ATLONA
a PANDUIT company

Stereo / Mono
Audio Power Amplifier
60 Watts

AT-GAIN-60 | Atlona Manuals **Audio**

Version Information

Version	Release Date	Notes
1	Apr 2018	Initial release
2	Nov 2018	Firmware version 1.0.03; added auto power-on feature
3	Jul 2019	Updated for 1.0.14 firmware: atlona logo update, other internal fixes. Refer to Release Notes for more information

Welcome to Atlona!

Thank you for purchasing this Atlona product. We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration only takes a few minutes and protects this product against theft or loss. In addition, you will receive notifications of product updates and firmware. Atlona product registration is voluntary and failure to register will not affect the product warranty.

To register your product, go to http://www.atlona.com/registration

Sales, Marketing, and Customer Support

Main Office

Atlona Incorporated
70 Daggett Drive
San Jose, CA 95134
United States

Office: +1.877.536.3976 (US Toll-free)
Office: +1.408.962.0515 (US/International)

Sales and Customer Service Hours
Monday - Friday: 6:00 a.m. - 4:30 p.m. (PST)

http://www.atlona.com/

International Headquarters

Atlona International AG
Ringstrasse 15a
8600 Dübendorf
Switzerland

Office: +41 43 508 4321

Sales and Customer Service Hours
Monday - Friday: 09:00 - 17:00 (UTC +1)

Operating Notes

IMPORTANT: Visit http://www.atlona.com/product/AT-GAIN-60 for the latest firmware updates and User Manual.

Atlona, Inc. (“Atlona”) Limited Product Warranty

Coverage

Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

- repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping.

OR

- replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products.

OR

- refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

Repair, replacement or refund of Atlona products is the purchaser’s exclusive remedy and Atlona liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of Atlona products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

Coverage Periods

Atlona Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser ‘s sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013.
- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013.
- Lifetime Limited Product Warranty for all cable products.

Limited Product Warranty Terms – Refurbished (B-Stock) Products and Discontinued Products

- 3 years from proof of purchase date for all Refurbished (B-Stock) and Discontinued hardware and electronic products purchased on or after June 1, 2013.

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit atlona.com for Atlona’s contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

Atlona requires that products returned are properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization or case number will be refused. Atlona, at its sole discretion, reserves the right to reject any products received without advanced authorization. Authorizations can be requested by calling 1-877-536-3976 (US toll free) or 1-408- 962-0515 (US/international) or via Atlona’s website at atlona.com.

Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packaging or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.

- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.
- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona’s products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona’s products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

Limitation on Liability

The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a “Consumer Product” under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

Other Conditions

Atlona’s Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona’s authorized distributors, dealers and resellers can be found at www.atlona.com.

Important Safety Information

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Das Symbol des Blitzzeichens innerhalb eines gleichseitigen Dreiecks soll den Benutzer davor warnen, dass innerhalb des Gehäuses gefährlich hohe Spannung an berührbaren Teilen anliegt. Die Spannung ist hoch genug um bei Berührung zu einem gefährlichen elektrischen Schlag zu führen!

三角形內帶有箭頭符號的閃電，旨意在提醒用戶產品外殼內存在未絕緣的“危險電壓”可能會造成人體觸電危險

Вспышка молнии с символом стрелки в треугольнике предназначена для предупреждения пользователя о наличии неизолированного «опасного напряжения» в корпусе продукта, которое может иметь достаточную величину, чтобы представлять опасность поражения электрическим током для людей

Le flash lumineux dans le symbole de la flèche du triangle équilatéral est destiné à alerter l’utilisateur de la présence d’une «tension dangereuse» non isolée dans l’enceinte du produit qui peut être suffisamment importante pour constituer un risque d’électrocution pour les personnes

Il simbolo del lampo con la punta di una freccia, all’interno di un triangolo equilatero, avvisa l’utente della presenza di “tensioni pericolose” non isolate all’interno del contenitore del prodotto che possono essere sufficientemente elevate da costituire un rischio di folgorazione per le persone.

El símbolo del rayo con punta de flecha dentro de un triángulo equilátero alerta al usuario de la presencia de “voltaje peligroso” no aislado en el interior del producto que puede ser de una magnitud suficiente como para constituir un riesgo de descarga eléctrica para las personas.

Important Safety Information

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCT THE RISK OF ELECTRIC SHOCK
DO NOT OPEN ENCLOSURE OR EXPOSE TO RAIN OR MOISTURE.
NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

The information bubble is intended to alert the user to helpful or optional operational instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.
11. Only use attachments/accessories specified by Atlona.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this product during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

FCC Statement

FCC Compliance and Advisory Statement: This hardware 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 A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or 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: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.

Table of Contents

Introduction

The Atlona **Gain™ 60** (**AT-GAIN-60**) is a compact power amplifier designed for low or high-impedance applications. A mode selector switch allows the Gain 60 to deliver two channels of 30 watts each into 4 or 8 ohms, or a single channel of 60 watts at 24, 70, or 100 volts. This Class-D amplifier is energy efficient and ENERGY STAR qualified, and is also convection-cooled without the need for fans. Additionally, the Gain 60 is UL 2043 plenum rated, allowing convenient yet discreet installation in a plenum airspace above a drop ceiling. Balanced and unbalanced audio inputs are provided for system design versatility. The Gain 60 is controllable via TCP/IP or RS-232, and can be integrated with Atlona AV switchers and OmniStream™ AV systems for a wide variety of sound reinforcement applications.

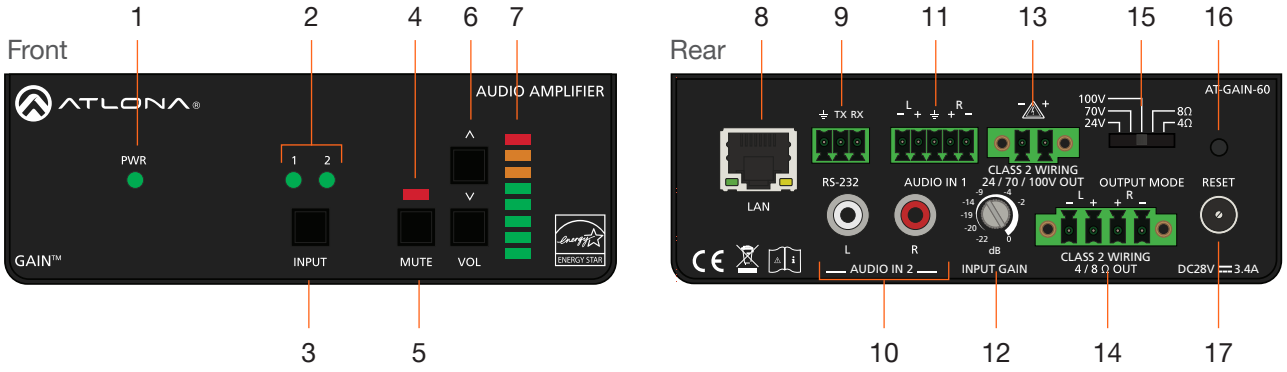
Features

- Selectable low or high-impedance operation.
  - » 2 x 30 watts @ 4 or 8 ohms.
  - » 1 x 60 watts @ 24, 70 or 100 volts.
- Selectable balanced and unbalanced audio inputs.
- Class-D efficient amplifier design.
- ENERGY STAR® qualified.
- Convection cooled – no need for fans.
- UL 2043 plenum-rated – allows installation above commercial drop ceilings.
- Automatic standby, configurable from 5 to 25 minutes of inactivity, to minimize power consumption.
- Rear panel input level control.
- Integrated protection circuitry automatically activates in the event of clipping, short circuit, thermal overload, and more.
- Bass and treble tone controls.
- TCP/IP and RS-232 control of volume level, muting, and tone controls.
- Ideal for IP-based control from Atlona Velocity™ Control System.
- Front-panel button controls for input selection, mute, and volume control.
- Front panel signal status LEDs for power, input selection, mute, and real-time volume level.
- Compact, rack-mountable enclosure.
- Optional AT-RACK-1RU rack shelf – recommended for rack installation.
- Includes installation guide, captive screw connectors, and external universal power supply.

Package Contents

1 x AT-GAIN-60
2 x Captive screw connector, 2-pin
1 x Captive screw connector, 4-pin
2 x Captive screw connector, 5-pin
1 x 28 V / 3.4 A DC power supply
1 x Installation Guide

Panel Description



1 **PWR**
This LED indicator glows solid green when the unit is powered. When set to standby mode, this LED indicator glows solid amber.

2 **1 / 2**
These LED indicators display the currently selected input. The active input will be indicated by a solid green LED.

3 **INPUT**
Press this button to select the desired audio input.

4 **Mute LED Indicator**
This LED indicator will glow solid red when the audio output is muted.

5 **MUTE**
Press this button to mute the audio output. Press the button again to unmute the audio output.

6 **VOL**
Press the up-arrow button to increase the output volume. Press the down-arrow button to decrease the output volume. The LEDs on the Audio Output Indicator will change each time one of these buttons is pressed.

7 **Audio Output Indicator**
Displays the output audio level. If the volume level peaks at the red indicator (0 dB), then clipping will occur.

8 **LAN**
Connect an Ethernet cable from this port to the Local Area Network (LAN).

9 **RS-232**
Connect the included 3-pin captive screw connector from this port to an RS-232 controller or automation system. Refer to RS-232 (page 12) for wiring information.

10 **AUDIO IN 2 (unbalanced)**
Connect RCA cables, from an analog line output, to these ports. Both analog stereo or two mono connections are supported. Input impedance is 10 kΩ.

11 **AUDIO IN 1**
Connect the included captive screw connector, from a balanced / unbalanced analog line output, to this port. Input impedance is 20 kΩ. Refer to Audio Connectors (page 11) for wiring information.

12 **INPUT GAIN**
Turn this pot to adjust the audio input gain in 4 dB increments.

13 **24 / 70 / 100V**
Connect the included 2-pin captive screw connector from this port to a distributed speaker system. Before connecting the speakers, set the speaker voltage using the **OUTPUT MODE** switch.

14 **4 / 8 Ω OUT**
Connect the included 4-pin captive screw connector from this port to a pair of program / stereo speakers. Before connecting the speakers, set the speaker impedance using the **OUTPUT MODE** switch.

15 **OUTPUT MODE**
Slide this switch to set the correct speaker impedance or voltage setting before connecting the speakers.

16 **RESET**
Press and hold this button for 10 seconds to reset the unit to factory-default settings. Refer to Factory Reset (page 23) for more information.

17 **DC 28V**
Connect the included 28V DC power supply to this power receptacle.

Installation

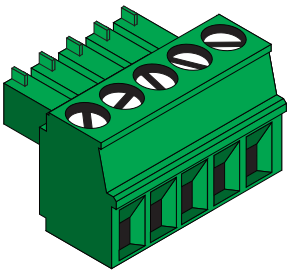
Audio Connectors

The AT-GAIN-60 provides two audio ports: one input and one output. The **AUDIO IN 1** port can be used to connect an audio digital signal processor (DSP) or other audio source device. Balanced or unbalanced wiring is supported.

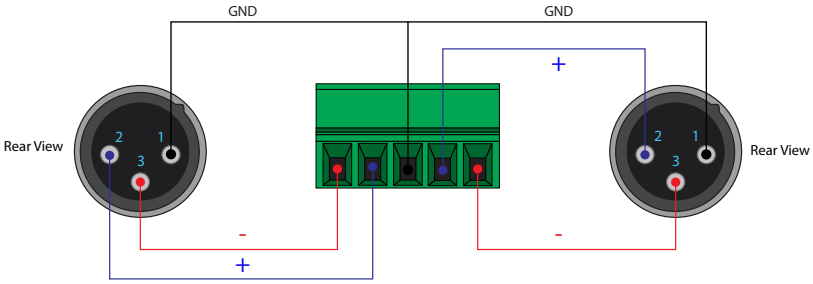
The **AUDIO IN 2** port is used to connect an analog audio source using RCA-type cables.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16” (5 mm) from the insulation of each wire.
3. Connect the wires as shown, using either balanced or unbalanced wiring.

