



BGW210-700 Broadband Gateway Release 1.0

Install and Operations Guide

365-095-30882 Revision 4.0

November 2016

ARRIS Copyrights and Trademarks

© 2016 ARRIS Enterprises LLC. All Rights Reserved.

No part of this publication may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from ARRIS Enterprises LLC. ("ARRIS"). ARRIS reserves the right to revise this publication and to make changes in content from time to time without obligation on the part of ARRIS to provide notification of such revision or change.

ARRIS and the ARRIS logo are all trademarks of ARRIS Enterprises LLC. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks or the names of their products. ARRIS disclaims proprietary interest in the marks and names of others.

ARRIS provides this guide without warranty of any kind, implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. ARRIS may make improvements or changes in the product(s) described in this manual at any time.

The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

Table of Contents

1. ARRIS BGW210-700 Broadband Gateway Introduction	5
About ARRIS Documentation.....	5
Documentation Hyperlinks.....	5
Related Documentation.....	6
Document Organization	6
2. Preliminary Safety Instructions.....	7
Power Supply Installation	7
Telecommunication Installation	8
Product Ventilation.....	8
3. Hardware Gateway Installation	9
Connecting the Power Adapter	11
Connecting Computers to the BGW210-700 Broadband Gateway	11
Connecting Devices Using Wired Ethernet.....	11
Connecting Devices Using Wi-Fi	12
Connecting the BGW210-700 Broadband Gateway to the Internet	13
Connecting VoIP Telephones.....	14
4. Basic Troubleshooting	16
Status Indicator Lights	17
Problem Isolation.....	21
Rear Panel Connectors	23
Factory Reset Switch	24
5. Technical Specifications and Safety Information	25
Dimensions and Interfaces	25
Power Supply	26
Environment	26
Agency Approvals	26
North America.....	26
Caring for the Environment by Recycling	26
6. Important Safety Instructions.....	27
WARNINGS.....	27
Product Ventilation.....	27
Telecommunication Installation Cautions.....	27
Electrical Safety Advisory.....	28
Declaration of Conformance	28

47 CFR Part 68 Information	28
FCC Caution.....	29
Radiation Exposure Statement	29
Service Requirements.....	30
7. ARRIS Contacts.....	31

ARRIS BGW210-700 Broadband Gateway

Introduction

The BGW210-700 Broadband Gateway hardware platform can host different software. The Advanced Residential Gateway supports VoIP, IPv6, video delivery, security firewall, and extensive remote management features.

The BGW210-700 Broadband Gateway delivers robust video, primary line telephony, and high-speed data over broadband networks via high-speed Internet connectivity. The four Gigabit Ethernet ports can be separated into different services allowing the configuration of dedicated ports for data. It is designed for advanced DSL network service deployments and supports Quality of Service (QoS) enabled features including:

- Simultaneous use of phone, video, and high-speed data over any one of the available WAN interfaces
- IPTV video
- Concurrent Wi-Fi support for 3x3 802.11n on 2.4GHz, and 4x4 802.11ac on 5GHz
- Primary line VoIP telephone service

About ARRIS Documentation

This guide presents basic operational concepts, and provides step-by-step instructions for the hardware installation and basic troubleshooting of the ARRIS BGW210-700 Broadband Gateway.



Note: For the purposes of this manual the ARRIS BGW210-700 Broadband Gateway may also be referred to simply as the *gateway*.

Documentation Hyperlinks

The hyperlink resides in the page number that follows the title. For example, to access *Hardware Gateway Installation* in the hyperlink below, hover the mouse over the page number in parenthesis until the finger pointer appears, and then click.

[*Hardware Gateway Installation* \(page 9\)](#)

Related Documentation

BGW210-700 Broadband Gateway reference documentation is as follows:

- *BGW210-700 Broadband Gateway Install and Operations Guide (this document)*
- *BGW210-700 Broadband Gateway AT&T Software Administrator's Handbook*
- *ARRIS ENB-17244* (select BGW210-700 Hardware Diagnostics Information)

Document Organization

This hardware install and operation guide consists of six product information chapters presented as follows:

- *ARRIS BGW210-700 Broadband Gateway Introduction* (page 5) — Describes the ARRIS® document suite, purpose, and structure of this guide.
- *Preliminary Safety Instructions* (page 7) — Provides power supply, telecommunication, and ventilation safety instructions.
- *Hardware Gateway Installation* (page 9) — Provides the rear panel illustration, a cabling overview, and procedures to perform BGW210-700 Broadband Gateway connections for the power adapter, wired Ethernet, wireless devices, Internet, and VoIP telephones.
- *Basic Troubleshooting* (page 16) — Provides simple suggestions for troubleshooting problems with the initial configuration of the gateway.
- *Technical Specifications* (page 25) — Presents system and device specifications and important compliance and safety statements.
- *Important Safety Instructions* (page 27) — Provides product, telecommunication, and electrical cautionary information, as well as conformance, radiation, and gateway disposable information.

Preliminary Safety Instructions



Warning: Do not use before reading these instructions.

Do not connect the Ethernet ports to a carrier or carriage service provider's telecommunications network or facility unless:

- You have the written consent of the network or facility manager, or
- The connection is in accordance with a connection permit or connection rules.

Connection of the Ethernet ports may cause a hazard or damage to the telecommunication network or facility, or persons, with consequential liability for substantial compensation.

Power Supply Installation

Connect the power supply cord to the power jack on the BGW210-700 Broadband Gateway. Plug the power supply into an appropriate electrical outlet.



Warning: The power supply must be connected to a mains outlet with a protective earth connection. Do not defeat the protective earth connection.



