and click C mputer . torola CD icon (D: in the e or remove.exe to run the OM. The SURFboard Ca	M in the C layed. e start-up s lect Run. DK. image). ne Remove able Moder	D-ROM drive. A screens. e utility from the n USB Driver Re	fter a short SURFboard emoval

Your Windows Explorer may appear slightly different than in the image on this page. There are slight variations between Windows versions and you can configure Windows Explorer as you like.









Removing the USB Driver from Windows XP, continued 20 The window on the left is displayed. Be sure the USB cable is disconnected.	Introduction Before You Begin	Installation a	& Configuration	Troubleshooting	FAQ	Glossary	License
Outroard Cable Modem USB Driver Removal Unity Exit Informational messages similar to the ones shown at left are displayed on the SURFboard Cable Modem USB Driver Removal window. Informational messages similar to the ones shown at left are displayed on the SURFboard Cable Modem USB Driver Removal window. Operating System is Microsoft Windows XP Operating System is Microsoft Windows XP Operating System is Microsoft Windows XP Operating Remove Driver in file[s] (Information) - Completed USB Informational messages and the use of the second message in the use of the second message in the use of the use	SURF board Cable Modern USB Driver Removal Motorola Inc. USB Driver Removal Utility This utility will remove the USB driver files and registry entries that are not removed by the Device Manager' list. Ensure your USB Cable Modern is disconnected. Operating System is Microsoft Windows XP Operations: Remove Driver .sys file(s) (System) - Completed Remove Driver .inf file(s) (Information) - Completed Remove Digital Signature File (Digital Catalog) - Completed Remove Registry entries - Completed Remove Registry entries - Completed Need New Drivers or more Information? You can check for the latest Information about your Motorola SURFboard Cat here. http://www.Motorola.com/broadband	Re 20 21 21 Exit About SURFboard USB Cable Modem	The window on the l Click Remove Drive Informational messa SURFboard Cable N er you remove the US ver in Windows XP" o vice provider.	B Driver from Windo left is displayed. <i>Be sure</i> er. ages similar to the ones s Modem USB Driver Remo B driver, re-install the US n page 21. If you continu	the USB ca hown at lea oval window B driver fo e to have p	continued able is disconne ft are displayed w. bllowing "Setting problems, conta	on the Up a USB ct your cable







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Contact Us

For information about customer service, technical support, or warranty claims, see the *Regulatory, Safety, Software License, and Warranty Information* card provided with your SURFboard cable modem.

For answers to typical questions, see "Frequently Asked Questions" on page 62.

For information about Motorola consumer cable products, education, and support, visit http://www.motorola.com/broadband.





Frequently Asked Questions

Here are answers to questions our customers frequently ask.

Q What is high-speed cable Internet access?

A Cable Internet access uses cable television wires instead of telephone lines to connect to the Internet. It is extremely fast and affordable and does not tie up telephone lines for incoming or outgoing calls and faxes.

Q How fast are cable modems?

A Cable modems offer Internet access at speeds up to 100 times faster than a traditional phone modem. You can experience speeds of over 1,000 Kbps. Due to network condition such as traffic volume and the speed of the sites you visit, actual speed may vary. Many network and other factors can affect download speeds.

Q Can I still watch cable TV while using my cable modem?

A Yes, your cable TV line can carry the TV signal while you send and receive information on the Internet.

Q What are CableLabs Certified, DOCSIS and Euro-DOCSIS?

A CableLabs[®] Certified, DOCSIS, and Euro-DOCSIS are the industry standards for high-speed data distribution over cable television system networks. They are intended to ensure that all compliant cable modems interface with all compliant cable systems. Your Motorola SURFboard cable modem is DOCSIS or Euro-DOCSIS certified.





Q If I have a cable modem, can I still use my old 28.8 Kbps or 56 Kbps modem?

A Yes! Although once you've experienced the speed of cable Internet access, you'll never again want to wait for traditional dial-up services.

Q I have more than one computer. Do I need more than one SURFboard cable modem?

A No, not if your computers are connected on a network. The SURFboard cable modem supports current Internet connection sharing technologies to enable you to connect up to 32 PCs to the Internet using a single cable modem.

Q Do I need to change my Internet service provider (ISP)?

A Currently, most Internet service providers do not provide cable Internet access. Contact your cable company for your specific information.

Q Do I need to subscribe to cable TV to get cable Internet access?

A No, but you will need to subscribe to cable Internet service. Some systems require that you subscribe to basic service before you can get Internet access and/or offer a discount when you use your own cable modem. Check with your local cable company for specific information.

Q What type of technical support is available?

A For questions about your Internet service, connection, or cable modem, call your cable service provider.

Q What do I do if my SURFboard cable modem stops working?

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A "Troubleshooting" on page 42 provides tips to diagnose problems and simple solutions. If you continue to have problems, call your cable service provider.







Before You Begin

Introduction

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A type of wire consisting of a center wire surrounded by insulation and a grounded shield of braided wire. The shield minimizes electrical and radio frequency interference.
The CableLabs Data-Over-Cable Service Interface Specification defines interface standards for cable modems and supporting equipment.
To copy a file from one computer to another. You can use the Internet to download files from a server to your home PC. A DOCSIS cable modem downloads its configuration from a server during start-up.
In a cable data network, downstream describes the direction of data received by your computer from the Internet.
The most widely used type of local area network (LAN). The most commonly installed Ethernet networks are called 10Base-T. 10Base-T provides transmission speeds up to 10 megabits per second (Mbps), usually over twisted-pair wire. Fast Ethernet (100Base-T) provides transmission speeds up to 100 Mbps.

Troubleshooting

Installation & Configuration

- expansion slot An opening in a computer where a circuit board can be inserted to add new capabilities.
- F-type connector A connector used to connect coaxial cable to equipment.
- IP address An Internet Protocol address is an identifier for a computer or device on a TCP/IP network. Networks using the TCP/IP protocol route messages based on the destination IP address. Your cable service provider assigns your cable modem an IP address to provide a continuous Internet connection.





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FAQ



Introduction	Before You Begin	Installation & Configuration	Iroubleshooting	FAQ	Glossary	License
MAC address	The Media Access Contro written to read-only memo provide the MAC address	I Address uniquely identifies each device ry (ROM) at the factory and printed on the to your cable service provider.	e that can be connected to he rear panel of your SURF	an Etherne board cabl	t network. It is p e modem. You n	ermanently leed to
MHz	Mega Hertz. A measure of	f radio frequency - millions of cycles per	second. One MHz means	one million	cycles per secor	۱d.
RJ-45	The most common type of	connector for Ethernet networks.				
splitter	A splitter is a device that d frequency range.	ivides the signal power from an input ca	ble equally between two or	more signa	als, each carryin	g a selected
TCP/IP	Transmission Control Prot networks.	ocol/Internet Protocol is a set of protoco	Is that provides standards	and rules fo	r communication	n between
upstream	In a cable data network, u	pstream describes the direction of data	sent from your computer to	the Interne	t.	
USB	Universal Serial Bus is a c your SURFboard cable mo	computer interface for add-on devices su odem to the USB port, Windows 98 and	ch as printers, scanners, a later versions automatically	nd cable m recognize	odems. When ye the cable mode	ou connect m.



X Exit

Software License

SURFboard Cable Modems

Motorola, Inc., Broadband Communications Sector ("Motorola")

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Horsham, PA 19044

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