

SURFboard™



SURFboard® SB6190 DOCSIS® 3.0 Cable Modem

User Guide

November 2016

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Table of Contents

1. Safety and Regulatory Information.....	5
Important Safety Instructions.....	5
FCC Statements.....	7
Caring for the Environment by Recycling Your ARRIS Equipment.....	9
2. Getting Started	10
Introduction	10
In the Box.....	10
Additional Item(s) Needed (Not Included)	11
System Requirements.....	11
Contact Information	11
3. Product Overview	12
Front Panel	12
Rear Panel.....	13
Cable Modem Label.....	14
4. Installing the Cable Modem.....	15
Connect the SB6190 to Your Computer	15
Establish an Internet Connection	16
5. Using the Cable Modem Web Manager	17
Start the SB6190 Web Manager	17
SB6190 Web Manager Screen Options.....	18
Get Help.....	20
Exit the SB6190 Web Manager	20
6. Monitoring Your Cable Modem and Connected Network	21
View the SB6190 Product Information	21
View the SB6190 Network Connection Status	22
View the SB6190 Event Log	23
View the SB6190 Configuration Settings.....	24
Restore the SB6190 Factory Default Settings.....	24
Restart the SB6190	25
Exit the SB6190 Web Manager	26
7. Troubleshooting Tips.....	27
Solutions	27
Front Panel LED Icons and Error Conditions.....	28

8. Warranty Information 29

Safety and Regulatory Information

Important Safety Instructions

Read This Before You Begin — When using your equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read all of the instructions listed here and/or in the user manual before you operate this device. Give particular attention to all safety precautions. Retain the instructions for future reference.
- This device must be installed and used in strict accordance with manufacturer's instructions, as described in the user documentation that is included with the device.
- Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this device.
- To prevent fire or shock hazard, do not expose this device to rain or moisture. The device must not be exposed to dripping or splashing. Do not place objects filled with liquids, such as vases, on the device.
- This device was qualified under test conditions that included the use of the supplied cables between system components. To ensure regulatory and safety compliance, use only the provided power and interface cables and install them properly.
- Different types of cord sets may be used for connections to the main POWER supply circuit. Use only a main line cord that complies with all applicable device safety requirements of the country of use.
- Installation of this device must be in accordance with national wiring codes and conform to local regulations.
- Operate this device only from the type of power source indicated on the device's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Do not overload outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded electrical outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords where they are attached to plugs and convenience receptacles, and examine the point where they exit from the device.

- Place this device in a location that is close enough to an electrical outlet to accommodate the length of the power cord.
- Place the device to allow for easy access when disconnecting the power cord of the device from the electrical wall outlet.
- Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.
- Place this device on a stable surface.
- Avoid damaging the device with static by touching the coaxial cable when it is attached to the earth-grounded coaxial cable-TV wall outlet.
- Always first touch the coaxial cable connector on the device when disconnecting or reconnecting the Ethernet cable from the device or user's PC.
- It is recommended that the customer install an electrical surge protector in the electrical outlet to which this device is connected. This is to avoid damaging the device by local lightning strikes and other electrical surges.
- Postpone installation until there is no risk of thunderstorm or lightning activity in the area.
- Do not use this product near water: for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.
- Do not cover the device or block the airflow to the device with any other objects. Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.
- Wipe the device with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the device or use forced air to remove dust.
- For added protection, unplug the device from the wall outlet and disconnect the cables to avoid damage to this device during lightning activity or power surges.
- Upon completion of any service or repairs to this device, ask the service technician to perform safety checks to determine that the device is in safe operating condition.
- Do not open the device. Do not perform any servicing other than that contained in the installation and troubleshooting instructions. Refer all servicing to qualified service personnel.
- This device should not be used in an environment that exceeds 104° F (40° C).

SAVE THE ABOVE INSTRUCTIONS

Note to CATV System Installer — This reminder is provided to call the CATV system installer's attention to Article 820.93 and 820.100 of the National Electric Code, which provides guidelines for proper grounding and, in particular, specifies that the Coaxial cable shield shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

FCC Statements

FCC Interference Statement

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 environment. 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 device 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 device 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 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.

FCC Caution: Any changes or modifications not expressly approved by ARRIS for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC RF exposure compliance requirements, the separation distance between the antenna and any person's body (including hands, wrists, feet and ankles) must be at least 8 inches (20.3 centimeters).

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter except those already approved in this filing.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destinations. The firmware setting is not accessible by the end user.

