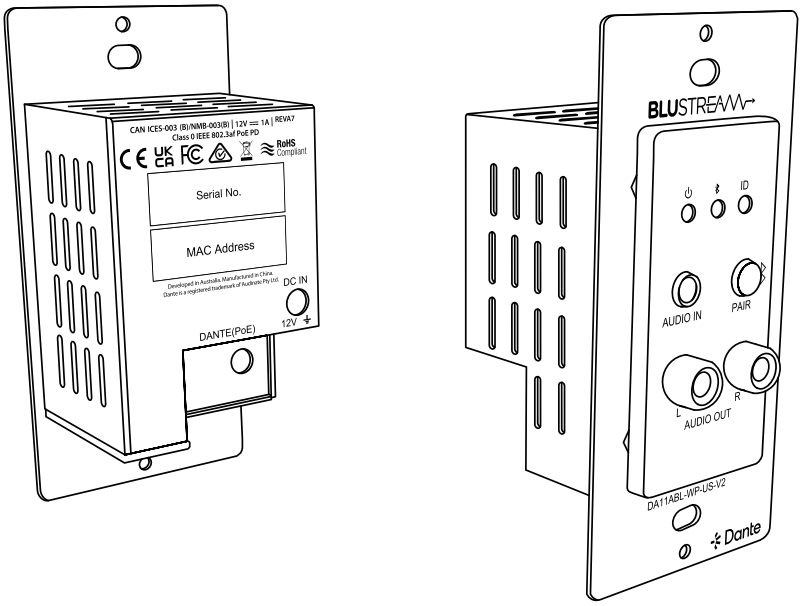


DA11ABL-WP-US-V2

User Manual

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge Protection Device Recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Contents

Introduction

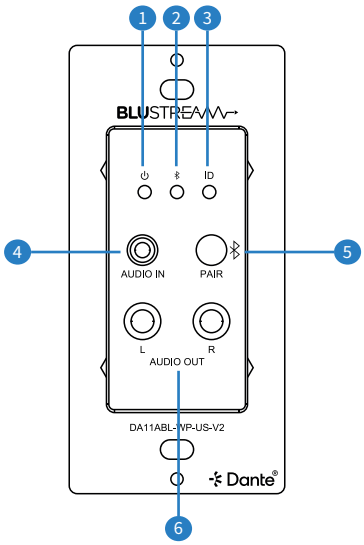
The DA11ABL-WP-US-V2 is a multi-input / output wall plate to convert Bluetooth and analog audio within a digital Dante® networked audio system. The DA11ABL-WP-US-V2 converts 2 input channels of Bluetooth or unbalanced audio to Dante® digital audio, and 2 channels of Dante® audio to 2 x output channels of unbalanced audio.

The DA11ABL-WP-US-V2 is a plug & play device that is powered using PoE (Power over Ethernet), or via 12V power supply, offers support for AES67 RTP audio transport and magnetic faceplate design allows installation into most single-gang US junction boxes. The DA11ABL-WP-US-V2 is the ideal BYOD interface to allow any Bluetooth device to stream audio wirelessly to a Dante® audio system.

FEATURES:

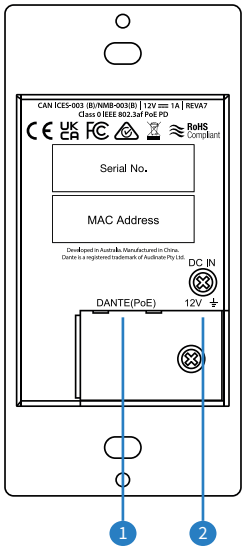
- Dante® network wall plate interface for Bluetooth and analog L/R audio inputs, and L/R audio outputs
- Converts 2ch Bluetooth, or un-balanced audio sources to Dante® audio
- Converts 2x Dante® audio channels to un-balanced audio outputs
- Adjustable input sensitivity from +24dBu to -28dBV (analog input only), and output gain from +20dBu to -28 dBV via web GUI or API
- Dante® Audio Supports 44.1, 48, 88.2 & 96KHz sample rates @ 16, 24 & 32-bit
- Configurable Dante® device latency (supports 2, 3, 4, 5 or 10ms configurable using Dante® Controller)
- Supports AES67 RTP audio transport
- Features Class 0 IEEE 802.3af PoE for powering of product from any PoE switch
- Supports power via 12V DC adapter (not included) for when network switch does not support PoE
- White magnetic faceplate surround and US Decora style backbox compatibility
- In-built web-GUI for configuration and control

Front Panel



1. Power Status Indicator — Illuminates when the devices is powered on power input
2. Bluetooth Status Indicator — Illuminates when a Bluetooth device is connected
3. ID LED Indicator — Flashes when this device is identified through Dante® Controller
4. Analogue Audio Input — 3.5mm stereo jack for unbalanced analogue audio input
5. Bluetooth Pair Button — Press to make device discoverable for Bluetooth pairing, additional functionality can be set through the web-GUI or API
6. Analogue Audio Output — RCA L/R connector unbalanced analogue audio output

Rear Panel



1. Dante® Network Connection (PoE) — RJ45 connection to connect to network switch
2. Power Port — Use 12V/1A DC adaptor (not included) when PoE is not available to power device

Operation and Connections

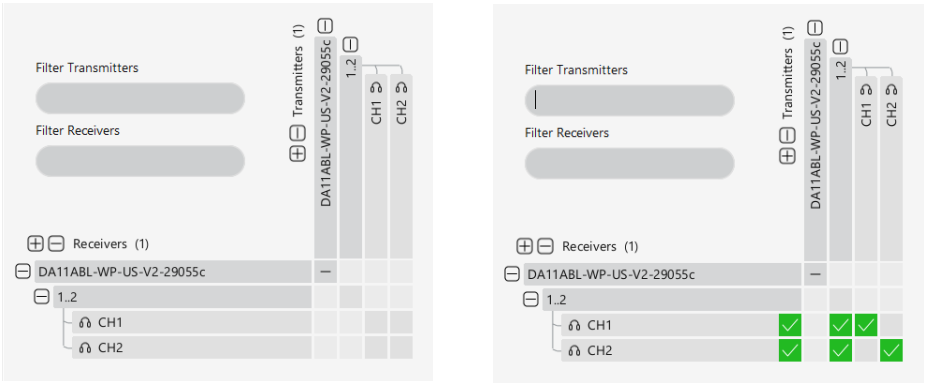
The DA11ABL-WP-US-V2 is initially configured with the Dante® Controller app. Connect the Dante® port to a PoE powered Dante® network. If PoE is not available, the unit can be powered via the Phoenix power port.