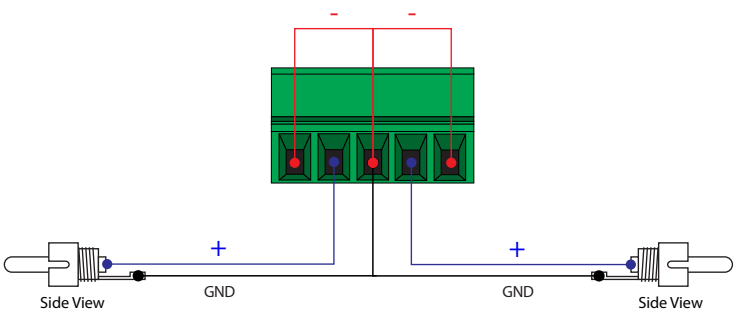
AUDIO IN



Balanced audio using XLR connectors

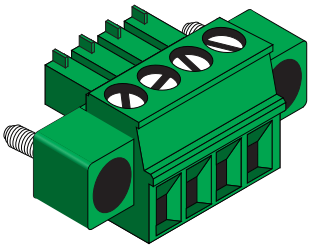


Unbalanced audio using RCA connectors



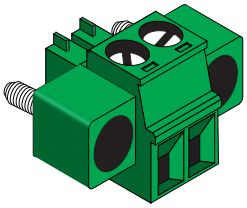
4 / 8 Ω OUT

Connect program/stereo speakers to the included 4-pin captive screw connector, then connect the terminal block to the **4 / 8 Ω OUT** port. When connecting program / stereo speakers, set the **MODE** switch to either 4 Ω or 8 Ω, depending upon the speaker impedance.



24 / 70 / 100V

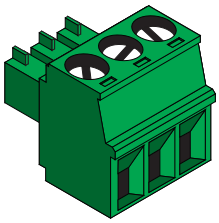
Connect distributed speaker system to the included 2-pin captive screw connector, then connect the terminal block to the **24 / 70 / 100V** port. When connecting program / stereo speakers, set the **MODE** switch to **24**, **70**, or **100V**, depending upon the speaker voltage.

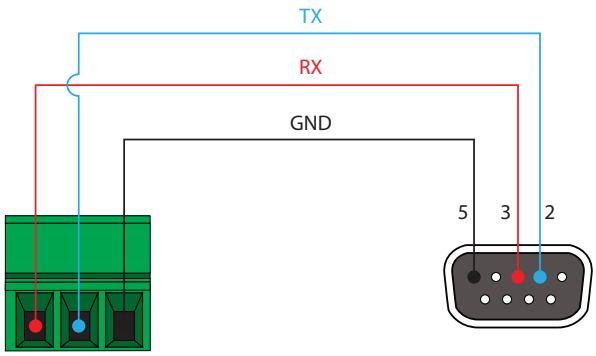


RS-232

The AT-GAIN-60 provides RS-232 control between an automation system and an RS-232 device. This step is optional.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16” (5 mm) from the insulation of the RX, TX, and GND wires.
3. Insert the TX, RX, and GND wires into correct terminal on the included captive screw block.





Connection Instructions

1. Connect an analog audio source to the **AUDIO IN** ports. Once connected, press the **INPUT** button on the front panel, to switch between the RCA and the 5-pin captive screw port.

   - **RCA cables (unbalanced)**
     Connect shielded RCA-type cables from the audio source to the **AUDIO IN 2** left/right RCA jacks.

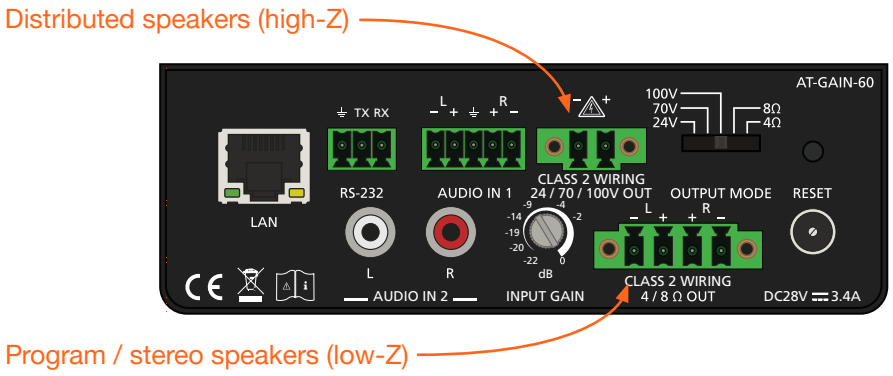
   - **Balanced/Unbalanced**
     Connect the included 5-pin captive screw to the **AUDIO IN 1** port. Use the desired wiring configuration, on the previous page.

2. Determine the use-case scenario of the AT-GAIN-60. The AT-GAIN-60 can be configured as either one of the following. Only one type of speaker connection is permitted at a time.

   - **Distributed speaker system (high impedance)**
     Set the **OUTPUT MODE** switch to the required voltage setting: **24**, **70**, or **100V**. This mode is used for commercial applications and longer speaker cable runs.

   - **Program speakers / stereo (low impedance)**
     Set the **OUTPUT MODE** switch to the impedance setting of the speakers being connected: **4Ω** or **8Ω**. This mode is used for consumer applications and shorter speaker cable runs.

     Refer to Connection Diagrams (page 14) for example applications.

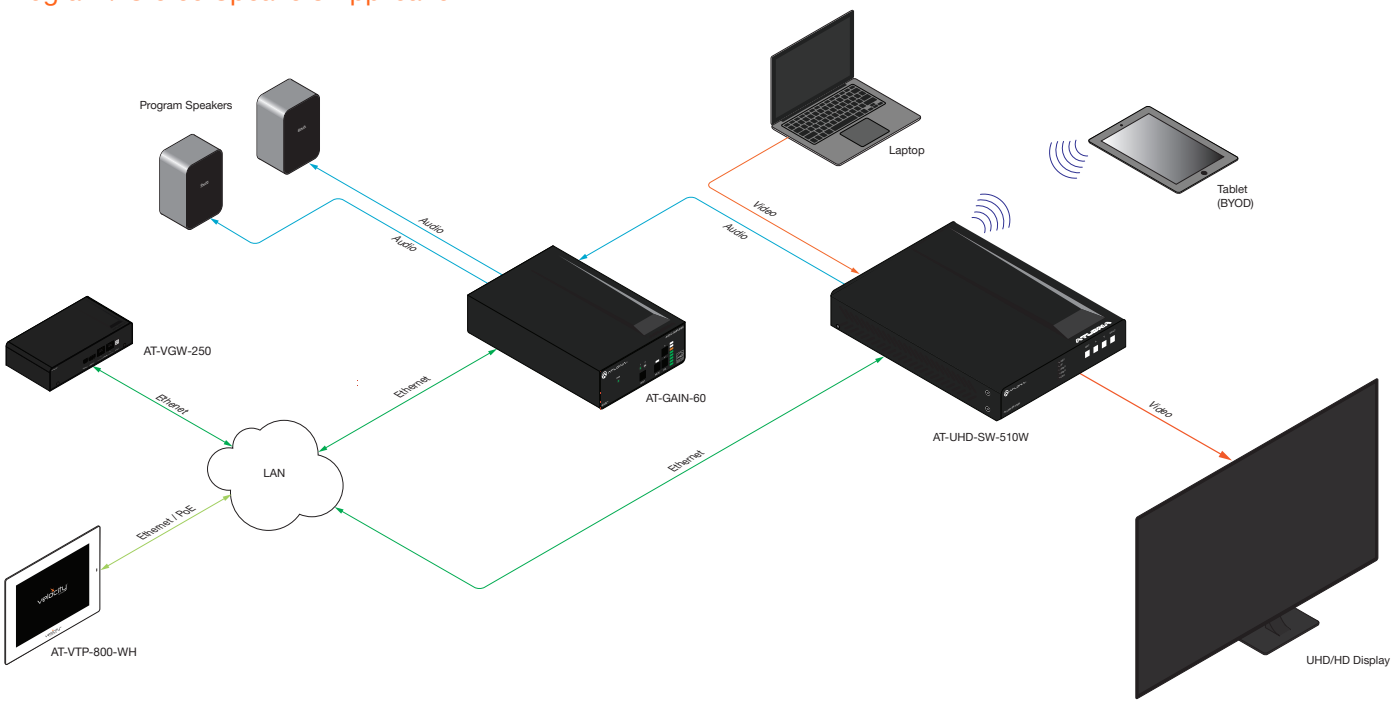


NOTE: The AT-GAIN-60 only supports one type of speaker connection at a time: high-impedance or low-impedance.

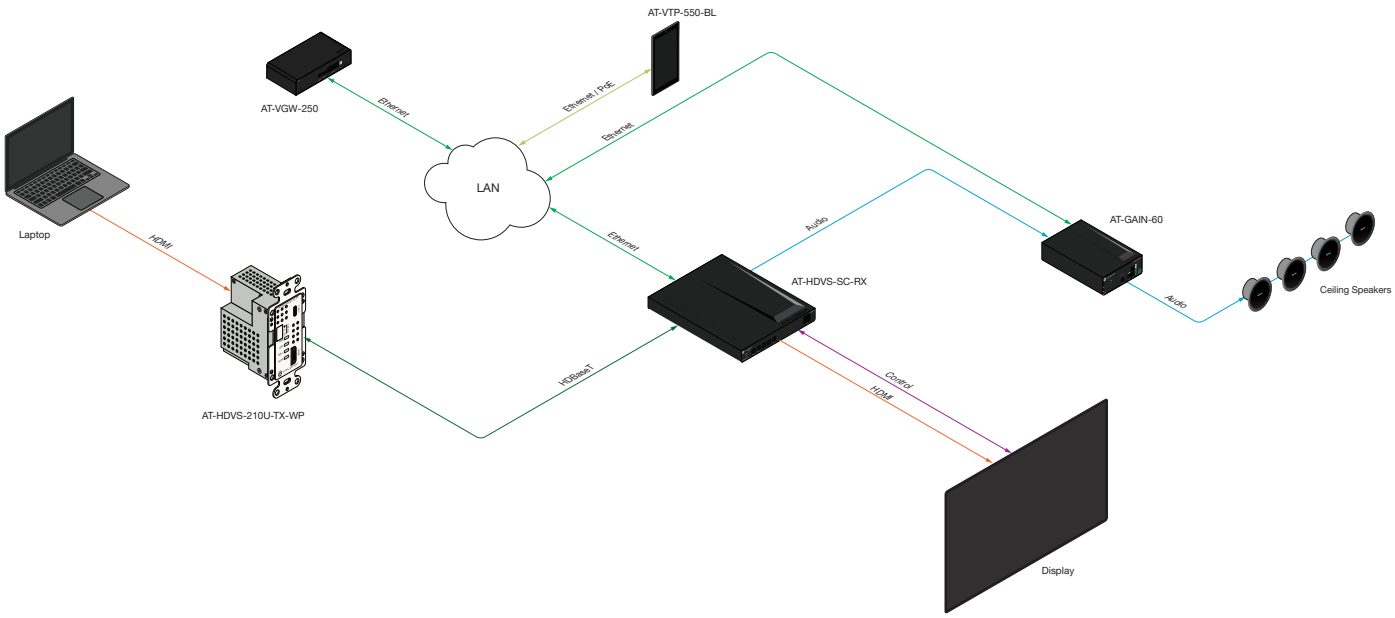
3. Connect the speakers to the proper port on the AT-GAIN-60, based on the selection made in the previous step.
4. Connect the **LAN** port to a network switch for set up and control of the unit.
5. Connect the included power supply to the **DC28V** power receptacle.
6. Connect the IEC power cable to an available electrical outlet.

Connection Diagrams

Program / Stereo Speakers Application



Distributed Speakers Application



IMPORTANT: When connecting speakers, either use a distributed speaker system or program/ stereo speakers. The AT-GAIN-60 does not support simultaneous distributed and program speaker connections.

IP Configuration

The AT-GAIN-60 is shipped with DHCP enabled. Once connected to a network, the DHCP server (if available), will automatically assign an IP address to the unit. Execute the arp -a command at the Windows command line or use an IP scanner to locate the AT-GAIN-60 on the network.

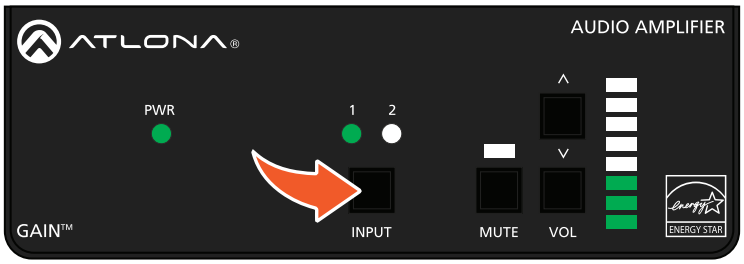
If the AT-GAIN-60 is unable to detect a DHCP server, within 15 seconds, then the unit will be assigned the following IP configuration:

- IP address 192.168.1.254
- Subnet mask 255.255.0.0
- Gateway 192.168.1.1

If a static IP address is desired, the unit can be switched to static IP mode. Use one of the following procedures to switch between DHCP and static IP mode. 192.168.1.254 is the default static IP address.