Industry Canada (IC) Statement

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

- This device may not cause interference, and
- This device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-3 (B)/NMB-3 (B)

In Canada, RLAN devices are restricted from using the 5600-5650 MHz frequency band.

Caution: To reduce the potential for harmful interference to co-channel mobile satellite systems, use of the 5150-5250 MHz frequency band is restricted to indoor use only.

High power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz frequency bands. These radars could cause interference and/or damage to License Exempt–Local Area Network (LE-LAN) devices.

IC Radiation Exposure Statement

Important Note: *This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.*

Avis D'Industrie Canada (IC)

Cet appareil est conforme à la réglementation RSS-210 d'Industrie Canada. Son utilisation est assujettie aux deux conditions suivantes:

- Cet appareil ne doit pas causer d'interférences et
- Cet appareil doit accepter toute interférence reçue, y compris les interférences causant un fonctionnement non désiré.

CAN ICES-3 (B)/NMB-3 (B)

Au Canada, les appareils de réseau local sans fil ne sont pas autorisés à utiliser les bandes de fréquence 5600-5650 MHz.

Avertissement: afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux, les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur

Les radars à haute puissance sont définis en tant qu'utilisateurs principaux (c.-à-d. prioritaires) des bandes de fréquences 5250-5350 MHz et 5650-5850 MHz. Ces radars peuvent causer de l'interférence ou des dommages susceptibles de nuire aux appareils exempts de licence–réseau local (LAN-EL).

Déclaration de IC sur L'Exposition aux Rayonnements

Note Importante: *cet équipement est conforme aux limites d'exposition aux rayonnements établies par IC pour un environnement non contrôlé. Cet équipement doit être installé et utilisé de manière à maintenir une distance d'au moins 20 cm entre la source de rayonnement et votre corps.*

Caring for the Environment by Recycling Your ARRIS Equipment



When you see this symbol on an ARRIS product, do not dispose of the product with residential or commercial waste.

Recycling your ARRIS Equipment

Please do not dispose of this product with your residential or commercial waste. Some countries or regions, such as the European Union, have set up systems to collect and recycle electrical and electronic waste items. Contact your local authorities for information about practices established for your region. If collection systems are not available, call ARRIS Customer Service at **1-877-466-8646** for assistance.

Getting Started

Introduction

The ARRIS SURFboard® SB6190 DOCSIS® 3.0® Cable Modem provides a secure high-speed broadband connection to the Internet and other online services on your home or small business network. You can use your SB6190 to directly connect a computer to your home or small business LAN through an Ethernet connection.

This guide provides a product overview and instructions for installing your SB6190 and monitoring your cable modem and network operational status.

In the Box

Before installing your SB6190, check that the following items are included in the box. If any items are missing, please call ARRIS Technical Support at **1-877-466-8646** for assistance.

Table 1. SB6190 Package Contents

Item		Description
SB6190 Cable Modem		High-speed DOCSIS 3.0 cable modem
Power Supply		Power adapter for an electrical wall outlet connection
Ethernet Cable		Standard Category 5e (CAT5e) or higher network cable
Software License & Regulatory Card		Software license, warranty, safety instructions, and regulatory information for the cable modem

Item		Description
Support Information Card		Contact information for obtaining technical support assistance with your SURFboard device
SB6190 Quick Start Guide		Basic information for installing the cable modem and connecting to the Internet on your home network.

Additional Item(s) Needed (Not Included)

The following item is not included in the box and must be purchased separately, if required:

- Coaxial (coax) cable, if one is not already connected to a cable wall outlet

System Requirements

- High-speed Internet access account
- Web browser access – Internet Explorer, Google Chrome, Firefox, or Safari
- Compatible operating systems:
 - Windows®10
 - Windows 8
 - Windows 7 Service Pack 1 (SP1)



Note: Although older versions of Microsoft Windows operating systems are no longer specifically supported, they should still function with this model.

- Macintosh® 10.4 or higher
- UNIX®
- Linux®

Contact Information

For technical support and additional ARRIS product information:

- Visit the ARRIS Support website: www.arris.com/consumers (<http://www.arris.com/consumers>)
- Call ARRIS Technical Support: **1-877-466-8646**

Product Overview

Front Panel



Figure 1: SB6190 Front View

Table 2. SB6190 Front Panel LED Icons

LED Icon	Blinking	On (Solid)
 POWER	Not applicable – icon does not blink.	Green: Power is properly connected.
 RECEIVE	Scanning for a downstream (receive) channel connection.	Green: Non-bonded downstream channel is connected. Blue *: High-speed Internet connection with bonded downstream channels.
 SEND	Scanning for an upstream (send) channel connection.	Green: Non-bonded upstream channel is connected. Blue *: High-speed Internet connection with bonded upstream channels.
 ONLINE	Scanning for an Internet connection.	Green: Startup process completed.