Dante® Controller

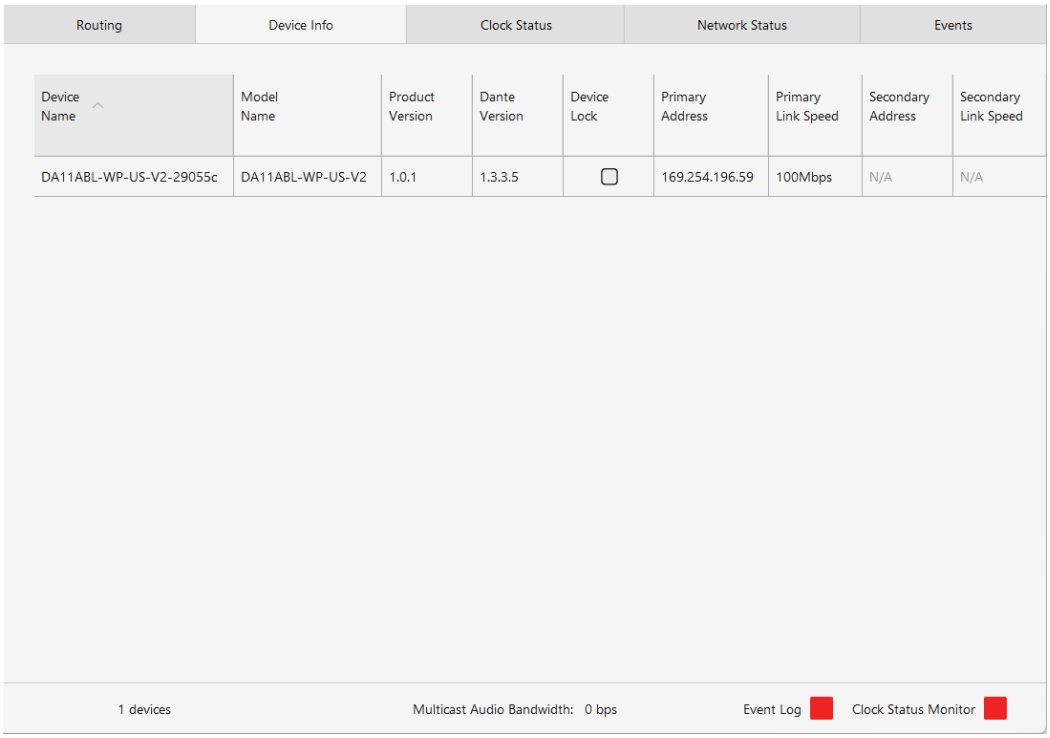
The Dante® Controller software is required in order to setup and configure the DA11ABL-WP-US-V2 as well as control a Dante® network. Audinate provide extensive training videos and documentation on their website, which can be found here:

http://www.audinate.com/products/software/dante-controller

Upon connecting the DA11ABL-WP-V2 to a compatible network, the Dante® Controller software should automatically discover the device. The DA11ABL-WP-V2 will appear in the Dante® Controller as 'DA11ABL-WP-US-V2-xxxxxx'. On the Routing tab, audio can be routed as a matrix between Dante® transmitters and receivers in your system.

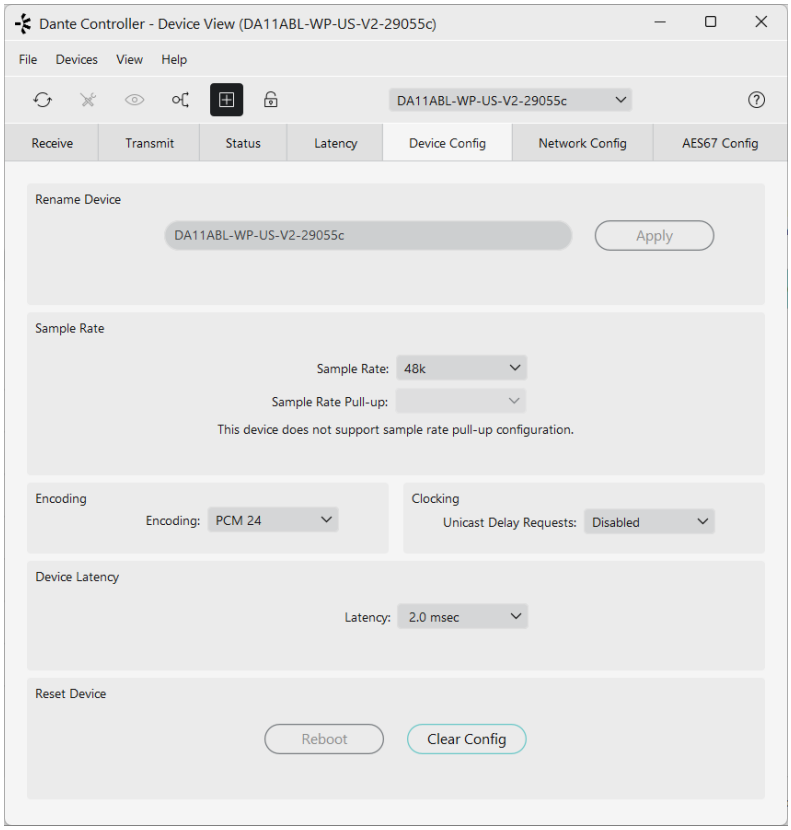


By default, the DA11ABL-WP-US-V2 is shipped with the network settings set to obtain an IP Address automatically on the Dante® port. This means that if a DHCP server is present on the network, the DA11ABL-WP-US-V2 will be provided with an IP Address. If no DHCP server is present, then the DA11ABL-WP-US-V2 will receive a default IP Address in the 169.254.xxx.xxx range.



Advanced Dante® Settings

Further settings of the DA11ABL-WP-US-V2 can be configured in the Dante® Controller software. Under the Device Info tab, select the DA11ABL-WP-US-V2 to open the Device View window.



The sample rate and latency can be adjusted under the Device Config tab, while network settings and the IP address can be set under the Network Config tab.

Please note: That Dante® products can only transmit or receive audio from other Dante® products that are set up with the same sample rate. A mismatch in sample rate may stop audio from transmitting.

Bluetooth

Bluetooth 5.0 technology allows for up to 2 x simultaneous connections from source audio devices, where the selected devices audio is received and sent into the Dante® network.

To connect a Bluetooth enabled device to the DA11ABL-WP-US-V2, press the Pair button on the unit, go to the Bluetooth settings of the source audio device, and enable Bluetooth connectivity. The DA11ABL-WP-US-V2 will appear in the list of available devices.

Web-GUI - Log In and Initialisation

The following pages will take you through the operation of the unit's web-GUI. You must connect a TCP/IP RJ45 socket to your local network, or directly from your computer to the DA11ABL-WP-US-V2, in order to access the product's web-GUI.

By default, the unit is set to DHCP; however, if a DHCP server (eg: network router) is not installed, the unit will receive an IP address in the 169.254.xxx.xxx range.