Warning: Use only the power supply and cord that came with the BGW210-700 Broadband Gateway. Failure to use the authorized power supply and cord may cause electric shock, fire, bodily injury, and/or property damage. If the power supply or cord becomes damaged or needs to be replaced, to obtain an authorized replacement please contact AT&T customer service by phone (1.800.288.2020) or via website (www.att.com/support).



Caution: Depending on the power supply provided with the product, either the direct plug-in power supply blades, power supply cord plug or the appliance coupler serves as the mains power disconnect. It is important that the direct plug-in power supply, socket-outlet or appliance coupler be located so it is readily accessible.

Telecommunication Installation

When using telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury, including the following:

- This device is intended for indoor use only.



Warning: Do not install this gateway outdoors.



Warning: Installing and operating this gateway outdoors is a violation of FCC rules.

- Do not use this product near water, for example, near a bathtub, washbowl, and kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.



Caution: The external phone should be UL listed, and the connections should be made in accordance with Article 800 of the National Electric Code (NEC).



Caution: To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

Product Ventilation

The BGW210-700 Broadband Gateway is intended for use in a consumer's home. Position the device in an upright vertical position located where ambient temperatures remain within a range of 32°- 107°F (0°- 41.7°C). The BGW210-700 Broadband Gateway should not be used in locations exposed to outside heat radiation or where it is subject to trapping of its own heat. The product should have at least two inches of clearance on all sides except the bottom when properly installed and should not be placed inside tightly enclosed spaces unless proper ventilation is provided.



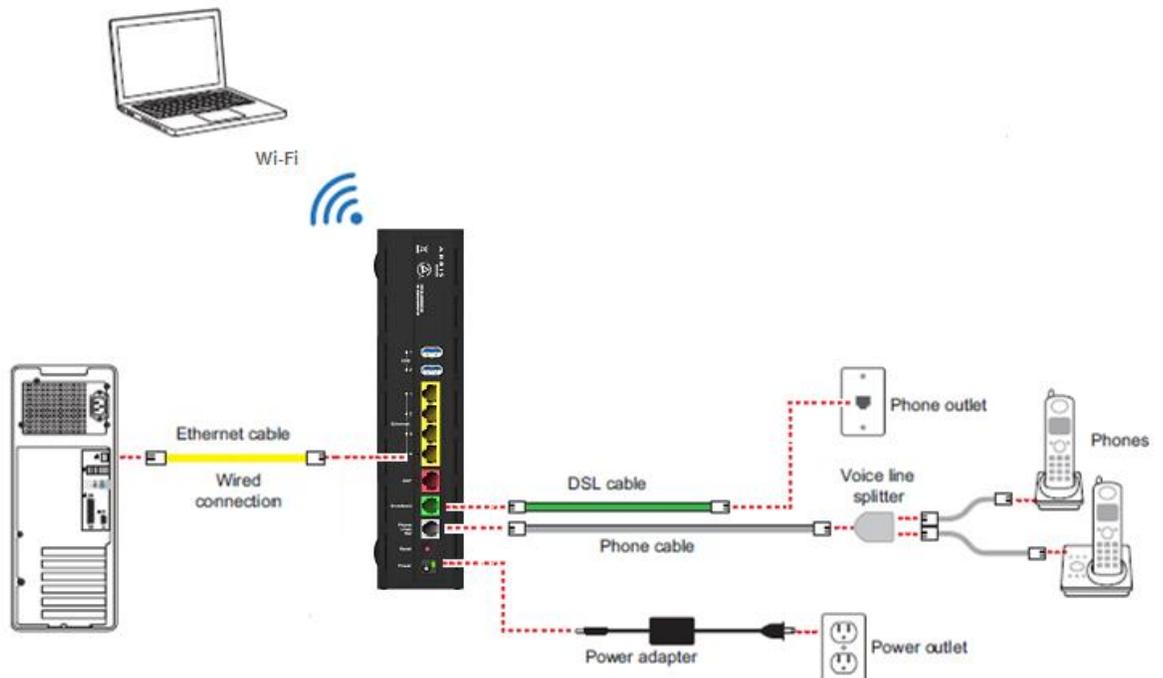
SAVE THESE INSTRUCTIONS

Hardware Gateway Installation

A BGW210-700 Broadband Gateway cabling overview, as well as rear panel illustration, is provided below. Also provided are procedures to perform BGW210-700 Broadband Gateway connections for the power adapter, wired Ethernet, wireless devices, Internet, and VoIP telephones.

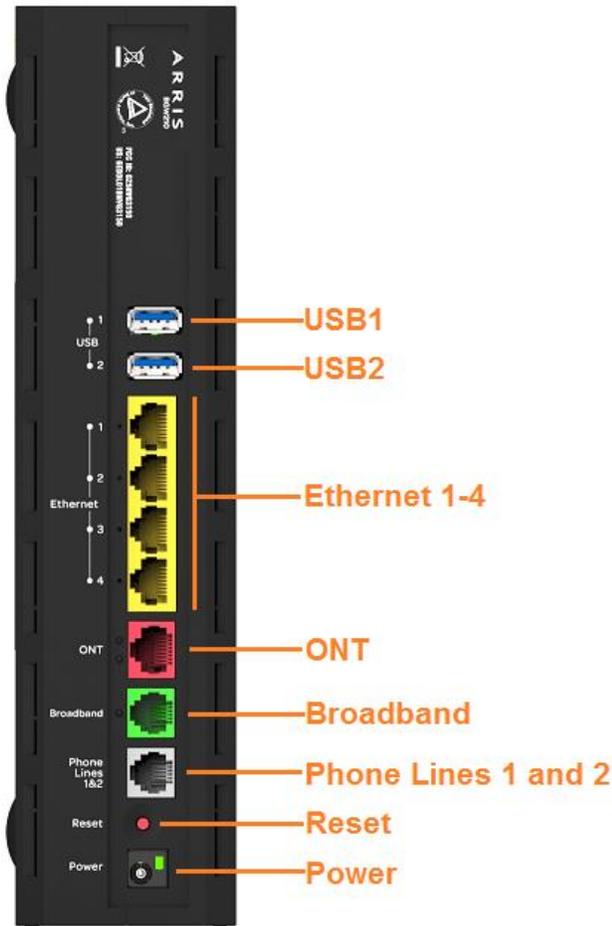
The following diagram illustrates BGW210-700 Broadband Gateway connections to the Internet using DSL Broadband. Phone and power adapter connections are also illustrated.