* **Blue:** Indicates DOCSIS 3.0 operation (high-speed Internet access) which may not be available in all locations. Check with your service provider for availability in your area.

Rear Panel



Figure 2: SB6190 Rear View

Table 3. SB6190 Rear Panel Ports & Connectors

Description	
Reset Button	Can be used to reboot the cable modem or reset the cable modem settings. To reboot (or restart) the modem, press the indented Reset button once using the end of a paper clip or other small object with a narrow tip, and then release. To reset the cable modem configuration back to the factory default settings, press and hold the indented Reset button for 15 seconds using the end of a paper clip or other small object with a narrow tip, and then release.
 ETHERNET	One-Gigabit Ethernet port for RJ-45 cable connections: Green - LED is ON - Indicates a device connection is detected Green - LED is ON - Indicates a device connection is detected
 CABLE	Coaxial cable connector
 POWER	+12VDC Power connector  WARNING! To avoid any damage to your SB6190, only use the power supply provided in the box.

Cable Modem Label

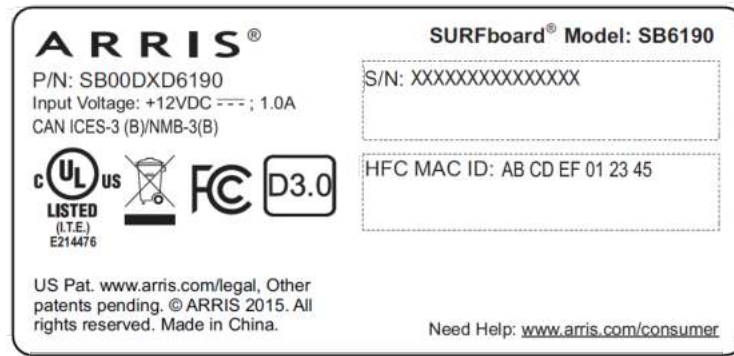


Figure 3: Sample SB6190 Cable Modem Label

The cable modem label is located on the bottom of your SB6190. It contains the cable modem ID that you may need when contacting your service provider or ARRIS Technical Support.

To receive Internet service, contact your service provider for assistance. You may need to provide the following information listed on the cable modem label:

- Cable modem Model name (**SB6190**)
- Cable modem MAC address (**HFC MAC ID**)
- Cable modem Serial number (**S/N**)

Installing the Cable Modem



Caution: This product is for indoor use only. Do not route the Ethernet cable(s) outside of the building. Exposure of the cables to lightning could create a safety hazard and damage the product.

Connect the SB6190 to Your Computer

Before installing the SB6190:

- Check with your service provider to ensure broadband cable service is available in your area.
- Choose a location in your home where your computer and the SB6190 are preferably near existing cable and electrical wall outlets.