Using the Rear Panel

1. Make sure the AT-GAIN-60 is powered.
2. Press and hold the **INPUT** button for approximately 10 seconds.



3. Release the **IP RESET** button once the **PWR** LED indicator on the front panel begins to flash. The number of flashes will indicate the currently selected IP mode.

POWER LED flashes	Description
Four	DHCP mode
Two	Static IP mode

4. Once the unit has changed IP modes, the unit will automatically reboot.
5. The unit is now set to the new IP mode and ready for use.

Using Commands

Use the IPStatic and IPDHCP commands to switch between DHCP and static IP mode using Telnet or RS-232. Refer to the Application Programmers Interface documentation for more information. All commands and their arguments are case-sensitive.

- **Setting static IP mode**

1. Connect to the AT-GAIN-60 using Telnet.
2. At the command line, execute the IPDHCP command using the off argument, as shown.

   IPDHCP off

3. Execute the IPStatic command. This command requires three arguments: the desired IP address of the AT-GAIN-60, the subnet mask, and the gateway address. All arguments must be entered in dot-decimal notation. The following is an example:

   IPStatic 192.168.1.112 255.255.255.0 192.168.1.1

4. The AT-GAIN-60 will automatically reboot. The unit is now set to static IP mode and ready for use.

- **Setting DHCP mode**

1. Connect to the AT-GAIN-60 using Telnet.
2. At the command line, execute the IPDHCP command using the on argument, as shown. All characters are case-sensitive.

   IPDHCP on

3. The AT-GAIN-60 will automatically reboot. The unit is now set to DHCP mode and will be assigned an IP address by the DHCP server (if present).

Using the Web GUI

The Network page (page 28) in the web GUI allows the option for the AT-GAIN-60 to use either DHCP or static IP mode. In order to access the web GUI, the IP address of the AT-GAIN-60 must be known.

1. Open the desired web browser and enter the IP address of the AT-GAIN-60.
2. Log in, using the required credentials. The factory-default username and password are listed below:

   Username: admin
   Password: Atlona

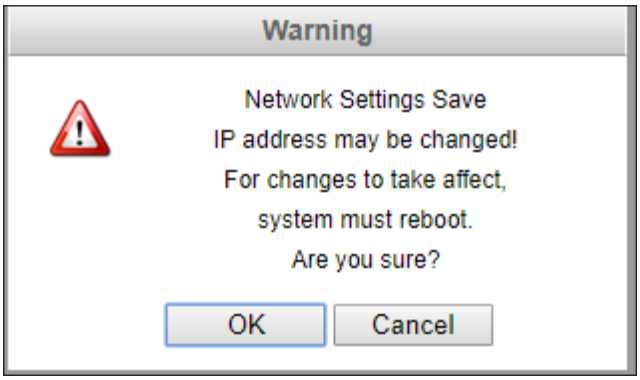
3. Click the **Network** tab, located on the side menu bar.

- **Setting static IP mode**
  a. Click **OFF**, next to **DHCP**.
  b. Enter the required information in the **IP Address**, **Subnet**, and **Gateway** fields.

- **Setting DHCP mode**
  a. Click **ON**, next to **DHCP**.

4. Click the **Save** button to save the changes.

5. The following message box will be displayed:

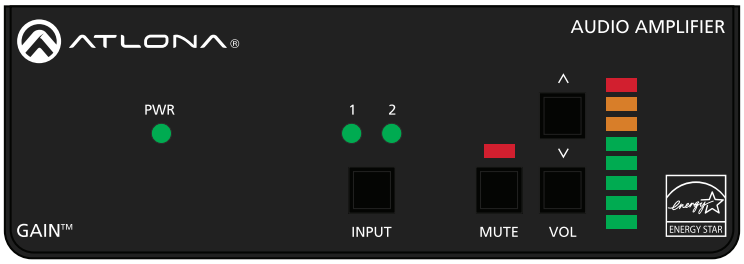


6. Click **OK** to accept the changes or click **Cancel** to abort changes and return to the **Network** page.

Basic Operation

LED Indicators

The LED indicators on the front panel, provide information on the current state of the AT-GAIN-60. Refer to the table below for more information.



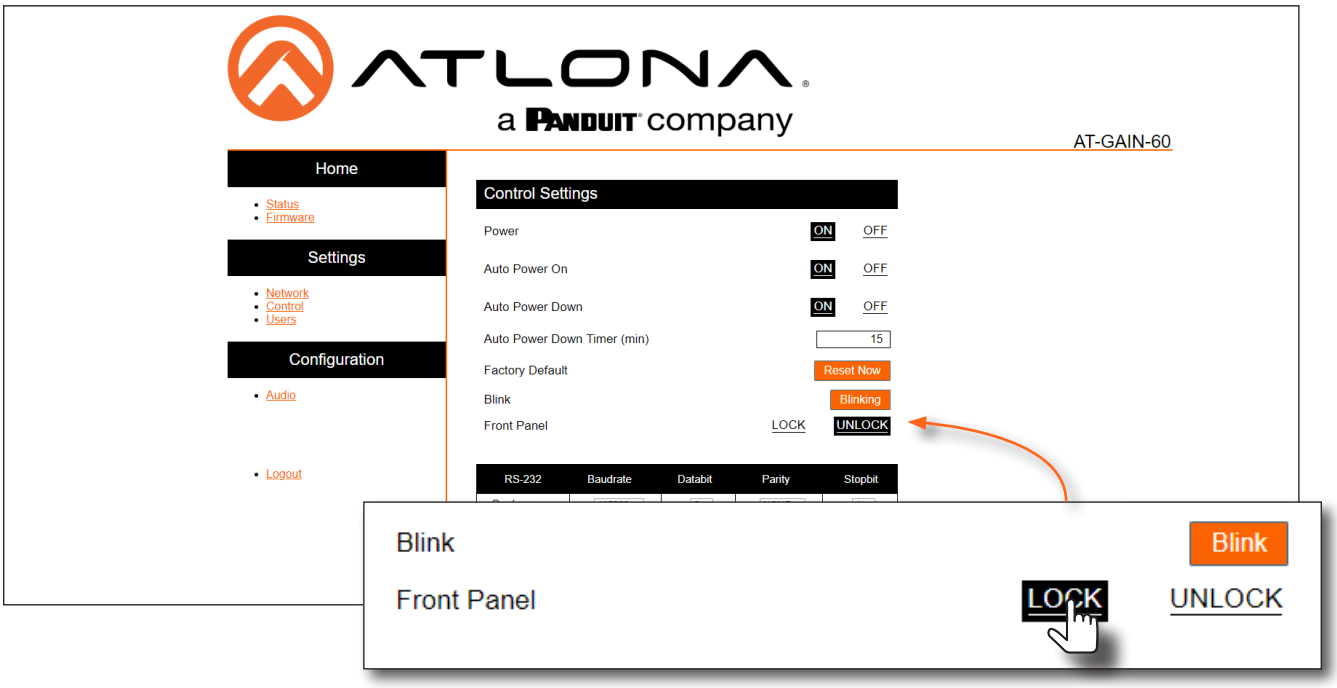
LED Indicator	State	Description
PWR	Solid green	Unit is powered.
	Solid amber	Unit is in low power consumption mode.
	Flashing green	Unit is in blink mode.
	Off	Unit is not powered. • Check the power cable between the AT-GAIN-60 and the electrical outlet. • Make sure that the electrical outlet is live.
1	Solid green	The **AUDIO IN 1** port is the active audio input.
	Off	The **AUDIO IN 1** port is *not* the active audio input.
2	Solid green	The **AUDIO IN 2** ports (RCA) are the active audio input.
	Off	The **AUDIO IN 2** ports (RCA) are *not* the active audio input.
MUTE	Solid red	Audio output is muted.
	Off	Audio muting is disabled.
Audio Output Indicators	Solid green	Acceptable range for output volume.
	Solid amber	Output volume level is approaching audio clipping.
	Solid red	Audio clipping.

NOTE: All LED indicators on the front panel will flash rapidly when a firmware update is in progress. Refer to Updating the Firmware (page 34) for more information.

Locking the Front Panel

The buttons on the front panel can be locked or unlocked. Locking the front-panel buttons prevents accidental pressing of the buttons, which may occur when the unit is mounted in a rack environment. Locking and unlocking of the front-panel buttons is managed through the web GUI or by executing the Lock and Unlock API commands. Refer to the API documentation for more information.

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 24) for more information.
2. Click **Control**, under the **Settings** menu, on the left side of the page.



3. Click **LOCK** to lock the front-panel buttons. To unlock the front-panel buttons, click **UNLOCK**.

   Locking the front panel does not affect access to the web GUI or Telnet sessions.

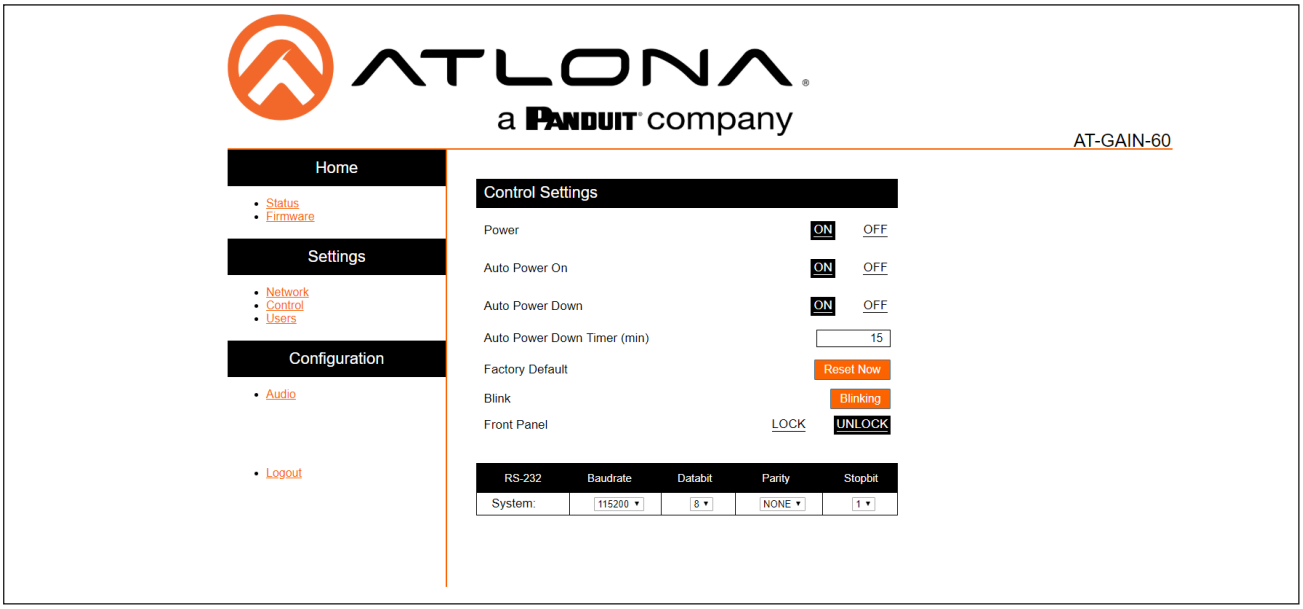
Power Modes

The following section discusses the power mode features which have been integrated into the AT-GAIN-60. Power modes are located under the **Control** tab within the web GUI.

1. Open the desired web browser and enter the IP address of the AT-GAIN-60.
2. Log in, using the required credentials. The factory-default username and password are listed below:

   Username: admin
   Password: Atlona

3. Click the **Control** tab, located on the side menu bar. The **Control Settings** section will be displayed.



Powering On or Off

Click the **OFF** option to power-off the AT-GAIN-60. When powered-off, audio output is disabled but the **LAN** port will remain active. To power-on the AT-GAIN-60, after it has been powered-off, any one of the following methods may be used:

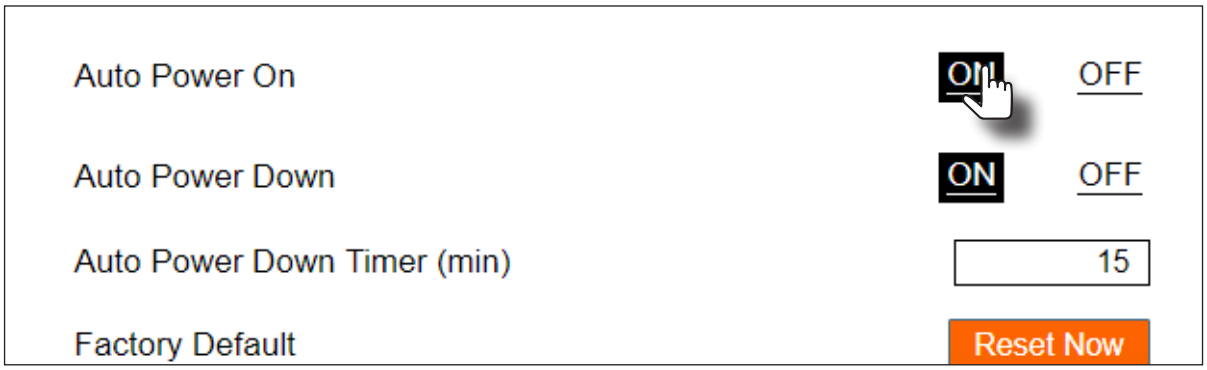
- Set **Power** to the **ON** setting, in the web GUI.
- Execute the PWON command using RS-232 or Telnet.
- Press any of the buttons on the front panel to wake the unit.