If the IP address of the DA11ABL-WP-US-V2 is not known, it can be found by:

- Dante® Controller
- Using a 3rd party IP scanning tool
- Using the default hostname address: da11abl-wp-us-v2.local

Due to updated password regulations, the login details for the web-GUI will differ based on the firmware version:

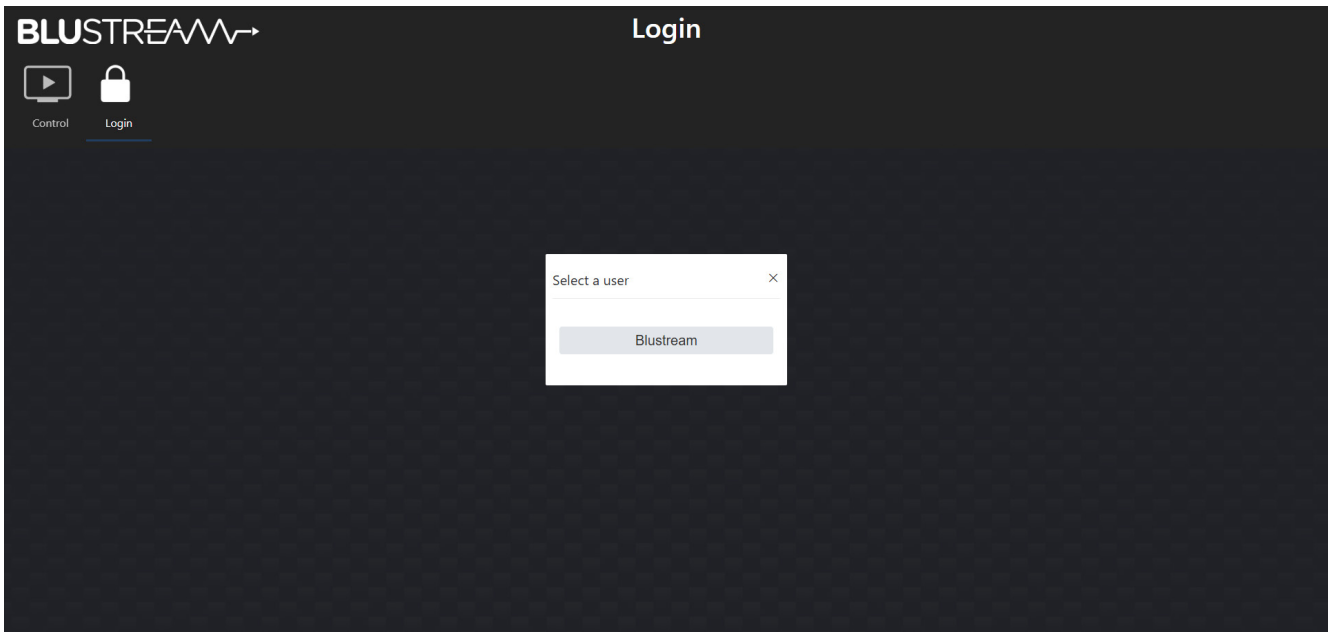
If the DEP firmware version is equal to or below V1.3.1.1, the following credentials will be utilised:

Default **Username:** blustream Default **Password:** 1234

If the DEP firmware version is equal to or above V1.3.3.5, the following credentials will be utilised:

Default **Username:** blustream Default **Password:** @Bls1234

When initially accessing the web-GUI of the DA11ABL-WP-US-V2, the Login page is shown as below.

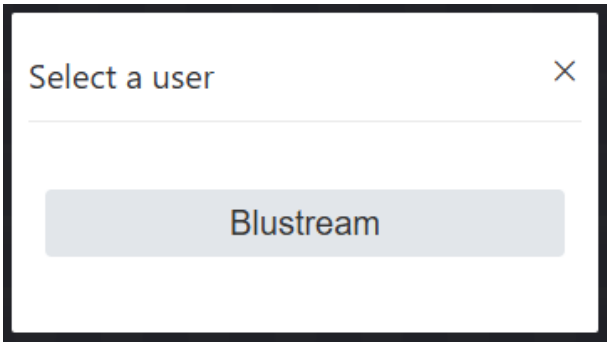


Login Page:

The web-GUI supports multiple users along with multiple user permissions as follows:

- Admin (Blustream) — The Admin account allows full access to all functions and configuration of the unit.
- User Accounts — User accounts can be utilised, each with individual login details and can be assigned permissions to specific inputs and functions.
- Guest — The Guest user can access the control page without logging in.

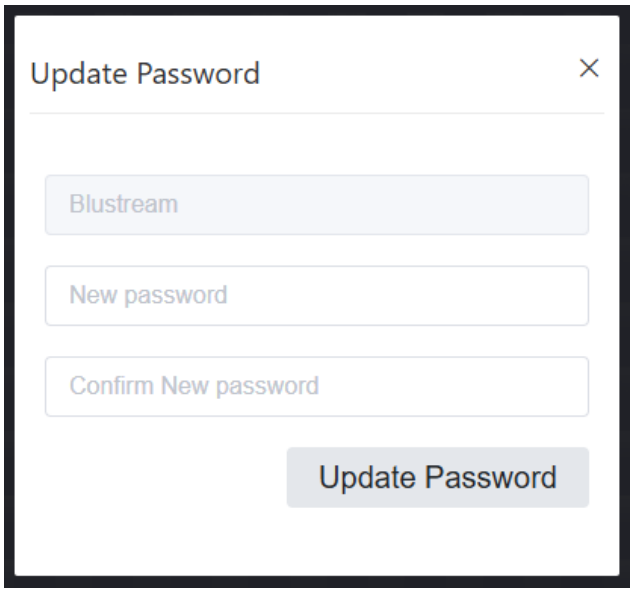
Please note: The guest user should have permissions set to prevent unwanted access, as they do not require credentials for control of the unit.



Please note: the first time the Administrator logs into the web-GUI of the DA11ABL-WP-US-V2, the default password must be changed to a unique password. Please retain this password for future use. Forgetting the password will mean having to factory reset the unit, losing all prior network and configuration settings.

New password regulations requires passwords being set for products to be a minimum of 8 characters and contain a minimum of: 1 x uppercase letter, 1 x lowercase latter, 1 x symbol and 1 x number.

Passwords can be changed as required within the web-GUI of the unit once logged in.