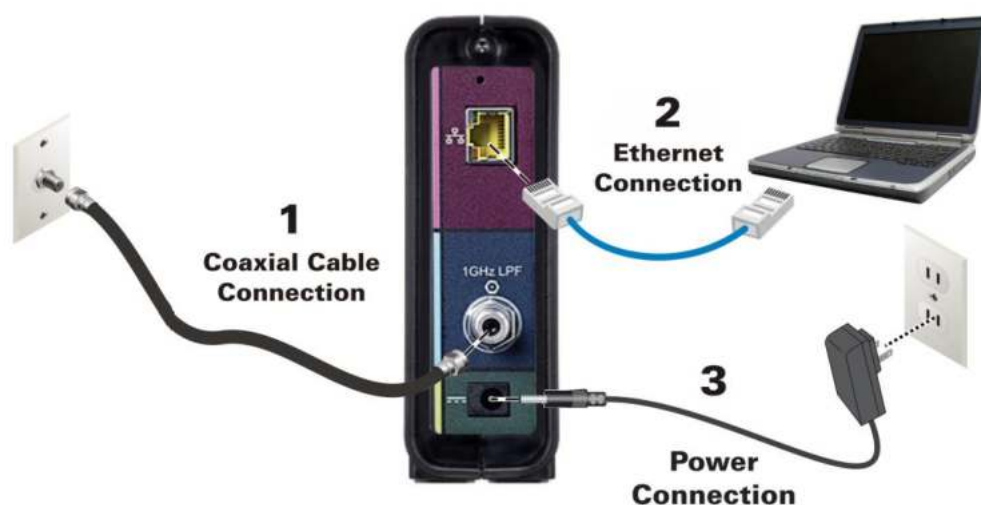


Figure 4: SB6190 Connection Diagram

1. Check that a coaxial cable is already connected to a cable wall outlet or RF splitter (not included).
2. Connect the other end of the coaxial cable to the **Cable** connector on the rear of the SB6190.
Use your hand to tighten the connectors to avoid damaging them.
3. Connect the Ethernet cable to the **Ethernet** port on the back of the SB6190.
4. Connect the other end of the Ethernet cable to the **Ethernet** port on your computer.

5. Connect the power adapter (included) to the **Power** port on the rear of the SB6190.
6. Plug the other end of the power adapter into an electrical wall outlet that is not controlled by a wall switch.



Note: This automatically powers ON the SB6190.

Establish an Internet Connection

Although your computer may already be configured to automatically access the Internet, you should still perform the following cable modem connectivity test to check that your network devices were connected properly:

1. Power ON the computer connected to the SB6190 if it is turned off, and then log in.
2. Contact your service provider to activate (provision) the SB6190. You may have to provide the **HFC MAC ID** listed on the cable modem label.



Note: Your service provider may allow for automatic activation which will automatically launch their special website when you open a web browser.

3. After the SB6190 is provisioned (activated), open a web browser (such as Internet Explorer, Google Chrome, Firefox, or Safari) on your computer.



Note: If the special website did not open, continue with step 4. If the website opened, proceed to step 5.

4. Type a valid URL (such as **www.surfboard.com**) in the address bar and then press **Enter**. The ARRIS website should open. If it failed to open, please contact your service provider for assistance.
5. Check that the **Power**, **Receive**, **Send**, and **Online** front panel LEDs on the SB6190 light up in sequential order. See [Front Panel](#) (page 12) for additional LED status information.
 - If all four LEDs did not light up Solid and you also are not connected to the Internet, you may have to contact your service provider to reactivate your SB6190 or check for possible signal issues.
 - If you still cannot connect to the Internet, the SB6190 may be defective. Please call ARRIS Technical Support at **1-877-466-8646** for assistance.

Using the Cable Modem Web Manager

The SB6190 Web Manager is available to view and monitor the SB6190 operational status and network configuration settings. You can also use the web manager to reset or reboot your SB6190.



Note: You may notice that some of the SB6190 Web Manager configuration settings may be blocked and cannot be modified. This may be due to some restrictions set up by your service provider to prevent unauthorized modifications to certain cable modem configuration parameters.

Start the SB6190 Web Manager

1. Open any Web browser on the computer connected to your SB6190.
2. Type the default LAN IP address, **192.168.100.1**, in the Address bar and then press **Enter** to log onto your SB6190.

The SB6190 Status screen displays.

Startup Procedure								
Procedure			Status			Comment		
Acquire Downstream Channel						Locked		
Connectivity State			OK			Operational		
Boot State			OK			Operational		
Configuration File			OK					
Security			Disabled			Disabled		
DOCSIS Network Access Enabled			Allowed					
Downstream Bonded Channels								
Channel	Lock Status	Modulation	Channel ID	Frequency	Power	SNR	Corrected	Uncorrectables
1	Locked	256QAM	8	747.00 MHz	-5.40 dBmV	40.37 dB	258	0
2	Locked	256QAM	1	705.00 MHz	-5.10 dBmV	40.95 dB	81	0
3	Locked	256QAM	2	711.00 MHz	-5.00 dBmV	40.37 dB	154	0
4	Locked	256QAM	3	717.00 MHz	-5.20 dBmV	40.37 dB	154	0
5	Locked	256QAM	4	723.00 MHz	-5.20 dBmV	40.37 dB	747	0
6	Locked	256QAM	5	729.00 MHz	-5.50 dBmV	40.37 dB	759	0
7	Locked	256QAM	6	735.00 MHz	-5.40 dBmV	40.95 dB	571	0
8	Locked	256QAM	7	741.00 MHz	-5.40 dBmV	40.95 dB	546	0
Upstream Bonded Channels								
Channel	Lock Status	US Channel Type	Channel ID	Symbol Rate	Frequency	Power		
1	Locked	ATDMA	1	5120 kSym/s	30.70 MHz	47.75 dBmV		
2	Locked	TDMA and ATDMA	4	2560 kSym/s	35.50 MHz	47.00 dBmV		
3	Locked	ATDMA	3	5120 kSym/s	23.30 MHz	47.25 dBmV		
4	Locked	TDMA and ATDMA	2	2560 kSym/s	18.50 MHz	47.00 dBmV		
Current System Time: Tue Aug 04 22:02:16 2015								