Input Signal Detection / Power On

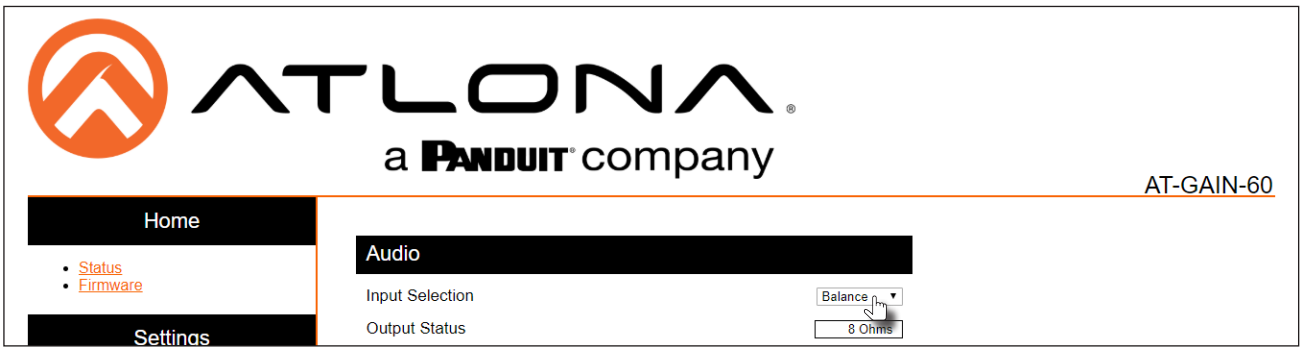
When enabled, **Auto Power On** mode will automatically power-on the AT-GAIN-60 when an input signal is detected on either the **AUDIO IN 1** or **AUDIO IN 2** port. When the AT-GAIN-60 is powered-on from a low-power state, the **PWR**, **INPUT**, and **VOL** LED indicators will be illuminated. By default this feature is enabled. The table below, lists the minimum frequency / voltage requirements in order for the AT-GAIN-60 to be powered from a low-power state.

Setting	Frequency	Voltage
Balance	1 kHz	3 mV
Unbalance	1 kHz	1.5 mV

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 24) for more information.
2. Click the **Control** tab, located on the side menu bar. The **Control Settings** section will be displayed.
3. Click the **ON** option, if not already selected, to enable **Auto Power On** mode.
4. Click **OFF** to disable this feature.



5. Click **Audio** in the side menu bar. The **Audio** section will be displayed.
6. Click the **Input Selection** drop-down list and select the desired initial input: **Balance** or **Unbalance**. Select the **Balance** option to set the active audio input to the **AUDIO IN 1** port. Select the **Unbalance** option to set the **AUDIO IN 2** port the active audio input.



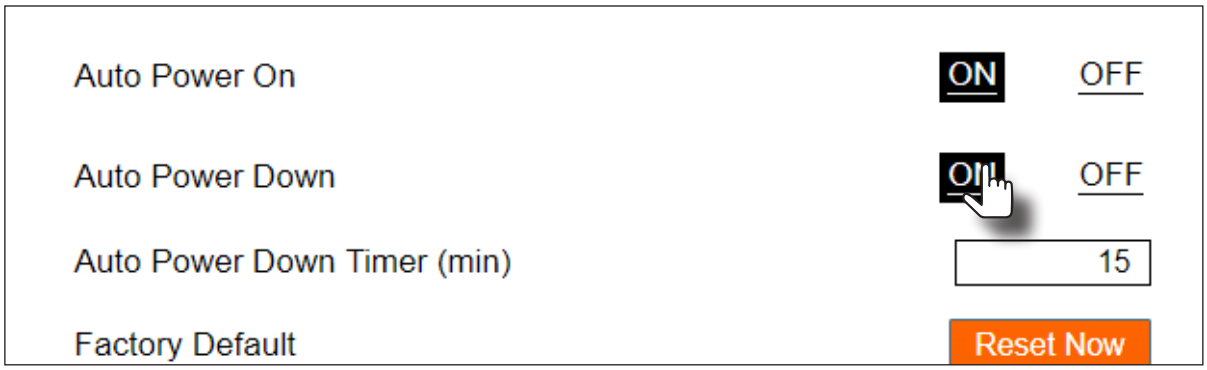
IMPORTANT: When **Auto Power On** is set to **ON** and an audio signal is present, the AT-GAIN-60 cannot be powered-off in the web GUI or through a Telnet session. To control powering of the AT-GAIN-60, regardless of whether or not an input signal is present, the Auto Power Off feature must be set to **OFF**.

Auto Power Down Mode

Enabling this mode will automatically power-down the AT-GAIN-60 if no audio input signal is present on either the **AUDIO IN 1** port or the **AUDIO IN 2** port, after the specified time interval. When the AT-GAIN-60 enters Auto Power Down mode, the Power option will be set to **OFF** and the front-panel LED indicators will turn off. In Auto Power Down mode, power consumption is limited to 1.2 W. By default this feature is enabled.

Note that when this mode is enabled, the AT-GAIN-60 only monitors the existence of an audio input signal, not the physical audio connection. Refer to the next page for instructions.

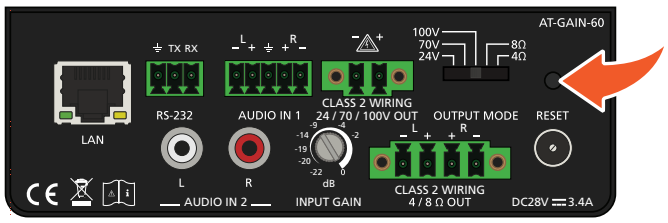
1. Login to the web GUI. Refer to Introduction to the Web GUI (page 24) for more information.
2. Click the **Control** tab, located on the side menu bar. The **Control Settings** section will be displayed.
3. Click the **ON** option, next to **Auto Power Off**, if it is not selected.
4. Enter the time interval in the **Auto Power Down Timer (min)** field. This is the amount of time which must elapse before the AT-GAIN-60 will power-down. This value can be set from 5 to 20 minutes. The default setting is 15 minutes.



Factory Reset

If necessary, the AT-GAIN-60 can be reset to factory-default settings. Note that the AT-GAIN-60 will be placed in DHCP mode, as part of the reset procedure. The AT-GAIN-60 can also be reset through the web GUI. Refer to the Control page (page 30) for more information.

1. Press and hold the **RESET** button on the back panel, using the end of a paper clip or other pointed object, for approximately 10 seconds.



2. Release the **RESET** button once a “clicking” sound is heard.
3. Factory reset is complete.

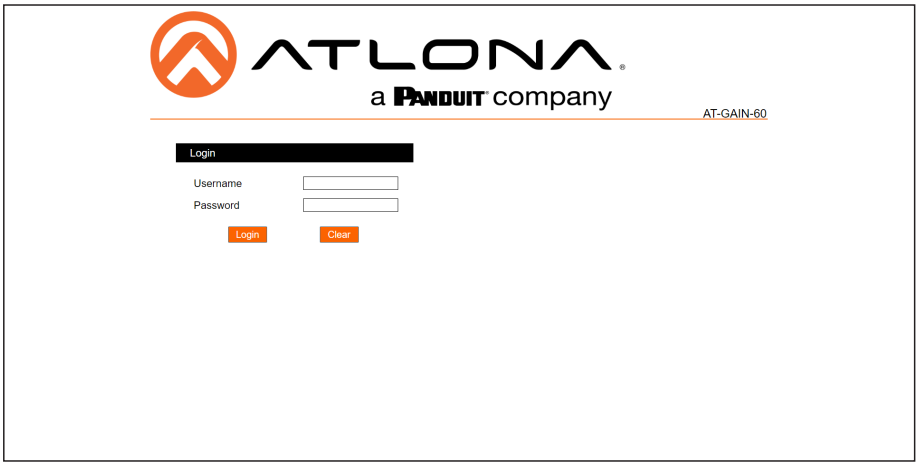
The Web GUI

Introduction to the Web GUI

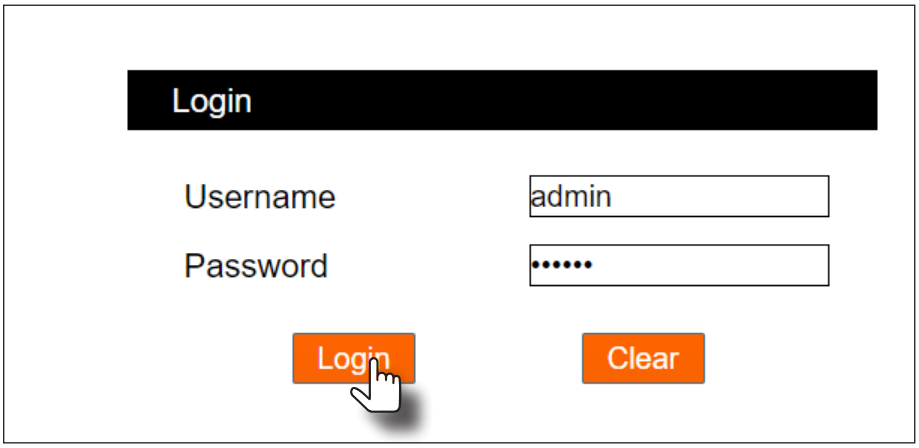
The AT-GAIN-60 includes a built-in web GUI. Atlona recommends that the web GUI be used to set up the AT-GAIN-60, as it provides intuitive management of all features.

The AT-GAIN-60 is shipped with DHCP enabled. Once connected to a network, the DHCP server will automatically assign an IP address to the unit. Use an IP scanner to determine the IP address of the AT-GAIN-60. If a static IP address is desired, refer to IP Configuration (page 15). The default static IP address of the AT-GAIN-60 is 192.168.1.254.

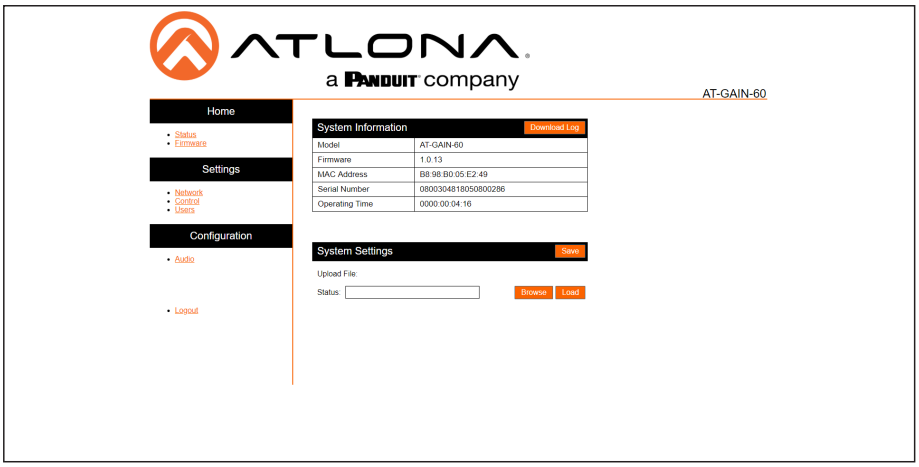
1. Launch a web browser.
2. In the address bar, type the IP address of the AT-GAIN-60.
3. The **Login** page will be displayed.



4. Type admin, using lower-case characters, in the **Username** field.
5. Type Atlona in the **Password** field. This is the default password. The password field is case-sensitive. When the password is entered, it will be masked. The password can be changed, if desired. Refer to Users page (page 32) for more information.
6. Click the **Login** button or press the ENTER key on the keyboard.