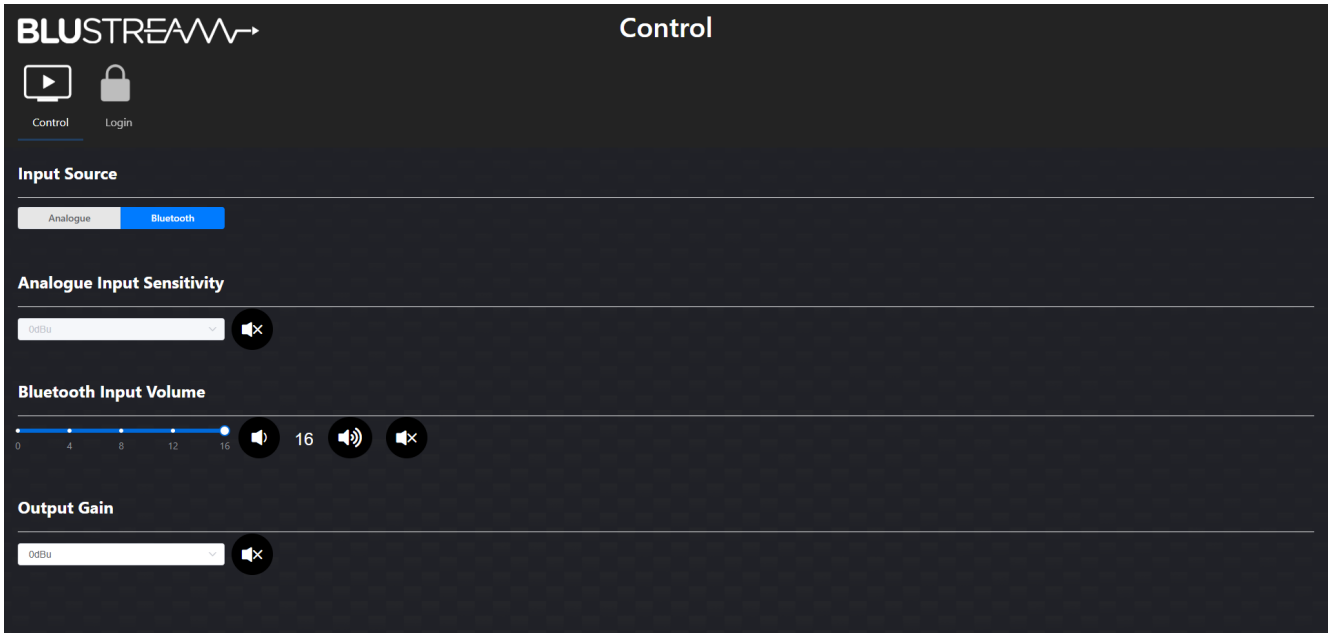


Guest Control Page:

When the Guest user is enabled, the control page is able to be accessed from the web-GUI without logging in. Depending on the permissions set, control for the Input Source, Analogue Input Sensitivity, Bluetooth Input Volume and Output Gain can be accessed from here.

Permissions can be set or revoked from the Users page when logged in, depending on the requirements of the installation.

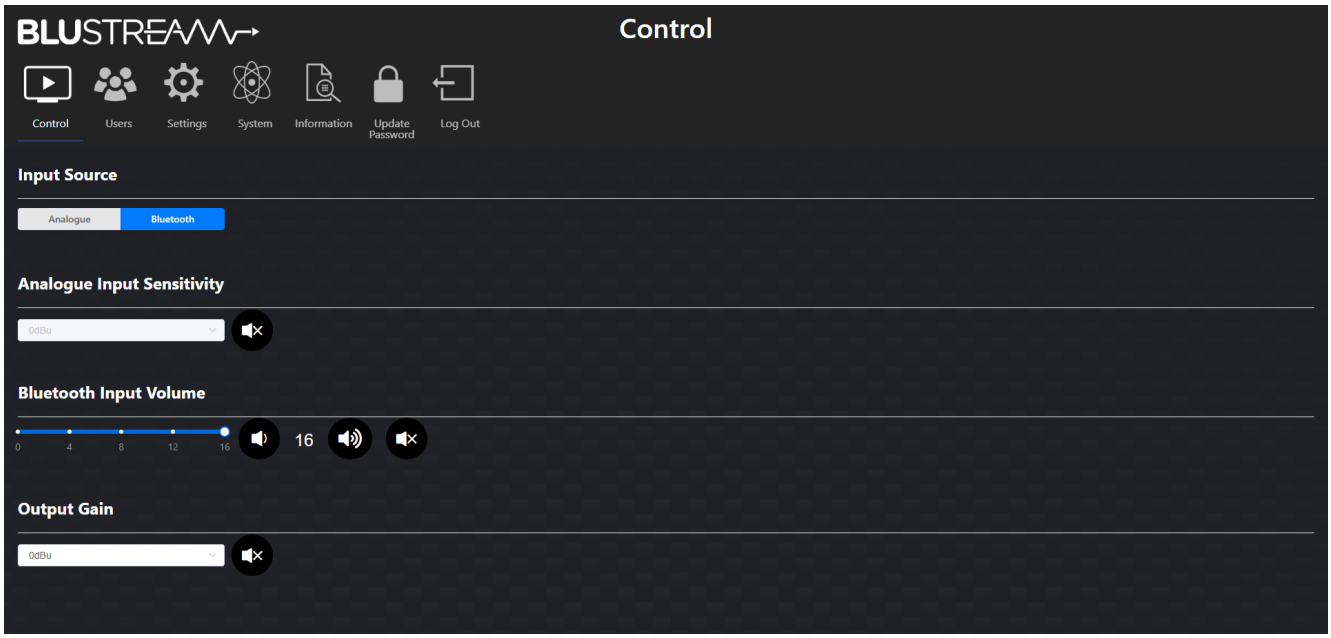
It is recommended to set permissions for the Guest user to avoid unwanted access and/or changes to the DA11ABL-WP-US-V2.



Web-GUI - Control

Once logged in as the Administrator, additional web-GUI pages become available from within the GUI: these can be navigated to by pressing the corresponding icon.

The Control page allows for source selection and the volume levels of the Line & Dante® outputs to be set or muted.



Input Source:

The input source can be selected from the analogue or Bluetooth inputs by pressing the corresponding button.

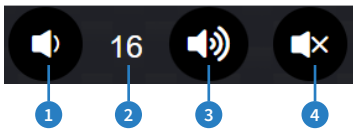
Analogue Input Sensitivity:

The sensitivity of the analogue input can be set between +24dBu and 0dBu, or between 0dbV and -28dbV. The input can be muted by pressing the mute button.

Please note: dBV and dBu are both voltage measurement units that use a logarithmic decibel scale but differ in their reference voltages.

Bluetooth Input Volume:

The Bluetooth input volume can be adjusted by using the corresponding slider. Fine-tuning of the volume can be achieved by using the decrement button 1 or the increment button 3, or by manually inputting the value 2. The output can be muted by pressing the mute button 4.



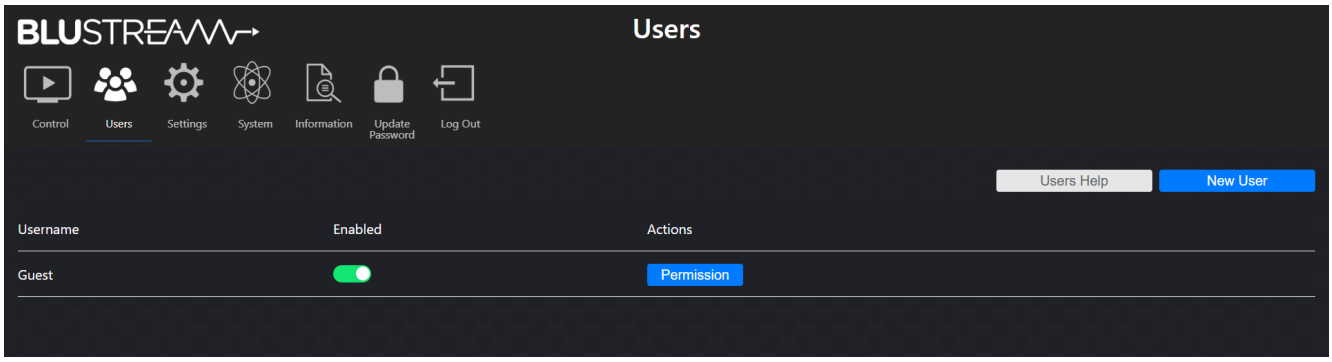
Output Gain:

The gain of the output can be set between +24dBu and 0dBu, or between 0dbV and -28dbV. The output can be muted by pressing the mute button.