BGW210-700 Broadband Gateway Cabling Overview



Alternatively, you can connect the BGW210-700 Broadband Gateway to the Internet using the WAN Ethernet port labeled *ONT*. See [Connecting the BGW210-700 Broadband Gateway to the Internet](#) (page 13) for the detailed procedures regarding this setup.

BGW210-700 Broadband Gateway Rear Panel



Port	Description
USB1 and USB2	Universal Serial Bus connections 1 and 2 for USB devices.
Ethernet 1,2,3,4	Provide connection for up to four Ethernet devices, such as PCs and other devices.
ONT	The Optical Network Terminal fiber optic connector.
Broadband	An alternate DSL connection to the Internet; its implementation is determined by the service configuration from the provider.
Phone Lines 1 and 2	Provides connection for up to two VoIP phones. A voice line splitter is required when connecting two phones.
Reset	Used to reboot the gateway or perform a factory default restore if depressed for 10 seconds or longer.
Power	Used to power the gateway on/off.

Connecting the Power Adapter

The power adapter supplies power to the BGW210-700 Broadband Gateway.

1. Connect the appropriate end of the power adapter cable to the BGW210-700 Broadband Gateway rear panel POWER port.
2. Connect the power plug end to the electrical outlet.

After the BGW210-700 Broadband Gateway is powered on, the power light blinks green momentarily and then remains steady green.

For all power light indications, see *Status Indicator Lights* (page 17) under *Basic Troubleshooting*.



Warning: Use only the power supply and cord that came with the BGW210-700 Broadband Gateway. Failure to use the authorized power supply and cord may cause electric shock, fire, bodily injury, and/or property damage. If the power supply or cord becomes damaged or needs to be replaced, to obtain an authorized replacement please contact AT&T customer service by phone (1.800.288.2020) or via website (www.att.com/support).

Connecting Computers to the BGW210-700 Broadband Gateway

The first computer you connect can be used to configure the BGW210-700 Broadband Gateway settings. You can connect more computers and other devices to the BGW210-700 Broadband Gateway using wireless or wired Ethernet.

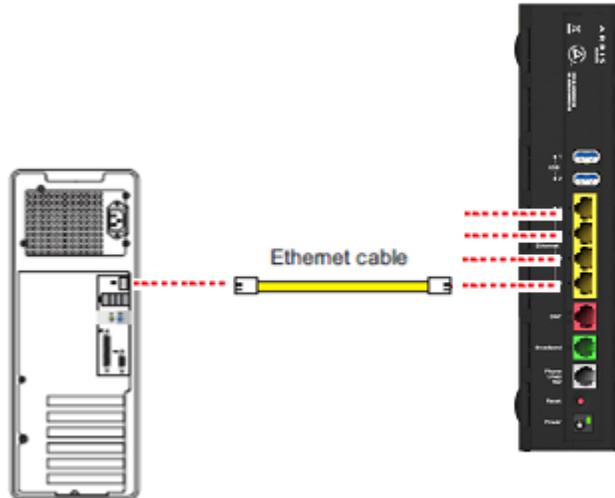
Connecting Devices Using Wired Ethernet

The BGW210-700 Broadband Gateway has four wired Ethernet ports that can be used to connect computers or other devices.

As shown in the illustration below, to connect a computer to the BGW210-700 Broadband Gateway:

1. Connect one end of the Ethernet cable to one of the Ethernet ports on the BGW210-700 Broadband Gateway.
2. Connect the other end of the cable to the Ethernet port on the computer.

Connecting a Computer to an Ethernet Port of the BGW210-700 Broadband Gateway



After the gateway recognizes the computer, the Ethernet light turns steady green and blinks when the computer starts transferring data with the gateway. See [Status Indicator Lights](#) (page 17) under *Basic Troubleshooting* for all Ethernet light indications.

Connecting Devices Using Wi-Fi

The BGW210-700 Broadband Gateway has an integrated Wi-Fi access point to which you can use to connect Wi-Fi devices. By default, the BGW210-700 Broadband Gateway is configured with a Wi-Fi network name (SSID) and is WPA-PSK/WPA2-PSK security enabled.

To connect a Wi-Fi device:

- On the Wi-Fi device, view the available Wi-Fi networks. The specifics of how you do this depend on the device to which you are connecting.

The default Wi-Fi network name (SSID) and the Wi-Fi password (e.g., encryption key) are printed on the label on the side of the BGW210-700 Broadband Gateway. Select the appropriate Wi-Fi network name and connect.

BGW210-700 Broadband Gateway Label



- At the prompt, enter the Wi-Fi password.

To simplify Wi-Fi device connection to the BGW210-700 Broadband Gateway:

You can configure Wi-Fi Protected Setup (WPS) to the network using the PIN or PUSH method.