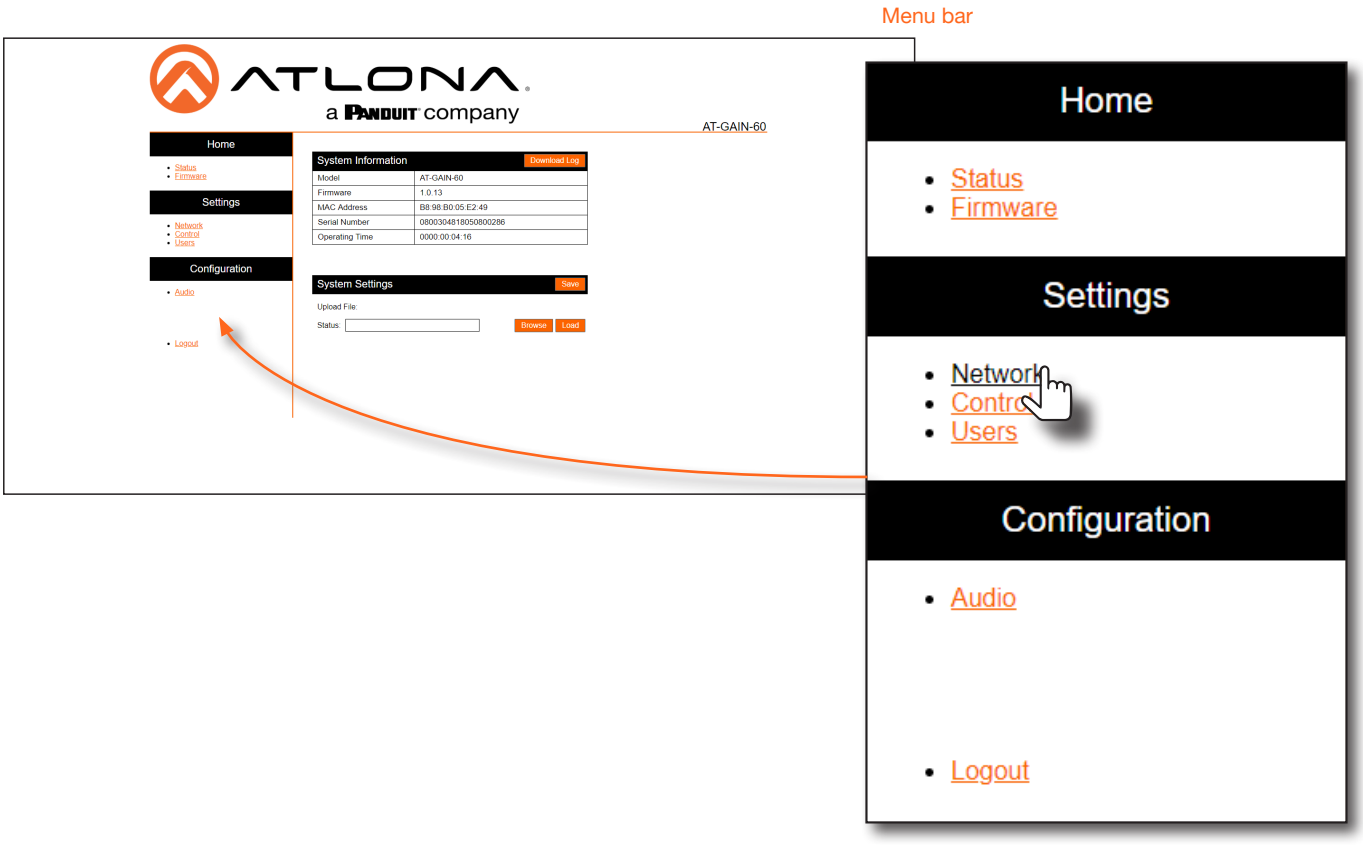
7. The **Status** page will be displayed.



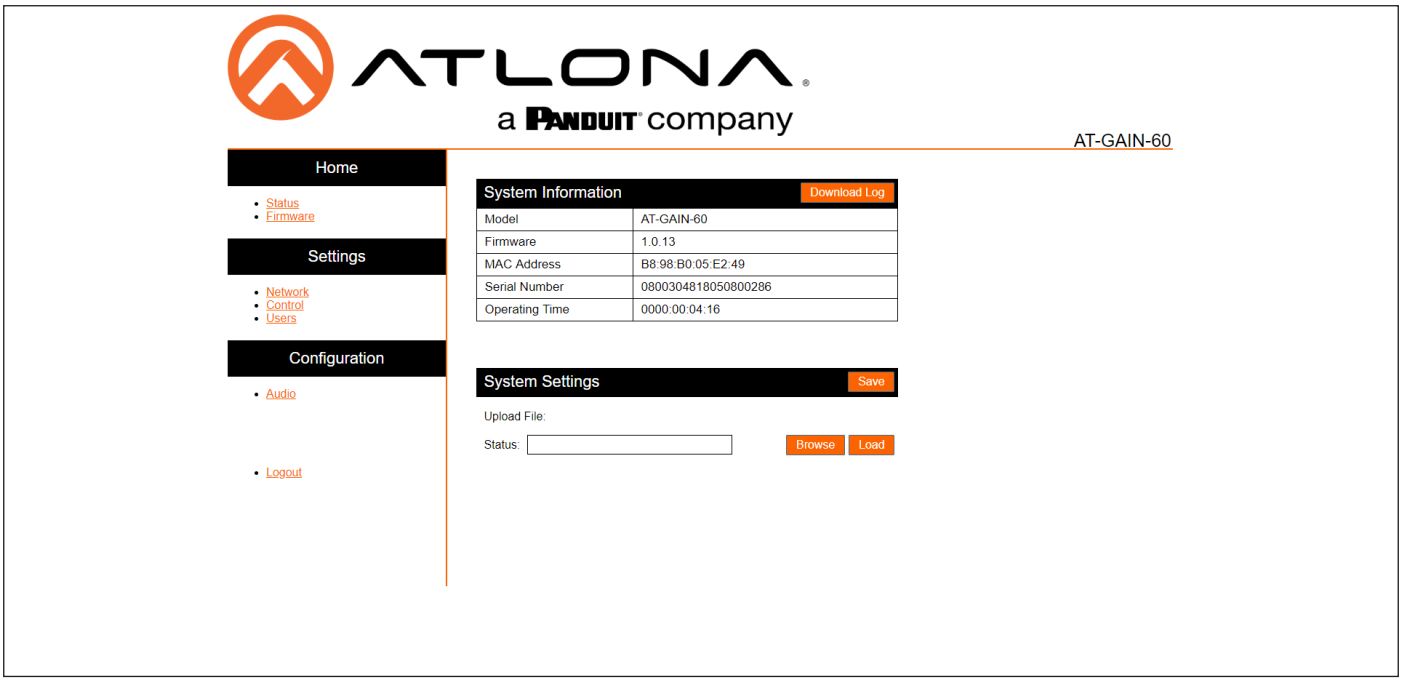
8. To logout of the web GUI at any time, click **Logout** on the side menu bar. Once logged out, the AT-GAIN-60 will display the login screen.

Menu Bar

The window on the left side of the screen is the menu bar. The menu system is divided into three sections: **Home**, **Settings**, and **Configuration**. When the mouse is moved over each menu item, it will be highlighted in black. Click the menu item to go that page.



Status page



Download Log
Click this button to download a log of command events to the computer's hard disk.

Model
The SKU of this product.

Firmware
The current firmware version installed.

MAC Address
The MAC address of the AT-GAIN-60.

Serial Number
The serial number of the AT-GAIN-60.

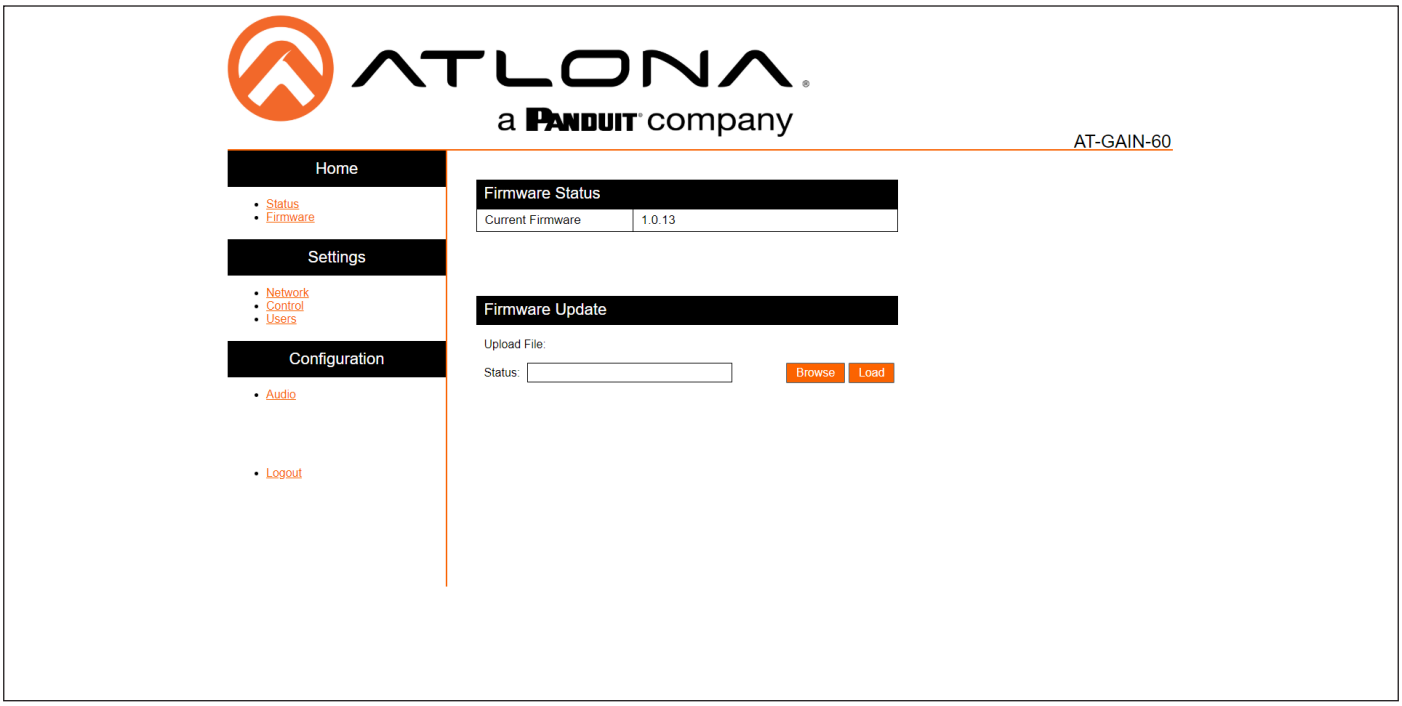
Operating Time
The time in which the unit has been in the "on" state since it was last rebooted.

Save
Click this button to save the system settings to a local file. System settings files are saved in .bin (binary) format. The default system settings filename is systemsettings.bin. It is recommended to save the system settings before performing a firmware update.

Status (progress bar)
Displays the status of saving and loading system settings files.

Browse
Click this button to select the desired system settings file. Click the **Load** button to upload the settings file to the AT-GAIN-60.

Firmware page



Current Firmware
The current firmware version installed.

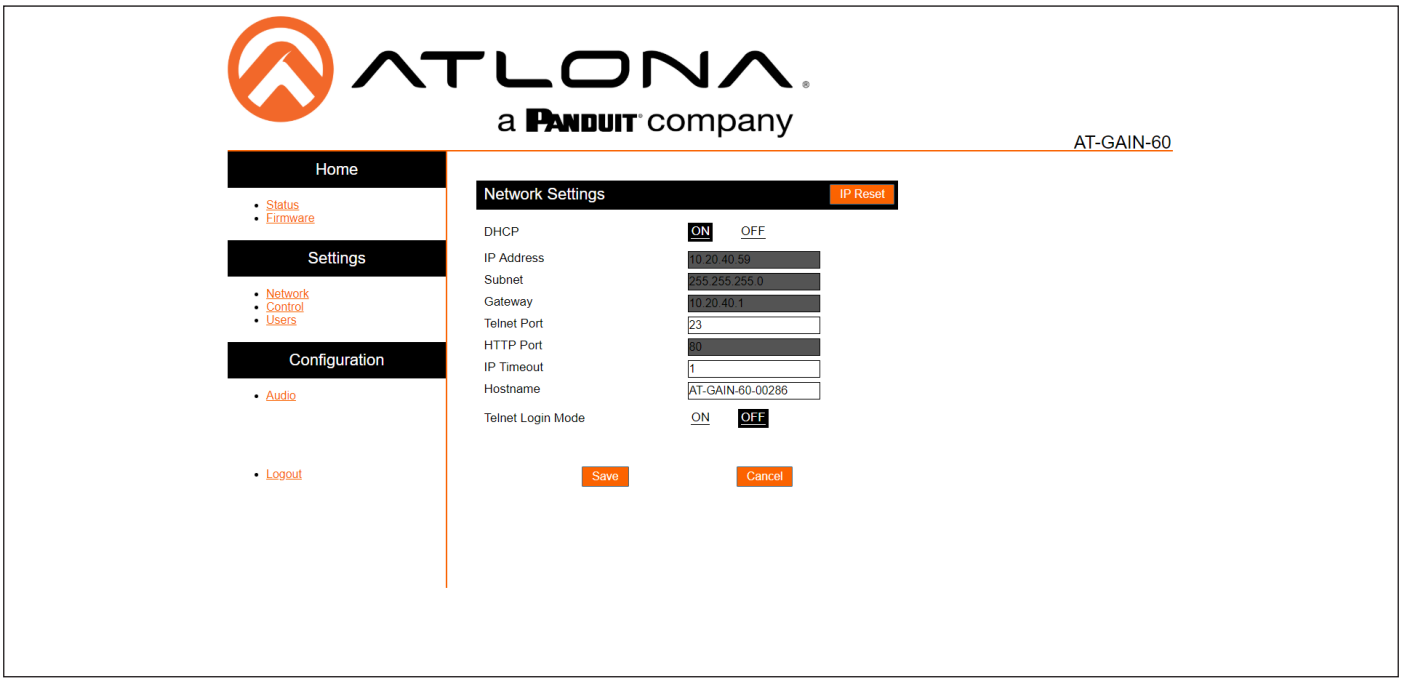
Status (progress bar)
Displays the status of loading new firmware during a firmware update procedure.