Figure 5: SB6190 Status Screen



Note: If you cannot access the HTML pages in the SB6190 Web Manager, please contact ARRIS Technical Support for assistance.

SB6190 Web Manager Screen Options

Menu Buttons and Links

You can use the web manager buttons or links to view the status and network configuration screens for your SB6190.

- The SB6190 menu buttons are displayed along the top of the SB6190 Web Manager screen (see Figure 5). To display a specific web manager screen, click the menu button.



Figure 6: SB6190 Web Manager Menu Buttons

- The SB6190 menu links are displayed along the bottom of the SB6190 Web Manager screen. To display a specific web manager screen, click the menu link.

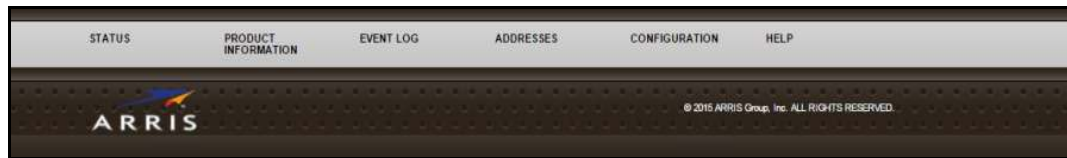


Figure 7: SB6190 Web Manager Menu Links

Table 4. SB6190 Web Manager Screen Options

Screen Option	Function
Status	Displays startup diagnostic information for the cable modem. Also provides the current network connection status of the cable modem.
Product Information	Provides general product and operational status information for the cable modem.
Event Log	Displays a listing of the time and actual events or alerts as they occur and are detected by the cable modem. This information may be useful to help diagnose and correct any problems that may occur with the cable modem.
Addresses	Provides network connection information for the cable modem and computer connected on your home network, including the cable modem serial number and MAC addresses.
Configuration	Provides the network connection frequency and channel ID information for the cable modem. Allows you to restart the cable modem. Allows you to reset the cable modem configuration back to the factory default settings.
Help	Provides a brief description for each web manager screen option.

Get Help

The Help feature provides a brief description for the SB6190 Web Manager screens.

- Click the **Help** menu button or link on the SB6190 Web Manager screen to open the SB6190 Help screen.

Help Pages	
Status	The Status page is the first page in the display. This page shows diagnostic information about the startup procedure, the downstream bonded channels, and the upstream bonded channels.
Product Information	The Product Information page displays information about the hardware version, software version, MAC address, serial number, system "up" time, and network registration status.
Event Log	The Event Log page provides a list of all the events that have occurred on the cable modem. Each event shows the time that it occurred, the priority of the event, and an event description.
Addresses	The Addresses Page provides information about the network connection between the Cable Modem and your computer. Also, it provides details about the connection between the Cable Modem and the service provider's computer systems.
Configuration	The Configuration page lists information about the upstream and downstream connection to the service provider.

Figure 8: SB6190 Help Screen

Exit the SB6190 Web Manager

To exit the SB6190 Web Manager:

- Click  (**Close** button) in the upper right corner of the web browser window to exit the SB6190 Web Manager and close the web browser window.

Monitoring Your Cable Modem and Connected Network



Note: You may notice that some of the SB6190 Web Manager configuration settings may be blocked and cannot be modified. This may be due to some restrictions set up by your service provider for security reasons and also to prevent unauthorized modifications to certain cable modem configuration parameters. Contact your service provider to obtain special authorization to change the cable modem frequencies or other configuration settings.

View the SB6190 Product Information

The Product Information screen displays general product information for the SB6190 which includes the hardware and software (firmware) versions, serial number, MAC address, and the current network connection status.

To open the Product Information screen:

1. Open the SB6190 Web Manager (see [Start the SB6190 Web Manager](#)).
2. Click the **Product Information** menu button or link on the SB6190 Web Manager screen.