- For more information about the PIN method, please see the *BGW210-700 Broadband Gateway AT&T Software Administrator's Handbook*, as it describes Web UI access for this input.
- The PUSH method establishes Wi-Fi connectivity if you push the WPS button on the front panel of the BGW210-700 Broadband Gateway and on the Wi-Fi device.
Upon WPS button push, the WPS button light flashes green until WPS is completed successfully, at which point it will stay green for 5-minutes (unless pushed again).
See [Status Indicator Lights](#) (page 17) under *Basic Troubleshooting* for all WPS indications.

Connecting the BGW210-700 Broadband Gateway to the Internet



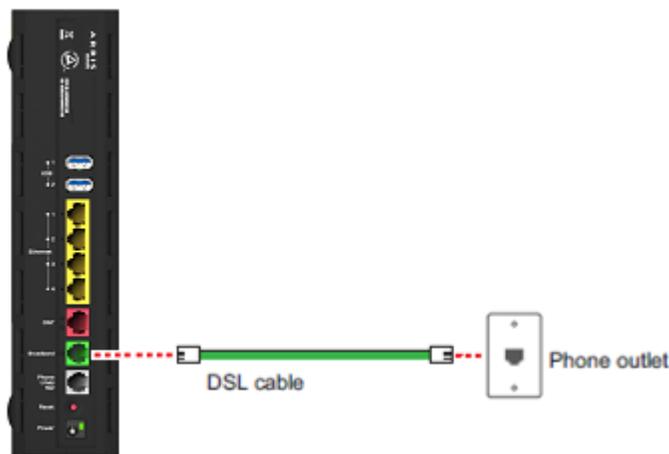
Note: The appropriate port to connect to the Internet is based on the service configuration from AT&T. Do not change the port used unless instructed to do so. Only one of these wiring arrangements can be used at the same time and attempting to use *both* may interfere with your service.

The DSL Broadband port (labeled *Broadband*) can be used to connect the BGW210-700 Broadband Gateway to the Internet:

1. Connect one end of the DSL cable to the green DSL port on the BGW210-700 Broadband Gateway.
2. Connect the other end of the DSL cable to the wall outlet.

After the BGW210-700 Broadband Gateway recognizes the connection, the Broadband light blinks green for a moment and then turns steady green. See [Status Indicator Lights](#) (page 17) under *Basic Troubleshooting* for all Broadband light indications.

BGW210-700 Broadband Gateway Connection to the Internet



Alternatively, you can connect the BGW210-700 Broadband Gateway to the Internet using the WAN Ethernet port (labeled *ONT*):

1. Connect one end of an Ethernet cable to the WAN Ethernet port on the BGW210-700 Broadband Gateway.
2. Connect the other end of the cable to the operator provided WAN Ethernet jack or ONT.

After the BGW210-700 Broadband Gateway recognizes the connection, the Broadband light blinks green for a moment and then turns steady green. See [Status Indicator Lights](#) (page 17) under *Basic Troubleshooting* for all Broadband light indications.

Connecting VoIP Telephones

The BGW210-700 Broadband Gateway includes one RJ-14 port (labeled *Phone 1 & 2*) with the capacity to support two phone lines using a splitter or multi-jack adapter.



Note: The BGW210-700 Broadband Gateway supports two VoIP lines over one RJ14 (FXS) VoIP port. To connect two phone lines, an inner and outer pair splitter adapter must be attached to the RJ14 (FXS) VoIP port to terminate both lines.

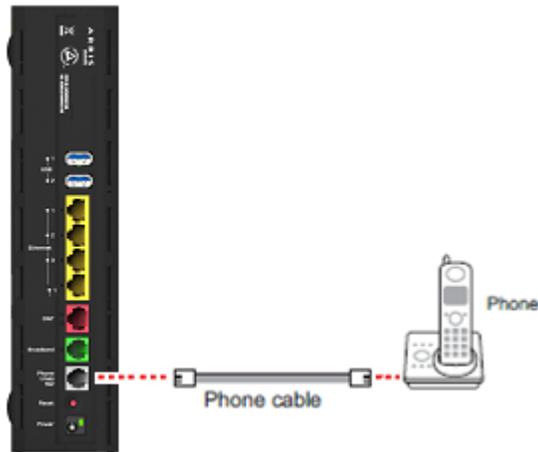


Warning: Do not connect the VoIP lines to your current home telephone wiring, especially if your home has an alarm system. Ensure that you are subscribed to VoIP service for this interface to be used.

As shown in the figures below, to connect phones directly to your gateway:

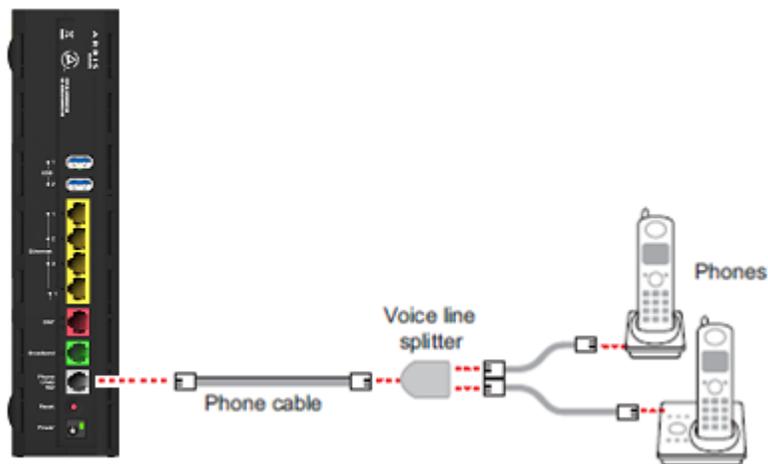
1. Connect one end of the phone cable to the gray Phone Lines 1&2 connector on the BGW210-700 Broadband Gateway.
2. To connect to the telephone(s), do one of the following:
 - For one phone, connect the phone cable directly to the telephone.