Browse
Click this button to select the firmware file. Click the **Load** button to begin the update procedure. Refer to Updating the Firmware (page 34) for more information.

Load
Click this button to upload the selected firmware file to the AT-GAIN-60. While the system settings file is being loaded, the **Status** progress bar will display the current progress.

Network page

After pressing the **Save** button, a reboot message will appear at the top of the web GUI. The AT-GAIN-60 must be rebooted when any of the network settings have changed.



DHCP
Click the **ON** button to enable DHCP. Click the **OFF** button to enable static IP mode. In static IP mode, the IP Address, Subnet, and Gateway fields can be modified.

IP Address
Enter the IP address of the AT-GAIN-60 in this field. This field can only be changed when DHCP is set to **OFF**.

Subnet
Enter the subnet mask in this field. This field can only be changed when DHCP is set to **OFF**.

Gateway
Enter the gateway (router) IP address in this field. This field can only be changed when DHCP is set to **OFF**.

Telnet Port
Enter the Telnet listening port in this field. The default port is 23.

HTTP Port
Enter the HTTP listening port in this field. The default port is 80. This field cannot be modified.

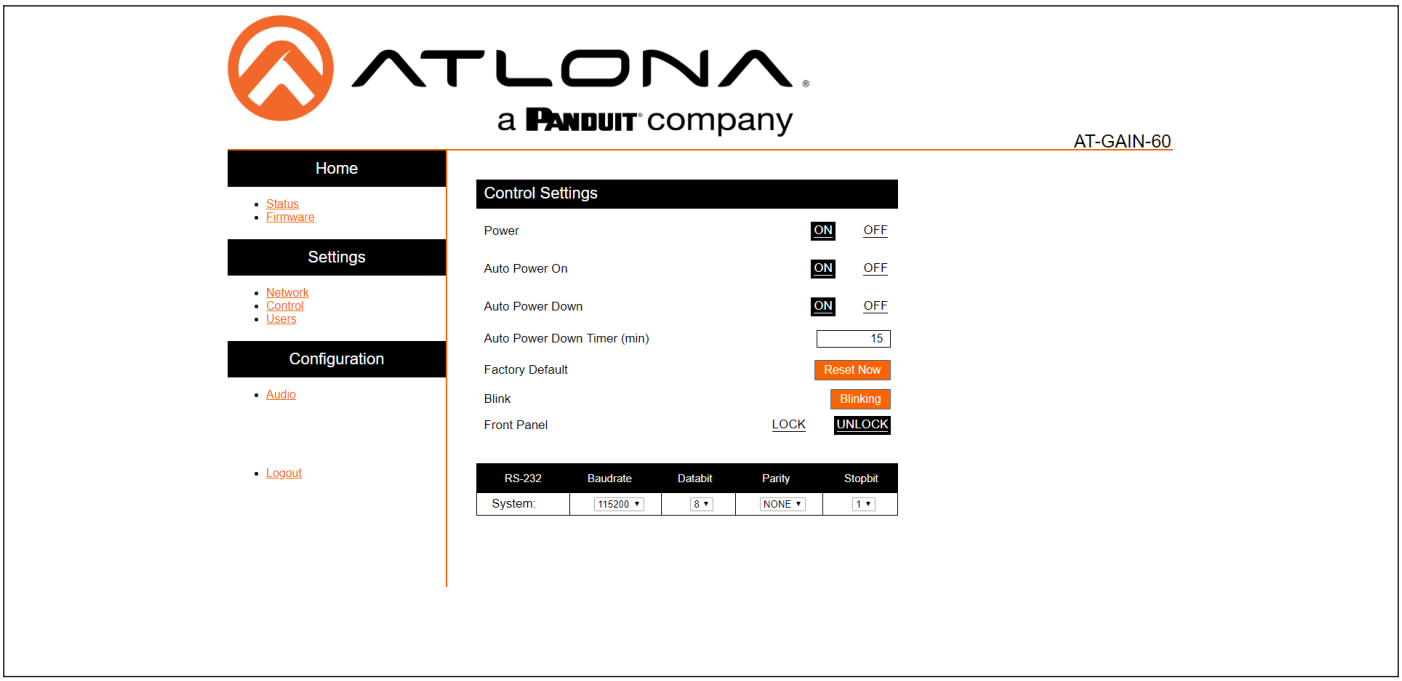
IP Timeout
Enter the time-out interval (in seconds) in this field.
This field represents the time interval before the TCP/IP connection times out.

Hostname
Enter the desired hostname in this field. By default, the hostname is the product (SKU) plus the last five digits of the unit serial number.

Telnet Login Mode
Click the **ON** button to prompt for username and password credentials. Username and password credentials are the same as the web GUI login credentials. Click the **OFF** button to create an open Telnet session that does not require login credentials. The default setting is **OFF**.

Save / Cancel
Click the **Save** button after any changes have been made. Click the **Cancel** button to abort changes.

Control page



Power
Click the **ON** button to power-on the AT-GAIN-60. Click the **OFF** button to power-off the unit.

Auto Power On
Settings this feature to ON will automatically power-on the AT-GAIN-60 when an incoming audio signal is detected. The default setting is ON. Refer to Input Signal Detection / Power On (page 22) for more information.

Auto Power Down
Enables or disables auto power down mode. Refer to Auto Power Down Mode (page 23) for more information.

Auto Power Down Time (min)
Specify the time interval before the AT-GAIN-60 goes into auto power down mode. Refer to Auto Power Down Mode (page 23) for more information. The default setting is 15 minutes.

Factory Default
Click this button to reset the AT-GAIN-60 to factory-default settings.

Blink
Click the **Blink** button to start blinking the **PWR** LED indicator. This feature is useful to identify the unit when multiple units are being used.

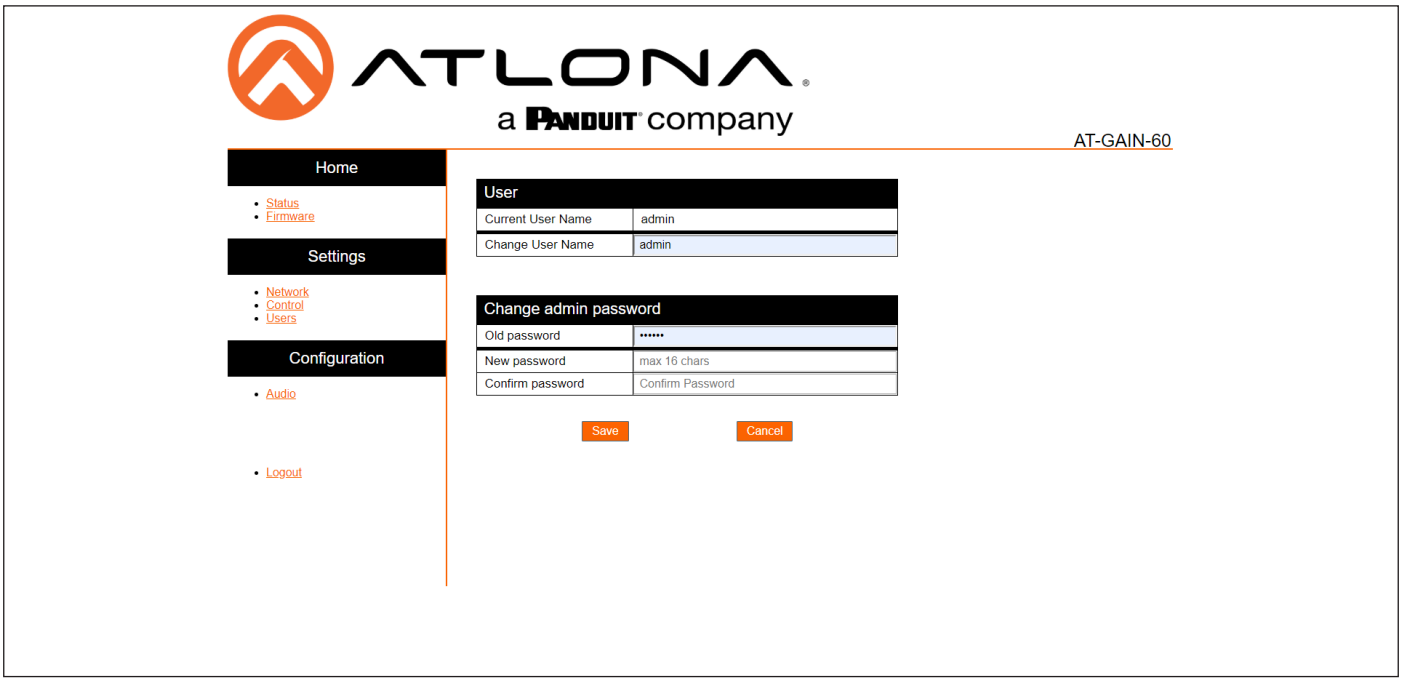
Front Panel
Click to lock or unlock the buttons on the front panel. Locking the front panel buttons is useful in preventing accidental button activation within rack environments.

RS-232

Sets the RS-232 settings used by the control device. The default settings are 115200, 8, None, 1.

Setting	Description
Baud rate	Sets the baud rate. The following options are available: 110, 300, 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200.
Data bit	Sets the number of data bits used to represent each character of data. The following options are available: 5, 6, 7, or 8.
Parity	Sets the parity bit, which can be included with each character to detect errors during the transmission of data. The following options are available: None, Odd, or Even.
Stop bit	Sets the stop bit. Stop bits are sent at the end of each character, allowing the client to detect the end of a character stream. The following options are available: 1 or 2.

Users page



Current Username
The administrator username. This field cannot be changed.

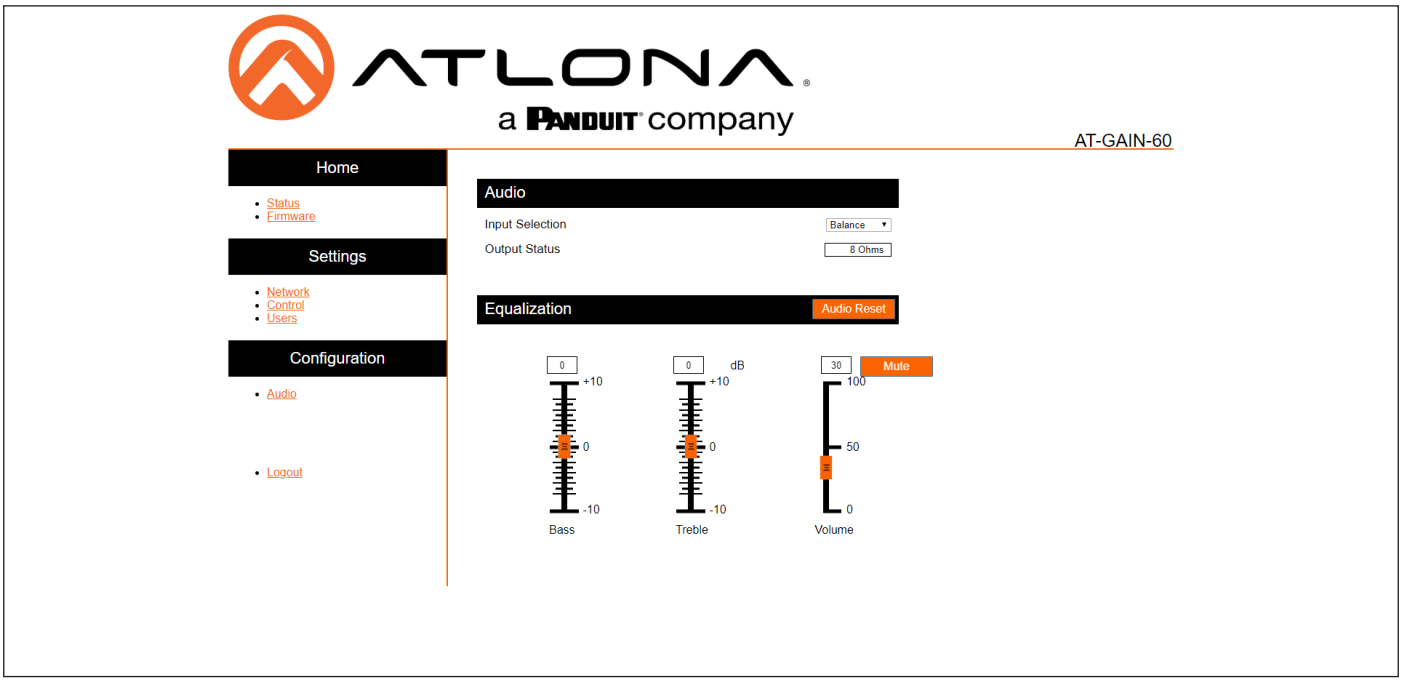
Password
Enter the password for the administrator in this field. Special characters (e.g. #, %, @, &, etc.) are not permitted.