Information	
Standard Specification Compliant	ARRIS DOCSIS 3.0 Cable Modem / Retail
Hardware Version	2
Software Version	9.1.93D
Cable Modem MAC Address	C8:3F:B4:59:1B:29
Serial Number	F5ERX122200236
Status	
Up Time	13 d: 9 h: 38 m

Figure 9: SB6190 Product Information Screen

3. Click the **Refresh** button (**F5**) in your web browser window to reload or update the SB6190 product information on the screen.

View the SB6190 Network Connection Status

The SB6190 Status screen displays the current connection status of the SB6190 as well as the downstream and upstream bonded channel connections for receive and send data transmissions.

To open the Status screen:

1. Open the SB6190 Web Manager (see [Start the SB6190 Web Manager](#)).
2. Click the **Status** menu button or link on the SB6190 Web Manager screen.

The SB6190 Status screen displays.

Startup Procedure								
Procedure	Status					Comment		
Acquire Downstream Channel						Locked		
Connectivity State	OK					Operational		
Boot State	OK					Operational		
Configuration File	OK							
Security	Disabled					Disabled		
DOCSIS Network Access Enabled	Allowed							

Downstream Bonded Channels								
Channel	Lock Status	Modulation	Channel ID	Frequency	Power	SNR	Corrected	Uncorrectables
1	Locked	256QAM	8	747.00 MHz	-5.40 dBmV	40.37 dB	258	0
2	Locked	256QAM	1	705.00 MHz	-5.10 dBmV	40.95 dB	81	0
3	Locked	256QAM	2	711.00 MHz	-5.00 dBmV	40.37 dB	154	0
4	Locked	256QAM	3	717.00 MHz	-5.20 dBmV	40.37 dB	154	0
5	Locked	256QAM	4	723.00 MHz	-5.20 dBmV	40.37 dB	747	0
6	Locked	256QAM	5	729.00 MHz	-5.50 dBmV	40.37 dB	759	0
7	Locked	256QAM	6	735.00 MHz	-5.40 dBmV	40.95 dB	571	0
8	Locked	256QAM	7	741.00 MHz	-5.40 dBmV	40.95 dB	546	0

Upstream Bonded Channels						
Channel	Lock Status	US Channel Type	Channel ID	Symbol Rate	Frequency	Power
1	Locked	ATDMA	1	5120 kSym/s	30.70 MHz	47.75 dBmV
2	Locked	TDMA and ATDMA	4	2560 kSym/s	35.50 MHz	47.00 dBmV
3	Locked	ATDMA	3	5120 kSym/s	23.30 MHz	47.25 dBmV
4	Locked	TDMA and ATDMA	2	2560 kSym/s	18.50 MHz	47.00 dBmV

Current System Time: Tue Aug 04 22:02:16 2015

Figure 10: SB6190 Status Screen

3. Click the **Refresh** button (F5) in your web browser to reload or update the SB6190 network status information on the screen.

View the SB6190 Event Log

The SB6190 generates a running log of the activities, events, and alerts detected during the cable modem operation.



Note: This information may be useful if you have to contact ARRIS Technical Support or your service provider to help diagnose and correct any problems that may occur with your SB6190.

To open the Event Log screen:

1. Open the SB6190 Web Manager (see [Start the SB6190 Web Manager](#)).
2. Click the **Event Log** menu button or link on the SB6190 Web Manager screen. The Event Log screen displays.