Single Phone Connection



- For two phones, connect the phone cable to a splitter and then to the phones.

Two Phone Connection Using Splitter



Note: To prevent interference with cordless phones, ensure that the BGW210-700 Broadband Gateway is at least 5 feet (1.5 m) from any cordless phone base station.

After the gateway recognizes the phones (Line 1 and Line 2), the Phone 1 & Phone 2 lights turn steady green and blink when the associated phone is in use. See [Status Indicator Lights](#) (page 17) under *Basic Troubleshooting* for all Phone light indications.

Basic Troubleshooting

This chapter provides simple troubleshooting suggestions for issues with the initial configuration of the BGW210-700 Broadband Gateway. The following topics are covered:

- *Status Indicator Lights* (page 17)
- *Rear Panel Connectors* (page 23)
- *Factory Reset Switch* (page 24)

Before troubleshooting:

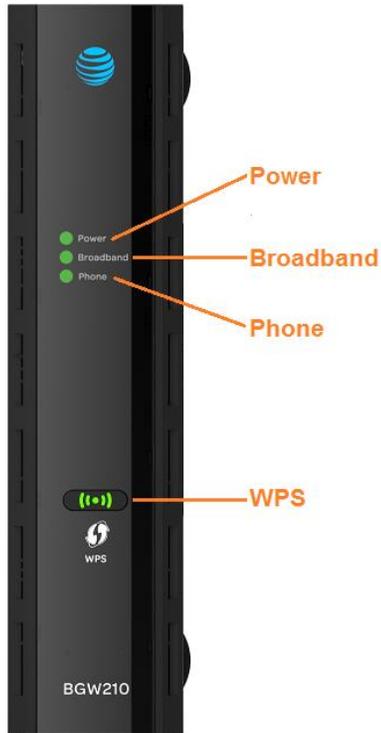
- Read this guide, including *Hardware Gateway Installation* (page 9) and all of the subtopics.
- Set the TCP/IP controls on the PC to obtain an IP address automatically.
- For additional troubleshooting support please see *BGW210-700 Broadband Gateway AT&T Software Administrator's Handbook*, which addresses product Web UI and CLI information.

Status Indicator Lights

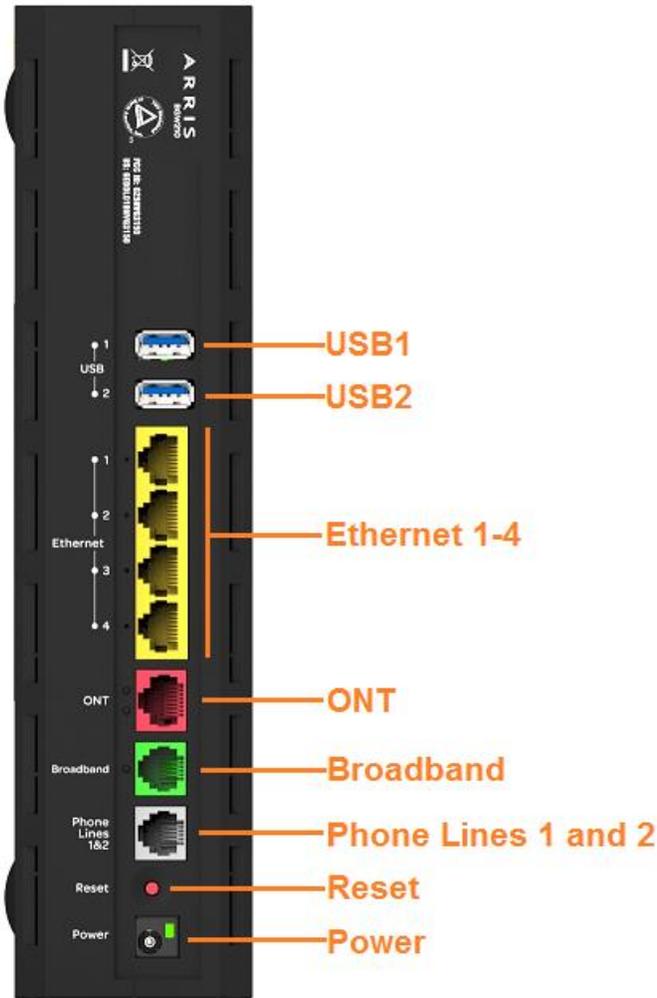
Check the status indicator lights (LEDs) to begin troubleshooting. Use the front and rear view graphics that follow, as well as the LED Activity descriptions table to interpret the LED indicators.

BGW210-700 Broadband Gateway Status Indicator Lights

Front View



Rear View



LED	Activity
All LEDs During Boot Process	<ul style="list-style-type: none"> ■ If the BGW210-700 Broadband Gateway boots and does not detect a failure: <ul style="list-style-type: none"> ● The Power, Broadband, and Phone LEDs all Flash Green, Power LED goes Solid Green and all other LEDs are Off. Power LED starts Flashing Green during Power On Self Test (POST), Power LED goes Solid Green and all other LEDs start functioning with normal behavior. ■ If the BGW210-700 Broadband Gateway does not boot and fails its self-test or fails to perform initial load of the bootloader: <ul style="list-style-type: none"> ● All LEDs on the front of the device continuously flash red in unison. ■ If the BGW210-700 Broadband Gateway boots and then detects a failure: <ul style="list-style-type: none"> ● Power, Broadband, and Phone LEDs all Flash Green for 2 to 3 seconds, and then all LEDs will flash red, including Power LED.