Change Admin Password

- **Old password**
  Enter the current password in this field. The default password is Atlona.
- **New Password**
  Enter the new password in this field.
- **Confirm Password**
  Verify the new password by entering it in this field.

Save / Cancel
Click the **Save** button to apply all changes. Click the **Cancel** button to abort changes.

Audio page



Input Selection
Click this drop-down list to select the audio input: **Balance** or **Unbalance**. Select the **Balance** option to set the active audio input to the **AUDIO IN 1** port. Select the **Unbalance** option to set the **AUDIO IN 2** port the active audio input.

Equalization
Click and drag the **Bass** and **Treble** sliders to the desired settings. The **Bass** and **Treble** sliders have a range from -10 to +10. Click and drag the **Volume** slider to adjust the output volume to the desired level. Volume can be adjusted from 0 to 100. Note that the output volume is not measured in decibels. The default value is 30.

Auto Reset
Click this button to reset the Bass, Treble, and Volume to the default settings. Refer to Default Settings (page 39) for more information.

Mute
Click this button to mute the audio output.

Appendix

Updating the Firmware

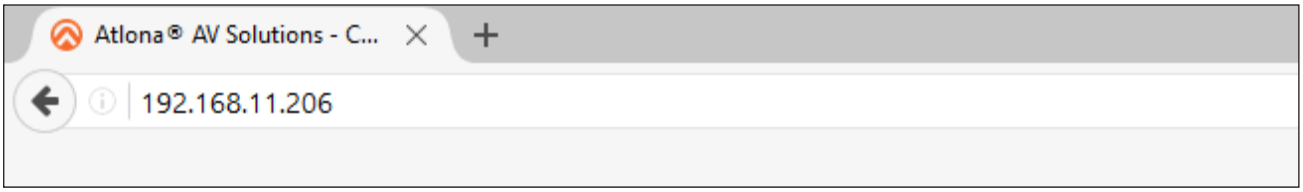
The AT-GAIN-60 can only be updated through the web GUI.

IMPORTANT: As of this writing, Google Chrome is the only browser that is supported for firmware updates. Other browsers will be supported in future versions of firmware.

Required items:

- Firmware
- IP address of the AT-GAIN-60
- Computer on the same network as the AT-GAIN-60
- Username and password to access the web GUI

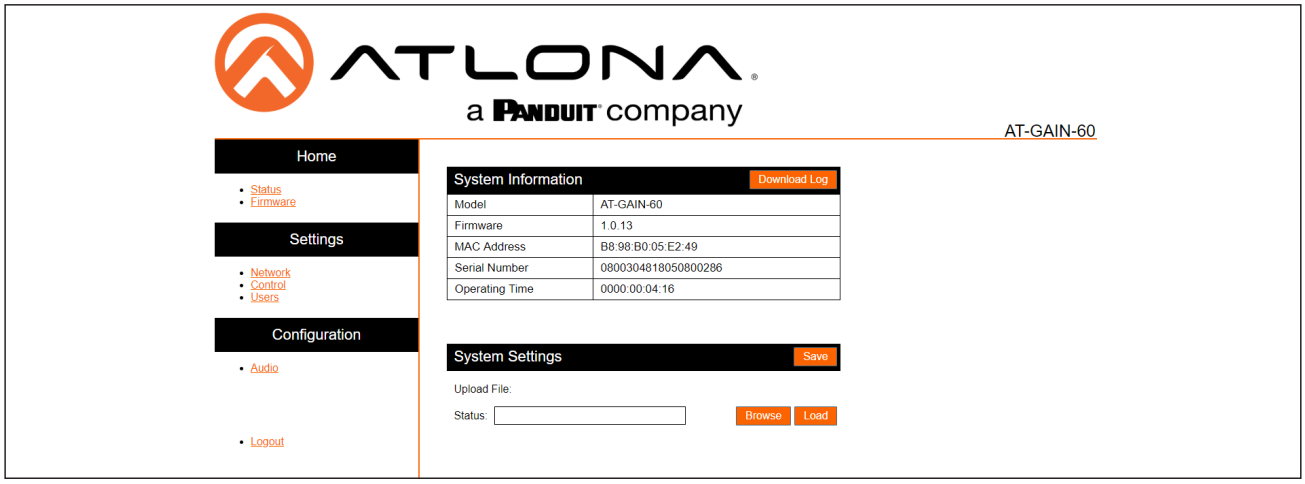
1. Verify that an Ethernet cable is connected between the AT-GAIN-60 and the network. The computer used to access the web GUI must be on the same network as the AT-GAIN-60.
2. Type the IP address of the AT-GAIN-60 into the web browser, as shown in the example below.



3. The login screen will be displayed. Login using the username and password. The default login credentials are:

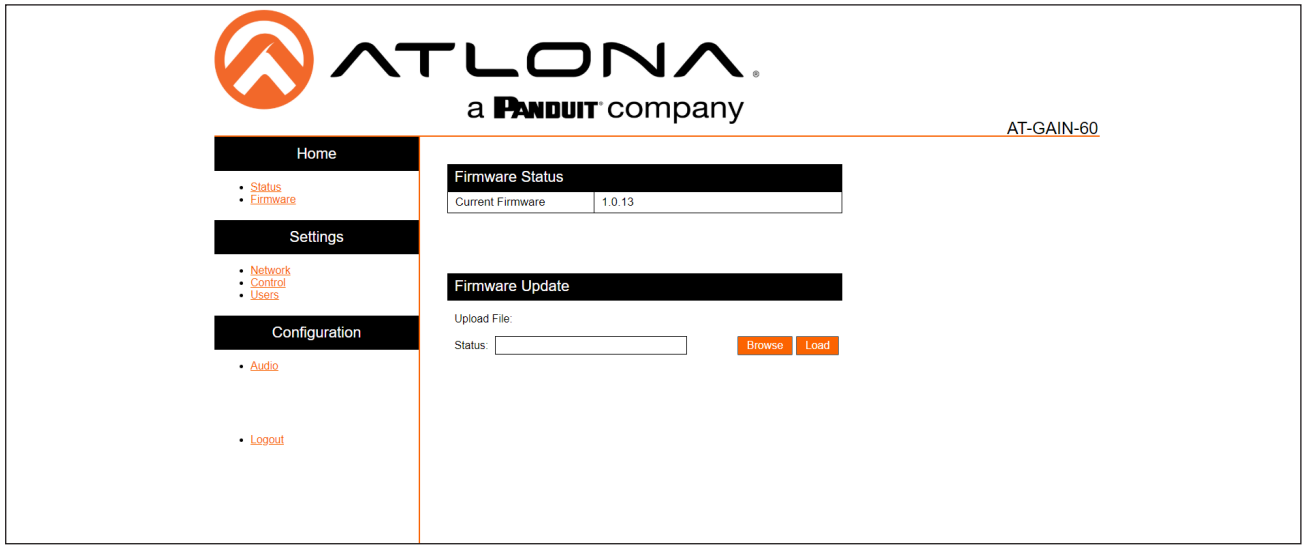
   Username: admin
   Password: Atlona

4. Click **Status** in the menu bar on left side of the screen.
5. Click the **Save** button.



6. The **Save As** dialog box will be displayed. Select the folder where the file will be saved. Click the **Save** button to save the file. The file is saved in .bin format and uses the default name of systemsettings.bin.

7. Click **Firmware** on the left side of the screen.



8. Click the **Browse** button to select the firmware file.
9. Click the **Load** button to begin the upgrade process. Once the update has been completed, the login screen will be displayed.

WARNING: Power must not be disconnected or interrupted during the firmware update process.

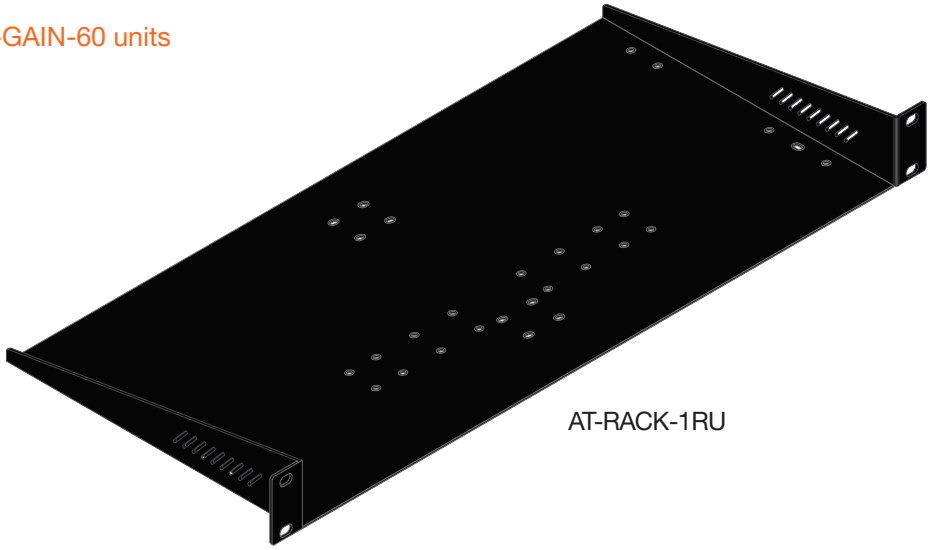
Rack Mount Installation

The AT-GAIN-60 can be mounted in different ways, based on the number of units that are being installed. In order to rack-mount the AT-GAIN-60, the AT-RACK-1RU will need to be purchased from atlona.com.

The AT-RACK-1RU can be used to either mount three AT-GAIN-60 unit at once or it can be used to mount two AT-GAIN units.

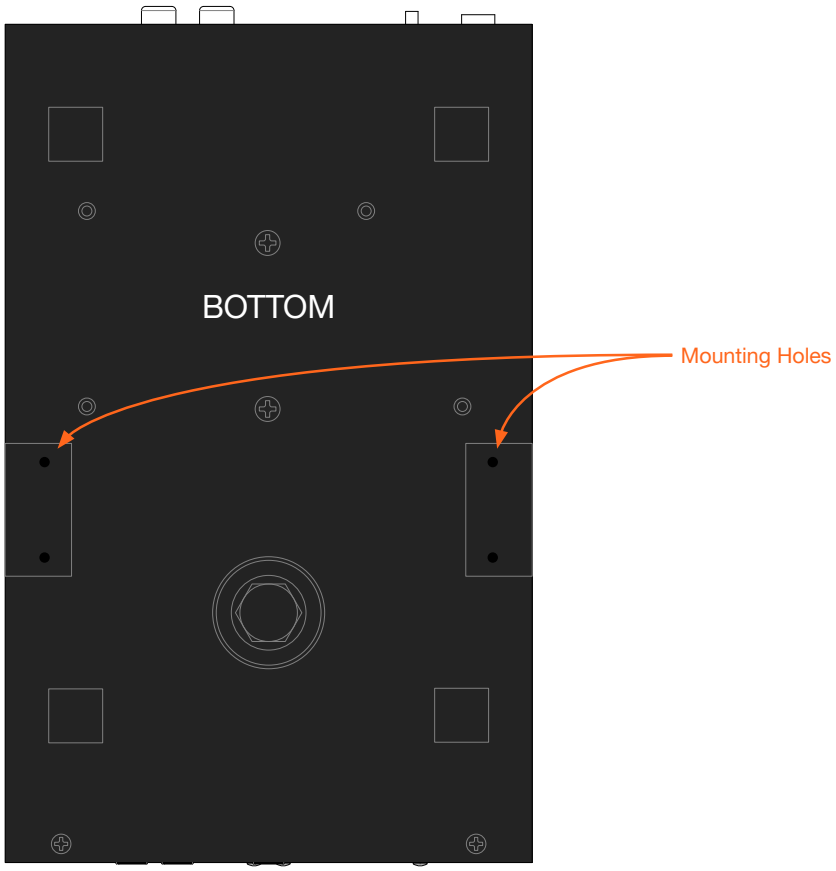
IMPORTANT: Before mounting the AT-GAIN-60 to the AT-RACK-1RU, remove the rubber feet from the bottom of the unit.