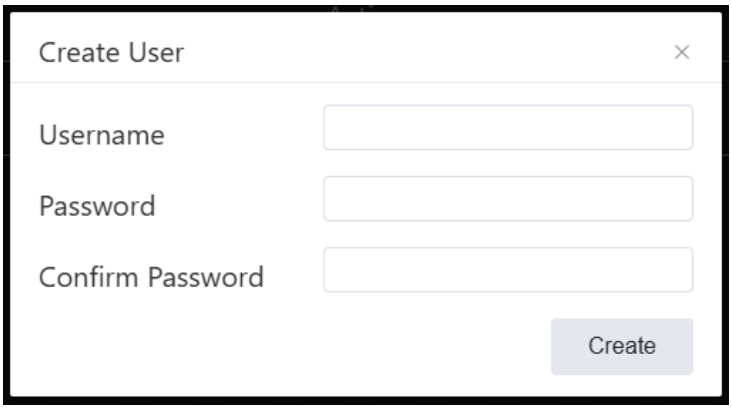
Please note: dBV and dBu are both voltage measurement units that use a logarithmic decibel scale but differ in their reference voltages.

Web-GUI - Users

The Users page allows for configuration of the Guest and User privileges. The DA11ABL-WP-US-V2 can be setup with different users, each with their own control privileges. This will enable the Administrator to manage the accessibility of features for each individual.

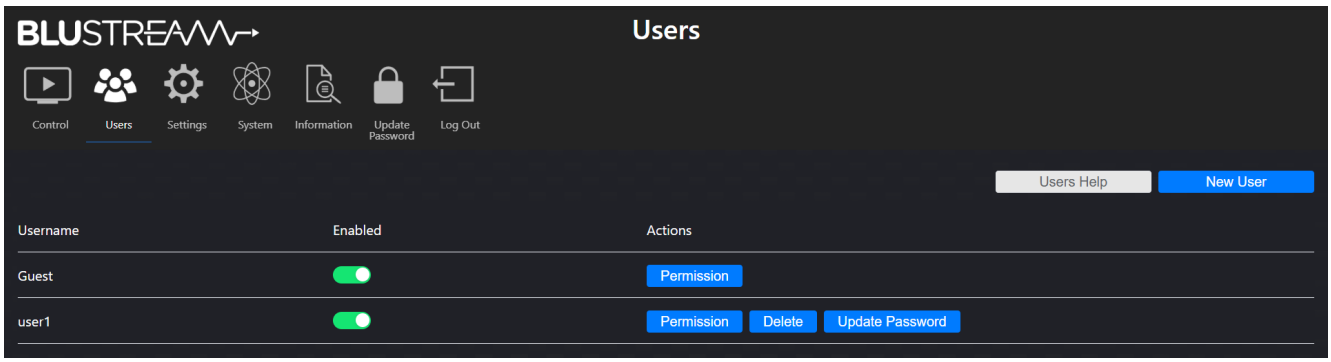


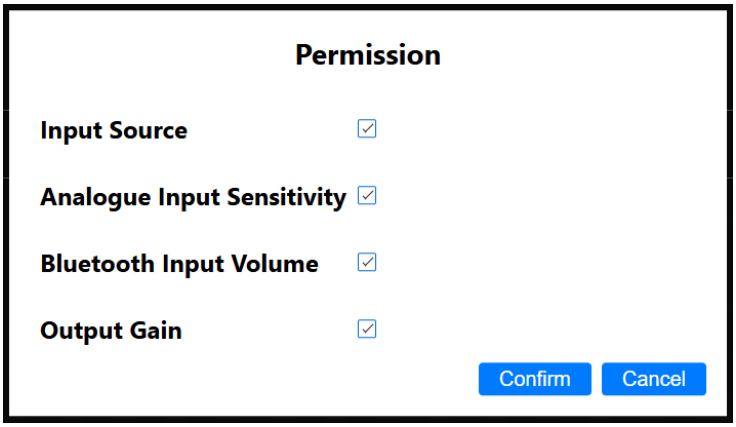
To create a new user, press the *New User* button to open a sub menu:



Enter a unique username and password, and click the Create button at the bottom of the sub menu to finalise the new user creation.

The new user will appear in the user list. The privileges for that user can then be updated as needed by pressing the *Permission* button. The user may be deleted by pressing the *Delete* button.



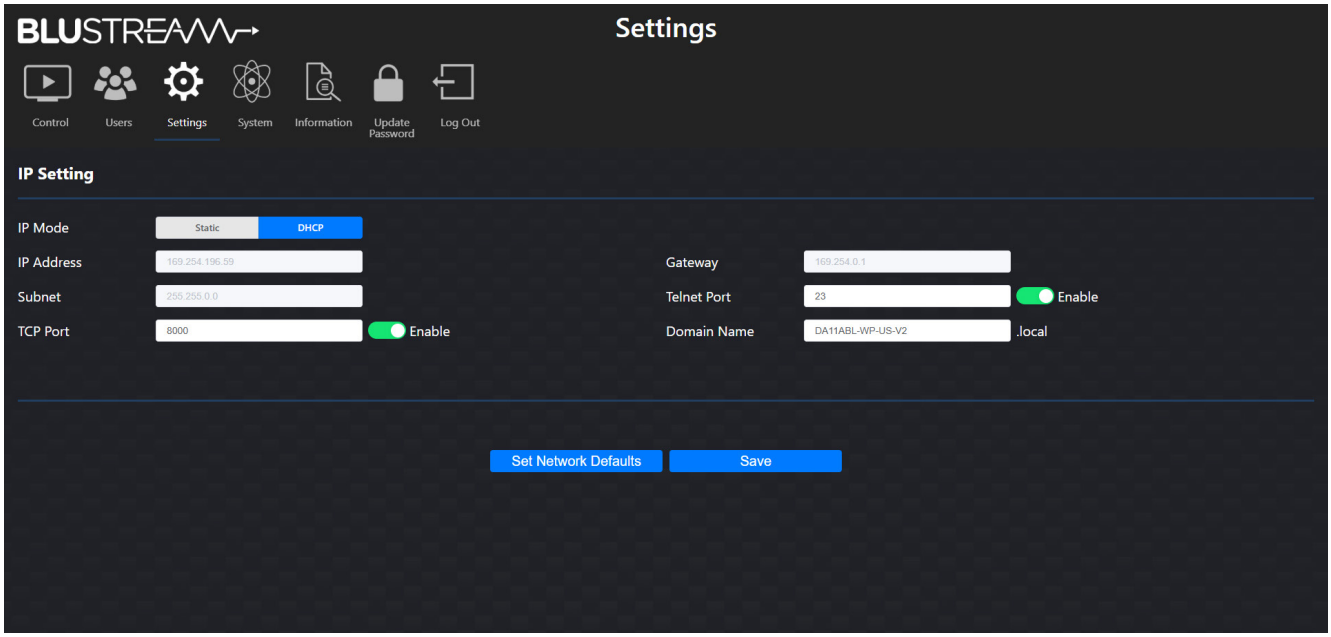


Web-GUI - Settings

Network settings for the DA11ABL-WP-US-V2 can be configured from this page, such as: IP settings, Telnet and mDNS.