LED	Activity
Power (Front Panel)	<ul style="list-style-type: none"> ■ Solid Green = The device is powered. ■ Off = The unit has no AC power. ■ Flashing Green = The POST is in progress. Also flashes green during initial power-up of the device. ■ Flashing Red = A POST failure (not bootable) or device malfunction occurred. <p> Note: A malfunction is defined as any error of internal sequence or state (not network connectivity) that prevents the BGW210-700 Broadband Gateway from connecting to the broadband network or passing data. This may be identified at various times such as after power-on or during operation through the use of self testing or in operations, which result in a unit state that is not expected or should not occur.</p>
Power LED During a Software Upgrade	<ul style="list-style-type: none"> ■ During the software installation you will lose Internet and phone service. The LEDs will function as follows: <ol style="list-style-type: none"> 1. As software is being loaded into flash, the LEDs operate normally. 2. During the software upgrade, which takes about 12 seconds, the Power LED will flash Orange (flash writing to memory), and all other LEDs operate normally. 3. The BGW210-700 Broadband Gateway restarts automatically. As the BGW210-700 Broadband Gateway reboots, the LEDs display power-on behavior.

LED	Activity
Broadband WAN (Front Panel)	<ul style="list-style-type: none"> ■ Solid Green = Good broadband connection (good sync for a DSL line or signal detected for other types of broadband connections). Only displays when not in <i>alert</i> mode. Off = The device is not powered. When in <i>alert</i> mode, the Solid Green and Flashing Green indications will not be displayed and the LED will be off. The <i>alert</i> mode is intended to avoid showing broadband WAN and VoIP LEDs unless there is an issue. By default the <i>alert</i> mode is disabled. ■ Flashing Green = Attempting broadband connection (e.g., DSL attempting sync, attempting 802.1x or attempting to obtain DHCP information). Only displays when not in <i>alert</i> mode. Also flashes green during initial power-up of the device. ■ Flashing Yellow = LTE device is in place, but not operating properly when a primary connection is working. ■ Flashing Red = A broadband signal is detected, but the connection could not be fully established or the device attempted to become IP connected and failed. ■ Solid Red = No signal on a line and the line is configured to be used (including when there is no signal on one pair of a bonded-pair connection as identified through manual or G.997.1 communication). The LED will light only when there is no signal, not during times of temporary no tone during the training sequence or when attempting to establish a connection. ■ During a software upgrade the LED will continue to function properly and not have any specialized sequence. ■ Off = The device is not powered.
Phone (Front Panel)	<ul style="list-style-type: none"> ■ Solid Green = At least one VoIP line has been configured and all configured VoIP lines are registered with a SIP proxy server. Only displays when not in <i>alert</i> mode. ■ Flashing Green = Indicates ringing associated with an incoming call, as well as when a telephone is off-hook, on either FXS port. Only displays when not in <i>alert</i> mode. Also flashes green during initial power-up of the device. ■ Solid Red = One or more configured lines are not registered with a SIP proxy server. ■ Off = VoIP not in use (e.g. both VoIP lines are not configured) or BGW210-700 Broadband Gateway power is off. When in <i>alert</i> mode the Solid Green and Flashing Green will not be displayed and the LED will be off. ■ During a software upgrade the LED will continue to function properly and not have any specialized sequence.

LED	Activity
WPS (appears After Using WPS button)	<ul style="list-style-type: none"> ■ Solid Green = Wi-Fi Protected Setup has been completed successfully. LED should stay on for 5 minutes or until push button is pressed again. ■ Flashing Green = Continues for 2 minutes, indicating when WPS is broadcasting. ■ Flashing Red = Continues for 2 minutes, indicating a Session overlap was detected (possible security risk). ■ Solid Red = Error unrelated to security, such as failure to find a partner, or WPS is disabled. LED should stay solid red for 5 minutes or until push button is pressed again. ■ Off = The gateway is ready for WPS authentication.
Ethernet 1,2,3,4 (Rear Panel)	<ul style="list-style-type: none"> ■ Solid Green = A 10/100/1000 Ethernet device is connected. ■ Off = The BGW210-700 Broadband Gateway is not powered or no powered devices are connected to the associated ports.
Power Jack (Rear Panel)	<ul style="list-style-type: none"> ■ Green = The voltage present at the DC input connector is equal to or above the required minimum specification of 11.4 volts. ■ Off = The voltage present at the DC input connector is below the required minimum specification of 10.8 volts.

Problem Isolation

If a status indicator light does not look correct, look for these possible problems:

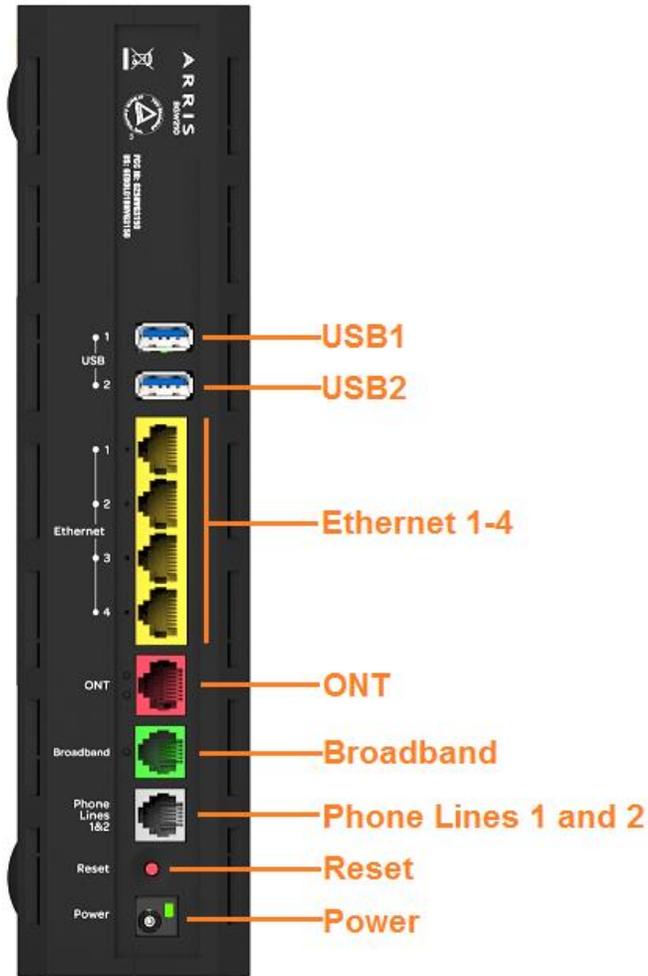
LED Not Lit	Possible Problems
Power (Front Panel)	<ul style="list-style-type: none"> ■ Check the rear panel Power LED, which is to the right of the connector for the cord from the power adapter. <ul style="list-style-type: none"> ● If the rear panel Power LED is on, contact AT&T by phone (1.800.288.2020) or via website (www.att.com/support). ● If the rear panel Power LED is off: <ul style="list-style-type: none"> ○ Make sure the power adapter is plugged into the gateway properly. For location, see <i>Rear Panel Connectors</i> (page 23). ○ Try a known good wall outlet. ○ If a power strip is used, make sure it is switched on.

LED Not Lit	Possible Problems
Broadband	<ul style="list-style-type: none"> ■ Make sure that you are using the correct cable. The DSL cable is a thinner standard telephone cable and is labeled <i>Data Cable</i>. ■ Make sure the DSL cable is plugged into the correct wall jack. ■ Make sure the DSL cable is plugged into the DSL port on the DSL gateway. ■ Make sure the DSL line has been activated by AT&T. ■ Make sure the DSL gateway is not plugged into a micro-filter. ■ Check if any telephone directly connected to a home wall phone jack (not to the gateway's phone port) has a micro-filter installed. If not, it may need to be installed, assuming the home does not use a DSL splitter to separate home phone and DSL lines.
Ethernet 1,2,3,4 (Rear Panel)	<ul style="list-style-type: none"> ■ Make sure that you are using the yellow Ethernet cable, not the DSL cable. The Ethernet cable is thicker than a standard telephone cable. ■ Make sure the Ethernet cable is securely plugged into the Ethernet jack on the PC. ■ Make sure the Ethernet cable is securely plugged into the Ethernet port on the DSL gateway. ■ Make sure you have Ethernet drivers installed on the PC. ■ Make sure the PC's TCP/IP properties for the Ethernet network control panel are set to obtain an IP address via DHCP. ■ Make sure the PC has obtained an address in the 192.168.1.x range. (You may have changed the subnet addressing.) ■ Make sure the PC is configured to access the Internet over a LAN. ■ Disable any installed network devices (Ethernet, HomePNA, Wi-Fi) that are not being used to connect to the DSL gateway.

Rear Panel Connectors

Connectors on the rear panel are depicted below.

BGW210-700 Broadband Gateway Rear Panel



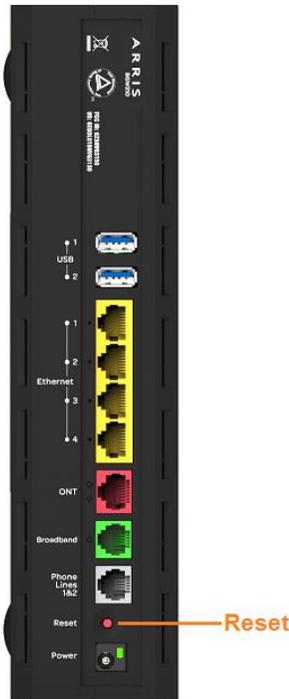
Note: The BGW210-700 Broadband Gateway supports two VoIP lines over one RJ14 (FXS) VoIP port. To connect two phone lines, an inner and outer pair splitter adapter must be attached to the RJ14 (FXS) VoIP port to terminate both lines.

Factory Reset Switch

The Reset switch will result in a reboot of the BGW210-700 Broadband Gateway. Depending on the software loaded on the BGW210-700 Broadband Gateway, holding it for an elongated duration of time may reset the device to factory defaults.

- Referring to the diagram below, find the round Reset switch opening.

BGW210-700 Broadband Gateway Reset Switch Location



- Press the reset button to initiate the following:
 - Press the factory reset button for less than ten seconds to reboot the BGW210-700 Broadband Gateway, the indicator lights on the device will respond immediately and start blinking red within one second of the reset button being pressed.
 - The lights will blink whether the button is still being pressed or has been released. The indicator lights will flash for a minimum of five seconds, even if the reset button is released within five seconds of being pressed. If the reset button is held for more than five seconds, it will continue to blink until released or until ten seconds have elapsed (see below).
 - Press the factory reset button and hold for longer than ten seconds, to reset the device to the factory default shipped settings. If the button is held for ten seconds, the Power indicator continues to blink for an additional five seconds, and then the indicator lights return to their normal operating mode, whether or not the reset button is still depressed.



Warning: Resetting the BGW210-700 Broadband Gateway to factory defaults will require all configured settings to be reconfigured.