Time	Priority	Description
Wed Jul 22 12:16:23 2015	4	SW upgrade Failed after download - SW File corruption
Wed Jul 22 12:16:23 2015	4	SW upgrade Failed before download - File not Present
Wed Jul 22 12:16:23 2015	4	SW upgrade Failed before download -TFTP Max Retry Exceeded
Wed Jul 22 12:18:39 2015	6	SW Download INIT - Via NMS
Wed Jul 22 12:18:39 2015	4	SW upgrade Failed after download - SW File corruption
Wed Jul 22 12:18:39 2015	4	SW upgrade Failed before download - File not Present
Wed Jul 22 12:18:39 2015	4	SW upgrade Failed before download -TFTP Max Retry Exceeded
Wed Jul 22 12:19:49 2015	6	SW Download INIT - Via NMS
Wed Jul 22 12:19:49 2015	4	SW upgrade Failed after download - SW File corruption
Wed Jul 22 12:19:49 2015	4	SW upgrade Failed before download - File not Present
Wed Jul 22 12:19:49 2015	4	SW upgrade Failed before download -TFTP Max Retry Exceeded
Thu Jan 01 00:00:56 1970	5	MDD message timeout;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.00.00.00.00.00;CM-QOS=1.1;CM-VER=3.0;
Thu Jan 01 00:00:56 1970	5	Lost MDD Timeout;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.00.00.00.00.00;CM-QOS=1.1;CM-VER=3.0;
Thu Jan 01 00:01:10 1970	3	No Ranging Response received - T3 time-out;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.30.b8.81.03.10;CM-QOS=1.1;CM-VER=3.0;
Wed Jul 22 13:23:17 2015	6	SW Download INIT - Via NMS
Wed Jul 22 13:26:41 2015	6	SW download Successful - Via NMS
Thu Jan 01 00:01:25 1970	5	MDD message timeout;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.00.00.00.00.00;CM-QOS=1.1;CM-VER=3.0;
Thu Jan 01 00:01:26 1970	5	Lost MDD Timeout;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.00.00.00.00.00;CM-QOS=1.1;CM-VER=3.0;
Wed Jul 22 13:29:35 2015	3	SYNC Timing Synchronization failure - Loss of Sync;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.30.b8.81.03.10;CM-QOS=1.1;CM-VER=3.0;
Thu Jul 23 00:32:24 2015	4	DHCP RENEW sent - No response for IPv6;CM-MAC=c8.3fb4.59.1b.29;CMTS-MAC=00.30.b8.c6.3a.20;CM-QOS=1.1;CM-VER=3.0;
Clear Log		

Figure 11: SB6190 Event Log Screen

3. Click the **Refresh** button (F5) in your web browser to reload or update the event log information on the screen.

View the SB6190 Configuration Settings

The SB6190 Configuration screen displays the downstream frequency and upstream channel connection to the network. When the SB6190 successfully connects to the network, it stores the connection frequency to automatically connect whenever you log back in to the SB6190. You can use the Configuration screen to reboot the SB6190 (see [Reboot Your Cable Modem](#)) or reset the cable modem settings to the factory default configuration (see [Reset the Factory Default Modem Settings](#)).

To open the Configuration screen:

1. Open the SB6190 Web Manager (see [Start the SB6190 Web Manager](#)).
2. Click the **Configuration** menu button or link on the SB6190 Web Manager screen.



Figure 12: SB6190 Configuration Screen



Note: The values on the SB6190 Configuration screen cannot be changed.

Restore the SB6190 Factory Default Settings

You can reset the SB6190 configuration back to the factory default configuration. The process to restore the cable modem factory defaults can take approximately five to 30 minutes to complete. Your network connection will be disabled until after the SB6190 factory default settings are restored.



WARNING! This action deletes any stored configuration settings and restores the factory defaults.

To open the Configuration screen:

1. Open the SB6190 Web Manager (see [Start the SB6190 Web Manager](#)).
2. Click the **Configuration** menu button or link on the SB6190 Web Manager Menu.

The Configuration screen displays.

The image shows a web-based configuration interface for a cable modem. It has a light blue header with the word "Configuration". Below the header are four rows of configuration options, each with a label and a text input field or dropdown menu. The first row is "Downstream Frequency (Hz)" with the value "747000000". The second row is "Upstream Channel ID" with the value "1". The third row is "Downstream Frequency Plan" with a dropdown menu showing "North America". The fourth row is "Energy Efficient Ethernet" with a dropdown menu showing "Disabled". Below these fields are two buttons: "Reboot" and "Restore Factory Defaults".

Configuration	
Downstream Frequency (Hz)	747000000
Upstream Channel ID	1
Downstream Frequency Plan	North America
Energy Efficient Ethernet	Disabled
Reboot Restore Factory Defaults	

Figure 13: SB6190 Restore Factory Defaults Configuration Screen

3. Click **Restore Factory Defaults**.

The following message displays:

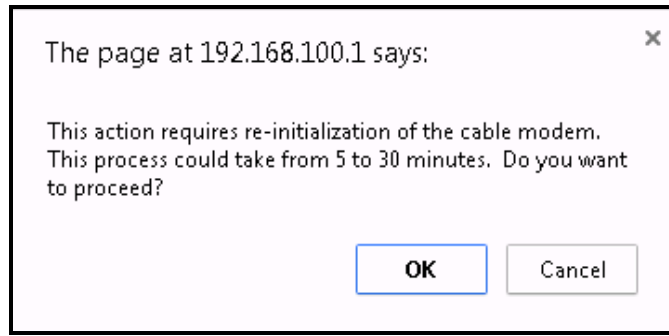


Figure 14: Restore Factory Defaults Dialog Box

4. Click **OK** to continue.

The SB6190 Web Manager will automatically open when the Restore Factory Defaults process is finished.