The default network settings can be restored by pressing the Set Network Defaults button.

To save the current network configuration, press the Save button.



IP Settings:

- IP Mode
  - Static / DHCP
- IP Address
  - Disabled when in DHCP mode
- IP Subnet
  - Disabled when in DHCP mode
- TCP Port
  - Enable / Disable (default: 8000)
- Gateway
  - Disabled when in DHCP mode
- Telnet Port
  - Enable / Disable (default: 23)
- Domain name (mDNS)
  - mDNS is a protocol used in network environments to resolve hostnames to IP addresses within local networks without the need for a dedicated DNS server. The DA11ABL-WP-US-V2 is able to be accessed via the hostname if the IP address is not known. By default this is set to da11abl-wp-us-v2.local

To restore network default settings, press the Set Network Defaults button.

Press the Save button to apply any changes made

Web-GUI - System

The System page allows for configuration of the DA11ABL-WP-US-V2, enabling and disabling features, as well as firmware upgrading and factory resetting.

Input Settings:

First Priority

- Sets which input will take priority when both Analogue and Bluetooth inputs are sensed

Auto Switch

- Set how many seconds of silence (no audio sensed) from the first priority input that must elapse before automatically switching to the second priority input. When set to Off, this feature is disabled

Manual Switch

- Sets how many times the Pair button must be pressed for the input to be manually switched. When set to Off, this feature is disabled

Factory Reset

- When enabled, the Pair button can be pressed 5 times in quick succession to factory reset the unit. When set to Off, this feature is disabled

Bluetooth Settings:

Bluetooth Name

- Set the Bluetooth broadcast name (max. 30 characters)
- Press Save to apply the name

Bluetooth Pairing

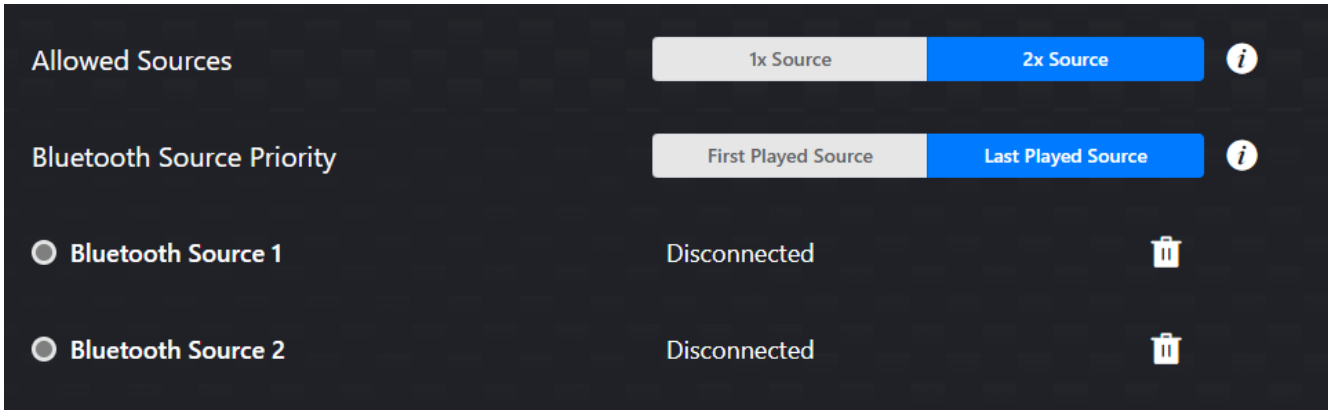
- Off
  - Bluetooth broadcasting is disabled and no Bluetooth connection is possible
- On
  - The Bluetooth signal is constantly broadcasting and Bluetooth devices can connect at any time (max. 2 connections)
- Manual
  - Bluetooth will only broadcast once the Pair button has been pressed or when triggered by pressing the Pair button on the web-GUI or via API
- Timeout (available in manual pairing mode)
  - Set the Bluetooth broadcast timeout for manual pairing. Interval can be set between 1-999 seconds. The remaining time will be displayed in the countdown timer. Once the timer reaches zero, the DA11ABL-WP-US-V2 will exit pairing mode

Manual Disconnect

- Set how long to press and hold the pair button to force disconnect all Bluetooth devices. When set to Off, this feature is disabled

Allowed Sources

- The number of Bluetooth simultaneuos Bluetooth connections can be set up to a maximum of 2
  - If set to 1 x Source, the existing Bluetooth connection must disconnect before another user can connect their device.
  - If set to 2 x Source, both devices can connect but audio playback priority will be subject to Bluetooth Source Priority:



Please note: When switching from 2 x Sources to 1 x Source, the Source that is not playing will be removed. If neither connected devices are playing content then Source 2 will be removed.

Please note: Due to Bluetooth limitations when using 2 x Sources some devices may experience unexpected behavior resulting in 2 audio streams at the same time and not stopping playback on a single source. This is a Bluetooth / source issue.

Bluetooth Source 1/2

- The current Bluetooth source 1/2 device name will be displayed here

LED Settings:

Power Light

- Off / Always on / 15s / 30s / 60s

BT Light

- Off / Always on / 15s / 30s / 60s

ID Light

- Off / Always on / 15s / 30s / 60s

Firmware Update:

MCU Update

- Browse your device for an MCU firmware file to upload to the unit. Once the required file has been selected press Update. The upgrade process will start and the progress will be shown on screen

DEP SDK Update

- Browse your device for a DEP firmware file to upload to the unit. Once the required file has been selected press Update. The upgrade process will start and the progress will be shown on screen

Factory Reset (Excludes Network Settings)

- Erases all settings, except for network settings, and reboots the unit.

Factory Reset All (Includes Network Settings)