Technical Specifications and Safety Information

Dimensions and Interfaces

Dimensions and Interfaces	
Dimensions/Weight/Placement	<ul style="list-style-type: none"> ■ Dimensions - 9.8in. High x 7.9in. Deep x 2.36in. Wide (249mm High x 201mm Deep x 60mm Wide) ■ Weight - 1.9 lbs (0.882 kg) ■ Placement - Vertical desktop or vertical wall mount
Communications interfaces	<ul style="list-style-type: none"> ■ Concurrent Wi-Fi support for 400 mW 802.11b/g/n and 802.11ac ■ Four-port 10/100/1000Base-T Ethernet switch, RJ-45 ■ Single-port voice FXS, RJ-14 ■ Two-port USB 2.0
WAN Interfaces	<ul style="list-style-type: none"> ■ Bonded VDSL2/single line VDSL2/bonded ADSL+/single line ADSL, RJ-14 ■ One-port 10/100/1000 Ethernet, RJ-45
Concurrent Wi-Fi	<ul style="list-style-type: none"> ■ 802.11 b/g/n and 802.11ac 400 mW high-power radio
Wi-Fi Characteristics	<ul style="list-style-type: none"> ■ 2.4GHz support, 3x3 integrated omni-directional antenna with diversity ■ 5GHz support, 4x4

Power Supply

This product is intended to be supplied with a Listed Direct Plug-In AC/DC power adapter marked Class 2 LPS power supply rated @ 12V 3A DC for all BGW210-xxx models.

The AC/DC power adapter supplied with this product is designed to ensure your personal safety and to be compatible with this equipment. Use only the power adapter that was provided with the gateway.

Environment

Operating temperature: 0°C to 41.7°C (32° F to 107° F); 8% to 95% (Non Condensing) Relative Humidity

Storage temperature: -40° C to 80° C (-40° F to 176° F)

Agency Approvals

North America

Safety Approvals:

- United States – UL 60950, Third Edition

EMC:

- United States – FCC Part 15 Class B, Subparts B, C, and E

Telecom:

- United States – CFR Part 68

Caring for the Environment by Recycling

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 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, contact ARRIS Customer Service for assistance at www.arris.com/consumers.

Important Safety Instructions



Warning: Do not use before reading these instructions.

Do not connect the Broadband Ethernet port (labeled *ONT*) to a carrier or carriage service provider's telecommunications network or facility unless:

- A) You have the written consent of the network or facility manager, or
- B) The connection is in accordance with a connection permit or connection rules.

Connection of the Ethernet ports may cause a hazard or damage to the telecommunication network or facility, or persons, with consequential liability for substantial compensation.

WARNINGS

The power supply must be connected to an outlet. *Do not defeat the protective earth connection.* The direct plug-in power supply serves as the main power disconnect; locate the direct plug-in power supply near the product for easy access.

Product Ventilation

The gateway is intended for residential use. Position the gateway in an upright vertical position and locate it where temperatures remain within a range of 32° – 107°F (0° – 41.7°C) and where heat from the unit itself is not trapped. There must be at least two inches (2") of clearance on all sides except the bottom.

Telecommunication Installation Cautions

- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

- Do not use the telephone to report a gas leak in the vicinity of the leak.

Electrical Safety Advisory

Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources. This has been identified as a major nationwide problem. Therefore it is advised that this equipment be connected to AC power through the use of a surge arrestor or similar protection device.

Declaration of Conformance



Warning: This is a Class B product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures. Adequate measures include increasing the physical distance between this product and other electrical devices. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

United States: 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.

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.

47 CFR Part 68 Information

United States: This device complies with 47 CFR Part 68 of the FCC Rules. Operation is subject to the following four conditions:

1. The Federal Communications Commission (FCC) has established Rules, which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.
2. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.
3. The telephone company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. You will be advised of your right to file a complaint with the FCC.
4. If the telephone company requests information on what equipment is connected to their lines, inform them of:
 - The telephone number to which this unit is connected.
 - The ringer equivalence number. [0.XB] (Indicated on the label)
 - The USOC jack required. [RJ11C]
 - The FCC Registration Number. [US:AAAEQ##TXXXX] (Indicated on the label)
The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the REN's of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

FCC Caution



Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits as set forth for an uncontrolled environment. This equipment should be installed and operated maintaining a minimum distance of 22 cm (9 inches) between the device and your body.

Service Requirements

In the event of equipment malfunction, if under warranty, we will exchange a product deemed defective. Under FCC rules, no customer is authorized to repair this equipment. This restriction applies regardless of whether the equipment is in or out of warranty.

Technical Support for Hardware Products:

Customers inside North America: 888-944-4357 (888-944-HELP)

Customers outside North America: 1-215-323-2345

For Spanish language support: 1-215-323-2346



Note: This product was tested for FCC compliance under conditions that included the use of shielded cables and connectors between system components. Changes or modifications to this product not authorized by the manufacturer could void your authority to operate the equipment.

ARRIS Contacts

Technical Services

For technical support on ARRIS products you can contact us by phone or on the web.

By Telephone The Technical Assistance Center can be reached at:
1-888-944-HELP (4357)

On the Web The Ask ARRIS web site gives you web access to service and support tools. You will need to register using your support contract ID and email address. Ask ARRIS is located at:

<http://www.arris.com/support>

There you will be able to access:

- Support Contact Information for all products
- Knowledge Base Information (also known as Solutions)
- User Documentation
- Current open support cases
- Ability to create a new support case (for technical support or repair and return)
- Training Webcast

By Email Email addresses for ARRIS products will be provided with your account at Ask ARRIS.

Technical Training

For more information about our Global Knowledge Services Department and the programs we offer, e-mail us at:

training@arris.com

Corporate Headquarters

ARRIS · Suwanee · Georgia · 30024 · USA

T: 1-678-473-2000 F: 1-678-473-8470

www.arris.com