Mounting three AT-GAIN-60 units



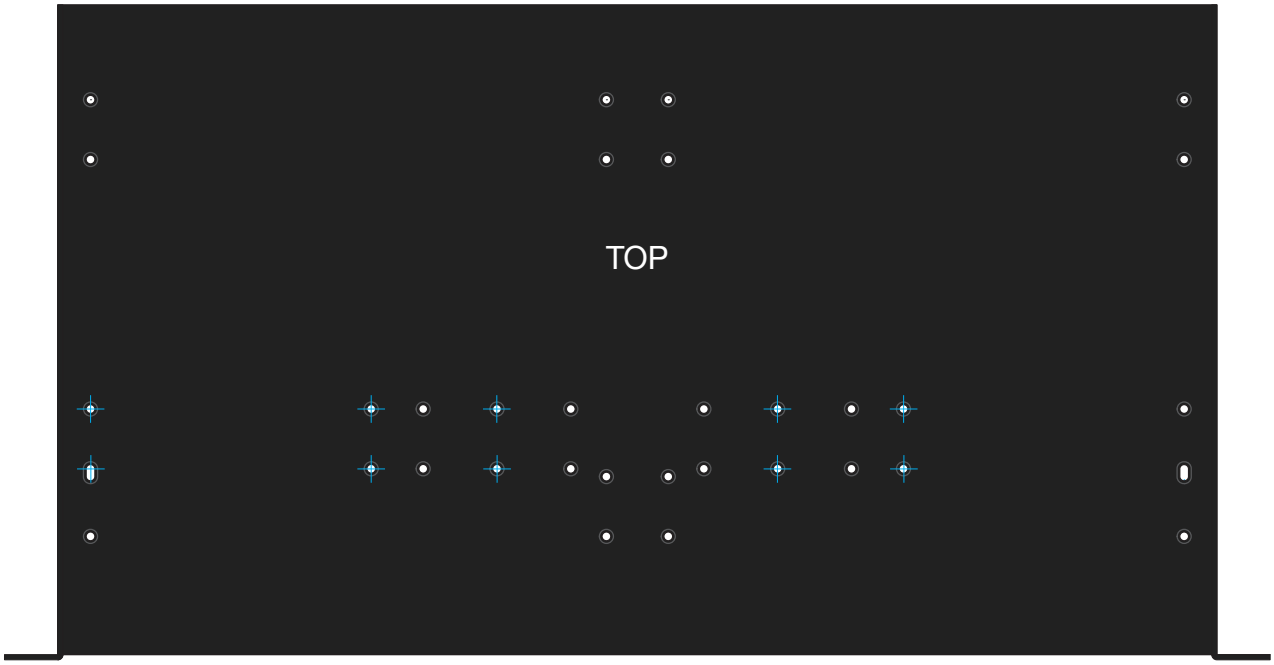
AT-RACK-1RU

1. Turn the AT-GAIN-60 so that the bottom of the unit is facing upward.
2. Locate the two sets of holes on either side of the unit, as shown.



Front of unit

3. Mount each of the AT-GAIN-60 units in the rack. Match the mounting holes on the bottom of each AT-GAIN-60 with the holes in the rack tray, marked in the illustration below.



Front of rack tray

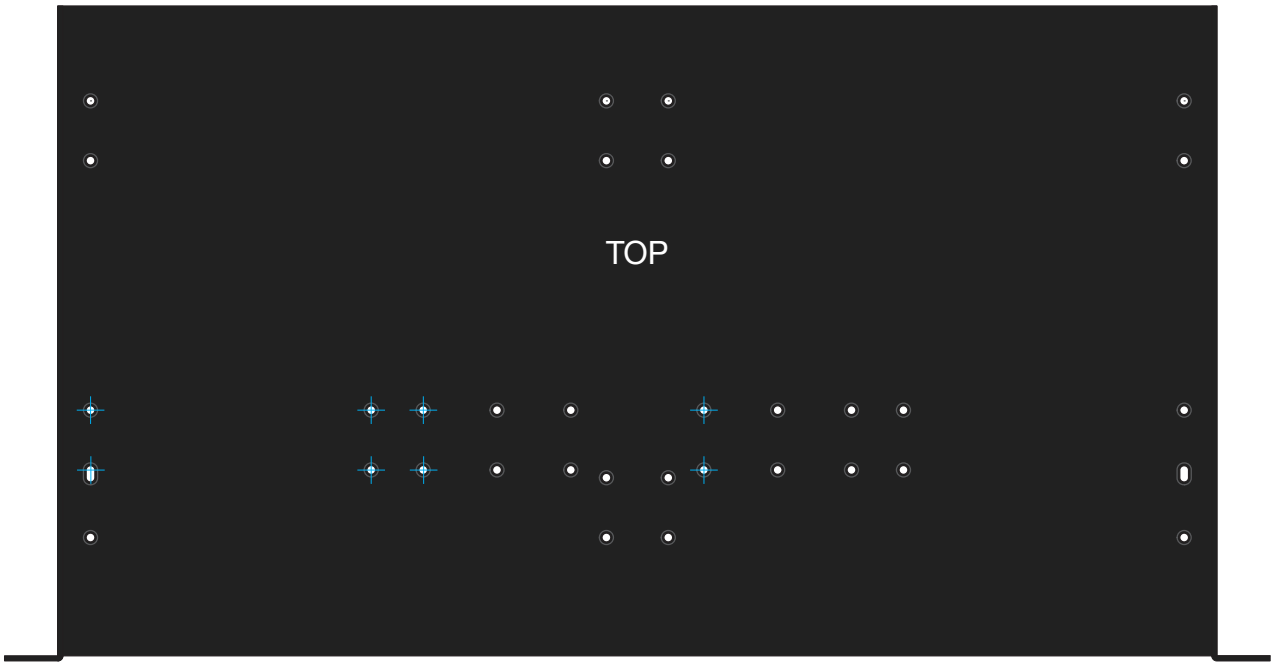
4. Install the rack tray in the rack shelf and secure the rack tray with two screws on either side.

IMPORTANT: To prevent possible damage to the device, rack, and/or screws, do not overtighten or use high-torque devices when securing the devices to the rack.

Mounting two AT-GAIN-60 units

The following provides an alternate method for mounting AT-GAIN-60 units closer together. This option provides extra space in the AT-RACK-1U for cabling, etc.

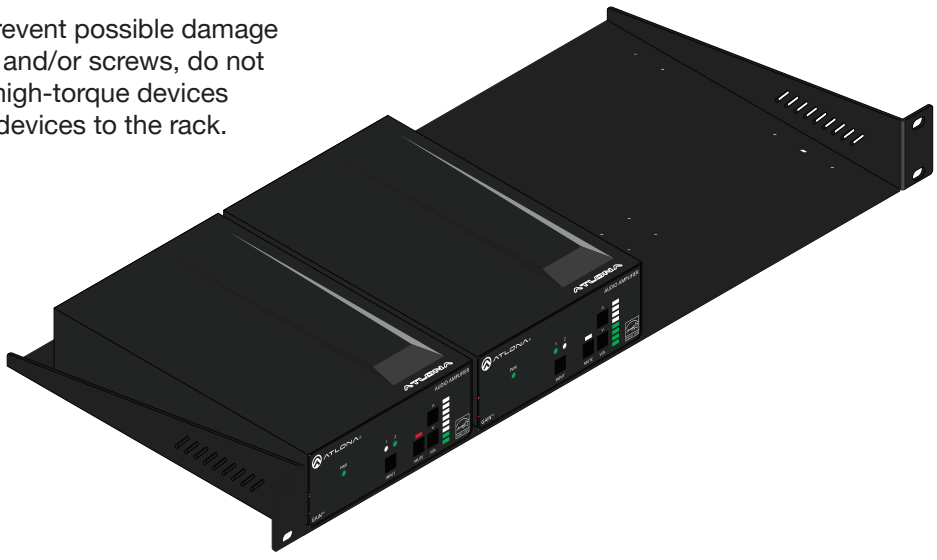
1. Turn the AT-GAIN-60 so that the bottom of the unit is facing upward.
2. Locate the two sets of holes on either side of the unit. Refer to Rack Mount Installation (page 36) for the location of the mounting holes.
3. Mount each of the AT-GAIN-60 units in the rack. Match the mounting holes on the bottom of each AT-GAIN-60 with the holes marked in the illustration below.



Front of rack tray

4. Install the rack tray in the rack shelf and secure the rack tray with two screws on either side.

IMPORTANT: To prevent possible damage to the device, rack, and/or screws, do not overtighten or use high-torque devices when securing the devices to the rack.



Default Settings

The following table lists the factory-default settings for the AT-GAIN-60.

Feature	Settings		
Network	DHCP	ON	
	Static IP address	192.168.1.254	
	Subnet	255.255.0.0	
	Gateway	192.168.1.1	
	Telnet Port	23	
	HTTP Port	80	
	IP Timeout	300	
	Hostname	AT-GAIN-60-[last five digits of serial number]	
	Telnet Login Mode	OFF	
Control	Power	OFF	
	Auto Power On	ON	
	Auto Power Down	ON	
	Auto Power Down Timer (min)	15	
	Blink	Disabled	
	Lock	UNLOCK	
	RS-232	Baud rate	115200
		Data bits	8
		Parity	None
		Stop bits	1
Users	Admin username	admin	
	Admin password	Atlona	
Audio	Input Selection	Balance	
	Equalization bands		
	Bass	0	
	Treble	0	
	Volume	30	

Specifications

Connectors, Controls, and Indicators	
LAN	1 - RJ45
AUDIO IN 1	1 - 5-pin captive screw, balanced: 10 kΩ
AUDIO IN 2	2 - RCA-type, female, unbalanced: 20 kΩ
4 / 8 Ω OUT	1 - 4-pin, 5.08 mm lock-down screw connector
24 / 70 / 100V	1 - 5-pin, 3.5mm
Power	1 - 3.5 mm barrel, locking
INPUT GAIN	1 - Rotary pot
MODE	1 - Slider switch, 5-pole, 24V / 70V / 100V / 8 Ω / 4 Ω
RESET	1 - Push button, tact-type
INPUT	1 - Push button, tact-type
MUTE	1 - Push button, tact-type
VOL	2 - Push buttons, tact-type
PWR	1 - LED indicator, green
1 / 2 Input Indicators	2 - LED indicators, green
Mute Indicator	1 - LED indicator, red
Audio Level Indicator	1 - Multi-LED

Input Signal	
Analog Input	Balanced: 20 kΩ, unblanced: 10 kΩ
Input Gain	Adjustable, -22 dB to 0 dB
CMRR	49 dB / 67 dB
Detection Threshold	0 dBV = 2.218 dBu

Output Signal	
Distributed speakers (mono)	24 V / 70 V / 100 V
Program speakers (stereo)	4 Ω / 8 Ω, line-level
Power	24 V = 60 Vrms (high-Z) 70 V = 60 Vrms (high-Z) 100 V = 60 Vrms (high-Z) 4 / 8 Ω = 30 W per channel

Audio Processing	
Audio Formats	24-bit uncompressed, selectable at 44.1, 48, 88.2, and 96 kHz sampling rate
Signal Processing	Volume, Auto on/off signal sensing, 80 Hz HPF
2-band EQ	Bass / Treble, adjustable: -10 to +10 dB

Appendix

Audio Performance	
Frequency Response	20 Hz - 20 kHz, ±0.2 / - 2 dB @ 4 Ω load
THD + N	< 0.1% @ 1 kHz, 3 db below clipping
SNR	> 95 dBA WTD
Damping Factor	< 48 @ 8 Ω
Amplifier Type	Class D

Temperature	Fahrenheit	Celsius
Operating	32 °F to 122 °F	0 °C to 50 °C
Storage	-40 °F to 158 °F	-40 °C to 70 °C
Humidity (RH)	90% RH, non-condensing	

Power	
Standby Mode	Powers down after 5 - 25 minutes (adjustable) of no signal; complies with ENERGY STAR power consumption limits of < 0.5 W in standby mode
Consumption	60 W (max.)
Standby Consumption	< 1.2 W
Supply	100 - 240 V AC, 50/60 Hz, 60 W

Dimensions	Inches	Millimeters
H x W x D	1.69 x 5.00 x 7.95	43 x 127 x 202

Weight	Pounds	Kilograms
Device	3.15	1.43

Certification	
Device	CE, RoHS, WEEE, FCC, ENERGY STAR®

Index