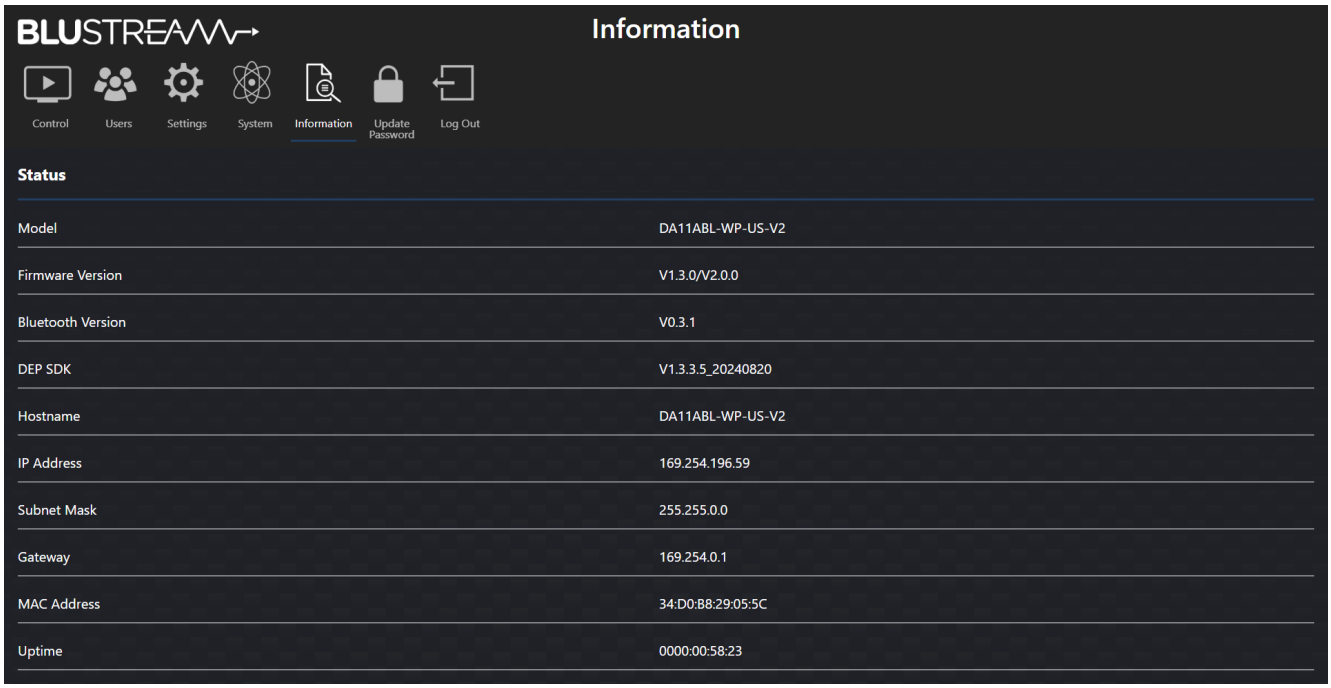
- Erases all settings and reboots the unit.

Reboot

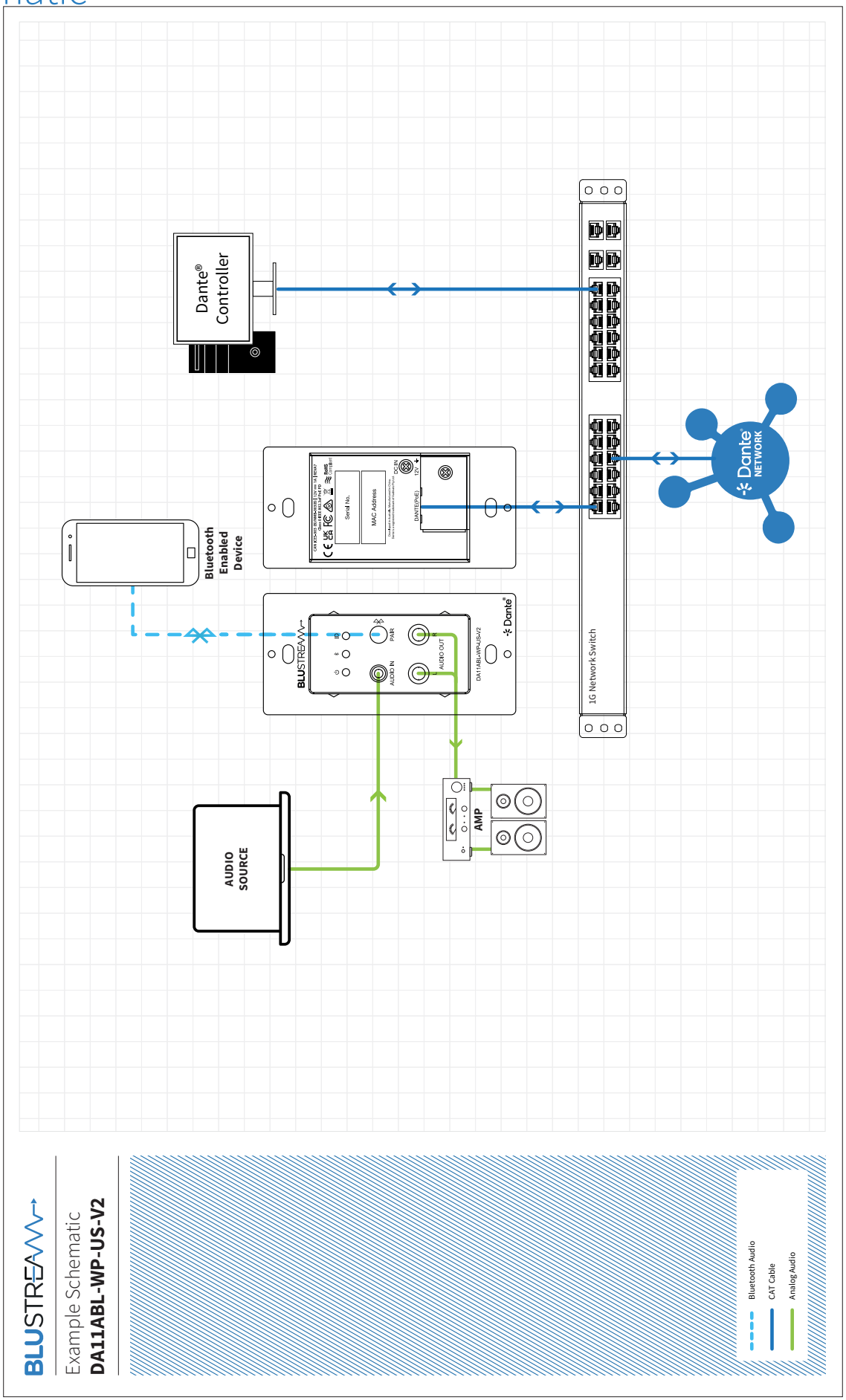
- Reboots the unit.

Web-GUI - Information

The Information page displays the model name, serial number, web-GUI firmware version, MCU firmware version and DEP firmware version of the DA11ABL-WP-US-V2. It also displays network configuration, temperature and uptime data.



Schematic


Dante® Controller
Dante NETWORK
1G Network Switch
Bluetooth Enabled Device
AUDIO SOURCE
AMP
AUDIO IN
AUDIO OUT
PWR
Serial No.
MAC Address
BLUSTREAM
Dante
Example Schematic
DA11ABL-WP-US-V2
Bluetooth Audio
CAT Cable
Analog Audio

Certifications

FCC NOTICE

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.