Restart the SB6190

To reboot the SB6190:

1. Open the SB6190 Web Manager (see [Start the SB6190 Web Manager](#)).
2. Click the **Configuration** menu button or link on the SB6190 Web Manager Menu.

The Configuration screen displays.

The image shows a web-based configuration interface for a cable modem. It has a light blue header with the word "Configuration" in white. Below the header, there are four rows of configuration options, each with a label on the left and a text input field or dropdown on the right. The first row is "Downstream Frequency (Hz)" with the value "747000000". The second row is "Upstream Channel ID" with the value "1". The third row is "Downstream Frequency Plan" with a dropdown menu showing "North America". The fourth row is "Energy Efficient Ethernet" with a dropdown menu showing "Disabled". At the bottom of the form, there are two buttons: "Reboot" and "Restore Factory Defaults".

Figure 15: SB6190 Restart Cable Modem Configuration Screen

3. Click **Reboot**.

The following message dialog will display:

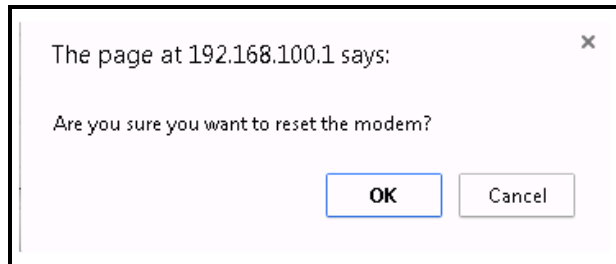


Figure 16: Cable Modem-Reboot Dialog Box

4. Click **OK**.

The following message will display: **The device has been reset... RELOAD.**

5. Click **RELOAD** to open the SB6190 Web Manager.

Exit the SB6190 Web Manager

To exit the SB6190 Web Manager:

- Click  (**Close** button) in the upper right corner of the web browser window to exit the SB6190 Web Manager and close the web browser window.

Troubleshooting Tips

If the solutions listed in the Troubleshooting Solutions table below do not solve your problem, please contact your service provider for assistance. Your service provider may ask for the status of the SB6190 front panel LEDs (see [Front Panel LED Icons and Error Conditions](#)) for more information).

You may have to reset the SB6190 configuration to the default factory settings if the SB6190 is not functioning properly. See [Restore the SB6190 Factory Default Settings](#) for more information.

Solutions

Table 5. Troubleshooting Solutions

Modem Problem	Possible Solution
Power LED Icon is OFF	■ Check the power connection from the cable modem to the electrical wall outlet. ■ Check that the electrical wall outlet is working. • Is the outlet controlled by a light switch? If so, disconnect the cable modem power cord and connect it to another electrical wall outlet that is not controlled by a light switch.
Cannot Send or Receive Data	■ Check each end of the coaxial cable connection on the cable modem and cable wall outlet. Use your hand to tighten each connector, if necessary. ■ Check the Ethernet cable to make sure it is properly connected to the cable modem and computer. ■ On the front panel, check the status of the LED icons and refer to Front Panel LED Icons and Error Conditions to identify the problem. ■ If you have cable television service, check your television to ensure your cable service is operating properly. ■ If none of the above solutions resolves the problem, contact your service provider or call ARRIS Technical Support at 1-877-466-8646 for assistance.

Modem Problem	Possible Solution
Cannot Access the Internet	■ Check that all cable and power connections on your cable modem and computer are properly connected. ■ Check that the Power and Online LED icons on the front panel are lit up solid. ■ Contact your service provider for assistance.

Front Panel LED Icons and Error Conditions

The SB6190 front panel LED icons provide status information for the following error conditions:

Table 6. Front Panel LED Icons and Error Conditions

Led Icon	Status	If, During Startup:	If, During Normal Operation
 POWER	OFF	Modem is not properly plugged into the electrical outlet	Modem is unplugged
 RECEIVE	FLASHING	Downstream receive channel cannot be acquired	Downstream channel is lost
 SEND	FLASHING	Upstream send channel cannot be acquired	Upstream channel is lost
 ONLINE	FLASHING	IP registration is unsuccessful	IP registration is lost

Warranty Information

SURFboard SB6190 DOCSIS 3.0 Cable Modem

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