CAUTION – changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADA, INDUSTRY CANADA (IC) NOTICES

This Class B digital apparatus complies with Canadian ICES-003. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CORRECT DISPOSAL OF THIS PRODUCT

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

Specifications

Audio Input Connections: 1 x Analog Left / Right audio (3.5mm stereo jack)

Audio Output Connections: 2x Analog RCA (Left / Right)

Network Connection: 1 x PoE Dante® Ethernet Connection (RJ45)

Bluetooth: Bluetooth V5.0 - SBC / MP3 / AAC / APT-X / APTX-LL / APTX-HD, 44.1K-48KHz 16 / 24-bit

Module Dimensions (W x H x D): 50mm x 104mm x 48mm (without faceplate)

Faceplate Dimensions (W x H x D): 70mm x 155mm x 5mm

Cut Out Dimensions (W x H x D): 46mm x 56mm x 39mm

Mounting Hole Spacing: US 83mm CTC

Backbox Requirements: US single gang junction box

Shipping Weight: 0.42 Kg

Operating Temperature: 32°F to 104°F (0°C to 40°C)

Storage Temperature: - 4°F to 140°F (- 20°C to 60°C)

Power Supply: Class 0 IEEE 802.3af PoE or 12V/1A DC 2-Pin Phoenix connector

Package Contents

- 1 x DA11ABL-WP-US-V2
- 1 x Magnetic Faceplate
- 1 x Quick Reference Guide

Acknowledgements

Telnet Commands

The DA11ABL-WP-US-V2 can be controlled via TCP/IP.

The following pages list all available IP commands.

Commonly Used Serial Commands

There are several commands that are commonly used for control and testing:

STATUS	Status will give feedback on the switcher such as outputs on, type of connection, etc.
PON	Power on
POFF	Power off
OUTON/OFF	Toggling the main output ON or OFF as required
	Example: OUTON (This would turn the main output on)
INSOURCExx	(xx is the input)
	Example: INSOURCE01 (This would switch the input source to Analogue)

Common Mistakes

- Carriage return: Some programs do not require the carriage return where as other will not work unless sent directly after the string. In the case of some Terminal software the token <CR> is used to execute a carriage return. Depending on the program you are using this token maybe different. Some other examples that other control systems deploy include \r or 0D (in hex)
- Spaces: Blustream commands do not require space between commands unless specified. There may be some programs that require spacing in order to work.
    - How the string should look is as follows: OUTON
    - How the string may look if spaces are required: OUT{Space}ON

Telnet Commands (continued)

COMMAND	ACTION
?/HELP	Print Help Information
STATUS	Print System Status And Port Status
UPTIME	Print System Uptime
RESET	Reset System Settings To Default (Should Type ""Yes"" To Confirm, ""No"" To Discard)
RESET ALL	Reset System And Network Settings To Default (Should Type ""Yes"" To Confirm, ""No"" To Discard)
REBOOT	Set System Reboot
IDLED ON/ OFF/15/30/60	Set IDLED On Or Auto Turn Off In 15/30/60s In Power On State Or Turn On 15/30/60s
BTLED ON/ OFF/15/30/60	Set BTLED On Or Auto Turn Off In 15/30/60s In Power On State Or Turn On 15/30/60s
PWRLED ON/ OFF/15/30/60	Set PWRLED On Or Auto Turn Off In 15/30/60s In Power On State Or Turn On 15/30/60s
RESET ON/OFF	Set Factory Reset By Pressing Pair Button On Or Off
BT NAME xx	Set Bluetooth Name To xx xx:Max 30 Characters
BT PAIR MODE xx	Set Bluetooth Pairing Mode To xx xx=[0...2]:0:Off,1:On,2:Manual
BT TIMEOUT xx	Set Bluetooth Timeout To xx Seconds xx=[1...999]:Default(30s)
BT SOURCE	Bluetooth RX Connected Source List
BT MDBT xx	Set Manual Disconnect Bluetooth Time Through Pressing Pairing Button Up To xx Seconds xx=[0/3/5/10]:0:Disable Manual Disconnect Function
BT RXCD xx	Set BT RX Connect Device xx xx=[1...2]:Paired Device List ID
BT RXDIS xx	Set BT RX Disconnect Device xx xx=[0...2]:0:All,1:Paired Device 1, 2:Paired Device 2
BT CLEAR xx	Clear BT RX Paired Device xx xx=[0...2]:0:All,1:Paired Device 1, 2:Paired Device 2
BT RXPN xx	Set BT RX Pairing Number To xx xx=[1...2]:Pairing Device Number
BT PRIORITY xx	Set Bluetooth Audio Priority To xx xx=[0...1]:0:First Played Source,1:Last Played Source
BT IN VOL xx	Set Bluetooth Input Volume To xx xx=[0...16]:Volume
BT IN VOL+xx	Increase Bluetooth Input Volume xx=[1...16]:Steps xx can be empty(1 Step)
BT IN VOL-xx	Decrease Bluetooth Input Volume xx=[1...16]:Steps xx can be empty(1 Step)
BT IN MUTE ON/OFF	Set Bluetooth Mute ON/OFF
BT RXPAIR	BT RX Trigger Paired Button
BT COUNTDOWN	Print Bluetooth Paired Countdown
AUTO SW xx	Set Auto Switch Time To xx When First Priority Audio Stops Playing xx=[0...4]:0:Off,1:5s,2:15s,3:30s,4:60s

COMMAND	ACTION
MANUAL SW xx	Set Manual Switch Through xx Press Button In Short Succession xx=[0...2]:0:Off,1:2x,2:3x
PRIORITY xx	Set First Priority Source To xx xx=[1...2]:1:Analogue,2:Bluetooth
IN SOURCE xx	Set Input Source To xx xx=[1...2]:1:Analogue,2:Bluetooth
ANA IN MUTE ON/OFF	Set Analogue Input Mute ON/OFF
ANA IN SENS xx	Set Analogue Input Sensitivity To xx xx=[0...15]:Sensitivity Levels xx=0:+24dBu xx=1:+21dBu xx=2:+18dBu xx=3:+15dBu xx=4:+12dBu xx=5:+9dBu xx=6:+6dBu xx=7:+4dBu xx=8:0dBu xx=9:0dBV xx=10:-3dBV xx=11:-6dBV xx=12:-10dBV xx=13:-14dBV xx=14:-20dBV xx=15:-28dBV
OUT GAIN xx	Set Analogue Output Gain To xx xx=[0...15]:Gain Levels xx=0:+20dBu xx=1:+18dBu xx=2:+15dBu xx=3:+12dBu xx=4:+9dBu xx=5:+6dBu xx=6:+4dBu xx=7:0dBu xx=8:0dBV xx=9:-3dBV xx=10:-6dBV xx=11:-10dBV xx=12:-14dBV xx=13:-20dBV xx=14:-24dBV xx=15:-28dBV
OUT MUTE ON/OFF	Set Output Mute ON/OFF
NET DHCP ON/OFF	Set Auto IP(DHCP) On Or Off
NET IP xxx.xxx.xxx.xxx	Set IP Address
NET GW xxx.xxx.xxx.xxx	Set Gateway Address
NET SM xxx.xxx.xxx.xxx	Set Subnet Mask Address
NET TCPPORT ON/OFF	Set TCP/IP On Or Off
NET TCPPORT xxxx	Set TCP/IP Port
NET TN ON/OFF	Set Telnet On Or Off
NET TN xxxx	Set Telnet Port
NET RB	Network Reboot And Apply New Config!!!
NET DNS xxxx	Set DNS Domain Name To xxxx

www.blustream-us.com
www.blustream.com.au
www.blustream.co.uk